The Radiosonde Intercomparison SONDEX Spring 1981, Payerne

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1. Introduction

The field phase of the Alpine Experiment (ALPEX), the last major project planned within the framework of the Global Atmospheric Research Programme (GARP) took place during the period 1 September 1981 to 30 September 1982. The main aims of the experiment were the study of airflow (on various scales) over and around a mountain range and a number of mountain related phenomena. The Alps were chosen for the experiment due to their profound effect on the weather in southern and central Europe, the availability of detailed meteorological records stretching back over many decades and the existence of a well-developed infrastructure necessary for the successful implementation of a large international field experiment. Also, the intense interest in the region for the study of mountain related atmospheric phenomena, demonstrated by the high density of individual research groups, was a contributory factor. The scientific programme which was developed for ALPEX reflects the general nature of problems encountered in connection with mountain ranges all over the world, together with a number of special topics unique to the Alps and the neighbouring Mediterranean Sea (ICSU/WMO, 1980a). As a result, subjects to be studied on the basis of the collected ALPEX data include general airflow characteristics, modelling problems, mountain drag, local winds such as the foehn, bora and mistral, orographic precipitation and heat island effects, as well as lee cyclogenesis in the Gulf of Genoa, air–sea interaction, storm surges and floods.

The main goal of the field phase of ALPEX and in particular the Special Observing Period (SOP) was the gathering of the data necessary for such an extensive programme of research (WMO, 1982). The composite observing system comprised the regular World Weather Watch (WWW) network of surface stations, upper-air stations and satellites together with a special observing system consisting of ships and aircraft (both scientific and commercial), additional upper-air stations, and a large number of other special surface observing platforms. In order that the data set should have the greatest possible homogeneity, the reliability and accuracy of the various observation systems had to be checked and the instruments calibrated. In most cases, this posed no

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particular problem and the National Weather Services or the research groups involved carried out the necessary procedures. The upper-air sounding systems, however, provided a notable exception.

A large number of radiosondes, functioning on a wide variety of principles, has been developed in recent years and this diversity has led inevitably to systematic inconsistencies in data collected from even a relatively small area such as the Alps (ZIMMERMANN, 1978). Each country has its favourite sonde or sondes, and in view of the number of countries taking active part in ALPEX, an intercomparison[=][1] of sondes was considered vitally important.

A radiosonde is a small package, comprising sensors for measuring atmospheric pressure, temperature and humidity, and a radio transmitter for the telemetry of the gathered data. It is carried aloft by hydrogen or helium filled balloon. During the ascent, which typically reaches a maximum altitude of over 30 km, it is free to drift with the wind. As a result the wind profile can also be deduced if the sonde's position is continually redetermined during the ascent.

Direct intercomparisons[=] of radiosondes have been carried out in the past (NYBERG, 1951; DELVER, 1956). More recently direct[=] comparisons[=] (see e.g. HOOPER, 1975; RIEKER, 1976; ACHESON, 1978; also HOEHNE, 1980) have been made, but the results rarely reach the radiosonde data user. Also, the trend in the last few years has been towards indirect[=] methods of intercomparison[=] (FINGER and MCINTURFF, 1978; SPACKMAN, 1978; MCINTURFF *et al.*, 1979). In this report by 'intercomparison' we imply the simultaneous testing of three or more sonde types. In a 'direct' test the various sondes are launched from the same place at or about the same time. In Autumn 1978, a direct[=] radiosonde intercomparison[=] was held in Payerne (PHILLIPS *et al.*, 1981) as part of a Swiss National ASOND project, which served as a preparation for the Swiss ALPEX contribution (homogeneous upper-air data from four stations). In that intercomparison[=], the three radiosonde types currently being used in Switzerland, the Swiss sonde, the VIZ 1392 and the Vaisala RS18, were flown together. In addition to the field work, the three sondes types were subjected to a number of stringent laboratory tests carried out by the Swiss Meteorological Institute's Osservatorio Ticinese at Locarno-Monti. As a result of the intercomparison[=], a number of modifications were made to the software associated with the various systems. Encouraged by the results of the ASOND project and at the instigation of the JSC ALPEX Working Group, SONDEX, an international radiosonde intercomparison[=], was conceived as an ALPEX-dedicated project.

2. *The field experiment*

During the ALPEX Working Group Meeting of November 1979, it was stressed that data gathering systems, in particular radiosondes expected to be in operation

[1] Terms labelled with [=] are defined in a glossary in Appendix C.

during ALPEX should be calibrated to a common standard before the Special Observing Period (SOP). In March 1980, a letter was sent to the heads of National Weather Services, research groups and the radiosonde manufacturers to sound out opinions concerning a possible international radiosonde intercomparison$^{=}$. In the letter, the Swiss Meteorological Institute (SMI) together with the Laboratory for Atmospheric Physics at ETH in Zurich (LAPETH) declared its willingness to act as planner, organizer and host for the project and to assume responsibility for the subsequent analysis of the data and the publication of the results. The response to the letter was most encouraging. Due to its central position and its excellent facilities, the SMI Aerological Station in Payerne was deemed suitable for the intercomparison$^{=}$ SONDEX. In reply to the invitation which followed, it became clear that about ten different radiosonde types would be represented in the field experiment. In particular the radiosonde manufacturers showed great interest in the intercomparison$^{=}$ – three firms officially took part in the project whilst a further three were indirectly involved. Initially, the National Weather Services of four countries intended participating, but two were subsequently unable to be present. As a result, the radiosondes used by over fifty weather services and numerous research establishments throughout the world could be tested in SONDEX.

In theory at least, the carrying out of a direct$^{=}$ radiosonde intercomparison$^{=}$ is relatively simple. The radiosondes to be tested are all prepared and launched simultaneously or in quick succession (*parallel ascents*$^{=}$). The data recorded at the ground stations are then compared. In practice, however, there were a number of problems:

1. The radio frequency bands reserved for the telemetry of meteorological data are of limited width. All radiosonde manufacturers are obliged to use these frequencies and this leads to mutual interference problems between certain sonde types. The Swiss sonde, for instance, utilizes virtually the whole 400–406 MHz radio band for data telemetry and especially its transponder system (see Section 3) and hence it could not be flown together with any other sonde using this most popular frequency band. Since the radiosonde station Payerne continued with its regular programme, making 6-hourly ascents, this meant that intercomparison$^{=}$ flights with other sondes could only be made during the four 3-hour 'windows' when the 400–406 MHz band was free.
2. The sondes do not necessarily fly through the same volume of air at the same time. Especially in the lowest layers of the atmosphere, humidity and, to a lesser extent, temperature vary markedly over short horizontal (isobaric) distances. One sonde might ascend through a region of cumulus convection whilst another ascends through a cloud-free region. In addition, all data are recorded as a function of pressure. Any inaccuracy in the pressure sensor will lead to an additional error when the other parameters are compared. Naturally, no direct$^{=}$ intercomparison$^{=}$ of pressure sensors is possible.

3. Two sonde types – the Vaisala RS21 and RS80 – were received and analysed using the same set of equipment. Hence, these two sondes could never be flown simultaneously.
4. Due to administrative reasons, it was not possible for all the sounding groups to be present for the whole field experiment. Hence, certain other combinations could not be flown together.

The second of these difficulties can be overcome by simply attaching a number of sondes to the same balloon (*multiple ascents*=). This, however, leads to other problems:

1. The number of sondes which can be attached to a balloon depends on the payload capacity of the balloon. Twin balloons were used to provide extra lift but with only limited success. Also, there are air traffic regulations limiting the weight of a balloon-borne package.
2. The sondes themselves are heat and moisture sources and care must be taken to ensure that the air sampled by one sonde is not contaminated by a neighbouring sonde.
3. The electronics of the various sondes must be checked for the effects of radio frequency interference from the transmitters of the neighbouring sondes.
4. Various ascent rates are recommended for different sondes, and hence, in multiple ascents= ventilation of the sensors may not be optimal.

The greatest advantage of carrying out multiple ascents= is that the pressure sensors can also be compared. The meteorological parameters (pressure included) are now defined as a function of time after launch, rather than as a function of pressure as is usual. Hence, for radiosondes on the same balloon, any inconsistencies in the times after launch at which the sondes reach a given pressure level indicate a discrepancy in the pressure sensor data, the magnitude of which can be determined by resort to the vertical velocity of the balloon (also calculated from the time–pressure data set) and the hydrostatic equation. In the event, both parallel (launched with 10 minutes) and multiple ascents= (two to five sondes on the same balloon) were carried out.

A total of 154 ascents was made during the 10-day period of the experiment. Figure 1 gives an overview of the data available. The data from the Vaisala RS21 were received and analysed using two completely different systems and software – the generally available Microcora (hereafter referred to as 'Cora') and the WMO Navaid system (see ICSU/WMO, 1980b). Both sets of data were included in the subsequent analysis (see Section 4). The number of ascents made by the different sonde types varied greatly due on the one hand to the inclusion of virtually all the Payerne routine ascents, which lead to this sonde being overrepresented, and on the other hand to relatively short visits of certain groups.

Because one of the main aims of the intercomparison= was to check the radiation corrections applied to temperature and humidity data, day-time ascents were supplemented by a large number of night-time ascents thus allowing the comparison= of data with and without the disturbing influence of solar radiation.

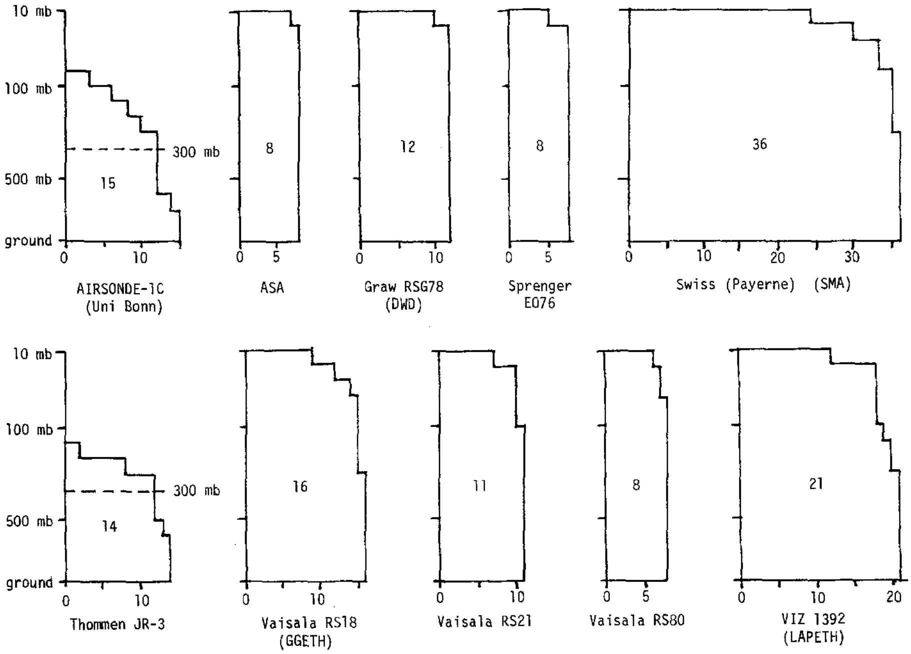

Figure 1

Overview of the available data. The horizontal axis shows the number of ascents made with a particular sonde, the vertical axis represents the height reached. The number printed in each graph is the total number of ascents made with that sonde.

On completion of each ascent, the groups were required to supply two sets of data according to an agreed format:

1. Standard level data. Temperature, humidity, geopotential, wind velocity and time after launch at the standard levels normally used in the upper air messages. The 1000 mb level, which is always below the ground in Payerne, was replaced by the 900 mb level. Also, ground data were reported.
2. Minute data. Pressure, temperature, humidity, geopotential and wind velocity at minute intervals after launch.

This report concerns itself exclusively with an analysis of the standard level data.

3. Participating radiosondes

Table 1 gives an overview of the radiosondes which were included in the intercomparison⁼.

All the sondes tested in SONDEX measured pressure using aneroid capsules – either one or two. The temperature and humidity sensors, on the other hand, varied widely from sonde to sonde. In the case of temperature, rather bulky mechanical (bimetallic) constructions, NTC resistors, as well as extremely small ceramic capacitors

Table 1

List of participating sondes and their characteristics

Sonde	Weight (g)	Frequency (MHz)	Band-width	Aneroid sensors	Temper-ature sensor	Humidity sensor	Tracking method	No. of ascents
Airsonde	130	403.5Q	10 kHz	1	Bead thermistor	Bead thermistor*	—	15
ASA	1000	400–406T	~1 MHz	2	Bimetallic spiral	Goldbeater's skin	Mono-pulse	8
Graw RSG78	650	402Q	50 kHz	1	Bead thermistor	Bead thermistor*	—	12
Sprenger E076	900	405Q	10 kHz	1	Bead thermistor	Carbon element	—	8
Swiss Payerne	1000	400–406T	~1 MHz	2	Bimetallic spiral	Goldbeater's skin	Switched lobe	36
Thommen JR-3	1500	464–474	200 kHz	1	Bimetallic spiral	Goldbeater's skin	Switched lobe	14
Vaisala RS18	280	24–25.6	1.6 MHz	2	Bimetallic ring	Hair	Phase meter	16
Vaisala RS21†	710	400–406	100 kHz	2	Bimetallic ring	Humicap	Omega	11
Vaisala RS80	210	400–406	150 kHz	1	Ceramic	Humicap	Omega	8
VIZ 1392	700	1670–1690	1 kHz	1	Thermistor rod	Carbon element	Conical scan	21

Q transmitter quartz stabilized.
T equipped with transponder.
* Humidity from wet bulb temperature.
† Data evaluated using two receiving systems.

were represented; in some cases radiation shielding was used. Humidity was measured with bio-organic material (goldbeater's skin, hair), carbon elements, wet bulb thermometers and thin film capacitors (humicap). The time constants for the sensors of the various sondes were not the same. However, no attempt has been made to include any effect of different time constants on the results in the intercomparison as was done in an earlier, similar experiment (PHILLIPS *et al.*, 1978). For obvious reasons, sondes functioning on mechanical principles are heavier than those using mainly electronic components.

For the telemetry of data the 403 MHz frequency band is most commonly used. However, the 25 MHz and 1680 MHz frequencies were also used, as well as a 470 MHz channel which is not officially available. The more recently developed sondes mainly use quartz controlled, narrow band transmitters while older sondes are not frequency stabilized and sometimes cover a rather wide frequency band. Both amplitude and frequency modulation techniques are used, the two techniques being in some cases combined.

Most sondes use audio frequency signals to modulate the transmitter, the audio frequency being a function of the meteorological value measured. The various parameters are either time or frequency multiplexed. Some sondes use pulse position modulation (Swiss, ASA) while in one sonde (Vaisala RS18) the carrier frequency is shifted as a function of the time-multiplexed meteorological value.

For the determination of wind, some sondes were intended to be tracked by a radar completely independent of the telemetry channel. Since no such radar was available at the site, these sondes did not give wind data. Other sondes were tracked by pointing an antenna system to the sonde's transmitter. To determine deviations from the proper antenna alignment, conical scan (VIZ 1392), lobe switching (Swiss, Thommen) or monopulse (ASA) techniques were used. One system (Vaisala RS18) determined the direction to the sonde by analysing the phase of signals received at horizontally spaced antennas. In yet another wind-finding technique, the radiosonde picks up VLF signals from Omega transmitters. There are seven such navigation transmitters more or less evenly distributed over the globe setting up a pulse modulated hyperbolic VLF-system. Their signals are relayed by the radiosonde to the ground station where they are analysed and the sonde's position is determined.

Some of the receiving systems provided a graphical recording of the raw data from the sonde which had to be analysed manually. Others fed data directly into a computer which produced a complete and coded upper-air report. Between these two extremes all kinds of semi-automatic data evaluation could be found.

On the following pages, brief descriptions of the participating sondes are given. The headings are identical to the names under which the sonde data was treated in this analysis (see Appendix B); the exact sonde types are added in brackets. Please note that the information concerning wind is only valid for the sonde–ground equipment combination used in the intercomparison. Most sondes can be used with other ground installations where different wind-finding techniques apply.

AIRSD (Airsonde™)

Manufacturer:
Atmospheric Instrumentation Research Inc., 220 Central Ave., Boulder, CO 80301, U.S.A.

Operator during SONDEX:
Meteorologisches Institut der Universität, Auf dem Hügel 20, D-5300 Bonn, Federal Republic of Germany

Sensors:
P: aneroid capsule bonded to ceramic capacity transducer
T: epoxy coated bead thermistor
U: psychrometric with wetted thermistor identical to the one for temperature

Accuracy stated by manufacturer:
P: ±3 mb from 1000 to 300 mb

T: 0.5 °C from −40 to 40 °C
1 °C from −70 to 50 °C
3 to 5 s time constant during ascent

U: (accuracy for wet bulb temperature same as for dry bulb temperature, 15 s time constant during ascent)

General:

The sonde's housing is made of styrofoam and has the form of a helicoid propeller. As it ascents or descends, its spinning aspirates the two thermistors mounted in radiation shields at the tips of the propeller. The aneroid is equipped with an additional temperature sensor. The capsule is mounted to a sealed ceramic capacitor acting as transducer. An electronic multiplexer samples the sensors sequentially every 6 s. Physical values are represented by audio frequencies which modulate a narrow band, quartz controlled 403 MHz FM-transmitter.

Wind:

Not available.

ASA (Höhenwettersonde 74)

Manufacturer:

Meteolabor AG, Hofstrasse 92, CH-8620 Wetzikon, Switzerland

Operator:

Weather Service of the Swiss Army

Sensors:

P: two aneroid capsules, one for 1000 to 100 mb, one for 100 to 5 mb

T: silver coated bimetallic spiral, no radiation shield
time constant is about 4 s at 1000 mb

U: goldbeater's skin

Accuracy stated by manufacturer:

P: ±4 mb from 1000 to 90 mb
±2 mb from 100 to 5 mb

T: ±1 °C from 30 to −70 °C

U: ±10% from 10 to 100% relative humidity

General:

Each of the four sensors mechanically moves a pointer about a common axis. A fifth pointer, driven by clockwork, rotates about this axis in the plane of the circle formed by the other four pointers. Whenever it is aligned with one of the sensor-actuated pointers, a pulse is produced by capacitive coupling. This pulse manifests itself by a lowering of the 403 MHz transmitter signal by 1 MHz. A fixed double pointer on the circle serves as zero and end point for the time base which is approximately 30 s long. Meteorological values are computed from the time lapse between zero (double pulse) and the pulse caused by the appropriate pointer. Hence, one complete PTU-cycle lasts approximately 30 s. The sonde's transmitter emits bursts of 50 μs. These are released upon receipt of signals from the ground station which are sent out at a rate of 350 Hz (transponder principle). By determining the time delay between the interrogating pulse from the ground and the sonde's response, the antenna–sonde distance can be computed.

Wind:
The sonde's position is determined using the radial distance (from the transponder system) and the antenna angles. Tracking is automatic using a monopulse antenna system.

GR78 (Graw RSG78)

Manufacturer:
Dr Graw Messgeräte, Muggenhofer-Strasse 95, D-8500 Nürnberg 80, Federal Republic of Germany

Operator during SONDEX:
German Weather Service, Aerologische Forschungs-und Erprobungsstelle München, August Schmauss-Strasse 1, D-8042 Oberschleissheim, Federal Republic of Germany

Sensors:
P: aneroid capsule
T: NTC resistor of 0.4 mm diameter mounted in duct acting as radiation shield
U: psychrometric with wetted NTC resistor identical to the one for temperature

Accuracy stated by manufacturer:
P: ±1 mb from 1060 to 200 mb
±0.5 mb from 200 to 8 mb
T: ±0.2°C from 40 to −80°C
U: ±0.1°C for psychrometric difference

General:
The aneroid capsule is attached to a capacitive transducer. Signals from the sensors are converted into audio frequencies which modulate a 403 MHz quartz controlled narrow band FM-transmitter. The two temperature sensors are switched in turn to the audio oscillator for about 6 s. The modulation frequency for temperature is between 600 and 2500 Hz, for pressure it lies between 30 and 400 Hz. Pressure and temperature signals are transmitted simultaneously.

Wind:
Not available.

SP76 (Sprenger E076 Q 400)

Manufacturer:
A. Sprenger KG GmbH & Co., Postfach 20, D-3434 St. Andreasberg, Federal Republic of Germany

Operator during SONDEX:
Factory team of manufacturer

Sensors:
P: aneroid capsule
T: bead thermistor housed in vertical duct
U: carbon element (plastic strip with thin carbon coating) housed in vertical duct

Accuracy stated by manufacturer:
P: ±1 mb from 1060 to 0 mb
1 s time constant
T: ±0.2°C from 50 to −90°C
1 s time constant
U: ±5% from 0 to 100% relative humidity
5 s time constant at 20°C
less than 2 min time constant in the range 40 to −40°C

General:
The aneroid capsule moves a pointer which switches to a different audio frequency about every 1.2 mb. All data are transmitted simultaneously: pressure is relayed as frequency modulation between 1.5 and 3 kHz, temperature as frequency modulation between 35 and 460 Hz and humidity as amplitude modulation between 30 and 60 Hz. The quartz stabilized, narrow band transmitter operates at about 403 MHz.

Wind:
Not available.

SWISS ('Swiss sonde')

Manufacturer:
Meteolabor AG, Hofstrasse 92, CH-8620 Wetzikon, Switzerland

Operator during SONDEX:
Swiss Meteorological Institute, Aerological Station, CH-1530 Payerne, Switzerland

Sensors:
P: two aneroid capsules, one from 1000 to 100 mb, one from 100 to 5 mb
T: silver coated bimetallic spiral, no radiation shield
time constant is about 4 s at 1000 mb
U: goldbeater's skin

Accuracy stated by manufacturer:
P: ±4 mb from 1000 to 90 mb
±2 mb from 100 to 5 mb
T: ±1°C from 30 to −70°C
U: ±10% from 10 to 100% relative humidity

General:
Each of the four sensors mechanically moves a pointer about a common axis. A fifth

pointer, driven by an electric motor, rotates about this axis in the plane of the circle formed by the other four pointers. Whenever it is aligned with one of the sensor-actuated pointers, a pulse is produced by capacitive coupling. This pulse manifests itself in a lowering of the 403 MHz transmitter signal by 1 MHz. A fixed double pointer on the circle serves as zero and end point for the time base which is approximately 30 s long. Meteorological values are computed from the time lapse between zero (double pulse) and the pulse caused by the appropriate pointer. Hence, one complete PTU-cycle lasts approximately 30 s. The sonde's transmitter emits bursts of 50 μs. These are released upon receipt of signals from the ground station which are sent out at a rate of 350 Hz (transponder principle). By determining the time delay between the interrogating pulse from the ground and the sonde's response, the antenna–sonde distance can be computed.

Wind:
The sonde's position is determined using the radial distance (from the transponder system) and the antenna angles. Tracking is automatic using a four-array, switched lobe antenna.

THOMM (Thommen J-R 3.2)

Manufacturer:
The manufacture of this sonde has been discontinued

Operator during SONDEX:
Artillery Weather Service of the Swiss Army

Sensors:
P: aneroid capsule
T: bimetallic spiral housed in polished vertical duct serving as radiation shield
U: goldbeater's skin

Accuracy stated by manufacturer:
P: $\pm$5 mb from 1050 to 300 mb
T: $\pm$0.5°C
U: $\pm$10% relative humidity

General:
Each of the three sensors mechanically moves a pointer about a common axis. A fourth pointer, driven by clockwork, rotates about this axis in the plane of the circle formed by the other three pointers. Whenever it is aligned with one of the sensor-actuated pointers, a short mechanical contact is established causing the 470 MHz transmitter to be shifted by about 80 kHz. A fixed double contact on the circle serves as zero and end point for the time base which is approximately 30 s long. Meteorological values are computed from the time lapse between zero (double pulse) and the pulse caused by the appropriate pointer. Hence, one complete PTU-cycle lasts approximately 30 s.

Wind:
The sonde's position is determined by tracking the sonde with a manually controlled antenna. This antenna consists of four electronically switched dipole arrays (switched lobe principle). Deviations from proper alignment are indicated by a cross-pointer instrument. As third co-ordinate, the geopotential height computed from the PTU-signal is used.

RS18 (Vaisala RS18)

Manufacturer:
Vaisala Oy, PL26, SF-00421 Helsinki 42, Finland

Operator during SONDEX:
Institute for Geography ETH, Sonneggstrasse 5, CH-8092 Zurich, Switzerland

Sensors:
P: two aneroid capsules, one from 1050 to 150 mb, one from 150 to 3 mb
T: bimetallic ring housed in a polished double shielded vertical duct acting as radiation shield, time constant <3 s at 1000 mb
U: single hair mounted in duct

Accuracy stated by manufacturer:
P: 1 mb from 1050 to 150 mb
0.1 mb from 150 to 3 mb
T: 0.1°C
U: 1% relative humidity

General:
The mechanical movement of the sensors moves one plate of a disc capacitor and in this way varies its capacity. These capacitors are switched in turn into the frequency determining circuit of a 25 MHz transmitter by a propeller turning about a vertical axis. In addition, two fixed value capacitors are switched in as references. The frequency of the transmitter, which varies between 24 and 25.6 MHz, is then a function of the meteorological values.

Wind:
The sonde's position is determined using an L-shaped antenna array. By analysing the phase differences of the sonde's signal picked up by different antennas, the slant angle between the incoming radiowave and the straight line between the two antennas can be computed. Using a two-dimensional array, the azimuth and elevation can be determined. The third co-ordinate is the geopotential height of the sonde computed from PTU-values.

RS21C and RS21N (Vaisala RS21-12CN)

Manufacturer:
Vaisala Oy, PL 26, SF-00421 Helsinki 42, Finland

Operator during SONDEX:
Factory team of manufacturer

Sensors:

P: two aneroid capsules, one from 1060 to 10 mb, one from 150 to 3 mb
T: bimetallic ring housed in polished double vertical duct acting as radiation shield
U: humicap thin film capacitor housed in duct

Accuracy stated by manufacturer:

P: 1 mb standard deviation from 1060 to 10 mb
0.2 mb standard deviation from 150 to 3 mb
T: 0.15°C standard deviation from 55 to −90°C
2.9 s time constant at 6 m/s and 1000 mb
U: 2% standard deviation from 0 to 100% relative humidity
1 s time constant at 1000 mb and 20°C

General:
The aneroid capsule and the temperature sensor control mechanically the capacity of three capacitors; the humidity sensor acts as a capacitor by itself. A rotating switch, driven by the unwinding suspension string, connects the different capacities as well as two reference capacitors to the frequency determining circuit of a 6 MHz (nominal) oscillator. After dividing its frequency by 128, this oscillator modulates the frequency of the 403 MHz transmitter. The sonde is equipped to receive one frequency of the VLF Omega Navaid transmitters. The output of this receiver is relayed to the ground by the 403 MHz transmitter.

Wind:
The sonde's position is determined by analysis of the Omega signals. The Cora receiver uses a slightly different technique from the Navaid receiver; the basic principle is, nevertheless, that of hyperbolic navigation. For the third co-ordinate, the geopotential height based on the PTU-values is used.

RS80 (Vaisala RS80-15N)

Manufacturer:
Vaisala Oy, PL 26, SF-00421 Helsinki 42, Finland

Operator during SONDEX:
Factory team of manufacturer

Sensors:

P: aneroid capsule with integrated capacity transducer
T: capacitive bead, 2.5 mm long and 1.5 mm diameter, unshielded
U: humicap thin film capacitor, unshielded

Accuracy stated by manufacturer:

P: 0.5 mb standard deviation from 1060 to 3 mb

T: 0.2°C standard deviation from 60 to −90°C
solar radiation correction <1°C at 60 deg elevation and 10 mb
U: 2% standard deviation from 0 to 100% relative humidity

General:
The capacities of the sensors as well as two reference capacitors are electronically sampled in turn for about 1 s. They control the frequency of an audio oscillator which modulates the frequency of the 403 MHz transmitter. The sonde is equipped to receive one frequency of the VLF Omega Navaid transmitters. The output of this receiver is relayed to the ground by the 403 MHz transmitter.

Wind:
The sonde's position is determined by analysis of the Omega signals. The basic principle is that of hyperbolic navigation. For the third co-ordinate, the geopotential height computed from the PTU-values is used.

V1392 (VIZ 1392 accu-lok)

Manufacturer:
VIZ Manufacturing Company, 335 E. Price Street, Philadelphia, PA 19144, U.S.A.

Operator during SONDEX:
Laboratory for Atmospheric Physics ETH, Hönggerberg, CH-8093 Zurich, Switzerland

Sensors:
P: Ni-Span-C aneroid capsule, temperature compensated
T: rod type NTC resistor of 2 mm diameter, 5 mm long with water repellent and solar reflective coating, unshielded, time constant is about 3.5 s at 1000 mb
U: carbon element (plastic strip with thin carbon coating) housed in duct

Accuracy stated by manufacturer:
P: within 2 mb (rms) from 1050 to 5 mb
T: within 0.2°C (rms) from 40 to −70°C
U: ±5% from 10 to 100% relative humidity between 40 and −60°C

General:
The aneroid capsule actuates a switch which connects the thermistor, the carbon element and two reference resistors in a fixed sequence to a voltage controlled audio oscillator. This oscillator modulates the amplitude of a 1680 MHz transmitter with a frequency between 8 and 200 Hz. Pressure is determined by counting 'steps' in the above-mentioned sequence which is facilitated by the use of the reference values.

Wind:
The sonde's position is determined using a parabolic antenna with conical scan together with the geopotential height computed from PTU-values.

4. Data analysis

4.1. Introduction

Of the two sets of the data provided by the groups during SONDEX, only the standard level data have as yet been fully analysed, and only these will be considered – as mentioned before – in this report. Although they are not as detailed as the minute data, standard level data do lead to a good indication of the relative performance of the various sondes, whilst presenting fewer problems. Also, despite the fact that standard level data give only a crude representation of the actual profile, most numerical models rely solely on this type of data.

The ascents were first arranged into groups according to their times of launch. These groups (see Appendix A) comprised from three to eight sondes and consisted of all sondes launched on the same balloon or within a period of about 3 hours. This limit of 3 hours was considered reasonable and necessary. Conditions in the atmosphere above 700 mb alter except under exceptional circumstances, only gradually. Below this level, radiative heating and cooling can of course cause substantial changes within shorter intervals. If, on the other hand, such a large timespan were not allowed, sondes which for technical reasons were not flown together could not have been directly compared. Care was taken that no data sets were grouped together when a drastic change in the weather had taken place within the timespan. As the results in Section 5.2 will show, the assumptions made above are reasonable.

For each parameter and level, the average and standard deviation were calculated. The results of this initial comparison= were then circulated to the various groups with the request that the raw data be checked and corrections made where necessary. Thus, mistakes in the data due to human error (hand digitizing of data, etc.) and transmission problems could be effectively eliminated. The main analysis was based on the corrected data set.

The standard level data for each ascent comprised a maximum of six parameters at a maximum of sixteen levels. Table 2 lists these levels, the parameters and their abbreviations.

Table 2

Definition of levels and parameters

Levels:	Ground	500	200	50
	900	400	150	30
	850	300	100	20
	700	250	70	10
Parameters:	Temperature		T	
	Humidity		U	
	Geopotential		H	
	Wind direction		D	
	Wind speed		F	
	Time after launch		t	

Three sounding systems, the Graw RSG78, Sprenger E076 and the Airsonde were not equipped for measuring wind velocity. As mentioned before, the parameter 'time after launch' was introduced to allow a comparison of pressure sensors and is only of importance in multiple ascents. Any difference in the time after launch for sondes on the same balloon to reach a given pressure level indicates a discrepancy in the pressure sensor or in the interpolation method used. The magnitude of the pressure discrepancy can be determined from the time difference, the local vertical velocity of the balloon (estimated from the time taken for the sonde to ascend from the previous standard level and the relative topography of the two levels) and the hydrostatic equation.

For each parameter and level, the value x_i reported by sonde i is given by

$$x_i = x_M + \bar{x}_i + \delta x_i \tag{4.1}$$

where x_M is the true meteorological value of the parameter at the given level, $\bar{x}_i$ is the systematic error of sonde i, and δx_i is a stochastic error. There is no way of determining or measuring x_M directly. The aim of the analysis is to obtain a realistic estimate for $\bar{x}_i$. Even if this could be done exactly, the stochastic error would remain. The standard deviation of the systematic error (the variability of parameter x of the given sonde type i) ${}_x\sigma_i$ is given by

$${}_x\sigma_i = \left[\frac{1}{n-1} \sum \delta x_i^2\right]^{1/2} \tag{4.2}$$

where n, the number of sondes used to determine ${}_x\sigma_i$, should be as large as possible.

If we assume that the systematic error is a function of pressure and not of x_M, we can eliminate x_M by simply calculating the difference between the values of the parameters reported by two sondes i and k which have been launched at or about at the same time:

$$\begin{aligned} x_{ik} = x_i - x_k &= x_M - x_M + \bar{x}_i - \bar{x}_k + \delta x_i - \delta x_k \\ &= \bar{x}_i - \bar{x}_k + \delta x_i - \delta x_k \end{aligned} \tag{4.3}$$

4.2. *The primary results*

In the first stage of the analysis, each possible combination of two sondes within a group (as defined for the quality control) was considered in turn and x_{ik} calculated. Where two sondes of the same type were included in the same group, the data from these sondes were compared only with data from other types of sondes and not with each other. The results of this initial stage were divided into two sets – day ascents and night ascents – as well as being retained in their original form. The remainder of the analysis was then carried out on these three data sets 'day', 'night' and 'all'. Certain parameters – temperature, relative humidity and their dependant parameter geopotential – are best considered separately for day and night ascents so that the effects of solar radiation can be investigated. Other parameters – pressure, wind speed and wind direction – are not likely to be directly affected by radiation.

The second stage of the analysis defines the mean difference $\bar{x}_{ik}$ between two sondes i and k by:

$$\bar{x}_{ik} = \overline{x_i - x_k} = \frac{1}{n_{ik}} \sum (\bar{x}_i - \bar{x}_k + \delta x_i - \delta x_k)$$

$$= \frac{1}{n_{ik}} \sum (\bar{x}_i - \bar{x}_k) \tag{4.4}$$

and the standard deviations of the mean differences

$${}_x\sigma_{ik} = \left[\frac{1}{n_{ik} - 1} \sum (\delta x_i - \delta x_k)^2 \right]^{1/2} \tag{4.5}$$

where n_{ik} is the number of direct= comparisons= between the two sondes. ${}_x\sigma_{ik}$ is related to ${}_x\sigma_i$ and ${}_x\sigma_k$ by

$${}_x\sigma_{ik} = \left[\frac{(n_{ik} - 1)({}_x\sigma_i^2 + {}_x\sigma_k^2)}{2n_{ik} - 1} \right]^{1/2} \tag{4.6}$$

The results at this stage can be represented in a series of primary difference matrices=, one matrix for each parameter and level (see Appendix B, even pages). Each element of these matrices comprises the three values $\bar{x}_{ik}$, ${}_x\sigma_{ik}$, and n_{ik}. These matrices, which constitute the direct results of the intercomparison= are skew symmetric matrices of order 11. In addition to the leading diagonal which is not determined since

$$n_{ii} = n_{jj} = \ldots = 0 \tag{4.7}$$

a number of other elements of the matrix are also undetermined since a direct= comparison= between certain pairs of sondes was not possible. For the calculation of the standard deviation ${}_x\sigma_{ik}$, the sum of squares (see equation 4.2) was divided by $n - 1$ which leads to a more conservative estimate. The probability of error when rejecting the hypothesis that there is no difference between the values reported by two different sondes is commonly called 'significance', a habit which will be adopted also in this report. Since for a given parameter at a given level only few comparisons= were available, small sample theory had to be applied and consequently t-tests (Student-tests) were used to determine the error probability or – as it is called from now on – the significance.

$$t = \frac{\bar{x}_{ik}}{{}_x\sigma_{ik}} (n - 1)^{1/2} \tag{4.8}$$

These t-scores were compared with tabulated values for given sample size and significance. The significance s_{ik}, for which

$$|t| \geqslant t_s \tag{4.9}$$

is indicated by symbols in the matrix elements, where

$ stands for 0.1%
* stands for 1%
+ stands for 2%
: stands for 5%

4.3. The adjustment analysis

Since, for the reasons stated above, it was not possible to fly every combination of two sondes together, quite a number of elements in the primary difference matrix are missing. Also it is highly unlikely that – for any parameter at any height – the difference between sondes i and j plus the difference between sonde j and k will be equal to the difference between the sondes i and k. (If, therefore, differences would be represented geometrically, the points i, j, and k would form a triangle rather than a straight line. In the case of n sondes, the points would most likely form an $(n-1)$-dimensional polyhedron.) In other words, the difference matrix itself is overdetermined while at the same time some of the elements are not determined at all. (This is a classical problem commonly encountered in surveying when, for example, the height of a point is determined using two different reference levels.) In order to obtain a complete and coherent= difference matrix, the primary matrix was subjected to an adjustment analysis. In this analysis the differences are modified such that for any element a in the matrix

$$a_{ik} = \text{sign}\ (j-i) \cdot a_{ij} + \text{sign}\ (k-j) \cdot a_{jk} \tag{4.10}$$

with

$$0 < (i, j, k) \leqslant n \tag{4.11}$$

Then, as can be shown

$$a_{ik} = a_{ij} + a_{jk} \tag{4.12}$$

which of course is physically plausible. (Geometrically, the $(n - 1)$-dimensional difference polyhedron has been reduced to a straight line by the adjustment process.)

Quite often the adjustment analysis is carried out such that the sum of the squares of the adjustments (i.e. the 'corrections' of the individual values) is minimal. This procedure was also chosen here by using multiple linear regressions.

In order to avoid the problem of defining weighting factors, the multiple regression was applied to the raw data rather than to the data contained in the primary difference matrix. Using the BMDP Statistical Software Package of the University of California (DIXON, 1981), the model

$$\tilde{x} = \sum m_i \tilde{x}_i \tag{4.13}$$

(where $\tilde{x}$ represent the adjusted values) was fitted using all available difference data x in the form of an equation

$$x_{ik} = m_i x_i + m_k x_k = x_i - x_k \tag{4.14}$$

The factors m, therefore, assume only the values -1, $+1$, or zero; in addition, in any equation predicting the difference x_{ik} there is always exactly one m which equals $+1$ and one m which equals -1; the remaining m's are zero. The x_{ik} are the dependent variables, the m_i the independent variables and the x_i the coefficients sought.

It must be noted that for physical reasons the model, i.e. the regression equation (4.13), must not contain a constant. In other words, the intercept of the regression line must be zero.

Since no constants are present on the right-hand side of the equation system (4.14), the resulting covariance matrix will be singular and cannot, therefore, be inverted to yield the parameters of the regression coefficients. If, however, m_j is set equal to zero – where j can be chosen arbitrarily – in all the equations (4.14), this will not happen. The resulting regression coefficients then represent the difference of a particular sonde with respect to sonde j as can readily be seen when looking at a particular equation (4.13)

$$\tilde{x}_{ij} = m_i \tilde{x}_i + m_j \tilde{x}_j = 1\tilde{x}_i + 0\tilde{x}_j = \tilde{x}_i \tag{4.15}$$

The program used also furnishes the 2-tail error probability for rejecting the hypothesis that the coefficient $\tilde{x}_{ik}$ is different from zero. The respective calculation is based on the t-test. By alternately setting m_1, m_2, ..., m_{10} to zero, all the mutual differences as well as their standard errors and significances can be obtained. The fact that differences should be coherent⁼ allows a quick but powerful test for the reliability of the calculations.

It should be remembered that the RS21 ascents were evaluated using two ground systems – the generally available Cora hard and software and the Navaid system developed specially for GARP. The RS21 Navaid data were, at this stage, omitted from the analysis in favour of the RS21 Cora data. The inclusion of both sets of data would have led to a bias towards the RS21 sonde. Ideally, there would have been forty-five combinations of two sondes, but in the event, a maximum of thirty-seven combinations were registered. At higher levels (above 30 mb) and also for wind data, the number of combinations falls markedly below this.

For reasons just mentioned, the data of the RS21 sondes as received by the Navaid set has been added to the adjusted mean difference matrix⁼ after the analysis. Based on the difference between RS21 Cora and RS21 Navaid, the differences with respect to other sondes were calculated. For the standard errors the estimate for the RS21 Cora was also taken for the RS21 Navaid; the same is true for the significance. This procedure is, of course, formally not absolutely correct. The primary difference matrices⁼, however, show that the standard deviations of the Cora and Navaid data with respect to any other sonde are nearly always about the same; this again is reflected in the significance. The two elements of the adjusted mean difference matrix⁼ giving the difference between the Cora and Navaid analysis (difference, standard error and significance), were carried over from the primary difference matrix$^{=}$ which, in this case, is statistically correct.

The results of the adjustment analysis, the adjusted mean difference, its standard error and its significance are put together in the adjusted mean difference matrix$^{=}$ which is – in contrast to the primary difference matrix$^{=}$ – complete and coherent$^{=}$ according to equation (4.12). The sample size or number of ascents of particular combinations n has lost its physical meaning in the process of the analysis and is no longer included (see Appendix B, odd pages).

The data contained in the adjusted mean difference matrices$^{=}$ represents the very basic results of the intercomparison$^{=}$. No subjectivity was involved in the evaluation, no data has been modified and all statistical calculations were carried out in accordance with generally approved statistical theory for small samples and of the least squares scheme. Therefore, any modification of upper-air data should eventually be based on the core data contained in the adjusted mean difference matrices$^{=}$. Here, of course, the assumption is made that during the intercomparison$^{=}$ the sounding systems performed 'typically', that there were no operator errors and that the software used does not significantly differ from that used at other sites. It is probably impossible to prove or disprove that this assumption is justified. In any case, without this assumption no intercomparison$^{=}$ could be carried out.

Since the number of comparisons$^{=}$ at a given level was small, it cannot be expected that the mean differences will differ from zero at a high level of significance. Nevertheless, the results do indicate that differences are systematic: Over a given pressure range, i.e. over a certain number of levels, the differences have equal sign and magnitude. As a consequence, data from different levels were combined to form one set which then was treated in the same way as the data at the individual levels. Due to the larger size of the statistical sample, the significance of the resulting mean difference became greater. The sets consisted of the combinations according to Table 3.

Appendix B contains the complete set of results in matrix form. The set is divided into two subsets – the results for individual levels and the results for groups of levels as defined in Table 3. The results for each subset are listed in the order: pressure (all),

Table 3

Grouping of standard level data for common data sets

Parameter	Level range
Pressure, temperature and wind	900 to 150 mb
	100 to 20 mb
Geopotential (relative error)	900 to 20 mb
Humidity	900 to 700 mb
	500 to 300 mb

temperature (day), temperature (night), relative humidity (day), relative humidity (night), geopotential (day), geopotential (night), wind speed (all) and wind direction (all). In every case, the primary difference matrix$^{=}$ is printed on the left-hand page (even page numbers), the corresponding adjusted mean difference matrix$^{=}$ on the right-hand page (odd page numbers). The elements of the matrices comprise four (in the case of adjusted mean difference matrices$^{=}$ three) items of information – the average difference between the sondes named at the head of the column and the beginning of the row, the standard deviation (or standard error) of this difference, the number of direct$^{=}$ comparisons$^{=}$ used in determining these values (primary difference matrices$^{=}$ only) and the significance of the result coded according to the list of symbols at the end of Section 4.2.

4.4. Graphic representation of results

Despite the rigour of the data in these matrices, it is rather difficult to visualize the results properly. Since graphs are more easy to interpret than numbers, an attempt has been made to represent the adjusted mean differences graphically. In order to do this, bench mark values must be defined to which the deviations can be referenced. Actually one could define a specific sonde as reference and plot the differences of the others with respect to this reference. This, however, would result in the unwanted implication that the values reported from a certain sonde are the meteorologically correct ones. In fact, it is impossible to find any meteorologically correct value, but it is possible to define a value which is realistic. Such values were computed and used in the graphical representation as reference for the adjusted mean differences.

As always, temperature, relative humidity and geopotential have been considered independently for day and night ascents, whilst for pressure and wind velocity, all available data have been analysed together. In order to reduce the influence of 'wild' data on the reference value, a three-stage analysis was developed. For each sonde type and parameter, the average root mean square of differences from the common mean for the range 900 to 100 mb (where data was available) were calculated. The five (in the case of wind, three) sondes with the lowest average root mean square differences were then used to calculate a new mean at each level. But even these 'good' sondes are not necessarily completely free of extreme data. Hence in the second stage of the analysis the standard deviation of the data from the five (or three) sondes forming the new common mean was calculated. Those sondes showing differences from the new common mean greater than 1.5 times the standard deviation of the 'good' sondes were eliminated at the level and a new common mean was generated on the basis of the remaining 'good' sondes. This common mean now represents the most likely centre for the distribution of data for the parameter at the given level.

Up until this point, the results have been obtained purely by analysis at a given level, each level being considered in isolation from the other levels. In order to supply a degree of vertical continuity to the results, the data were further subjected, in the third stage of the analysis, to cubic spline smoothing. The stiffness of the smoothing was determined for each parameter separately (although not for day and night analyses of the same parameter) so as to give nearly straight lines for the majority of sonde types. In these cases, the cubic spline 'curves' approximate to linear regressions. The smoothed difference always lies well within the standard deviation associated with the unsmoothed difference at that level.

With the reproduction of those graphs no implication is made that the vertical axis really represents zero deviation from the true meteorological value. Certainly it is highly probable that values closer to zero in the graph are also closer to the true meteorological value. However, it was neither the aim of the intercomparison= nor was the experiment designed to find the 'best' sonde, i.e. the sonde which reports data differing the least from the true values. The intention was to provide differences between the sounding systems in use whereby the data user could choose any sounding system as reference. For this reason, the graphs should be regarded only as more easily conceivable representation of the results contained in the adjusted mean difference matrices=.

5. *Results*

The findings presented here are only of limited practical value for some sonde types (the Graw RSG78, the Vaisala RS80 and to some extent the Airsonde), since modifications have been made to the sonde or the software since the experiment took place. Nevertheless, it has been decided that the results for these sondes should also be included in this report since they represent a substantial part of the intercomparison= and have led to the development of improved hard and software. This decision, however, brings with it the danger that radiosonde data users could apply corrections based on obsolete values. Therefore, before applying corrections based on this report to Airsonde, Graw RSG78 and Vaisala RS80 sondes, the data user is strongly advised to consult the manufacturer about the current state of the sonde and the software package.

Figures 2a–i depict the differences of the six investigated parameters – pressure, temperature, relative humidity, geopotential, wind direction and speed – from an arbitrarily defined common mean as a function of the logarithm of pressure (see Section 4.4). As always, temperature, relative humidity and geopotential have been considered independently for day and night ascents, whilst in the case of pressure and wind, all available data have been taken together. For reasons of clarity, each Figure is split into halves, the sondes being distributed alphanumerically between the halves. The scales used in the halves are identical. Again, it should be stressed that these results cannot be taken as absolute: they represent solely the differences of the sondes from some reasonably correct but nevertheless arbitrary common mean, and the meteorological value of any parameter at any level remains unknown. In the legend beneath each Figure, the five (or, in the case of wind speed and direction, three) sonde types with the least average root mean square differences are indicated by a ↑.

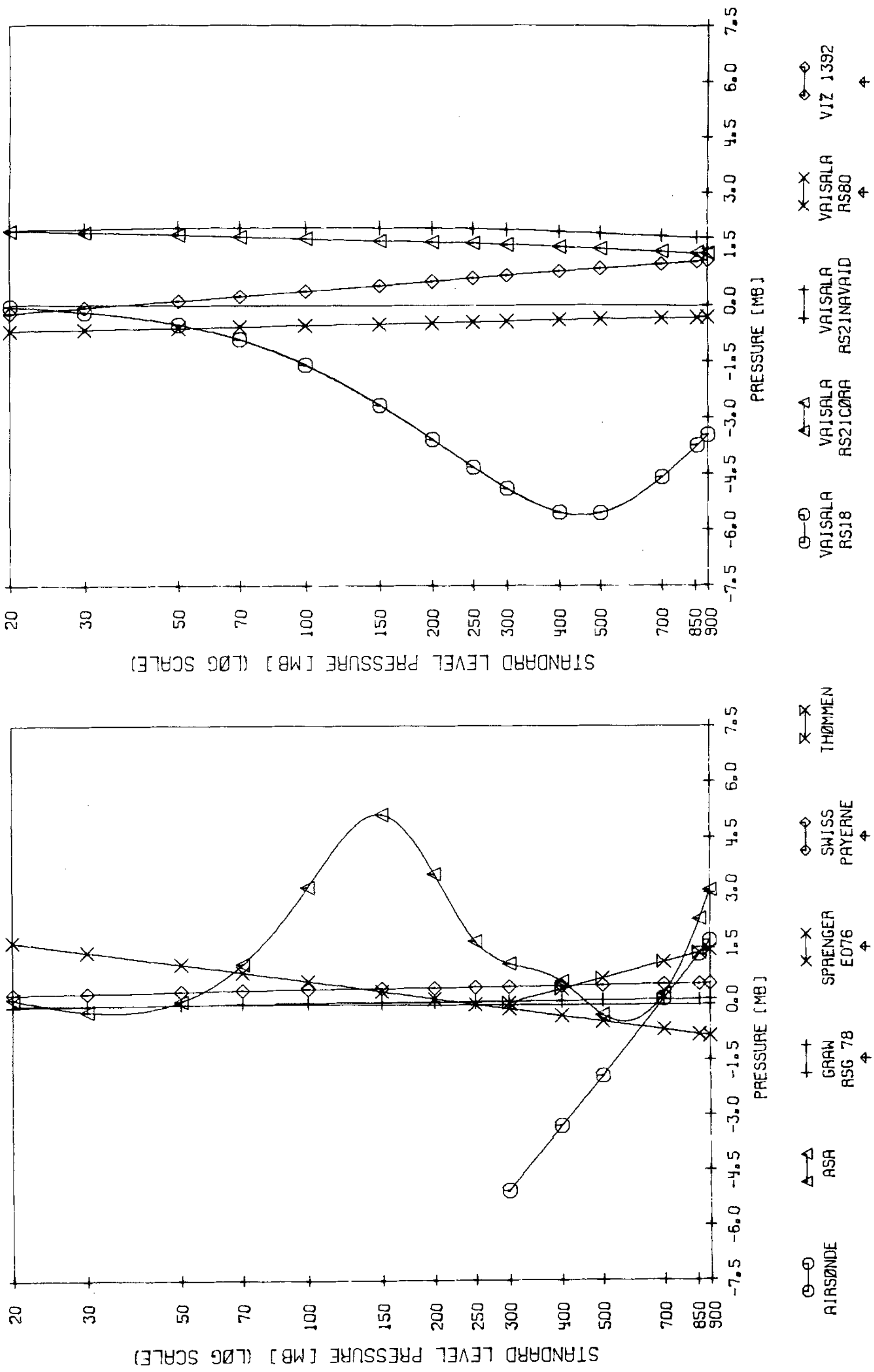

Figure 2a
Differences (sonde – common mean) for pressure (all ascents) as a function of log (p) (see Section 4.4).

In the discussion of the results which follows, a 'significant' difference between sondes implies that the difference is significant at a level of 1% or less (see Section 4.1).

5.1. *Pressure*

Differences in pressure data between various sonde types were derived from the time after launched (to the nearest 0.01 min, which corresponds to ±0.15 mb near the ground, less at higher levels) at which sondes on the same balloon (multiple ascents⁼) reached the given pressure level. Any difference in time of arrival at a given pressure implies a difference in pressure measurement, the magnitude of which can be deduced by resort to the time difference, the vertical velocity of the balloon and the hydrostatic equation. The number of comparisons⁼ possible is limited by the number of *multiple* ascents⁼ made – data from parallel ascents⁼ cannot, of course, be used. The accuracy of pressure differences deduced in this way depends further upon the synchronization of the clocks at launch and the accuracy of the clocks during the ascent, and the vertical velocity of the balloon must be estimated. Whilst clock synchronization and vertical velocity determination caused little problem, the accuracy of the clock during ascent was a source of difficulty in the case of the ASA, Swiss and Thommen sondes. These sondes use precision clockwork (in the case of the Swiss sonde, electrically driven) to sample PTU-data. Although the period for a full cycle is nominally 30 s (see Section 3), slight variations from sonde to sonde and during the ascent can and do occur without influencing the PTU data in any way. For technical reasons, this 30 s cycle had to be used as time base for these sondes and this has led to errors in determining the time after launch. Hence, a comparison of these pressure data with those of other sondes was severely limited. In addition, the Swiss sonde could be flown only with sondes transmitting in a band other than the 400–406 MHz band (see Section 3), thus restricting the number of sonde types with which this sonde's pressure data could be directly compared.

The differences from the common mean for most sonde types are in general less than ±1.5 mb (Fig. 2a). Notable exceptions are the Airsonde (which is specified only for ascents up to 300 mb), the Vaisala RS18 and the ASA sondes. In the case of the Airsonde, the difference increases up to 300 mb (and beyond), the pressure which it records at any time being lower than the common mean. The differences become only significant⁼, however, at the 400 mb and 300 mb levels, and then only with respect to the Graw RSG78, Vaisala RS21 and RS80 and VIZ 1392 sondes.

In the case of the Vaisala RS18, a non-linearity in the receiving equipment was suspected, but this proved to be in order. The differences between the Vaisala RS18 and the majority of other sondes are significant⁼ only at the 850, 500 and 400 mb levels. The differences between the Vaisala RS18 and the RS21 sondes, on the other hand, are significant⁼ at virtually every level up to 100 mb.

The bulge in the ASA data around 150 mb is due to the poor fit of the calibration data for the first aeroid capsule at the end of its range (100 mb). Above this level, the

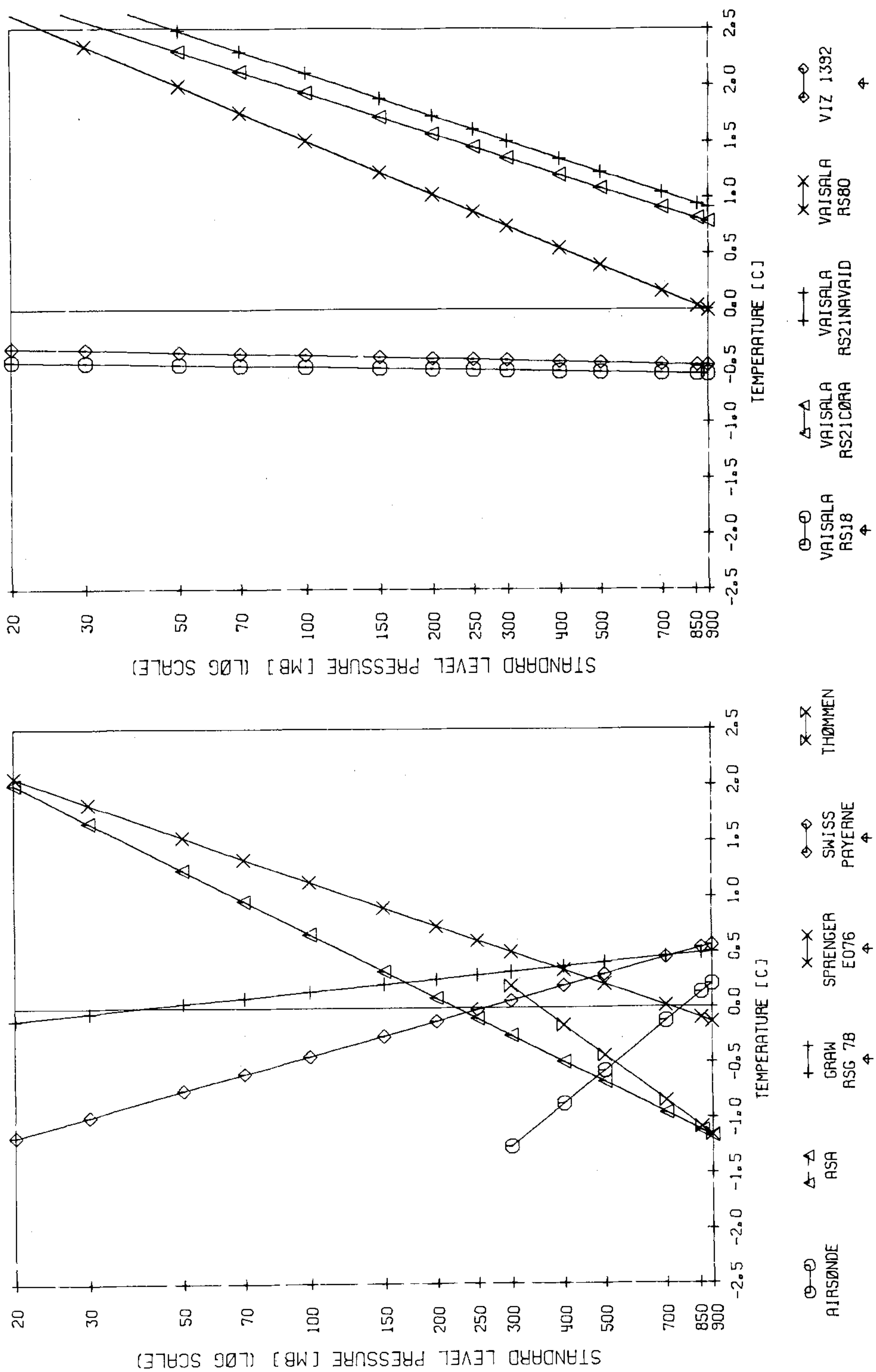

Figure 2b
As Fig. 2a but for temperature (day ascents).

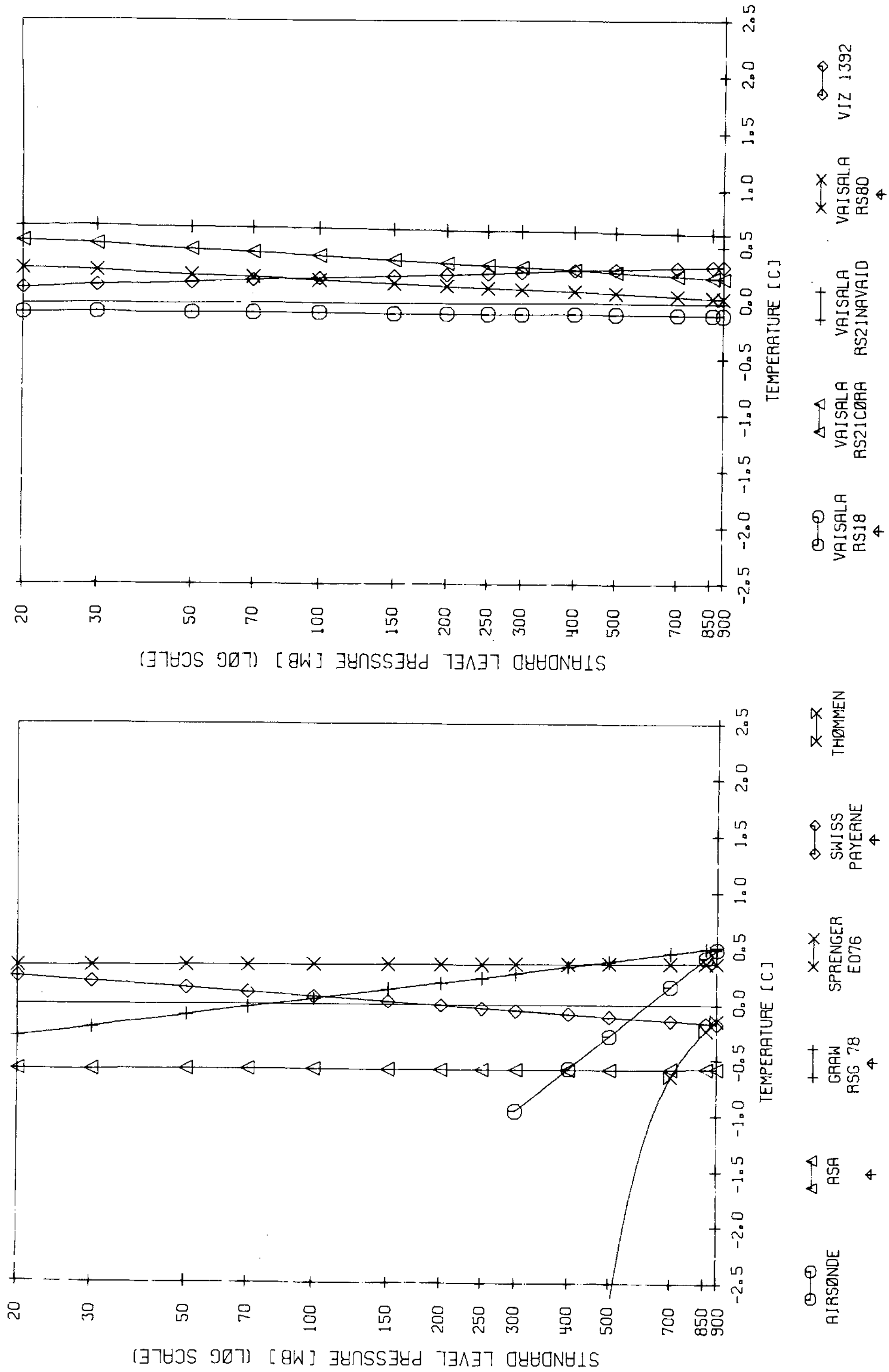

Fig. 2c
As Fig. 2a but for temperature (night ascents).

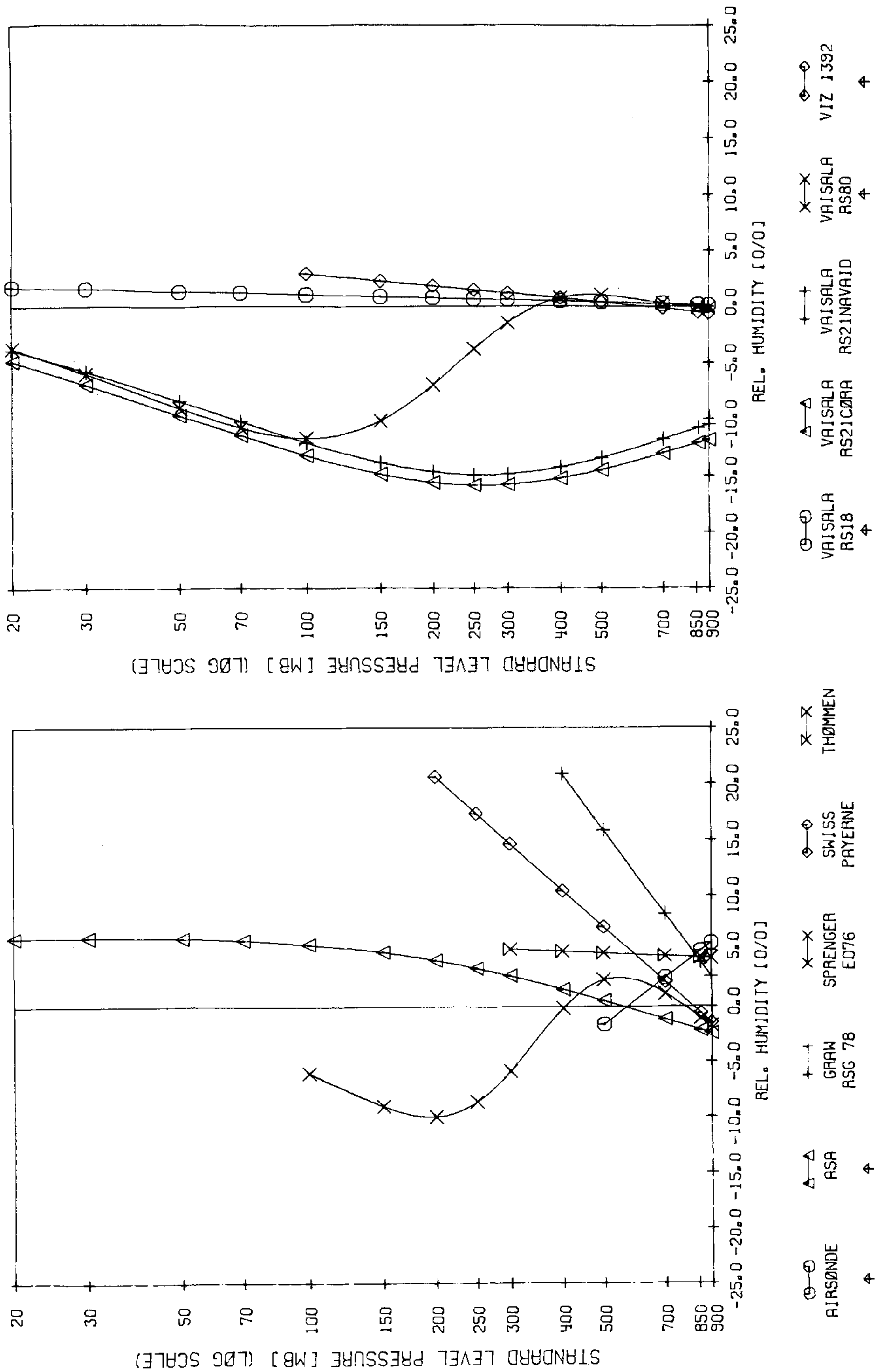

Figure 2d
As Fig. 2a but for relative humidity (day ascents).

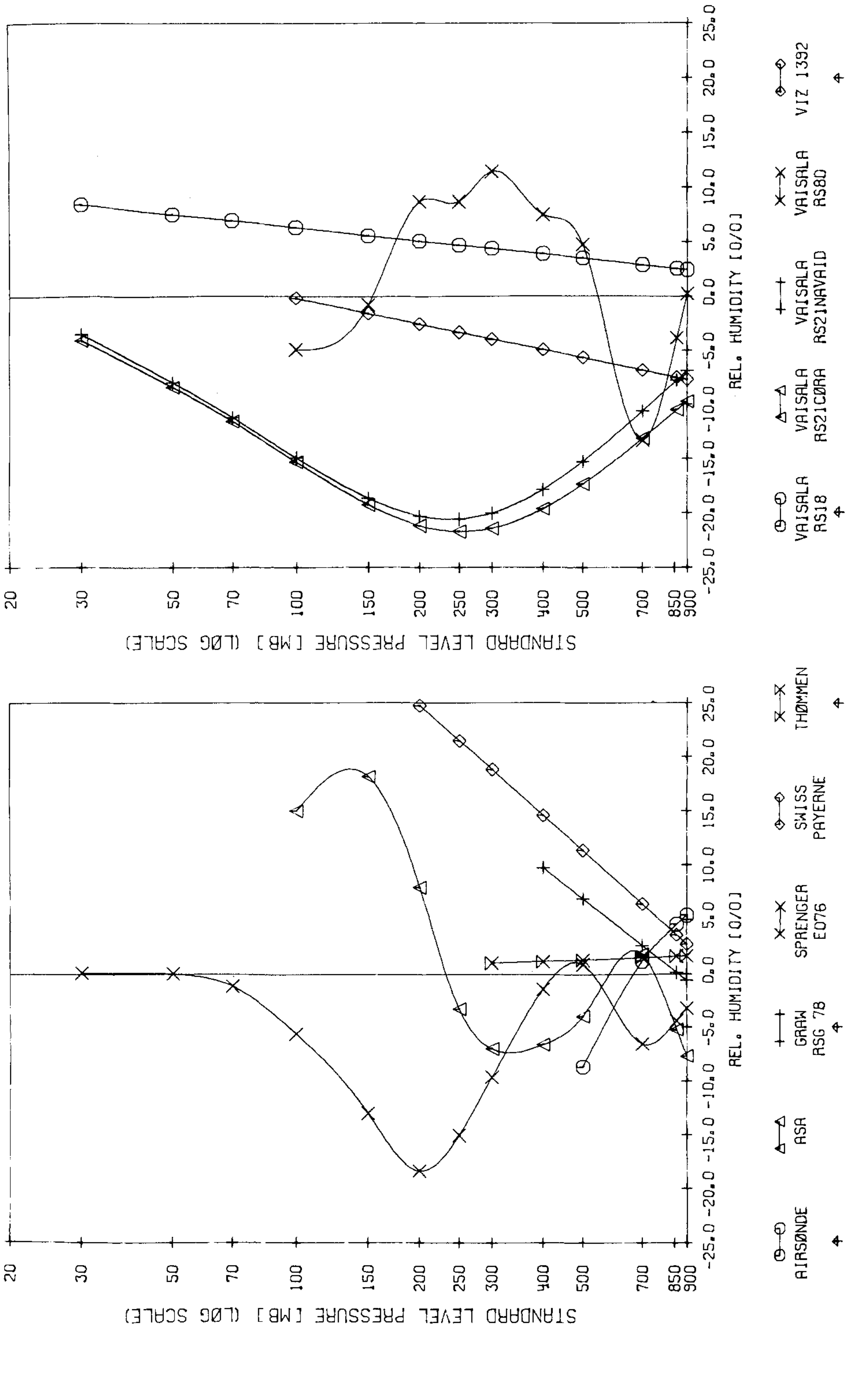

Figure 2e

As Fig. 2a but for relative humidity (night ascents).

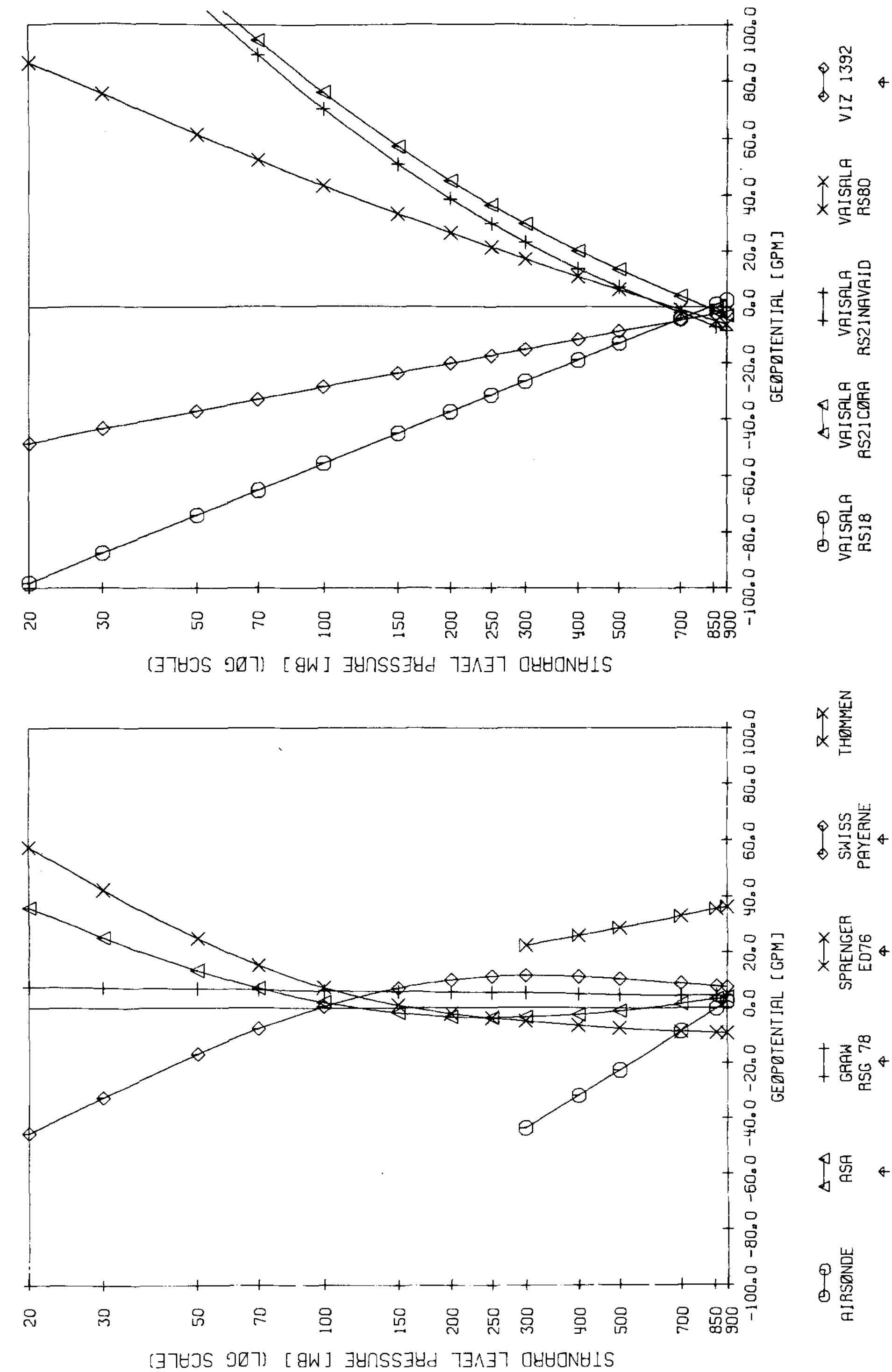

Figure 2f
As Fig. 2a but for geopotential (day ascents)

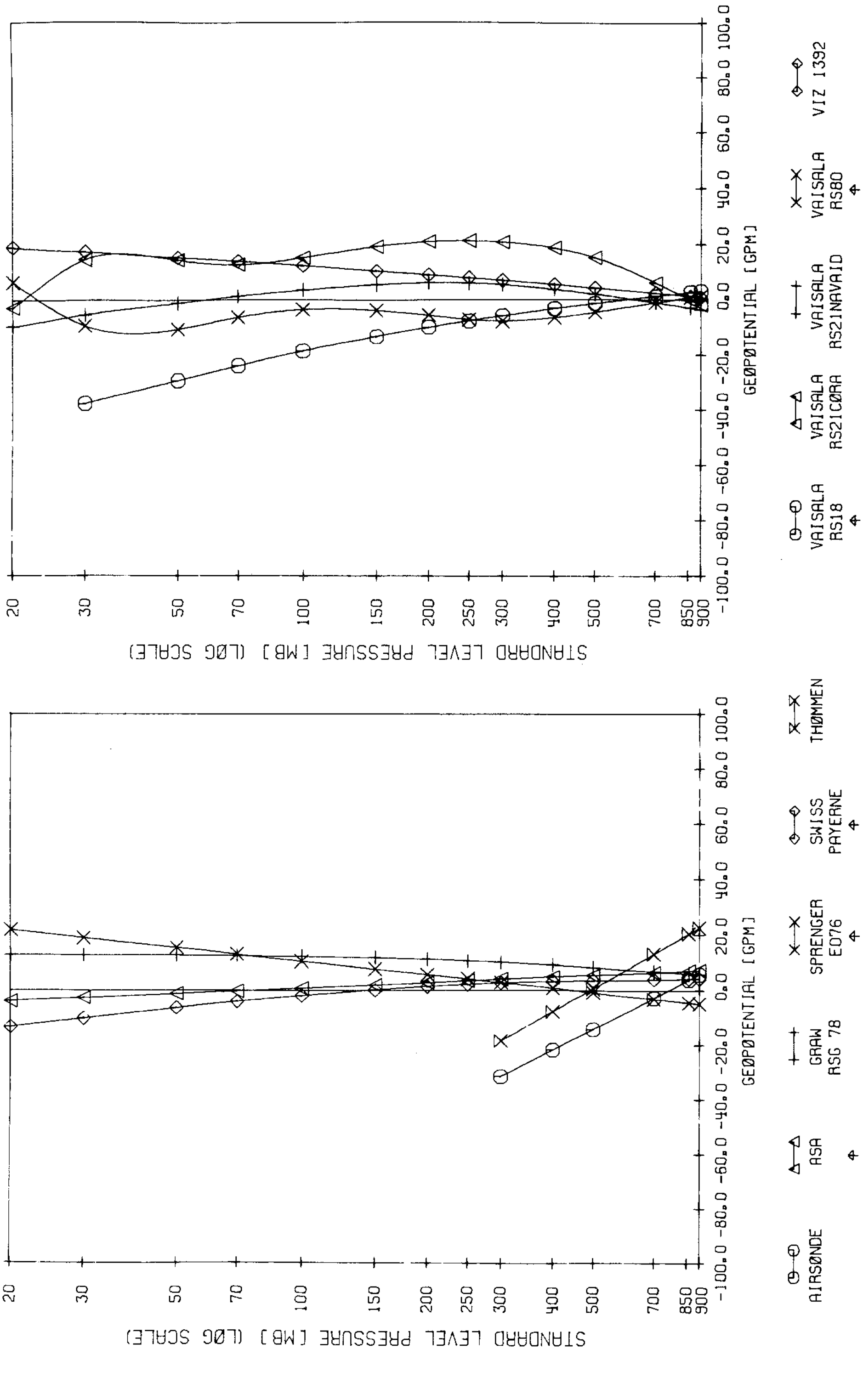

Figure 2g
As Fig. 2a but for geopotential (night ascents).

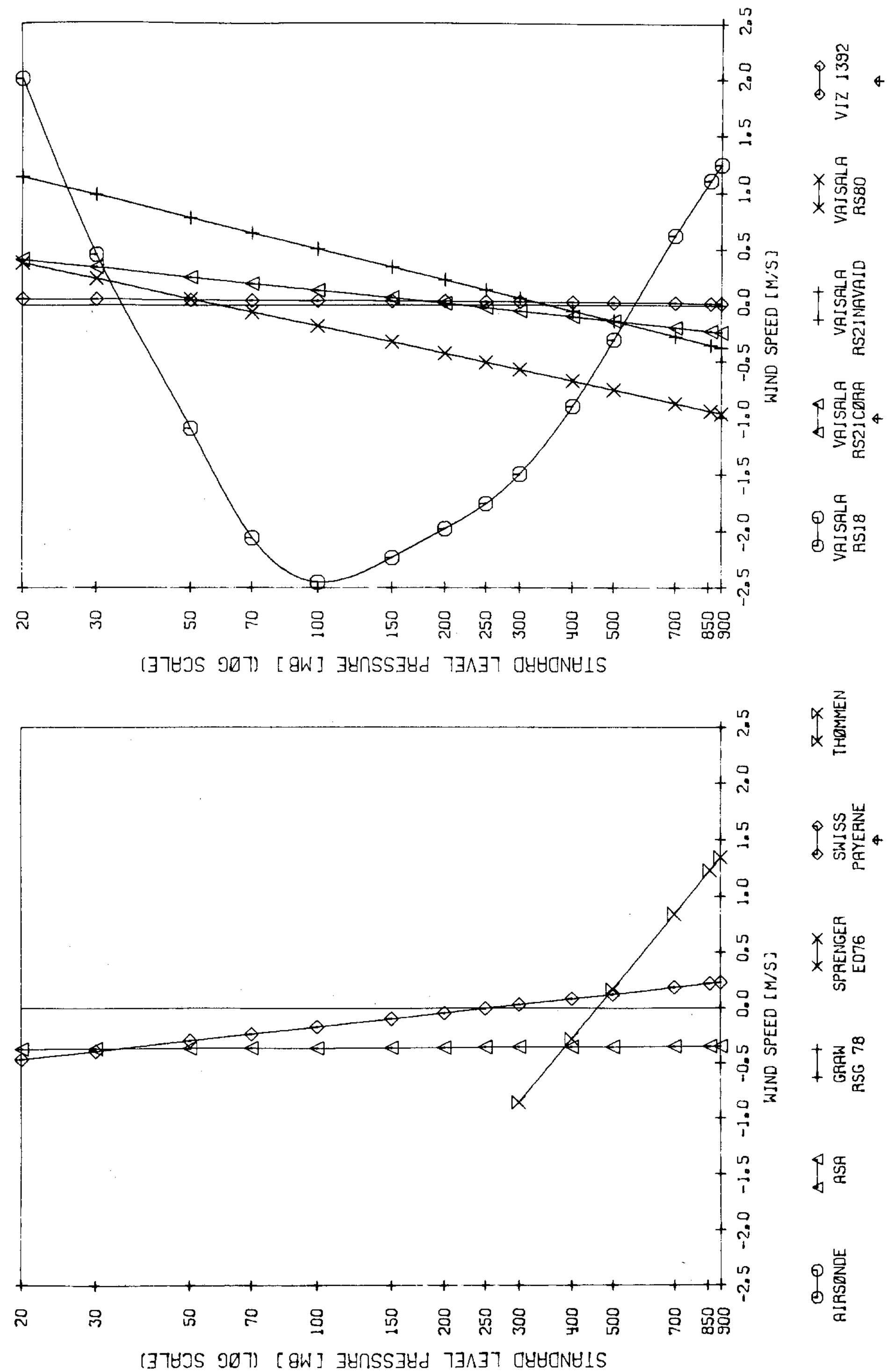

Figure 2h
As Fig. 2a but for wind speed (all ascents).

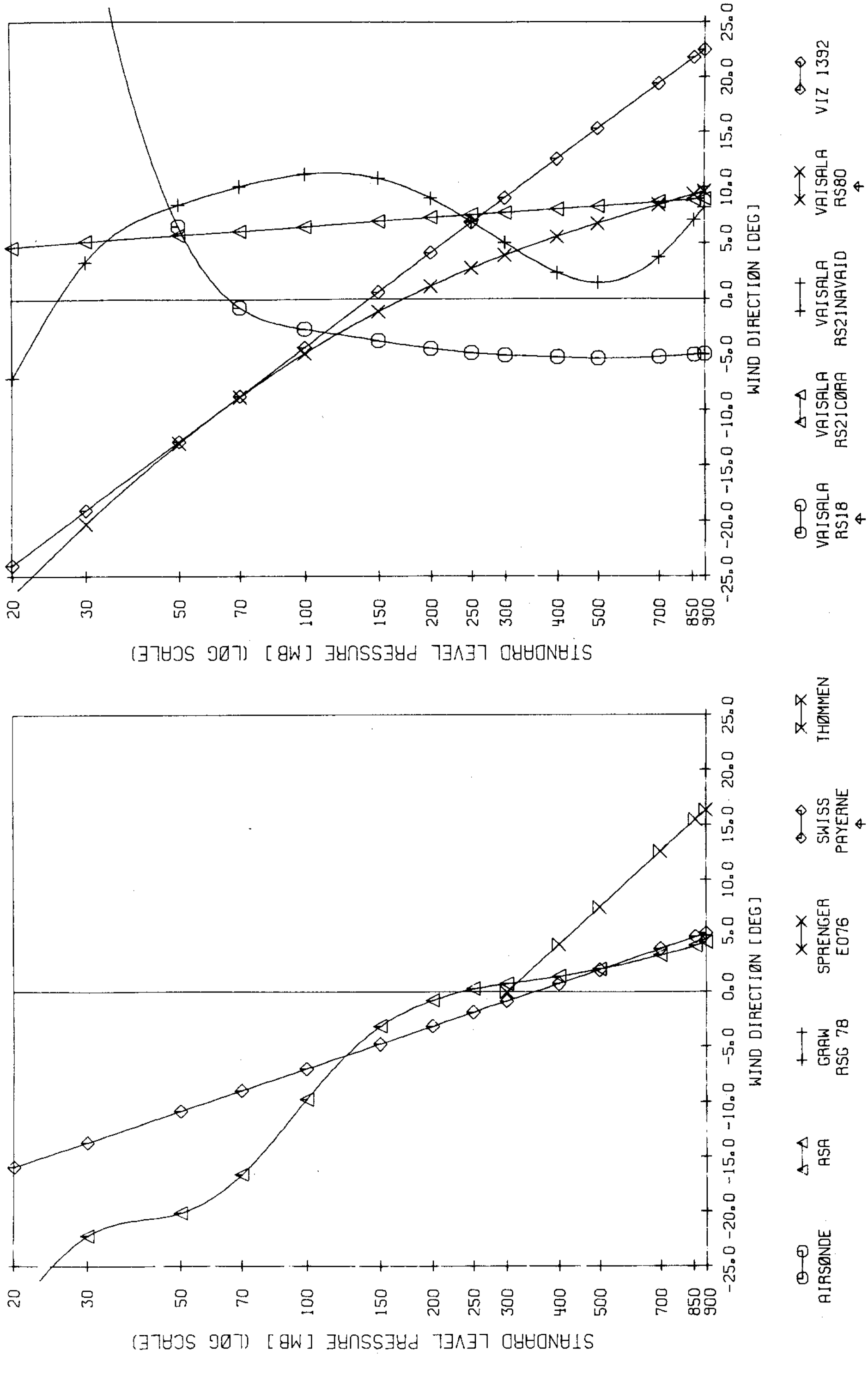

Figure 2i
As Fig. 2a but for wind direction (all ascents).

second pressure capsule provides pressure data and is clearly more consistent with the other sonde types. The difference from other sonde types is never significant$^{=}$, even at the 150 mb level. A similar discontinuity was discovered in data from the Swiss sonde (basically very similar to the ASA sonde) during the ASOND-78 intercomparison$^{=}$ (see Phillips *et al.*, 1981). Subsequent modifications to the software have solved this problem for the Swiss sonde as can be seen from the appropriate pressure difference curve.

The two analyses of the Vaisala RS21 data show an almost constant (but not identical) positive difference from the common mean. The difference of this sonde from the Vaisala RS80 and VIZ 1392 is significant$^{=}$ around the 100 mb level – otherwise, the differences are not significant$^{=}$. The differences between the Sprenger E076 on the one hand and the Graw RSG78, the Vaisala RS18, Vaisala RS80 and the VIZ 1392 sondes on the other are significant$^{=}$ at the 20 mb level, indicating a possible calibration error.

5.2. Temperature

Figure 2b shows the temperature differences for the various sondes for day ascents. The divergence of the temperature data with increasing height is particularly noteworthy, with the Vaisala RS21 and RS80 and the Sprenger E076 sondes showing above average, the Swiss sonde indicating below average temperatures. It should at this point be stressed that Sprenger make no radiation correction to their data since, according to the manufacturers, too few ascents have as yet been made to allow a meaningful statistical analysis of the data. The VIZ 1392 data, on the other hand, have been corrected in accordance with the procedure outlined by Richner and Phillips (1981), although the manufacturer does not specifically recommend such a correction.

In general, differences between sondes are significant$^{=}$ wherever the absolute difference is larger than about 1°C. It seems that the apparent underestimation of temperature by the Airsonde may be due to the fact that it is calibrated for a lower ascent velocity.

The differences of the sondes from the common mean for night ascents (Fig. 2c) are about a factor four less than for day ascents. The Airsonde is a notable exception showing very similar characteristics for both data subsets. Up to and including the 850 mb level, the Swiss sonde is the only one showing significant$^{=}$ differences from virtually all the other sondes. At 500 mb, the ASA and Thommen sondes show significant$^{=}$ differences from nearly all the other sondes (but not from each other), and above this level it is predominantly the Thomen and Airsonde which differ significantly$^{=}$ from the other sondes. The reason for the significant$^{=}$ difference between the Swiss and other sondes in the lowest regions of the atmosphere can easily be explained: the Swiss sonde was always launched 3 hours after the other sondes and hence the greater part of the difference is due to nocturnal radiative cooling of the lowest layers of the atmosphere, i.e. the difference is meteorological rather than systematic (see Section 4.1). This phenomenon is not observed in the case of the day ascents because the effects of the diurnal temperature variation cancel on average. The differences between the RS21 Cora and RS21 Navaid, whilst never being significant[=], are nevertheless surprisingly large considering that they represent two analyses of identical signals from the same sonde.

5.3. Relative humidity

Relative humidity data are often considered to be the least reliable radiosonde data (see, for instance, BROUSAIDES, 1973, or MCKAY, 1978) and this intercomparison[=] endorses that view. Figures 2d and 2e show the results of the intercomparison[=] for day and night ascents respectively. Among the ten radiosonde systems represented in this intercomparison[=], four different types of humidity sensors are employed. The ASA, Swiss, Thommen and Vaisala RS18 sondes all have bio-organic sensors; the first three use goldbeater's skin and the RS18 hair. Only the most optimistic radiosonde user can expect to get accurate relative humidity data from these sensors above the tropopause and the Swiss practice of discounting relative humidity data above 200 mb seems appropriate. The Airsonde and the Graw RSG78 sonde both use a second bead thermistor together with a water reservoir to measure wet bulb temperature. In these sondes, difficulties are to be expected during freezing of the wet bulb (release of latent heat). Difficulties also arise due to the strong pressure dependence of the psychrometric equation (at 300 mb and –40°C, a 0.5°C wet bulb depression corresponds to a 63% relative humidity). The Vaisala RS21 and RS80 sondes both use humicap sensors which should not suffer from the deficiencies of the previously mentioned sensors. Finally, the VIZ 1392 sonde makes use of a carbon element; this sensor is also incorporated in the Sprenger E076.

The Vaisala RS21 sonde seems to give lower than average relative humidities, the difference being typically in the range 10–15% for day ascents throughout the whole troposphere and lower stratosphere. The differences from most of the other sondes are also significant[=]. For night ascents, the deviation is even greater, the differences being once again significant[=] at all levels. Above 100 mb, the Vaisala RS21 as well as the Vaisala RS80 (both equipped with the humicap) are comparable only with the Vaisala RS18 and ASA sondes with their bio-organic sensors. It is to be expected that the two humicap sondes give more accurate data at those levels despite the graphical representation. The Vaisala RS80 sonde gives for both day and night ascents relative humidities which are closer to the common mean even in the troposphere than those of the Vaisala RS21. The Swiss sonde seems to overestimate the relative humidity and the differences from most other sondes become significant[=] at and above 300 mb. The Thommen and ASA sondes, whilst employing a mechanism for relative humidity measurement similar to that of the Swiss sonde, seem to fare somewhat better. A similar discrepancy in the Swiss sonde data was also noted in the ASOND-78 intercomparison[=] (PHILLIPS *et al.*, 1981). The VIZ 1392 shows only small deviations from the common mean in both day and night ascents and differences from other sondes are seldom significant[=]. The

Sprenger E076 sonde, which, as mentioned before, uses the same carbon element as the VIZ 1392 sonde (see BROUSAIDES, 1973), gives data which are significantly$^{=}$ different from the majority of other sondes near the tropopause where it shows very good agreement with the Vaisala RS21 both for day and night ascents. The two sondes equipped with wet bulb thermometers, the Airsonde and Graw RSG78 sonde, record humidity up to 500 and 400 mb respectively. The team operating the Airsonde developed a new evaluation procedure as a result of the preliminary results of SONDEX (see SCHALLER and KALTHOFF, 1982) and hence the differences of this sonde from the others are no longer significant$^{=}$. The Graw RSG78 sonde gives significantly$^{=}$ different values for relative humidity at the 500 and 400 mb levels for day ascents. The fact that the differences are positive and increase with height tends to indicate that the wet bulb depression is underestimated which in turn suggests insufficient ventilation of the wet bulb temperature sensor.

5.4. *Geopotential height*

Figures 2f and 2g show the differences in geopotential for the various sondes for day and night ascents respectively. Geopotential is a derived parameter calculated by numerical integration of the geopotential equation using profiles of virtual temperature (a function of temperature and, to a lesser extent, relative humidity) and pressure. So any discrepancy in geopotential could be due to discrepancies in any or all of the three basic meteorological parameters, or to inadequacies or inaccuracies in the integration software.

In the case of night ascents, the geopotentials as calculated from the various sonde data differ very little. The difference between the Thommen data and data from the majority of other sondes is significant$^{=}$ up to and including the 700 mb level. At higher levels, only the Airsonde shows any significant$^{=}$ difference from the other sondes. The maximum deviation from the common mean is shown by the Vaisala RS18 sonde at the 30 mb level; this sonde also displays the greatest negative deviation of any sonde above 250 mb. This conflicts somewhat with the geopotential given by the ASA sonde which, despite larger negative night temperature differences, is more consistent with other sondes than is the Vaisala RS18 sonde. This seems to indicate procedural inconsistencies between the Vaisala RS18 and the ASA evaluation methods which, incidentally, were both manual during SONDEX.

The day ascents cannot be dismissed so lightly. The Thommen sonde again shows significant$^{=}$ differences from virtually all other sondes up to and including the 400 mb level. The ASA, Graw RSG78, Sprenger E076 and Swiss geopotentials are not significantly$^{=}$ different from each other up to and including the 30 mb level. The Airsonde shows significant$^{=}$ differences from the other sondes above the 500 mb levels. The remaining sondes diverge markedly and virtually linearly with increasing height which, to a large extent, reflects the differences in temperature already discussed in Section 5.2. Despite similar differences from the common mean shown by the day temperature data for the Vaisala RS18 and VIZ 1392 sondes, the geopotential differences diverge more than is to be expected. Noteworthy are also the two evaluations of the Vaisala RS21 data. Whilst the Navaid is consistently warmer by about 0.15 °C, the Cora regularly records greater geopotentials although the opposite is to be expected. Near the ground (i.e. up to 700 mb) the differences between the two analyses are in fact significant⁼.

5.5. *Wind*

Although the determination of the wind profile using radiosondes is an integral part of radiosounding, a comparison⁼ of wind data does not wholly belong to a radiosonde intercomparison⁼ since wind finding is much more dependant on the locating of the radiosonde with ground equipment than on the radiosonde itself (see VOCKEROTH, 1975). There are, however, two exceptions to this general rule. Firstly, the Vaisala RS21 and RS80 both use the Omega navigation system for determining the position of the sonde. This undoubtedly has advantages when no rigid base is available for mounting a direction-finding antenna – on a ship for instance – and also at low elevation angles. The Omega signals are received by the sonde itself and relayed to the ground for analysis. Secondly, the ASA and Swiss sondes are equipped with a transponder which allows the radial distance of the sonde to be determined. This is also of importance at low elevation angles (RIEKER, 1978). Finally, it should be noted that the Airsonde, the Graw RSG78 and Sprenger E076 sondes did not deliver any wind data.

Figures 2h and 2i show the differences in wind speed and direction respectively for the various sonde systems. Although large differences between the various sondes were observed, these differences were virtually never significant⁼. Since differences in wind direction were expected to be small, wind speed and wind direction were handled as two completely independent parameters in this intercomparison⁼. Although the Vaisala RS18 showed only small differences in wind direction from the common mean up to 70 mb, the differences in wind speed were the greatest of any sonde. The VIZ 1392, on the other hand shows completely the opposite – small differences in wind speed but large differences in direction. As far as wind speed is concerned, there seems little to choose between the Omega and transponder equipped sondes on the one hand, and the other sondes: Wind speed differences from the common mean are in all cases less than about 1 m/s. In the case of wind direction, it could be argued that the choice of the Vaisala RS18 sonde as one of the reference sondes used in calculating a common mean is unfortunate. If this sonde were to be omitted, the positive to negative (with increasing height) trend of the ASA, Swiss, Vaisala RS80 and VIZ 1392 sondes would be much reduced. This would, however, result in large positive differences above 200 mb for the Vaisala RS21 Cora and Navaid analyses.

5.6. *Performance of individual sonde types*

On the following pages, the results for each of the participating sondes are summarized. The headings are identical to the names under which the sonde data was treated in the analysis; the exact sonde types are added in brackets. Please note that the information concerning wind is only valid for the sonde–ground equipment combination used during the comparison⁼. Also, the performance of the Omega system depends to some extent on the time of day and the position of the sonde relative to the Omega transmitters. Most sondes can be used with other ground installations where other wind-finding techniques apply.

AIRSD (Airsonde™)

P:

This sonde tends to underestimate the pressure above 700 mb. The error increases with height and reaches about −5 mb at 300 mb (i.e. when the pressure is 300 mb, the sonde records 295 mb).

T:

Temperature is underestimated above 700 mb with a maximum difference at 300 mb of −1.2°C (day) and −1.0°C (night). In both cases, temperature is slightly overestimated (by <0.5°C) near the ground.

U:

The sonde delivers usable humidity data up to 500 mb only. Differences decrease from +5% near the ground (day and night) to −2% (day) and −10% (night) at 500 mb. Data during the freezing of the wet bulb sensor are, or course, unreliable. The evaluation procedure for the humidity data has been extensively reworked by the operators team and, hence, are considerably different from data obtained using standard Airsonde software.

Geopotential:

The negative differences observed with the sonde reflect very clearly the negative temperature differences found for both day and night ascents: −50 gpm (day), and −30 gpm (night) at 300 mb.

Wind:

No data available.

General:

This sonde is only specified to 300 mb and its performance up to this level only has been discussed. It should be noted that the manufacturers recommend a lower ascent rate than that used during SONDEX. This may to some extent be responsible for the large differences in the temperature and humidity data.

Important Note:

New evaluation procedures have been developed based on the results of this intercomparison⁼. These might replace the software recommended at the time the field experiment was carried out. Therefore, before applying corrections based on the results presented here, users should check whether their software was effective in Spring 1981.

ASA (Höhenwettersonde 74)

P:

The first aneroid (range 1000 mb to 100 mb) seems to overestimate the pressure towards the end of its range by up to +6 mb (registering 156 mb at the 150 mb level). The second aneroid, on the other hand, shows much smaller differences.

T:

Temperature is underestimated during the day by around −1.2°C near the ground, whilst it is overestimated at higher levels by up to +2°C. At night, the sonde underestimates the temperature by −0.6°C throughout.

U:

For day ascents, the relative humidity is overestimated above 500 mb, reaching a maximum of +5% at 20 mb. For night ascents, the results are erratic.

Geopotential:

For day ascents, geopotential deviations are near to zero below 100 mb whereupon they gradually increase to around +30 gpm at 20 mb. For night ascents, differences from the common mean are within about ±10 gpm throughout.

Wind:

While wind speed agrees very well with the common mean, the wind direction shows increasingly negative differences with height, although it compares well with the Swiss, VIZ 1392 and Vaisala RS80 sondes.

General:

This sonde is nearly identical with the Swiss sonde. Hence, any difference between these two must be attributed to the calibration and evaluation procedures which do differ. It is believed – and this study supports this view – that the software used for the Swiss sonde is generally superior to that of the ASA sonde. At present, a new software is being developed for the ASA sonde.

GR78 (Graw RSG78)

P:

This sonde records pressure data very close to the common mean throughout.

T:

Temperature errors are similar for both day and night ascents: +0.5°C near the ground, changing to about −0.2°C at 20 mb.

U:

The sonde increasingly overestimates the relative humidity with height and reaches +20% (day) and +10% (night) at 20 mb. During freezing of the wet bulb sensor the data is unreliable. The positive differences may be due to the release of latent heat on freezing or insufficient ventilation of the sensor.

Geopotential:
The sonde shows larger differences from the common mean at night (maximum about +12 gpm) than for day ascents (about +5 gpm throughout).

Wind:
No data available.

General:
This sonde is not yet on the market: The instruments used during SONDEX were pre-production sondes. Since SONDEX took place, it has been decided that the wet bulb thermometer should be replaced by a carbon element for measuring humidity.

SP76 (Sprenger E076 Q 400)

P:
This sonde underestimates pressure near the ground by about −1 mb (giving 899 mb at the 900 mb level), but overestimates by about +1.5 mb at higher levels (giving 21.5 mb at 20 mb).

T:
For day ascents, temperature is overestimated throughout virtually the whole range, reaching a maximum of around +2°C at 20 mb. For night ascents, temperature is overestimated but this time by +0.4°C throughout.

U:
This sonde shows similar characteristics for both day and night ascents, the greatest differences being in the upper troposphere where they amount to −10% (day) and −20% (night).

Geopotential:
For day ascents, the differences from the common mean vary from −10 gpm at 900 mb to +50 gpm at 20 mb. For night ascents, differences are about 30% of the day-time differences.

Wind:
No wind data available.

General:
It is to be expected that other members of the E076 series will perform similarly.

SWISS ('Swiss sonde')

P:
The sonde records pressure data very close to the common mean throughout, the difference decreasing from +0.6 mb (recording 900.6 mb instead of 900 mb) near the ground to about +0.4 mb (20.4 mb instead of 20 mb). The sonde does not appear to suffer from the difficulties which its twin, the ASA sonde, experiences before pressure sensors are switched at around 100 mb.

T:

The sonde overestimates temperature by about +0.5°C near the ground, but underestimates it by about −1°C at 20 mb for day ascents. During night ascents, the difference is always less than 0.3°C – negative near the ground, positive at higher levels.

U:

The sonde increasingly overestimates relative humidity with height, the difference reaching +20% (day) and +25% (night) at 200 mb. This compares very unfavourably with the similar ASA sonde.

Geopotential:

Up to 150 mb, the sonde shows a practically constant deviation of +10 gpm for day ascents. Above this, the geopotential difference becomes increasingly negative (−45 gpm at 20 mb) reflecting the negative differences in temperature in the stratosphere. For night ascents deviations are about a third of the day-time values throughout.

Wind:

Wind speed differences from the common mean are typically less than ±0.5 m/s. The wind direction agrees well with the ASA sonde (also equipped with a transponder), the Vaisala RS80 (Omega) and the VIZ 1392.

General:

This sonde is nearly identical with the ASA sonde. Thus any difference in performance between the two sondes must be attributed to calibration and evaluation procedures which are, in fact, different.

THOMM (Thommen J-R 3.2)

P:

The sonde seems to overestimate pressure near the ground by +1.5 mb (recording 901.5 mb instead of 900 mb), but the error decreases to zero by the 300 mb level.

T:

Temperature is underestimated by more than −1°C near the ground, but this difference disappears by 400 mb during the day. During the night, the sonde exhibits inexplicably large deviations.

U:

The sonde records relative humidity slightly too high for both day (4%) and night (2%). In both cases, there is little variation with height.

Geopotential:

The sonde yields too high values for geopotential (+40 gpm at 900 mb decreasing to +20 gpm at 300 mb) for day ascents which is not to be expected from the temperature data. This disagreement is accentuated for the night ascents.

Wind:
Speed is overestimated by +1.5 m/s near the ground and underestimated by about −1 m/s at 300 mb. The wind direction agrees well with the VIZ 1392 and Vaisala RS80 data.

General:
This sonde is specified only up to 300 mb and its performance up to this level only has been discussed. This sonde is no longer on the market.

RS18 (Vaisala RS18)

P:
This sonde exhibits large negative differences of up to −5.5 mb (recording 494.5 mb instead of 500 mb). This is not due to non-linearity of the receiving equipment as was at one time suspected, and hence may be a result of poor calibration.

T:
This sonde shows a constant negative difference of around −0.5 °C for day ascents and −0.1 °C for night ascents.

U:
The RS18 relative humidity data varies very little from the common mean throughout for day ascents. For night ascents, the difference is positive and increases from +3% near the ground to +10% at 30 mb.

Geopotential:
The geopotential differences increase from 0 gpm near the ground to −100 gpm at 20 mb for day ascents. This is larger than to be expected purely from the temperature anomalies. Night differences are also greater than expected, reaching about −40 gpm at 30 mb. The geopotential data for this sonde were obtained by graphical methods which may be less accurate than numerical integration.

Wind:
The sonde shows the largest deviations of any sonde in wind speed. This is at least partly due to the graphical method employed for determining the wind. The good result for wind direction should be treated with suspicion since the Vaisala RS80, the Swiss and the ASA sondes which have more accurate wind finding systems all show similar deviations from the Vaisala RS18 data.

General:
Production of this sonde will cease within the next few years.

RS21C and RS21N (Vaisala RS21-12CN)

P:
Both analyses of this sonde seem to overestimate the pressure by between +1.5 and +2 mb, the difference increasing with height (recording 22mb at 20 mb). The Navaid over-

estimation is consistently greater than that of the Cora analysis, although this gradually decreases with height.

T:

The overestimation of temperature by this sonde increases from around +0.8 °C near the ground to more than +3 °C at 20 mb for day ascents. For night ascents, the positive difference is nearly a constant +0.6 °C throughout. The difference between Navaid and Cora analyses is particularly large for night ascents, being around 0.3 °C near the ground. The Navaid analysis always yields higher temperatures

U:

Both analyses of the Vaisala RS21 data indicate that the sonde severely underestimates the relative humidity in the troposphere by −10 to −15% for day ascents and −20% for night ascents. Lack of reliable data from other sondes means that in the stratosphere no judgement can be made on the performance of the humicap sensor.

Geopotential:

Both analyses overestimate the geopotential by up to +150 gpm at 20 mb for day ascents. For night ascents, geopotential differences are less than 20 gpm throughout. It should be noted that whereas the Navaid analysis results in higher temperatures than the Cora analysis, the Navaid geopotential differences are less than those for Cora. For night ascents, the difference between the two sets of data are surprisingly large.

Wind:

The Cora and Navaid analyses of the same (Omega) data show large deviations from one another. Although wind speed differences from the common mean are relatively small (<0.5 m/s for the Cora analysis) wind directions differ considerably from the transponder sondes as well as from the Vaisala RS80 (Omega) and the VIZ 1392.

General:

It is to be expected that the other members of the RS21 series (RS21-12C, RS21-13C) will perform similarly.

RS80 (Vaisala RS80-15N)

P:

This sonde underestimates the pressure by between −0.3 mb (indicating 899.7 mb at 900 mb) and −0.8 mb (19.2 mb at 20 mb).

T:

For day ascents, the temperature data differs only slightly from the common mean near the ground but deviations of +3 °C are in evidence at 20 mb. The difference at night is also positive and increases with height, attaining a maximum at 20 mb of about +0.3 °C.

U:

Unlike the Vaisala RS21, the RS80 (which uses the same humicap sensor) seems to yield humidity data much more consistent with the other sondes in the troposphere especially for day ascents. For night ascents, on the other hand, the RS80 overestimates relative humidity by up to +10% (at 300 mb).

Geopotential:
For day ascents, the sonde shows large positive differences of up to about +90 gpm at 20 mb as expected from the temperature measurements. For night ascents, differences are less than ±10 gpm throughout.

Wind:
Wind speed is underestimated by up to −1 m/s in the lower atmosphere although at higher levels the speed is more consistent with that from other sondes. There seem to be large deviations from the common mean wind direction, but the sonde agrees well with the ASA, Swiss and VIZ 1392 sondes.

General:
It is to be expected that the other sondes of this family (RS80-15, RS80-16) will show a similar performance.

Important Note:
At the time of SONDEX, this sonde was not yet on the market. The manufacturers have since modified the software package for this sonde at least partially as a consequence of the results found in this intercomparison= (ANTIKAINEN and HYVONEN, 1983). Therefore, users are strongly advised to consult the manufacturers before applying corrections based on results presented here.

V1392 (VIZ 1392 accu-lok)

P:
This sonde overestimates pressure at lower levels by +1.3 mb at 900 mb (recording 901.3 mb) and underestimates pressure by −0.3 mb at 20 mb (recording 19.7 mb).

T:
For day ascents, temperature is underestimated by a constant 0.5°C. The analysis of night-time ascents shows positive differences of between +0.4°C near the ground and +0.2°C at 20 mb.

U:
The sonde shows good agreement with the common mean up to 100 mb for day ascents, the maximum difference being about +3% at 100 mb. For night ascents, the difference of −9% near the ground declines to practically zero at 100 mb.

Geopotential:
For day ascents, the geopotential differences from the common mean are negative and increase up to −50 gpm at 20 mb. For night ascents, the differences are slightly positive reaching about +15 gpm at 20 mb.

Wind:
The differences in wind speed from the common mean are negligible. In wind direction,

the VIZ 1392 shows good agreement with the Vaisala RS80 (Omega) as well as with the Swiss and ASA (both transponder) sondes above about 500 mb.

General:
It is to be expected that other VIZ sondes with similar sensors (1393, 1395 etc.) will show a similar performance. The software used for the evaluation of temperature data did make corrections for radiation effects (RICHNER and PHILLIPS, 1981). Also, the results for humidity are valid only for the new type humidity sensor (yellow label, distributed since Summer 1980).

5.7. Recommended correction values

For the users of radiosonde data who would like to standardize upper-air data to a specific type of sonde, the rather complicated adjusted mean difference matrices= are not very practical. Also, deviations between two different sondes should be smoothed as a function of pressure, as was done for the graphical representations.

In this Section, recommended smoothed correction data are listed for the sonde types in wide use. This data was obtained by applying cubical spline smoothing to the appropriate data in the adjusted mean difference matrices= (see Section 4.3).

For data between the standard pressure levels indicated, i.e. for significant= levels, linear interpolation should provide adequate correction values. It should be noted that in some cases it might be advisable to recompute the geopotential height from the standardized data rather than use the corrections given.

It should be pointed out again that the values reproduced here are only correct if the raw data of the particular sondes is analysed using software packages which do not significantly differ from those used in the intercomparison.

Correction factors (day ascents) Standard: Swiss

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the Swiss sonde.

	RS18				RS21C				RS21N				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	4.0	1.1	−2	5	−.8	−.2	10	10	−1.2	−.4	9	16	−.7	1.1	−1	9
850	4.3	1.1	−1	7	−.9	−.3	12	9	−1.3	−.4	10	15	−.6	1.0	0	10
700	5.1	1.0	2	13	−.9	−.5	15	5	−1.3	−.6	14	11	−.6	.9	2	14
500	6.1	.9	7	24	−1.0	−.8	22	−3	−1.4	−.9	21	3	−.5	.8	7	20
400	6.0	.7	10	30	−1.1	−1.0	26	−9	−1.5	−1.2	25	−3	−.4	.7	10	23
300	5.4	.6	14	38	−1.1	−1.3	31	−18	−1.5	−1.5	30	−12	−.3	.5	13	27
250	4.8	.5	17	43	−1.2	−1.5	33	−25	−1.6	−1.6	32	−19	−.3	.4	16	29
200	4.0	.4	20	47	−1.2	−1.7	36	−35	−1.6	−1.9	35	−29	−.2	.3	19	30
150	3.1	.3	—	52	−1.3	−2.0	—	−50	−1.6	−2.1	—	−44	−.1	.2	—	31
100	2.0	.1	—	56	−1.4	−2.4	—	−76	−1.7	−2.5	—	−70	.0	−.0	—	29
70	1.3	−.1	—	58	−1.5	−2.7	—	−102	−1.7	−2.9	—	−97	.1	−.2	—	26
50	.9	−.3	—	57	−1.5	−3.0	—	−130	−1.7	−3.2	—	−125	.2	−.4	—	21
30	.5	−.5	—	55	−1.6	−3.5	—	−175	−1.7	−3.7	—	−171	.4	−.6	—	11
20	.3	−.7	—	53	−1.7	−3.9	—	−212	−1.7	−4.1	—	−209	.5	−.8	—	3

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (day ascents) Standard: RS 18

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the RS 18 sonde.

	Swiss				RS21C				RS21N				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	−4.0	−1.1	2	−5	−4.8	−1.4	12	5	−5.3	−1.5	11	11	−4.7	−.1	1	4
850	−4.3	−1.1	1	−7	−5.1	−1.4	12	2	−5.5	−1.5	11	8	−4.9	−.1	1	3
700	−5.1	−1.0	−2	−13	−6.0	−1.5	13	−8	−6.4	−1.6	12	−2	−5.7	−.1	0	1
500	−6.1	−.9	−7	−24	−7.1	−1.7	15	−27	−7.5	−1.8	14	−20	−6.5	−.1	0	−4
400	−6.0	−.7	−10	−30	−7.1	−1.8	16	−39	−7.5	−1.9	15	−33	−6.4	−.1	0	−7
300	−5.4	−.6	−14	−38	−6.5	−1.9	16	−57	−6.9	−2.1	15	−50	−5.7	−.1	−1	−11
250	−4.8	−.5	−17	−43	−6.0	−2.0	17	−68	−6.3	−2.2	16	−61	−5.0	−.1	−1	−14

200	−4.0	−.4	−20	−47	−5.3	−2.1	16	−82	−5.6	−2.3	15	−76	−4.2	−.1	−1	−17
150	−3.1	−.3	—	−52	−4.4	−2.3	16	−102	−4.7	−2.4	15	−96	−3.2	−.1	−1	−21
100	−2.0	−.1	—	−56	−3.4	−2.4	14	−132	−3.7	−2.6	13	−126	−2.0	−.1	−2	−27
70	−1.3	.1	—	−58	−2.7	−2.6	13	−160	−3.0	−2.8	11	−155	−1.1	−.1	—	−32
50	−.9	.3	—	−57	−2.4	−2.8	11	−187	−2.6	−3.0	10	−182	−.6	−.1	—	−37
30	−.5	.5	—	−55	−2.1	−3.0	9	−230	−2.2	−3.2	7	−226	−.1	−.1	—	−44
20	−.3	.7	—	−53	−2.0	−3.2	7	−265	−2.0	−3.4	6	−262	.2	−.1	—	−50

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (day ascents) Standard: RS21C

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the RS21C sonde.

	Swiss				RS18				RS21N				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	.8	.2	−10	−10	4.8	1.4	−12	−5	−.4	−.1	−1	6	.2	1.3	−11	−1
850	.9	.3	−12	−9	5.1	1.4	−12	−2	−.4	−.1	−1	6	.2	1.3	−12	1
700	.9	.5	−15	−5	6.0	1.5	−13	8	−.4	−.1	−1	6	.3	1.4	−13	9
500	1.0	.8	−22	3	7.1	1.7	−15	27	−.4	−.1	−1	6	.5	1.6	−15	23
400	1.1	1.0	−26	9	7.1	1.8	−16	39	−.4	−.1	−1	7	.7	1.7	−16	32
300	1.1	1.3	−31	18	6.5	1.9	−16	57	−.4	−.2	−1	7	.8	1.8	−17	45
250	1.2	1.5	−33	25	6.0	2.0	−17	68	−.4	−.2	−1	7	.9	1.9	−17	54
200	1.2	1.7	−36	35	5.3	2.1	−16	82	−.4	−.2	−1	6	1.0	2.0	−17	65
150	1.3	2.0	—	50	4.4	2.3	−16	102	−.3	−.2	−1	6	1.2	2.2	−17	81
100	1.4	2.4	—	76	3.4	2.4	−14	132	−.3	−.2	−1	6	1.4	2.3	−16	105
70	1.5	2.7	—	102	2.7	2.6	−13	160	−.2	−.2	−1	5	1.6	2.5	—	128
50	1.5	3.0	—	130	2.4	2.8	−11	187	−.2	−.2	−1	5	1.8	2.7	—	150
30	1.6	3.5	—	175	2.1	3.0	−9	230	−.1	−.2	−1	4	2.0	2.9	—	186
20	1.7	3.9	—	212	2.0	3.2	−7	265	−.0	−.2	−1	4	2.2	3.1	—	215

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (day ascents) Standard: RS21N

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the RS21N sonde.

	Swiss				RS 18				RS21C				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	1.2	.4	−9	−16	5.3	1.5	−11	−11	.4	.1	1	−6	.6	1.4	−10	−7
850	1.3	.4	−10	−15	5.5	1.5	−11	−8	.4	.1	1	−6	.6	1.4	−10	−5
700	1.3	.6	−14	−11	6.4	1.6	−12	2	.4	.1	1	−6	.7	1.5	−12	3
500	1.4	.9	−21	−3	7.5	1.8	−14	20	.4	.1	1	−6	.9	1.7	−14	16
400	1.5	1.2	−25	3	7.5	1.9	−15	33	.4	.1	1	−7	1.1	1.8	−15	26
300	1.5	1.5	−30	12	6.9	2.1	−15	50	.4	.2	1	−7	1.2	2.0	−16	38
250	1.6	1.6	−32	19	6.3	2.2	−16	61	.4	.2	1	−7	1.3	2.1	−16	47
200	1.6	1.9	−35	29	5.6	2.3	−15	76	.4	.2	1	−6	1.4	2.2	−16	59
150	1.6	2.1	—	44	4.7	2.4	−15	96	.3	.2	1	−6	1.5	2.3	−16	75
100	1.7	2.5	—	70	3.7	2.6	−13	126	.3	.2	1	−6	1.7	2.5	−15	99
70	1.7	2.9	—	97	3.0	2.8	−11	155	.2	.2	1	−5	1.8	2.7	—	122
50	1.7	3.2	—	125	2.6	3.0	−10	182	.2	.2	1	−5	1.9	2.9	—	146
30	1.7	3.7	—	171	2.2	3.2	−7	226	.1	.2	1	−4	2.1	3.1	—	182
20	1.7	4.1	—	209	2.0	3.4	−6	262	.0	.2	1	−4	2.2	3.3	—	212

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (day ascents) Standard: V1392

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the V1392 sonde.

	Swiss				RS 18				RS21C				RS21N			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	.7	−1.1	1	−9	4.7	.1	−1	−4	−.2	−1.3	11	1	−.6	−1.4	10	7
850	.6	−1.0	0	−10	4.9	.1	−1	−3	−.2	−1.3	12	−1	−.6	−1.4	10	5
700	.6	−.9	−2	−14	5.7	.1	0	−1	−.3	−1.4	13	−9	−.7	−1.5	12	−3
500	.5	−.8	−7	−20	6.5	.1	0	4	−.5	−1.6	15	−23	−.9	−1.7	14	−16
400	.4	−.7	−10	−23	6.4	.1	0	7	−.7	−1.7	16	−32	−1.1	−1.8	15	−26
300	.3	−.5	−13	−27	5.7	.1	1	11	−.8	−1.8	17	−45	−1.2	−2.0	16	−38
250	.3	−.4	−16	−29	5.0	.1	1	14	−.9	−1.9	17	−54	−1.3	−2.1	16	−47
200	.2	−.3	−19	−30	4.2	.1	1	17	−1.0	−2.0	17	−65	−1.4	−2.2	16	−59
150	.1	−.2	—	−31	3.2	.1	1	21	−1.2	−2.2	17	−81	−1.5	−2.3	16	−75
100	−.0	.0	—	−29	2.0	.1	2	27	−1.4	−2.3	16	−105	−1.7	−2.5	15	−99
70	−.1	.2	—	−26	1.1	.1	—	32	−1.6	−2.5	—	−128	−1.8	−2.7	—	−122
50	−.2	.4	—	−21	.6	.1	—	37	−1.8	−2.7	—	−150	−1.9	−2.9	—	−146
30	−.4	.6	—	−11	.1	.1	—	44	−2.0	−2.9	—	−186	−2.1	−3.1	—	−182
20	−.5	.8	—	−3	−.2	.1	—	50	−2.2	−3.1	—	−215	−2.2	−3.3	—	−212

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (night ascents) Standard: Swiss

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the Swiss sonde.

	RS 18				RS21C				RS21N				V11392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	4.0	−.1	0	1	−.8	−.4	13	6	−1.2	−.8	10	8	−.7	−.5	10	3
850	4.3	−.1	1	1	−.9	−.4	14	4	−1.3	−.8	11	7	−.6	−.5	11	3
700	5.1	−.0	4	3	−.9	−.4	20	−2	−1.3	−.8	17	5	−.6	−.5	13	2
500	6.1	−.0	8	5	−1.0	−.4	29	−12	−1.4	−.7	27	2	−.5	−.4	17	−1
400	6.0	.0	11	7	−1.1	−.4	34	−15	−1.5	−.7	33	−1	−.4	−.4	20	−2
300	5.4	.0	14	9	−1.1	−.4	40	−18	−1.5	−.7	39	−3	−.3	−.3	23	−4
250	4.8	.1	17	10	−1.2	−.4	43	−19	−1.6	−.7	42	−4	−.3	−.3	25	−6
200	4.0	.1	20	11	−1.2	−.4	46	−19	−1.6	−.7	45	−5	−.2	−.3	27	−8
150	3.1	.1	—	14	−1.3	−.4	—	−19	−1.6	−.6	—	−5	−.1	−.2	—	−10
100	2.0	.2	—	17	−1.4	−.4	—	−17	−1.7	−.6	—	−5	.0	−.2	—	−14
70	1.3	.2	—	20	−1.5	−.3	—	−17	−1.7	−.6	—	−5	.1	−.1	—	−18
50	.9	.2	—	23	−1.5	−.3	—	−21	−1.7	−.5	—	−5	.2	−.0	—	−22
30	.5	.3	—	27	−1.6	−.3	—	−25	−1.7	−.5	—	−5	.4	.0	—	−28
20	.3	.3	—	—	−1.7	−.3	—	−10	−1.7	−.5	—	−4	.5	.1	—	−32

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (night ascents) Standard: RS 18

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the RS 18 sonde.

	Swiss				RS21C				RS21N				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	−4.0	.1	0	−1	−4.8	−.3	12	5	−5.3	−.7	9	7	−4.7	−.4	10	2
850	−4.3	.1	−1	−1	−5.1	−.3	13	3	−5.5	−.7	10	6	−4.9	−.4	10	1
700	−5.1	.0	−4	−3	−6.0	−.4	16	−5	−6.4	−.7	14	2	−5.7	−.4	10	−1
500	−6.1	.0	−8	−5	−7.1	−.4	21	−17	−7.5	−.7	19	−3	−6.5	−.4	9	−6
400	−6.0	−.0	−11	−7	−7.1	−.4	24	−22	−7.5	−.7	22	−7	−6.4	−.4	9	−9
300	−5.4	−.0	−14	−9	−6.5	−.4	26	−27	−6.9	−.7	25	−11	−5.7	−.4	8	−13
250	−4.8	−.1	−17	−10	−6.0	−.4	26	−29	−6.3	−.7	25	−14	−5.0	−.4	8	−16

200	−4.0	−.1	−20	−11	−5.3	−.5	26	−31	−5.6	−.8	25	−16	−4.2	−.4	8	−19
150	−3.1	−.1	—	−14	−4.4	−.5	25	−32	−4.7	−.7	24	−19	−3.2	−.3	7	−24
100	−2.0	−.2	—	−17	−3.4	−.5	22	−34	−3.7	−.8	21	−22	−2.0	−.3	7	−31
70	−1.3	−.2	—	−20	−2.7	−.5	19	−36	−3.0	−.8	18	−25	−1.1	−.3	—	−38
50	−.9	−.2	—	−23	−2.4	−.6	16	−44	−2.6	−.8	16	−28	−.6	−.3	—	−44
30	−.5	−.3	—	−27	−2.1	−.6	12	−52	−2.2	−.8	12	−32	−.1	−.2	—	−55
20	−.3	−.3	—	—	−2.0	−.6	—	—	−2.0	−.8	—	—	.2	−.2	—	—

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (night ascents) Standard: RS21C

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the RS21C sonde.

	Swiss				RS 18				RS21N				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	.8	.4	−13	−6	4.8	.3	−12	−5	−.4	−.4	−3	2	.2	−.1	−2	−3
850	.9	.4	−14	−4	5.1	.3	−13	−3	−.4	−.4	−3	3	.2	−.1	−3	−1
700	.9	.4	−20	2	6.0	.4	−16	5	−.4	−.4	−3	7	.3	−.1	−6	4
500	1.0	.4	−29	12	7.1	.4	−21	17	−.4	−.4	−2	13	.5	−.0	−12	11
400	1.1	.4	−34	15	7.1	.4	−24	22	−.4	−.3	−2	15	.7	.0	−15	13
300	1.1	.4	−40	18	6.5	.4	−26	27	−.4	−.3	−1	15	.8	.0	−17	14
250	1.2	.4	−43	19	6.0	.4	−26	29	−.4	−.3	−1	15	.9	.1	−18	13
200	1.2	.4	−46	19	5.3	.5	−26	31	−.4	−.3	−1	15	1.0	.1	−19	12
150	1.3	.4	—	19	4.4	.5	−25	32	−.3	−.3	−1	14	1.2	.1	−18	9
100	1.4	.4	—	17	3.4	.5	−22	34	−.3	−.2	0	12	1.4	.2	−15	3
70	1.5	.3	—	17	2.7	.5	−19	36	−.2	−.2	0	11	1.6	.3	—	−1
50	1.5	.3	—	21	2.4	.6	−16	44	−.2	−.2	0	16	1.8	.3	—	−1
30	1.6	.3	—	25	2.1	.6	−12	52	−.1	−.2	−1	20	2.0	.4	—	−3
20	1.7	.3	—	10	2.0	.6	—	—	−.0	−.1	—	7	2.2	.4	—	−22

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (night ascents) Standard: RS21N

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the RS21N sonde.

	Swiss				RS 18				RS21C				V1392			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	1.2	.8	−10	−8	5.3	.7	−9	−7	.4	.4	3	−2	.6	.3	1	−5
850	1.3	.8	−11	−7	5.5	.7	−10	−6	.4	.4	3	−3	.6	.3	0	−4
700	1.3	.8	−17	−5	6.4	.7	−14	−2	.4	.4	3	−7	.7	.3	−4	−4
500	1.4	.7	−27	−2	7.5	.7	−19	3	.4	.4	2	−13	.9	.3	−10	−2
400	1.5	.7	−33	1	7.5	.7	−22	7	.4	.3	2	−15	1.1	.3	−13	−2
300	1.5	.7	−39	3	6.9	.7	−25	11	.4	.3	1	−15	1.2	.4	−16	−2
250	1.6	.7	−42	4	6.3	.7	−25	14	.4	.3	1	−15	1.3	.4	−17	−2
200	1.6	.7	−45	5	5.6	.8	−25	16	.4	.3	1	−15	1.4	.4	−18	−3
150	1.6	.6	—	5	4.7	.7	−24	19	.3	.3	1	−14	1.5	.4	−17	−5
100	1.7	.6	—	5	3.7	.8	−21	22	.3	.2	0	−12	1.7	.4	−15	−9
70	1.7	.6	—	5	3.0	.8	−18	25	.2	.2	0	−11	1.8	.5	—	−13
50	1.7	.5	—	5	2.6	.8	−16	28	.2	.2	0	−16	1.9	.5	—	−16
30	1.7	.5	—	5	2.2	.8	−12	32	.1	.2	1	−20	2.1	.5	—	−23
20	1.7	.5	—	4	2.0	.8	—	—	.0	.1	—	−7	2.2	.6	—	−28

* Note: the pressure corrections refer to both day and night ascents.

Correction factors (night ascents) Standard: V1392

It is recommended that the following compatibility corrections are added to the values given by the various sondes to make them compatible with the V1392 sonde.

	Swiss				RS 18				RS21C				RS21N			
	P*	T	U	H	P*	T	U	H	P*	T	U	H	P*	T	U	H
900	.7	.5	−10	−3	4.7	.4	−10	−2	−.2	.1	2	3	−.6	−.3	−1	5
850	.6	.5	−11	−3	4.9	.4	−10	−1	−.2	.1	3	1	−.6	−.3	0	4
700	.6	.5	−13	−2	5.7	.4	−10	1	−.3	.1	6	−4	−.7	−.3	4	4
500	.5	.4	−17	1	6.5	.4	−9	6	−.5	.0	12	−11	−.9	−.3	10	2
400	.4	.4	−20	2	6.4	.4	−9	9	−.7	−.0	15	−13	−1.1	−.3	13	2
300	.3	.3	−23	4	5.7	.4	−8	13	−.8	−.0	17	−14	−1.2	−.4	16	2
250	.3	.3	−25	6	5.0	.4	−8	16	−.9	−.1	18	−13	−1.3	−.4	17	2
200	.2	.3	−27	8	4.2	.4	−8	19	−1.0	−.1	19	−12	−1.4	−.4	18	3
150	.1	.2	—	10	3.2	.3	−7	24	−1.2	−.1	18	−9	−1.5	−.4	17	5
100	−.0	.2	—	14	2.0	.3	−7	31	−1.4	−.2	15	−3	−1.7	−.4	15	9
70	−.1	.1	—	18	1.1	.3	—	38	−1.6	−.3	—	1	−1.8	−.5	—	13
50	−.2	.0	—	22	.6	.3	—	44	−1.8	−.3	—	1	−1.9	−.5	—	16
30	−.4	−.0	—	28	.1	.2	—	55	−2.0	−.4	—	3	−2.1	−.5	—	23
20	−.5	−.1	—	32	−.2	.2	—	—	−2.2	−.4	—	22	−2.2	−.6	—	28

* Note: the pressure corrections refer to both day and night ascents.

6. *Conclusions and recommendations*

SONDEX proved to be a very worthwhile and necessary experiment. Although sophisticated systems are now available for making upper-air soundings, and much time and energy is spent on developing these systems, there are still great inconsistencies between the data from the various radiosondes.

Most sondes deliver acceptable pressure data. The calibration procedure of the Vaisala RS18 radiosonde should be checked. Modifications to the ASA sonde calibration and software, similar to those already carried out for the Swiss sonde, could possibly remove the large error at the end of the first aneroid capsule's range. The two low level sondes – Airsonde and Thommen – should also have their pressure calibration procedures checked.

It seems that all the sondes are equipped with sensors capable of measuring temperature accurately as is clearly shown by the generally good results for night-time ascents. The definition and application of solar radiation corrections remains the major problem associated with temperature measurement. This is especially true for the Vaisala RS21 and RS80 sondes.

The definition of generally applicable radiation corrections must come from carefully executed laboratory experiments on the one hand, and from radiosonde intercomparisons= both direct= (as in field experiments such as SONDEX) and indirect= (as in the statistical analyses of SPACKMANN, 1978 and MCINTURFF *et al.*, 1979) on the other.

The only method available for conclusively checking the validity of radiation corrections, however, remains the direct= intercomparison=.

The collecting of accurate humidity data is the second major problem faced by the radiosonde manufacturers. The use of wet bulb sensors to derive relative humidity is extremely restricted and thwart with difficulties. In the time which has elapsed since SONDEX, this method of humidity measurement in the Graw RSG78 sonde has been abandoned in favour of a carbon element. It seems that the use of bio-organic sensors should be restricted to below the 300 mb level and on no account should stratospheric humidity data be looked on as reliable. The humicap and carbon element seem to offer the best chances for obtaining accurate humidity data with cheap sensors. The vast difference between the Vaisala RS21 and RS80 sondes, both of which employ the humicap sensor, shows that a great deal of work needs to be done on determining transfer equations etc. before the humicap realizes its full potential.

A software intercomparison= seems necessary, especially since systems giving similar pressure, temperature and humidity profiles are inconsistent with respect to geopotential height.

Wind data are in general acceptable, at least below the tropopause. Some inconsistencies between data from different sondes come undoubtedly from the various smoothing procedures employed, together with differences in interpolation methods (see VOCKEROTH, 1975). A software intercomparison= could also lead to the laying down of guidelines for wind evaluation.

Sondes are continually being improved or replaced – two sondes, the Vaisala RS80 and the Graw RSG78 made their debut in Payerne. As pointed out in Section 5, caution should be exercised when corrections based on this report are applied to these new sondes; they might well have been improved since the experiment took place. Because of this continuous process, radiosonde intercomparisons⁼ along the lines of SONDEX should become a regular feature of the international activities encouraged by the WMO.

Acknowledgments

The authors are greatly indebted to all those who took part in SONDEX, especially V. Antikainen and his team from Vaisala, Dr E. Schaller and N. Kalthoff from Bonn University, Dr H. Tiefenau and colleagues from Albin Sprenger KG GmbH & Co., and Dr E. Schöllmann and his team from the German Weather Service (DWD) who all travelled to Payerne with their equipment. Without their valuable co-operation, the field experiment could not have been carried out. Thanks also are due to the leaders of the Swiss Groups, to Captain H. Schneebeli and his troops of the Artillery Weather Service, and Dr A. Ohmura and his team from the Institute of Geography, ETH. Particularly we are indebted to Dr J. Rieker and his staff at the Aerological Station in Payerne for their generous accommodation of the field experiment. Further thanks go to the Army Weather Service, to the Group of General Staff Services, and to the Defence Technology and Procurement Group of the Swiss Army for the loan of equipment and support of the project. Also we are indebted to Dr J. Joss from the Osservatorio Ticinese of the Swiss Meteorological Institute for his valuable co-operation in solving ground check and radio interference problems. W. Stahel of the Group for Stochastics, ETH, has supported the statistical analysis with many embarrassing questions and valuable remarks which is gratefully acknowledged. Finally we wish to thank very specially Dr Th. Gutermann, head of research at the Swiss Meteorological Institute in Zurich, for initiating, and for his meticulous planning, directing and administrating the project. This research was funded in part by the Swiss National Science Foundation which is also gratefully acknowledged.

Draft versions of this report were submitted to the Observing System Division of the World Weather Watch (WWW) for comments. Special thanks go to the board of referees which was subsequently appointed by this Division; its valuable suggestions have been duly considered in this report.

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APPENDICES

Appendix A: List of analysed SONDEX radiosonde ascents groupings

Ascent	Date	Time	Last available level (mb) P	T	U	wind
B807	20.04.81	10:45	70	30	30	—
A907	20.04.81	11:45	10	10	200	10
B007	20.04.81	15:40	10	10	10	—
H007	20.04.81	15:40	10	10	30	20
K007	20.04.81	15:40	10	10	10	30
A008	20.04.81	17:45	20	20	200	20
C008	20.04.81	17:45	700	20	100	50
B009	21.04.81	08:45	10	10	10	—
D009	21.04.81	08:45	10	10	10	30
L009	21.04.81	08:45	850	850	850	—
C010	21.04.81	10:50	200	200	200	200
M010	21.04.81	10:50	150	150	150	250
A910	21.04.81	11:45	20	20	200	20
H011	21.04.81	14:45	20	20	20	—
K011	21.04.81	14:45	20	20	100	—
L011	21.04.81	14:45	100	100	500	—
M011	21.04.81	14:45	150	150	150	150
C012	21.04.81	19:45	10	10	100	20
M012	21.04.81	19:45	250	250	250	250
D013	21.04.81	20:45	10	10	10	50
I013	21.04.81	20:45	10	10	400	20
L013	21.04.81	20:45	700	700	700	—
M916	22.04.81	08:00	200	200	200	250
H016	22.04.81	08:45	20	20	200	30
K016	22.04.81	08:45	20	20	200	20
D017	22.04.81	10:00	10	10	10	—
M017	22.04.81	10:00	250	250	250	250
A917	22.04.81	11:45	10	10	200	20
C018	22.04.81	14:45	10	10	100	20
D018	22.04.81	14:45	10	10	10	—
L018	22.04.81	14:45	200	200	500	—
M818	22.04.81	16:30	500	500	500	500
A918	22.04.81	17:45	10	10	200	10
C020	22.04.81	20:45	100	100	100	100
H020	22.04.81	20:45	100	100	250	250
K020	22.04.81	20:45	100	100	100	100
M020	22.04.81	20:45	700	700	700	—
A920	22.04.81	23:45	10	10	200	10

Ascent	Date	Time	Last available level (mb) P	T	U	wind
B021	23.04.81	03:15	10	10	10	—
A921	23.04.81	05:45	20	20	200	20
C022	23.04.81	08:45	10	10	100	20
I022	23.04.81	08:45	10	10	10	20
M022	23.04.81	08:45	200	200	200	700
A822	23.04.81	11:45	10	10	200	10
M922	23.04.81	12:00	200	200	200	700
H023	23.04.81	14:45	20	20	200	50
K023	23.04.81	14:45	20	20	200	20
M023	23.04.81	14:45	250	250	250	700
A024	23.04.81	17:40	250	250	250	250
C024	23.04.81	17:40	250	250	250	250
D024	23.04.81	17:40	250	250	250	250
M924	23.04.81	19:15	200	200	200	300
D025	23.04.81	20:45	50	50	50	—
L025	23.04.81	20:45	150	150	500	—
M025	23.04.81	20:45	250	250	250	250
A925	23.04.81	23:45	10	10	200	10
C026	24.04.81	02:45	10	10	100	20
F026	24.04.81	02:45	—	10	400	—
A926	24.04.81	05:45	10	10	200	30
B027	24.04.81	09:05	10	10	10	10
M027	24.04.81	09:05	200	200	200	200
A827	24.04.81	11:45	10	10	200	10
M927	24.04.81	12:05	200	200	200	200
C028	24.04.81	14:30	10	10	100	20
H028	24.04.81	14:30	10	10	10	20
K028	24.04.81	14:30	10	10	150	200
D029	24.04.81	14:35	10	10	10	—
F029	24.04.81	14:35	10	10	400	—
L829	24.04.81	16:25	200	200	500	—
A929	24.04.81	17:45	10	10	200	10
D030	24.04.81	20:45	20	20	20	20
F030	24.04.81	20:45	10	10	400	—
I030	24.04.81	20:45	10	10	100	70
A930	24.04.81	23:45	20	20	200	20
H031	25.04.81	02:45	10	10	10	10
K031	25.04.81	02:45	10	10	30	20
L031	25.04.81	02:45	100	100	500	—
A931	25.04.81	05:45	10	10	200	70
D032	25.04.81	08:45	20	20	20	—
I032	25.04.81	08:45	10	10	10	50
L032	25.04.81	08:45	70	70	500	—
A932	25.04.81	11:45	10	10	200	20

Ascent	Date	Time	Last available level (mb) P	T	U	wind
B033	25.04.81	14:45	10	10	10	10
D033	25.04.81	14:45	10	10	10	—
A933	25.04.81	17:45	20	20	200	20
B734	25.04.81	20:45	10	10	10	10
A834	25.04.81	23:45	30	30	200	30
B034	26.04.81	03:00	200	10	10	10
C034	26.04.81	03:00	—	20	100	20
A934	26.04.81	05:45	10	10	200	10
F035	26.04.81	08:45	10	10	400	—
G035	26.04.81	08:45	20	20	20	—
A935	26.04.81	11:45	70	70	200	70
F036	26.04.81	14:45	20	20	400	—
G036	26.04.81	14:45	20	20	20	—
A936	26.04.81	17:45	10	10	200	10
C037	26.04.81	20:45	10	10	100	30
F037	26.04.81	20:45	20	20	400	—
G037	26.04.81	20:45	10	10	10	—
A937	26.04.81	23:45	10	10	200	10
C038	27.04.81	03:00	10	10	100	20
A938	27.04.81	05:45	10	10	200	10
C039	27.04.81	08:45	10	10	100	—
F039	27.04.81	08:45	10	10	400	—
G039	27.04.81	08:45	20	20	20	—
H039	27.04.81	08:45	10	10	250	20
K039	27.04.81	08:45	10	10	250	30
L839	27.04.81	10:25	100	100	500	—
A939	27.04.81	11:45	20	20	200	30
C040	27.04.81	14:35	20	20	100	30
D040	27.04.81	14:35	20	20	20	—
F041	27.04.81	14:35	10	10	400	—
I041	27.04.81	14:35	10	10	150	10
L041	27.04.81	14:35	700	700	700	—
A941	27.04.81	17:45	10	10	200	100
A842	27.04.81	23:45	10	10	200	10
D042	28.04.81	01:45	30	30	30	30
G042	28.04.81	01:45	10	10	10	—
A942	28.04.81	05:45	10	10	200	10
C043	28.04.81	08:40	20	20	100	20
F043	28.04.81	08:40	10	10	400	—
I043	28.04.81	08:40	20	20	150	20
L043	28.04.81	08:40	250	250	700	—
C044	28.04.81	08:45	300	20	100	—
G044	28.04.81	08:45	10	10	10	—
A944	28.04.81	11:45	10	10	200	10

Ascent	Date	Time	Last available level (mb) P	T	U	wind
D045	28.04.81	14:45	10	10	10	—
F045	28.04.81	14:45	10	10	400	—
H045	28.04.81	14:45	10	10	10	10
K045	28.04.81	14:45	10	10	100	10
A945	28.04.81	17:45	30	30	200	30
C046	28.04.81	20:30	10	10	100	20
D046	28.04.81	20:30	30	30	30	—
G046	28.04.81	20:30	—	10	10	—
F047	28.04.81	20:35	10	10	400	—
H047	28.04.81	20:35	10	10	10	10
K047	28.04.81	20:35	10	10	200	10
L047	28.04.81	20:35	150	150	500	—
A947	28.04.81	23:50	10	10	200	10
G048	29.04.81	02:45	10	10	250	—
I048	29.04.81	02:45	50	50	50	70
A948	29.04.81	05:45	70	70	200	400
F049	29.04.81	08:45	10	10	400	—
H049	29.04.81	08:45	10	10	10	10
K049	29.04.81	08:45	10	10	70	20
L049	29.04.81	08:45	70	70	500	—
A949	29.04.81	11:45	10	10	200	20
C050	29.04.81	14:35	20	20	100	20
D050	29.04.81	14:35	10	10	10	—
I050	29.04.81	14:35	10	10	10	70
L050	29.04.81	14:35	70	70	500	—
C051	29.04.81	14:40	10	10	100	—
A951	29.04.81	17:45	10	10	200	10
C052	29.04.81	20:35	10	10	100	20
L052	29.04.81	20:35	250	250	500	—
A053	29.04.81	23:45	10	10	200	10
C053	29.04.81	23:45	10	10	100	10
D053	29.04.81	23:45	10	10	10	—

Sondes:

A	Swiss
B	ASA
C	VIZ 1392
D	Vaisala RS18
F	Graw RSG78
G	Sprenger E076
H	Vaisala RS21 (CORA)
I	Vaisala RS80
K	Vaisala RS21 (NAVAID)
L	AIRSONDE
M	Thommen

Note: 'Sondes' H and K represent two different analyses of identical data from the same sonde.

Appendix B. Primary and adjusted mean differences

This Appendix contains the complete set of results in matrix form. The set is divided into two subsets – the results for individual levels and the results for groups of levels as defined in Table 3. In every case, the primary difference matrix⁼ (see Section 4.2) is printed on the left-hand page (even page numbers), the corresponding adjusted mean difference matrix⁼ (see Section 4.3) on the right-hand side (odd page numbers). The elements of the primary difference matrices comprise four items of information – the primary difference between the sonde named at the head of the column and the sonde named at the beginning of the row ($\bar{x}_{ik}$), the standard deviation of this difference ($_x\sigma_{ik}$), the number of direct⁼ intercomparisons⁼ used in determining the values (n_{ik}) and the significance (s_{ik}, where \$ indicates 0.1%, * 1%, + 2% and : 5%, this item being omitted if the result is not significant at the 5% level), arranged according to the format

$$\begin{matrix} \bar{x}_{ik} & s_{ik} \\ _x\sigma_{ik} & n_{ik} \end{matrix}$$

The elements in the adjusted mean difference matrix comprise three items of information – the adjusted mean difference ($\tilde{x}_{ik}$), the standard error ($_x\tilde{\sigma}_{ik}$) and the significance ($\tilde{s}_{ik}$) thus:

$$\begin{matrix} \tilde{x}_{ik} & \\ _x\tilde{\sigma}_{ik} & \tilde{s}_{ik} \end{matrix}$$

CONTENTS

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 900 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	-.10 1.41 4	... .	... .	1.00 .42 2	-4.05 5.63 6	0.00 1.99 4	-.10 2.18 4	-1.38 : .94 5	.05 .91 4
ASA	... .	... .	... .	... .	... .	-7.35 ... 1	... .	-2.35 ... 1	-4.10 ... 1	... .	... .
GR 78	.10 1.41 4	... .	... .	-2.50 2.20 4	... .	... .	-1.00 1.51 3	-.15 1.02 4	.45 .70 4	.27 1.01 3	-.33 .57 3
SP 76	... .	... .	2.50 2.20 4	... .	... .	... .	-2.25 1.91 2	-1.50 ... 1	.80 ... 1	-1.80 ... 1	-.57 1.10 3
SWISS	... .	... .	... .	... .	... .	... .	1.40 ... 1	... .	... .	... .	.30 .42 2
THOMM	-1.00 .42 2	7.35 ... 1	... .	... .	... .	... .	-1.75 2.05 2	-.90 .70 3	-1.57 .64 3	... .	-2.00 ... 1
RS 18	4.05 5.63 6	... .	1.00 1.51 3	2.25 1.91 2	-1.40 ... 1	1.75 2.05 2	... .	0.00 ... 1	-.80 ... 1	1.38 1.85 4	1.01 2.52 6
RS21C	0.00 1.99 4	2.35 ... 1	.15 1.02 4	1.50 ... 1	... .	.90 .70 3	0.00 ... 1	... .	-.15 1.55 11	... .	-.10 1.15 3
RS21N	.10 2.18 4	4.10 ... 1	-.45 .70 4	-.80 ... 1	... .	1.57 .64 3	.80 ... 1	.15 1.55 11	... .	... .	-1.43 .78 3
RS 80	1.38 : .94 5	... .	-.27 1.01 3	1.80 ... 1	... .	... .	-1.38 1.85 4	... .	... .	... .	.63 2.14 3
V1392	-.05 .91 4	... .	.33 .57 3	.57 1.10 3	-.30 .42 2	2.00 ... 1	-1.01 2.52 6	.10 1.15 3	1.43 .78 3	-.63 2.14 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 900 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	4.55 1.75 +	-.37 .64	-1.09 .84	-2.20 1.43	-.07 .88	-2.52 .59 $	-.63 .68	-.79 .68	-1.23 .67	-1.04 .62
ASA	-4.55 1.75 +	... ...	-4.92 1.77 *	-5.64 1.85 $	-6.75 2.19 $	-4.62 1.68 *	-7.07 1.76 $	-5.18 1.68 $	-5.34 1.68 $	-5.78 1.81 $	-5.58 1.76 $
GR 78	.37 .64	4.92 1.77 *	... ...	-.72 .77	-1.82 1.45	.30 .95	-2.15 .65 $	-.26 .71	-.41 .71	-.86 .72	-.66 .65
SP 76	1.09 .84	5.64 1.85 $	.72 .77	... ...	-1.11 1.52	1.02 1.08	-1.43 .81	.46 .89	.30 .89	-.14 .88	.06 .79
SWISS	2.20 1.43	6.75 2.19 $	1.82 1.45	1.11 1.52	... ...	2.13 1.58	-.32 1.38	1.56 1.48	1.41 1.48	.97 1.47	1.16 1.34
THOMM	.07 .88	4.62 1.68 *	-.30 .95	-1.02 1.08	-2.13 1.58	... ...	-2.45 .89 *	-.56 .87	-.72 .87	-1.16 1.00	-.97 .91
RS 18	2.52 .59 $	7.07 1.76 $	2.15 .65 $	1.43 .81	.32 1.38	2.45 .89 *	... ...	1.89 .73 +	1.73 .73 +	1.29 .68	1.49 .59 +
RS21C	.63 .68	5.18 1.68 $	.26 .71	-.46 .89	-1.56 1.48	.56 .87	-1.89 .73 +	... ...	-.15 1.55	-.60 .83	-.40 .71
RS21N	.79 .68	5.34 1.68 $	.41 .71	-.30 .89	-1.41 1.48	.72 .87	-1.73 .73 +	.15 1.55	... ...	-.44 .83	-.25 .71
RS 80	1.23 .67	5.78 1.81 $	.86 .72	.14 .88	-.97 1.47	1.16 1.00	-1.29 .68	.60 .83	.44 .83	... ...	.20 .70
V1392	1.04 .62	5.58 1.76 $	.66 .65	-.06 .79	-1.16 1.34	.97 .91	-1.49 .59 +	.40 .71	.25 .71	-.20 .70	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 850 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	-.83 2.12 4	... .	... .	.55 4.88 2	-5.57 7.27 6	.01 2.65 4	.49 1.49 4	-1.38 2.85 5	1.53 2.96 4
ASA	... .	... .	... .	... .	... .	7.55 ... 1	... .	-5.95 ... 1	-3.00 ... 1	... .	... .
GR 78	.83 2.12 4	... .	... .	-.20 .99 4	... .	... .	-3.91 + .85 3	1.25 2.36 4	.90 1.07 4	.03 2.64 3	2.60 3.40 3
SP 76	... .	... .	.20 .99 4	... .	... .	... .	-8.27 1.67 2	1.00 ... 1	-1.10 ... 1	0.00 ... 1	.85 4.22 3
SWISS	... .	... .	... .	... .	... .	... .	.60 ... 1	... .	... .	... .	-.60 .28 2
THOMM	-.55 4.88 2	-7.55 ... 1	... .	... .	... .	... .	-1.97 6.47 2	-1.01 7.16 3	-.83 6.01 3	... .	-4.45 ... 1
RS 18	5.57 7.27 6	... .	3.91 + .85 3	8.27 1.67 2	-.60 ... 1	1.97 6.47 2	... .	4.90 ... 1	6.50 ... 1	4.91 $ 1.28 4	2.68 3.92 6
RS21C	-.01 2.65 4	5.95 ... 1	-1.25 2.36 4	-1.00 ... 1	... .	1.01 7.16 3	-4.90 ... 1	... .	.44 2.18 11	... .	1.53 2.42 3
RS21N	-.49 1.49 4	3.00 ... 1	-.90 1.07 4	1.10 ... 1	... .	.83 6.01 3	-6.50 ... 1	-.44 2.18 11	... .	... .	2.85 3.49 3
RS 80	1.38 2.85 5	... .	-.03 2.64 3	0.00 ... 1	... .	... .	-4.91 $ 1.28 4	... .	... .	... .	2.02 2.20 3
V1392	-1.53 2.96 4	... .	-2.60 3.40 3	-.85 4.22 3	.60 .28 2	4.45 ... 1	-2.68 3.92 6	-1.53 2.42 3	-2.85 3.49 3	-2.02 2.20 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 850 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-.54 2.87	-1.11 1.05	-.25 1.38	-1.32 2.35	.99 1.45	-4.54 .97 $	-.57 1.12	-.13 1.12	-.94 1.10	-.01 1.01
ASA	.54 2.87	... ...	-.57 2.91	.29 3.04	-.78 3.59	1.53 2.76	-4.00 2.89	-.03 2.76	.41 2.76	-.39 2.98	.53 2.89
GR 78	1.11 1.05	.57 2.91	... ...	.86 1.27	-.21 2.38	2.10 1.57	-3.43 1.07 $	.54 1.16	.98 1.16	.17 1.18	1.10 1.07
SP 76	.25 1.38	-.29 3.04	-.86 1.27	... ...	-1.07 2.49	1.24 1.78	-4.29 1.32 $	-.32 1.46	.12 1.46	-.69 1.45	.24 1.29
SWISS	1.32 2.35	.78 3.59	.21 2.38	1.07 2.49	... ...	2.30 2.60	-3.22 2.27	.75 2.43	1.19 2.43	.38 2.41	1.31 2.20
THOMM	-.99 1.45	-1.53 2.76	-2.10 1.57	-1.24 1.78	-2.30 2.60	... ...	-5.53 1.47 $	-1.55 1.42	-1.12 1.42	-1.92 1.65	-.99 1.50
RS 18	4.54 .97 $	4.00 2.89	3.43 1.07 $	4.29 1.32 $	3.22 2.27	5.53 1.47 $	... ...	3.97 1.19 $	4.41 1.19 $	3.61 1.11 $	4.53 .96 $
RS21C	.57 1.12	.03 2.76	-.54 1.16	.32 1.46	-.75 2.43	1.55 1.42	-3.97 1.19 $	... ...	.44 2.18	-.37 1.36	.56 1.16
RS21N	.13 1.12	-.41 2.76	-.98 1.16	-.12 1.46	-1.19 2.43	1.12 1.42	-4.41 1.19 $	-.44 2.18	... ...	-.80 1.36	.12 1.16
RS 80	.94 1.10	.39 2.98	-.17 1.18	.69 1.45	-.38 2.41	1.92 1.65	-3.61 1.11 $	.37 1.36	.80 1.36	... ...	.93 1.15
V1392	.01 1.01	-.53 2.89	-1.10 1.07	-.24 1.29	-1.31 2.20	.99 1.50	-4.53 .96 $	-.56 1.16	-.12 1.16	-.93 1.15	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 700 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	-1.14 5.45 4	... .	... .	1.67 .82 2	-6.60 6.12 5	.18 6.17 4	.37 6.04 4	-4.67 : 3.44 5	3.71 5.65 4
ASA	... .	... .	... .	... .	... .	5.80 ... 1	... .	-2.90 ... 1	-3.20 ... 1	... .	... .
GR 78	1.14 5.45 4	... .	... .	-1.32 2.66 4	... .	... .	-7.30 : 1.93 3	.98 2.45 4	1.50 .99 4	.23 2.71 3	3.32 5.21 3
SP 76	... .	... .	1.32 2.66 4	... .	... .	... .	3.73 13.26 2	-3.60 ... 1	-1.90 ... 1	-4.75 ... 1	.99 4.07 3
SWISS	... .	... .	... .	... .	... .	... .	3.05 ... 1	... .	... .	... .	-.75 .21 2
THOMM	-1.67 .82 2	-5.80 ... 1	... .	... .	... .	... .	-2.85 2.76 2	1.50 4.79 3	.15 3.49 3	... .	-1.30 ... 1
RS 18	6.60 6.12 5	... .	7.30 : 1.93 3	-3.73 13.26 2	-3.05 ... 1	2.85 2.76 2	... .	6.00 ... 1	6.25 ... 1	7.91 5.56 4	6.69 9.47 6
RS21C	-.18 6.17 4	2.90 ... 1	-.98 2.45 4	3.60 ... 1	... .	-1.50 4.79 3	-6.00 ... 1	... .	.07 1.63 11	... .	3.17 5.30 3
RS21N	-.37 6.04 4	3.20 ... 1	-1.50 .99 4	1.90 ... 1	... .	-.15 3.49 3	-6.25 ... 1	-.07 1.63 11	... .	... .	2.03 4.67 3
RS 80	4.67 : 3.44 5	... .	-.23 2.71 3	4.75 ... 1	... .	... .	-7.91 5.56 4	... .	... .	... .	4.84 7.49 3
V1392	-3.71 5.65 4	... .	-3.32 5.21 3	-.99 4.07 3	.75 .21 2	1.30 ... 1	-6.69 9.47 6	-3.17 5.30 3	-2.03 4.67 3	-4.84 7.49 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 700 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-1.97 4.24	-1.09 1.56	-2.02 2.05	-1.59 3.47	-.32 2.14	-5.80 1.48 $	-.72 1.67	-.64 1.67	-2.20 1.63	1.27 1.51
ASA	1.97 4.24	... ...	.87 4.30	-.05 4.48	.38 5.30	1.65 4.06	-3.83 4.27	1.25 4.06	1.32 4.06	-.24 4.39	3.24 4.27
GR 78	1.09 1.56	-.87 4.30	... ...	-.92 1.87	-.49 3.51	.78 2.31	-4.71 1.59 $	.38 1.72	.45 1.72	-1.11 1.74	2.36 1.57
SP 76	2.02 2.05	.05 4.48	.92 1.87	... ...	.43 3.68	1.70 2.63	-3.78 1.96	1.30 2.15	1.37 2.15	-.19 2.14	3.29 1.90
SWISS	1.59 3.47	-.38 5.30	.49 3.51	-.43 3.68	... ...	1.27 3.83	-4.21 3.35	.87 3.58	.94 3.58	-.62 3.56	2.86 3.24
THOMM	.32 2.14	-1.65 4.06	-.78 2.31	-1.70 2.63	-1.27 3.83	... ...	-5.48 2.17 +	-.40 2.10	-.33 2.10	-1.89 2.43	1.59 2.21
RS 18	5.80 1.48 $	3.83 4.27	4.71 1.59 $	3.78 1.96	4.21 3.35	5.48 2.17 +	... ...	5.08 1.78 *	5.15 1.78 *	3.59 1.65 :	7.07 1.43 $
RS21C	.72 1.67	-1.25 4.06	-.38 1.72	-1.30 2.15	-.87 3.58	.40 2.10	-5.08 1.78 *	... ...	.07 1.63	-1.49 2.00	1.99 1.72
RS21N	.64 1.67	-1.32 4.06	-.45 1.72	-1.37 2.15	-.94 3.58	.33 2.10	-5.15 1.78 *	-.07 1.63	... ...	-1.56 2.00	1.91 1.72
RS 80	2.20 1.63	.24 4.39	1.11 1.74	.19 2.14	.62 3.56	1.89 2.43	-3.59 1.65 :	1.49 2.00	1.56 2.00	... ...	3.47 1.69 :
V1392	-1.27 1.51	-3.24 4.27	-2.36 1.57	-3.29 1.90	-2.86 3.24	-1.59 2.21	-7.07 1.43 $	-1.99 1.72	-1.91 1.72	-3.47 1.69 :	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 500 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	3.00 1.21 3	... .	... .	4.90 * .07 2	-9.60 + 4.12 4	1.23 4.20 4	3.55 4.37 4	-.15 5.37 3	3.73 5.55 4
ASA	... .	... .	... .	... .	... .	.80 ... 1	... .	2.10 ... 1	.20 ... 1	... .	... .
GR 78	-3.00 1.21 3	... .	... .	-1.63 3.62 4	... .	... .	-9.97 $ .93 3	1.13 1.27 4	1.93 $ .22 4	2.15 3.68 3	2.39 4.96 3
SP 76	... .	... .	1.63 3.62 4	... .	... .	... .	.60 17.11 2	-1.90 ... 1	-.60 ... 1	1.10 ... 1	.65 3.11 3
SWISS	... .	... .	... .	... .	... .	... .	-8.55 ... 1	... .	... .	... .	-1.80 ... 1
THOMM	-4.90 * .07 2	-.80 ... 1	... .	... .	... .	... .	-8.02 : .53 2	-.50 7.85 2	3.80 1.70 2	... .	... .
RS 18	9.60 + 4.12 4	... .	9.97 $ .93 3	-.60 17.11 2	8.55 ... 1	8.02 : .53 2	... .	8.40 ... 1	10.50 ... 1	11.15 * 3.54 4	11.80 $ 5.00 6
RS21 C	-1.23 4.20 4	-2.10 ... 1	-1.13 1.27 4	1.90 ... 1	... .	.50 7.85 2	-8.40 ... 1	... .	1.19 2.69 11	... .	.60 4.85 3
RS21 N	-3.55 4.37 4	-.20 ... 1	-1.93 $ .22 4	.60 ... 1	... .	-3.80 1.70 2	-10.50 ... 1	-1.19 2.69 11	... .	... .	-.03 4.22 3
RS 80	.15 5.37 3	... .	-2.15 3.68 3	-1.10 ... 1	... .	... .	-11.15 * 3.54 4	... .	... .	... .	2.69 4.78 3
V1392	-3.73 5.55 4	... .	-2.39 4.96 3	-.65 3.11 3	1.80 ... 1	... .	-11.80 $ 5.00 6	-.60 4.85 3	.03 4.22 3	-2.69 4.78 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 500 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	.42 3.54	1.05 1.39	-.73 1.75	2.74 3.45	2.22 1.97	-7.85 1.31 $	1.51 1.42	2.69 1.42	1.64 1.50	2.94 1.32 :
ASA	-.42 3.54	... ...	.63 3.59	-1.15 3.73	2.33 4.78	1.80 3.39	-8.27 3.56 :	1.10 3.39	2.28 3.39	1.22 3.68	2.52 3.58
GR 78	-1.05 1.39	-.63 3.59	... ...	-1.78 1.55	1.69 3.46	1.17 2.13	-8.90 1.34 $	.46 1.45	1.64 1.45	.59 1.50	1.89 1.33
SP 76	.73 1.75	1.15 3.73	1.78 1.55	... ...	3.47 3.57	2.95 2.36	-7.12 1.63 $	2.24 1.80	3.42 1.80	2.37 1.80	3.67 1.58 :
SWISS	-2.74 3.45	-2.33 4.78	-1.69 3.46	-3.47 3.57	... ...	-.52 3.78	-10.59 3.30 $	-1.23 3.51	-.05 3.51	-1.11 3.50	.19 3.30
THOMM	-2.22 1.97	-1.80 3.39	-1.17 2.13	-2.95 2.36	.52 3.78	... ...	-10.07 1.99 $	-.71 1.97	.47 1.97	-.58 2.24	.72 2.09
RS 18	7.85 1.31 $	8.27 3.56 :	8.90 1.34 $	7.12 1.63 $	10.59 3.30 $	10.07 1.99 $	... ...	9.36 1.51 $	10.54 1.51 $	9.49 1.43 $	10.79 1.21 $
RS21C	-1.51 1.42	-1.10 3.39	-.46 1.45	-2.24 1.80	1.23 3.51	.71 1.97	-9.36 1.51 $	... ...	1.18 2.66	.13 1.73	1.43 1.46
RS21N	-2.69 1.42	-2.28 3.39	-1.64 1.45	-3.42 1.80	.05 3.51	-.47 1.97	-10.54 1.51 $	-1.18 2.66	... ...	-1.06 1.73	.24 1.46
RS 80	-1.64 1.50	-1.22 3.68	-.59 1.50	-2.37 1.80	1.11 3.50	.58 2.24	-9.49 1.43 $	-.13 1.73	1.06 1.73	... ...	1.30 1.46
V1392	-2.94 1.32 :	-2.52 3.58	-1.89 1.33	-3.67 1.58 :	-.19 3.30	-.72 2.09	-10.79 1.21 $	-1.43 1.46	-.24 1.46	-1.30 1.46	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 400 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	7.35 3.21 3	... .	... .	3.52 1.88 2	-5.65 4.68 4	5.25 4.38 4	7.37 4.86 4	3.47 7.43 3	6.51 9.30 4
ASA	... .	... .	... .	... .	... .	.90 ... 1	... .	-2.45 ... 1	-2.75 ... 1	... .	... .
GR 78	-7.35 3.21 3	... .	... .	.73 2.24 4	... .	... .	-4.21 2.29 3	2.15 1.70 4	2.82 + .99 4	1.98 2.82 3	2.08 4.92 3
SP 76	... .	... .	-.73 2.24 4	... .	... .	... .	3.40 15.98 2	0.00 ... 1	1.00 ... 1	-.20 ... 1	.13 3.54 3
SWISS	... .	... .	... .	... .	... .	... .	-2.10 ... 1	... .	... .	... .	-1.70 ... 1
THOMM	-3.52 1.88 2	-.90 ... 1	... .	... .	... .	... .	-8.07 1.88 2	3.53 5.41 2	7.48 1.74 2	... .	... .
RS 18	5.65 4.68 4	... .	4.21 2.29 3	-3.40 15.98 2	2.10 ... 1	8.07 1.88 2	... .	8.40 ... 1	9.25 ... 1	9.74 7.33 4	7.72 : 7.19 6
RS21C	-5.25 4.38 4	2.45 ... 1	-2.15 1.70 4	0.00 ... 1	... .	-3.53 5.41 2	-8.40 ... 1	... .	.79 2.14 11	... .	-1.28 4.71 3
RS21N	-7.37 4.86 4	2.75 ... 1	-2.82 + .99 4	-1.00 ... 1	... .	-7.48 1.74 2	-9.25 ... 1	-.79 2.14 11	... .	... .	-.58 3.42 3
RS 80	-3.47 7.43 3	... .	-1.98 2.82 3	.20 ... 1	... .	... .	-9.74 7.33 4	... .	... .	... .	2.55 5.19 3
V1392	-6.51 9.30 4	... .	-2.08 4.92 3	-.13 3.54 3	1.70 ... 1	... .	-7.72 : 7.19 6	1.28 4.71 3	.58 3.42 3	-2.55 5.19 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 400 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	5.56 4.21	3.19 1.65	2.61 2.09	3.07 4.10	4.06 2.34	-2.63 1.56	5.46 1.69 $	6.25 1.69 $	4.51 1.79 +	4.96 1.57 $
ASA	-5.56 4.21	... ...	-2.37 4.27	-2.96 4.45	-2.50 5.69	-1.50 4.04	-8.19 4.24	-.10 4.04	.69 4.04	-1.05 4.38	-.60 4.26
GR 78	-3.19 1.65	2.37 4.27	... ...	-.58 1.85	-.12 4.11	.87 2.53	-5.82 1.60 $	2.27 1.72	3.06 1.72	1.32 1.79	1.77 1.58
SP 76	-2.61 2.09	2.96 4.45	.58 1.85	... ...	.46 4.25	1.45 2.81	-5.24 1.94 *	2.86 2.14	3.65 2.14	1.90 2.14	2.36 1.88
SWISS	-3.07 4.10	2.50 5.69	.12 4.11	-.46 4.25	... ...	.99 4.51	-5.70 3.93	2.40 4.18	3.19 4.18	1.44 4.16	1.90 3.93
THOMM	-4.06 2.34	1.50 4.04	-.87 2.53	-1.45 2.81	-.99 4.51	... ...	-6.69 2.37 *	1.40 2.35	2.19 2.35	.45 2.67	.90 2.49
RS 18	2.63 1.56	8.19 4.24	5.82 1.60 $	5.24 1.94 *	5.70 3.93	6.69 2.37 *	... ...	8.10 1.79 $	8.89 1.79 $	7.14 1.70 $	7.60 1.45 $
RS21C	-5.46 1.69 $	.10 4.04	-2.27 1.72	-2.86 2.14	-2.40 4.18	-1.40 2.35	-8.10 1.79 $	... ...	.79 2.12	-.95 2.06	-.50 1.73
RS21N	-6.25 1.69 $	-.69 4.04	-3.06 1.72	-3.65 2.14	-3.19 4.18	-2.19 2.35	-8.89 1.79 $	-.79 2.12	... ...	-1.74 2.06	-1.29 1.73
RS 80	-4.51 1.79 +	1.05 4.38	-1.32 1.79	-1.90 2.14	-1.44 4.16	-.45 2.67	-7.14 1.70 $	.95 2.06	1.74 2.06	... ...	.45 1.73
V1392	-4.96 1.57 $	.60 4.26	-1.77 1.58	-2.36 1.88	-1.90 3.93	-.90 2.49	-7.60 1.45 $	.50 1.73	1.29 1.73	-.45 1.73	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 300 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	7.05 5.11 3	... .	... .	9.85 8.77 2	-2.58 5.88 4	9.48 * 2.83 4	10.03 * 2.83 4	4.70 8.93 3	6.68 10.19 4
ASA	... .	... .	... .	... .	... .	1.95 ... 1	... .	-2.30 ... 1	-1.90 ... 1	... .	... .
GR 78	-7.05 5.11 3	... .	... .	-.10 1.29 4	... .	... .	-5.28 2.37 3	2.54 2.52 4	3.09 2.49 4	1.57 2.50 3	1.64 4.32 3
SP 76	... .	... .	.10 1.29 4	... .	... .	... .	2.30 11.53 2	.80 ... 1	.50 ... 1	0.00 ... 1	-.97 2.22 3
SWISS	... .	... .	... .	... .	... .	... .	-5.45 ... 1	... .	... .	... .	-2.78 2.80 2
THOMM	-9.85 8.77 2	-1.95 ... 1	... .	... .	... .	... .	-1.20 .71 2	6.33 13.69 2	6.13 13.97 2	... .	... .
RS 18	2.58 5.88 4	... .	5.28 2.37 3	-2.30 11.53 2	5.45 ... 1	1.20 .71 2	... .	4.65 ... 1	6.05 ... 1	3.35 3.54 4	6.32 : 4.91 6
RS21 C	-9.48 * 2.83 4	2.30 ... 1	-2.54 2.52 4	-.80 ... 1	... .	-6.33 13.69 2	-4.65 ... 1	... .	.44 1.41 11	... .	-.77 2.29 3
RS21 N	-10.03 * 2.83 4	1.90 ... 1	-3.09 2.49 4	-.50 ... 1	... .	-6.13 13.97 2	-6.05 ... 1	-.44 1.41 11	... .	... .	-1.20 2.21 3
RS 80	-4.70 8.93 3	... .	-1.57 2.50 3	0.00 ... 1	... .	... .	-3.35 3.54 4	... .	... .	... .	2.27 4.84 3
V1392	-6.68 10.19 4	... .	-1.64 4.32 3	.97 2.22 3	2.78 2.80 2	... .	-6.32 : 4.91 6	.77 2.29 3	1.20 2.21 3	-2.27 4.84 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 300 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	6.92	5.45	4.98	8.55	5.29	1.25	8.16	8.58	5.09	6.65
	...	3.98	1.56 $	1.97 +	3.27 +	2.22 :	1.47	1.60 $	1.60 $	1.70 $	1.48 $
ASA	-6.92	...	-1.47	-1.94	1.62	-1.63	-5.68	1.23	1.66	-1.83	-.28
	3.98	...	4.04	4.21	4.97	3.82	4.01	3.82	3.82	4.15	4.03
GR 78	-5.45	1.47	...	-.47	3.09	-.17	-4.21	2.70	3.13	-.36	1.19
	1.56 $	4.04	...	1.75	3.28	2.40	1.51 *	1.63	1.63	1.69	1.50
SP 76	-4.98	1.94	.47	...	3.56	.31	-3.74	3.17	3.60	.11	1.66
	1.97 +	4.21	1.75	...	3.42	2.66	1.83 :	2.02	2.02	2.03	1.78
SWISS	-8.55	-1.62	-3.09	-3.56	...	-3.26	-7.30	-.39	.04	-3.46	-1.90
	3.27 +	4.97	3.28	3.42	...	3.72	3.12 :	3.35	3.35	3.34	3.02
THOMM	-5.29	1.63	.17	-.31	3.26	...	-4.04	2.87	3.29	-.20	1.36
	2.22 :	3.82	2.40	2.66	3.72	...	2.24	2.22	2.22	2.53	2.35
RS 18	-1.25	5.68	4.21	3.74	7.30	4.04	...	6.91	7.34	3.84	5.40
	1.47	4.01	1.51 *	1.83 :	3.12 :	2.24	...	1.69 $	1.69 $	1.60 +	1.36 $
RS21C	-8.16	-1.23	-2.70	-3.17	.39	-2.87	-6.91	...	.43	-3.06	-1.51
	1.60 $	3.82	1.63	2.02	3.35	2.22	1.69 $	...	1.40	1.95	1.64
RS21N	-8.58	-1.66	-3.13	-3.60	-.04	-3.29	-7.34	-.43	...	-3.49	-1.94
	1.60 $	3.82	1.63	2.02	3.35	2.22	1.69 $	1.40	...	1.95	1.64
RS 80	-5.09	1.83	.36	-.11	3.46	.20	-3.84	3.06	3.49	...	1.56
	1.70 $	4.15	1.69	2.03	3.34	2.53	1.60 +	1.95	1.95	...	1.64
V1392	-6.65	.28	-1.19	-1.66	1.90	-1.36	-5.40	1.51	1.94	-1.56	...
	1.48 $	4.03	1.50	1.78	3.02	2.35	1.36 $	1.64	1.64	1.64	...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 250 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	9.55 7.12 3	... .	... .	8.02 2.51 2	-1.50 9.57 4	12.35 + 4.91 4	12.38 : 5.70 4	6.44 13.36 3	9.27 17.40 4
ASA	... .	... .	... .	... .	... .	7.70 ... 1	... .	-5.55 ... 1	-5.25 ... 1	... .	... .
GR 78	-9.55 7.12 3	... .	... .	.28 1.52 4	... .	... .	-3.00 1.95 3	2.56 3.27 4	2.77 2.62 4	1.13 1.42 3	1.05 3.23 3
SP 76	... .	... .	-.28 1.52 4	... .	... .	... .	5.38 12.34 2	-1.10 ... 1	-.50 ... 1	.70 ... 1	-1.56 1.37 3
SWISS	... .	... .	... .	... .	... .	... .	-2.05 ... 1	... .	... .	... .	-2.20 .57 2
THOMM	-8.02 2.51 2	-7.70 ... 1	... .	... .	... .	... .	-1.97 3.50 2	9.10 8.56 2	8.28 9.44 2	... .	... .
RS 18	1.50 9.57 4	... .	3.00 1.95 3	-5.38 12.34 2	2.05 ... 1	1.97 3.50 2	... .	3.70 ... 1	4.95 ... 1	2.64 2.01 4	5.28 5.81 6
RS21C	-12.35 + 4.91 4	5.55 ... 1	-2.56 3.27 4	1.10 ... 1	... .	-9.10 8.56 2	-3.70 ... 1	... .	.69 2.22 11	... .	.95 3.30 3
RS21N	-12.38 : 5.70 4	5.25 ... 1	-2.77 2.62 4	.50 ... 1	... .	-8.28 9.44 2	-4.95 ... 1	-.69 2.22 11	... .	... .	-1.18 1.51 3
RS 80	-6.44 13.36 3	... .	-1.13 1.42 3	-.70 ... 1	... .	... .	-2.64 2.01 4	... .	... .	... .	1.87 4.21 3
V1392	-9.27 17.40 4	... .	-1.05 3.23 3	1.56 1.37 3	2.20 .57 2	... .	-5.28 5.81 6	-.95 3.30 3	1.18 1.51 3	-1.87 4.21 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 250 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	6.78	6.93	6.51	8.82	6.10	3.63	9.46	10.15	6.69	8.16
	...	5.17	2.03 $	2.56 +	4.24 :	2.88 :	1.91	2.08 $	2.08 $	2.20 $	1.92 $
ASA	-6.78	...	.15	-.27	2.04	-.68	-3.15	2.68	3.37	-.09	1.38
	5.17	...	5.24	5.46	6.45	4.96	5.20	4.96	4.96	5.39	5.23
GR 78	-6.93	-.15	...	-.42	1.89	-.84	-3.30	2.53	3.21	-.24	1.23
	2.03 $	5.24	...	2.27	4.25	3.11	1.96	2.12	2.12	2.19	1.94
SP 76	-6.51	.27	.42	...	2.31	-.42	-2.88	2.95	3.63	.18	1.65
	2.56 +	5.46	2.27	...	4.44	3.45	2.38	2.63	2.63	2.63	2.31
SWISS	-8.82	-2.04	-1.89	-2.31	...	-2.72	-5.19	.65	1.33	-2.12	-.66
	4.24 :	6.45	4.25	4.44	...	4.83	4.05	4.35	4.35	4.33	3.92
THOMM	-6.10	.68	.84	.42	2.72	...	-2.47	3.37	4.05	.60	2.07
	2.88 :	4.96	3.11	3.45	4.83	...	2.91	2.88	2.88	3.28	3.05
RS 18	-3.63	3.15	3.30	2.88	5.19	2.47	...	5.84	6.52	3.07	4.53
	1.91	5.20	1.96	2.38	4.05	2.91	...	2.20 +	2.20 +	2.08	1.77 +
RS21C	-9.46	-2.68	-2.53	-2.95	-.65	-3.37	-5.84	...	.68	-2.77	-1.30
	2.08 $	4.96	2.12	2.63	4.35	2.88	2.20 +	...	2.19	2.53	2.13
RS21N	-10.15	-3.37	-3.21	-3.63	-1.33	-4.05	-6.52	-.68	...	-3.45	-1.98
	2.08 $	4.96	2.12	2.63	4.35	2.88	2.20 +	2.19	...	2.53	2.13
RS 80	-6.69	.09	.24	-.18	2.12	-.60	-3.07	2.77	3.45	...	1.47
	2.20 $	5.39	2.19	2.63	4.33	3.28	2.08	2.53	2.53	...	2.13
V1392	-8.16	-1.38	-1.23	-1.65	.66	-2.07	-4.53	1.30	1.98	-1.47	...
	1.92 $	5.23	1.94	2.31	3.92	3.05	1.77 +	2.13	2.13	2.13	...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 200 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	10.63 1.88 2	... .	... .	14.75 ... 1	4.26 10.18 4	18.66 + 8.11 4	18.95 : 9.28 4	4.95 6.44 2	-.87 9.87 2
ASA	... .	... .	... .	... .	... .	7.35 ... 1	... .	-5.15 ... 1	-5.90 ... 1	... .	... .
GR 78	-10.63 1.88 2	... .	... .	.18 .41 4	... .	... .	-2.25 .98 3	1.89 1.42 4	2.20 + .94 4	.27 1.97 3	.39 3.37 3
SP 76	... .	... .	-.18 .41 4	... .	... .	... .	4.33 14.46 2	1.10 ... 1	1.95 ... 1	-.90 ... 1	-1.88 2.68 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	-1.80 ... 1
THOMM	-14.75 ... 1	-7.35 ... 1	... .	... .	... .	... .	... .	1.60 ... 1	1.40 ... 1	... .	... .
RS 18	-4.26 10.18 4	... .	2.25 .98 3	-4.33 14.46 2	... .	... .	... .	2.00 ... 1	2.90 ... 1	2.65 4.37 4	6.46 6.51 5
RS21C	-18.66 + 8.11 4	5.15 ... 1	-1.89 1.42 4	-1.10 ... 1	... .	-1.60 ... 1	-2.00 ... 1	... .	.19 1.06 11	... .	-1.37 1.27 3
RS21N	-18.95 : 9.28 4	5.90 ... 1	-2.20 + .94 4	-1.95 ... 1	... .	-1.40 ... 1	-2.90 ... 1	-.19 1.06 11	... .	... .	-1.30 1.42 3
RS 80	-4.95 6.44 2	... .	-.27 1.97 3	.90 ... 1	... .	... .	-2.65 4.37 4	... .	... .	... .	1.99 3.23 3
V1392	.87 9.87 2	... .	-.39 3.37 3	1.88 2.68 3	1.80 ... 1	... .	-6.46 6.51 5	1.37 1.27 3	1.30 1.42 3	-1.99 3.23 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 200 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	12.32	8.25	7.71	10.03	14.69	4.99	11.94	12.14	7.01	8.23
	...	4.79 +	1.96 $	2.38 $	6.16	3.88 $	1.87 +	1.94 $	1.94 $	2.14 $	1.95 $
ASA	-12.32	...	-4.07	-4.61	-2.29	2.37	-7.33	-.37	-.18	-5.30	-4.09
	4.79 +	...	4.86	5.04	7.61	4.55	4.90	4.55	4.55	5.01	4.87
GR 78	-8.25	4.07	...	-.54	1.78	6.44	-3.26	3.70	3.89	-1.23	-.02
	1.96 $	4.86	...	1.99	6.11	4.06	1.79	1.91	1.91	1.97	1.77
SP 76	-7.71	4.61	.54	...	2.32	6.98	-2.72	4.23	4.43	-.70	.52
	2.38 $	5.04	1.99	...	6.20	4.28	2.12	2.34	2.34	2.33	2.05
SWISS	-10.03	2.29	-1.78	-2.32	...	4.66	-5.04	1.92	2.11	-3.01	-1.80
	6.16	7.61	6.11	6.20	...	7.13	6.09	6.17	6.17	6.16	5.85
THOMM	-14.69	-2.37	-6.44	-6.98	-4.66	...	-9.70	-2.74	-2.55	-7.67	-6.46
	3.88 $	4.55	4.06	4.28	7.13	...	4.09 :	3.78	3.78	4.22	4.08
RS 18	-4.99	7.33	3.26	2.72	5.04	9.70	...	6.96	7.15	2.03	3.24
	1.87 +	4.90	1.79	2.12	6.09	4.09 :	...	2.05 $	2.05 $	1.89	1.70
RS21C	-11.94	.37	-3.70	-4.23	-1.92	2.74	-6.96	...	.19	-4.93	-3.72
	1.94 $	4.55	1.91	2.34	6.17	3.78	2.05 $	...	1.06	2.30 :	1.96
RS21N	-12.14	.18	-3.89	-4.43	-2.11	2.55	-7.15	-.19	...	-5.12	-3.91
	1.94 $	4.55	1.91	2.34	6.17	3.78	2.05 $	1.06	...	2.30 :	1.96
RS 80	-7.01	5.30	1.23	.70	3.01	7.67	-2.03	4.93	5.12	...	1.21
	2.14 $	5.01	1.97	2.33	6.16	4.22	1.89	2.30 :	2.30 :	...	1.95
V1392	-8.23	4.09	.02	-.52	1.80	6.46	-3.24	3.72	3.91	-1.21	...
	1.95 $	4.87	1.77	2.05	5.85	4.08	1.70	1.96	1.96	1.95	...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 150 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	18.88 8.03 2	... .	... .	9.50 ... 1	7.50 7.10 3	21.93 : 9.72 4	21.96 : 10.56 4	3.93 4.28 2	4.65 ... 1
ASA	... .	... .	... .	... .	... .	... .	... .	-3.55 ... 1	-4.50 ... 1	... .	... .
GR 78	-18.88 8.03 2	... .	... .	.80 .67 4	... .	... .	-.98 1.59 3	-1.14 2.83 4	-.79 3.67 4	-.70 .69 3	-.53 1.69 3
SP 76	... .	... .	-.80 .67 4	... .	... .	... .	-2.72 1.60 2	.50 ... 1	1.50 ... 1	-.10 ... 1	-2.21 1.09 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	-.80 ... 1
THOMM	-9.50 ... 1	... .	... .	... .	... .	... .	... .	11.65 ... 1	10.45 ... 1	... .	... .
RS 18	-7.50 7.10 3	... .	.98 1.59 3	2.72 1.60 2	... .	... .	... .	.30 ... 1	1.20 ... 1	1.98 4.00 4	2.41 : 1.83 5
RS21C	-21.93 : 9.72 4	3.55 ... 1	1.14 2.83 4	-.50 ... 1	... .	-11.65 ... 1	-.30 ... 1	... .	.07 1.08 11	... .	-2.11 : .69 3
RS21N	-21.96 : 10.56 4	4.50 ... 1	.79 3.67 4	-1.50 ... 1	... .	-10.45 ... 1	-1.20 ... 1	-.07 1.08 11	... .	... .	-2.33 : .90 3
RS 80	-3.93 4.28 2	... .	.70 .69 3	.10 ... 1	... .	... .	-1.98 4.00 4	... .	... .	... .	1.75 2.20 3
V1392	-4.65 ... 1	... .	.53 1.69 3	2.21 1.09 3	.80 ... 1	... .	-2.41 : 1.83 5	2.11 : .69 3	2.33 : .90 3	-1.75 2.20 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 150 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	18.97 4.63 $	13.58 1.53 $	13.78 1.85 $	12.86 4.66 *	6.68 3.19 :	9.99 1.52 $	15.37 1.50 $	15.44 1.50 $	10.67 1.66 $	12.06 1.59 $
ASA	-18.97 4.63 $	... ...	-5.39 4.61	-5.19 4.72	-6.11 6.37	-12.28 5.42 :	-8.98 4.65	-3.60 4.38	-3.53 4.38	-8.30 4.71	-6.91 4.63
GR 78	-13.58 1.53 $	5.39 4.61	... ...	.19 1.49	-.72 4.58	-6.90 3.35 :	-3.59 1.36 +	1.79 1.43	1.86 1.43	-2.91 1.48	-1.52 1.34
SP 76	-13.78 1.85 $	5.19 4.72	-.19 1.49	... ...	-.91 4.64	-7.09 3.51 :	-3.78 1.60 :	1.59 1.76	1.67 1.76	-3.11 1.74	-1.71 1.54
SWISS	-12.86 4.66 *	6.11 6.37	.72 4.58	.91 4.64	... ...	-6.18 5.53	-2.87 4.57	2.51 4.63	2.58 4.63	-2.20 4.62	-.80 4.38
THOMM	-6.68 3.19 :	12.28 5.42 :	6.90 3.35 :	7.09 3.51 :	6.18 5.53	... ...	3.31 3.38	8.68 3.19 *	8.76 3.19 *	3.98 3.45	5.38 3.38
RS 18	-9.99 1.52 $	8.98 4.65	3.59 1.36 +	3.78 1.60 :	2.87 4.57	-3.31 3.38	... ...	5.38 1.57 $	5.45 1.57 $	.68 1.42	2.07 1.30
RS21C	-15.37 1.50 $	3.60 4.38	-1.79 1.43	-1.59 1.76	-2.51 4.63	-8.68 3.19 *	-5.38 1.57 $	... ...	.07 1.08	-4.70 1.73 *	-3.31 1.50 :
RS21N	-15.44 1.50 $	3.53 4.38	-1.86 1.43	-1.67 1.76	-2.58 4.63	-8.76 3.19 *	-5.45 1.57 $	-.07 1.08	... ...	-4.77 1.73 *	-3.38 1.50 :
RS 80	-10.67 1.66 $	8.30 4.71	2.91 1.48	3.11 1.74	2.20 4.62	-3.98 3.45	-.68 1.42	4.70 1.73 *	4.77 1.73 *	... ...	1.40 1.47
V1392	-12.06 1.59 $	6.91 4.63	1.52 1.34	1.71 1.54	.80 4.38	-5.38 3.38	-2.07 1.30	3.31 1.50 :	3.38 1.50 :	-1.40 1.47	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 100 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	20.70 ... 1	... .	... .	... .	7.30 6.86 2	28.72 13.51 3	29.17 13.63 3	7.23 6.75 2	5.65 ... 1
ASA	... .	... .	... .	... .	... .	... .	... .	1.25 ... 1	1.40 ... 1	... .	... .
GR 78	-20.70 ... 1	... .	... .	.58 : .28 4	... .	... .	-.11 1.74 3	1.40 : .73 4	1.70 1.24 4	-.93 .55 3	-.47 1.48 3
SP 76	... .	... .	-.58 : .28 4	... .	... .	... .	-1.10 .57 2	.60 ... 1	.10 ... 1	-2.50 ... 1	-2.08 .90 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	-2.05 ... 1
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-7.30 6.86 2	... .	.11 1.74 3	1.10 .57 2	... .	... .	... .	1.10 ... 1	1.80 ... 1	.25 .44 4	.79 1.73 5
RS21C	-28.72 13.51 3	-1.25 ... 1	-1.40 : .73 4	-.60 ... 1	... .	... .	-1.10 ... 1	... .	.23 .58 11	... .	-2.13 : .80 3
RS21N	-29.17 13.63 3	-1.40 ... 1	-1.70 1.24 4	-.10 ... 1	... .	... .	-1.80 ... 1	-.23 .58 11	... .	... .	-2.30 1.07 3
RS 80	-7.23 6.75 2	... .	.93 .55 3	2.50 ... 1	... .	... .	-.25 .44 4	... .	... .	... .	1.59 1.81 3
V1392	-5.65 ... 1	... .	.47 1.48 3	2.08 .90 3	2.05 ... 1	... .	-.79 1.73 5	2.13 : .80 3	2.30 1.07 3	-1.59 1.81 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 100 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	15.94 4.27 $	13.81 1.59 $	14.37 1.82 $	14.80 4.28 $	... ...	11.82 1.56 $	17.14 1.57 $	17.37 1.57 $	11.22 1.62 $	12.70 1.59 $
ASA	-15.94 4.27 $	... ...	-2.14 4.19	-1.58 4.29	-1.14 5.79	... ...	-4.13 4.24	1.20 3.97	1.43 3.97	-4.72 4.29	-3.24 4.21
GR 78	-13.81 1.59 $	2.14 4.19	... ...	.56 1.36	.99 4.16	... ...	-1.99 1.26	3.34 1.35 +	3.56 1.35 +	-2.59 1.36	-1.11 1.23
SP 76	-14.37 1.82 $	1.58 4.29	-.56 1.36	... ...	.43 4.21	... ...	-2.55 1.46	2.78 1.62	3.00 1.62	-3.15 1.58	-1.67 1.40
SWISS	-14.80 4.28 $	1.14 5.79	-.99 4.16	-.43 4.21	... ...	... ...	-2.98 4.15	2.34 4.21	2.57 4.21	-3.58 4.19	-2.10 3.97
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-11.82 1.56 $	4.13 4.24	1.99 1.26	2.55 1.46	2.98 4.15	... ...	... ...	5.33 1.48 $	5.55 1.48 $	-.60 1.30	.88 1.19
RS21C	-17.14 1.57 $	-1.20 3.97	-3.34 1.35 +	-2.78 1.62	-2.34 4.21	... ...	-5.33 1.48 $	... ...	.23 .58	-5.92 1.61 $	-4.44 1.39 $
RS21N	-17.37 1.57 $	-1.43 3.97	-3.56 1.35 +	-3.00 1.62	-2.57 4.21	... ...	-5.55 1.48 $	-.23 .58	... ...	-6.15 1.61 $	-4.67 1.39 $
RS 80	-11.22 1.62 $	4.72 4.29	2.59 1.36	3.15 1.58	3.58 4.19	... ...	.60 1.30	5.92 1.61 $	6.15 1.61 $	... ...	1.48 1.34
V1392	-12.70 1.59 $	3.24 4.21	1.11 1.23	1.67 1.40	2.10 3.97	... ...	-.88 1.19	4.44 1.39 $	4.67 1.39 $	-1.48 1.34	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 70 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	16.15 ... 1	... .	... .	... .	9.83 8.45 2	17.20 ... 1	18.35 ... 1	9.83 8.52 2	6.50 ... 1
ASA	... .	... .	... .	... .	... .	... .	... .	1.10 ... 1	1.30 ... 1	... .	... .
GR 78	-16.15 ... 1	... .	... .	1.03 $ .26 4	... .	... .	-.75 1.72 3	1.67 + .69 4	2.00 + .74 4	.21 1.86 3	.78 2.97 3
SP 76	... .	... .	-1.03 $ .26 4	... .	... .	... .	-1.32 1.03 2	.20 ... 1	0.00 , ... 1	-1.90 ... 1	-2.06 1.18 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	.40 ... 1
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-9.83 8.45 2	... .	.75 1.72 3	1.32 1.03 2	... .	... .	... .	1.85 ... 1	2.05 ... 1	.50 .58 4	.51 1.47 5
RS21C	-17.20 ... 1	-1.10 ... 1	-1.67 + .69 4	-.20 ... 1	... .	... .	-1.85 ... 1	... .	.22 .39 10	... .	-1.05 .21 2
RS21N	-18.35 ... 1	-1.30 ... 1	-2.00 + .74 4	0.00 ... 1	... .	... .	-2.05 ... 1	-.22 .39 10	... .	... .	-1.27 .82 2
RS 80	-9.83 8.52 2	... .	-.21 1.86 3	1.90 ... 1	... .	... .	-.50 .58 4	... .	... .	... .	1.30 1.49 3
V1392	-6.50 ... 1	... .	-.78 2.97 3	2.06 1.18 3	-.40 ... 1	... .	-.51 1.47 5	1.05 .21 2	1.27 .82 2	-1.30 1.49 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 70 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	10.98 2.56 $	10.34 1.00 $	11.60 1.13 $	9.78 2.51 $	... ...	9.56 .96 $	12.08 1.12 $	12.30 1.12 $	9.69 .99 $	10.18 1.00 $
ASA	-10.98 2.56 $	... ...	-.64 2.44	.62 2.50	-1.19 3.37	... ...	-1.42 2.48	1.10 2.30	1.32 2.30	-1.28 2.51	-.79 2.47
GR 78	-10.34 1.00 $	.64 2.44	... ...	1.26 .79	-.55 2.41	... ...	-.78 .73	1.74 .83 :	1.96 .83 :	-.65 .79	-.15 .72
SP 76	-11.60 1.13 $	-.62 2.50	-1.26 .79	... ...	-1.82 2.44	... ...	-2.04 .85 :	.48 .99	.70 .99	-1.91 .92 :	-1.42 .82
SWISS	-9.78 2.51 $	1.19 3.37	.55 2.41	1.82 2.44	... ...	... ...	-.23 2.40	2.29 2.47	2.51 2.47	-.09 2.43	.40 2.30
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-9.56 .96 $	1.42 2.48	.78 .73	2.04 .85 :	.23 2.40	... ...	... ...	2.52 .93 +	2.74 .93 +	.13 .75	.63 .70
RS21C	-12.08 1.12 $	-1.10 2.30	-1.74 .83 :	-.48 .99	-2.29 2.47	... ...	-2.52 .93 +	... ...	.22 .39	-2.38 1.01 :	-1.89 .90 :
RS21N	-12.30 1.12 $	-1.32 2.30	-1.96 .83 :	-.70 .99	-2.51 2.47	... ...	-2.74 .93 +	-.22 .39	... ...	-2.60 1.01 :	-2.11 .90 :
RS 80	-9.69 .99 $	1.28 2.51	.65 .79	1.91 .92 :	.09 2.43	... ...	-.13 .75	2.38 1.01 :	2.60 1.01 :	... ...	.49 .78
V1392	-10.18 1.00 $	.79 2.47	.15 .72	1.42 .82	-.40 2.30	... ...	-.63 .70	1.89 .90 :	2.11 .90 :	-.49 .78	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 50 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	.80 ... 1	.80 ... 1	... .	... .
GR 78	... .	... .	... .	.93 .96 4	... .	... .	-.90 2.17 3	1.39 * .46 4	1.57 : .76 4	.62 2.53 3	1.45 3.28 3
SP 76	... .	... .	-.93 .96 4	... .	... .	... .	-1.05 1.06 2	-.10 ... 1	-.50 ... 1	2.75 ... 1	-1.93 1.11 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	.40 ... 1
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	.90 2.17 3	1.05 1.06 2	... .	... .	... .	1.50 ... 1	1.85 ... 1	.60 .66 4	.65 1.20 5
RS21 C	... .	-.80 ... 1	-1.39 * .46 4	.10 ... 1	... .	... .	-1.50 ... 1	... .	.10 .30 10	... .	-1.05 .64 2
RS21 N	... .	-.80 ... 1	-1.57 : .76 4	.50 ... 1	... .	... .	-1.85 ... 1	-.10 .30 10	... .	... .	-.97 1.10 2
RS 80	... .	... .	-.62 2.53 3	-2.75 ... 1	... .	... .	-.60 .66 4	... .	... .	... .	1.20 1.13 3
V1392	... .	... .	-1.45 3.28 3	1.93 1.11 3	-.40 ... 1	... .	-.65 1.20 5	1.05 .64 2	.97 1.10 2	-1.20 1.13 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 50 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-.55 1.68	.54 1.72	-.41 2.31	... ...	-.81 1.71	.80 1.57	.90 1.57	-.11 1.74	-.01 1.70
GR 78	... ...	.55 1.68	... ...	1.09 .54	.15 1.65	... ...	-.26 .52	1.35 .59 :	1.45 .59 :	.45 .57	.55 .51
SP 76	... ...	-.54 1.72	-1.09 .54	... ...	-.95 1.67	... ...	-1.35 .59 :	.26 .70	.36 .70	-.65 .65	-.55 .56
SWISS	... ...	.41 2.31	-.15 1.65	.95 1.67	... ...	... ...	-.40 1.65	1.21 1.70	1.31 1.70	.30 1.67	.40 1.57
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	.81 1.71	.26 .52	1.35 .59 :	.40 1.65	... ...	... ...	1.61 .68 :	1.71 .68 :	.70 .55	.80 .49
RS21C	... ...	-.80 1.57	-1.35 .59 :	-.26 .70	-1.21 1.70	... ...	-1.61 .68 :	... ...	.10 .30	-.91 .74	-.81 .65
RS21N	... ...	-.90 1.57	-1.45 .59 :	-.36 .70	-1.31 1.70	... ...	-1.71 .68 :	-.10 .30	... ...	-1.01 .74	-.91 .65
RS 80	... ...	.11 1.74	-.45 .57	.65 .65	-.30 1.67	... ...	-.70 .55	.91 .74	1.01 .74	... ...	.10 .56
V1392	... ...	.01 1.70	-.55 .51	.55 .56	-.40 1.57	... ...	-.80 .49	.81 .65	.91 .65	-.10 .56	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 30 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	1.00 ... 1	1.00 ... 1	... .	... .
GR 78	... .	... .	... .	1.56 1.42 4	... .	... .	-.15 2.23 3	.80 1.67 4	.89 1.78 4	-.27 1.71 3	.89 2.19 3
SP 76	... .	... .	-1.56 1.42 4	... .	... .	... .	-.30 .28 2	1.00 ... 1	.90 ... 1	... .	-1.00 1.65 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	.95 ... 1
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	.15 2.23 3	.30 .28 2	... .	... .	... .	.90 ... 1	1.00 ... 1	.06 .49 4	.51 .94 5
RS21 C	... .	-1.00 ... 1	-.80 1.67 4	-1.00 ... 1	... .	... .	-.90 ... 1	... .	.08 .15 10	... .	-.57 .39 2
RS21 N	... .	-1.00 ... 1	-.89 1.78 4	-.90 ... 1	... .	... .	-1.00 ... 1	-.08 .15 10	... .	... .	-.55 .64 2
RS 80	... .	... .	.27 1.71 3	... .	... .	... .	-.06 .49 4	... .	... .	... .	1.12 1.45 3
V1392	... .	... .	-.89 2.19 3	1.00 1.65 3	-.95 ... 1	... .	-.51 .94 5	.57 .39 2	.55 .64 2	-1.12 1.45 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 30 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
ASA	...	...	-.05	1.10	-.40	...	-.02	1.00	1.08	-.27	.50
	...	...	1.42	1.45	1.95	...	1.44	1.32	1.32	1.47	1.43
GR 78	...	.05	...	1.14	-.36	...	.03	1.05	1.13	-.22	.54
	...	1.42	...	.47 :	1.39	...	.44	.50 :	.50 :	.50	.43
SP 76	...	-1.10	-1.14	...	-1.50	...	-1.11	-.10	-.02	-1.37	-.60
	...	1.45	.47 :	...	1.41	...	.51 :	.60	.60	.60 :	.49
SWISS	...	.40	.36	1.50	...	...	.39	1.40	1.48	.13	.90
	...	1.95	1.39	1.41	...	...	1.39	1.43	1.43	1.41	1.32
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	...	.02	-.03	1.11	-.39	...	...	1.02	1.10	-.25	.51
	...	1.44	.44	.51 :	1.39	...	...	.57	.57	.47	.42
RS21C	...	-1.00	-1.05	.10	-1.40	...	-1.02	...	.08	-1.27	-.50
	...	1.32	.50 :	.60	1.43	...	.57	...	.15	.64	.54
RS21N	...	-1.08	-1.13	.02	-1.48	...	-1.10	-.08	...	-1.35	-.58
	...	1.32	.50 :	.60	1.43	...	.57	.15	...	.64	.54
RS 80	...	.27	.22	1.37	-.13	...	.25	1.27	1.35	...	.77
	...	1.47	.50	.60 :	1.41	...	.47	.64	.64	...	.49
V1392	...	-.50	-.54	.60	-.90	...	-.51	.50	.58	-.77	...
	...	1.43	.43	.49	1.32	...	.42	.54	.54	.49	...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 20 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	.50 ... 1	.60 ... 1	... .	... .
GR 78	... .	... .	... .	3.24 3.40 4	... .	... .	0.00 2.50 3	.50 1.91 4	.56 2.04 4	.12 1.87 3	.60 2.34 3
SP 76	... .	... .	-3.24 3.40 4	... .	... .	... .	... .	-.10 ... 1	-.10 ... 1	... .	-1.88 1.70 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	.40 ... 1
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	0.00 2.50 3	... .	... .	... .	... .	.30 ... 1	.40 ... 1	.41 .72 4	.37 .91 4
RS21C	... .	-.50 ... 1	-.50 1.91 4	.10 ... 1	... .	... .	-.30 ... 1	... .	.05 .12 10	... .	-.72 .46 2
RS21N	... .	-.60 ... 1	-.56 2.04 4	.10 ... 1	... .	... .	-.40 ... 1	-.05 .12 10	... .	... .	-.82 .61 2
RS 80	... .	... .	-.12 1.87 3	... .	... .	... .	-.41 .72 4	... .	... .	... .	.65 1.36 3
V1392	... .	... .	-.60 2.34 3	1.88 1.70 3	-.40 ... 1	... .	-.37 .91 4	.72 .46 2	.82 .61 2	-.65 1.36 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I PRESSURE [MB] I I 20 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-.32 1.77	2.09 1.83	-.32 2.43	... ...	-.38 1.81	.50 1.65	.55 1.65	-.22 1.84	.08 1.79
GR 78	... ...	.32 1.77	... ...	2.41 .63 $	-.01 1.74	... ...	-.06 .59	.82 .62	.87 .62	.09 .63	.39 .54
SP 76	... ...	-2.09 1.83	-2.41 .63 $	... ...	-2.42 1.78	... ...	-2.47 .78 $	-1.59 .78	-1.54 .78	-2.32 .81 *	-2.02 .67 *
SWISS	... ...	.32 2.43	.01 1.74	2.42 1.78	... ...	... ...	-.05 1.75	.82 1.79	.87 1.79	.10 1.76	.40 1.65
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	.38 1.81	.06 .59	2.47 .78 $	.05 1.75	... ...	... ...	.88 .75	.93 .75	.15 .61	.45 .57
RS21 C	... ...	-.50 1.65	-.82 .62	1.59 .78	-.82 1.79	... ...	-.88 .75	... ...	.05 .12	-.72 .80	-.42 .68
RS21 N	... ...	-.55 1.65	-.87 .62	1.54 .78	-.87 1.79	... ...	-.93 .75	-.05 .12	... ...	-.77 .80	-.47 .68
RS 80	... ...	.22 1.84	-.09 .63	2.32 .81 *	-.10 1.76	... ...	-.15 .61	.72 .80	.77 .80	... ...	.30 .62
V1392	... ...	-.08 1.79	-.39 .54	2.02 .67 *	-.40 1.65	... ...	-.45 .57	.42 .68	.47 .68	-.30 .62	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 900 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	1.10 ... 1	-.20 1.15 5	.05 .21 2	1.16 : 1.19 8	-1.55 1.63 2	-.58 1.64 6	.13 1.33 4	.30 1.49 4	.13 .29 4	-1.03 : 1.05 8
ASA	-1.10 ... 1	... .	... .	... .	1.43 3.36 4	3.05 1.91 2	1.00 .57 2	2.25 1.77 2	2.85 1.77 2	... .	... .
GR 78	.20 1.15 5	... .	... .	-.28 .43 4	.26 1.18 8	... .	-1.03 : .31 3	.13 .25 4	.38 + .15 4	-.05 .35 2	-1.06 .97 5
SP 76	-.05 .21 2	... .	.28 .43 4	... .	-.20 .98 4	... .	... .	.80 ... 1	.80 ... 1	.10 ... 1	-1.37 .67 3
SWISS	-1.16 : 1.19 8	-1.43 3.36 4	-.26 1.18 8	.20 .98 4	... .	-1.58 $ 1.03 8	-2.12 $ 1.36 9	.24 1.93 5	.56 2.14 5	-1.76 : 1.27 5	-1.54 $ 1.27 12
THOMM	1.55 1.63 2	-3.05 1.91 2	... .	... .	1.58 $ 1.03 8	... .	1.13 .90 3	1.93 1.72 3	2.00 1.73 3	-1.45 .35 2	-.32 1.99 5
RS 18	.58 1.64 6	-1.00 .57 2	1.03 : .31 3	... .	2.12 $ 1.36 9	-1.13 .90 3	... .	1.45 : .07 2	1.60 .28 2	.63 .59 3	0.00 .79 6
RS21C	-.13 1.33 4	-2.25 1.77 2	-.13 .25 4	-.80 ... 1	-.24 1.93 5	-1.93 1.72 3	-1.45 : .07 2	... .	.23 .31 8	... .	-1.95 1.34 2
RS21N	-.30 1.49 4	-2.85 1.77 2	-.38 + .15 4	-.80 ... 1	-.56 2.14 5	-2.00 1.73 3	-1.60 .28 2	-.23 .31 8	... .	... .	-1.90 1.41 2
RS 80	-.13 .29 4	... .	.05 .35 2	-.10 ... 1	1.76 : 1.27 5	1.45 .35 2	-.63 .59 3	... .	... .	... .	-.85 : .63 6
V1392	1.03 : 1.05 8	... .	1.06 .97 5	1.37 .67 3	1.54 $ 1.27 12	.32 1.99 5	0.00 .79 6	1.95 1.34 2	1.90 1.41 2	.85 : .63 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 900 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-1.39 .44 $	.30 .29	.34 .38	.81 .24 $	-.63 .32	-.78 .28 *	.77 .32 +	.99 .32 +	-.36 .32	-.91 .26 $
ASA	1.39 .44 $	... ...	1.69 .46 $	1.73 .52 $	2.20 .41 $	.75 .45	.60 .43	2.15 .45 $	2.38 .45 $	1.03 .48 :	.47 .44
GR 78	-.30 .29	-1.69 .46 $	... ...	.04 .38	.51 .27	-.94 .35 *	-1.08 .31 $	.47 .34	.69 .34	-.66 .35	-1.21 .28 $
SP 76	-.34 .38	-1.73 .52 $	-.04 .38	... ...	.47 .36	-.98 .43 :	-1.12 .40 *	.43 .42	.65 .42	-.70 .42	-1.25 .37 $
SWISS	-.81 .24 $	-2.20 .41 $	-.51 .27	-.47 .36	... ...	-1.45 .28 $	-1.60 .25 $	-.05 .30	.18 .30	-1.17 .30 $	-1.73 .23 $
THOMM	.63 .32	-.75 .45	.94 .35 *	.98 .43 :	1.45 .28 $	... ...	-.15 .33	1.40 .36 $	1.63 .36 $	.28 .36	-.28 .30
RS 18	.78 .28 *	-.60 .43	1.08 .31 $	1.12 .40 *	1.60 .25 $	.15 .33	... ...	1.55 .34 $	1.77 .34 $	.42 .33	-.13 .27
RS21 C	-.77 .32 +	-2.15 .45 $	-.47 .34	-.43 .42	.05 .30	-1.40 .36 $	-1.55 .34 $	... ...	.23 .31	-1.13 .38 $	-1.68 .32 $
RS21 N	-.99 .32 +	-2.38 .45 $	-.69 .34	-.65 .42	-.18 .30	-1.63 .36 $	-1.77 .34 $	-.23 .31	... ...	-1.35 .38 $	-1.90 .32 $
RS 80	.36 .32	-1.03 .48 :	.66 .35	.70 .42	1.17 .30 $	-.28 .36	-.42 .33	1.13 .38 $	1.35 .38 $	... ...	-.55 .30
V1392	.91 .26 $	-.47 .44	1.21 .28 $	1.25 .37 $	1.73 .23 $	.28 .30	.13 .27	1.68 .32 $	1.90 .32 $	.55 .30	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 850 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	-.40 ... 1	.22 .74 5	.45 .21 2	.81 * .62 8	-1.95 1.91 2	-.75 : .64 6	.60 1.00 4	.78 1.12 4	.23 .29 4	-.74 : .83 8
ASA	.40 ... 1	... .	... .	... .	1.30 2.00 4	1.70 1.56 2	.85 .49 2	1.70 .71 2	2.20 .71 2	... .	... .
GR 78	-.22 .74 5	... .	... .	-.25 .31 4	-.28 1.64 8	... .	-.87 : .25 3	.13 .17 4	.38 .25 4	-.05 .35 2	-1.06 .99 5
SP 76	-.45 .21 2	... .	.25 .31 4	... .	-.73 1.93 4	... .	... .	.50 ... 1	.70 ... 1	.30 ... 1	-1.20 1.04 3
SWISS	-.81 * .62 8	-1.30 2.00 4	.28 1.64 8	.73 1.93 4	... .	-1.68 : 1.79 8	-1.58 $ .83 9	.40 .96 5	.70 1.17 5	-.86 : .53 5	-1.30 $ .84 12
THOMM	1.95 1.91 2	-1.70 1.56 2	... .	... .	1.68 : 1.79 8	... .	2.43 2.63 3	2.33 2.23 3	2.37 2.11 3	.55 .64 2	.98 2.82 5
RS 18	.75 : .64 6	-.85 .49 2	.87 : .25 3	... .	1.58 $ .83 9	-2.43 2.63 3	... .	1.10 .28 2	1.10 .57 2	1.03 .45 3	.33 .33 6
RS21 C	-.60 1.00 4	-1.70 .71 2	-.13 .17 4	-.50 ... 1	-.40 .96 5	-2.33 2.23 3	-1.10 .28 2	... .	.20 .32 8	... .	-2.00 1.27 2
RS21 N	-.78 1.12 4	-2.20 .71 2	-.38 .25 4	-.70 ... 1	-.70 1.17 5	-2.37 2.11 3	-1.10 .57 2	-.20 .32 8	... .	... .	-2.00 1.56 2
RS 80	-.23 .29 4	... .	.05 .35 2	-.30 ... 1	.86 : .53 5	-.55 .64 2	-1.03 .45 3	... .	... .	... .	-.92 * .49 6
V1392	.74 : .83 8	... .	1.06 .99 5	1.20 1.04 3	1.30 $ .84 12	-.98 2.82 5	-.33 .33 6	2.00 1.27 2	2.00 1.56 2	.92 * .49 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 850 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-1.35 .40 $	.51 .26	.56 .35	.50 .22 :	-1.44 .29 $	-.68 .25 *	.75 .29 +	.95 .29 +	.07 .29	-.69 .23 $
ASA	1.35 .40 $	... ...	1.86 .42 $	1.91 .47 $	1.85 .37 $	-.09 .40	.67 .39	2.10 .41 $	2.30 .41 $	1.42 .44 $	.66 .40
GR 78	-.51 .26	-1.86 .42 $	... ...	.05 .34	-.01 .24	-1.95 .32 $	-1.18 .28 $	.25 .31	.45 .31	-.44 .31	-1.19 .26 $
SP 76	-.56 .35	-1.91 .47 $	-.05 .34	... ...	-.06 .33	-2.00 .39 $	-1.24 .37 $	.19 .38	.39 .38	-.49 .38	-1.24 .34 $
SWISS	-.50 .22 :	-1.85 .37 $	.01 .24	.06 .33	... ...	-1.94 .26 $	-1.17 .23 $	.26 .27	.46 .27	-.43 .27	-1.18 .21 $
THOMM	1.44 .29 $	.09 .40	1.95 .32 $	2.00 .39 $	1.94 .26 $	... ...	.76 .30 +	2.19 .32 $	2.39 .32 $	1.51 .33 $	.75 .28 *
RS 18	.68 .25 *	-.67 .39	1.18 .28 $	1.24 .37 $	1.17 .23 $	-.76 .30 +	... ...	1.43 .31 $	1.63 .31 $	.74 .30 +	-.01 .25
RS21 C	-.75 .29 +	-2.10 .41 $	-.25 .31	-.19 .38	-.26 .27	-2.19 .32 $	-1.43 .31 $	... ...	.20 .32	-.69 .35	-1.44 .29 $
RS21 N	-.95 .29 +	-2.30 .41 $	-.45 .31	-.39 .38	-.46 .27	-2.39 .32 $	-1.63 .31 $	-.20 .32	... ...	-.89 .35	-1.64 .29 $
RS 80	-.07 .29	-1.42 .44 $	.44 .31	.49 .38	.43 .27	-1.51 .33 $	-.74 .30 +	.69 .35	.89 .35	... ...	-.75 .28 *
V1392	.69 .23 $	-.66 .40	1.19 .26 $	1.24 .34 $	1.18 .21 $	-.75 .28 *	.01 .25	1.44 .29 $	1.64 .29 $	.75 .28 *	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 700 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.14 .58 5	-.05 .92 2	.13 .82 8	-1.50 : .14 2	-.68 .65 5	.78 .73 4	.85 .70 4	.85 : .47 4	-.51 .84 8
ASA	... .	... .	... .	... .	1.30 1.69 4	1.60 .57 2	.20 .28 2	1.05 .64 2	1.65 .64 2	... .	... .
GR 78	-.14 .58 5	... .	... .	-.18 .33 4	-.54 1.05 8	... .	-1.20 : .40 3	.33 .22 4	.53 : .26 4	.70 .42 2	-1.00 : .80 5
SP 76	.05 .92 2	... .	.18 .33 4	... .	-.43 .99 4	... .	... .	.80 ... 1	.70 ... 1	.60 ... 1	-1.20 .61 3
SWISS	-.13 .82 8	-1.30 1.69 4	.54 1.05 8	.43 .99 4	... .	-.64 : .70 8	-.64 1.66 9	1.04 1.09 5	1.32 1.10 5	.28 .64 5	-.40 .99 12
THOMM	1.50 : .14 2	-1.60 .57 2	... .	... .	.64 : .70 8	... .	1.63 1.47 3	1.50 1.73 3	1.67 1.52 3	.50 .99 2	.54 .94 5
RS 18	.68 .65 5	-.20 .28 2	1.20 : .40 3	... .	.64 1.66 9	-1.63 1.47 3	... .	1.65 .64 2	1.85 .92 2	1.60 : .56 3	.05 .91 6
RS21C	-.78 .73 4	-1.05 .64 2	-.33 .22 4	-.80 ... 1	-1.04 1.09 5	-1.50 1.73 3	-1.65 .64 2	... .	.24 : .27 8	... .	-1.55 1.20 2
RS21N	-.85 .70 4	-1.65 .64 2	-.53 : .26 4	-.70 ... 1	-1.32 1.10 5	-1.67 1.52 3	-1.85 .92 2	-.24 : .27 8	... .	... .	-1.50 1.13 2
RS 80	-.85 : .47 4	... .	-.70 .42 2	-.60 ... 1	-.28 .64 5	-.50 .99 2	-1.60 : .56 3	... .	... .	... .	-1.25 $ .52 6
V1392	.51 .84 8	... .	1.00 : .80 5	1.20 .61 3	.40 .99 12	-.54 .94 5	-.05 .91 6	1.55 1.20 2	1.50 1.13 2	1.25 $ .52 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 700 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-1.28 .33 $	.37 .21	.26 .27	-.08 .18	-.90 .23 $	-.63 .21 $	.74 .23 $	.98 .23 $	.59 .23 +	-.57 .19 $
ASA	1.28 .33 $	... ...	1.65 .34 $	1.54 .39 $	1.20 .30 $	.38 .33	.65 .32 :	2.02 .33 $	2.26 .33 $	1.87 .36 $	.71 .33 :
GR 78	-.37 .21	-1.65 .34 $	... ...	-.11 .27	-.45 .19 :	-1.27 .25 $	-1.00 .22 $	.37 .24	.61 .24	.22 .25	-.94 .20 $
SP 76	-.26 .27	-1.54 .39 $	.11 .27	... ...	-.34 .26	-1.16 .31 $	-.89 .29 $	.48 .30	.72 .30	.33 .30	-.83 .26 $
SWISS	.08 .18	-1.20 .30 $	.45 .19 :	.34 .26	... ...	-.82 .20 $	-.56 .18 $	.82 .21 $	1.06 .21 $	.67 .22 $	-.49 .16 $
THOMM	.90 .23 $	-.38 .33	1.27 .25 $	1.16 .31 $	.82 .20 $	... ...	.27 .23	1.64 .25 $	1.88 .25 $	1.49 .26 $	.33 .22
RS 18	.63 .21 $	-.65 .32 :	1.00 .22 $	.89 .29 $	.56 .18 $	-.27 .23	... ...	1.38 .24 $	1.61 .24 $	1.22 .24 $	.07 .20
RS21 C	-.74 .23 $	-2.02 .33 $	-.37 .24	-.48 .30	-.82 .21 $	-1.64 .25 $	-1.38 .24 $	... ...	.24 .27 :	-.15 .28	-1.31 .23 $
RS21 N	-.98 .23 $	-2.26 .33 $	-.61 .24	-.72 .30	-1.06 .21 $	-1.88 .25 $	-1.61 .24 $	-.24 .27 :	... ...	-.39 .28	-1.55 .23 $
RS 80	-.59 .23 +	-1.87 .36 $	-.22 .25	-.33 .30	-.67 .22 $	-1.49 .26 $	-1.22 .24 $	.15 .28	.39 .28	... ...	-1.16 .22 $
V1392	.57 .19 $	-.71 .33 :	.94 .20 $	.83 .26 $	.49 .16 $	-.33 .22	-.07 .20	1.31 .23 $	1.55 .23 $	1.16 .22 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 500 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.70 .80 4	1.00 .28 2	1.03 1.13 7	-1.65 .92 2	-.03 1.14 4	1.23 .87 4	1.08 1.02 4	1.13 .60 3	-.09 .81 7
ASA	... .	... .	... .	... .	.80 .80 4	.80 .14 2	-.35 .07 2	0.00 .71 2	.80 .71 2	... .	... .
GR 78	-.70 .80 4	... .	... .	-.25 .21 4	.05 .55 8	... .	-1.33 .76 3	.48 $ .10 4	.65 : .33 4	.15 .35 2	-1.14 $ .45 5
SP 76	-1.00 .28 2	... .	.25 .21 4	... .	.38 .39 4	... .	... .	.80 ... 1	.70 ... 1	.40 ... 1	-1.20 : .46 3
SWISS	-1.03 1.13 7	-.80 .80 4	-.05 .55 8	-.38 .39 4	... .	-.80 2.15 8	-.96 : 1.02 9	.42 .76 5	.72 : .44 5	-.18 .41 5	-1.03 $ .66 11
THOMM	1.65 .92 2	-.80 .14 2	... .	... .	.80 2.15 8	... .	1.00 1.23 3	1.47 2.14 3	1.07 1.44 3	2.80 3.82 2	.74 2.46 5
RS 18	.03 1.14 4	.35 .07 2	1.33 .76 3	... .	.96 : 1.02 9	-1.00 1.23 3	... .	2.10 .99 2	2.15 1.06 2	1.00 .61 3	-.17 .68 6
RS21C	-1.23 .87 4	0.00 .71 2	-.48 $ .10 4	-.80 ... 1	-.42 .76 5	-1.47 2.14 3	-2.10 .99 2	... .	.04 .61 8	... .	-1.80 .42 2
RS21N	-1.08 1.02 4	-.80 .71 2	-.65 : .33 4	-.70 ... 1	-.72 : .44 5	-1.07 1.44 3	-2.15 1.06 2	-.04 .61 8	... .	... .	-1.75 .35 2
RS 80	-1.13 .60 3	... .	-.15 .35 2	-.40 ... 1	.18 .41 5	-2.80 3.82 2	-1.00 .61 3	... .	... .	... .	-1.18 $ .47 6
V1392	.09 .81 7	... .	1.14 $ .45 5	1.20 : .46 3	1.03 $ .66 11	-.74 2.46 5	.17 .68 6	1.80 .42 2	1.75 .35 2	1.18 $ .47 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 500 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	.05 .39	.88 .25 $	.71 .32 :	.85 .21 $	-.53 .27	-.10 .25	1.23 .27 $	1.27 .27 $	1.06 .28 $	-.17 .22
ASA	-.05 .39	... ...	.83 .39 :	.66 .44	.80 .35 :	-.58 .38	-.15 .37	1.18 .38 $	1.22 .38 $	1.00 .41 +	-.22 .37
GR 78	-.88 .25 $	-.83 .39 :	... ...	-.17 .31	-.03 .22	-1.41 .29 $	-.98 .26 $	.35 .28	.39 .28	.18 .29	-1.05 .24 $
SP 76	-.71 .32 :	-.66 .44	.17 .31	... ...	.14 .29	-1.24 .35 $	-.81 .33 +	.53 .34	.56 .34	.35 .35	-.88 .30 $
SWISS	-.85 .21 $	-.80 .35 :	.03 .22	-.14 .29	... ...	-1.38 .23 $	-.95 .21 $	.38 .25	.42 .25	.21 .25	-1.02 .19 $
THOMM	.53 .27	.58 .38	1.41 .29 $	1.24 .35 $	1.38 .23 $	... ...	.43 .27	1.76 .29 $	1.80 .29 $	1.59 .30 $	.36 .25
RS 18	.10 .25	.15 .37	.98 .26 $	.81 .33 +	.95 .21 $	-.43 .27	... ...	1.33 .28 $	1.37 .28 $	1.16 .28 $	-.07 .23
RS21C	-1.23 .27 $	-1.18 .38 $	-.35 .28	-.53 .34	-.38 .25	-1.76 .29 $	-1.33 .28 $	... ...	.04 .61	-.18 .32	-1.41 .27 $
RS21N	-1.27 .27 $	-1.22 .38 $	-.39 .28	-.56 .34	-.42 .25	-1.80 .29 $	-1.37 .28 $	-.04 .61	... ...	-.21 .32	-1.44 .27 $
RS 80	-1.06 .28 $	-1.00 .41 +	-.18 .29	-.35 .35	-.21 .25	-1.59 .30 $	-1.16 .28 $	.18 .32	.21 .32	... ...	-1.23 .25 $
V1392	.17 .22	.22 .37	1.05 .24 $	.88 .30 $	1.02 .19 $	-.36 .25	.07 .23	1.41 .27 $	1.44 .27 $	1.23 .25 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 400 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.70 .76 4	.80 $ 0.00 2	1.13 1.74 7	-1.70 ... 1	-.38 1.61 4	1.53 1.16 4	1.40 : .88 4	1.27 1.12 3	.40 1.09 7
ASA	... .	... .	... .	... .	.38 .85 4	2.10 1.56 2	-.20 2.12 2	.45 .78 2	1.25 .78 2	... .	... .
GR 78	-.70 .76 4	... .	... .	-.38 .46 4	.06 1.05 8	... .	-1.17 .76 3	.53 : .24 4	.73 + .29 4	.15 .35 2	-.90 $ .24 5
SP 76	-.80 $ 0.00 2	... .	.38 .46 4	... .	.33 .67 4	... .	... .	1.40 ... 1	1.20 ... 1	.20 ... 1	-.87 : .25 3
SWISS	-1.13 1.74 7	-.38 .85 4	-.06 1.05 8	-.33 .67 4	... .	.14 1.47 7	-1.11 + 1.02 9	.38 1.20 5	.70 1.16 5	.28 .29 5	-.49 : .67 12
THOMM	1.70 ... 1	-2.10 1.56 2	... .	... .	-.14 1.47 7	... .	.10 1.70 2	2.20 2.43 3	1.77 1.97 3	1.20 .57 2	-.40 1.16 4
RS 18	.38 1.61 4	.20 2.12 2	1.17 .76 3	... .	1.11 + 1.02 9	-.10 1.70 2	... .	2.05 : .21 2	2.25 + .07 2	1.10 .82 3	.28 .46 6
RS21C	-1.53 1.16 4	-.45 .78 2	-.53 : .24 4	-1.40 ... 1	-.38 1.20 5	-2.20 2.43 3	-2.05 : .21 2	... .	.04 .61 8	... .	-1.55 .64 2
RS21N	-1.40 : .88 4	-1.25 .78 2	-.73 + .29 4	-1.20 ... 1	-.70 1.16 5	-1.77 1.97 3	-2.25 + .07 2	-.04 .61 8	... .	... .	-1.60 .28 2
RS 80	-1.27 1.12 3	... .	-.15 .35 2	-.20 ... 1	-.28 .29 5	-1.20 .57 2	-1.10 .82 3	... .	... .	... .	-.87 $ .29 6
V1392	-.40 1.09 7	... .	.90 $ .24 5	.87 : .25 3	.49 : .67 12	.40 1.16 4	-.28 .46 6	1.55 .64 2	1.60 .28 2	.87 $ .29 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 400 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	.09 .38	.93 .25 $	.68 .31 :	.83 .21 $	.45 .29	-.17 .24	1.58 .26 $	1.62 .26 $	1.13 .27 $	.20 .22
ASA	-.09 .38	... ...	.84 .38 :	.59 .43	.75 .34 :	.36 .37	-.25 .36	1.49 .37 $	1.53 .37 $	1.05 .40 *	.11 .36
GR 78	-.93 .25 $	-.84 .38 :	... ...	-.25 .30	-.09 .21	-.48 .29	-1.10 .25 $	.65 .27 +	.69 .27 +	.20 .28	-.73 .23 $
SP 76	-.68 .31 :	-.59 .43	.25 .30	... ...	.16 .28	-.23 .35	-.84 .32 +	.90 .33 *	.94 .33 *	.45 .34	-.48 .29
SWISS	-.83 .21 $	-.75 .34 :	.09 .21	-.16 .28	... ...	-.39 .24	-1.00 .21 $	.75 .24 $	.78 .24 $	.30 .24	-.63 .18 $
THOMM	-.45 .29	-.36 .37	.48 .29	.23 .35	.39 .24	... ...	-.61 .28 :	1.13 .29 $	1.17 .29 $	.69 .30 :	-.25 .26
RS 18	.17 .24	.25 .36	1.10 .25 $	.84 .32 +	1.00 .21 $	.61 .28 :	... ...	1.75 .27 $	1.78 .27 $	1.30 .27 $	.37 .22
RS21C	-1.58 .26 $	-1.49 .37 $	-.65 .27 +	-.90 .33 *	-.75 .24 $	-1.13 .29 $	-1.75 .27 $	... ...	.04 .61	-.45 .31	-1.38 .26 $
RS21N	-1.62 .26 $	-1.53 .37 $	-.69 .27 +	-.94 .33 *	-.78 .24 $	-1.17 .29 $	-1.78 .27 $	-.04 .61	... ...	-.49 .31	-1.42 .26 $
RS 80	-1.13 .27 $	-1.05 .40 *	-.20 .28	-.45 .34	-.30 .24	-.69 .30 :	-1.30 .27 $	.45 .31	.49 .31	... ...	-.93 .25 $
V1392	-.20 .22	-.11 .36	.73 .23 $	.48 .29	.63 .18 $	.25 .26	-.37 .22	1.38 .26 $	1.42 .26 $	.93 .25 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 300 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	1.25 2.51 4	2.05 .92 2	2.57 3.65 7	-1.80 ... 1	1.10 3.20 4	2.10 2.63 4	2.55 2.54 4	2.90 1.65 3	1.33 2.45 7
ASA	... .	... .	... .	... .	1.40 : .78 4	2.80 .71 2	.10 1.98 2	1.30 .28 2	1.80 .28 2	... .	... .
GR 78	-1.25 2.51 4	... .	... .	-.15 .34 4	-.29 1.10 8	... .	-.93 : .35 3	.80 * .22 4	1.20 $ .14 4	.35 .07 2	-.66 .71 5
SP 76	-2.05 .92 2	... .	.15 .34 4	... .	.60 .70 4	... .	... .	.80 ... 1	1.00 ... 1	.50 ... 1	-.80 .36 3
SWISS	-2.57 3.65 7	-1.40 : .78 4	.29 1.10 8	-.60 .70 4	... .	.81 1.12 7	-1.03 1.83 9	1.00 1.25 5	1.42 1.41 5	.34 .94 5	-.88 1.62 12
THOMM	1.80 ... 1	-2.80 .71 2	... .	... .	-.81 1.12 7	... .	.20 .14 2	1.03 3.25 3	1.23 3.37 3	.45 1.34 2	-1.13 1.66 4
RS 18	-1.10 3.20 4	-.10 1.98 2	.93 : .35 3	... .	1.03 1.83 9	-.20 .14 2	... .	1.95 .64 2	2.35 .35 2	1.07 $ .12 3	-.15 .71 6
RS21C	-2.10 2.63 4	-1.30 .28 2	-.80 * .22 4	-.80 ... 1	-1.00 1.25 5	-1.03 3.25 3	-1.95 .64 2	... .	.34 * .27 8	... .	-1.55 : .07 2
RS21N	-2.55 2.54 4	-1.80 .28 2	-1.20 $ .14 4	-1.00 ... 1	-1.42 1.41 5	-1.23 3.37 3	-2.35 .35 2	-.34 * .27 8	... .	... .	-1.95 .35 2
RS 80	-2.90 1.65 3	... .	-.35 .07 2	-.50 ... 1	-.34 .94 5	-.45 1.34 2	-1.07 $ .12 3	... .	... .	... .	-.93 + .62 6
V1392	-1.33 2.45 7	... .	.66 .71 5	.80 .36 3	.88 1.62 12	1.13 1.66 4	.15 .71 6	1.55 : .07 2	1.95 .35 2	.93 + .62 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 300 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	.53 .60	1.88 .39 $	1.71 .49 $	1.93 .33 $	2.06 .45 $	1.09 .39 *	2.64 .42 $	2.97 .42 $	2.30 .43 $	1.12 .35 $
ASA	-.53 .60	... ...	1.35 .61 :	1.19 .68	1.40 .54 +	1.53 .59 +	.56 .57	2.11 .59 $	2.45 .59 $	1.77 .63 *	.59 .58
GR 78	-1.88 .39 $	-1.35 .61 :	... ...	-.16 .47	.05 .34	.18 .47	-.79 .40	.76 .43	1.09 .43	.42 .44	-.76 .36 :
SP 76	-1.71 .49 $	-1.19 .68	.16 .47	... ...	.21 .45	.35 .56	-.63 .52	.92 .53	1.26 .53	.58 .53	-.59 .47
SWISS	-1.93 .33 $	-1.40 .54 +	-.05 .34	-.21 .45	... ...	.14 .38	-.84 .33 +	.71 .38	1.05 .38	.37 .38	-.81 .29 *
THOMM	-2.06 .45 $	-1.53 .59 +	-.18 .47	-.35 .56	-.14 .38	... ...	-.97 .44 :	.57 .46	.91 .46	.23 .48	-.94 .41 :
RS 18	-1.09 .39 *	-.56 .57	.79 .40	.63 .52	.84 .33 +	.97 .44 :	... ...	1.55 .43 $	1.89 .43 $	1.21 .43 *	.03 .35
RS21 C	-2.64 .42 $	-2.11 .59 $	-.76 .43	-.92 .53	-.71 .38	-.57 .46	-1.55 .43 $	... ...	.34 .27 *	-.34 .49	-1.52 .41 $
RS21 N	-2.97 .42 $	-2.45 .59 $	-1.09 .43	-1.26 .53	-1.05 .38	-.91 .46	-1.89 .43 $	-.34 .27 *	... ...	-.68 .49	-1.85 .41 $
RS 80	-2.30 .43 $	-1.77 .63 *	-.42 .44	-.58 .53	-.37 .38	-.23 .48	-1.21 .43 *	.34 .49	.68 .49	... ...	-1.18 .39 $
V1392	-1.12 .35 $	-.59 .58	.76 .36 :	.59 .47	.81 .29 *	.94 .41 :	-.03 .35	1.52 .41 $	1.85 .41 $	1.18 .39 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 250 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	3.98 + 1.72 4	5.00 1.84 2	2.97 $ 1.49 7	4.90 ... 1	3.30 : 1.97 4	5.60 + 2.11 4	5.93 * 1.94 4	4.57 2.11 3	4.18 $ 1.64 6
ASA	... .	... .	... .	... .	.05 1.01 4	.35 .07 2	-.55 3.89 2	.10 .99 2	.60 .99 2	... .	... .
GR 78	-3.98 + 1.72 4	... .	... .	-.05 .19 4	.01 1.54 8	... .	-.50 1.11 3	.98 + .37 4	1.30 $ .18 4	.30 .28 2	-.40 .65 4
SP 76	-5.00 1.84 2	... .	.05 .19 4	... .	.48 1.59 4	... .	... .	.40 ... 1	1.00 ... 1	.60 ... 1	-.45 1.06 2
SWISS	-2.97 $ 1.49 7	-.05 1.01 4	-.01 1.54 8	-.48 1.59 4	... .	1.34 1.81 7	-.63 2.11 9	1.48 1.40 5	1.84 1.57 5	.48 1.61 5	.11 1.20 11
THOMM	-4.90 ... 1	-.35 .07 2	... .	... .	-1.34 1.81 7	... .	-1.60 3.25 2	-.70 3.14 3	-.93 3.19 3	-2.75 + .07 2	-3.48 $ .52 4
RS 18	-3.30 : 1.97 4	.55 3.89 2	.50 1.11 3	... .	.63 2.11 9	1.60 3.25 2	... .	2.20 1.27 2	2.30 .85 2	.77 1.04 3	-.18 .58 6
RS21C	-5.60 + 2.11 4	-.10 .99 2	-.98 + .37 4	-.40 ... 1	-1.48 1.40 5	.70 3.14 3	-2.20 1.27 2	... .	.14 .40 8	... .	-1.70 : .14 2
RS21N	-5.93 * 1.94 4	-.60 .99 2	-1.30 $ .18 4	-1.00 ... 1	-1.84 1.57 5	.93 3.19 3	-2.30 .85 2	-.14 .40 8	... .	... .	-2.20 $ 0.00 2
RS 80	-4.57 2.11 3	... .	-.30 .28 2	-.60 ... 1	-.48 1.61 5	2.75 + .07 2	-.77 1.04 3	... .	... .	... .	-.82 .77 5
V1392	-4.18 $ 1.64 6	... .	.40 .65 4	.45 1.06 2	-.11 1.20 11	3.48 $ .52 4	.18 .58 6	1.70 : .14 2	2.20 $ 0.00 2	.82 .77 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 250 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	4.44 .54 $	3.99 .36 $	4.00 .46 $	3.88 .31 $	5.77 .41 $	3.49 .35 $	5.21 .38 $	5.34 .38 $	4.26 .40 $	3.59 .33 $
ASA	-4.44 .54 $	... ...	-.45 .55	-.45 .62	-.57 .49	1.33 .54 +	-.96 .52	.76 .53	.90 .53	-.18 .58	-.85 .53
GR 78	-3.99 .36 $	.45 .55	... ...	.00 .44	-.11 .31	1.78 .43 $	-.50 .37	1.21 .39 $	1.35 .39 $	.27 .41	-.40 .34
SP 76	-4.00 .46 $	.45 .62	-.00 .44	... ...	-.12 .42	1.78 .52 $	-.51 .48	1.21 .49 +	1.35 .49 +	.27 .50	-.40 .45
SWISS	-3.88 .31 $	.57 .49	.11 .31	.12 .42	... ...	1.89 .35 $	-.39 .30	1.33 .34 $	1.47 .34 $	.39 .36	-.29 .27
THOMM	-5.77 .41 $	-1.33 .54 +	-1.78 .43 $	-1.78 .52 $	-1.89 .35 $	... ...	-2.28 .40 $	-.57 .42	-.43 .42	-1.51 .44 $	-2.18 .38 $
RS 18	-3.49 .35 $	.96 .52	.50 .37	.51 .48	.39 .30	2.28 .40 $	... ...	1.72 .39 $	1.85 .39 $	.77 .40	.10 .33
RS21C	-5.21 .38 $	-.76 .53	-1.21 .39 $	-1.21 .49 +	-1.33 .34 $	.57 .42	-1.72 .39 $	... ...	.14 .40	-.94 .45 :	-1.61 .38 $
RS21N	-5.34 .38 $	-.90 .53	-1.35 .39 $	-1.35 .49 +	-1.47 .34 $	.43 .42	-1.85 .39 $	-.14 .40	... ...	-1.08 .45 :	-1.75 .38 $
RS 80	-4.26 .40 $	.18 .58	-.27 .41	-.27 .50	-.39 .36	1.51 .44 $	-.77 .40	.94 .45 :	1.08 .45 :	... ...	-.67 .37
V1392	-3.59 .33 $	.85 .53	.40 .34	.40 .45	.29 .27	2.18 .38 $	-.10 .33	1.61 .38 $	1.75 .38 $	.67 .37	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 200 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	3.63 2.54 3	1.40 ... 1	2.60 : 2.26 6	4.60 ... 1	2.75 + .99 4	5.88 : 2.70 4	5.53 + 2.42 4	4.75 : .49 2	2.50 2.46 5
ASA	... .	... .	... .	... .	-.38 1.66 4	1.30 .28 2	-2.95 4.31 2	1.35 .64 2	1.65 .64 2	... .	... .
GR 78	-3.63 2.54 3	... .	... .	.53 .39 4	-.26 1.65 8	... .	-1.00 .89 3	1.50 $ .36 4	1.48 $ .22 4	.70 .57 2	-.20 .62 5
SP 76	-1.40 ... 1	... .	-.53 .39 4	... .	-.15 1.34 4	... .	... .	.60 ... 1	.50 ... 1	1.10 ... 1	-.33 1.23 3
SWISS	-2.60 : 2.26 6	.38 1.66 4	.26 1.65 8	.15 1.34 4	... .	2.70 : 2.03 5	-.38 1.76 8	1.68 1.52 5	1.72 1.77 5	1.88 + .96 5	.27 1.36 11
THOMM	-4.60 ... 1	-1.30 .28 2	... .	... .	-2.70 : 2.03 5	... .	... .	.75 3.89 2	.30 2.97 2	-3.00 1.84 2	-3.37 2.21 3
RS 18	-2.75 + .99 4	2.95 4.31 2	1.00 .89 3	... .	.38 1.76 8	... .	... .	3.25 .64 2	3.05 + .07 2	1.23 .81 3	.10 1.08 5
RS21 C	-5.88 : 2.70 4	-1.35 .64 2	-1.50 $ .36 4	-.60 ... 1	-1.68 1.52 5	-.75 3.89 2	-3.25 .64 2	... .	-.02 .55 8	... .	-2.30 $ 0.00 2
RS21 N	-5.53 + 2.42 4	-1.65 .64 2	-1.48 $ .22 4	-.50 ... 1	-1.72 1.77 5	-.30 2.97 2	-3.05 + .07 2	.02 .55 8	... .	... .	-1.95 .35 2
RS 80	-4.75 : .49 2	... .	-.70 .57 2	-1.10 ... 1	-1.88 + .96 5	3.00 1.84 2	-1.23 .81 3	... .	... .	... .	-.98 $ .43 6
V1392	-2.50 2.46 5	... .	.20 .62 5	.33 1.23 3	-.27 1.36 11	3.37 2.21 3	-.10 1.08 5	2.30 $ 0.00 2	1.95 .35 2	.98 $ .43 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 200 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	4.02 .58 $	3.25 .40 $	3.27 .50 $	2.88 .34 $	5.66 .50 $	2.45 .40 $	5.20 .42 $	5.18 .42 $	4.05 .44 $	2.87 .36 $
ASA	-4.02 .58 $	... ...	-.77 .58	-.75 .65	-1.15 .51 :	1.63 .59 *	-1.57 .55 *	1.18 .56 :	1.16 .56 :	.03 .60	-1.15 .56 :
GR 78	-3.25 .40 $	.77 .58	... ...	.02 .46	-.37 .33	2.41 .50 $	-.80 .40 :	1.95 .41 $	1.93 .41 $	.80 .43	-.37 .35
SP 76	-3.27 .50 $	.75 .65	-.02 .46	... ...	-.39 .44	2.39 .58 $	-.82 .51	1.93 .52 $	1.91 .52 $	.78 .52	-.39 .46
SWISS	-2.88 .34 $	1.15 .51 :	.37 .33	.39 .44	... ...	2.78 .43 $	-.43 .33	2.33 .37 $	2.30 .37 $	1.17 .37 $	-.00 .29
THOMM	-5.66 .50 $	-1.63 .59 *	-2.41 .50 $	-2.39 .58 $	-2.78 .43 $	... ...	-3.21 .50 $	-.45 .50	-.48 .50	-1.61 .50 $	-2.78 .45 $
RS 18	-2.45 .40 $	1.57 .55 *	.80 .40 :	.82 .51	.43 .33	3.21 .50 $	... ...	2.75 .43 $	2.73 .43 $	1.60 .43 $	.43 .36
RS21C	-5.20 .42 $	-1.18 .56 :	-1.95 .41 $	-1.93 .52 $	-2.33 .37 $	.45 .50	-2.75 .43 $	... ...	-.02 .55	-1.15 .48 +	-2.33 .40 $
RS21N	-5.18 .42 $	-1.16 .56 :	-1.93 .41 $	-1.91 .52 $	-2.30 .37 $	.48 .50	-2.73 .43 $	.02 .55	... ...	-1.13 .48 +	-2.30 .40 $
RS 80	-4.05 .44 $	-.03 .60	-.80 .43	-.78 .52	-1.17 .37 $	1.61 .50 $	-1.60 .43 $	1.15 .48 +	1.13 .48 +	... ...	-1.18 .38 $
V1392	-2.87 .36 $	1.15 .56 :	.37 .35	.39 .46	.00 .29	2.78 .45 $	-.43 .36	2.33 .40 $	2.30 .40 $	1.18 .38 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 150 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	2.40 1.41 2	1.30 ... 1	1.50 1.54 4	3.80 ... 1	1.85 2.33 2	4.90 2.07 3	4.57 : 1.29 3	3.35 2.19 2	2.60 1.80 3
ASA	... .	... .	... .	... .	-.20 1.30 4	... .	-1.65 3.46 2	1.65 .78 2	2.25 .78 2	... .	... .
GR 78	-2.40 1.41 2	... .	... .	.28 .30 4	-.71 1.34 8	... .	-1.17 .67 3	1.33 * .38 4	1.53 $ .35 4	.80 .28 2	-.62 .78 5
SP 76	-1.30 ... 1	... .	-.28 .30 4	... .	-.33 1.67 4	... .	... .	1.90 ... 1	1.80 ... 1	.40 ... 1	-.83 .71 3
SWISS	-1.50 1.54 4	.20 1.30 4	.71 1.34 8	.33 1.67 4	... .	2.90 ... 1	-.25 2.21 8	2.40 $ .93 5	2.68 $ .89 5	2.32 $ .50 5	.59 .99 10
THOMM	-3.80 ... 1	... .	... .	... .	-2.90 ... 1	... .	... .	3.40 ... 1	1.70 ... 1	... .	... .
RS 18	-1.85 2.33 2	1.65 3.46 2	1.17 .67 3	... .	.25 2.21 8	... .	... .	2.85 + .07 2	2.90 .42 2	1.33 + .31 3	-.10 .62 5
RS21C	-4.90 2.07 3	-1.65 .78 2	-1.33 * .38 4	-1.90 ... 1	-2.40 $ .93 5	-3.40 ... 1	-2.85 + .07 2	... .	-.05 .76 8	... .	-2.70 : .14 2
RS21N	-4.57 : 1.29 3	-2.25 .78 2	-1.53 $ .35 4	-1.80 ... 1	-2.68 $ .89 5	-1.70 ... 1	-2.90 .42 2	.05 .76 8	... .	... .	-2.55 + .07 2
RS 80	-3.35 2.19 2	... .	-.80 .28 2	-.40 ... 1	-2.32 $ .50 5	... .	-1.33 + .31 3	... .	... .	... .	-1.30 $ .66 6
V1392	-2.60 1.80 3	... .	.62 .78 5	.83 .71 3	-.59 .99 10	... .	.10 .62 5	2.70 : .14 2	2.55 + .07 2	1.30 $ .66 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 150 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	2.56 .53 $	2.67 .36 $	2.59 .43 $	1.80 .32 $	3.20 .74 $	1.74 .37 $	4.50 .38 $	4.45 .38 $	3.53 .39 $	2.13 .34 $
ASA	-2.56 .53 $	... ...	.11 .50	.02 .56	-.76 .45	.64 .84	-.82 .48	1.94 .49 $	1.89 .49 $	.97 .53	-.43 .49
GR 78	-2.67 .36 $	-.11 .50	... ...	-.08 .37	-.87 .27 $	.53 .76	-.93 .33 *	1.83 .34 $	1.78 .34 $	.86 .36 +	-.54 .29
SP 76	-2.59 .43 $	-.02 .56	.08 .37	... ...	-.78 .36 :	.61 .79	-.85 .41 :	1.92 .42 $	1.87 .42 $	.94 .43 :	-.46 .37
SWISS	-1.80 .32 $	.76 .45	.87 .27 $	.78 .36 :	... ...	1.40 .73	-.06 .28	2.70 .31 $	2.65 .31 $	1.73 .32 $	.33 .25
THOMM	-3.20 .74 $	-.64 .84	-.53 .76	-.61 .79	-1.40 .73	... ...	-1.46 .76	1.30 .74	1.25 .74	.33 .78	-1.07 .75
RS 18	-1.74 .37 $	.82 .48	.93 .33 *	.85 .41 :	.06 .28	1.46 .76	... ...	2.76 .36 $	2.71 .36 $	1.79 .36 $	.39 .30
RS21C	-4.50 .38 $	-1.94 .49 $	-1.83 .34 $	-1.92 .42 $	-2.70 .31 $	-1.30 .74	-2.76 .36 $	... ...	-.05 .76	-.97 .40 +	-2.37 .34 $
RS21N	-4.45 .38 $	-1.89 .49 $	-1.78 .34 $	-1.87 .42 $	-2.65 .31 $	-1.25 .74	-2.71 .36 $	.05 .76	... ...	-.92 .40 +	-2.32 .34 $
RS 80	-3.53 .39 $	-.97 .53	-.86 .36 +	-.94 .43 :	-1.73 .32 $	-.33 .78	-1.79 .36 $	.97 .40 +	.92 .40 +	... ...	-1.40 .32 $
V1392	-2.13 .34 $	.43 .49	.54 .29	.46 .37	-.33 .25	1.07 .75	-.39 .30	2.37 .34 $	2.32 .34 $	1.40 .32 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 100 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	1.60 .57 2	2.60 ... 1	1.08 1.44 4	... .	3.25 1.63 2	5.33 3.70 3	5.40 3.47 3	4.80 1.84 2	2.77 2.72 3
ASA	... .	... .	... .	... .	-.78 + .33 4	... .	-1.80 3.25 2	1.25 .35 2	1.65 .35 2	... .	... .
GR 78	-1.60 .57 2	... .	... .	.95 : .51 4	-.34 1.17 8	... .	.13 .68 3	1.63 $ .17 4	1.80 $ .26 4	1.30 .57 2	-.66 1.05 5
SP 76	-2.60 ... 1	... .	-.95 : .51 4	... .	-1.43 1.00 4	... .	... .	.80 ... 1	.90 ... 1	.10 ... 1	-2.40 + .44 3
SWISS	-1.08 1.44 4	.78 + .33 4	.34 1.17 8	1.43 1.00 4	... .	... .	.19 1.97 8	2.44 * 1.14 5	2.66 * 1.10 5	2.28 : 1.66 5	.77 1.27 10
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-3.25 1.63 2	1.80 3.25 2	-.13 .68 3	... .	-.19 1.97 8	... .	... .	1.90 : .14 2	2.05 .35 2	1.03 .91 3	-.16 .84 5
RS21C	-5.33 3.70 3	-1.25 .35 2	-1.63 $ .17 4	-.80 ... 1	-2.44 * 1.14 5	... .	-1.90 : .14 2	... .	.14 .20 8	... .	-2.95 .78 2
RS21N	-5.40 3.47 3	-1.65 .35 2	-1.80 $ .26 4	-.90 ... 1	-2.66 * 1.10 5	... .	-2.05 .35 2	-.14 .20 8	... .	... .	-3.00 .85 2
RS 80	-4.80 1.84 2	... .	-1.30 .57 2	-.10 ... 1	-2.28 : 1.66 5	... .	-1.03 .91 3	... .	... .	... .	-1.70 + 1.11 6
V1392	-2.77 2.72 3	... .	.66 1.05 5	2.40 + .44 3	-.77 1.27 10	... .	.16 .84 5	2.95 .78 2	3.00 .85 2	1.70 + 1.11 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 100 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	3.28 .59 $	2.57 .40 $	3.72 .48 $	1.97 .36 $	... ...	2.46 .41 $	4.61 .42 $	4.75 .42 $	4.05 .43 $	2.30 .38 $
ASA	-3.28 .59 $	... ...	-.71 .55	.44 .61	-1.31 .49 *	... ...	-.82 .53	1.33 .54 +	1.47 .54 +	.77 .58	-.98 .54
GR 78	-2.57 .40 $	.71 .55	... ...	1.15 .41 *	-.60 .30 :	... ...	-.11 .36	2.04 .38 $	2.18 .38 $	1.48 .39 $	-.27 .32
SP 76	-3.72 .48 $	-.44 .61	-1.15 .41 *	... ...	-1.75 .39 $	... ...	-1.26 .46 *	.89 .47	1.03 .47	.32 .47	-1.42 .41 $
SWISS	-1.97 .36 $	1.31 .49 *	.60 .30 :	1.75 .39 $	... ...	... ...	.49 .30	2.64 .35 $	2.78 .35 $	2.08 .35 $	.33 .27
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-2.46 .41 $	.82 .53	.11 .36	1.26 .46 *	-.49 .30	... ...	... ...	2.15 .40 $	2.29 .40 $	1.58 .39 $	-.17 .33
RS21C	-4.61 .42 $	-1.33 .54 +	-2.04 .38 $	-.89 .47	-2.64 .35 $	... ...	-2.15 .40 $	... ...	.14 .20	-.57 .45	-2.31 .38 $
RS21N	-4.75 .42 $	-1.47 .54 +	-2.18 .38 $	-1.03 .47	-2.78 .35 $	... ...	-2.29 .40 $	-.14 .20	... ...	-.70 .45	-2.45 .38 $
RS 80	-4.05 .43 $	-.77 .58	-1.48 .39 $	-.32 .47	-2.08 .35 $	... ...	-1.58 .39 $	.57 .45	.70 .45	... ...	-1.75 .35 $
V1392	-2.30 .38 $	.98 .54	.27 .32	1.42 .41 $	-.33 .27	... ...	.17 .33	2.31 .38 $	2.45 .38 $	1.75 .35 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 70 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	2.90 ... 1	... .	1.73 1.47 3	... .	2.40 3.25 2	4.90 ... 1	5.30 ... 1	4.10 3.82 2	5.15 : .49 2
ASA	... .	... .	... .	... .	-1.30 1.44 4	... .	-.85 3.61 2	.10 1.41 2	.50 1.41 2	... .	... .
GR 78	-2.90 ... 1	... .	... .	.88 .62 4	-.71 + .66 8	... .	-.57 .38 3	1.90 $ .22 4	2.08 $ .47 4	1.25 .49 2	-.82 : .51 5
SP 76	... .	... .	-.88 .62 4	... .	-1.43 : .67 4	... .	... .	1.50 ... 1	1.80 ... 1	1.00 ... 1	-1.20 .52 3
SWISS	-1.73 1.47 3	1.30 1.44 4	.71 + .66 8	1.43 : .67 4	... .	... .	.21 1.16 8	2.36 + 1.23 5	2.58 * 1.24 5	2.46 + 1.23 5	.80 : .96 10
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-2.40 3.25 2	.85 3.61 2	.57 .38 3	... .	-.21 1.16 8	... .	... .	2.40 .28 2	2.40 $ 0.00 2	1.57 : .46 3	-.24 .84 5
RS21C	-4.90 ... 1	-.10 1.41 2	-1.90 $ .22 4	-1.50 ... 1	-2.36 + 1.23 5	... .	-2.40 .28 2	... .	.21 : .24 8	... .	-2.90 .57 2
RS21N	-5.30 ... 1	-.50 1.41 2	-2.08 $ .47 4	-1.80 ... 1	-2.58 * 1.24 5	... .	-2.40 $ 0.00 2	-.21 : .24 8	... .	... .	-2.95 .92 2
RS 80	-4.10 3.82 2	... .	-1.25 .49 2	-1.00 ... 1	-2.46 + 1.23 5	... .	-1.57 : .46 3	... .	... .	... .	-1.85 $ .33 6
V1392	-5.15 : .49 2	... .	.82 : .51 5	1.20 .52 3	-.80 : .96 10	... .	.24 .84 5	2.90 .57 2	2.95 .92 2	1.85 $ .33 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 70 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	4.00	3.27	3.96	2.40	...	2.82	5.01	5.22	4.65	2.93
	...	.52 $	.39 $	.46 $	.36 $	...	.38 $	.42 $	.42 $	.40 $	.37 $
ASA	-4.00	...	-.73	-.04	-1.59	...	-1.18	1.01	1.23	.65	-1.06
	.52 $	...	.45	.51	.41 $	...	.43 *	.45 :	.45 :	.48	.45 +
GR 78	-3.27	.73	...	.69	-.87	...	-.45	1.74	1.95	1.38	-.34
	.39 $	.45	...	.34 :	.25 $	...	.30	.32 $	.32 $	.32 $	.27
SP 76	-3.96	.04	-.69	...	-1.55	...	-1.14	1.05	1.26	.69	-1.03
	.46 $	.51	.34 :	...	.33 $	...	.38 $	.40 +	.40 +	.39	.35 $
SWISS	-2.40	1.59	.87	1.55	...	...	.42	2.61	2.82	2.25	.53
	.36 $	.41 $	.25 $	.33 $	...	...	.25	.30 $	.30 $	.29 $	.23 :
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	-2.82	1.18	.45	1.14	-.42	...	...	2.19	2.40	1.83	.11
	.38 $	.43 *	.30	.38 $	.25	...	...	.34 $	.34 $	.32 $	.28
RS21C	-5.01	-1.01	-1.74	-1.05	-2.61	...	-2.19	...	.21	-.36	-2.08
	.42 $	.45 :	.32 $	.40 +	.30 $	...	.34 $	...	.24 :	.38	.33 $
RS21N	-5.22	-1.23	-1.95	-1.26	-2.82	...	-2.40	-.21	...	-.57	-2.29
	.42 $	.45 :	.32 $	.40 +	.30 $	...	.34 $	.24 :	...	.38	.33 $
RS 80	-4.65	-.65	-1.38	-.69	-2.25	...	-1.83	.36	.57	...	-1.72
	.40 $	.48	.32 $	.39	.29 $	...	.32 $	.38	.38	...	.29 $
V1392	-2.93	1.06	.34	1.03	-.53	...	-.11	2.08	2.29	1.72	...
	.37 $	.45 +	.27	.35 $	.23 :	...	.28	.33 $	.33 $	.29 $	...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 50 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-1.70 2.96 4	... .	-2.00 3.82 2	1.60 1.13 2	1.80 1.13 2	... .	... .
GR 78	... .	... .	... .	.40 .29 4	-1.64 + 1.37 7	... .	-.27 + .06 3	2.40 + .83 4	2.73 $ .70 4	1.10 .28 2	-1.06 .99 5
SP 76	... .	... .	-.40 .29 4	... .	-2.77 1.72 3	... .	... .	2.30 ... 1	2.40 ... 1	.90 ... 1	-1.90 * .26 3
SWISS	... .	1.70 2.96 4	1.64 + 1.37 7	2.77 1.72 3	... .	... .	-.29 2.97 8	4.04 $ 1.44 5	4.34 $ 1.31 5	3.20 $ 1.25 5	.78 : .96 10
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	2.00 3.82 2	.27 + .06 3	... .	.29 2.97 8	... .	... .	3.15 : .35 2	3.45 .49 2	2.10 : .60 3	.12 .95 5
RS21 C	... .	-1.60 1.13 2	-2.40 + .83 4	-2.30 ... 1	-4.04 $ 1.44 5	... .	-3.15 : .35 2	... .	.23 + .19 8	... .	-3.65 .92 2
RS21 N	... .	-1.80 1.13 2	-2.73 $ .70 4	-2.40 ... 1	-4.34 $ 1.31 5	... .	-3.45 .49 2	-.23 + .19 8	... .	... .	-3.90 .71 2
RS 80	... .	... .	-1.10 .28 2	-.90 ... 1	-3.20 $ 1.25 5	... .	-2.10 : .60 3	... .	... .	... .	-2.23 $ .60 6
V1392	... .	... .	1.06 .99 5	1.90 * .26 3	-.78 : .96 10	... .	-.12 .95 5	3.65 .92 2	3.90 .71 2	2.23 $ .60 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 50 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1 392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-.47 .60	.24 .68	-2.02 .53 $	... ...	-1.68 .57 $	1.93 .59 $	2.15 .59 $	.84 .64	-1.44 .59 +
GR 78	... ...	.47 .60	... ...	.71 .46	-1.55 .34 $	... ...	-1.21 .40 $	2.40 .43 $	2.63 .43 $	1.31 .44 $	-.97 .36 *
SP 76	... ...	-.24 .68	-.71 .46	... ...	-2.26 .46 $	... ...	-1.92 .52 $	1.69 .54 $	1.92 .54 $	.60 .54	-1.68 .47 $
SWISS	... ...	2.02 .53 $	1.55 .34 $	2.26 .46 $	... ...	... ...	.34 .34	3.95 .40 $	4.18 .40 $	2.86 .39 $	.58 .31
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	1.68 .57 $	1.21 .40 $	1.92 .52 $	-.34 .34	... ...	... ...	3.61 .45 $	3.84 .45 $	2.52 .44 $	.24 .37
RS21 C	... ...	-1.93 .59 $	-2.40 .43 $	-1.69 .54 $	-3.95 .40 $	... ...	-3.61 .45 $	... ...	.23 .19 +	-1.09 .51 :	-3.37 .44 $
RS21 N	... ...	-2.15 .59 $	-2.63 .43 $	-1.92 .54 $	-4.18 .40 $	... ...	-3.84 .45 $	-.23 .19 +	... ...	-1.32 .51 :	-3.60 .44 $
RS 80	... ...	-.84 .64	-1.31 .44 $	-.60 .54	-2.86 .39 $	... ...	-2.52 .44 $	1.09 .51 :	1.32 .51 :	... ...	-2.28 .39 $
V1 392	... ...	1.44 .59 +	.97 .36 *	1.68 .47 $	-.58 .31	... ...	-.24 .37	3.37 .44 $	3.60 .44 $	2.28 .39 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 30 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-2.40 2.25 4	... .	-2.70 3.96 2	2.25 .92 2	2.15 .92 2	... .	... .
GR 78	... .	... .	... .	1.40 : .84 4	-.80 : .73 7	... .	.03 .57 3	2.23 $ .35 4	2.55 $ .54 4	2.00 $ 0.00 2	-.58 .60 5
SP 76	... .	... .	-1.40 : .84 4	... .	-2.57 * .40 3	... .	... .	.10 ... 1	.40 ... 1	.30 ... 1	-2.70 : 1.00 3
SWISS	... .	2.40 2.25 4	.80 : .73 7	2.57 * .40 3	... .	... .	.07 2.49 8	2.92 $ .88 5	3.16 $ .73 5	3.20 $ .37 5	.37 .88 10
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	2.70 3.96 2	-.03 .57 3	... .	-.07 2.49 8	... .	... .	2.15 .78 2	2.35 .92 2	2.57 : .95 3	-.30 .88 5
RS21 C	... .	-2.25 .92 2	-2.23 $ .35 4	-.10 ... 1	-2.92 $ .88 5	... .	-2.15 .78 2	... .	.30 : .29 8	... .	-3.00 1.13 2
RS21 N	... .	-2.15 .92 2	-2.55 $ .54 4	-.40 ... 1	-3.16 $ .73 5	... .	-2.35 .92 2	-.30 : .29 8	... .	... .	-3.20 1.27 2
RS 80	... .	... .	-2.00 $ 0.00 2	-.30 ... 1	-3.20 $ .37 5	... .	-2.57 : .95 3	... .	... .	... .	-2.57 $ .47 6
V1392	... .	... .	.58 .60 5	2.70 : 1.00 3	-.37 .88 10	... .	.30 .88 5	3.00 1.13 2	3.20 1.27 2	2.57 $ .47 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 30 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-1.34 .49 *	.42 .56	-2.18 .44 $	... ...	-1.83 .47 $	.94 .48	1.24 .48	.77 .52	-1.94 .48 $
GR 78	... ...	1.34 .49 *	... ...	1.76 .38 $	-.83 .28 $	... ...	-.49 .33	2.28 .35 $	2.58 .35 $	2.11 .36 $	-.60 .30 :
SP 76	... ...	-.42 .56	-1.76 .38 $	... ...	-2.59 .38 $	... ...	-2.25 .43 $	.52 .44	.82 .44	.36 .44	-2.35 .38 $
SWISS	... ...	2.18 .44 $	.83 .28 $	2.59 .38 $	... ...	... ...	.34 .28	3.12 .33 $	3.42 .33 $	2.95 .32 $	.24 .25
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	1.83 .47 $	.49 .33	2.25 .43 $	-.34 .28	... ...	... ...	2.77 .37 $	3.07 .37 $	2.60 .36 $	-.11 .30
RS21C	... ...	-.94 .48	-2.28 .35 $	-.52 .44	-3.12 .33 $	... ...	-2.77 .37 $	... ...	.30 .29 :	-.17 .42	-2.88 .36 $
RS21N	... ...	-1.24 .48	-2.58 .35 $	-.82 .44	-3.42 .33 $	... ...	-3.07 .37 $	-.30 .29 :	... ...	-.47 .42	-3.18 .36 $
RS 80	... ...	-.77 .52	-2.11 .36 $	-.36 .44	-2.95 .32 $	... ...	-2.60 .36 $	.17 .42	.47 .42	... ...	-2.71 .32 $
V1392	... ...	1.94 .48 $	.60 .30 :	2.35 .38 $	-.24 .25	... ...	.11 .30	2.88 .36 $	3.18 .36 $	2.71 .32 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 20 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-3.67 + .90 3	... .	-3.15 3.46 2	2.70 ... 1	2.00 ... 1	... .	... .
GR 78	... .	... .	... .	4.28 3.01 4	.03 .96 6	... .	-.10 1.28 3	2.53 * .76 4	2.83 $ .68 4	3.20 .71 2	-.52 1.08 5
SP 76	... .	... .	-4.28 3.01 4	... .	-2.90 2.82 3	... .	... .	-2.10 ... 1	-1.70 ... 1	-.40 ... 1	-4.63 : 1.45 3
SWISS	... .	3.67 + .90 3	-.03 .96 6	2.90 2.82 3	... .	... .	.40 1.78 7	3.23 : 1.99 4	3.25 : 1.58 4	4.44 $ .89 5	.47 1.10 10
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	3.15 3.46 2	.10 1.28 3	... .	-.40 1.78 7	... .	... .	2.55 .64 2	2.75 .92 2	4.37 + .91 3	.22 1.96 5
RS21C	... .	-2.70 ... 1	-2.53 * .76 4	2.10 ... 1	-3.23 : 1.99 4	... .	-2.55 .64 2	... .	.24 .54 8	... .	-3.50 .71 2
RS21N	... .	-2.00 ... 1	-2.83 $ .68 4	1.70 ... 1	-3.25 : 1.58 4	... .	-2.75 .92 2	-.24 .54 8	... .	... .	-3.70 .99 2
RS 80	... .	... .	-3.20 .71 2	.40 ... 1	-4.44 $ .89 5	... .	-4.37 + .91 3	... .	... .	... .	-3.43 $ .71 6
V1392	... .	... .	.52 1.08 5	4.63 : 1.45 3	-.47 1.10 10	... .	-.22 1.96 5	3.50 .71 2	3.70 .99 2	3.43 $ .71 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 20 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-2.64 .69 $	1.29 .76	-3.04 .62 $	... ...	-2.85 .65 $	.22 .70	.45 .70	1.03 .72	-2.76 .67 $
GR 78	... ...	2.64 .69 $	... ...	3.93 .48 $	-.40 .36	... ...	-.20 .42	2.86 .46 $	3.10 .46 $	3.68 .46 $	-.12 .37
SP 76	... ...	-1.29 .76	-3.93 .48 $	... ...	-4.33 .47 $	... ...	-4.13 .54 $	-1.07 .57	-.83 .57	-.25 .55	-4.05 .48 $
SWISS	... ...	3.04 .62 $	.40 .36	4.33 .47 $	... ...	... ...	.20 .36	3.26 .44 $	3.50 .44 $	4.08 .40 $	.28 .32
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	2.85 .65 $	.20 .42	4.13 .54 $	-.20 .36	... ...	... ...	3.06 .49 $	3.30 .49 $	3.88 .45 $	.08 .38
RS21C	... ...	-.22 .70	-2.86 .46 $	1.07 .57	-3.26 .44 $	... ...	-3.06 .49 $	... ...	.24 .54	.82 .54	-2.98 .46 $
RS21N	... ...	-.45 .70	-3.10 .46 $	.83 .57	-3.50 .44 $	... ...	-3.30 .49 $	-.24 .54	... ...	.58 .54	-3.22 .46 $
RS 80	... ...	-1.03 .72	-3.68 .46 $	.25 .55	-4.08 .40 $	... ...	-3.88 .45 $	-.82 .54	-.58 .54	... ...	-3.80 .40 $
V1392	... ...	2.76 .67 $	.12 .37	4.05 .48 $	-.28 .32	... ...	-.08 .38	2.98 .46 $	3.22 .46 $	3.80 .40 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 900 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	-.10 ... 1	-.50 ... 1	-1.93 1.17 3	-1.80 2.55 2	-.37 .67 3	.25 .21 2	.35 .49 2	.20 ... 1	.47 .83 3
ASA	... .	... .	... .	... .	-.14 2.37 5	... .	... .	... .	... .	... .	... .
GR 78	.10 ... 1	... .	... .	-.55 .21 2	-.67 .42 3	... .	-.70 .42 2	.20 ... 1	.10 ... 1	-.30 ... 1	.20 .14 2
SP 76	.50 ... 1	... .	.55 .21 2	... .	.04 1.07 5	... .	-.80 .28 2	.60 ... 1	.50 ... 1	1.60 ... 1	.75 : .07 2
SWISS	1.93 1.17 3	.14 2.37 5	.67 .42 3	-.04 1.07 5	... .	1.15 2.19 2	.45 1.29 6	1.63 : .57 3	2.00 .96 3	.30 .57 2	.58 .80 6
THOMM	1.80 2.55 2	... .	... .	... .	-1.15 2.19 2	... .	1.80 2.26 2	-.90 ... 1	0.00 ... 1	.20 ... 1	.30 1.56 2
RS 18	.37 .67 3	... .	.70 .42 2	.80 .28 2	-.45 1.29 6	-1.80 2.26 2	... .	1.20 ... 1	1.10 ... 1	.05 .07 2	.93 .55 3
RS21C	-.25 .21 2	... .	-.20 ... 1	-.60 ... 1	-1.63 : .57 3	.90 ... 1	-1.20 ... 1	... .	.37 .50 3	... .	.10 $ 0.00 2
RS21N	-.35 .49 2	... .	-.10 ... 1	-.50 ... 1	-2.00 .96 3	0.00 ... 1	-1.10 ... 1	-.37 .50 3	... .	... .	-.30 .71 2
RS 80	-.20 ... 1	... .	.30 ... 1	-1.60 ... 1	-.30 .57 2	-.20 ... 1	-.05 .07 2	... .	... .	... .	1.20 ... 1
V1392	-.47 .83 3	... .	-.20 .14 2	-.75 : .07 2	-.58 .80 6	-.30 1.56 2	-.93 .55 3	-.10 $ 0.00 2	.30 .71 2	-1.20 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 900 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-.99 .61	-.25 .42	-.86 .41 :	-1.13 .33 $	-.90 .43 :	-.66 .35	.01 .42	.37 .42	-.50 .46	-.08 .35
ASA	.99 .61	... ...	.74 .63	.13 .61	-.14 .51	.09 .65	.33 .59	1.00 .64	1.36 .64	.49 .66	.91 .59
GR 78	.25 .42	-.74 .63	... ...	-.61 .42	-.88 .37 +	-.66 .49	-.41 .39	.26 .46	.62 .46	-.25 .48	.17 .39
SP 76	.86 .41 :	-.13 .61	.61 .42	... ...	-.27 .34	-.05 .48	.20 .38	.87 .45	1.23 .45	.36 .47	.78 .38 :
SWISS	1.13 .33 $	.14 .51	.88 .37 +	.27 .34	... ...	.23 .40	.47 .29	1.14 .38 $	1.50 .38 $	.63 .42	1.05 .29 $
THOMM	.90 .43 :	-.09 .65	.66 .49	.05 .48	-.23 .40	... ...	.24 .42	.91 .48	1.28 .48	.41 .50	.82 .42
RS 18	.66 .35	-.33 .59	.41 .39	-.20 .38	-.47 .29	-.24 .42	... ...	.67 .41	1.04 .41	.17 .43	.58 .33
RS21 C	-.01 .42	-1.00 .64	-.26 .46	-.87 .45	-1.14 .38 $	-.91 .48	-.67 .41	... ...	.37 .50	-.50 .51	-.09 .40
RS21 N	-.37 .42	-1.36 .64	-.62 .46	-1.23 .45	-1.50 .38 $	-1.28 .48	-1.04 .41	-.37 .50	... ...	-.87 .51	-.45 .40
RS 80	.50 .46	-.49 .66	.25 .48	-.36 .47	-.63 .42	-.41 .50	-.17 .43	.50 .51	.87 .51	... ...	.42 .44
V1392	.08 .35	-.91 .59	-.17 .39	-.78 .38 :	-1.05 .29 $	-.82 .42	-.58 .33	.09 .40	.45 .40	-.42 .44	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 850 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.20 ... 1	-.20 ... 1	-1.03 .60 3	-1.20 1.98 2	-.20 .36 3	.20 .14 2	.35 .35 2	.10 ... 1	.47 .47 3
ASA	... .	... .	... .	... .	.34 1.80 5	... .	... .	... .	... .	... .	... .
GR 78	-.20 ... 1	... .	... .	-.20 .28 2	-.53 .31 3	... .	-.80 $ 0.00 2	-.10 ... 1	-.10 ... 1	-.10 ... 1	.05 .21 2
SP 76	.20 ... 1	... .	.20 .28 2	... .	-.46 .47 5	... .	-.90 .71 2	.30 ... 1	.30 ... 1	.30 ... 1	.25 .07 2
SWISS	1.03 .60 3	-.34 1.80 5	.53 .31 3	.46 .47 5	... .	.45 2.05 2	.10 .74 6	1.03 .47 3	1.37 .76 3	.50 .28 2	.62 * .36 6
THOMM	1.20 1.98 2	... .	... .	... .	-.45 2.05 2	... .	1.20 1.84 2	-.70 ... 1	0.00 ... 1	-.10 ... 1	.10 .99 2
RS 18	.20 .36 3	... .	.80 $ 0.00 2	.90 .71 2	-.10 .74 6	-1.20 1.84 2	... .	.70 ... 1	.70 ... 1	.35 .49 2	.57 .42 3
RS21C	-.20 .14 2	... .	.10 ... 1	-.30 ... 1	-1.03 .47 3	.70 ... 1	-.70 ... 1	... .	.33 .35 3	... .	.05 .07 2
RS21N	-.35 .35 2	... .	.10 ... 1	-.30 ... 1	-1.37 .76 3	0.00 ... 1	-.70 ... 1	-.33 .35 3	... .	... .	-.30 .42 2
RS 80	-.10 ... 1	... .	.10 ... 1	-.30 ... 1	-.50 .28 2	.10 ... 1	-.35 .49 2	... .	... .	... .	.90 ... 1
V1392	-.47 .47 3	... .	-.05 .21 2	-.25 .07 2	-.62 * .36 6	-.10 .99 2	-.57 .42 3	-.05 .07 2	.30 .42 2	-.90 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 850 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-1.01 .42 +	.07 .29	-.11 .28	-.67 .23 *	-.54 .30	-.44 .24	.07 .29	.40 .29	-.19 .32	.10 .24
ASA	1.01 .42 +	... ...	1.08 .43 +	.89 .42 :	.34 .35	.46 .45	.56 .41	1.08 .44 +	1.41 .44 +	.82 .45	1.10 .41 *
GR 78	-.07 .29	-1.08 .43 +	... ...	-.19 .29	-.74 .25 $	-.62 .34	-.51 .27	-.00 .32	.33 .32	-.26 .33	.03 .27
SP 76	.11 .28	-.89 .42 :	.19 .29	... ...	-.55 .23 :	-.43 .33	-.33 .26	.18 .31	.52 .31	-.08 .33	.21 .26
SWISS	.67 .23 *	-.34 .35	.74 .25 $	.55 .23 :	... ...	.12 .28	.22 .20	.74 .26 *	1.07 .26 *	.48 .29	.76 .20 $
THOMM	.54 .30	-.46 .45	.62 .34	.43 .33	-.12 .28	... ...	.10 .29	.61 .33	.95 .33	.35 .35	.64 .29 :
RS 18	.44 .24	-.56 .41	.51 .27	.33 .26	-.22 .20	-.10 .29	... ...	.51 .29	.85 .29	.25 .30	.54 .23 :
RS21 C	-.07 .29	-1.08 .44 +	.00 .32	-.18 .31	-.74 .26 *	-.61 .33	-.51 .29	... ...	.33 .35	-.26 .36	.03 .28
RS21 N	-.40 .29	-1.41 .44 +	-.33 .32	-.52 .31	-1.07 .26 *	-.95 .33	-.85 .29	-.33 .35	... ...	-.59 .36	-.31 .28
RS 80	.19 .32	-.82 .45	.26 .33	.08 .33	-.48 .29	-.35 .35	-.25 .30	.26 .36	.59 .36	... ...	.29 .31
V1392	-.10 .24	-1.10 .41 *	-.03 .27	-.21 .26	-.76 .20 $	-.64 .29 :	-.54 .23 :	-.03 .28	.31 .28	-.29 .31	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 700 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	.40 ... 1	2.90 ... 1	.30 .36 3	-1.45 1.91 2	.03 .31 3	.40 .28 2	.50 .71 2	.40 ... 1	.20 .36 3
ASA	... .	... .	... .	... .	.72 .73 5	... .	... .	... .	... .	... .	... .
GR 78	-.40 ... 1	... .	... .	.95 2.19 2	-.83 .93 3	... .	-.60 .14 2	-.20 ... 1	-.40 ... 1	-.10 ... 1	0.00 .28 2
SP 76	-2.90 ... 1	... .	-.95 2.19 2	... .	-.26 1.34 5	... .	-2.20 1.41 2	-2.70 ... 1	-2.90 ... 1	.40 ... 1	-.95 1.91 2
SWISS	-.30 .36 3	-.72 .73 5	.83 .93 3	.26 1.34 5	... .	-.55 3.75 2	-.37 1.38 6	.37 .67 3	.70 1.15 3	.70 1.13 2	.28 .70 6
THOMM	1.45 1.91 2	... .	... .	... .	.55 3.75 2	... .	1.65 2.05 2	-1.30 ... 1	-.50 ... 1	.50 ... 1	-.70 1.27 2
RS 18	-.03 .31 3	... .	.60 .14 2	2.20 1.41 2	.37 1.38 6	-1.65 2.05 2	... .	.50 ... 1	.30 ... 1	.35 .07 2	0.00 .90 3
RS21 C	-.40 .28 2	... .	.20 ... 1	2.70 ... 1	-.37 .67 3	1.30 ... 1	-.50 ... 1	... .	.33 .50 3	... .	.05 .49 2
RS21 N	-.50 .71 2	... .	.40 ... 1	2.90 ... 1	-.70 1.15 3	.50 ... 1	-.30 ... 1	-.33 .50 3	... .	... .	-.25 1.20 2
RS 80	-.40 ... 1	... .	.10 ... 1	-.40 ... 1	-.70 1.13 2	-.50 ... 1	-.35 .07 2	... .	... .	... .	-.30 ... 1
V1392	-.20 .36 3	... .	0.00 .28 2	.95 1.91 2	-.28 .70 6	.70 1.27 2	0.00 .90 3	-.05 .49 2	.25 1.20 2	.30 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 700 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-.51 .61	.57 .42	1.29 .41 $	.21 .33	-.35 .43	.03 .35	.06 .42	.39 .42	.64 .46	.19 .35
ASA	.51 .61	... ...	1.08 .63	1.80 .61 $	.72 .51	.15 .65	.53 .59	.57 .64	.90 .64	1.15 .66	.69 .59
GR 78	-.57 .42	-1.08 .63	... ...	.72 .42	-.36 .37	-.92 .49	-.54 .39	-.51 .46	-.18 .46	.07 .48	-.38 .39
SP 76	-1.29 .41 $	-1.80 .61 $	-.72 .42	... ...	-1.08 .34 $	-1.64 .48 $	-1.26 .38 $	-1.23 .45 *	-.90 .45 *	-.65 .47	-1.10 .38 $
SWISS	-.21 .33	-.72 .51	.36 .37	1.08 .34 $	... ...	-.57 .40	-.19 .29	-.15 .38	.18 .38	.43 .42	-.03 .29
THOMM	.35 .43	-.15 .65	.92 .49	1.64 .48 $	.57 .40	... ...	.38 .42	.41 .48	.75 .48	1.00 .50	.54 .42
RS 18	-.03 .35	-.53 .59	.54 .39	1.26 .38 $	.19 .29	-.38 .42	... ...	.03 .41	.36 .41	.61 .43	.16 .33
RS21 C	-.06 .42	-.57 .64	.51 .46	1.23 .45 *	.15 .38	-.41 .48	-.03 .41	... ...	.33 .50	.58 .51	.13 .40
RS21 N	-.39 .42	-.90 .64	.18 .46	.90 .45 *	-.18 .38	-.75 .48	-.36 .41	-.33 .50	... ...	.25 .51	-.20 .40
RS 80	-.64 .46	-1.15 .66	-.07 .48	.65 .47	-.43 .42	-1.00 .50	-.61 .43	-.58 .51	-.25 .51	... ...	-.45 .44
V1392	-.19 .35	-.69 .59	.38 .39	1.10 .38 $	.03 .29	-.54 .42	-.16 .33	-.13 .40	.20 .40	.45 .44	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 500 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.40 ... 1	.10 ... 1	.10 1.18 3	-3.50 ... 1	-.55 .64 2	.60 .57 2	.65 .78 2	... .	-.15 .78 2
ASA	... .	... .	... .	... .	1.28 $ .51 5	... .	... .	... .	... .	... .	... .
GR 78	-.40 ... 1	... .	... .	-.50 .28 2	-.83 .40 3	... .	-.65 1.06 2	-.20 ... 1	-.30 ... 1	-.70 ... 1	-.10 .14 2
SP 76	-.10 ... 1	... .	.50 .28 2	... .	-.48 + .27 5	... .	-1.10 $ 0.00 2	.10 ... 1	0.00 ... 1	.10 ... 1	.40 .14 2
SWISS	-.10 1.18 3	-1.28 $ .51 5	.83 .40 3	.48 + .27 5	... .	-2.60 ... 1	.05 .67 6	-.07 .42 3	.23 .40 3	.05 .21 2	.28 .54 6
THOMM	3.50 ... 1	... .	... .	... .	2.60 ... 1	... .	1.40 2.83 2	... .	... .	-.30 ... 1	.60 ... 1
RS 18	.55 .64 2	... .	.65 1.06 2	1.10 $ 0.00 2	-.05 .67 6	-1.40 2.83 2	... .	1.20 ... 1	1.10 ... 1	-.25 .78 2	.80 .87 3
RS21C	-.60 .57 2	... .	.20 ... 1	-.10 ... 1	.07 .42 3	... .	-1.20 ... 1	... .	.30 .46 3	... .	-.05 .35 2
RS21N	-.65 .78 2	... .	.30 ... 1	0.00 ... 1	-.23 .40 3	... .	-1.10 ... 1	-.30 .46 3	... .	... .	-.40 .99 2
RS 80	... .	... .	.70 ... 1	-.10 ... 1	-.05 .21 2	.30 ... 1	.25 .78 2	... .	... .	... .	.90 ... 1
V1392	.15 .78 2	... .	.10 .14 2	-.40 .14 2	-.28 .54 6	-.60 ... 1	-.80 .87 3	.05 .35 2	.40 .99 2	-.90 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 500 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-1.56 .41 $	.35 .30	.04 .29	-.28 .24	-1.85 .36 $	-.51 .26	.14 .30	.44 .30	-.65 .34	.06 .26
ASA	1.56 .41 $	... ...	1.90 .41 $	1.60 .40 $	1.28 .33 $	-.29 .47	1.05 .39 *	1.69 .42 $	1.99 .42 $	.91 .44 :	1.62 .39 $
GR 78	-.35 .30	-1.90 .41 $	... ...	-.30 .27	-.62 .24 +	-2.19 .38 $	-.85 .26 $	-.21 .31	.09 .31	-.99 .33 $	-.28 .26
SP 76	-.04 .29	-1.60 .40 $	.30 .27	... ...	-.32 .22	-1.89 .37 $	-.55 .25 :	.09 .30	.39 .30	-.69 .32 :	.02 .25
SWISS	.28 .24	-1.28 .33 $	.62 .24 +	.32 .22	... ...	-1.57 .33 $	-.23 .20	.41 .26	.71 .26	-.37 .29	.34 .20
THOMM	1.85 .36 $	.29 .47	2.19 .38 $	1.89 .37 $	1.57 .33 $	... ...	1.34 .33 $	1.98 .39 $	2.28 .39 $	1.20 .38 $	1.91 .34 $
RS 18	.51 .26	-1.05 .39 *	.85 .26 $	.55 .25 :	.23 .20	-1.34 .33 $	... ...	.64 .28 :	.94 .28 :	-.14 .29	.57 .22 +
RS21C	-.14 .30	-1.69 .42 $	.21 .31	-.09 .30	-.41 .26	-1.98 .39 $	-.64 .28 :	... ...	.30 .46	-.78 .36 :	-.08 .28
RS21N	-.44 .30	-1.99 .42 $	-.09 .31	-.39 .30	-.71 .26	-2.28 .39 $	-.94 .28 :	-.30 .46	... ...	-1.08 .36 :	-.38 .28
RS 80	.65 .34	-.91 .44 :	.99 .33 $	.69 .32 :	.37 .29	-1.20 .38 $	.14 .29	.78 .36 :	1.08 .36 :	... ...	.71 .31 :
V1392	-.06 .26	-1.62 .39 $	.28 .26	-.02 .25	-.34 .20	-1.91 .34 $	-.57 .22 +	.08 .28	.38 .28	-.71 .31 :	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 400 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.20 ... 1	-.10 ... 1	.33 1.53 3	-1.60 ... 1	-.30 .85 2	.55 1.20 2	.60 1.41 2	... .	.15 .49 2
ASA	... .	... .	... .	... .	.78 1.43 5	... .	... .	... .	... .	... .	1.65 1.63 2
GR 78	-.20 ... 1	... .	... .	-.45 .21 2	-.65 .56 4	... .	-.80 .42 2	-.50 ... 1	-.60 ... 1	-.70 ... 1	.33 .15 3
SP 76	.10 ... 1	... .	.45 .21 2	... .	-.46 .97 5	... .	-.70 .14 2	-.20 ... 1	-.30 ... 1	-.30 ... 1	.70 .14 2
SWISS	-.33 1.53 3	-.78 1.43 5	.65 .56 4	.46 .97 5	... .	-1.60 ... 1	.20 .56 6	.07 .65 3	.37 .68 3	-.60 .71 2	.58 .88 8
THOMM	1.60 ... 1	... .	... .	... .	1.60 ... 1	... .	7.40 7.78 2	... .	... .	11.40 ... 1	12.70 ... 1
RS 18	.30 .85 2	... .	.80 .42 2	.70 .14 2	-.20 .56 6	-7.40 7.78 2	... .	.60 ... 1	.50 ... 1	-.85 .92 2	.53 .81 3
RS21C	-.55 1.20 2	... .	.50 ... 1	.20 ... 1	-.07 .65 3	... .	-.60 ... 1	... .	.30 .46 3	... .	.40 .57 2
RS21N	-.60 1.41 2	... .	.60 ... 1	.30 ... 1	-.37 .68 3	... .	-.50 ... 1	-.30 .46 3	... .	... .	.05 1.20 2
RS 80	... .	... .	.70 ... 1	.30 ... 1	.60 .71 2	-11.40 ... 1	.85 .92 2	... .	... .	... .	1.30 ... 1
V1392	-.15 .49 2	-1.65 1.63 2	-.33 .15 3	-.70 .14 2	-.58 .88 8	-12.70 ... 1	-.53 .81 3	-.40 .57 2	-.05 1.20 2	-1.30 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 400 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-.50 .84	.96 .66	.67 .66	.27 .55	-6.54 .83 $	.44 .60	.57 .68	.87 .68	.49 .80	1.20 .59 :
ASA	.50 .84	... ...	1.46 .82	1.17 .81	.76 .66	-6.05 .99 $	.94 .78	1.06 .87	1.36 .87	.98 .92	1.69 .71 :
GR 78	-.96 .66	-1.46 .82	... ...	-.29 .61	-.69 .51	-7.50 .85 $	-.52 .57	-.39 .69	-.09 .69	-.47 .74	.24 .54
SP 76	-.67 .66	-1.17 .81	.29 .61	... ...	-.40 .50	-7.21 .85 $	-.23 .57	-.10 .69	.20 .69	-.18 .74	.53 .56
SWISS	-.27 .55	-.76 .66	.69 .51	.40 .50	... ...	-6.81 .76 $	.17 .45	.30 .59	.60 .59	.22 .66	.93 .40 :
THOMM	6.54 .83 $	6.05 .99 $	7.50 .85 $	7.21 .85 $	6.81 .76 $	... ...	6.98 .76 $	7.11 .91 $	7.41 .91 $	7.03 .88 $	7.74 .78 $
RS 18	-.44 .60	-.94 .78	.52 .57	.23 .57	-.17 .45	-6.98 .76 $	... ...	.13 .66	.43 .66	.05 .68	.76 .50
RS21C	-.57 .68	-1.06 .87	.39 .69	.10 .69	-.30 .59	-7.11 .91 $	-.13 .66	... ...	.30 .46	-.08 .83	.63 .62
RS21N	-.87 .68	-1.36 .87	.09 .69	-.20 .69	-.60 .59	-7.41 .91 $	-.43 .66	-.30 .46	... ...	-.38 .83	.33 .62
RS 80	-.49 .80	-.98 .92	.47 .74	.18 .74	-.22 .66	-7.03 .88 $	-.05 .68	.08 .83	.38 .83	... ...	.71 .69
V1392	-1.20 .59 :	-1.69 .71 :	-.24 .54	-.53 .56	-.93 .40 :	-7.74 .78 $	-.76 .50	-.63 .62	-.33 .62	-.71 .69	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 300 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	1.50 ... 1	2.90 ... 1	1.60 1.35 3	.20 ... 1	1.35 1.20 2	1.45 .92 2	1.30 1.27 2	... .	-.15 2.62 2
ASA	... .	... .	... .	... .	.50 2.19 5	... .	... .	... .	... .	... .	.55 2.62 2
GR 78	-1.50 ... 1	... .	... .	.40 1.41 2	-.20 .90 4	... .	-.35 .92 2	-.70 ... 1	-1.10 ... 1	-.50 ... 1	-.13 .35 3
SP 76	-2.90 ... 1	... .	-.40 1.41 2	... .	.02 1.80 5	... .	-1.60 1.13 2	-2.10 ... 1	-2.50 ... 1	0.00 ... 1	-.35 1.20 2
SWISS	-1.60 1.35 3	-.50 2.19 5	.20 .90 4	-.02 1.80 5	... .	-2.70 ... 1	.07 .85 6	.47 : .12 3	.60 .46 3	-1.10 .99 2	.18 .81 8
THOMM	-.20 ... 1	... .	... .	... .	2.70 ... 1	... .	2.30 .42 2	... .	... .	2.90 ... 1	2.10 ... 1
RS 18	-1.35 1.20 2	... .	.35 .92 2	1.60 1.13 2	-.07 .85 6	-2.30 .42 2	... .	.30 ... 1	-.10 ... 1	-.25 .78 2	-.23 1.32 3
RS21C	-1.45 .92 2	... .	.70 ... 1	2.10 ... 1	-.47 : .12 3	... .	-.30 ... 1	... .	.13 .55 3	... .	.30 .85 2
RS21N	-1.30 1.27 2	... .	1.10 ... 1	2.50 ... 1	-.60 .46 3	... .	.10 ... 1	-.13 .55 3	... .	... .	.15 1.63 2
RS 80	... .	... .	.50 ... 1	0.00 ... 1	1.10 .99 2	-2.90 ... 1	.25 .78 2	... .	... .	... .	-.80 ... 1
V1392	.15 2.62 2	-.55 2.62 2	.13 .35 3	.35 1.20 2	-.18 .81 8	-2.10 ... 1	.23 1.32 3	-.30 .85 2	-.15 1.63 2	.80 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 300 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	.87 .57	1.60 .45 $	1.97 .45 $	1.42 .38 $	-.92 .57	1.31 .41 $	1.29 .46 *	1.43 .46 *	1.24 .54 :	1.29 .40 $
ASA	-.87 .57	... ...	.73 .55	1.11 .55	.55 .45	-1.79 .67 *	.44 .53	.42 .59	.56 .59	.37 .62	.42 .49
GR 78	-1.60 .45 $	-.73 .55	... ...	.37 .42	-.18 .35	-2.53 .58 $	-.29 .39	-.31 .47	-.18 .47	-.37 .50	-.31 .37
SP 76	-1.97 .45 $	-1.11 .55	-.37 .42	... ...	-.55 .34	-2.90 .58 $	-.67 .39	-.68 .47	-.55 .47	-.74 .50	-.68 .38
SWISS	-1.42 .38 $	-.55 .45	.18 .35	.55 .34	... ...	-2.34 .52 $	-.11 .30	-.13 .40	.01 .40	-.18 .45	-.13 .28
THOMM	.92 .57	1.79 .67 *	2.53 .58 $	2.90 .58 $	2.34 .52 $	... ...	2.23 .52 $	2.22 .62 $	2.35 .62 $	2.16 .60 $	2.21 .53 $
RS 18	-1.31 .41 $	-.44 .53	.29 .39	.67 .39	.11 .30	-2.23 .52 $	... ...	-.02 .45	.12 .45	-.07 .46	-.02 .34
RS21C	-1.29 .46 *	-.42 .59	.31 .47	.68 .47	.13 .40	-2.22 .62 $	.02 .45	... ...	.13 .55	-.05 .57	-.00 .42
RS21N	-1.43 .46 *	-.56 .59	.18 .47	.55 .47	-.01 .40	-2.35 .62 $	-.12 .45	-.13 .55	... ...	-.19 .57	-.14 .42
RS 80	-1.24 .54 :	-.37 .62	.37 .50	.74 .50	.18 .45	-2.16 .60 $	.07 .46	.05 .57	.19 .57	... ...	.05 .47
V1392	-1.29 .40 $	-.42 .49	.31 .37	.68 .38	.13 .28	-2.21 .53 $	.02 .34	.00 .42	.14 .42	-.05 .47	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 250 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	4.90 ... 1	5.40 ... 1	3.40 4.37 3	3.20 ... 1	2.75 2.90 2	5.15 : .35 2	5.40 : .28 2	... .	2.75 4.60 2
ASA	... .	... .	... .	... .	.34 1.44 5	... .	... .	... .	... .	... .	.75 1.77 2
GR 78	-4.90 ... 1	... .	... .	.60 .14 2	1.15 1.23 4	... .	.30 .57 2	.50 ... 1	.70 ... 1	-.60 ... 1	.13 .84 3
SP 76	-5.40 ... 1	... .	-.60 .14 2	... .	.60 1.54 5	... .	-.20 .57 2	0.00 ... 1	.20 ... 1	.20 ... 1	-.25 1.20 2
SWISS	-3.40 4.37 3	-.34 1.44 5	-1.15 1.23 4	-.60 1.54 5	... .	4.40 ... 1	.45 1.92 6	-.33 1.59 3	.23 1.85 3	-.50 $ 0.00 2	-.45 1.06 8
THOMM	-3.20 ... 1	... .	... .	... .	-4.40 ... 1	... .	-1.85 .92 2	... .	... .	-.10 ... 1	0.00 ... 1
RS 18	-2.75 2.90 2	... .	-.30 .57 2	.20 .57 2	-.45 1.92 6	1.85 .92 2	... .	.60 ... 1	.80 ... 1	-.10 1.70 2	.40 1.39 3
RS21C	-5.15 : .35 2	... .	-.50 ... 1	0.00 ... 1	.33 1.59 3	... .	-.60 ... 1	... .	.57 .55 3	... .	.35 .35 2
RS21N	-5.40 : .28 2	... .	-.70 ... 1	-.20 ... 1	-.23 1.85 3	... .	-.80 ... 1	-.57 .55 3	... .	... .	-.35 1.06 2
RS 80	... .	... .	.60 ... 1	-.20 ... 1	.50 $ 0.00 2	.10 ... 1	.10 1.70 2	... .	... .	... .	.10 ... 1
V1392	-2.75 4.60 2	-.75 1.77 2	-.13 .84 3	.25 1.20 2	.45 1.06 8	0.00 ... 1	-.40 1.39 3	-.35 .35 2	.35 1.06 2	-.10 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 250 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	3.24 .79 $	3.26 .62 $	3.66 .62 $	3.75 .52 $	4.89 .78 $	3.54 .56 $	3.86 .64 $	4.42 .64 $	3.52 .74 $	3.57 .55 $
ASA	-3.24 .79 $	... ...	.02 .76	.41 .76	.51 .62	1.64 .93	.30 .73	.61 .81	1.18 .81	.28 .86	.33 .67
GR 78	-3.26 .62 $	-.02 .76	... ...	.39 .57	.49 .48	1.62 .80 :	.28 .54	.59 .65	1.16 .65	.26 .69	.31 .51
SP 76	-3.66 .62 $	-.41 .76	-.39 .57	... ...	.10 .47	1.23 .80	-.11 .54	.20 .65	.77 .65	-.14 .69	-.09 .52
SWISS	-3.75 .52 $	-.51 .62	-.49 .48	-.10 .47	... ...	1.13 .71	-.21 .42	.10 .55	.67 .55	-.23 .62	-.18 .38
THOMM	-4.89 .78 $	-1.64 .93	-1.62 .80 :	-1.23 .80	-1.13 .71	... ...	-1.35 .71	-1.03 .85	-.47 .85	-1.37 .82	-1.32 .73
RS 18	-3.54 .56 $	-.30 .73	-.28 .54	.11 .54	.21 .42	1.35 .71	... ...	.31 .61	.88 .61	-.02 .64	.03 .47
RS21C	-3.86 .64 $	-.61 .81	-.59 .65	-.20 .65	-.10 .55	1.03 .85	-.31 .61	... ...	.57 .55	-.34 .78	-.29 .58
RS21N	-4.42 .64 $	-1.18 .81	-1.16 .65	-.77 .65	-.67 .55	.47 .85	-.88 .61	-.57 .55	... ...	-.90 .78	-.85 .58
RS 80	-3.52 .74 $	-.28 .86	-.26 .69	.14 .69	.23 .62	1.37 .82	.02 .64	.34 .78	.90 .78	... ...	.05 .65
V1392	-3.57 .55 $	-.33 .67	-.31 .51	.09 .52	.18 .38	1.32 .73	-.03 .47	.29 .58	.85 .58	-.05 .65	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 200 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	2.90 ... 1	3.10 ... 1	5.57 3.93 3	... .	2.35 + .07 2	5.40 3.96 2	5.65 4.45 2	... .	3.30 ... 1
ASA	... .	... .	... .	... .	.34 .98 5	... .	... .	... .	... .	... .	2.30 .57 2
GR 78	-2.90 ... 1	... .	... .	.30 .14 2	-.55 .83 4	... .	0.00 .85 2	-.30 ... 1	-.40 ... 1	.30 ... 1	-.37 .86 3
SP 76	-3.10 ... 1	... .	-.30 .14 2	... .	-.20 1.33 5	... .	-1.30 .71 2	-.50 ... 1	-.60 ... 1	.30 ... 1	-.20 .57 2
SWISS	-5.57 3.93 3	-.34 .98 5	.55 .83 4	.20 1.33 5	... .	... .	.02 1.55 6	-.77 1.15 3	-.40 1.23 3	.20 2.26 2	.09 1.15 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-2.35 + .07 2	... .	0.00 .85 2	1.30 .71 2	-.02 1.55 6	... .	... .	.30 ... 1	.20 ... 1	-.50 .28 2	-.23 1.31 3
RS21 C	-5.40 3.96 2	... .	.30 ... 1	.50 ... 1	.77 1.15 3	... .	-.30 ... 1	... .	.37 .40 3	... .	-.20 1.27 2
RS21 N	-5.65 4.45 2	... .	.40 ... 1	.60 ... 1	.40 1.23 3	... .	-.20 ... 1	-.37 .40 3	... .	... .	-.45 1.77 2
RS 80	... .	... .	-.30 ... 1	-.30 ... 1	-.20 2.26 2	... .	.50 .28 2	... .	... .	... .	.60 ... 1
V1392	-3.30 ... 1	-2.30 .57 2	.37 .86 3	.20 .57 2	-.09 1.15 8	... .	.23 1.31 3	.20 1.27 2	.45 1.77 2	-.60 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 200 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	3.26 .73 $	4.26 .58 $	4.40 .58 $	4.15 .50 $	... ...	3.93 .54 $	4.18 .59 $	4.55 .59 $	4.06 .72 $	4.19 .54 $
ASA	-3.26 .73 $	... ...	1.00 .69	1.14 .68	.89 .56	... ...	.67 .66	.92 .73	1.29 .73	.80 .79	.93 .60
GR 78	-4.26 .58 $	-1.00 .69	... ...	.14 .51	-.11 .43	... ...	-.33 .49	-.08 .58	.29 .58	-.20 .65	-.07 .46
SP 76	-4.40 .58 $	-1.14 .68	-.14 .51	... ...	-.25 .42	... ...	-.48 .49	-.22 .58	.15 .58	-.35 .65	-.22 .47
SWISS	-4.15 .50 $	-.89 .56	.11 .43	.25 .42	... ...	... ...	-.22 .39	.03 .50	.40 .50	-.09 .58	.04 .35
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-3.93 .54 $	-.67 .66	.33 .49	.48 .49	.22 .39	... ...	... ...	.25 .56	.62 .56	.13 .60	.26 .43
RS21C	-4.18 .59 $	-.92 .73	.08 .58	.22 .58	-.03 .50	... ...	-.25 .56	... ...	.37 .40	-.12 .72	.01 .53
RS21N	-4.55 .59 $	-1.29 .73	-.29 .58	-.15 .58	-.40 .50	... ...	-.62 .56	-.37 .40	... ...	-.49 .72	-.36 .53
RS 80	-4.06 .72 $	-.80 .79	.20 .65	.35 .65	.09 .58	... ...	-.13 .60	.12 .72	.49 .72	... ...	.13 .62
V1392	-4.19 .54 $	-.93 .60	.07 .46	.22 .47	-.04 .35	... ...	-.26 .43	-.01 .53	.36 .53	-.13 .62	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 150 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	1.90 ... 1	1.70 ... 1	4.37 3.07 3	... .	3.35 3.46 2	4.80 4.38 2	4.95 4.74 2	... .	2.30 ... 1
ASA	... .	... .	... .	... .	-.77 .64 3	... .	... .	... .	... .	... .	.20 ... 1
GR 78	-1.90 ... 1	... .	... .	-.10 .14 2	-.55 .58 4	... .	-.25 1.06 2	-.20 ... 1	-.30 ... 1	.20 ... 1	-.40 1.14 3
SP 76	-1.70 ... 1	... .	.10 .14 2	... .	-.04 1.34 5	... .	-1.50 .99 2	0.00 ... 1	-.10 ... 1	.10 ... 1	.35 .35 2
SWISS	-4.37 3.07 3	.77 .64 3	.55 .58 4	.04 1.34 5	... .	... .	.02 1.33 6	.50 .44 3	1.07 1.19 3	-.40 2.12 2	.19 .85 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-3.35 3.46 2	... .	.25 1.06 2	1.50 .99 2	-.02 1.33 6	... .	... .	.80 ... 1	.70 ... 1	.25 .78 2	.57 .80 3
RS21C	-4.80 4.38 2	... .	.20 ... 1	0.00 ... 1	-.50 .44 3	... .	-.80 ... 1	... .	.57 .76 3	... .	0.00 .85 2
RS21N	-4.95 4.74 2	... .	.30 ... 1	.10 ... 1	-1.07 1.19 3	... .	-.70 ... 1	-.57 .76 3	... .	... .	-.65 1.91 2
RS 80	... .	... .	-.20 ... 1	-.10 ... 1	.40 2.12 2	... .	-.25 .78 2	... .	... .	... .	-.30 ... 1
V1392	-2.30 ... 1	-.20 ... 1	.40 1.14 3	-.35 .35 2	-.19 .85 8	... .	-.57 .80 3	0.00 .85 2	.65 1.91 2	.30 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 150 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	4.00 .80 $	3.66 .54 $	3.52 .54 $	3.43 .46 $	... ...	3.16 .50 $	3.95 .55 $	4.52 .55 $	3.47 .66 $	3.58 .50 $
ASA	-4.00 .80 $	... ...	-.33 .77	-.48 .77	-.56 .67	... ...	-.84 .75	-.05 .80	.52 .80	-.53 .85	-.41 .71
GR 78	-3.66 .54 $	.33 .77	... ...	-.14 .47	-.23 .40	... ...	-.50 .45	.29 .54	.86 .54	-.20 .59	-.08 .43
SP 76	-3.52 .54 $	.48 .77	.14 .47	... ...	-.09 .39	... ...	-.36 .45	.43 .54	1.00 .54	-.06 .59	.06 .44
SWISS	-3.43 .46 $	.56 .67	.23 .40	.09 .39	... ...	... ...	-.27 .36	.52 .46	1.08 .46	.03 .54	.15 .33
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-3.16 .50 $	.84 .75	.50 .45	.36 .45	.27 .36	... ...	... ...	.79 .51	1.36 .51	.30 .56	.42 .40
RS21 C	-3.95 .55 $	.05 .80	-.29 .54	-.43 .54	-.52 .46	... ...	-.79 .51	... ...	.57 .76	-.49 .67	-.37 .49
RS21 N	-4.52 .55 $	-.52 .80	-.86 .54	-1.00 .54	-1.08 .46	... ...	-1.36 .51	-.57 .76	... ...	-1.05 .67	-.93 .49
RS 80	-3.47 .66 $	.53 .85	.20 .59	.06 .59	-.03 .54	... ...	-.30 .56	.49 .67	1.05 .67	... ...	.12 .57
V1392	-3.58 .50 $	.41 .71	.08 .43	-.06 .44	-.15 .33	... ...	-.42 .40	.37 .49	.93 .49	-.12 .57	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 100 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	4.20 ... 1	... .	... .	6.40 ... 1	6.80 ... 1	... .	... .
ASA	... .	... .	... .	... .	.48 .55 5	... .	... .	... .	... .	... .	1.25 .49 2
GR 78	... .	... .	... .	.25 .35 2	-.03 .78 4	... .	.25 1.20 2	-.10 ... 1	-.20 ... 1	.60 ... 1	-.07 .29 3
SP 76	... .	... .	-.25 .35 2	... .	.08 1.07 5	... .	-.95 .49 2	-.10 ... 1	-.20 ... 1	.20 ... 1	-.15 .35 2
SWISS	-4.20 ... 1	-.48 .55 5	.03 .78 4	-.08 1.07 5	... .	... .	-.50 1.52 6	.63 1.50 3	1.00 1.77 3	.35 .49 2	-.14 1.08 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	-.25 1.20 2	.95 .49 2	.50 1.52 6	... .	... .	.50 ... 1	.40 ... 1	-.10 .57 2	.50 .82 3
RS21C	-6.40 ... 1	... .	.10 ... 1	.10 ... 1	-.63 1.50 3	... .	-.50 ... 1	... .	.37 .45 3	... .	-.55 1.06 2
RS21N	-6.80 ... 1	... .	.20 ... 1	.20 ... 1	-1.00 1.77 3	... .	-.40 ... 1	-.37 .45 3	... .	... .	-.90 1.70 2
RS 80	... .	... .	-.60 ... 1	-.20 ... 1	-.35 .49 2	... .	.10 .57 2	... .	... .	... .	.90 ... 1
V1392	... .	-1.25 .49 2	.07 .29 3	.15 .35 2	.14 1.08 8	... .	-.50 .82 3	.55 1.06 2	.90 1.70 2	-.90 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 100 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	4.36 .75 $	4.98 .71 $	5.20 .71 $	5.05 .66 $	... ...	4.71 .70 $	5.55 .66 $	5.91 .66 $	5.03 .75 $	5.09 .69 $
ASA	-4.36 .75 $	... ...	.61 .43	.84 .43	.69 .35	... ...	.34 .42	1.18 .47 +	1.55 .47 +	.66 .50	.73 .38
GR 78	-4.98 .71 $	-.61 .43	... ...	.22 .33	.08 .28	... ...	-.27 .32	.57 .38	.94 .38	.05 .41	.12 .30
SP 76	-5.20 .71 $	-.84 .43	-.22 .33	... ...	-.15 .27	... ...	-.49 .32	.35 .38	.71 .38	-.17 .41	-.11 .31
SWISS	-5.05 .66 $	-.69 .35	-.08 .28	.15 .27	... ...	... ...	-.34 .25	.49 .33	.86 .33	-.03 .37	.04 .22
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-4.71 .70 $	-.34 .42	.27 .32	.49 .32	.34 .25	... ...	... ...	.84 .37 :	1.21 .37 :	.32 .38	.38 .28
RS21 C	-5.55 .66 $	-1.18 .47 +	-.57 .38	-.35 .38	-.49 .33	... ...	-.84 .37 :	... ...	.37 .45	-.52 .47	-.46 .35
RS21 N	-5.91 .66 $	-1.55 .47 +	-.94 .38	-.71 .38	-.86 .33	... ...	-1.21 .37 :	-.37 .45	... ...	-.89 .47	-.82 .35
RS 80	-5.03 .75 $	-.66 .50	-.05 .41	.17 .41	.03 .37	... ...	-.32 .38	.52 .47	.89 .47	... ...	.06 .39
V1392	-5.09 .69 $	-.73 .38	-.12 .30	.11 .31	-.04 .22	... ...	-.38 .28	.46 .35	.82 .35	-.06 .39	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 70 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	.12 1.06 5	... .	... .	... .	... .	... .	2.65 1.06 2
GR 78	... .	... .	... .	.95 .92 2	-.73 .79 4	... .	.20 1.56 2	.40 ... 1	.20 ... 1	.70 ... 1	-.13 .60 3
SP 76	... .	... .	-.95 .92 2	... .	-.64 1.84 5	... .	-1.95 .78 2	-1.20 ... 1	-1.40 ... 1	.20 ... 1	-1.05 : .07 2
SWISS	... .	-.12 1.06 5	.73 .79 4	.64 1.84 5	... .	... .	-.52 1.92 6	-.35 1.34 2	-.30 .99 2	1.45 .35 2	.77 1.26 7
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	-.20 1.56 2	1.95 .78 2	.52 1.92 6	... .	... .	1.30 ... 1	1.10 ... 1	-.20 .57 2	-.33 1.70 3
RS21C	... .	... .	-.40 ... 1	1.20 ... 1	.35 1.34 2	... .	-1.30 ... 1	... .	.05 .35 2	... .	.10 ... 1
RS21N	... .	... .	-.20 ... 1	1.40 ... 1	.30 .99 2	... .	-1.10 ... 1	-.05 .35 2	... .	... .	.30 ... 1
RS 80	... .	... .	-.70 ... 1	-.20 ... 1	-1.45 .35 2	... .	.20 .57 2	... .	... .	... .	-2.20 ... 1
V1392	... .	-2.65 1.06 2	.13 .60 3	1.05 : .07 2	-.77 1.26 7	... .	.33 1.70 3	-.10 ... 1	-.30 ... 1	2.20 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 70 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	1.10 .63	1.88 .63 $	.71 .51	... ...	.74 .61	1.00 .74	1.05 .74	1.81 .72 +	1.17 .55 :
GR 78	... ...	-1.10 .63	... ...	.78 .48	-.39 .41	... ...	-.36 .46	-.10 .62	-.05 .62	.71 .59	.07 .44
SP 76	... ...	-1.88 .63 $	-.78 .48	... ...	-1.17 .40 *	... ...	-1.14 .46 +	-.88 .62	-.83 .62	-.08 .59	-.72 .45
SWISS	... ...	-.71 .51	.39 .41	1.17 .40 *	... ...	... ...	.03 .37	.29 .56	.34 .56	1.10 .53 :	.46 .34
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-.74 .61	.36 .46	1.14 .46 +	-.03 .37	... ...	... ...	.26 .61	.31 .61	1.07 .55	.43 .42
RS21C	... ...	-1.00 .74	.10 .62	.88 .62	-.29 .56	... ...	-.26 .61	... ...	.05 .35	.81 .73	.16 .60
RS21N	... ...	-1.05 .74	.05 .62	.83 .62	-.34 .56	... ...	-.31 .61	-.05 .35	... ...	.76 .73	.11 .60
RS 80	... ...	-1.81 .72 +	-.71 .59	.08 .59	-1.10 .53 :	... ...	-1.07 .55	-.81 .73	-.76 .73	... ...	-.64 .56
V1392	... ...	-1.17 .55 :	-.07 .44	.72 .45	-.46 .34	... ...	-.43 .42	-.16 .60	-.11 .60	.64 .56	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 50 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-.02 1.57 5	... .	... .	... .	... .	... .	.20 1.41 2
GR 78	... .	... .	... .	.65 1.48 2	-.30 1.63 4	... .	-.70 .14 2	0.00 ... 1	-.20 ... 1	-.40 ... 1	.13 .15 3
SP 76	... .	... .	-.65 1.48 2	... .	-.55 1.00 4	... .	-1.15 1.06 2	.40 ... 1	.20 ... 1	.30 ... 1	-.60 1.56 2
SWISS	... .	.02 1.57 5	.30 1.63 4	.55 1.00 4	... .	... .	-.17 1.50 6	.75 2.33 2	.75 2.05 2	.30 ... 1	-.40 2.21 7
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	.70 .14 2	1.15 1.06 2	.17 1.50 6	... .	... .	.80 ... 1	.60 ... 1	.40 .28 2	.33 .55 3
RS21C	... .	... .	0.00 ... 1	-.40 ... 1	-.75 2.33 2	... .	-.80 ... 1	... .	0.00 .28 2	... .	.10 ... 1
RS21N	... .	... .	.20 ... 1	-.20 ... 1	-.75 2.05 2	... .	-.60 ... 1	0.00 .28 2	... .	... .	.30 ... 1
RS 80	... .	... .	.40 ... 1	-.30 ... 1	-.30 ... 1	... .	-.40 .28 2	... .	... .	... .	-.30 ... 1
V1392	... .	-.20 1.41 2	-.13 .15 3	.60 1.56 2	.40 2.21 7	... .	-.33 .55 3	-.10 ... 1	-.30 ... 1	.30 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 50 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	.24 .62	.61 .63	.06 .50	... ...	-.26 .60	.55 .73	.55 .73	.28 .74	.00 .55
GR 78	... ...	-.24 .62	... ...	.37 .48	-.18 .40	... ...	-.49 .45	.31 .61	.31 .61	.05 .61	-.24 .43
SP 76	... ...	-.61 .63	-.37 .48	... ...	-.55 .41	... ...	-.87 .46	-.06 .62	-.06 .62	-.33 .62	-.61 .45
SWISS	... ...	-.06 .50	.18 .40	.55 .41	... ...	... ...	-.32 .37	.49 .56	.49 .56	.22 .57	-.06 .34
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	.26 .60	.49 .45	.87 .46	.32 .37	... ...	... ...	.81 .60	.81 .60	.54 .57	.26 .41
RS21 C	... ...	-.55 .73	-.31 .61	.06 .62	-.49 .56	... ...	-.81 .60	... ...	0.00 .28	-.27 .75	-.55 .59
RS21 N	... ...	-.55 .73	-.31 .61	.06 .62	-.49 .56	... ...	-.81 .60	0.00 .28	... ...	-.27 .75	-.55 .59
RS 80	... ...	-.28 .74	-.05 .61	.33 .62	-.22 .57	... ...	-.54 .57	.27 .75	.27 .75	... ...	-.28 .59
V1392	... ...	-.00 .55	.24 .43	.61 .45	.06 .34	... ...	-.26 .41	.55 .59	.55 .59	.28 .59	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 30 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	1.20 1.37 5	... .	... .	... .	... .	... .	2.10 $ 0.00 2
GR 78	... .	... .	... .	.50 .14 2	.20 1.51 4	... .	.50 .14 2	.90 ... 1	.80 ... 1	.70 ... 1	.40 1.51 3
SP 76	... .	... .	-.50 .14 2	... .	.68 1.71 4	... .	-.40 .28 2	.30 ... 1	.20 ... 1	... .	-.80 1.13 2
SWISS	... .	-1.20 1.37 5	-.20 1.51 4	-.68 1.71 4	... .	... .	-.34 2.20 5	.95 .21 2	1.05 : .07 2	2.00 ... 1	.30 1.03 7
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	-.50 .14 2	.40 .28 2	.34 2.20 5	... .	... .	.50 ... 1	.40 ... 1	.05 .07 2	.13 1.00 3
RS21C	... .	... .	-.90 ... 1	-.30 ... 1	-.95 .21 2	... .	-.50 ... 1	... .	.10 .28 2	... .	-.30 ... 1
RS21N	... .	... .	-.80 ... 1	-.20 ... 1	-1.05 : .07 2	... .	-.40 ... 1	-.10 .28 2	... .	... .	-.20 ... 1
RS 80	... .	... .	-.70 ... 1	... .	-2.00 ... 1	... .	-.05 .07 2	... .	... .	... .	1.10 ... 1
V1392	... .	-2.10 $ 0.00 2	-.40 1.51 3	.80 1.13 2	-.30 1.03 7	... .	-.13 1.00 3	.30 ... 1	.20 ... 1	-1.10 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 30 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	1.08 .59	1.46 .60 +	1.39 .47 *	... ...	1.32 .58 :	2.03 .69 *	2.13 .69 *	1.69 .74 :	1.62 .52 $
GR 78	... ...	-1.08 .59	... ...	.37 .47	.31 .38	... ...	.24 .43	.94 .58	1.04 .58	.60 .62	.53 .41
SP 76	... ...	-1.46 .60 +	-.37 .47	... ...	-.06 .40	... ...	-.14 .46	.57 .59	.67 .59	.23 .67	.16 .44
SWISS	... ...	-1.39 .47 *	-.31 .38	.06 .40	... ...	... ...	-.07 .36	.63 .53	.73 .53	.29 .59	.22 .32
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-1.32 .58 :	-.24 .43	.14 .46	.07 .36	... ...	... ...	.71 .57	.81 .57	.37 .58	.30 .39
RS21 C	... ...	-2.03 .69 *	-.94 .58	-.57 .59	-.63 .53	... ...	-.71 .57	... ...	.10 .28	-.34 .75	-.41 .56
RS21 N	... ...	-2.13 .69 *	-1.04 .58	-.67 .59	-.73 .53	... ...	-.81 .57	-.10 .28	... ...	-.44 .75	-.51 .56
RS 80	... ...	-1.69 .74 :	-.60 .62	-.23 .67	-.29 .59	... ...	-.37 .58	.34 .75	.44 .75	... ...	-.07 .60
V1392	... ...	-1.62 .52 $	-.53 .41	-.16 .44	-.22 .32	... ...	-.30 .39	.41 .56	.51 .56	.07 .60	... ...

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 20 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	1.23 .81 3	... .	... .	... .	... .	... .	.60 .99 2
GR 78	... .	... .	... .	-.40 1.56 2	1.63 5.22 4	... .	-.80 ... 1	-.70 ... 1	-.80 ... 1	-1.60 ... 1	2.83 6.64 3
SP 76	... .	... .	.40 1.56 2	... .	.18 .96 4	... .	... .	.80 ... 1	.70 ... 1	... .	-.60 1.56 2
SWISS	... .	-1.23 .81 3	-1.63 5.22 4	-.18 .96 4	... .	... .	.65 .35 2	1.05 .21 2	1.25 .64 2	-.40 ... 1	-.37 1.43 6
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	.80 ... 1	... .	-.65 .35 2	... .	... .	... .	... .	.45 1.77 2	-.10 .71 2
RS21 C	... .	... .	.70 ... 1	-.80 ... 1	-1.05 .21 2	... .	... .	... .	.20 .42 2	... .	-.30 ... 1
RS21 N	... .	... .	.80 ... 1	-.70 ... 1	-1.25 .64 2	... .	... .	-.20 .42 2	... .	... .	-.20 ... 1
RS 80	... .	... .	1.60 ... 1	... .	.40 ... 1	... .	-.45 1.77 2	... .	... .	... .	-1.30 ... 1
V1392	... .	-.60 .99 2	-2.83 6.64 3	.60 1.56 2	.37 1.43 6	... .	.10 .71 2	.30 ... 1	.20 ... 1	1.30 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I 20 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-.02 1.40	.67 1.47	1.03 1.20	... ...	.72 1.57	1.22 1.66	1.42 1.66	.71 1.71	.90 1.24
GR 78	... ...	.02 1.40	... ...	.69 1.06	1.05 .85	... ...	.75 1.21	1.24 1.31	1.44 1.31	.73 1.35	.93 .90
SP 76	... ...	-.67 1.47	-.69 1.06	... ...	.36 .93	... ...	.06 1.36	.55 1.35	.75 1.35	.04 1.51	.23 1.01
SWISS	... ...	-1.03 1.20	-1.05 .85	-.36 .93	... ...	... ...	-.31 1.11	.19 1.22	.39 1.22	-.32 1.30	-.13 .73
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-.72 1.57	-.75 1.21	-.06 1.36	.31 1.11	... ...	... ...	.50 1.57	.70 1.57	-.01 1.32	.18 1.12
RS21C	... ...	-1.22 1.66	-1.24 1.31	-.55 1.35	-.19 1.22	... ...	-.50 1.57	... ...	.20 .42	-.51 1.70	-.32 1.28
RS21N	... ...	-1.42 1.66	-1.44 1.31	-.75 1.35	-.39 1.22	... ...	-.70 1.57	-.20 .42	... ...	-.71 1.70	-.52 1.28
RS 80	... ...	-.71 1.71	-.73 1.35	-.04 1.51	.32 1.30	... ...	.01 1.32	.51 1.70	.71 1.70	... ...	.19 1.31
V1392	... ...	-.90 1.24	-.93 .90	-.23 1.01	.13 .73	... ...	-.18 1.12	.32 1.28	.52 1.28	-.19 1.31	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 900 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	−18.6 ... 1	−2.1 9.5 5	−10.8 11.9 2	−9.3 : 10.6 8	−7.6 11.7 2	−5.0 8.1 6	−15.4 11.2 4	−14.9 11.7 4	−4.2 3.8 4	−3.9 9.1 8
ASA	18.6 ... 1	... .	... .	... .	8.5 18.2 4	−4.9 5.4 2	3.0 7.1 2	−7.0 19.8 2	−9.4 19.8 2	... .	... .
GR 78	2.1 9.5 5	... .	... .	−1.5 2.9 4	−6.0 14.2 8	... .	−8.7 11.9 3	−11.5 $ 1.9 4	−10.4 * 2.8 4	−8.0 7.1 2	−5.4 7.5 5
SP 76	10.8 11.9 2	... .	1.5 2.9 4	... .	1.0 6.2 4	... .	... .	−12.0 ... 1	−13.0 ... 1	2.0 ... 1	1.9 4.1 3
SWISS	9.3 : 10.6 8	−8.5 18.2 4	6.0 14.2 8	−1.0 6.2 4	... .	11.4 * 9.2 8	6.9 : 8.3 9	−11.2 15.8 5	−10.8 16.0 5	7.9 8.8 5	8.6 $ 7.2 12
THOMM	7.6 11.7 2	4.9 5.4 2	... .	... .	−11.4 * 9.2 8	... .	−5.7 : 2.2 3	−7.6 18.5 3	−5.4 17.0 3	9.0 11.0 2	.3 8.7 5
RS 18	5.0 8.1 6	−3.0 7.1 2	8.7 11.9 3	... .	−6.9 : 8.3 9	5.7 : 2.2 3	... .	−9.0 1.4 2	−7.9 5.9 2	1.9 6.2 3	1.3 3.1 6
RS21C	15.4 11.2 4	7.0 19.8 2	11.5 $ 1.9 4	12.0 ... 1	11.2 15.8 5	7.6 18.5 3	9.0 1.4 2	... .	1.1 2.7 8	... .	7.6 2.3 2
RS21N	14.9 11.7 4	9.4 19.8 2	10.4 * 2.8 4	13.0 ... 1	10.8 16.0 5	5.4 17.0 3	7.9 5.9 2	−1.1 2.7 8	... .	... .	9.1 1.6 2
RS 80	4.2 3.8 4	... .	8.0 7.1 2	−2.0 ... 1	−7.9 8.8 5	−9.0 11.0 2	−1.9 6.2 3	... .	... .	... .	1.4 4.4 6
V1392	3.9 9.1 8	... .	5.4 7.5 5	−1.9 4.1 3	−8.6 $ 7.2 12	−.3 8.7 5	−1.3 3.1 6	−7.6 2.3 2	−9.1 1.6 2	−1.4 4.4 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 900 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-11.9 3.1 $	-2.1 2.1	-7.3 2.7 *	-10.5 1.8 $	-4.6 2.3 :	-6.1 2.0 $	-16.2 2.3 $	-15.1 2.3 $	-4.0 2.3	-4.1 1.8 :
ASA	11.9 3.1 $	... ...	9.7 3.3 $	4.5 3.8	1.4 2.9	7.3 3.2 :	5.8 3.1	-4.3 3.2	-3.2 3.2	7.9 3.4 :	7.8 3.1 +
GR 78	2.1 2.1	-9.7 3.3 $	... ...	-5.2 2.7	-8.3 1.9 $	-2.5 2.5	-4.0 2.2	-14.0 2.4 $	-12.9 2.4 $	-1.8 2.5	-1.9 2.0
SP 76	7.3 2.7 *	-4.5 3.8	5.2 2.7	... ...	-3.1 2.6	2.7 3.1	1.2 2.9	-8.8 3.0 $	-7.7 3.0 $	3.4 3.0	3.3 2.7
SWISS	10.5 1.8 $	-1.4 2.9	8.3 1.9 $	3.1 2.6	... ...	5.9 2.0 $	4.4 1.8 +	-5.7 2.2 *	-4.6 2.2 *	6.5 2.2 $	6.4 1.6 $
THOMM	4.6 2.3 :	-7.3 3.2 :	2.5 2.5	-2.7 3.1	-5.9 2.0 $	... ...	-1.5 2.3	-11.5 2.5 $	-10.5 2.5 $	.6 2.6	.6 2.2
RS 18	6.1 2.0 $	-5.8 3.1	4.0 2.2	-1.2 2.9	-4.4 1.8 +	1.5 2.3	... ...	-10.0 2.4 $	-9.0 2.4 $	2.1 2.4	2.0 2.0
RS21C	16.2 2.3 $	4.3 3.2	14.0 2.4 $	8.8 3.0 $	5.7 2.2 *	11.5 2.5 $	10.0 2.4 $	... ...	1.1 2.7	12.2 2.8 $	12.1 2.3 $
RS21N	15.1 2.3 $	3.2 3.2	12.9 2.4 $	7.7 3.0 $	4.6 2.2 *	10.5 2.5 $	9.0 2.4 $	-1.1 2.7	... ...	11.1 2.8 $	11.0 2.3 $
RS 80	4.0 2.3	-7.9 3.4 :	1.8 2.5	-3.4 3.0	-6.5 2.2 $	-.6 2.6	-2.1 2.4	-12.2 2.8 $	-11.1 2.8 $	... ...	-.1 2.2
V1392	4.1 1.8 :	-7.8 3.1 +	1.9 2.0	-3.3 2.7	-6.4 1.6 $	-.6 2.2	-2.0 2.0	-12.1 2.3 $	-11.0 2.3 $	.1 2.2	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 850 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	-1.6 ... 1	-7.0 16.6 3	-27.4 ... 1	.8 17.1 6	-4.4 22.1 2	.8 3.3 5	-19.0 12.7 4	-17.1 15.1 4	-2.3 1.8 2	-5.4 14.9 5
ASA	1.6 ... 1	... .	... .	... .	6.5 7.9 4	-2.2 3.5 2	1.5 2.1 2	4.0 9.9 2	.1 9.9 2	... .	... .
GR 78	7.0 16.6 3	... .	... .	-2.0 3.6 3	.7 19.5 7	... .	-9.3 15.0 3	-13.5 $ 2.9 4	-10.9 * 3.4 4	-20.0 ... 1	-9.7 9.1 3
SP 76	27.4 ... 1	... .	2.0 3.6 3	... .	8.8 13.9 4	... .	... .	-10.0 ... 1	-11.5 ... 1	-2.0 ... 1	.3 3.4 3
SWISS	-.8 17.1 6	-6.5 7.9 4	-.7 19.5 7	-8.8 13.9 4	... .	11.3 : 10.9 8	4.6 10.6 9	-17.2 20.1 5	-15.9 20.2 5	4.2 7.6 5	4.2 13.1 12
THOMM	4.4 22.1 2	2.2 3.5 2	... .	... .	-11.3 : 10.9 8	... .	-2.9 9.8 3	-8.5 16.9 3	-5.5 16.2 3	-5.0 7.1 2	-3.4 5.5 5
RS 18	-.8 3.3 5	-1.5 2.1 2	9.3 15.0 3	... .	-4.6 10.6 9	2.9 9.8 3	... .	-11.0 2.8 2	-7.0 5.7 2	.7 4.7 3	-.3 4.4 6
RS21C	19.0 12.7 4	-4.0 9.9 2	13.5 $ 2.9 4	10.0 ... 1	17.2 20.1 5	8.5 16.9 3	11.0 2.8 2	... .	2.0 3.2 8	... .	7.0 + .3 2
RS21N	17.1 15.1 4	-.1 9.9 2	10.9 * 3.4 4	11.5 ... 1	15.9 20.2 5	5.5 16.2 3	7.0 5.7 2	-2.0 3.2 8	... .	... .	6.8 2.8 2
RS 80	2.3 1.8 2	... .	20.0 ... 1	2.0 ... 1	-4.2 7.6 5	5.0 7.1 2	-.7 4.7 3	... .	... .	... .	2.8 : 2.6 6
V1392	5.4 14.9 5	... .	9.7 9.1 3	-.3 3.4 3	-4.2 13.1 12	3.4 5.5 5	.3 4.4 6	-7.0 + .3 2	-6.8 2.8 2	-2.8 : 2.6 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 850 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-8.3 4.1 :	-1.5 3.1	-8.7 3.8 :	-5.0 2.5 :	-.1 3.1	-3.1 2.8	-15.2 3.1 $	-13.3 3.1 $	-4.9 3.3	-3.9 2.7
ASA	8.3 4.1 :	... ...	6.7 4.3	-.5 4.9	3.3 3.7	8.2 4.0 :	5.2 3.9	-6.9 4.1	-5.0 4.1	3.4 4.4	4.4 4.0
GR 78	1.5 3.1	-6.7 4.3	... ...	-7.2 3.7	-3.5 2.7	1.4 3.4	-1.5 3.0	-13.7 3.2 $	-11.7 3.2 $	-3.4 3.5	-2.3 2.9
SP 76	8.7 3.8 :	.5 4.9	7.2 3.7	... ...	3.7 3.4	8.6 4.0 :	5.7 3.9	-6.5 4.0	-4.5 4.0	3.8 4.1	4.9 3.6
SWISS	5.0 2.5 :	-3.3 3.7	3.5 2.7	-3.7 3.4	... ...	4.9 2.6	1.9 2.3	-10.2 2.7 $	-8.3 2.7 $	.1 2.9	1.1 2.1
THOMM	.1 3.1	-8.2 4.0 :	-1.4 3.4	-8.6 4.0 :	-4.9 2.6	... ...	-3.0 3.0	-15.1 3.2 $	-13.2 3.2 $	-4.8 3.4	-3.8 2.8
RS 18	3.1 2.8	-5.2 3.9	1.5 3.0	-5.7 3.9	-1.9 2.3	3.0 3.0	... ...	-12.1 3.1 $	-10.2 3.1 $	-1.8 3.2	-.8 2.5
RS21C	15.2 3.1 $	6.9 4.1	13.7 3.2 $	6.5 4.0	10.2 2.7 $	15.1 3.2 $	12.1 3.1 $	... ...	2.0 3.2	10.3 3.6 *	11.4 3.0 $
RS21N	13.3 3.1 $	5.0 4.1	11.7 3.2 $	4.5 4.0	8.3 2.7 $	13.2 3.2 $	10.2 3.1 $	-2.0 3.2	... ...	8.4 3.6 *	9.4 3.0 $
RS 80	4.9 3.3	-3.4 4.4	3.4 3.5	-3.8 4.1	-.1 2.9	4.8 3.4	1.8 3.2	-10.3 3.6 *	-8.4 3.6 *	... ...	1.1 2.9
V1392	3.9 2.7	-4.4 4.0	2.3 2.9	-4.9 3.6	-1.1 2.1	3.8 2.8	.8 2.5	-11.4 3.0 $	-9.4 3.0 $	-1.1 2.9	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 700 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	6.8 12.3 5	4.7 14.9 2	2.4 12.7 8	-17.4 14.3 2	-1.6 15.3 5	-14.2 21.2 4	-13.7 21.5 4	-6.6 14.5 4	2.3 18.7 8
ASA	... .	... .	... .	... .	8.0 20.2 4	1.5 3.5 2	16.0 9.9 2	.5 .7 2	-2.5 .7 2	... .	... .
GR 78	-6.8 12.3 5	... .	... .	-1.3 4.8 4	-.8 20.7 8	... .	-12.7 18.8 3	-14.8 11.1 4	-13.0 10.1 4	-24.5 26.2 2	-7.4 16.8 5
SP 76	-4.7 14.9 2	... .	1.3 4.8 4	... .	10.3 19.4 4	... .	... .	-12.0 ... 1	-15.9 ... 1	-1.0 ... 1	3.7 4.6 3
SWISS	-2.4 12.7 8	-8.0 20.2 4	.8 20.7 8	-10.3 19.4 4	... .	8.1 : 8.6 8	-1.3 7.2 9	-9.4 7.7 5	-8.6 9.4 5	-7.0 9.1 5	.3 8.3 12
THOMM	17.4 14.3 2	-1.5 3.5 2	... .	... .	-8.1 : 8.6 8	... .	-4.3 12.5 3	-21.1 : 6.2 3	-20.4 : 5.7 3	-16.0 $ 0.0 2	-7.7 6.9 5
RS 18	1.6 15.3 5	-16.0 9.9 2	12.7 18.8 3	... .	1.3 7.2 9	4.3 12.5 3	... .	-12.0 4.2 2	-9.0 7.1 2	-10.0 8.5 3	-4.5 5.8 6
RS21C	14.2 21.2 4	-.5 .7 2	14.8 11.1 4	12.0 ... 1	9.4 7.7 5	21.1 : 6.2 3	12.0 4.2 2	... .	.8 3.2 8	... .	12.4 12.2 2
RS21N	13.7 21.5 4	2.5 .7 2	13.0 10.1 4	15.9 ... 1	8.6 9.4 5	20.4 : 5.7 3	9.0 7.1 2	-.8 3.2 8	... .	... .	13.8 15.7 2
RS 80	6.6 14.5 4	... .	24.5 26.2 2	1.0 ... 1	7.0 9.1 5	16.0 $ 0.0 2	10.0 8.5 3	... .	... .	... .	6.2 : 4.6 6
V1392	-2.3 18.7 8	... .	7.4 16.8 5	-3.7 4.6 3	-.3 8.3 12	7.7 6.9 5	4.5 5.8 6	-12.4 12.2 2	-13.8 15.7 2	-6.2 : 4.6 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 700 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	-7.8	5.2	-2.2	.7	4.7	.3	-11.5	-10.8	-8.3	-.6
	...	4.5	2.8	3.7	2.4	3.1	2.8	3.1 $	3.1 $	3.1 *	2.5
ASA	7.8	...	13.0	5.6	8.6	12.5	8.1	-3.7	-3.0	-.5	7.2
	4.5	...	4.6 *	5.2	4.1 :	4.4 *	4.4	4.5	4.5	4.8	4.4
GR 78	-5.2	-13.0	...	-7.4	-4.4	-.5	-4.9	-16.7	-16.0	-13.5	-5.8
	2.8	4.6 *	...	3.6 :	2.6	3.4	3.0	3.2 $	3.2 $	3.3 $	2.7 :
SP 76	2.2	-5.6	7.4	...	2.9	6.9	2.5	-9.4	-8.6	-6.2	1.6
	3.7	5.2	3.6 :	...	3.5	4.1	3.9	4.1 :	4.1 :	4.1	3.6
SWISS	-.7	-8.6	4.4	-2.9	...	3.9	-.4	-12.3	-11.5	-9.1	-1.3
	2.4	4.1 :	2.6	3.5	...	2.7	2.5	2.9 $	2.9 $	2.9 $	2.2
THOMM	-4.7	-12.5	.5	-6.9	-3.9	...	-4.3	-16.2	-15.5	-13.0	-5.3
	3.1	4.4 *	3.4	4.1	2.7	...	3.2	3.4 $	3.4 $	3.5 $	2.9
RS 18	-.3	-8.1	4.9	-2.5	.4	4.3	...	-11.9	-11.1	-8.7	-.9
	2.8	4.4	3.0	3.9	2.5	3.2	...	3.3 $	3.3 $	3.2 *	2.7
RS21C	11.5	3.7	16.7	9.4	12.3	16.2	11.9	...	.8	3.2	11.0
	3.1 $	4.5	3.2 $	4.1 :	2.9 $	3.4 $	3.3 $	...	3.2	3.7	3.1 $
RS21N	10.8	3.0	16.0	8.6	11.5	15.5	11.1	-.8	...	2.4	10.2
	3.1 $	4.5	3.2 $	4.1 :	2.9 $	3.4 $	3.3 $	3.2	...	3.7	3.1 $
RS 80	8.3	.5	13.5	6.2	9.1	13.0	8.7	-3.2	-2.4	...	7.8
	3.1 *	4.8	3.3 $	4.1	2.9 $	3.5 $	3.2 *	3.7	3.7	...	2.9 *
V1392	.6	-7.2	5.8	-1.6	1.3	5.3	.9	-11.0	-10.2	-7.8	...
	2.5	4.4	2.7 :	3.6	2.2	2.9	2.7	3.1 $	3.1 $	2.9 *	...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 500 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	16.4 29.4 3	30.8 ... 1	11.1 30.0 6	22.3 5.6 2	-4.7 22.3 4	-14.2 32.5 4	-14.5 29.3 4	.6 20.9 2	-3.1 24.7 5
ASA	... .	... .	... .	... .	4.8 18.6 4	2.5 .7 2	2.5 2.1 2	-28.5 4.9 2	-26.5 4.9 2	... .	... .
GR 78	-16.4 29.4 3	... .	... .	-7.3 7.1 4	-9.1 27.4 8	... .	-18.0 $ 1.7 3	-34.0 + 14.2 4	-32.6 + 13.0 4	-11.5 14.8 2	-17.6 + 8.6 5
SP 76	-30.8 ... 1	... .	7.3 7.1 4	... .	-3.0 33.4 4	... .	... .	-10.0 ... 1	-11.7 ... 1	5.0 ... 1	-3.8 4.2 3
SWISS	-11.1 30.0 6	-4.8 18.6 4	9.1 27.4 8	3.0 33.4 4	... .	5.8 + 4.9 8	-16.9 : 19.8 9	-23.0 $ 7.6 5	-21.4 $ 8.3 5	-8.8 40.9 5	-5.8 34.6 11
THOMM	-22.3 5.6 2	-2.5 .7 2	... .	... .	-5.8 + 4.9 8	... .	-2.0 7.8 3	-20.4 + 4.4 3	-21.3 : 5.3 3	-12.5 7.8 2	-1.9 4.6 5
RS 18	4.7 22.3 4	-2.5 2.1 2	18.0 $ 1.7 3	... .	16.9 : 19.8 9	2.0 7.8 3	... .	-8.5 6.4 2	-6.5 6.4 2	0.0 5.6 3	-1.6 7.2 6
RS21C	14.2 32.5 4	28.5 4.9 2	34.0 + 14.2 4	10.0 ... 1	23.0 $ 7.6 5	20.4 + 4.4 3	8.5 6.4 2	... .	.6 2.7 8	... .	10.9 3.5 2
RS21N	14.5 29.3 4	26.5 4.9 2	32.6 + 13.0 4	11.7 ... 1	21.4 $ 8.3 5	21.3 : 5.3 3	6.5 6.4 2	-.6 2.7 8	... .	... .	10.8 : .9 2
RS 80	-.6 20.9 2	... .	11.5 14.8 2	-5.0 ... 1	8.8 40.9 5	12.5 7.8 2	0.0 5.6 3	... .	... .	... .	-4.6 7.3 6
V1392	3.1 24.7 5	... .	17.6 + 8.6 5	3.8 4.2 3	5.8 34.6 11	1.9 4.6 5	1.6 7.2 6	-10.9 3.5 2	-10.8 : .9 2	4.6 7.3 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 500 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	6.0 7.3	18.2 5.0 $	9.7 6.4	9.7 4.3 :	10.3 5.3	-.7 4.8	-13.0 5.2 +	-12.4 5.2 +	3.0 5.5	1.4 4.5
ASA	-6.0 7.3	... ...	12.2 7.3	3.7 8.3	3.7 6.5	4.4 7.0	-6.7 6.9	-19.0 7.1 *	-18.4 7.1 *	-3.0 7.7	-4.5 7.0
GR 78	-18.2 5.0 $	-12.2 7.3	... ...	-8.5 5.9	-8.5 4.2 :	-7.8 5.4	-18.9 4.9 $	-31.2 5.2 $	-30.6 5.2 $	-15.2 5.5 *	-16.7 4.5 $
SP 76	-9.7 6.4	-3.7 8.3	8.5 5.9	... ...	-.0 5.6	.6 6.7	-10.4 6.4	-22.7 6.6 $	-22.1 6.6 $	-6.7 6.7	-8.3 5.8
SWISS	-9.7 4.3 :	-3.7 6.5	8.5 4.2 :	.0 5.6	... ...	.7 4.3	-10.4 3.9 *	-22.7 4.6 $	-22.1 4.6 $	-6.7 4.7	-8.2 3.6 :
THOMM	-10.3 5.3	-4.4 7.0	7.8 5.4	-.6 6.7	-.7 4.3	... ...	-11.1 5.0 :	-23.4 5.4 $	-22.7 5.4 $	-7.3 5.6	-8.9 4.7
RS 18	.7 4.8	6.7 6.9	18.9 4.9 $	10.4 6.4	10.4 3.9 *	11.1 5.0 :	... ...	-12.3 5.2 +	-11.7 5.2 +	3.7 5.3	2.2 4.3
RS21C	13.0 5.2 +	19.0 7.1 *	31.2 5.2 $	22.7 6.6 $	22.7 4.6 $	23.4 5.4 $	12.3 5.2 +	... ...	.6 2.7	16.0 6.0 *	14.5 5.0 $
RS21N	12.4 5.2 +	18.4 7.1 *	30.6 5.2 $	22.1 6.6 $	22.1 4.6 $	22.7 5.4 $	11.7 5.2 +	-.6 2.7	... ...	15.4 6.0 *	13.8 5.0 $
RS 80	-3.0 5.5	3.0 7.7	15.2 5.5 *	6.7 6.7	6.7 4.7	7.3 5.6	-3.7 5.3	-16.0 6.0 *	-15.4 6.0 *	... ...	-1.6 4.8
V1392	-1.4 4.5	4.5 7.0	16.7 4.5 $	8.3 5.8	8.2 3.6 :	8.9 4.7	-2.2 4.3	-14.5 5.0 $	-13.8 5.0 $	1.6 4.8	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 400 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	10.5 19.3 4	2.5 3.5 2	0.0 0.0 2	-21.5 6.4 2	-21.5 6.4 2	... .	... .
GR 78	... .	... .	... .	-6.5 $ .6 4	-6.6 33.9 8	... .	-34.0 : 12.0 3	-39.3 * 12.3 4	-38.4 $ 9.7 4	-22.5 29.0 2	-23.2 : 17.7 5
SP 76	... .	... .	6.5 $ .6 4	... .	16.0 36.0 4	... .	... .	-19.0 ... 1	-21.5 ... 1	5.0 ... 1	-7.2 3.1 3
SWISS	... .	-10.5 19.3 4	6.6 33.9 8	-16.0 36.0 4	... .	-6.2 15.7 7	-18.3 : 20.0 9	-31.6 27.9 5	-30.9 29.1 5	-6.0 27.1 5	-14.5 24.8 12
THOMM	... .	-2.5 3.5 2	... .	... .	6.2 15.7 7	... .	-4.0 7.1 2	-18.7 : 7.2 3	-17.1 7.7 3	12.8 8.5 2	3.8 8.1 4
RS 18	... .	0.0 0.0 2	34.0 : 12.0 3	... .	18.3 : 20.0 9	4.0 7.1 2	... .	-7.5 4.9 2	-6.1 6.9 2	-.4 14.9 3	-2.7 9.6 6
RS21C	... .	21.5 6.4 2	39.3 * 12.3 4	19.0 ... 1	31.6 27.9 5	18.7 : 7.2 3	7.5 4.9 2	... .	1.0 1.8 8	... .	14.0 1.8 2
RS21N	... .	21.5 6.4 2	38.4 $ 9.7 4	21.5 ... 1	30.9 29.1 5	17.1 7.7 3	6.1 6.9 2	-1.0 1.8 8	... .	... .	15.2 3.5 2
RS 80	... .	... .	22.5 29.0 2	-5.0 ... 1	6.0 27.1 5	-12.8 8.5 2	.4 14.9 3	... .	... .	... .	-12.1 $ 4.3 6
V1392	... .	... .	23.2 : 17.7 5	7.2 3.1 3	14.5 24.8 12	-3.8 8.1 4	2.7 9.6 6	-14.0 1.8 2	-15.2 3.5 2	12.1 $ 4.3 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 400 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	20.0 7.2 *	3.9 8.1	12.1 6.2	.2 6.9	-4.2 6.7	-18.2 7.0 +	-17.2 7.0 +	5.2 7.5	-3.4 6.8
GR 78	... ...	-20.0 7.2 *	... ...	-16.1 5.9 *	-7.8 4.2	-19.8 5.7 $	-24.2 5.0 $	-38.2 5.3 $	-37.2 5.3 $	-14.8 5.5 *	-23.4 4.5 $
SP 76	... ...	-3.9 8.1	16.1 5.9 *	... ...	8.2 5.6	-3.8 6.8	-8.1 6.4	-22.1 6.7 $	-21.1 6.7 $	1.3 6.7	-7.3 5.8
SWISS	... ...	-12.1 6.2	7.8 4.2	-8.2 5.6	... ...	-12.0 4.6 +	-16.4 4.0 $	-30.4 4.8 $	-29.3 4.8 $	-7.0 4.8	-15.6 3.6 $
THOMM	... ...	-.2 6.9	19.8 5.7 $	3.8 6.8	12.0 4.6 +	... ...	-4.4 5.4	-18.4 5.7 $	-17.4 5.7 $	5.0 5.8	-3.6 5.0
RS 18	... ...	4.2 6.7	24.2 5.0 $	8.1 6.4	16.4 4.0 $	4.4 5.4	... ...	-14.0 5.5 +	-13.0 5.5 +	9.4 5.3	.8 4.4
RS21C	... ...	18.2 7.0 +	38.2 5.3 $	22.1 6.7 $	30.4 4.8 $	18.4 5.7 $	14.0 5.5 +	... ...	1.0 1.8	23.4 6.2 $	14.8 5.2 *
RS21N	... ...	17.2 7.0 +	37.2 5.3 $	21.1 6.7 $	29.3 4.8 $	17.4 5.7 $	13.0 5.5 +	-1.0 1.8	... ...	22.4 6.2 $	13.8 5.2 *
RS 80	... ...	-5.2 7.5	14.8 5.5 *	-1.3 6.7	7.0 4.8	-5.0 5.8	-9.4 5.3	-23.4 6.2 $	-22.4 6.2 $	... ...	-8.6 4.8
V1392	... ...	3.4 6.8	23.4 4.5 $	7.3 5.8	15.6 3.6 $	3.6 5.0	-.8 4.4	-14.8 5.2 *	-13.8 5.2 *	8.6 4.8	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 300 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	9.5 13.3 4	4.5 3.5 2	-1.5 2.1 2	-26.0 5.7 2	-25.0 5.7 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	31.5 21.6 4	... .	... .	-9.0 ... 1	-9.8 ... 1	6.0 ... 1	-1.2 3.8 3
SWISS	... .	-9.5 13.3 4	... .	-31.5 21.6 4	... .	2.8 6.1 7	-18.8 : 19.9 9	-49.0 $ 15.7 5	-48.0 $ 16.4 5	-14.6 18.2 5	-18.0 : 23.2 12
THOMM	... .	-4.5 3.5 2	... .	... .	-2.8 6.1 7	... .	-1.5 13.4 2	-20.4 : 7.4 3	-19.8 8.1 3	3.2 8.7 2	2.2 6.1 4
RS 18	... .	1.5 2.1 2	... .	... .	18.8 : 19.9 9	1.5 13.4 2	... .	-13.0 : 1.4 2	-11.5 2.1 2	-3.0 13.7 3	-3.1 10.3 6
RS21 C	... .	26.0 5.7 2	... .	9.0 ... 1	49.0 $ 15.7 5	20.4 : 7.4 3	13.0 : 1.4 2	... .	.9 1.1 8	... .	11.8 1.7 2
RS21 N	... .	25.0 5.7 2	... .	9.8 ... 1	48.0 $ 16.4 5	19.8 8.1 3	11.5 2.1 2	-.9 1.1 8	... .	... .	11.7 + .4 2
RS 80	... .	... .	... .	-6.0 ... 1	14.6 18.2 5	-3.2 8.7 2	3.0 13.7 3	... .	... .	... .	-6.6 * 3.6 6
V1392	... .	... .	... .	1.2 3.8 3	18.0 : 23.2 12	-2.2 6.1 4	3.1 10.3 6	-11.8 1.7 2	-11.7 + .4 2	6.6 * 3.6 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 300 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-13.3 7.1	12.0 5.1 :	2.2 5.6	-4.5 5.5	-25.7 5.8 $	-24.8 5.8 $	-1.9 6.2	-6.7 5.6
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	13.3 7.1	... ...	... ...	25.2 5.3 $	15.5 6.1 +	8.8 6.0	-12.5 6.3	-11.6 6.3	11.3 6.1	6.5 5.4
SWISS	... ...	-12.0 5.1 :	... ...	-25.2 5.3 $	... ...	-9.7 3.7 +	-16.4 3.4 $	-37.7 4.2 $	-36.8 4.2 $	-13.9 4.1 $	-18.7 3.1 $
THOMM	... ...	-2.2 5.6	... ...	-15.5 6.1 +	9.7 3.7 +	... ...	-6.7 4.4	-28.0 4.8 $	-27.1 4.8 $	-4.2 4.8	-9.0 4.1 :
RS 18	... ...	4.5 5.5	... ...	-8.8 6.0	16.4 3.4 $	6.7 4.4	... ...	-21.3 4.8 $	-20.4 4.8 $	2.5 4.5	-2.3 3.7
RS21C	... ...	25.7 5.8 $	... ...	12.5 6.3	37.7 4.2 $	28.0 4.8 $	21.3 4.8 $	... ...	.9 1.1	23.8 5.5 $	19.0 4.6 $
RS21N	... ...	24.8 5.8 $	... ...	11.6 6.3	36.8 4.2 $	27.1 4.8 $	20.4 4.8 $	-.9 1.1	... ...	22.9 5.5 $	18.1 4.6 $
RS 80	... ...	1.9 6.2	... ...	-11.3 6.1	13.9 4.1 $	4.2 4.8	-2.5 4.5	-23.8 5.5 $	-22.9 5.5 $	... ...	-4.8 4.1
V1392	... ...	6.7 5.6	... ...	-6.5 5.4	18.7 3.1 $	9.0 4.1 :	2.3 3.7	-19.0 4.6 $	-18.1 4.6 $	4.8 4.1	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 250 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	8.5 16.8 4	3.5 3.5 2	-1.5 .7 2	-26.5 4.9 2	-24.5 4.9 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	36.3 28.1 4	... .	... .	-10.0 ... 1	-8.4 ... 1	10.0 ... 1	3.0 2.2 2
SWISS	... .	-8.5 16.8 4	... .	-36.3 28.1 4	... .	3.9 6.1 7	-18.3 + 16.8 9	-42.0 $ 13.1 5	-40.2 $ 13.3 5	-20.0 26.3 5	-18.3 : 23.6 11
THOMM	... .	-3.5 3.5 2	... .	... .	-3.9 6.1 7	... .	-2.5 12.0 2	-23.5 : 8.3 3	-23.2 : 8.5 3	-6.3 5.3 2	-2.4 3.9 4
RS 18	... .	1.5 .7 2	... .	... .	18.3 + 16.8 9	2.5 12.0 2	... .	-17.0 : 1.4 2	-15.0 2.8 2	-7.7 10.0 3	-2.4 7.9 6
RS21C	... .	26.5 4.9 2	... .	10.0 ... 1	42.0 $ 13.1 5	23.5 : 8.3 3	17.0 : 1.4 2	... .	1.3 * 1.0 8	... .	14.6 4.5 2
RS21N	... .	24.5 4.9 2	... .	8.4 ... 1	40.2 $ 13.3 5	23.2 : 8.5 3	15.0 2.8 2	-1.3 * 1.0 8	... .	... .	13.3 4.9 2
RS 80	... .	... .	... .	-10.0 ... 1	20.0 26.3 5	6.3 5.3 2	7.7 10.0 3	... .	... .	... .	.2 3.2 5
V1392	... .	... .	... .	-3.0 2.2 2	18.3 : 23.6 11	2.4 3.9 4	2.4 7.9 6	-14.6 4.5 2	-13.3 4.9 2	-.2 3.2 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 250 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-20.0 7.3 *	10.3 5.1 :	3.3 5.6	-5.3 5.5	-26.1 5.8 $	-24.8 5.8 $	-8.9 6.2	-7.7 5.6
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	20.0 7.3 *	... ...	... ...	30.3 5.5 $	23.3 6.4 $	14.7 6.2 :	-6.1 6.5	-4.8 6.5	11.1 6.4	12.3 5.8 :
SWISS	... ...	-10.3 5.1 :	... ...	-30.3 5.5 $	... ...	-7.0 3.7	-15.6 3.5 $	-36.4 4.2 $	-35.1 4.2 $	-19.2 4.2 $	-18.0 3.2 $
THOMM	... ...	-3.3 5.6	... ...	-23.3 6.4 $	7.0 3.7	... ...	-8.6 4.4	-29.4 4.8 $	-28.1 4.8 $	-12.2 4.9 +	-11.0 4.1 *
RS 18	... ...	5.3 5.5	... ...	-14.7 6.2 :	15.6 3.5 $	8.6 4.4	... ...	-20.8 4.8 $	-19.5 4.8 $	-3.6 4.6	-2.4 3.8
RS21 C	... ...	26.1 5.8 $	... ...	6.1 6.5	36.4 4.2 $	29.4 4.8 $	20.8 4.8 $	... ...	1.3 1.0 *	17.2 5.5 $	18.4 4.7 $
RS21 N	... ...	24.8 5.8 $	... ...	4.8 6.5	35.1 4.2 $	28.1 4.8 $	19.5 4.8 $	-1.3 1.0 *	... ...	15.9 5.5 $	17.1 4.7 $
RS 80	... ...	8.9 6.2	... ...	-11.1 6.4	19.2 4.2 $	12.2 4.9 +	3.6 4.6	-17.2 5.5 $	-15.9 5.5 $	... ...	1.2 4.3
V1392	... ...	7.7 5.6	... ...	-12.3 5.8 :	18.0 3.2 $	11.0 4.1 *	2.4 3.8	-18.4 4.7 $	-17.1 4.7 $	-1.2 4.3	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 200 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	5.8 16.1 4	5.0 2.8 2	-1.5 .7 2	-23.0 4.2 2	-21.0 4.2 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	39.0 27.2 4	... .	... .	... .	... .	-7.0 ... 1	2.0 6.1 3
SWISS	... .	-5.8 16.1 4	... .	-39.0 27.2 4	... .	6.9 11.9 5	-18.9 $ 12.9 8	-32.0 $ 4.2 4	-30.6 $ 4.3 4	-30.8 : 21.1 5	-17.7 + 18.7 11
THOMM	... .	-5.0 2.8 2	... .	... .	-6.9 11.9 5	... .	... .	-28.0 8.5 2	-26.5 10.6 2	-21.4 9.4 2	-5.8 7.3 3
RS 18	... .	1.5 .7 2	... .	... .	18.9 $ 12.9 8	... .	... .	-16.5 7.8 2	-15.2 8.3 2	-15.3 6.7 3	-.6 6.9 5
RS21C	... .	23.0 4.2 2	... .	... .	32.0 $ 4.2 4	28.0 8.5 2	16.5 7.8 2	... .	1.1 1.3 7	... .	20.2 ... 1
RS21N	... .	21.0 4.2 2	... .	... .	30.6 $ 4.3 4	26.5 10.6 2	15.2 8.3 2	-1.1 1.3 7	... .	... .	19.2 ... 1
RS 80	... .	... .	... .	7.0 ... 1	30.8 : 21.1 5	21.4 9.4 2	15.3 6.7 3	... .	... .	... .	10.5 $ 4.3 6
V1392	... .	... .	... .	-2.0 6.1 3	17.7 + 18.7 11	5.8 7.3 3	.6 6.9 5	-20.2 ... 1	-19.2 ... 1	-10.5 $ 4.3 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 200 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	−21.0 6.7 $	8.7 4.6	6.3 5.3	−7.9 5.1	−23.7 5.5 $	−22.6 5.5 $	−20.9 5.6 $	−9.1 5.1
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	21.0 6.7 $	... ...	... ...	29.7 5.0 $	27.3 6.1 $	13.1 5.7 :	−2.7 6.5	−1.6 6.5	.1 5.7	11.9 5.1 :
SWISS	... ...	−8.7 4.6	... ...	−29.7 5.0 $	... ...	−2.4 3.9	−16.6 3.4 $	−32.4 4.4 $	−31.3 4.4 $	−29.6 3.7 $	−17.8 2.9 $
THOMM	... ...	−6.3 5.3	... ...	−27.3 6.1 $	2.4 3.9	... ...	−14.2 4.8 $	−30.0 5.1 $	−28.9 5.1 $	−27.2 4.7 $	−15.4 4.3 $
RS 18	... ...	7.9 5.1	... ...	−13.1 5.7 :	16.6 3.4 $	14.2 4.8 $	... ...	−15.8 4.9 $	−14.7 4.9 $	−13.0 4.2 $	−1.2 3.7
RS21C	... ...	23.7 5.5 $	... ...	2.7 6.5	32.4 4.4 $	30.0 5.1 $	15.8 4.9 $	... ...	1.1 1.3	2.8 5.4	14.6 4.9 $
RS21N	... ...	22.6 5.5 $	... ...	1.6 6.5	31.3 4.4 $	28.9 5.1 $	14.7 4.9 $	−1.1 1.3	... ...	1.7 5.4	13.5 4.9 $
RS 80	... ...	20.9 5.6 $	... ...	−.1 5.7	29.6 3.7 $	27.2 4.7 $	13.0 4.2 $	−2.8 5.4	−1.7 5.4	... ...	11.8 3.7 $
V1392	... ...	9.1 5.1	... ...	−11.9 5.1 :	17.8 2.9 $	15.4 4.3 $	1.2 3.7	−14.6 4.9 $	−13.5 4.9 $	−11.8 3.7 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 150 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	-4.0 1.4 2	-19.5 3.5 2	-17.5 3.5 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	-1.0 ... 1	10.3 $ .9 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	-26.0 ... 1	-26.0 ... 1	... .	... .
RS 18	... .	4.0 1.4 2	... .	... .	... .	... .	... .	-17.0 8.5 2	-15.5 7.8 2	-17.3 $ .6 3	2.7 4.5 5
RS21 C	... .	19.5 3.5 2	... .	... .	... .	26.0 ... 1	17.0 8.5 2	... .	1.4 : .9 5	... .	27.1 ... 1
RS21 N	... .	17.5 3.5 2	... .	... .	... .	26.0 ... 1	15.5 7.8 2	-1.4 : .9 5	... .	... .	25.1 ... 1
RS 80	... .	... .	... .	1.0 ... 1	... .	... .	17.3 $ .6 3	... .	... .	... .	17.7 $ 7.2 6
V1392	... .	... .	... .	-10.3 $ .9 3	... .	... .	-2.7 4.5 5	-27.1 ... 1	-25.1 ... 1	-17.7 $ 7.2 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 150 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-11.8 4.1 +	... ...	5.0 5.9	-2.5 2.9	-21.0 2.9 $	-19.6 2.9 $	-17.8 3.5 $	.2 3.3
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	11.8 4.1 +	... ...	... ...	... ...	16.8 6.4 +	9.3 3.1 *	-9.2 3.9 :	-7.8 3.9 :	-6.0 2.9	11.9 2.6 $
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	-5.0 5.9	... ...	-16.8 6.4 +	... ...	... ...	-7.5 5.8	-26.0 5.1 $	-24.6 5.1 $	-22.8 6.0 $	-4.9 5.9
RS 18	... ...	2.5 2.9	... ...	-9.3 3.1 *	... ...	7.5 5.8	... ...	-18.5 2.6 $	-17.1 2.6 $	-15.3 2.1 $	2.7 1.8
RS21C	... ...	21.0 2.9 $	... ...	9.2 3.9 :	... ...	26.0 5.1 $	18.5 2.6 $	... ...	1.4 .9 :	3.2 3.2	21.1 2.9 $
RS21N	... ...	19.6 2.9 $	... ...	7.8 3.9 :	... ...	24.6 5.1 $	17.1 2.6 $	-1.4 .9 :	... ...	1.8 3.2	19.7 2.9 $
RS 80	... ...	17.8 3.5 $	... ...	6.0 2.9	... ...	22.8 6.0 $	15.3 2.1 $	-3.2 3.2	-1.8 3.2	... ...	17.9 1.7 $
V1392	... ...	-.2 3.3	... ...	-11.9 2.6 $	... ...	4.9 5.9	-2.7 1.8	-21.1 2.9 $	-19.7 2.9 $	-17.9 1.7 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 100 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	-3.5 .7 2	-17.5 3.5 2	-15.5 3.5 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	11.5 $ .9 3
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	3.5 .7 2	... .	... .	... .	... .	... .	-13.5 6.4 2	-9.0 ... 1	-15.5 3.5 2	3.9 + 2.3 5
RS21C	... .	17.5 3.5 2	... .	... .	... .	... .	13.5 6.4 2	... .	.5 1.0 4	... .	22.6 ... 1
RS21N	... .	15.5 3.5 2	... .	... .	... .	... .	9.0 ... 1	-.5 1.0 4	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	15.5 3.5 2	... .	... .	... .	18.6 + 3.5 3
V1392	... .	... .	... .	-11.5 $ .9 3	... .	... .	-3.9 + 2.3 5	-22.6 ... 1	... .	-18.6 + 3.5 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 100 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-10.3 2.6 $	... ...	... ...	-3.1 1.7	-17.9 1.7 $	-17.4 1.7 $	-17.9 2.2 $	1.2 1.9
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	10.3 2.6 $	... ...	... ...	... ...	... ...	7.2 2.0 $	-7.6 2.4 *	-7.1 2.4 *	-7.5 2.2 $	11.5 1.7 $
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	3.1 1.7	... ...	-7.2 2.0 $	... ...	... ...	... ...	-14.8 1.5 $	-14.3 1.5 $	-14.8 1.5 $	4.3 1.1 $
RS21 C	... ...	17.9 1.7 $	... ...	7.6 2.4 *	... ...	... ...	14.8 1.5 $	... ...	.5 1.0	.1 2.0	19.1 1.7 $
RS21 N	... ...	17.4 1.7 $	... ...	7.1 2.4 *	... ...	... ...	14.3 1.5 $	-.5 1.0	... ...	-.4 2.0	18.6 1.7 $
RS 80	... ...	17.9 2.2 $	... ...	7.5 2.2 $	... ...	... ...	14.8 1.5 $	-.1 2.0	.4 2.0	... ...	19.1 1.4 $
V1392	... ...	-1.2 1.9	... ...	-11.5 1.7 $	... ...	... ...	-4.3 1.1 $	-19.1 1.7 $	-18.6 1.7 $	-19.1 1.4 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 70 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	−4.0 1.4 2	−16.0 4.2 2	−14.0 4.2 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	4.0 1.4 2	... .	... .	... .	... .	... .	−11.0 7.1 2	... .	−12.5 2.1 2	... .
RS21C	... .	16.0 4.2 2	... .	... .	... .	... .	11.0 7.1 2	... .	1.0 1.4 2	... .	... .
RS21N	... .	14.0 4.2 2	... .	... .	... .	... .	... .	−1.0 1.4 2	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	12.5 2.1 2	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 70 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	-4.3 2.2	-15.7 2.2 $	-14.7 2.2 $	-16.8 3.5 *	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	4.3 2.2	... ...	... ...	... ...	... ...	... ...	-11.3 2.2 $	-10.3 2.2 $	-12.5 2.7 *	... ...
RS21 C	... ...	15.7 2.2 $	... ...	... ...	... ...	... ...	11.3 2.2 $	... ...	1.0 1.4	-1.2 3.5	... ...
RS21 N	... ...	14.7 2.2 $	... ...	... ...	... ...	... ...	10.3 2.2 $	-1.0 1.4	... ...	-2.2 3.5	... ...
RS 80	... ...	16.8 3.5 *	... ...	... ...	... ...	... ...	12.5 2.7 *	1.2 3.5	2.2 3.5	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 50 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	-4.0 1.4 2	-15.0 4.2 2	-13.0 4.2 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	4.0 1.4 2	... .	... .	... .	... .	... .	-9.0 7.1 2	... .	-10.0 1.4 2	... .
RS21 C	... .	15.0 4.2 2	... .	... .	... .	... .	9.0 7.1 2	... .	2.0 ... 1	... .	... .
RS21 N	... .	13.0 4.2 2	... .	... .	... .	... .	... .	-2.0 ... 1	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	10.0 1.4 2	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 50 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	-4.7 2.2	-14.3 2.2 $	-12.3 2.2 $	-14.7 3.5 *	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	4.7 2.2	... ...	... ...	... ...	... ...	... ...	-9.7 2.2 *	-7.7 2.2 *	-10.0 2.7 +	... ...
RS21 C	... ...	14.3 2.2 $	... ...	... ...	... ...	... ...	9.7 2.2 *	... ...	2.0 ...	-.3 3.5	... ...
RS21 N	... ...	12.3 2.2 $	... ...	... ...	... ...	... ...	7.7 2.2 *	-2.0 ...	... ...	-2.3 3.5	... ...
RS 80	... ...	14.7 3.5 *	... ...	... ...	... ...	... ...	10.0 2.7 +	.3 3.5	2.3 3.5	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 30 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	-3.0 2.8 2	-13.0 4.2 2	-11.0 4.2 2	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	3.0 2.8 2	... .	... .	... .	... .	... .	-7.0 5.7 2	... .	-6.5 : .7 2	... .
RS21 C	... .	13.0 4.2 2	... .	... .	... .	... .	7.0 5.7 2	... .	2.0 ... 1	... .	... .
RS21 N	... .	11.0 4.2 2	... .	... .	... .	... .	... .	-2.0 ... 1	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	6.5 : .7 2	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 30 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	-4.0 2.1	-12.0 2.1 $	-10.0 2.1 $	-10.5 3.3 :	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	4.0 2.1	... ...	... ...	... ...	... ...	... ...	-8.0 2.1 +	-6.0 2.1 +	-6.5 2.5	... ...
RS21C	... ...	12.0 2.1 $	... ...	... ...	... ...	... ...	8.0 2.1 +	... ...	2.0 ...	1.5 3.3	... ...
RS21N	... ...	10.0 2.1 $	... ...	... ...	... ...	... ...	6.0 2.1 +	-2.0 ...	... ...	-.5 3.3	... ...
RS 80	... ...	10.5 3.3 :	... ...	... ...	... ...	... ...	6.5 2.5	-1.5 3.3	.5 3.3	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 20 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	-2.5 2.1 2	... .	-7.0 ... 1	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	2.5 2.1 2	... .	... .	... .	... .	... .	-5.5 4.9 2	... .	-4.5 2.1 2	... .
RS21 C	... .	... .	... .	... .	... .	... .	5.5 4.9 2	... .	... .	... .	... .
RS21 N	... .	7.0 ... 1	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	4.5 2.1 2	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 20 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	-2.5 2.4	-8.0 3.3	... ...	-7.0 3.3	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	2.5 2.4	... ...	... ...	... ...	... ...	... ...	-5.5 2.4	... ...	-4.5 2.4	... ...
RS21C	... ...	8.0 3.3	... ...	... ...	... ...	... ...	5.5 2.4	... ...	... ...	1.0 3.3	... ...
RS21N	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 80	... ...	7.0 3.3	... ...	... ...	... ...	... ...	4.5 2.4	-1.0 3.3	... ...	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 900 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.1 ... 1	-5.1 ... 1	-.8 18.7 3	-2.8 9.1 2	2.2 2.9 3	-11.6 3.7 2	-6.1 3.0 2	-1.2 ... 1	-6.6 5.8 3
ASA	... .	... .	... .	... .	9.2 10.4 5	... .	... .	... .	... .	... .	... .
GR 78	-.1 ... 1	... .	... .	-5.1 * .1 2	10.7 6.4 3	... .	-.5 .7 2	-9.0 ... 1	-4.0 ... 1	-2.0 ... 1	-3.9 + .1 2
SP 76	5.1 ... 1	... .	5.1 * .1 2	... .	6.4 14.8 5	... .	-1.9 8.6 2	-3.8 ... 1	1.2 ... 1	4.0 ... 1	1.3 .2 2
SWISS	.8 18.7 3	-9.2 10.4 5	-10.7 6.4 3	-6.4 14.8 5	... .	11.0 8.5 2	-7.3 11.6 6	-6.3 17.9 3	-3.2 17.0 3	-8.5 2.1 2	-5.1 14.3 6
THOMM	2.8 9.1 2	... .	... .	... .	-11.0 8.5 2	... .	6.5 10.6 2	-14.0 ... 1	-15.7 ... 1	8.0 ... 1	-8.4 6.2 2
RS 18	-2.2 2.9 3	... .	.5 .7 2	1.9 8.6 2	7.3 11.6 6	-6.5 10.6 2	... .	-8.0 ... 1	-3.0 ... 1	-4.0 2.8 2	-7.6 9.0 3
RS21C	11.6 3.7 2	... .	9.0 ... 1	3.8 ... 1	6.3 17.9 3	14.0 ... 1	8.0 ... 1	... .	3.1 4.2 3	... .	3.2 2.8 2
RS21N	6.1 3.0 2	... .	4.0 ... 1	-1.2 ... 1	3.2 17.0 3	15.7 ... 1	3.0 ... 1	-3.1 4.2 3	... .	... .	1.6 1.9 2
RS 80	1.2 ... 1	... .	2.0 ... 1	-4.0 ... 1	8.5 2.1 2	-8.0 ... 1	4.0 2.8 2	... .	... .	... .	-12.0 ... 1
V1392	6.6 5.8 3	... .	3.9 + .1 2	-1.3 .2 2	5.1 14.3 6	8.4 6.2 2	7.6 9.0 3	-3.2 2.8 2	-1.6 1.9 2	12.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 900 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-8.1 5.2	-3.1 3.6	-5.4 3.5	1.1 2.8	.0 3.6	-1.6 3.0	-9.4 3.5 +	-6.3 3.5 +	-2.3 3.9	-6.5 3.0 :
ASA	8.1 5.2	... ...	5.0 5.3	2.8 5.2	9.2 4.3 :	8.2 5.5	6.5 5.0	-1.3 5.4	1.8 5.4	5.9 5.6	1.6 5.0
GR 78	3.1 3.6	-5.0 5.3	... ...	-2.3 3.5	4.2 3.1	3.2 4.2	1.5 3.3	-6.3 3.9	-3.2 3.9	.9 4.1	-3.4 3.3
SP 76	5.4 3.5	-2.8 5.2	2.3 3.5	... ...	6.4 2.8 :	5.4 4.0	3.7 3.2	-4.0 3.8	-.9 3.8	3.1 4.0	-1.1 3.2
SWISS	-1.1 2.8	-9.2 4.3 :	-4.2 3.1	-6.4 2.8 :	... ...	-1.0 3.4	-2.7 2.5	-10.5 3.2 $	-7.4 3.2 $	-3.3 3.5	-7.6 2.5 $
THOMM	-.0 3.6	-8.2 5.5	-3.2 4.2	-5.4 4.0	1.0 3.4	... ...	-1.7 3.5	-9.4 4.1 :	-6.3 4.1 :	-2.3 4.3	-6.6 3.5
RS 18	1.6 3.0	-6.5 5.0	-1.5 3.3	-3.7 3.2	2.7 2.5	1.7 3.5	... ...	-7.7 3.5 :	-4.6 3.5 :	-.6 3.6	-4.9 2.8
RS21C	9.4 3.5 +	1.3 5.4	6.3 3.9	4.0 3.8	10.5 3.2 $	9.4 4.1 :	7.7 3.5 :	... ...	3.1 4.2	7.1 4.4	2.9 3.4
RS21N	6.3 3.5 +	-1.8 5.4	3.2 3.9	.9 3.8	7.4 3.2 $	6.3 4.1 :	4.6 3.5 :	-3.1 4.2	... ...	4.0 4.4	-.2 3.4
RS 80	2.3 3.9	-5.9 5.6	-.9 4.1	-3.1 4.0	3.3 3.5	2.3 4.3	.6 3.6	-7.1 4.4	-4.0 4.4	... ...	-4.3 3.7
V1392	6.5 3.0 :	-1.6 5.0	3.4 3.3	1.1 3.2	7.6 2.5 $	6.6 3.5	4.9 2.8	-2.9 3.4	.2 3.4	4.3 3.7	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 850 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	5.7 ... 1	6.1 ... 1	-5.2 15.6 3	-11.3 16.1 2	1.0 4.2 3	-10.8 4.9 2	-5.8 4.9 2	-6.7 ... 1	-6.3 14.4 3
ASA	... .	... .	... .	... .	11.6 11.5 5	... .	... .	... .	... .	... .	... .
GR 78	-5.7 ... 1	... .	... .	-2.3 3.8 2	8.7 3.8 3	... .	-3.0 $ 0.0 2	-13.0 ... 1	-8.0 ... 1	-5.0 ... 1	-2.2 1.5 2
SP 76	-6.1 ... 1	... .	2.3 3.8 2	... .	3.1 12.0 5	... .	6.3 13.7 2	-13.4 ... 1	-8.4 ... 1	0.0 ... 1	.2 2.3 2
SWISS	5.2 15.6 3	-11.6 11.5 5	-8.7 3.8 3	-3.1 12.0 5	... .	9.8 3.1 2	3.5 19.8 6	-9.3 11.0 3	-6.9 12.2 3	-14.0 5.7 2	-5.4 11.1 6
THOMM	11.3 16.1 2	... .	... .	... .	-9.8 3.1 2	... .	11.5 10.6 2	-17.6 ... 1	-20.5 ... 1	16.0 ... 1	-9.4 13.4 2
RS 18	-1.0 4.2 3	... .	3.0 $ 0.0 2	-6.3 13.7 2	-3.5 19.8 6	-11.5 10.6 2	... .	-10.0 ... 1	-5.0 ... 1	-2.5 .7 2	-6.5 10.9 3
RS21C	10.8 4.9 2	... .	13.0 ... 1	13.4 ... 1	9.3 11.0 3	17.6 ... 1	10.0 ... 1	... .	2.4 4.6 3	... .	5.4 9.3 2
RS21N	5.8 4.9 2	... .	8.0 ... 1	8.4 ... 1	6.9 12.2 3	20.5 ... 1	5.0 ... 1	-2.4 4.6 3	... .	... .	4.3 3.7 2
RS 80	6.7 ... 1	... .	5.0 ... 1	0.0 ... 1	14.0 5.7 2	-16.0 ... 1	2.5 .7 2	... .	... .	... .	-15.9 ... 1
V1392	6.3 14.4 3	... .	2.2 1.5 2	-.2 2.3 2	5.4 11.1 6	9.4 13.4 2	6.5 10.9 3	-5.4 9.3 2	-4.3 3.7 2	15.9 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 850 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	-13.3 5.8 :	-2.6 4.0	-4.1 3.9	-1.7 3.2	-4.0 4.1	.7 3.4	-13.1 4.0 $	-10.7 4.0 $	-3.7 4.4	-7.5 3.3 :
ASA	13.3 5.8 :	... ...	10.7 6.0	9.2 5.8	11.6 4.8 +	9.3 6.2	13.9 5.6 +	.2 6.0	2.6 6.0	9.6 6.3	5.8 5.6
GR 78	2.6 4.0	-10.7 6.0	... ...	-1.5 4.0	.9 3.5	-1.4 4.7	3.3 3.7	-10.5 4.4 +	-8.1 4.4 +	-1.1 4.6	-4.9 3.7
SP 76	4.1 3.9	-9.2 5.8	1.5 4.0	... ...	2.4 3.2	.2 4.5	4.8 3.6	-9.0 4.2 :	-6.6 4.2 :	.5 4.5	-3.4 3.6
SWISS	1.7 3.2	-11.6 4.8 +	-.9 3.5	-2.4 3.2	... ...	-2.3 3.8	2.3 2.8	-11.4 3.6 $	-9.0 3.6 $	-2.0 4.0	-5.8 2.8 :
THOMM	4.0 4.1	-9.3 6.2	1.4 4.7	-.2 4.5	2.3 3.8	... ...	4.6 4.0	-9.2 4.6 :	-6.8 4.6 :	.3 4.8	-3.6 4.0
RS 18	-.7 3.4	-13.9 5.6 +	-3.3 3.7	-4.8 3.6	-2.3 2.8	-4.6 4.0	... ...	-13.8 3.9 $	-11.4 3.9 $	-4.3 4.1	-8.2 3.1 +
RS21 C	13.1 4.0 $	-.2 6.0	10.5 4.4 +	9.0 4.2 :	11.4 3.6 $	9.2 4.6 :	13.8 3.9 $	... ...	2.4 4.6	9.5 4.9	5.6 3.8
RS21 N	10.7 4.0 $	-2.6 6.0	8.1 4.4 +	6.6 4.2 :	9.0 3.6 $	6.8 4.6 :	11.4 3.9 $	-2.4 4.6	... ...	7.1 4.9	3.2 3.8
RS 80	3.7 4.4	-9.6 6.3	1.1 4.6	-.5 4.5	2.0 4.0	-.3 4.8	4.3 4.1	-9.5 4.9	-7.1 4.9	... ...	-3.9 4.2
V1392	7.5 3.3 :	-5.8 5.6	4.9 3.7	3.4 3.6	5.8 2.8 :	3.6 4.0	8.2 3.1 +	-5.6 3.8	-3.2 3.8	3.9 4.2	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 700 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	17.2	-17.8	-1.4	-13.2	-9.1	-14.5 :	-12.4 :	-36.4	-22.7
	... .	... .	... 1	... 1	16.2 3	3.9 2	5.6 3	1.0 2	.6 2	... 1	11.5 3
ASA	...	...	...	...	1.8	...	...	...	...	...	...
	... .	... .	... .	... .	7.1 5	... .	... .	... .	... .	... .	... .
GR 78	-17.2	...	...	-15.5	17.3	...	-9.0	-31.0	-30.0	-4.0	-13.2
	... 1	... .	... .	27.6 2	17.5 3	... .	25.5 2	... 1	... 1	... 1	21.8 2
SP 76	17.8	...	15.5	...	22.4	...	3.5	4.0	5.0	27.0	2.3
	... 1	... .	27.6 2	... .	38.0 5	... .	6.4 2	... 1	... 1	... 1	5.8 2
SWISS	1.4	-1.8	-17.3	-22.4	...	1.9	-7.5	-17.3	-15.3	-46.5	-12.0 :
	16.2 3	7.1 5	17.5 3	38.0 5	... .	7.8 2	18.4 6	12.7 3	13.7 3	10.6 2	9.8 6
THOMM	13.2	...	...	...	-1.9	...	4.4	-22.4	-20.4	-26.0	-13.3
	3.9 2	... .	... .	... .	7.8 2	... .	11.8 2	... 1	... 1	... 1	2.0 2
RS 18	9.1	...	9.0	-3.5	7.5	-4.4	...	-4.0	-3.0	-17.5	-2.9
	5.6 3	... .	25.5 2	6.4 2	18.4 6	11.8 2	... .	... 1	... 1	6.4 2	4.5 3
RS21C	14.5 :	...	31.0	-4.0	17.3	22.4	4.0	...	2.1	...	5.1
	1.0 2	... .	... 1	... 1	12.7 3	... 1	... 1	... .	1.1 3	... .	3.7 2
RS21N	12.4 :	...	30.0	-5.0	15.3	20.4	3.0	-2.1	...	...	3.6
	.6 2	... .	... 1	... 1	13.7 3	... 1	... 1	1.1 3	... .	... .	3.0 2
RS 80	36.4	...	4.0	-27.0	46.5	26.0	17.5	...	...	...	14.1
	... 1	... .	... 1	... 1	10.6 2	... 1	6.4 2	... .	... .	... .	... 1
V1392	22.7	...	13.2	-2.3	12.0 :	13.3	2.9	-5.1	-3.6	-14.1	...
	11.5 3	... .	21.8 2	5.8 2	9.8 6	2.0 2	4.5 3	3.7 2	3.0 2	... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 700 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	-2.0 8.4	-6.1 5.9	-22.8 5.6 $	-.2 4.6	-6.0 5.9	-10.7 4.9 :	-20.3 5.8 $	-18.3 5.8 $	-28.3 6.3 $	-16.4 4.9 $
ASA	2.0 8.4	... ...	-4.1 8.7	-20.8 8.4 +	1.8 7.0	-3.9 9.0	-8.7 8.1	-18.3 8.8 :	-16.2 8.8 :	-26.3 9.1 *	-14.4 8.1
GR 78	6.1 5.9	4.1 8.7	... ...	-16.7 5.8 *	5.9 5.1	.2 6.8	-4.5 5.4	-14.2 6.4 :	-12.1 6.4 :	-22.2 6.7 $	-10.3 5.4
SP 76	22.8 5.6 $	20.8 8.4 +	16.7 5.8 *	... ...	22.6 4.6 $	16.9 6.6 +	12.1 5.2 :	2.5 6.2	4.6 6.2	-5.5 6.5	6.4 5.2
SWISS	.2 4.6	-1.8 7.0	-5.9 5.1	-22.6 4.6 $	... ...	-5.7 5.6	-10.5 4.1 +	-20.1 5.2 $	-18.0 5.2 $	-28.1 5.7 $	-16.2 4.0 $
THOMM	6.0 5.9	3.9 9.0	-.2 6.8	-16.9 6.6 +	5.7 5.6	... ...	-4.7 5.7	-14.4 6.6 :	-12.3 6.6 :	-22.3 6.9 $	-10.5 5.7
RS 18	10.7 4.9 :	8.7 8.1	4.5 5.4	-12.1 5.2 :	10.5 4.1 +	4.7 5.7	... ...	-9.6 5.7	-7.6 5.7	-17.6 5.9 $	-5.8 4.6
RS21C	20.3 5.8 $	18.3 8.8 :	14.2 6.4 :	-2.5 6.2	20.1 5.2 $	14.4 6.6 :	9.6 5.7	... ...	2.1 1.1	-8.0 7.1	3.9 5.5
RS21N	18.3 5.8 $	16.2 8.8 :	12.1 6.4 :	-4.6 6.2	18.0 5.2 $	12.3 6.6 :	7.6 5.7	-2.1 1.1	... ...	-10.0 7.1	1.8 5.5
RS 80	28.3 6.3 $	26.3 9.1 *	22.2 6.7 $	5.5 6.5	28.1 5.7 $	22.3 6.9 $	17.6 5.9 $	8.0 7.1	10.0 7.1	... ...	11.9 6.1
V1392	16.4 4.9 $	14.4 8.1	10.3 5.4	-6.4 5.2	16.2 4.0 $	10.5 5.7	5.8 4.6	-3.9 5.5	-1.8 5.5	-11.9 6.1	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 500 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	16.8 ... 1	20.5 ... 1	25.9 17.0 3	14.0 ... 1	23.9 5.5 2	2.4 10.7 2	6.0 9.8 2	... .	-7.1 19.0 2
ASA	... .	... .	... .	... .	18.8 * 7.6 5	... .	... .	... .	... .	... .	... .
GR 78	-16.8 ... 1	... .	... .	4.9 1.6 2	11.7 24.1 3	... .	-7.5 26.2 2	-22.0 ... 1	-17.8 ... 1	-20.0 ... 1	-5.3 7.4 2
SP 76	-20.5 ... 1	... .	-4.9 1.6 2	... .	6.3 15.5 5	... .	5.2 3.0 2	-25.7 ... 1	-21.5 ... 1	-1.0 ... 1	-10.2 5.7 2
SWISS	-25.9 17.0 3	-18.8 * 7.6 5	-11.7 24.1 3	-6.3 15.5 5	... .	2.0 ... 1	-2.3 14.0 6	-25.7 21.2 3	-22.6 20.3 3	-4.0 $ 0.0 2	-16.5 16.9 6
THOMM	-14.0 ... 1	... .	... .	... .	-2.0 ... 1	... .	-.5 9.2 2	... .	... .	11.0 ... 1	-9.0 ... 1
RS 18	-23.9 5.5 2	... .	7.5 26.2 2	-5.2 3.0 2	2.3 14.0 6	.5 9.2 2	... .	-33.0 ... 1	-28.8 ... 1	12.0 8.5 2	-13.1 10.0 3
RS21C	-2.4 10.7 2	... .	22.0 ... 1	25.7 ... 1	25.7 21.2 3	... .	33.0 ... 1	... .	3.1 : 1.1 3	... .	12.0 : .7 2
RS21N	-6.0 9.8 2	... .	17.8 ... 1	21.5 ... 1	22.6 20.3 3	... .	28.8 ... 1	-3.1 : 1.1 3	... .	... .	8.9 2.3 2
RS 80	... .	... .	20.0 ... 1	1.0 ... 1	4.0 $ 0.0 2	-11.0 ... 1	-12.0 8.5 2	... .	... .	... .	-20.0 ... 1
V1392	7.1 19.0 2	... .	5.3 7.4 2	10.2 5.7 2	16.5 16.9 6	9.0 ... 1	13.1 10.0 3	-12.0 : .7 2	-8.9 2.3 2	20.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 500 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	4.8 7.0	17.9 5.0 $	18.4 4.9 $	23.6 4.1 $	17.4 6.1 *	19.1 4.4 $	-3.9 5.0	-.8 5.0	21.4 5.9 $	6.0 4.4
ASA	-4.8 7.0	... ...	13.1 7.0	13.6 6.8	18.8 5.7 $	12.6 8.0	14.3 6.6 :	-8.7 7.2	-5.6 7.2	16.6 7.5 :	1.2 6.6
GR 78	-17.9 5.0 $	-13.1 7.0	... ...	.5 4.7	5.7 4.1	-.5 6.4	1.2 4.4	-21.8 5.3 $	-18.7 5.3 $	3.5 5.6	-11.9 4.4 *
SP 76	-18.4 4.9 $	-13.6 6.8	-.5 4.7	... ...	5.2 3.8	-1.0 6.3	.7 4.2	-22.3 5.1 $	-19.2 5.1 $	3.0 5.5	-12.4 4.3 *
SWISS	-23.6 4.1 $	-18.8 5.7 $	-5.7 4.1	-5.2 3.8	... ...	-6.2 5.6	-4.5 3.3	-27.5 4.4 $	-24.4 4.4 $	-2.2 4.9	-17.6 3.4 $
THOMM	-17.4 6.1 *	-12.6 8.0	.5 6.4	1.0 6.3	6.2 5.6	... ...	1.7 5.6	-21.2 6.7 $	-18.2 6.7 $	4.0 6.5	-11.3 5.8
RS 18	-19.1 4.4 $	-14.3 6.6 :	-1.2 4.4	-.7 4.2	4.5 3.3	-1.7 5.6	... ...	-23.0 4.8 $	-19.9 4.8 $	2.3 5.0	-13.1 3.8 $
RS21C	3.9 5.0	8.7 7.2	21.8 5.3 $	22.3 5.1 $	27.5 4.4 $	21.2 6.7 $	23.0 4.8 $	... ...	3.1 1.1 :	25.3 6.1 $	9.9 4.7 :
RS21N	.8 5.0	5.6 7.2	18.7 5.3 $	19.2 5.1 $	24.4 4.4 $	18.2 6.7 $	19.9 4.8 $	-3.1 1.1 :	... ...	22.2 6.1 $	6.8 4.7 :
RS 80	-21.4 5.9 $	-16.6 7.5 :	-3.5 5.6	-3.0 5.5	2.2 4.9	-4.0 6.5	-2.3 5.0	-25.3 6.1 $	-22.2 6.1 $	... ...	-15.4 5.2 $
V1392	-6.0 4.4	-1.2 6.6	11.9 4.4 *	12.4 4.3 *	17.6 3.4 $	11.3 5.8	13.1 3.8 $	-9.9 4.7 :	-6.8 4.7 :	15.4 5.2 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 400 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	21.4 20.8 5	... .	... .	... .	... .	... .	-13.2 2.1 2
GR 78	... .	... .	... .	-8.1 15.6 2	5.3 18.6 4	... .	-13.0 12.7 2	-38.0 ... 1	-34.2 ... 1	-22.0 ... 1	-15.2 10.0 3
SP 76	... .	... .	8.1 15.6 2	... .	15.0 16.2 5	... .	12.1 4.3 2	-18.9 ... 1	-15.1 ... 1	15.0 ... 1	-7.9 1.6 2
SWISS	... .	-21.4 20.8 5	-5.3 18.6 4	-15.0 16.2 5	... .	-5.0 ... 1	-5.0 15.7 6	-30.0 21.8 3	-27.7 20.5 3	-4.5 6.4 2	-28.3 $ 17.7 8
THOMM	... .	... .	... .	... .	5.0 ... 1	... .	9.0 4.2 2	... .	... .	11.0 ... 1	5.7 ... 1
RS 18	... .	... .	13.0 12.7 2	-12.1 4.3 2	5.0 15.7 6	-9.0 4.2 2	... .	-34.0 ... 1	-30.2 ... 1	2.5 3.5 2	-10.7 10.8 3
RS21C	... .	... .	38.0 ... 1	18.9 ... 1	30.0 21.8 3	... .	34.0 ... 1	... .	2.3 1.3 3	... .	12.5 : .6 2
RS21N	... .	... .	34.2 ... 1	15.1 ... 1	27.7 20.5 3	... .	30.2 ... 1	-2.3 1.3 3	... .	... .	9.6 1.8 2
RS 80	... .	... .	22.0 ... 1	-15.0 ... 1	4.5 6.4 2	-11.0 ... 1	-2.5 3.5 2	... .	... .	... .	-5.3 ... 1
V1392	... .	13.2 2.1 2	15.2 10.0 3	7.9 1.6 2	28.3 $ 17.7 8	-5.7 ... 1	10.7 10.8 3	-12.5 : .6 2	-9.6 1.8 2	5.3 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 400 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	15.4 6.7 :	2.2 6.6	18.3 5.4 $	.5 8.4	9.9 6.4	-16.8 7.3 :	-14.5 7.3 :	9.3 7.4	-5.4 5.8
GR 78	... ...	-15.4 6.7 :	... ...	-13.2 5.1 +	2.9 4.3	-14.9 7.4 :	-5.5 4.8	-32.2 6.0 $	-29.9 6.0 $	-6.1 6.1	-20.8 4.5 $
SP 76	... ...	-2.2 6.6	13.2 5.1 +	... ...	16.1 4.2 $	-1.7 7.4	7.7 4.8	-19.0 6.0 $	-16.6 6.0 $	7.1 6.1	-7.5 4.6
SWISS	... ...	-18.3 5.4 $	-2.9 4.3	-16.1 4.2 $	... ...	-17.8 6.7 +	-8.4 3.8 :	-35.1 5.2 $	-32.7 5.2 $	-9.0 5.4	-23.7 3.4 $
THOMM	... ...	-.5 8.4	14.9 7.4 :	1.7 7.4	17.8 6.7 +	... ...	9.5 6.6	-17.3 8.1 :	-14.9 8.1 :	8.8 7.4	-5.8 6.8
RS 18	... ...	-9.9 6.4	5.5 4.8	-7.7 4.8	8.4 3.8 :	-9.5 6.6	... ...	-26.7 5.8 $	-24.4 5.8 $	-.6 5.5	-15.3 4.2 $
RS21C	... ...	16.8 7.3 :	32.2 6.0 $	19.0 6.0 $	35.1 5.2 $	17.3 8.1 :	26.7 5.8 $	... ...	2.3 1.3	26.1 7.0 $	11.4 5.4 :
RS21N	... ...	14.5 7.3 :	29.9 6.0 $	16.6 6.0 $	32.7 5.2 $	14.9 8.1 :	24.4 5.8 $	-2.3 1.3	... ...	23.8 7.0 $	9.1 5.4 :
RS 80	... ...	-9.3 7.4	6.1 6.1	-7.1 6.1	9.0 5.4	-8.8 7.4	.6 5.5	-26.1 7.0 $	-23.8 7.0 $	... ...	-14.7 5.7 +
V1392	... ...	5.4 5.8	20.8 4.5 $	7.5 4.6	23.7 3.4 $	5.8 6.8	15.3 4.2 $	-11.4 5.4 :	-9.1 5.4 :	14.7 5.7 +	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 300 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	22.4 19.2 5	... .	... .	... .	... .	... .	5.1 4.2 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	32.1 + 16.0 5	... .	17.7 + .5 2	-18.7 ... 1	-17.7 ... 1	10.0 ... 1	-5.0 2.6 2
SWISS	... .	-22.4 19.2 5	... .	-32.1 + 16.0 5	... .	-3.5 ... 1	-14.3 : 12.9 6	-46.0 27.6 3	-45.3 27.1 3	-2.0 9.9 2	-25.7 * 20.7 8
THOMM	... .	... .	... .	... .	3.5 ... 1	... .	-.8 8.1 2	... .	... .	... .	6.2 ... 1
RS 18	... .	... .	... .	-17.7 + .5 2	14.3 : 12.9 6	.8 8.1 2	... .	-36.0 ... 1	-35.0 ... 1	21.0 ... 1	-10.4 10.9 3
RS21C	... .	... .	... .	18.7 ... 1	46.0 27.6 3	... .	36.0 ... 1	... .	.7 .6 3	... .	16.5 : 1.3 2
RS21N	... .	... .	... .	17.7 ... 1	45.3 27.1 3	... .	35.0 ... 1	-.7 .6 3	... .	... .	16.0 2.0 2
RS 80	... .	... .	... .	-10.0 ... 1	2.0 9.9 2	... .	-21.0 ... 1	... .	... .	... .	... .
V1392	... .	-5.1 4.2 2	... .	5.0 2.6 2	25.7 * 20.7 8	-6.2 ... 1	10.4 10.9 3	-16.5 : 1.3 2	-16.0 2.0 2	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 300 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-3.1 7.4	24.6 5.8 $	9.1 9.7	10.2 7.1	-20.8 8.2 +	-20.2 8.2 +	20.8 9.7 :	-.5 6.4
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	3.1 7.4	... ...	... ...	27.8 4.9 $	12.2 9.0	13.3 5.7 :	-17.7 7.0 +	-17.0 7.0 +	24.0 8.4 *	2.7 5.5
SWISS	... ...	-24.6 5.8 $	... ...	-27.8 4.9 $	... ...	-15.6 8.0	-14.5 4.4 $	-45.4 6.0 $	-44.8 6.0 $	-3.8 7.8	-25.1 3.9 $
THOMM	... ...	-9.1 9.7	... ...	-12.2 9.0	15.6 8.0	... ...	1.1 7.9	-29.9 9.6 $	-29.2 9.6 $	11.8 10.8	-9.5 8.2
RS 18	... ...	-10.2 7.1	... ...	-13.3 5.7 :	14.5 4.4 $	-1.1 7.9	... ...	-31.0 6.7 $	-30.3 6.7 $	10.7 8.2	-10.6 5.0 :
RS21C	... ...	20.8 8.2 +	... ...	17.7 7.0 +	45.4 6.0 $	29.9 9.6 $	31.0 6.7 $	... ...	.7 .6	41.6 9.5 $	20.3 6.3 $
RS21N	... ...	20.2 8.2 +	... ...	17.0 7.0 +	44.8 6.0 $	29.2 9.6 $	30.3 6.7 $	-.7 .6	... ...	41.0 9.5 $	19.7 6.3 $
RS 80	... ...	-20.8 9.7 :	... ...	-24.0 8.4 *	3.8 7.8	-11.8 10.8	-10.7 8.2	-41.6 9.5 $	-41.0 9.5 $	... ...	-21.3 8.4 +
V1392	... ...	.5 6.4	... ...	-2.7 5.5	25.1 3.9 $	9.5 8.2	10.6 5.0 :	-20.3 6.3 $	-19.7 6.3 $	21.3 8.4 +	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 250 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	29.0 $ 6.7 5	... .	... .	... .	... .	... .	-1.6 4.2 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	41.5 $ 9.3 5	... .	19.4 2.3 2	-19.3 ... 1	-17.3 ... 1	9.0 ... 1	.2 3.7 2
SWISS	... .	-29.0 $ 6.7 5	... .	-41.5 $ 9.3 5	... .	-6.0 ... 1	-18.3 $ 9.2 6	-36.7 29.3 3	-35.3 28.7 3	-18.0 17.0 2	-27.0 * 19.3 8
THOMM	... .	... .	... .	... .	6.0 ... 1	... .	-.5 9.2 2	... .	... .	... .	4.8 ... 1
RS 18	... .	... .	... .	-19.4 2.3 2	18.3 $ 9.2 6	.5 9.2 2	... .	-37.0 ... 1	-35.0 ... 1	15.0 ... 1	-11.5 9.6 3
RS21C	... .	... .	... .	19.3 ... 1	36.7 29.3 3	... .	37.0 ... 1	... .	1.3 .6 3	... .	19.3 3.5 2
RS21N	... .	... .	... .	17.3 ... 1	35.3 28.7 3	... .	35.0 ... 1	-1.3 .6 3	... .	... .	17.8 4.2 2
RS 80	... .	... .	... .	-9.0 ... 1	18.0 17.0 2	... .	-15.0 ... 1	... .	... .	... .	... .
V1392	... .	1.6 4.2 2	... .	-.2 3.7 2	27.0 * 19.3 8	-4.8 ... 1	11.5 9.6 3	-19.3 3.5 2	-17.8 4.2 2	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 250 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-7.1 6.5	28.2 5.1 $	9.9 8.6	10.4 6.2	-16.6 7.2 :	-15.3 7.2 :	11.9 8.5	.5 5.6
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	7.1 6.5	... ...	... ...	35.3 4.3 $	17.0 7.9 :	17.5 5.0 $	-9.5 6.1	-8.1 6.1	19.0 7.4 +	7.7 4.9
SWISS	... ...	-28.2 5.1 $	... ...	-35.3 4.3 $	... ...	-18.3 7.1 +	-17.8 3.9 $	-44.8 5.3 $	-43.4 5.3 $	-16.3 6.9 :	-27.6 3.5 $
THOMM	... ...	-9.9 8.6	... ...	-17.0 7.9 :	18.3 7.1 +	... ...	.5 6.9	-26.5 8.5 $	-25.2 8.5 $	2.0 9.5	-9.4 7.2
RS 18	... ...	-10.4 6.2	... ...	-17.5 5.0 $	17.8 3.9 $	-.5 6.9	... ...	-27.0 5.9 $	-25.6 5.9 $	1.5 7.2	-9.9 4.4 :
RS21C	... ...	16.6 7.2 :	... ...	9.5 6.1	44.8 5.3 $	26.5 8.5 $	27.0 5.9 $	... ...	1.3 .6	28.5 8.4 $	17.1 5.6 $
RS21N	... ...	15.3 7.2 :	... ...	8.1 6.1	43.4 5.3 $	25.2 8.5 $	25.6 5.9 $	-1.3 .6	... ...	27.1 8.4 $	15.8 5.6 $
RS 80	... ...	-11.9 8.5	... ...	-19.0 7.4 +	16.3 6.9 :	-2.0 9.5	-1.5 7.2	-28.5 8.4 $	-27.1 8.4 $	... ...	-11.4 7.4
V1392	... ...	-.5 5.6	... ...	-7.7 4.9	27.6 3.5 $	9.4 7.2	9.9 4.4 :	-17.1 5.6 $	-15.8 5.6 $	11.4 7.4	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 200 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	14.8 13.0 5	... .	... .	... .	... .	... .	-12.0 1.4 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	54.7 $ 10.9 4	... .	22.9 : 1.6 2	-12.3 ... 1	-11.3 ... 1	... .	11.1 14.3 2
SWISS	... .	-14.8 13.0 5	... .	-54.7 $ 10.9 4	... .	... .	-19.7 + 12.0 6	-49.5 34.6 2	-38.7 29.8 3	-16.5 29.0 2	-27.4 * 21.6 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	-22.9 : 1.6 2	19.7 + 12.0 6	... .	... .	-34.0 ... 1	-33.0 ... 1	11.0 ... 1	-10.8 10.7 3
RS21C	... .	... .	... .	12.3 ... 1	49.5 34.6 2	... .	34.0 ... 1	... .	1.5 .7 2	... .	13.3 ... 1
RS21N	... .	... .	... .	11.3 ... 1	38.7 29.8 3	... .	33.0 ... 1	-1.5 .7 2	... .	... .	18.7 9.0 2
RS 80	... .	... .	... .	... .	16.5 29.0 2	... .	-11.0 ... 1	... .	... .	... .	... .
V1392	... .	12.0 1.4 2	... .	-11.1 14.3 2	27.4 * 21.6 8	... .	10.8 10.7 3	-13.3 ... 1	-18.7 9.0 2	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 200 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-31.7 7.9 $	15.7 6.0 +	... ...	-4.8 7.3	-35.6 9.2 $	-34.1 9.2 $	1.5 10.8	-14.2 6.6 :
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	31.7 7.9 $	... ...	... ...	47.4 5.5 $	... ...	26.9 6.2 $	-3.9 8.1	-2.4 8.1	33.2 10.4 $	17.5 6.0 *
SWISS	... ...	-15.7 6.0 +	... ...	-47.4 5.5 $	... ...	... ...	-20.5 4.7 $	-51.3 7.2 $	-49.8 7.2 $	-14.2 9.0	-29.9 4.2 $
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	4.8 7.3	... ...	-26.9 6.2 $	20.5 4.7 $	... ...	... ...	-30.8 7.7 $	-29.3 7.7 $	6.4 9.4	-9.4 5.3
RS21C	... ...	35.6 9.2 $	... ...	3.9 8.1	51.3 7.2 $	... ...	30.8 7.7 $	... ...	1.5 .7	37.1 11.4 $	21.4 7.6 *
RS21N	... ...	34.1 9.2 $	... ...	2.4 8.1	49.8 7.2 $	... ...	29.3 7.7 $	-1.5 .7	... ...	35.6 11.4 $	19.9 7.6 *
RS 80	... ...	-1.5 10.8	... ...	-33.2 10.4 $	14.2 9.0	... ...	-6.4 9.4	-37.1 11.4 $	-35.6 11.4 $	... ...	-15.7 9.8
V1392	... ...	14.2 6.6 :	... ...	-17.5 6.0 *	29.9 4.2 $	... ...	9.4 5.3	-21.4 7.6 *	-19.9 7.6 *	15.7 9.8	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 150 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	-17.2 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	20.5 7.8 2	-12.0 ... 1	... .	... .	14.7 18.0 2
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	-20.5 7.8 2	... .	... .	... .	-27.0 ... 1	... .	-11.0 ... 1	-6.0 7.6 3
RS21C	... .	... .	... .	12.0 ... 1	... .	... .	27.0 ... 1	... .	0.0 ... 1	... .	13.9 ... 1
RS21N	... .	... .	... .	... .	... .	... .	... .	0.0 ... 1	... .	... .	25.0 ... 1
RS 80	... .	... .	... .	... .	... .	... .	11.0 ... 1	... .	... .	... .	... .
V1392	... .	17.2 ... 1	... .	-14.7 18.0 2	... .	... .	6.0 7.6 3	-13.9 ... 1	-25.0 ... 1	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 150 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-30.1 10.2 :	... ...	... ...	-10.4 10.0	-36.9 10.7 +	-36.9 10.7 +	-21.4 13.5	-17.2 9.0
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	30.1 10.2 :	... ...	... ...	... ...	... ...	19.6 4.7 $	-6.8 5.9	-6.8 5.9	8.6 10.2	12.9 4.7 :
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	10.4 10.0	... ...	-19.6 4.7 $	... ...	... ...	... ...	-26.4 5.8 $	-26.4 5.8 $	-11.0 9.0	-6.8 4.3
RS21C	... ...	36.9 10.7 +	... ...	6.8 5.9	... ...	... ...	26.4 5.8 $	... ...	0.0 ...	15.4 10.7	19.7 5.8 +
RS21N	... ...	36.9 10.7 +	... ...	6.8 5.9	... ...	... ...	26.4 5.8 $	0.0 ...	... ...	15.4 10.7	19.7 5.8 +
RS 80	... ...	21.4 13.5	... ...	-8.6 10.2	... ...	... ...	11.0 9.0	-15.4 10.7	-15.4 10.7	... ...	4.2 10.0
V1392	... ...	17.2 9.0	... ...	-12.9 4.7 :	... ...	... ...	6.8 4.3	-19.7 5.8 +	-19.7 5.8 +	-4.2 10.0	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 100 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	-11.1 4.2 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	12.5 6.4 2	-11.0 ... 1	... .	... .	10.9 12.6 2
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	-12.5 6.4 2	... .	... .	... .	-19.0 ... 1	... .	-11.0 ... 1	-3.1 4.9 3
RS21C	... .	... .	... .	11.0 ... 1	... .	... .	19.0 ... 1	... .	0.0 ... 1	... .	13.0 ... 1
RS21N	... .	... .	... .	... .	... .	... .	... .	0.0 ... 1	... .	... .	19.7 ... 1
RS 80	... .	... .	... .	... .	... .	... .	11.0 ... 1	... .	... .	... .	... .
V1392	... .	11.1 4.2 2	... .	-10.9 12.6 2	... .	... .	3.1 4.9 3	-13.0 ... 1	-19.7 ... 1	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 100 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	-20.3 5.3 *	... ...	... ...	-8.0 5.2	-27.5 5.8 $	-27.5 5.8 $	-19.0 8.0 :	-11.1 4.3 :
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	20.3 5.3 *	... ...	... ...	... ...	... ...	12.3 3.2 $	-7.2 4.0	-7.2 4.0	1.3 6.9	9.2 3.2 +
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	8.0 5.2	... ...	-12.3 3.2 $	... ...	... ...	... ...	-19.5 3.9 $	-19.5 3.9 $	-11.0 6.1	-3.1 2.9
RS21 C	... ...	27.5 5.8 $	... ...	7.2 4.0	... ...	... ...	19.5 3.9 $	... ...	0.0 ...	8.5 7.2	16.4 3.9 $
RS21 N	... ...	27.5 5.8 $	... ...	7.2 4.0	... ...	... ...	19.5 3.9 $	0.0 ...	... ...	8.5 7.2	16.4 3.9 $
RS 80	... ...	19.0 8.0 :	... ...	-1.3 6.9	... ...	... ...	11.0 6.1	-8.5 7.2	-8.5 7.2	... ...	7.9 6.7
V1392	... ...	11.1 4.3 :	... ...	-9.2 3.2 +	... ...	... ...	3.1 2.9	-16.4 3.9 $	-16.4 3.9 $	-7.9 6.7	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 70 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	10.2 4.0 2	-8.7 ... 1	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	-10.2 4.0 2	... .	... .	... .	-16.0 ... 1	... .	... .	... .
RS21 C	... .	... .	... .	8.7 ... 1	... .	... .	16.0 ... 1	... .	0.0 ... 1	... .	... .
RS21 N	... .	... .	... .	... .	... .	... .	... .	0.0 ... 1	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 70 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	9.6 2.0 :	-7.6 2.4	-7.6 2.4	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	... ...	... ...	-9.6 2.0 :	... ...	... ...	... ...	-17.1 2.4 +	-17.1 2.4 +	... ...	... ...
RS21 C	... ...	... ...	... ...	7.6 2.4	... ...	... ...	17.1 2.4 +	... ...	0.0 ...	... ...	... ...
RS21 N	... ...	... ...	... ...	7.6 2.4	... ...	... ...	17.1 2.4 +	0.0 ...	... ...	... ...	... ...
RS 80	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 50 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	8.0 4.2 2	-8.0 ... 1	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	-8.0 4.2 2	... .	... .	... .	-13.0 ... 1	... .	... .	... .
RS21C	... .	... .	... .	8.0 ... 1	... .	... .	13.0 ... 1	... .	1.0 ... 1	... .	... .
RS21N	... .	... .	... .	... .	... .	... .	... .	-1.0 ... 1	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 50 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	7.4 2.1	-6.8 2.5	-5.8 2.5	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	... ...	... ...	-7.4 2.1	... ...	... ...	... ...	-14.2 2.5 :	-13.2 2.5 :	... ...	... ...
RS21 C	... ...	... ...	... ...	6.8 2.5	... ...	... ...	14.2 2.5 :	... ...	1.0 ...	... ...	... ...
RS21 N	... ...	... ...	... ...	5.8 2.5	... ...	... ...	13.2 2.5 :	-1.0 ...	... ...	... ...	... ...
RS 80	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 30 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	6.0 4.2 2	-7.0 ... 1	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	-6.0 4.2 2	... .	... .	... .	-10.0 ... 1	... .	... .	... .
RS21C	... .	... .	... .	7.0 ... 1	... .	... .	10.0 ... 1	... .	.6 ... 1	... .	... .
RS21N	... .	... .	... .	... .	... .	... .	... .	-.6 ... 1	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

ADJUSTED DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 30 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	5.4 2.1	-5.8 2.5	-5.2 2.5	... ...	... ...
SWISS	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	... ...	... ...	-5.4 2.1	... ...	... ...	... ...	-11.2 2.5 :	-10.6 2.5 :	... ...	... ...
RS21 C	... ...	... ...	... ...	5.8 2.5	... ...	... ...	11.2 2.5 :	... ...	.6 ...	... ...	... ...
RS21 N	... ...	... ...	... ...	5.2 2.5	... ...	... ...	10.6 2.5 :	-.6 ...	... ...	... ...	... ...
RS 80	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
V1392	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I 20 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	-6.0 ... 1	... .	... .	... .
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS21C	... .	... .	... .	6.0 ... 1	... .	... .	... .	... .	... .	... .	... .
RS21N	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 80	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
V1392	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 900 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	8.0 ... 1	.2 4.3 5	-7.5 4.9 2	0.0 12.1 8	67.0 67.9 2	1.7 5.6 6	1.5 5.7 4	-3.0 4.7 4	.8 4.5 4	-4.8 + 4.3 8
ASA	-8.0 ... 1	... .	... .	... .	-6.5 * 1.9 4	1.0 2.8 2	3.5 .7 2	4.0 1.4 2	2.0 1.4 2	... .	... .
GR 78	-.2 4.3 5	... .	... .	1.3 8.3 4	5.3 8.3 8	... .	-1.7 : .6 3	2.5 $ .6 4	-2.3 + 1.0 4	3.0 $ 0.0 2	-3.2 : 2.5 5
SP 76	7.5 4.9 2	... .	-1.3 8.3 4	... .	7.5 13.5 4	... .	... .	8.0 ... 1	3.0 ... 1	7.0 ... 1	0.0 2.6 3
SWISS	0.0 12.1 8	6.5 * 1.9 4	-5.3 8.3 8	-7.5 13.5 4	... .	37.0 47.5 8	4.7 9.1 9	2.0 10.5 5	-2.2 10.8 5	-1.4 7.8 5	-3.2 11.1 12
THOMM	-67.0 67.9 2	-1.0 2.8 2	... .	... .	-37.0 47.5 8	... .	-49.0 63.2 3	-15.3 : 6.1 3	-20.3 * 3.5 3	-18.0 11.3 2	-44.6 52.6 5
RS 18	-1.7 5.6 6	-3.5 .7 2	1.7 : .6 3	... .	-4.7 9.1 9	49.0 63.2 3	... .	4.5 .7 2	0.0 1.4 2	2.0 4.4 3	-2.7 3.4 6
RS21C	-1.5 5.7 4	-4.0 1.4 2	-2.5 $ .6 4	-8.0 ... 1	-2.0 10.5 5	15.3 : 6.1 3	-4.5 .7 2	... .	-4.5 $ 1.9 8	... .	-6.0 $ 0.0 2
RS21N	3.0 4.7 4	-2.0 1.4 2	2.3 + 1.0 4	-3.0 ... 1	2.2 10.8 5	20.3 * 3.5 3	0.0 1.4 2	4.5 $ 1.9 8	... .	... .	-.5 .7 2
RS 80	-.8 4.5 4	... .	-3.0 $ 0.0 2	-7.0 ... 1	1.4 7.8 5	18.0 11.3 2	-2.0 4.4 3	... .	... .	... .	-4.0 : 3.5 6
V1392	4.8 + 4.3 8	... .	3.2 : 2.5 5	0.0 2.6 3	3.2 11.1 12	44.6 52.6 5	2.7 3.4 6	6.0 $ 0.0 2	.5 .7 2	4.0 : 3.5 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 900 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	10.3	-.7	-3.4	1.4	37.2	1.6	6.4	1.9	2.9	-2.9
	...	6.4	4.2	5.5	3.5	4.7 $	4.1	4.7	4.7	4.6	3.7
ASA	-10.3	...	-11.0	-13.7	-8.9	27.0	-8.7	-3.9	-8.4	-7.4	-13.2
	6.4	...	6.7	7.6	5.9	6.5 $	6.3	6.6	6.6	7.0	6.4 :
GR 78	.7	11.0	...	-2.7	2.1	37.9	2.3	7.1	2.6	3.6	-2.2
	4.2	6.7	...	5.5	3.9	5.1 $	4.5	4.9	4.9	5.0	4.1
SP 76	3.4	13.7	2.7	...	4.9	40.7	5.1	9.9	5.4	6.4	.5
	5.5	7.6	5.5	...	5.2	6.2 $	5.9	6.1	6.1	6.1	5.4
SWISS	-1.4	8.9	-2.1	-4.9	...	35.8	.2	5.0	.5	1.5	-4.3
	3.5	5.9	3.9	5.2	...	4.1 $	3.7	4.4	4.4	4.4	3.3
THOMM	-37.2	-27.0	-37.9	-40.7	-35.8	...	-35.6	-30.8	-35.3	-34.3	-40.2
	4.7 $	6.5 $	5.1 $	6.2 $	4.1 $	...	4.7 $	5.2 $	5.2 $	5.3 $	4.4 $
RS 18	-1.6	8.7	-2.3	-5.1	-.2	35.6	...	4.8	.3	1.3	-4.5
	4.1	6.3	4.5	5.9	3.7	4.7 $	...	4.9	4.9	4.8	4.0
RS21C	-6.4	3.9	-7.1	-9.9	-5.0	30.8	-4.8	...	-4.5	-3.5	-9.3
	4.7	6.6	4.9	6.1	4.4	5.2 $	4.9	...	1.9 $	5.6	4.7 :
RS21N	-1.9	8.4	-2.6	-5.4	-.5	35.3	-.3	4.5	...	1.0	-4.8
	4.7	6.6	4.9	6.1	4.4	5.2 $	4.9	1.9 $	...	5.6	4.7 :
RS 80	-2.9	7.4	-3.6	-6.4	-1.5	34.3	-1.3	3.5	-1.0	...	-5.8
	4.6	7.0	5.0	6.1	4.4	5.3 $	4.8	5.6	5.6	...	4.4
V1392	2.9	13.2	2.2	-.5	4.3	40.2	4.5	9.3	4.8	5.8	...
	3.7	6.4 :	4.1	5.4	3.3	4.4 $	4.0	4.7 :	4.7 :	4.4	...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 850 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	7.0 ... 1	1.0 3.7 5	-13.5 21.9 2	2.3 12.1 8	64.0 73.5 2	.3 6.4 6	2.0 2.4 4	-2.8 4.9 4	1.3 5.1 4	-5.0 : 4.9 8
ASA	-7.0 ... 1	... .	... .	... .	11.5 12.4 4	-9.0 22.6 2	6.0 $ 0.0 2	6.0 4.2 2	6.0 4.2 2	... .	... .
GR 78	-1.0 3.7 5	... .	... .	-8.0 11.0 4	5.4 7.4 8	... .	-3.7 * .6 3	2.8 + 1.0 4	-2.3 2.5 4	1.0 $ 0.0 2	-5.4 : 3.6 5
SP 76	13.5 21.9 2	... .	8.0 11.0 4	... .	15.5 15.2 4	... .	... .	28.0 ... 1	19.0 ... 1	4.0 ... 1	2.3 11.2 3
SWISS	-2.3 12.1 8	-11.5 12.4 4	-5.4 7.4 8	-15.5 15.2 4	... .	38.6 48.4 8	1.2 9.1 9	-4.2 9.6 5	-8.2 9.7 5	-3.6 7.4 5	-5.5 11.3 12
THOMM	-64.0 73.5 2	9.0 22.6 2	... .	... .	-38.6 48.4 8	... .	-55.7 54.8 3	-10.3 9.0 3	-15.0 7.9 3	-33.5 12.0 2	-56.6 : 43.7 5
RS 18	-.3 6.4 6	-6.0 $ 0.0 2	3.7 * .6 3	... .	-1.2 9.1 9	55.7 54.8 3	... .	6.0 1.4 2	3.0 2.8 2	3.0 4.4 3	-1.5 3.8 6
RS21C	-2.0 2.4 4	-6.0 4.2 2	-2.8 + 1.0 4	-28.0 ... 1	4.2 9.6 5	10.3 9.0 3	-6.0 1.4 2	... .	-4.3 * 3.2 8	... .	-9.0 5.7 2
RS21N	2.8 4.9 4	-6.0 4.2 2	2.3 2.5 4	-19.0 ... 1	8.2 9.7 5	15.0 7.9 3	-3.0 2.8 2	4.3 * 3.2 8	... .	... .	-2.5 2.1 2
RS 80	-1.3 5.1 4	... .	-1.0 $ 0.0 2	-4.0 ... 1	3.6 7.4 5	33.5 12.0 2	-3.0 4.4 3	... .	... .	... .	-4.5 : 3.9 6
V1392	5.0 : 4.9 8	... .	5.4 : 3.6 5	-2.3 11.2 3	5.5 11.3 12	56.6 : 43.7 5	1.5 3.8 6	9.0 5.7 2	2.5 2.1 2	4.5 : 3.9 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 850 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	6.2 6.5	.8 4.3	-9.6 5.6	4.2 3.6	40.7 4.8 $	.1 4.2	7.7 4.8	3.4 4.8	1.3 4.7	-4.5 3.8
ASA	-6.2 6.5	... ...	-5.4 6.8	-15.9 7.7 :	-2.0 6.0	34.4 6.6 $	-6.2 6.4	1.5 6.7	-2.8 6.7	-5.0 7.1	-10.7 6.5
GR 78	-.8 4.3	5.4 6.8	... ...	-10.4 5.6	3.4 3.9	39.8 5.2 $	-.8 4.6	6.9 5.0	2.6 5.0	.5 5.1	-5.3 4.2
SP.76	9.6 5.6	15.9 7.7 :	10.4 5.6	... ...	13.8 5.3 +	50.3 6.3 $	9.7 6.0	17.3 6.2 *	13.1 6.2 *	10.9 6.2	5.1 5.5
SWISS	-4.2 3.6	2.0 6.0	-3.4 3.9	-13.8 5.3 +	... ...	36.5 4.2 $	-4.1 3.8	3.5 4.4	-.7 4.4	-2.9 4.4	-8.7 3.4 +
THOMM	-40.7 4.8 $	-34.4 6.6 $	-39.8 5.2 $	-50.3 6.3 $	-36.5 4.2 $	... ...	-40.6 4.8 $	-33.0 5.3 $	-37.2 5.3 $	-39.4 5.4 $	-45.1 4.5 $
RS 18	-.1 4.2	6.2 6.4	.8 4.6	-9.7 6.0	4.1 3.8	40.6 4.8 $	... ...	7.6 5.0	3.4 5.0	1.2 4.9	-4.5 4.0
RS21C	-7.7 4.8	-1.5 6.7	-6.9 5.0	-17.3 6.2 *	-3.5 4.4	33.0 5.3 $	-7.6 5.0	... ...	-4.3 3.2 *	-6.4 5.7	-12.2 4.8 +
RS21N	-3.4 4.8	2.8 6.7	-2.6 5.0	-13.1 6.2 *	.7 4.4	37.2 5.3 $	-3.4 5.0	4.3 3.2 *	... ...	-2.2 5.7	-7.9 4.8 +
RS 80	-1.3 4.7	5.0 7.1	-.5 5.1	-10.9 6.2	2.9 4.4	39.4 5.4 $	-1.2 4.9	6.4 5.7	2.2 5.7	... ...	-5.8 4.5
V1392	4.5 3.8	10.7 6.5	5.3 4.2	-5.1 5.5	8.7 3.4 +	45.1 4.5 $	4.5 4.0	12.2 4.8 +	7.9 4.8 +	5.8 4.5	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 700 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	10.0 10.7 5	-1.5 33.2 2	15.9 19.7 8	52.0 76.4 2	-3.8 6.9 5	6.8 + 2.4 4	-4.0 5.4 4	11.5 15.3 4	-.1 13.6 8
ASA	... .	... .	... .	... .	2.8 14.4 4	8.5 7.8 2	-4.0 12.7 2	10.5 6.4 2	9.5 6.4 2	... .	... .
GR 78	-10.0 10.7 5	... .	... .	-8.5 12.4 4	9.9 13.2 8	... .	-10.0 * 1.7 3	3.5 2.4 4	-5.5 6.6 4	2.5 2.1 2	-9.8 : 7.4 5
SP 76	1.5 33.2 2	... .	8.5 12.4 4	... .	13.0 22.3 4	... .	... .	30.0 ... 1	16.0 ... 1	8.0 ... 1	-2.3 8.5 3
SWISS	-15.9 19.7 8	-2.8 14.4 4	-9.9 13.2 8	-13.0 22.3 4	... .	27.8 47.7 8	-13.6 17.7 9	-5.6 16.0 5	-13.0 21.8 5	-7.0 6.6 5	-13.5 + 15.2 12
THOMM	-52.0 76.4 2	-8.5 7.8 2	... .	... .	-27.8 47.7 8	... .	-38.3 67.5 3	-1.0 17.6 3	-8.7 16.3 3	-8.5 16.3 2	-40.6 54.8 5
RS 18	3.8 6.9 5	4.0 12.7 2	10.0 * 1.7 3	... .	13.6 17.7 9	38.3 67.5 3	... .	15.5 2.1 2	7.5 12.0 2	9.0 : 3.6 3	.8 5.5 6
RS21C	-6.8 + 2.4 4	-10.5 6.4 2	-3.5 2.4 4	-30.0 ... 1	5.6 16.0 5	1.0 17.6 3	-15.5 2.1 2	... .	-7.5 $ 5.2 8	... .	-17.5 9.2 2
RS21N	4.0 5.4 4	-9.5 6.4 2	5.5 6.6 4	-16.0 ... 1	13.0 21.8 5	8.7 16.3 3	-7.5 12.0 2	7.5 $ 5.2 8	... .	... .	-3.0 9.9 2
RS 80	-11.5 15.3 4	... .	-2.5 2.1 2	-8.0 ... 1	7.0 6.6 5	8.5 16.3 2	-9.0 : 3.6 3	... .	... .	... .	-8.0 : 7.0 6
V1392	.1 13.6 8	... .	9.8 : 7.4 5	2.3 8.5 3	13.5 + 15.2 12	40.6 54.8 5	-.8 5.5 6	17.5 9.2 2	3.0 9.9 2	8.0 : 7.0 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 700 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	11.9 7.7	8.5 4.9	-.2 6.3	14.6 4.1 $	35.5 5.4 $	-.3 4.8	15.8 5.4 $	8.3 5.4 $	10.4 5.3	-.3 4.3
ASA	-11.9 7.7	... ...	-3.5 7.9	-12.1 8.9	2.6 7.0	23.6 7.6 $	-12.2 7.5	3.8 7.7	-3.7 7.7	-1.5 8.2	-12.2 7.6
GR 78	-8.5 4.9	3.5 7.9	... ...	-8.6 6.2	6.1 4.4	27.0 5.8 $	-8.7 5.2	7.3 5.6	-.2 5.6	2.0 5.7	-8.8 4.7
SP 76	.2 6.3	12.1 8.9	8.6 6.2	... ...	14.7 5.9 +	35.7 7.1 $	-.1 6.7	15.9 7.0 :	8.4 7.0 :	10.6 7.0	-.1 6.1
SWISS	-14.6 4.1 $	-2.6 7.0	-6.1 4.4	-14.7 5.9 +	... ...	20.9 4.7 $	-14.8 4.2 $	1.2 5.0	-6.3 5.0	-4.1 5.0	-14.9 3.8 $
THOMM	-35.5 5.4 $	-23.6 7.6 $	-27.0 5.8 $	-35.7 7.1 $	-20.9 4.7 $	... ...	-35.8 5.4 $	-19.7 5.9 $	-27.2 5.9 $	-25.1 6.0 $	-35.8 5.0 $
RS 18	.3 4.8	12.2 7.5	8.7 5.2	.1 6.7	14.8 4.2 $	35.8 5.4 $	... ...	16.0 5.6 *	8.5 5.6 *	10.7 5.5	-.0 4.6
RS21C	-15.8 5.4 $	-3.8 7.7	-7.3 5.6	-15.9 7.0 :	-1.2 5.0	19.7 5.9 $	-16.0 5.6 *	... ...	-7.5 5.2 $	-5.3 6.4	-16.1 5.3 $
RS21N	-8.3 5.4 $	3.7 7.7	.2 5.6	-8.4 7.0 :	6.3 5.0	27.2 5.9 $	-8.5 5.6 *	7.5 5.2 $	... ...	2.2 6.4	-8.6 5.3 $
RS 80	-10.4 5.3	1.5 8.2	-2.0 5.7	-10.6 7.0	4.1 5.0	25.1 6.0 $	-10.7 5.5	5.3 6.4	-2.2 6.4	... ...	-10.7 5.0 :
V1392	.3 4.3	12.2 7.6	8.8 4.7	.1 6.1	14.9 3.8 $	35.8 5.0 $	.0 4.6	16.1 5.3 $	8.6 5.3 $	10.7 5.0 :	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 500 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	21.5 21.6 4	17.0 41.0 2	19.4 33.1 7	45.0 77.8 2	-10.5 10.7 4	17.8 : 7.9 4	4.8 9.4 4	24.7 31.5 3	4.0 22.0 7
ASA	... .	... .	... .	... .	7.3 23.4 4	18.0 14.1 2	-10.0 14.1 2	14.5 10.6 2	18.5 10.6 2	... .	... .
GR 78	-21.5 21.6 4	... .	... .	-11.0 13.9 4	2.6 18.8 8	... .	-29.3 12.9 3	6.0 4.5 4	-2.8 8.0 4	6.5 3.5 2	-17.4 : 10.9 5
SP 76	-17.0 41.0 2	... .	11.0 13.9 4	... .	14.3 28.1 4	... .	... .	34.0 ... 1	16.0 ... 1	15.0 ... 1	-9.3 6.7 3
SWISS	-19.4 33.1 7	-7.3 23.4 4	-2.6 18.8 8	-14.3 28.1 4	... .	27.8 42.5 8	-22.8 : 27.3 9	8.2 20.9 5	2.0 24.5 5	-10.6 : 8.4 5	-20.6 + 23.2 11
THOMM	-45.0 77.8 2	-18.0 14.1 2	... .	... .	-27.8 42.5 8	... .	-36.3 62.3 3	2.3 43.5 3	-9.3 34.4 3	-23.0 8.5 2	-46.0 49.0 5
RS 18	10.5 10.7 4	10.0 14.1 2	29.3 12.9 3	... .	22.8 : 27.3 9	36.3 62.3 3	... .	31.0 7.1 2	22.0 9.9 2	29.7 15.9 3	7.7 15.6 6
RS21C	-17.8 : 7.9 4	-14.5 10.6 2	-6.0 4.5 4	-34.0 ... 1	-8.2 20.9 5	-2.3 43.5 3	-31.0 7.1 2	... .	-8.3 : 9.5 8	... .	-27.5 16.3 2
RS21N	-4.8 9.4 4	-13.5 10.6 2	2.8 8.0 4	-16.0 ... 1	-2.0 24.5 5	9.3 34.4 3	-22.0 9.9 2	8.3 : 9.5 8	... .	... .	-13.0 11.3 2
RS 80	-24.7 31.5 3	... .	-6.5 3.5 2	-15.0 ... 1	10.6 : 8.4 5	23.0 8.5 2	-29.7 15.9 3	... .	... .	... .	-17.8 $ 8.7 6
V1392	-4.0 22.0 7	... .	17.4 : 10.9 5	9.3 6.7 3	20.6 + 23.2 11	46.0 49.0 5	-7.7 15.6 6	27.5 16.3 2	13.0 11.3 2	17.8 $ 8.7 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 500 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	13.7 9.0	19.5 5.8 $	8.1 7.4	20.4 5.0 $	41.2 6.3 $	-4.7 5.8	28.4 6.3 $	20.2 6.3 $	19.1 6.4 $	.8 5.2
ASA	-13.7 9.0	... ...	5.7 9.1	-5.7 10.2	6.6 8.1	27.5 8.7 $	-18.4 8.6 :	14.7 8.9	6.4 8.9	5.4 9.5	-13.0 8.7
GR 78	-19.5 5.8 $	-5.7 9.1	... ...	-11.4 7.2	.9 5.1	21.7 6.7 $	-24.1 6.0 $	9.0 6.4	.7 6.4	-.3 6.7	-18.7 5.5 $
SP 76	-8.1 7.4	5.7 10.2	11.4 7.2	... ...	12.3 6.8	33.1 8.1 $	-12.7 7.7	20.4 8.0 +	12.1 8.0 +	11.0 8.1	-7.3 7.0
SWISS	-20.4 5.0 $	-6.6 8.1	-.9 5.1	-12.3 6.8	... ...	20.8 5.4 $	-25.0 4.9 $	8.1 5.7	-.2 5.7	-1.2 5.8	-19.6 4.4 $
THOMM	-41.2 6.3 $	-27.5 8.7 $	-21.7 6.7 $	-33.1 8.1 $	-20.8 5.4 $	... ...	-45.9 6.2 $	-12.8 6.7	-21.0 6.7	-22.1 6.9 $	-40.4 5.8 $
RS 18	4.7 5.8	18.4 8.6 :	24.1 6.0 $	12.7 7.7	25.0 4.9 $	45.9 6.2 $	... ...	33.1 6.5 $	24.9 6.5 $	23.8 6.5 $	5.4 5.3
RS21C	-28.4 6.3 $	-14.7 8.9	-9.0 6.4	-20.4 8.0 +	-8.1 5.7	12.8 6.7	-33.1 6.5 $	... ...	-8.3 9.5 :	-9.3 7.4	-27.7 6.2 $
RS21N	-20.2 6.3 $	-6.4 8.9	-.7 6.4	-12.1 8.0 +	.2 5.7	21.0 6.7	-24.9 6.5 $	8.3 9.5 :	... ...	-1.1 7.4	-19.4 6.2 $
RS 80	-19.1 6.4 $	-5.4 9.5	.3 6.7	-11.0 8.1	1.2 5.8	22.1 6.9 $	-23.8 6.5 $	9.3 7.4	1.1 7.4	... ...	-18.3 5.9 $
V1392	-.8 5.2	13.0 8.7	18.7 5.5 $	7.3 7.0	19.6 4.4 $	40.4 5.8 $	-5.4 5.3	27.7 6.2 $	19.4 6.2 $	18.3 5.9 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 400 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	34.3 24.3 4	37.0 24.0 2	43.4 : 46.7 7	1.0 ... 1	11.8 30.2 4	40.5 : 23.0 4	24.8 : 15.4 4	63.0 : 18.5 3	27.7 : 27.1 7
ASA	... .	... .	... .	... .	11.3 30.1 4	33.0 19.8 2	-11.5 19.1 2	17.0 11.3 2	30.0 11.3 2	... .	... .
GR 78	-34.3 24.3 4	... .	... .	-10.8 14.4 4	4.8 22.9 8	... .	-37.0 + 8.5 3	9.5 : 5.7 4	2.8 10.4 4	7.5 6.4 2	-21.0 : 13.9 5
SP 76	-37.0 24.0 2	... .	10.8 14.4 4	... .	16.5 26.8 4	... .	... .	38.0 ... 1	17.0 ... 1	16.0 ... 1	-16.3 6.8 3
SWISS	-43.4 : 46.7 7	-11.3 30.1 4	-4.8 22.9 8	-16.5 26.8 4	... .	20.0 30.2 7	-31.1 : 33.1 9	11.2 26.6 5	8.4 31.3 5	-12.8 + 7.4 5	-24.1 + 27.4 11
THOMM	-1.0 ... 1	-33.0 19.8 2	... .	... .	-20.0 30.2 7	... .	-9.0 46.7 2	-79.7 154.1 3	-96.0 142.7 3	-24.0 18.4 2	-38.0 47.1 4
RS 18	-11.8 30.2 4	11.5 19.1 2	37.0 + 8.5 3	... .	31.1 : 33.1 9	9.0 46.7 2	... .	46.0 11.3 2	40.0 15.6 2	35.0 : 11.3 3	11.0 15.5 6
RS21 C	-40.5 : 23.0 4	-17.0 11.3 2	-9.5 : 5.7 4	-38.0 ... 1	-11.2 26.6 5	79.7 154.1 3	-46.0 11.3 2	... .	-7.9 16.3 8	... .	-37.0 21.2 2
RS21 N	-24.8 : 15.4 4	-30.0 11.3 2	-2.8 10.4 4	-17.0 ... 1	-8.4 31.3 5	96.0 142.7 3	-40.0 15.6 2	7.9 16.3 8	... .	... .	-22.0 12.7 2
RS 80	-63.0 : 18.5 3	... .	-7.5 6.4 2	-16.0 ... 1	12.8 + 7.4 5	24.0 18.4 2	-35.0 : 11.3 3	... .	... .	... .	-22.2 $ 11.3 6
V1392	-27.7 : 27.1 7	... .	21.0 : 13.9 5	16.3 6.8 3	24.1 + 27.4 11	38.0 47.1 4	-11.0 15.5 6	37.0 21.2 2	22.0 12.7 2	22.2 $ 11.3 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 400 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	30.0 12.0 +	39.7 7.8 $	30.0 9.9 $	44.6 6.7 $	65.2 9.1 $	13.3 7.8	43.2 8.5 $	35.3 8.5 $	44.5 8.6 $	21.7 7.0 $
ASA	-30.0 12.0 +	... ...	9.8 12.2	.0 13.7	14.6 10.8	35.2 11.9 $	-16.6 11.5	13.2 11.8	5.3 11.8	14.5 12.7	-8.3 11.7
GR 78	-39.7 7.8 $	-9.8 12.2	... ...	-9.7 9.5	4.9 6.8	25.4 9.4 *	-26.4 8.1 $	3.4 8.6	-4.5 8.6	4.8 8.9	-18.0 7.3 +
SP 76	-30.0 9.9 $	-.0 13.7	9.7 9.5	... ...	14.6 9.1	35.1 11.2 $	-16.7 10.4	13.1 10.7	5.3 10.7	14.5 10.8	-8.3 9.4
SWISS	-44.6 6.7 $	-14.6 10.8	-4.9 6.8	-14.6 9.1	... ...	20.5 7.7 *	-31.3 6.6 $	-1.5 7.6	-9.3 7.6	-.1 7.8	-22.9 5.9 $
THOMM	-65.2 9.1 $	-35.2 11.9 $	-25.4 9.4 *	-35.1 11.2 $	-20.5 7.7 *	... ...	-51.8 8.9 $	-22.0 9.4 :	-29.9 9.4 :	-20.6 9.7 :	-43.4 8.3 $
RS 18	-13.3 7.8	16.6 11.5	26.4 8.1 $	16.7 10.4	31.3 6.6 $	51.8 8.9 $	... ...	29.8 8.7 $	22.0 8.7 $	31.2 8.7 $	8.4 7.2
RS21C	-43.2 8.5 $	-13.2 11.8	-3.4 8.6	-13.1 10.7	1.5 7.6	22.0 9.4 :	-29.8 8.7 $	... ...	-7.9 16.3	1.4 9.8	-21.4 8.3 +
RS21N	-35.3 8.5 $	-5.3 11.8	4.5 8.6	-5.3 10.7	9.3 7.6	29.9 9.4 :	-22.0 8.7 $	7.9 16.3	... ...	9.2 9.8	-13.6 8.3 +
RS 80	-44.5 8.6 $	-14.5 12.7	-4.8 8.9	-14.5 10.8	.1 7.8	20.6 9.7 :	-31.2 8.7 $	-1.4 9.8	-9.2 9.8	... ...	-22.8 7.9 $
V1392	-21.7 7.0 $	8.3 11.7	18.0 7.3 +	8.3 9.4	22.9 5.9 $	43.4 8.3 $	-8.4 7.2	21.4 8.3 +	13.6 8.3 +	22.8 7.9 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 300 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	45.3 29.0 4	48.0 19.8 2	63.6 : 56.8 7	41.0 ... 1	20.8 45.6 4	59.3 : 31.0 4	43.5 : 24.6 4	82.0 : 30.5 3	39.7 : 37.3 7
ASA	... .	... .	... .	... .	19.0 34.0 4	53.0 29.7 2	-12.0 33.9 2	19.0 9.9 2	36.0 9.9 2	... .	... .
GR 78	-45.3 29.0 4	... .	... .	-12.5 17.2 4	6.9 28.9 8	... .	-44.0 * 6.6 3	15.3 : 7.0 4	10.3 11.8 4	8.5 9.2 2	-26.8 : 16.0 5
SP 76	-48.0 19.8 2	... .	12.5 17.2 4	... .	20.8 26.2 4	... .	... .	47.0 ... 1	26.0 ... 1	19.0 ... 1	-23.0 : 6.1 3
SWISS	-63.6 : 56.8 7	-19.0 34.0 4	-6.9 28.9 8	-20.8 26.2 4	... .	10.9 20.4 7	-40.6 + 38.6 9	13.8 35.2 5	13.2 37.7 5	-12.6 : 8.9 5	-29.5 + 31.1 11
THOMM	-41.0 ... 1	-53.0 29.7 2	... .	... .	-10.9 20.4 7	... .	-12.5 34.6 2	-1.7 57.3 3	-20.3 39.9 3	-25.0 15.6 2	-20.5 28.8 4
RS 18	-20.8 45.6 4	12.0 33.9 2	44.0 * 6.6 3	... .	40.6 + 38.6 9	12.5 34.6 2	... .	63.5 16.3 2	58.0 18.4 2	42.0 $ 3.6 3	11.7 16.4 6
RS21C	-59.3 : 31.0 4	-19.0 9.9 2	-15.3 : 7.0 4	-47.0 ... 1	-13.8 35.2 5	1.7 57.3 3	-63.5 16.3 2	... .	-7.4 20.0 8	... .	-49.0 24.0 2
RS21N	-43.5 : 24.6 4	-36.0 9.9 2	-10.3 11.8 4	-26.0 ... 1	-13.2 37.7 5	20.3 39.9 3	-58.0 18.4 2	7.4 20.0 8	... .	... .	-35.0 14.1 2
RS 80	-82.0 : 30.5 3	... .	-8.5 9.2 2	-19.0 ... 1	12.6 : 8.9 5	25.0 15.6 2	-42.0 $ 3.6 3	... .	... .	... .	-28.2 * 15.3 6
V1392	-39.7 : 37.3 7	... .	26.8 : 16.0 5	23.0 : 6.1 3	29.5 + 31.1 11	20.5 28.8 4	-11.7 16.4 6	49.0 24.0 2	35.0 14.1 2	28.2 * 15.3 6	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 300 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	37.4 10.6 $	56.1 6.9 $	44.8 8.7 $	62.3 5.9 $	67.1 8.1 $	21.9 6.9 $	71.3 7.5 $	63.9 7.5 $	60.6 7.6 $	33.6 6.2 $
ASA	-37.4 10.6 $	... ...	18.7 10.8	7.4 12.1	24.9 9.5 *	29.7 10.5 *	-15.5 10.2	33.9 10.4 $	26.5 10.4 $	23.2 11.2 :	-3.8 10.3
GR 78	-56.1 6.9 $	-18.7 10.8	... ...	-11.2 8.4	6.3 6.0	11.0 8.3	-34.2 7.2 $	15.2 7.6 :	7.9 7.6 :	4.6 7.9	-22.5 6.5 $
SP 76	-44.8 8.7 $	-7.4 12.1	11.2 8.4	... ...	17.5 8.0 :	22.3 9.9 :	-22.9 9.2 +	26.5 9.4 *	19.1 9.4 *	15.8 9.5	-11.2 8.3
SWISS	-62.3 5.9 $	-24.9 9.5 *	-6.3 6.0	-17.5 8.0 :	... ...	4.8 6.8	-40.5 5.9 $	9.0 6.7	1.6 6.7	-1.7 6.9	-28.8 5.2 $
THOMM	-67.1 8.1 $	-29.7 10.5 *	-11.0 8.3	-22.3 9.9 :	-4.8 6.8	... ...	-45.2 7.9 $	4.2 8.3	-3.2 8.3	-6.5 8.5	-33.5 7.4 $
RS 18	-21.9 6.9 $	15.5 10.2	34.2 7.2 $	22.9 9.2 +	40.5 5.9 $	45.2 7.9 $	... ...	49.4 7.7 $	42.0 7.7 $	38.8 7.7 $	11.7 6.3
RS21C	-71.3 7.5 $	-33.9 10.4 $	-15.2 7.6 :	-26.5 9.4 *	-9.0 6.7	-4.2 8.3	-49.4 7.7 $	... ...	-7.4 20.0	-10.7 8.7	-37.7 7.3 $
RS21N	-63.9 7.5 $	-26.5 10.4 $	-7.9 7.6 :	-19.1 9.4 *	-1.6 6.7	3.2 8.3	-42.0 7.7 $	7.4 20.0	... ...	-3.3 8.7	-30.3 7.3 $
RS 80	-60.6 7.6 $	-23.2 11.2 :	-4.6 7.9	-15.8 9.5	1.7 6.9	6.5 8.5	-38.8 7.7 $	10.7 8.7	3.3 8.7	... ...	-27.1 6.9 $
V1392	-33.6 6.2 $	3.8 10.3	22.5 6.5 $	11.2 8.3	28.8 5.2 $	33.5 7.4 $	-11.7 6.3	37.7 7.3 $	30.3 7.3 $	27.1 6.9 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 250 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	55.3 41.8 4	66.0 11.3 2	78.1 : 71.3 7	7.0 ... 1	33.3 62.9 4	75.8 : 45.8 4	61.5 39.6 4	100.7 : 36.5 3	54.2 53.2 6
ASA	... .	... .	... .	... .	22.8 38.1 4	69.0 28.3 2	-15.5 51.6 2	19.5 6.4 2	42.5 6.4 2	... .	... .
GR 78	-55.3 41.8 4	... .	... .	-12.0 16.8 4	4.9 31.2 8	... .	-50.0 * 7.8 3	19.5 + 7.6 4	17.5 12.2 4	10.5 9.2 2	-28.8 18.9 4
SP 76	-66.0 11.3 2	... .	12.0 16.8 4	... .	21.5 26.6 4	... .	... .	47.0 ... 1	32.0 ... 1	20.0 ... 1	-25.5 : 2.1 2
SWISS	-78.1 : 71.3 7	-22.8 38.1 4	-4.9 31.2 8	-21.5 26.6 4	... .	47.3 66.6 7	-44.0 : 45.9 9	19.6 37.3 5	22.6 39.0 5	-10.4 : 7.4 5	-28.7 : 34.4 10
THOMM	-7.0 ... 1	-69.0 28.3 2	... .	... .	-47.3 66.6 7	... .	-14.0 36.8 2	12.0 93.0 3	-8.0 68.9 3	-29.0 15.6 2	-79.3 91.4 4
RS 18	-33.3 62.9 4	15.5 51.6 2	50.0 * 7.8 3	... .	44.0 : 45.9 9	14.0 36.8 2	... .	75.5 19.1 2	73.0 24.0 2	44.3 $ 5.1 3	11.2 19.4 6
RS21C	-75.8 : 45.8 4	-19.5 6.4 2	-19.5 + 7.6 4	-47.0 ... 1	-19.6 37.3 5	-12.0 93.0 3	-75.5 19.1 2	... .	-5.6 21.2 8	... .	-57.0 24.0 2
RS21N	-61.5 39.6 4	-42.5 6.4 2	-17.5 12.2 4	-32.0 ... 1	-22.6 39.0 5	8.0 68.9 3	-73.0 24.0 2	5.6 21.2 8	... .	... .	-46.5 17.7 2
RS 80	-100.7 : 36.5 3	... .	-10.5 9.2 2	-20.0 ... 1	10.4 : 7.4 5	29.0 15.6 2	-44.3 $ 5.1 3	... .	... .	... .	-28.4 + 13.9 5
V1392	-54.2 53.2 6	... .	28.8 18.9 4	25.5 : 2.1 2	28.7 : 34.4 10	79.3 91.4 4	-11.2 19.4 6	57.0 24.0 2	46.5 17.7 2	28.4 + 13.9 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 250 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	50.3 15.5 $	68.5 10.2 $	57.0 13.0 $	72.7 8.7 $	100.5 11.7 $	32.2 10.1 $	91.8 10.9 $	86.2 10.9 $	74.9 11.3 $	41.9 9.3 $
ASA	-50.3 15.5 $	... ...	18.2 15.7	6.7 17.7	22.5 13.8	50.2 15.2 $	-18.1 14.8	41.5 15.2 *	35.9 15.2 *	24.6 16.4	-8.4 15.1
GR 78	-68.5 10.2 $	-18.2 15.7	... ...	-11.6 12.5	4.2 8.9	32.0 12.2 *	-36.3 10.5 $	23.3 11.0 :	17.6 11.0 :	6.4 11.7	-26.6 9.8 *
SP 76	-57.0 13.0 $	-6.7 17.7	11.6 12.5	... ...	15.8 12.0	43.5 14.7 $	-24.8 13.6	34.8 14.0 +	29.2 14.0 +	17.9 14.2	-15.1 12.7
SWISS	-72.7 8.7 $	-22.5 13.8	-4.2 8.9	-15.8 12.0	... ...	27.7 9.9 *	-40.5 8.5 $	19.0 9.8	13.4 9.8	2.2 10.1	-30.8 7.9 $
THOMM	-100.5 11.7 $	-50.2 15.2 $	-32.0 12.2 *	-43.5 14.7 $	-27.7 9.9 *	... ...	-68.3 11.5 $	-8.7 12.0	-14.3 12.0	-25.6 12.5 :	-58.6 10.8 $
RS 18	-32.2 10.1 $	18.1 14.8	36.3 10.5 $	24.8 13.6	40.5 8.5 $	68.3 11.5 $	... ...	59.6 11.2 $	53.9 11.2 $	42.7 11.3 $	9.7 9.4
RS21C	-91.8 10.9 $	-41.5 15.2 *	-23.3 11.0 :	-34.8 14.0 +	-19.0 9.8	8.7 12.0	-59.6 11.2 $	... ...	-5.6 21.2	-16.9 12.7	-49.9 10.8 $
RS21N	-86.2 10.9 $	-35.9 15.2 *	-17.6 11.0 :	-29.2 14.0 +	-13.4 9.8	14.3 12.0	-53.9 11.2 $	5.6 21.2	... ...	-11.3 12.7	-44.2 10.8 $
RS 80	-74.9 11.3 $	-24.6 16.4	-6.4 11.7	-17.9 14.2	-2.2 10.1	25.6 12.5 :	-42.7 11.3 $	16.9 12.7	11.3 12.7	... ...	-33.0 10.5 $
V1392	-41.9 9.3 $	8.4 15.1	26.6 9.8 *	15.1 12.7	30.8 7.9 $	58.6 10.8 $	-9.7 9.4	49.9 10.8 $	44.2 10.8 $	33.0 10.5 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 200 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	72.7 48.6 3	84.0 ... 1	94.0 : 76.7 6	27.0 ... 1	54.3 66.2 4	112.8 + 49.3 4	100.3 + 42.7 4	137.5 54.4 2	76.8 65.8 5
ASA	... .	... .	... .	... .	24.0 39.8 4	75.5 36.1 2	-27.5 72.8 2	22.5 3.5 2	46.5 : 3.5 2	... .	... .
GR 78	-72.7 48.6 3	... .	... .	-9.0 19.3 4	6.4 29.4 8	... .	-56.7 + 12.4 3	27.5 $ 5.7 4	28.3 + 11.4 4	16.0 11.3 2	-30.0 22.6 4
SP 76	-84.0 ... 1	... .	9.0 19.3 4	... .	26.3 24.3 4	... .	... .	54.0 ... 1	44.0 ... 1	26.0 ... 1	-26.5 12.0 2
SWISS	-94.0 : 76.7 6	-24.0 39.8 4	-6.4 29.4 8	-26.3 24.3 4	... .	51.4 48.1 5	-57.3 + 50.8 8	29.0 36.4 5	34.4 36.6 5	-.6 5.4 5	-31.8 : 33.5 9
THOMM	-27.0 ... 1	-75.5 36.1 2	... .	... .	-51.4 48.1 5	... .	... .	18.0 159.8 2	-8.5 125.2 2	-21.0 19.8 2	-85.3 57.7 3
RS 18	-54.3 66.2 4	27.5 72.8 2	56.7 + 12.4 3	... .	57.3 + 50.8 8	... .	... .	91.5 20.5 2	89.0 26.9 2	54.0 $ 3.0 3	15.4 23.3 5
RS21C	-112.8 + 49.3 4	-22.5 3.5 2	-27.5 $ 5.7 4	-54.0 ... 1	-29.0 36.4 5	-18.0 159.8 2	-91.5 20.5 2	... .	-5.4 23.0 8	... .	-72.0 24.0 2
RS21N	-100.3 + 42.7 4	-46.5 : 3.5 2	-28.3 + 11.4 4	-44.0 ... 1	-34.4 36.6 5	8.5 125.2 2	-89.0 26.9 2	5.4 23.0 8	... .	... .	-63.5 21.9 2
RS 80	-137.5 54.4 2	... .	-16.0 11.3 2	-26.0 ... 1	.6 5.4 5	21.0 19.8 2	-54.0 $ 3.0 3	... .	... .	... .	-32.8 * 15.3 5
V1392	-76.8 65.8 5	... .	30.0 22.6 4	26.5 12.0 2	31.8 : 33.5 9	85.3 57.7 3	-15.4 23.3 5	72.0 24.0 2	63.5 21.9 2	32.8 * 15.3 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 200 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	73.5 15.7 $	89.0 10.8 $	77.0 13.9 $	95.3 9.3 $	130.4 13.4 $	42.6 10.7 $	122.5 11.3 $	117.1 11.3 $	102.2 11.9 $	61.9 10.0 $
ASA	-73.5 15.7 $	... ...	15.5 15.7	3.5 17.9	21.8 13.8	56.9 15.9 $	-30.9 14.9 :	49.0 15.2 $	43.6 15.2 $	28.7 16.4	-11.6 15.2
GR 78	-89.0 10.8 $	-15.5 15.7	... ...	-11.9 12.8	6.4 9.0	41.4 13.5 $	-46.4 10.8 $	33.5 11.2 $	28.1 11.2 $	13.2 11.8	-27.1 10.0 *
SP 76	-77.0 13.9 $	-3.5 17.9	11.9 12.8	... ...	18.3 12.3	53.3 16.0 $	-34.5 14.2 +	45.4 14.3 $	40.0 14.3 $	25.1 14.6	-15.2 13.1
SWISS	-95.3 9.3 $	-21.8 13.8	-6.4 9.0	-18.3 12.3	... ...	35.0 11.5 $	-52.8 9.0 $	27.1 10.0 *	21.8 10.0 *	6.8 10.3	-33.4 8.3 $
THOMM	-130.4 13.4 $	-56.9 15.9 $	-41.4 13.5 $	-53.3 16.0 $	-35.0 11.5 $	... ...	-87.8 13.5 $	-7.9 13.4	-13.3 13.4	-28.2 13.7 :	-68.5 12.4 $
RS 18	-42.6 10.7 $	30.9 14.9 :	46.4 10.8 $	34.5 14.2 +	52.8 9.0 $	87.8 13.5 $	... ...	79.9 11.6 $	74.5 11.6 $	59.6 11.6 $	19.3 10.0
RS21C	-122.5 11.3 $	-49.0 15.2 $	-33.5 11.2 $	-45.4 14.3 $	-27.1 10.0 *	7.9 13.4	-79.9 11.6 $	... ...	-5.4 23.0	-20.3 13.0	-60.6 11.1 $
RS21N	-117.1 11.3 $	-43.6 15.2 $	-28.1 11.2 $	-40.0 14.3 $	-21.8 10.0 *	13.3 13.4	-74.5 11.6 $	5.4 23.0	... ...	-14.9 13.0	-55.2 11.1 $
RS 80	-102.2 11.9 $	-28.7 16.4	-13.2 11.8	-25.1 14.6	-6.8 10.3	28.2 13.7 :	-59.6 11.6 $	20.3 13.0	14.9 13.0	... ...	-40.3 10.7 $
V1392	-61.9 10.0 $	11.6 15.2	27.1 10.0 *	15.2 13.1	33.4 8.3 $	68.5 12.4 $	-19.3 10.0	60.6 11.1 $	55.2 11.1 $	40.3 10.7 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 150 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	119.5 $ .7 2	92.0 ... 1	143.3 * 42.3 4	596.0 ... 1	108.5 65.8 2	176.7 + 41.1 3	164.0 $ 12.3 3	174.5 68.6 2	134.0 76.4 3
ASA	... .	... .	... .	... .	24.8 38.2 4	... .	-41.5 108.2 2	35.0 $ 0.0 2	59.0 $ 0.0 2	... .	... .
GR 78	-119.5 $ .7 2	... .	... .	-7.3 21.3 4	5.9 28.6 8	... .	-64.0 + 15.5 3	38.8 $ 6.8 4	39.0 * 10.5 4	22.5 13.4 2	-33.5 27.2 4
SP 76	-92.0 ... 1	... .	7.3 21.3 4	... .	24.3 28.0 4	... .	... .	64.0 ... 1	58.0 ... 1	28.0 ... 1	-33.0 14.1 2
SWISS	-143.3 * 42.3 4	-24.8 38.2 4	-5.9 28.6 8	-24.3 28.0 4	... .	146.0 ... 1	-61.5 : 64.2 8	42.0 35.5 5	47.0 : 33.4 5	12.4 13.0 5	-28.6 35.1 8
THOMM	-596.0 ... 1	... .	... .	... .	-146.0 ... 1	... .	... .	-372.0 ... 1	-423.0 ... 1	... .	... .
RS 18	-108.5 65.8 2	41.5 108.2 2	64.0 + 15.5 3	... .	61.5 : 64.2 8	... .	... .	115.5 16.3 2	109.5 23.3 2	64.7 $ 3.1 3	17.2 28.7 5
RS21C	-176.7 + 41.1 3	-35.0 $ 0.0 2	-38.8 $ 6.8 4	-64.0 ... 1	-42.0 35.5 5	372.0 ... 1	-115.5 16.3 2	... .	-5.3 22.8 8	... .	-91.5 21.9 2
RS21N	-164.0 $ 12.3 3	-59.0 $ 0.0 2	-39.0 * 10.5 4	-58.0 ... 1	-47.0 : 33.4 5	423.0 ... 1	-109.5 23.3 2	5.3 22.8 8	... .	... .	-83.0 25.5 2
RS 80	-174.5 68.6 2	... .	-22.5 13.4 2	-28.0 ... 1	-12.4 13.0 5	... .	-64.7 $ 3.1 3	... .	... .	... .	-41.0 * 18.5 5
V1392	-134.0 76.4 3	... .	33.5 27.2 4	33.0 14.1 2	28.6 35.1 8	... .	-17.2 28.7 5	91.5 21.9 2	83.0 25.5 2	41.0 * 18.5 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 150 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	139.1 18.2 $	148.2 12.4 $	135.1 15.1 $	157.2 11.2 $	486.8 25.4 $	95.8 12.7 $	189.1 12.9 $	183.8 12.9 $	166.0 13.5 $	120.0 12.1 $
ASA	-139.1 18.2 $	... ...	9.1 17.3	-4.0 19.4	18.1 15.5	347.7 28.9 $	-43.3 16.5 +	50.0 16.8 $	44.7 16.8 $	26.9 18.3	-19.1 17.2
GR 78	-148.2 12.4 $	-9.1 17.3	... ...	-13.1 13.1	9.0 9.4	338.6 26.0 $	-52.4 11.3 $	40.9 11.7 $	35.6 11.7 $	17.8 12.5	-28.2 10.7 *
SP 76	-135.1 15.1 $	4.0 19.4	13.1 13.1	... ...	22.1 12.6	351.6 27.4 $	-39.3 14.6 *	53.9 14.8 $	48.7 14.8 $	30.9 15.1 :	-15.2 13.6
SWISS	-157.2 11.2 $	-18.1 15.5	-9.0 9.4	-22.1 12.6	... ...	329.5 25.1 $	-61.4 9.5 $	31.8 10.7 $	26.6 10.7 $	8.8 11.1	-37.3 9.2 $
THOMM	-486.8 25.4 $	-347.7 28.9 $	-338.6 26.0 $	-351.6 27.4 $	-329.5 25.1 $	... ...	-390.9 26.2 $	-297.7 25.4 $	-302.9 25.4 $	-320.8 26.8 $	-366.8 26.0 $
RS 18	-95.8 12.7 $	43.3 16.5 +	52.4 11.3 $	39.3 14.6 *	61.4 9.5 $	390.9 26.2 $	... ...	93.3 12.3 $	88.0 12.3 $	70.2 12.3 $	24.1 10.7 :
RS21C	-189.1 12.9 $	-50.0 16.8 $	-40.9 11.7 $	-53.9 14.8 $	-31.8 10.7 $	297.7 25.4 $	-93.3 12.3 $	... ...	-5.3 22.8	-23.1 14.0	-69.1 12.1 $
RS21N	-183.8 12.9 $	-44.7 16.8 $	-35.6 11.7 $	-48.7 14.8 $	-26.6 10.7 $	302.9 25.4 $	-88.0 12.3 $	5.3 22.8	... ...	-17.8 14.0	-63.9 12.1 $
RS 80	-166.0 13.5 $	-26.9 18.3	-17.8 12.5	-30.9 15.1 :	-8.8 11.1	320.8 26.8 $	-70.2 12.3 $	23.1 14.0	17.8 14.0	... ...	-46.0 11.5 $
V1392	-120.0 12.1 $	19.1 17.2	28.2 10.7 *	15.2 13.6	37.3 9.2 $	366.8 26.0 $	-24.1 10.7 :	69.1 12.1 $	63.9 12.1 $	46.0 11.5 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 100 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	145.0 $ 1.4 2	122.0 ... 1	161.8 * 50.3 4	... .	138.0 96.2 2	230.0 + 52.0 3	217.0 $ 21.1 3	218.0 97.6 2	171.0 96.1 3
ASA	... .	... .	... .	... .	17.5 42.0 4	... .	-57.5 147.8 2	50.0 + 1.4 2	75.0 * 1.4 2	... .	... .
GR 78	-145.0 $ 1.4 2	... .	... .	-3.8 21.9 4	-.9 32.8 8	... .	-70.7 : 22.2 3	58.5 $ 6.6 4	58.8 $ 13.0 4	32.5 19.1 2	-39.3 31.2 4
SP 76	-122.0 ... 1	... .	3.8 21.9 4	... .	14.8 30.0 4	... .	... .	79.0 ... 1	73.0 ... 1	39.0 ... 1	-41.5 23.3 2
SWISS	-161.8 * 50.3 4	-17.5 42.0 4	.9 32.8 8	-14.8 30.0 4	... .	... .	-60.9 82.5 8	69.0 + 36.6 5	74.2 * 34.9 5	35.8 : 21.4 5	-18.8 38.7 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-138.0 96.2 2	57.5 147.8 2	70.7 : 22.2 3	... .	60.9 82.5 8	... .	... .	144.5 20.5 2	138.0 26.9 2	75.3 $ 8.1 3	14.2 30.5 5
RS21C	-230.0 + 52.0 3	-50.0 + 1.4 2	-58.5 $ 6.6 4	-79.0 ... 1	-69.0 + 36.6 5	... .	-144.5 20.5 2	... .	-5.8 23.8 8	... .	-120.0 24.0 2
RS21N	-217.0 $ 21.1 3	-75.0 * 1.4 2	-58.8 $ 13.0 4	-73.0 ... 1	-74.2 * 34.9 5	... .	-138.0 26.9 2	5.8 23.8 8	... .	... .	-111.5 27.6 2
RS 80	-218.0 97.6 2	... .	-32.5 19.1 2	-39.0 ... 1	-35.8 : 21.4 5	... .	-75.3 $ 8.1 3	... .	... .	... .	-55.4 * 22.8 5
V1392	-171.0 96.1 3	... .	39.3 31.2 4	41.5 23.3 2	18.8 38.7 8	... .	-14.2 30.5 5	120.0 24.0 2	111.5 27.6 2	55.4 * 22.8 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 100 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	167.3	173.3	162.8	170.9	...	115.8	238.9	233.1	202.6	142.5
	...	19.2 $	13.2 $	15.9 $	11.9 $	...	13.4 $	13.8 $	13.8 $	14.3 $	12.8 $
ASA	-167.3	...	6.0	-4.5	3.7	...	-51.4	71.6	65.9	35.3	-24.8
	19.2 $	...	18.1	20.3	16.2	...	17.3 $	17.7 $	17.7 $	19.2	18.0
GR 78	-173.3	-6.0	...	-10.5	-2.4	...	-57.5	65.6	59.8	29.3	-30.8
	13.2 $	18.1	...	13.7	9.8	...	11.8 $	12.4 $	12.4 $	13.1 :	11.2 *
SP 76	-162.8	4.5	10.5	...	8.1	...	-47.0	76.1	70.3	39.8	-20.3
	15.9 $	20.3	13.7	...	13.3	...	15.3 $	15.6 $	15.6 $	15.8 +	14.3
SWISS	-170.9	-3.7	2.4	-8.1	...	...	-55.1	68.0	62.2	31.6	-28.4
	11.9 $	16.2	9.8	13.3	...	...	10.0 $	11.4 $	11.4 $	11.6 *	9.6 $
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	-115.8	51.4	57.5	47.0	55.1	...	...	123.1	117.3	86.7	26.7
	13.4 $	17.3 $	11.8 $	15.3 $	10.0 $	...	...	13.0 $	13.0 $	12.9 $	11.2 +
RS21C	-238.9	-71.6	-65.6	-76.1	-68.0	...	-123.1	...	-5.8	-36.3	-96.4
	13.8 $	17.7 $	12.4 $	15.6 $	11.4 $	...	13.0 $	...	23.8	14.8 +	12.8 $
RS21N	-233.1	-65.9	-59.8	-70.3	-62.2	...	-117.3	5.8	...	-30.6	-90.6
	13.8 $	17.7 $	12.4 $	15.6 $	11.4 $	...	13.0 $	23.8	...	14.8 +	12.8 $
RS 80	-202.6	-35.3	-29.3	-39.8	-31.6	...	-86.7	36.3	30.6	...	-60.0
	14.3 $	19.2	13.1 :	15.8 +	11.6 *	...	12.9 $	14.8 +	14.8 +	...	12.1 $
V1392	-142.5	24.8	30.8	20.3	28.4	...	-26.7	96.4	90.6	60.0	...
	12.8 $	18.0	11.2 *	14.3	9.6 $	...	11.2 +	12.8 $	12.8 $	12.1 $	...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 70 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	171.0 ... 1	... .	176.3 82.8 3	... .	170.0 130.1 2	239.0 ... 1	266.0 ... 1	257.5 126.6 2	276.5 41.7 2
ASA	... .	... .	... .	... .	5.5 44.7 4	... .	-75.5 181.7 2	55.5 : 3.5 2	84.5 + 3.5 2	... .	... .
GR 78	-171.0 ... 1	... .	... .	5.0 23.3 4	-9.5 37.2 8	... .	-79.3 + 18.0 3	77.5 $ 8.7 4	77.3 $ 16.3 4	46.0 19.8 2	-45.3 35.6 4
SP 76	... .	... .	-5.0 23.3 4	... .	1.8 30.5 4	... .	... .	95.0 ... 1	86.0 ... 1	45.0 ... 1	-53.0 31.1 2
SWISS	-176.3 82.8 3	-5.5 44.7 4	9.5 37.2 8	-1.8 30.5 4	... .	... .	-57.0 99.5 8	95.8 * 40.4 5	101.4 $ 36.7 5	60.4 $ 20.6 5	-9.9 44.6 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-170.0 130.1 2	75.5 181.7 2	79.3 + 18.0 3	... .	57.0 99.5 8	... .	... .	170.5 21.9 2	161.0 31.1 2	89.3 $ 4.0 3	11.8 36.6 5
RS21C	-239.0 ... 1	-55.5 : 3.5 2	-77.5 $ 8.7 4	-95.0 ... 1	-95.8 * 40.4 5	... .	-170.5 21.9 2	... .	-4.1 25.8 8	... .	-149.5 29.0 2
RS21N	-266.0 ... 1	-84.5 + 3.5 2	-77.3 $ 16.3 4	-86.0 ... 1	-101.4 $ 36.7 5	... .	-161.0 31.1 2	4.1 25.8 8	... .	... .	-137.0 33.9 2
RS 80	-257.5 126.6 2	... .	-46.0 19.8 2	-45.0 ... 1	-60.4 $ 20.6 5	... .	-89.3 $ 4.0 3	... .	... .	... .	-68.0 $ 23.0 5
V1392	-276.5 41.7 2	... .	45.3 35.6 4	53.0 31.1 2	9.9 44.6 8	... .	-11.8 36.6 5	149.5 29.0 2	137.0 33.9 2	68.0 $ 23.0 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 70 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	220.1	219.8	218.4	206.7	...	156.0	301.9	297.8	258.9	187.7
	...	25.1 $	18.9 $	22.5 $	17.2 $	...	18.4 $	20.3 $	20.3 $	19.2 $	18.1 $
ASA	-220.1	...	-.3	-1.6	-13.4	...	-64.1	81.8	77.7	38.8	-32.4
	25.1 $	...	21.9	24.9	19.6	...	20.8 $	21.5 $	21.5 $	23.2	21.8
GR 78	-219.8	.3	...	-1.4	-13.1	...	-63.9	82.1	78.0	39.1	-32.2
	18.9 $	21.9	...	17.0	12.0	...	14.4 $	15.5 $	15.5 $	15.9 +	13.7 :
SP 76	-218.4	1.6	1.4	...	-11.7	...	-62.5	83.5	79.4	40.4	-30.8
	22.5 $	24.9	17.0	...	16.6	...	19.0 $	19.7 $	19.7 $	19.6 :	17.8
SWISS	-206.7	13.4	13.1	11.7	...	...	-50.7	95.2	91.1	52.2	-19.0
	17.2 $	19.6	12.0	16.6	...	...	12.1 $	14.2 $	14.2 $	14.1 $	11.8
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	-156.0	64.1	63.9	62.5	50.7	...	...	146.0	141.8	102.9	31.7
	18.4 $	20.8 $	14.4 $	19.0 $	12.1 $	...	...	16.2 $	16.2 $	15.6 $	13.6 :
RS21C	-301.9	-81.8	-82.1	-83.5	-95.2	...	-146.0	...	-4.1	-43.0	-114.2
	20.3 $	21.5 $	15.5 $	19.7 $	14.2 $	...	16.2 $	...	25.8	18.3 :	16.0 $
RS21N	-297.8	-77.7	-78.0	-79.4	-91.1	...	-141.8	4.1	...	-38.9	-110.1
	20.3 $	21.5 $	15.5 $	19.7 $	14.2 $	...	16.2 $	25.8	...	18.3 :	16.0 $
RS 80	-258.9	-38.8	-39.1	-40.4	-52.2	...	-102.9	43.0	38.9	...	-71.2
	19.2 $	23.2	15.9 +	19.6 :	14.1 $	...	15.6 $	18.3 :	18.3 :	...	14.7 $
V1392	-187.7	32.4	32.2	30.8	19.0	...	-31.7	114.2	110.1	71.2	...
	18.1 $	21.8	13.7 :	17.8	11.8	...	13.6 :	16.0 $	16.0 $	14.7 $	...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 50 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	1.7 67.0 3	... .	-85.5 210.0 2	73.0 ... 1	101.0 ... 1	... .	... .
GR 78	... .	... .	... .	12.0 23.8 4	-27.1 39.5 7	... .	-84.7 : 23.4 3	93.8 $ 9.0 4	96.8 $ 19.3 4	56.5 23.3 2	-51.5 37.9 4
SP 76	... .	... .	-12.0 23.8 4	... .	-34.3 32.2 3	... .	... .	107.0 ... 1	101.0 ... 1	53.0 ... 1	-66.0 36.8 2
SWISS	... .	-1.7 67.0 3	27.1 39.5 7	34.3 32.2 3	... .	... .	-57.9 114.0 8	127.6 $ 37.2 5	135.6 $ 33.8 5	84.8 $ 29.2 5	-1.6 46.1 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	85.5 210.0 2	84.7 : 23.4 3	... .	57.9 114.0 8	... .	... .	193.5 : 19.1 2	187.0 28.3 2	111.0 $ 12.1 3	15.0 42.1 5
RS21C	... .	-73.0 ... 1	-93.8 $ 9.0 4	-107.0 ... 1	-127.6 $ 37.2 5	... .	-193.5 : 19.1 2	... .	-3.3 26.3 8	... .	-172.0 38.2 2
RS21N	... .	-101.0 ... 1	-96.8 $ 19.3 4	-101.0 ... 1	-135.6 $ 33.8 5	... .	-187.0 28.3 2	3.3 26.3 8	... .	... .	-162.5 43.1 2
RS 80	... .	... .	-56.5 23.3 2	-53.0 ... 1	-84.8 $ 29.2 5	... .	-111.0 $ 12.1 3	... .	... .	... .	-84.6 $ 24.9 5
V1392	... .	... .	51.5 37.9 4	66.0 36.8 2	1.6 46.1 8	... .	-15.0 42.1 5	172.0 38.2 2	162.5 43.1 2	84.6 $ 24.9 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 50 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	9.3 25.0	17.0 28.0	-20.6 22.7	... ...	-70.7 23.5 $	110.4 25.2 $	107.2 25.2 $	54.6 26.2 :	-38.3 24.8
GR 78	... ...	-9.3 25.0	... ...	7.7 17.8	-29.9 12.8 :	... ...	-80.0 15.2 $	101.2 16.3 $	97.9 16.3 $	45.4 16.9 *	-47.6 14.3 $
SP 76	... ...	-17.0 28.0	-7.7 17.8	... ...	-37.6 17.7 :	... ...	-87.7 20.0 $	93.5 20.8 $	90.2 20.8 $	37.7 20.7	-55.3 18.7 $
SWISS	... ...	20.6 22.7	29.9 12.8 :	37.6 17.7 :	... ...	... ...	-50.1 12.7 $	131.1 15.2 $	127.8 15.2 $	75.3 15.0 $	-17.7 12.4
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	70.7 23.5 $	80.0 15.2 $	87.7 20.0 $	50.1 12.7 $	... ...	... ...	181.2 17.2 $	177.9 17.2 $	125.4 16.5 $	32.4 14.2 :
RS21C	... ...	-110.4 25.2 $	-101.2 16.3 $	-93.5 20.8 $	-131.1 15.2 $	... ...	-181.2 17.2 $	... ...	-3.3 26.3	-55.8 19.6 *	-148.8 16.9 $
RS21N	... ...	-107.2 25.2 $	-97.9 16.3 $	-90.2 20.8 $	-127.8 15.2 $	... ...	-177.9 17.2 $	3.3 26.3	... ...	-52.5 19.6 *	-145.5 16.9 $
RS 80	... ...	-54.6 26.2 :	-45.4 16.9 *	-37.7 20.7	-75.3 15.0 $	... ...	-125.4 16.5 $	55.8 19.6 *	52.5 19.6 *	... ...	-93.0 15.4 $
V1392	... ...	38.3 24.8	47.6 14.3 $	55.3 18.7 $	17.7 12.4	... ...	-32.4 14.2 :	148.8 16.9 $	145.5 16.9 $	93.0 15.4 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 30 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-32.7 81.2 3	... .	-139.5 280.7 2	98.0 ... 1	119.0 ... 1	... .	... .
GR 78	... .	... .	... .	40.8 28.9 4	-31.1 45.3 7	... .	-110.3 62.5 3	130.3 $ 9.6 4	129.8 $ 23.4 4	85.5 33.2 2	-57.0 49.7 4
SP 76	... .	... .	-40.8 28.9 4	... .	-72.3 52.9 3	... .	... .	117.0 ... 1	103.0 ... 1	52.0 ... 1	-108.0 52.3 2
SWISS	... .	32.7 81.2 3	31.1 45.3 7	72.3 52.9 3	... .	... .	-70.4 154.6 8	169.6 $ 36.2 5	173.4 $ 33.2 5	134.6 $ 41.2 5	11.4 59.4 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	139.5 280.7 2	110.3 62.5 3	... .	70.4 154.6 8	... .	... .	267.0 75.0 2	257.5 92.6 2	150.7 * 25.7 3	20.4 56.8 5
RS21C	... .	-98.0 ... 1	-130.3 $ 9.6 4	-117.0 ... 1	-169.6 $ 36.2 5	... .	-267.0 75.0 2	... .	-5.4 30.3 8	... ¢... .	-223.0 55.2 2
RS21N	... .	-119.0 ... 1	-129.8 $ 23.4 4	-103.0 ... 1	-173.4 $ 33.2 5	... .	-257.5 92.6 2	5.4 30.3 8	... .	... .	-205.0 60.8 2
RS 80	... .	... .	-85.5 33.2 2	-52.0 ... 1	-134.6 $ 41.2 5	... .	-150.7 * 25.7 3	... .	... .	... .	-114.0 $ 29.4 5
V1392	... .	... .	57.0 49.7 4	108.0 52.3 2	-11.4 59.4 8	... .	-20.4 56.8 5	223.0 55.2 2	205.0 60.8 2	114.0 $ 29.4 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 30 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-16.7 33.7	21.4 37.8	-56.6 30.6	... ...	-116.7 31.7 $	124.3 34.0 $	118.9 34.0 $	58.0 35.4	-68.8 33.4 :
GR 78	... ...	16.7 33.7	... ...	38.1 24.0	-39.9 17.3 :	... ...	-100.0 20.4 $	141.0 22.0 $	135.6 22.0 $	74.7 22.7 $	-52.1 19.3 *
SP 76	... ...	-21.4 37.8	-38.1 24.0	... ...	-78.0 23.9 $	... ...	-138.1 27.0 $	102.9 28.0 $	97.5 28.0 $	36.7 27.9	-90.2 25.2 $
SWISS	... ...	56.6 30.6	39.9 17.3 :	78.0 23.9 $	... ...	... ...	-60.1 17.2 $	180.9 20.5 $	175.5 20.5 $	114.6 20.2 $	-12.2 16.7
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	116.7 31.7 $	100.0 20.4 $	138.1 27.0 $	60.1 17.2 $	... ...	... ...	241.0 23.2 $	235.7 23.2 $	174.8 22.3 $	47.9 19.2 +
RS21C	... ...	-124.3 34.0 $	-141.0 22.0 $	-102.9 28.0 $	-180.9 20.5 $	... ...	-241.0 23.2 $	... ...	-5.4 30.3	-66.3 26.4 +	-193.1 22.9 $
RS21N	... ...	-118.9 34.0 $	-135.6 22.0 $	-97.5 28.0 $	-175.5 20.5 $	... ...	-235.7 23.2 $	5.4 30.3	... ...	-60.9 26.4 +	-187.7 22.9 $
RS 80	... ...	-58.0 35.4	-74.7 22.7 $	-36.7 27.9	-114.6 20.2 $	... ...	-174.8 22.3 $	66.3 26.4 +	60.9 26.4 +	... ...	-126.8 20.8 $
V1392	... ...	68.8 33.4 :	52.1 19.3 *	90.2 25.2 $	12.2 16.7	... ...	-47.9 19.2 +	193.1 22.9 $	187.7 22.9 $	126.8 20.8 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 20 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-74.0 93.2 3	... .	-189.5 314.7 2	94.0 ... 1	125.0 ... 1	... .	... .
GR 78	... .	... .	... .	87.0 * 27.0 4	-41.7 51.3 6	... .	-128.0 87.8 3	163.5 $ 6.6 4	162.5 $ 28.4 4	117.5 27.6 2	-64.0 57.1 4
SP 76	... .	... .	-87.0 * 27.0 4	... .	-109.0 45.1 3	... .	... .	105.0 ... 1	97.0 ... 1	55.0 ... 1	-150.0 73.5 2
SWISS	... .	74.0 93.2 3	41.7 51.3 6	109.0 45.1 3	... .	... .	-50.7 181.6 7	218.8 $ 39.1 4	222.0 $ 30.3 4	174.2 $ 32.8 5	17.8 65.2 8
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	189.5 314.7 2	128.0 87.8 3	... .	50.7 181.6 7	... .	... .	324.5 106.8 2	312.0 144.2 2	185.7 $ 17.0 3	23.4 70.5 5
RS21 C	... .	-94.0 ... 1	-163.5 $ 6.6 4	-105.0 ... 1	-218.8 $ 39.1 4	... .	-324.5 106.8 2	... .	-4.8 28.8 8	... .	-269.5 53.0 2
RS21 N	... .	-125.0 ... 1	-162.5 $ 28.4 4	-97.0 ... 1	-222.0 $ 30.3 4	... .	-312.0 144.2 2	4.8 28.8 8	... .	... .	-246.0 75.0 2
RS 80	... .	... .	-117.5 27.6 2	-55.0 ... 1	-174.2 $ 32.8 5	... .	-185.7 $ 17.0 3	... .	... .	... .	-142.0 $ 33.4 5
V1392	... .	... .	64.0 57.1 4	150.0 73.5 2	-17.8 65.2 8	... .	-23.4 70.5 5	269.5 53.0 2	246.0 75.0 2	142.0 $ 33.4 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 20 MB LEVEL I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	-52.1 38.4	22.5 42.8	-105.7 34.7 $	... ...	-158.3 36.0 $	126.6 38.9 $	121.8 38.9 $	49.8 40.1	-109.4 37.8 *
GR 78	... ...	52.1 38.4	... ...	74.5 27.3 *	-53.6 20.4 +	... ...	-106.2 23.6 $	178.7 25.5 $	173.9 25.5 $	101.8 26.0 $	-57.3 22.1 +
SP 76	... ...	-22.5 42.8	-74.5 27.3 *	... ...	-128.2 27.2 $	... ...	-180.7 30.8 $	104.1 32.2 $	99.4 32.2 $	27.3 31.6	-131.9 28.5 $
SWISS	... ...	105.7 34.7 $	53.6 20.4 +	128.2 27.2 $	... ...	... ...	-52.6 20.1 +	232.3 24.3 $	227.5 24.3 $	155.4 23.0 $	-3.7 19.1
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	158.3 36.0 $	106.2 23.6 $	180.7 30.8 $	52.6 20.1 +	... ...	... ...	284.8 27.0 $	280.1 27.0 $	208.0 25.4 $	48.9 21.9 :
RS21C	... ...	-126.6 38.9 $	-178.7 25.5 $	-104.1 32.2 $	-232.3 24.3 $	... ...	-284.8 27.0 $	... ...	-4.8 28.8	-76.8 30.4 +	-236.0 26.4 $
RS21N	... ...	-121.8 38.9 $	-173.9 25.5 $	-99.4 32.2 $	-227.5 24.3 $	... ...	-280.1 27.0 $	4.8 28.8	... ...	-72.1 30.4 +	-231.2 26.4 $
RS 80	... ...	-49.8 40.1	-101.8 26.0 $	-27.3 31.6	-155.4 23.0 $	... ...	-208.0 25.4 $	76.8 30.4 +	72.1 30.4 +	... ...	-159.2 23.6 $
V1392	... ...	109.4 37.8 *	57.3 22.1 +	131.9 28.5 $	3.7 19.1	... ...	-48.9 21.9 :	236.0 26.4 $	231.2 26.4 $	159.2 23.6 $	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 900 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	-1.0 ... 1	... .	-.7 5.5 3	10.0 24.0 2	-1.3 1.2 3	2.5 2.1 2	-2.5 2.1 2	3.0 ... 1	-7.3 5.1 3
ASA	... .	... .	... .	... .	-12.2 12.7 5	... .	... .	... .	... .	... .	... .
GR 78	1.0 ... 1	... .	... .	6.0 ... 1	2.0 3.5 3	... .	-1.0 $ 0.0 2	2.0 ... 1	-3.0 ... 1	5.0 ... 1	-7.0 7.1 2
SP 76	... .	... .	-6.0 ... 1	... .	-1.3 5.5 4	... .	2.0 ... 1	... .	... .	3.0 ... 1	-8.0 ... 1
SWISS	.7 5.5 3	12.2 12.7 5	-2.0 3.5 3	1.3 5.5 4	... .	24.0 35.4 2	.5 5.4 6	1.0 1.7 3	-1.3 5.7 3	1.0 2.8 2	-.3 6.2 6
THOMM	-10.0 24.0 2	... .	... .	... .	-24.0 35.4 2	... .	-11.0 22.6 2	-47.0 ... 1	-44.0 ... 1	-24.0 ... 1	-37.5 10.6 2
RS 18	1.3 1.2 3	... .	1.0 $ 0.0 2	-2.0 ... 1	-.5 5.4 6	11.0 22.6 2	... .	3.0 ... 1	-2.0 ... 1	4.5 2.1 2	-5.0 5.3 3
RS21C	-2.5 2.1 2	... .	-2.0 ... 1	... .	-1.0 1.7 3	47.0 ... 1	-3.0 ... 1	... .	-2.3 4.6 3	... .	-6.0 11.3 2
RS21N	2.5 2.1 2	... .	3.0 ... 1	... .	1.3 5.7 3	44.0 ... 1	2.0 ... 1	2.3 4.6 3	... .	... .	-5.0 5.7 2
RS 80	-3.0 ... 1	... .	-5.0 ... 1	-3.0 ... 1	-1.0 2.8 2	24.0 ... 1	-4.5 2.1 2	... .	... .	... .	-6.0 ... 1
V1392	7.3 5.1 3	... .	7.0 7.1 2	8.0 ... 1	.3 6.2 6	37.5 10.6 2	5.0 5.3 3	6.0 11.3 2	5.0 5.7 2	6.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 900 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	9.2 5.1	-3.1 3.6	-1.1 4.2	-3.0 2.8	21.0 3.6 $	-1.3 3.0	-2.9 3.6	-5.2 3.6	.6 3.8	-7.3 3.0 +
ASA	-9.2 5.1	... ...	-12.3 5.2 :	-10.4 5.4	-12.2 4.2 *	11.8 5.4 :	-10.6 4.9 :	-12.1 5.3 :	-14.5 5.3 :	-8.7 5.4	-16.5 4.9 $
GR 78	3.1 3.6	12.3 5.2 :	... ...	1.9 4.2	.1 3.1	24.1 4.1 $	1.7 3.3	.2 4.0	-2.2 4.0	3.6 4.0	-4.3 3.3
SP 76	1.1 4.2	10.4 5.4	-1.9 4.2	... ...	-1.8 3.5	22.2 4.5 $	-.2 3.8	-1.8 4.5	-4.1 4.5	1.7 4.4	-6.2 3.9
SWISS	3.0 2.8	12.2 4.2 *	-.1 3.1	1.8 3.5	... ...	24.0 3.3 $	1.6 2.5	.1 3.3	-2.3 3.3	3.5 3.4	-4.3 2.5
THOMM	-21.0 3.6 $	-11.8 5.4 :	-24.1 4.1 $	-22.2 4.5 $	-24.0 3.3 $	... ...	-22.4 3.4 $	-23.9 4.0 $	-26.3 4.0 $	-20.5 4.1 $	-28.4 3.4 $
RS 18	1.3 3.0	10.6 4.9 :	-1.7 3.3	.2 3.8	-1.6 2.5	22.4 3.4 $	... ...	-1.6 3.5	-3.9 3.5	1.9 3.5	-6.0 2.8 :
RS21C	2.9 3.6	12.1 5.3 :	-.2 4.0	1.8 4.5	-.1 3.3	23.9 4.0 $	1.6 3.5	... ...	-2.3 4.6	3.4 4.3	-4.4 3.4
RS21N	5.2 3.6	14.5 5.3 :	2.2 4.0	4.1 4.5	2.3 3.3	26.3 4.0 $	3.9 3.5	2.3 4.6	... ...	5.8 4.3	-2.1 3.4
RS 80	-.6 3.8	8.7 5.4	-3.6 4.0	-1.7 4.4	-3.5 3.4	20.5 4.1 $	-1.9 3.5	-3.4 4.3	-5.8 4.3	... ...	-7.9 3.7 :
V1392	7.3 3.0 +	16.5 4.9 $	4.3 3.3	6.2 3.9	4.3 2.5	28.4 3.4 $	6.0 2.8 :	4.4 3.4	2.1 3.4	7.9 3.7 :	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 850 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	−1.0 ... 1	... .	−2.3 6.1 3	9.0 28.3 2	−1.3 2.1 3	2.0 $ 0.0 2	−3.0 2.8 2	3.0 ... 1	−6.0 5.0 3
ASA	... .	... .	... .	... .	−12.6 15.4 5	... .	... .	... .	... .	... .	... .
GR 78	1.0 ... 1	... .	... .	−9.0 ... 1	1.7 3.8 3	... .	−1.5 .7 2	3.0 ... 1	−4.0 ... 1	5.0 ... 1	−6.0 5.7 2
SP 76	... .	... .	9.0 ... 1	... .	1.0 7.2 4	... .	−3.0 ... 1	... .	... .	4.0 ... 1	7.0 ... 1
SWISS	2.3 6.1 3	12.6 15.4 5	−1.7 3.8 3	−1.0 7.2 4	... .	25.5 38.9 2	.2 6.1 6	2.7 3.5 3	0.0 6.9 3	.5 2.1 2	1.0 5.9 6
THOMM	−9.0 28.3 2	... .	... .	... .	−25.5 38.9 2	... .	−10.0 25.5 2	−47.0 ... 1	−45.0 ... 1	−26.0 ... 1	−38.5 12.0 2
RS 18	1.3 2.1 3	... .	1.5 .7 2	3.0 ... 1	−.2 6.1 6	10.0 25.5 2	... .	4.0 ... 1	−3.0 ... 1	4.5 3.5 2	−3.7 4.7 3
RS21C	−2.0 $ 0.0 2	... .	−3.0 ... 1	... .	−2.7 3.5 3	47.0 ... 1	−4.0 ... 1	... .	−2.7 4.5 3	... .	−6.5 9.2 2
RS21N	3.0 2.8 2	... .	4.0 ... 1	... .	0.0 6.9 3	45.0 ... 1	3.0 ... 1	2.7 4.5 3	... .	... .	−4.0 2.8 2
RS 80	−3.0 ... 1	... .	−5.0 ... 1	−4.0 ... 1	−.5 2.1 2	26.0 ... 1	−4.5 3.5 2	... .	... .	... .	−4.0 ... 1
V1392	6.0 5.0 3	... .	6.0 5.7 2	−7.0 ... 1	−1.0 5.9 6	38.5 12.0 2	3.7 4.7 3	6.5 9.2 2	4.0 2.8 2	4.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 850 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	8.5 5.7	-2.7 4.1	-6.2 4.7	-4.1 3.2	21.0 4.0 $	-2.4 3.3	-2.4 4.0	-5.1 4.0	-.8 4.3	-6.4 3.3
ASA	-8.5 5.7	... ...	-11.2 5.8	-14.7 6.1 +	-12.6 4.7 *	12.5 6.0 :	-11.0 5.4 :	-11.0 5.9	-13.6 5.9	-9.3 6.1	-15.0 5.4 *
GR 78	2.7 4.1	11.2 5.8	... ...	-3.5 4.7	-1.4 3.5	23.7 4.6 $	.3 3.7	.2 4.4	-2.4 4.4	1.9 4.5	-3.8 3.7
SP 76	6.2 4.7	14.7 6.1 +	3.5 4.7	... ...	2.1 3.9	27.2 5.1 $	3.8 4.3	3.8 5.1	1.1 5.1	5.4 4.9	-.2 4.3
SWISS	4.1 3.2	12.6 4.7 *	1.4 3.5	-2.1 3.9	... ...	25.1 3.7 $	1.6 2.8	1.6 3.6	-1.0 3.6	3.3 3.8	-2.4 2.8
THOMM	-21.0 4.0 $	-12.5 6.0 :	-23.7 4.6 $	-27.2 5.1 $	-25.1 3.7 $	... ...	-23.4 3.8 $	-23.4 4.5 $	-26.1 4.5 $	-21.8 4.6 $	-27.4 3.8 $
RS 18	2.4 3.3	11.0 5.4 :	-.3 3.7	-3.8 4.3	-1.6 2.8	23.4 3.8 $	... ...	-.0 4.0	-2.7 4.0	1.6 4.0	-4.0 3.1
RS21C	2.4 4.0	11.0 5.9	-.2 4.4	-3.8 5.1	-1.6 3.6	23.4 4.5 $	.0 4.0	... ...	-2.7 4.5	1.6 4.9	-4.0 3.8
RS21N	5.1 4.0	13.6 5.9	2.4 4.4	-1.1 5.1	1.0 3.6	26.1 4.5 $	2.7 4.0	2.7 4.5	... ...	4.3 4.9	-1.4 3.8
RS 80	.8 4.3	9.3 6.1	-1.9 4.5	-5.4 4.9	-3.3 3.8	21.8 4.6 $	-1.6 4.0	-1.6 4.9	-4.3 4.9	... ...	-5.6 4.1
V1392	6.4 3.3	15.0 5.4 *	3.8 3.7	.2 4.3	2.4 2.8	27.4 3.8 $	4.0 3.1	4.0 3.8	1.4 3.8	5.6 4.1	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 700 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	0.0 ... 1	... .	-1.0 5.0 3	0.0 39.6 2	-2.7 4.0 3	4.0 2.8 2	-6.0 5.7 2	3.0 ... 1	-2.7 6.0 3
ASA	... .	... .	... .	... .	-10.2 22.4 5	... .	... .	... .	... .	... .	... .
GR 78	0.0 ... 1	... .	... .	-10.0 ... 1	-.7 1.5 3	... .	-5.5 2.1 2	2.0 ... 1	-10.0 ... 1	3.0 ... 1	-5.5 4.9 2
SP 76	... .	... .	10.0 ... 1	... .	.5 9.3 4	... .	-11.0 ... 1	... .	... .	4.0 ... 1	8.0 ... 1
SWISS	1.0 5.0 3	10.2 22.4 5	.7 1.5 3	-.5 9.3 4	... .	23.0 63.6 2	-3.0 6.7 6	10.0 13.0 3	-2.3 9.1 3	1.0 1.4 2	2.8 6.3 6
THOMM	0.0 39.6 2	... .	... .	... .	-23.0 63.6 2	... .	-.5 37.5 2	-43.0 ... 1	-60.0 ... 1	-25.0 ... 1	-41.5 23.3 2
RS 18	2.7 4.0 3	... .	5.5 2.1 2	11.0 ... 1	3.0 6.7 6	.5 37.5 2	... .	9.0 ... 1	-3.0 ... 1	4.5 3.5 2	.7 2.3 3
RS21C	-4.0 2.8 2	... .	-2.0 ... 1	... .	-10.0 13.0 3	43.0 ... 1	-9.0 ... 1	... .	-12.3 : 4.5 3	... .	-13.0 2.8 2
RS21N	6.0 5.7 2	... .	10.0 ... 1	... .	2.3 9.1 3	60.0 ... 1	3.0 ... 1	12.3 : 4.5 3	... .	... .	1.5 .7 2
RS 80	-3.0 ... 1	... .	-3.0 ... 1	-4.0 ... 1	-1.0 1.4 2	25.0 ... 1	-4.5 3.5 2	... .	... .	... .	0.0 ... 1
V1392	2.7 6.0 3	... .	5.5 4.9 2	-8.0 ... 1	-2.8 6.3 6	41.5 23.3 2	-.7 2.3 3	13.0 2.8 2	-1.5 .7 2	0.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 700 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	5.8 8.3	-.9 5.9	-5.4 6.8	-4.4 4.6	16.9 5.8 $	-4.4 4.9	1.9 5.8	-10.4 5.8	-1.8 6.3	-5.6 4.9
ASA	-5.8 8.3	... ...	-6.6 8.5	-11.2 8.9	-10.2 6.8	11.1 8.7	-10.2 7.9	-3.9 8.7	-16.2 8.7	-7.6 8.8	-11.4 7.9
GR 78	.9 5.9	6.6 8.5	... ...	-4.6 6.8	-3.6 5.1	17.8 6.7 +	-3.5 5.4	2.8 6.5	-9.5 6.5	-1.0 6.6	-4.7 5.4
SP 76	5.4 6.8	11.2 8.9	4.6 6.8	... ...	1.0 5.6	22.3 7.4 $	1.0 6.3	7.3 7.4	-5.0 7.4	3.6 7.1	-.2 6.3
SWISS	4.4 4.6	10.2 6.8	3.6 5.1	-1.0 5.6	... ...	21.3 5.4 $	.0 4.0	6.3 5.3	-6.0 5.3	2.6 5.6	-1.2 4.0
THOMM	-16.9 5.8 $	-11.1 8.7	-17.8 6.7 +	-22.3 7.4 $	-21.3 5.4 $	... ...	-21.3 5.6 $	-15.0 6.6 :	-27.3 6.6 :	-18.8 6.8 *	-22.5 5.6 $
RS 18	4.4 4.9	10.2 7.9	3.5 5.4	-1.0 6.3	-.0 4.0	21.3 5.6 $	... ...	6.3 5.8	-6.0 5.8	2.5 5.8	-1.2 4.5
RS21C	-1.9 5.8	3.9 8.7	-2.8 6.5	-7.3 7.4	-6.3 5.3	15.0 6.6 :	-6.3 5.8	... ...	-12.3 4.5 :	-3.8 7.1	-7.5 5.6
RS21N	10.4 5.8	16.2 8.7	9.5 6.5	5.0 7.4	6.0 5.3	27.3 6.6 :	6.0 5.8	12.3 4.5 :	... ...	8.6 7.1	4.8 5.6
RS 80	1.8 6.3	7.6 8.8	1.0 6.6	-3.6 7.1	-2.6 5.6	18.8 6.8 *	-2.5 5.8	3.8 7.1	-8.6 7.1	... ...	-3.8 6.0
V1392	5.6 4.9	11.4 7.9	4.7 5.4	.2 6.3	1.2 4.0	22.5 5.6 $	1.2 4.5	7.5 5.6	-4.8 5.6	3.8 6.0	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 500 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	5.0 ... 1	... .	20.7 38.6 3	-58.0 ... 1	-3.5 7.8 2	35.0 43.8 2	23.0 48.1 2	... .	-1.5 .7 2
ASA	... .	... .	... .	... .	-3.2 24.8 5	... .	... .	... .	... .	... .	... .
GR 78	-5.0 ... 1	... .	... .	-13.0 ... 1	-7.7 7.2 3	... .	-11.0 4.2 2	-1.0 ... 1	-16.0 ... 1	-1.0 ... 1	-3.0 4.2 2
SP 76	... .	... .	13.0 ... 1	... .	-.3 18.2 4	... .	-21.0 ... 1	... .	... .	6.0 ... 1	13.0 ... 1
SWISS	-20.7 38.6 3	3.2 24.8 5	7.7 7.2 3	.3 18.2 4	... .	-53.0 ... 1	-6.3 15.4 6	17.3 27.4 3	-2.7 13.8 3	-2.0 7.1 2	6.8 8.0 6
THOMM	58.0 ... 1	... .	... .	... .	53.0 ... 1	... .	6.5 75.7 2	... .	... .	-39.0 ... 1	-34.0 ... 1
RS 18	3.5 7.8 2	... .	11.0 4.2 2	21.0 ... 1	6.3 15.4 6	-6.5 75.7 2	... .	13.0 ... 1	-2.0 ... 1	7.5 : .7 2	8.0 5.0 3
RS21C	-35.0 43.8 2	... .	1.0 ... 1	... .	-17.3 27.4 3	... .	-13.0 ... 1	... .	-20.0 14.2 3	... .	-18.5 19.1 2
RS21N	-23.0 48.1 2	... .	16.0 ... 1	... .	2.7 13.8 3	... .	2.0 ... 1	20.0 14.2 3	... .	... .	7.0 4.2 2
RS 80	... .	... .	1.0 ... 1	-6.0 ... 1	2.0 7.1 2	39.0 ... 1	-7.5 : .7 2	... .	... .	... .	5.0 ... 1
V1392	1.5 .7 2	... .	3.0 4.2 2	-13.0 ... 1	-6.8 8.0 6	34.0 ... 1	-8.0 5.0 3	18.5 19.1 2	-7.0 4.2 2	-5.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 500 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	8.7	10.5	2.9	5.5	-7.9	-2.7	22.8	2.8	-1.5	4.9
	...	12.8	9.4	10.8	7.7	11.2	8.2	9.4 +	9.4 +	10.8	8.2
ASA	-8.7	...	1.9	-5.8	-3.2	-16.6	-11.4	14.1	-5.9	-10.2	-3.8
	12.8	...	12.7	13.2	10.2	14.4	11.9	13.1	13.1	13.5	11.9
GR 78	-10.5	-1.9	...	-7.6	-5.1	-18.5	-13.3	12.2	-7.8	-12.1	-5.7
	9.4	12.7	...	10.2	7.6	11.7	8.2	9.9	9.9	10.2	8.2
SP 76	-2.9	5.8	7.6	...	2.6	-10.8	-5.6	19.9	-.1	-4.4	2.0
	10.8	13.2	10.2	...	8.4	12.5	9.4	11.3	11.3	10.9	9.5
SWISS	-5.5	3.2	5.1	-2.6	...	-13.4	-8.2	17.3	-2.7	-7.0	-.6
	7.7	10.2	7.6	8.4	...	10.2	6.1	8.3 :	8.3 :	8.8	6.2
THOMM	7.9	16.6	18.5	10.8	13.4	...	5.2	30.7	10.7	6.4	12.8
	11.2	14.4	11.7	12.5	10.2	...	10.0	12.2 +	12.2 +	11.7	10.5
RS 18	2.7	11.4	13.3	5.6	8.2	-5.2	...	25.5	5.5	1.2	7.6
	8.2	11.9	8.2	9.4	6.1	10.0	...	9.1 *	9.1 *	9.1	7.0
RS21C	-22.8	-14.1	-12.2	-19.9	-17.3	-30.7	-25.5	...	-20.0	-24.3	-17.9
	9.4 +	13.1	9.9	11.3	8.3 :	12.2 +	9.1 *	...	14.2	11.3 :	8.8 :
RS21N	-2.8	5.9	7.8	.1	2.7	-10.7	-5.5	20.0	...	-4.3	2.1
	9.4 +	13.1	9.9	11.3	8.3 :	12.2 +	9.1 *	14.2	...	11.3 :	8.8 :
RS 80	1.5	10.2	12.1	4.4	7.0	-6.4	-1.2	24.3	4.3	...	6.4
	10.8	13.5	10.2	10.9	8.8	11.7	9.1	11.3 :	11.3 :	...	9.5
V1392	-4.9	3.8	5.7	-2.0	.6	-12.8	-7.6	17.9	-2.1	-6.4	...
	8.2	11.9	8.2	9.5	6.2	10.5	7.0	8.8 :	8.8 :	9.5	...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 400 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	40.0 ... 1	... .	51.3 30.0 3	-27.0 ... 1	29.5 17.7 2	60.0 33.9 2	48.0 38.2 2	... .	18.0 26.9 2
ASA	... .	... .	... .	... .	3.8 27.4 5	... .	... .	... .	... .	... .	... .
GR 78	-40.0 ... 1	... .	... .	-18.0 ... 1	-11.7 9.1 3	... .	-17.5 7.8 2	-4.0 ... 1	-19.0 ... 1	-7.0 ... 1	0.0 4.2 2
SP 76	... .	... .	18.0 ... 1	... .	-1.3 21.8 4	... .	-27.0 ... 1	... .	... .	5.0 ... 1	21.0 ... 1
SWISS	-51.3 30.0 3	-3.8 27.4 5	11.7 9.1 3	1.3 21.8 4	... .	-60.0 ... 1	-8.5 18.8 6	10.3 18.8 3	-1.3 19.4 3	-4.5 7.8 2	9.7 9.6 6
THOMM	27.0 ... 1	... .	... .	... .	60.0 ... 1	... .	9.5 84.1 2	... .	... .	-46.0 ... 1	-31.0 ... 1
RS 18	-29.5 17.7 2	... .	17.5 7.8 2	27.0 ... 1	8.5 18.8 6	-9.5 84.1 2	... .	19.0 ... 1	4.0 ... 1	4.5 .7 2	15.0 7.8 3
RS21 C	-60.0 33.9 2	... .	4.0 ... 1	... .	-10.3 18.8 3	... .	-19.0 ... 1	... .	-11.7 : 3.1 3	... .	-6.5 10.6 2
RS21 N	-48.0 38.2 2	... .	19.0 ... 1	... .	1.3 19.4 3	... .	-4.0 ... 1	11.7 : 3.1 3	... .	... .	6.5 13.4 2
RS 80	... .	... .	7.0 ... 1	-5.0 ... 1	4.5 7.8 2	46.0 ... 1	-4.5 .7 2	... .	... .	... .	15.0 ... 1
V1392	-18.0 26.9 2	... .	0.0 4.2 2	-21.0 ... 1	-9.7 9.6 6	31.0 ... 1	-15.0 7.8 3	6.5 10.6 2	-6.5 13.4 2	-15.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 400 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	30.9 13.5 :	42.5 9.9 $	31.7 11.4 *	34.7 8.1 $	19.0 11.7	24.2 8.7 *	47.1 9.9 $	35.4 9.9 $	23.1 11.3 :	36.9 8.7 $
ASA	-30.9 13.5 :	... ...	11.6 13.4	.8 13.9	3.8 10.8	-11.9 15.2	-6.8 12.5	16.2 13.8	4.5 13.8	-7.8 14.2	6.0 12.6
GR 78	-42.5 9.9 $	-11.6 13.4	... ...	-10.8 10.7	-7.8 8.0	-23.5 12.3	-18.3 8.6 :	4.6 10.4	-7.1 10.4	-19.4 10.7	-5.5 8.7
SP 76	-31.7 11.4 *	-.8 13.9	10.8 10.7	... ...	3.0 8.9	-12.7 13.2	-7.5 9.9	15.4 11.9	3.7 11.9	-8.6 11.4	5.2 10.0
SWISS	-34.7 8.1 $	-3.8 10.8	7.8 8.0	-3.0 8.9	... ...	-15.7 10.7	-10.6 6.5	12.4 8.7	.7 8.7	-11.6 9.3	2.2 6.5
THOMM	-19.0 11.7	11.9 15.2	23.5 12.3	12.7 13.2	15.7 10.7	... ...	5.1 10.6	28.1 12.9 :	16.4 12.9 :	4.1 12.3	17.9 11.1
RS 18	-24.2 8.7 *	6.8 12.5	18.3 8.6 :	7.5 9.9	10.6 6.5	-5.1 10.6	... ...	22.9 9.5 +	11.2 9.5 +	-1.1 9.5	12.8 7.4
RS21C	-47.1 9.9 $	-16.2 13.8	-4.6 10.4	-15.4 11.9	-12.4 8.7	-28.1 12.9 :	-22.9 9.5 +	... ...	-11.7 3.1 :	-24.0 11.9 :	-10.1 9.2
RS21N	-35.4 9.9 $	-4.5 13.8	7.1 10.4	-3.7 11.9	-.7 8.7	-16.4 12.9 :	-11.2 9.5 +	11.7 3.1 :	... ...	-12.3 11.9 :	1.5 9.2
RS 80	-23.1 11.3 :	7.8 14.2	19.4 10.7	8.6 11.4	11.6 9.3	-4.1 12.3	1.1 9.5	24.0 11.9 :	12.3 11.9 :	... ...	13.8 10.0
V1392	-36.9 8.7 $	-6.0 12.6	5.5 8.7	-5.2 10.0	-2.2 6.5	-17.9 11.1	-12.8 7.4	10.1 9.2	-1.5 9.2	-13.8 10.0	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 300 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	49.0 ... 1	... .	59.7 36.5 3	-34.0 ... 1	35.5 24.7 2	68.0 39.6 2	54.5 44.5 2	... .	23.5 34.6 2
ASA	... .	... .	... .	... .	9.8 41.1 5	... .	... .	... .	... .	... .	... .
GR 78	-49.0 ... 1	... .	... .	-23.0 ... 1	-16.7 : 4.5 3	... .	-21.0 14.1 2	-9.0 ... 1	-26.0 ... 1	-14.0 ... 1	2.5 4.9 2
SP 76	... .	... .	23.0 ... 1	... ¢	1.0 28.4 4	... .	-33.0 ... 1	... .	... .	4.0 ... 1	29.0 ... 1
SWISS	-59.7 36.5 3	-9.8 41.1 5	16.7 : 4.5 3	-1.0 28.4 4	... .	-80.0 ... 1	-6.7 21.8 6	12.0 19.3 3	1.3 23.3 3	-12.0 14.1 2	14.2 : 10.4 6
THOMM	34.0 ... 1	... .	... .	... .	80.0 ... 1	... .	13.0 104.7 2	... .	... .	-62.0 ... 1	-39.0 ... 1
RS 18	-35.5 24.7 2	... .	21.0 14.1 2	33.0 ... 1	6.7 21.8 6	-13.0 104.7 2	... .	22.0 ... 1	5.0 ... 1	-2.0 1.4 2	17.7 15.0 3
RS21C	-68.0 39.6 2	... .	9.0 ... 1	... .	-12.0 19.3 3	... .	-22.0 ... 1	... .	-10.7 6.0 3	... .	-.5 12.0 2
RS21N	-54.5 44.5 2	... .	26.0 ... 1	... .	-1.3 23.3 3	... .	-5.0 ... 1	10.7 6.0 3	... .	... .	10.5 20.5 2
RS 80	... .	... .	14.0 ... 1	-4.0 ... 1	12.0 14.1 2	62.0 ... 1	2.0 1.4 2	... .	... .	... .	23.0 ... 1
V1392	-23.5 34.6 2	... .	-2.5 4.9 2	-29.0 ... 1	-14.2 : 10.4 6	39.0 ... 1	-17.7 15.0 3	.5 12.0 2	-10.5 20.5 2	-23.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 300 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	30.2 17.1	51.0 12.6 $	35.0 14.5 +	40.0 10.3 $	21.1 14.9	29.6 11.0 *	53.0 12.6 $	42.4 12.6 $	21.1 14.4	45.3 11.0 $
ASA	-30.2 17.1	... ...	20.8 17.0	4.8 17.7	9.8 13.6	-9.1 19.2	-.7 15.9	22.8 17.6	12.1 17.6	-9.2 18.0	15.1 15.9
GR 78	-51.0 12.6 $	-20.8 17.0	... ...	-16.0 13.6	-11.0 10.1	-29.9 15.6	-21.4 10.9	2.0 13.2	-8.6 13.2	-29.9 13.6 :	-5.7 11.0
SP 76	-35.0 14.5 +	-4.8 17.7	16.0 13.6	... ...	5.0 11.3	-13.9 16.7	-5.5 12.6	18.0 15.1	7.4 15.1	-13.9 14.5	10.3 12.7
SWISS	-40.0 10.3 $	-9.8 13.6	11.0 10.1	-5.0 11.3	... ...	-18.9 13.6	-10.5 8.2	13.0 11.1	2.3 11.1	-19.0 11.8	5.3 8.3
THOMM	-21.1 14.9	9.1 19.2	29.9 15.6	13.9 16.7	18.9 13.6	... ...	8.5 13.4	31.9 16.3	21.3 16.3	-.0 15.6	24.2 14.0
RS 18	-29.6 11.0 *	.7 15.9	21.4 10.9	5.5 12.6	10.5 8.2	-8.5 13.4	... ...	23.5 12.1	12.8 12.1	-8.5 12.1	15.8 9.4
RS21 C	-53.0 12.6 $	-22.8 17.6	-2.0 13.2	-18.0 15.1	-13.0 11.1	-31.9 16.3	-23.5 12.1	... ...	-10.7 6.0	-32.0 15.1 :	-7.7 11.7
RS21 N	-42.4 12.6 $	-12.1 17.6	8.6 13.2	-7.4 15.1	-2.3 11.1	-21.3 16.3	-12.8 12.1	10.7 6.0	... ...	-21.3 15.1 :	3.0 11.7
RS 80	-21.1 14.4	9.2 18.0	29.9 13.6 :	13.9 14.5	19.0 11.8	.0 15.6	8.5 12.1	32.0 15.1 :	21.3 15.1 :	... ...	24.3 12.7
V1392	-45.3 11.0 $	-15.1 15.9	5.7 11.0	-10.3 12.7	-5.3 8.3	-24.2 14.0	-15.8 9.4	7.7 11.7	-3.0 11.7	-24.3 12.7	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 250 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	59.0 ... 1	... .	70.7 38.8 3	-27.0 ... 1	42.5 24.7 2	80.5 47.4 2	66.5 54.4 2	... .	26.0 48.1 2
ASA	... .	... .	... .	... .	13.2 47.9 5	... .	... .	... .	... .	... .	... .
GR 78	-59.0 ... 1	... .	... .	-23.0 ... 1	-13.7 * 2.1 3	... .	-21.0 18.4 2	-12.0 ... 1	-31.0 ... 1	-16.0 ... 1	3.5 3.5 2
SP 76	... .	... .	23.0 ... 1	... .	7.0 28.2 4	... .	-34.0 ... 1	... .	... .	7.0 ... 1	29.0 ... 1
SWISS	-70.7 38.8 3	-13.2 47.9 5	13.7 * 2.1 3	-7.0 28.2 4	... .	-81.0 ... 1	-6.5 22.7 6	9.0 13.2 3	1.3 24.1 3	-17.0 18.4 2	11.3 : 10.6 6
THOMM	27.0 ... 1	... .	... .	... .	81.0 ... 1	... .	5.5 115.3 2	... .	... .	-71.0 ... 1	-53.0 ... 1
RS 18	-42.5 24.7 2	... .	21.0 18.4 2	34.0 ... 1	6.5 22.7 6	-5.5 115.3 2	... .	22.0 ... 1	3.0 ... 1	-1.5 9.2 2	17.0 21.6 3
RS21C	-80.5 47.4 2	... .	12.0 ... 1	... .	-9.0 13.2 3	... .	-22.0 ... 1	... .	-7.7 12.1 3	... .	6.0 9.9 2
RS21N	-66.5 54.4 2	... .	31.0 ... 1	... .	-1.3 24.1 3	... .	-3.0 ... 1	7.7 12.1 3	... .	... .	13.0 26.9 2
RS 80	... .	... .	16.0 ... 1	-7.0 ... 1	17.0 18.4 2	71.0 ... 1	1.5 9.2 2	... .	... .	... .	18.0 ... 1
V1392	-26.0 48.1 2	... .	-3.5 3.5 2	-29.0 ... 1	-11.3 : 10.6 6	53.0 ... 1	-17.0 21.6 3	-6.0 9.9 2	-13.0 26.9 2	-18.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 250 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	36.9 18.9	58.5 13.9 $	40.5 16.0 +	50.1 11.4 $	35.0 16.5 :	37.4 12.2 $	59.6 13.9 $	51.9 13.9 $	28.3 15.9	52.0 12.2 $
ASA	−36.9 18.9	... ...	21.6 18.8	3.6 19.6	13.2 15.1	−1.8 21.3	.5 17.6	22.7 19.5	15.0 19.5	−8.6 20.0	15.2 17.7
GR 78	−58.5 13.9 $	−21.6 18.8	... ...	−18.1 15.1	−8.4 11.2	−23.5 17.3	−21.1 12.1	1.1 14.6	−6.6 14.6	−30.2 15.1	−6.5 12.2
SP 76	−40.5 16.0 +	−3.6 19.6	18.1 15.1	... ...	9.6 12.5	−5.4 18.5	−3.0 13.9	19.1 16.7	11.5 16.7	−12.2 16.1	11.6 14.0
SWISS	−50.1 11.4 $	−13.2 15.1	8.4 11.2	−9.6 12.5	... ...	−15.0 15.0	−12.7 9.1	9.5 12.2	1.8 12.2	−21.8 13.0	2.0 9.1
THOMM	−35.0 16.5 :	1.8 21.3	23.5 17.3	5.4 18.5	15.0 15.0	... ...	2.4 14.9	24.5 18.1	16.9 18.1	−6.8 17.2	17.0 15.5
RS 18	−37.4 12.2 $	−.5 17.6	21.1 12.1	3.0 13.9	12.7 9.1	−2.4 14.9	... ...	22.1 13.4	14.5 13.4	−9.2 13.4	14.6 10.4
RS21C	−59.6 13.9 $	−22.7 19.5	−1.1 14.6	−19.1 16.7	−9.5 12.2	−24.5 18.1	−22.1 13.4	... ...	−7.7 12.1	−31.3 16.8	−7.5 13.0
RS21N	−51.9 13.9 $	−15.0 19.5	6.6 14.6	−11.5 16.7	−1.8 12.2	−16.9 18.1	−14.5 13.4	7.7 12.1	... ...	−23.7 16.8	.1 13.0
RS 80	−28.3 15.9	8.6 20.0	30.2 15.1	12.2 16.1	21.8 13.0	6.8 17.2	9.2 13.4	31.3 16.8	23.7 16.8	... ...	23.8 14.0
V1392	−52.0 12.2 $	−15.2 17.7	6.5 12.2	−11.6 14.0	−2.0 9.1	−17.0 15.5	−14.6 10.4	7.5 13.0	−.1 13.0	−23.8 14.0	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 200 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	88.0 ... 1	... .	95.3 56.8 3	... .	55.5 9.2 2	114.0 55.2 2	101.5 60.1 2	... .	91.0 ... 1
ASA	... .	... .	... .	... .	13.2 48.0 5	... .	... .	... .	... .	... .	... .
GR 78	-88.0 ... 1	... .	... .	-23.0 ... 1	-10.3 + 2.1 3	... .	-20.5 26.2 2	-13.0 ... 1	-29.0 ... 1	-16.0 ... 1	3.0 $ 0.0 2
SP 76	... .	... .	23.0 ... 1	... .	5.3 29.6 4	... .	-47.0 ... 1	... .	... .	8.0 ... 1	26.0 ... 1
SWISS	-95.3 56.8 3	-13.2 48.0 5	10.3 + 2.1 3	-5.3 29.6 4	... .	... .	-5.7 28.3 6	7.3 19.7 3	-3.0 23.4 3	-18.0 19.8 2	9.5 10.8 6
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-55.5 9.2 2	... .	20.5 26.2 2	47.0 ... 1	5.7 28.3 6	... .	... .	26.0 ... 1	10.0 ... 1	-2.5 16.3 2	17.3 31.4 3
RS21C	-114.0 55.2 2	... .	13.0 ... 1	... .	-7.3 19.7 3	... .	-26.0 ... 1	... .	-10.3 5.1 3	... .	5.0 15.6 2
RS21N	-101.5 60.1 2	... .	29.0 ... 1	... .	3.0 23.4 3	... .	-10.0 ... 1	10.3 5.1 3	... .	... .	16.0 22.6 2
RS 80	... .	... .	16.0 ... 1	-8.0 ... 1	18.0 19.8 2	... .	2.5 16.3 2	... .	... .	... .	19.0 ... 1
V1392	-91.0 ... 1	... .	-3.0 $ 0.0 2	-26.0 ... 1	-9.5 10.8 6	... .	-17.3 31.4 3	-5.0 15.6 2	-16.0 22.6 2	-19.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 200 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	74.7 15.3 $	97.4 11.5 $	83.3 13.2 $	87.9 9.7 $	... ...	74.4 10.4 $	98.2 11.4 $	87.9 11.4 $	76.4 13.6 $	97.7 10.7 $
ASA	-74.7 15.3 $	... ...	22.8 14.8	8.6 15.5	13.2 11.9	... ...	-.2 14.0	23.5 15.3	13.2 15.3	1.8 16.1	23.0 14.1
GR 78	-97.4 11.5 $	-22.8 14.8	... ...	-14.1 11.9	-9.6 8.9	... ...	-23.0 9.6 :	.8 11.5	-9.6 11.5	-21.0 12.3	.2 9.7
SP 76	-83.3 13.2 $	-8.6 15.5	14.1 11.9	... ...	4.6 9.9	... ...	-8.9 11.1	14.9 13.2	4.6 13.2	-6.9 13.0	14.4 11.2
SWISS	-87.9 9.7 $	-13.2 11.9	9.6 8.9	-4.6 9.9	... ...	... ...	-13.4 7.4	10.3 9.7	-.0 9.7	-11.4 10.8	9.8 7.5
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	-74.4 10.4 $	.2 14.0	23.0 9.6 :	8.9 11.1	13.4 7.4	... ...	... ...	23.8 10.7 :	13.4 10.7 :	2.0 11.2	23.2 8.6 *
RS21C	-98.2 11.4 $	-23.5 15.3	-.8 11.5	-14.9 13.2	-10.3 9.7	... ...	-23.8 10.7 :	... ...	-10.3 5.1	-21.8 13.7	-.5 10.4
RS21N	-87.9 11.4 $	-13.2 15.3	9.6 11.5	-4.6 13.2	.0 9.7	... ...	-13.4 10.7 :	10.3 5.1	... ...	-11.4 13.7	9.8 10.4
RS 80	-76.4 13.6 $	-1.8 16.1	21.0 12.3	6.9 13.0	11.4 10.8	... ...	-2.0 11.2	21.8 13.7	11.4 13.7	... ...	21.2 11.7
V1392	-97.7 10.7 $	-23.0 14.1	-.2 9.7	-14.4 11.2	-9.8 7.5	... ...	-23.2 8.6 *	.5 10.4	-9.8 10.4	-21.2 11.7	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 150 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	119.0 ... 1	... .	150.0 85.8 3	... .	94.0 28.3 2	172.0 91.9 2	159.5 105.4 2	... .	128.0 ... 1
ASA	... .	... .	... .	... .	-3.7 36.3 3	... .	... .	... .	... .	... .	... .
GR 78	-119.0 ... 1	... .	... .	-25.0 ... 1	-18.3 * 3.1 3	... .	-20.0 35.4 2	-12.0 ... 1	-34.0 ... 1	-14.0 ... 1	6.0 4.2 2
SP 76	... .	... .	25.0 ... 1	... .	1.8 32.2 4	... .	-62.0 ... 1	... .	... .	16.0 ... 1	28.0 ... 1
SWISS	-150.0 85.8 3	3.7 36.3 3	18.3 * 3.1 3	-1.8 32.2 4	... .	... .	-4.7 37.0 6	11.3 28.4 3	-2.0 26.1 3	-10.5 24.7 2	12.3 17.7 6
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-94.0 28.3 2	... .	20.0 35.4 2	62.0 ... 1	4.7 37.0 6	... .	... .	33.0 ... 1	11.0 ... 1	-5.0 19.8 2	21.7 39.2 3
RS21C	-172.0 91.9 2	... .	12.0 ... 1	... .	-11.3 28.4 3	... .	-33.0 ... 1	... .	-13.3 9.6 3	... .	4.0 24.0 2
RS21N	-159.5 105.4 2	... .	34.0 ... 1	... .	2.0 26.1 3	... .	-11.0 ... 1	13.3 9.6 3	... .	... .	22.5 29.0 2
RS 80	... .	... .	14.0 ... 1	-16.0 ... 1	10.5 24.7 2	... .	5.0 19.8 2	... .	... .	... .	24.0 ... 1
V1392	-128.0 ... 1	... .	-6.0 4.2 2	-28.0 ... 1	-12.3 17.7 6	... .	-21.7 39.2 3	-4.0 24.0 2	-22.5 29.0 2	-24.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 150 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	136.9	144.6	131.8	133.3	...	119.4	149.7	136.4	125.0	146.4
	...	23.3 $	14.8 $	16.9 $	12.4 $	...	13.3 $	14.6 $	14.6 $	17.5 $	13.8 $
ASA	-136.9	...	7.7	-5.1	-3.7	...	-17.5	12.8	-.5	-11.9	9.5
	23.3 $	...	22.7	23.4	19.7	...	21.8	23.3	23.3	24.1	21.9
GR 78	-144.6	-7.7	...	-12.8	-11.4	...	-25.2	5.1	-8.2	-19.6	1.8
	14.8 $	22.7	...	15.2	11.4	...	12.4 :	14.8	14.8	15.8	12.5
SP 76	-131.8	5.1	12.8	...	1.5	...	-12.4	17.9	4.6	-6.8	14.6
	16.9 $	23.4	15.2	...	12.6	...	14.2	16.9	16.9	16.7	14.3
SWISS	-133.3	3.7	11.4	-1.5	...	...	-13.9	16.5	3.1	-8.2	13.1
	12.4 $	19.7	11.4	12.6	...	...	9.4	12.4	12.4	13.9	9.6
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	-119.4	17.5	25.2	12.4	13.9	...	...	30.3	17.0	5.6	27.0
	13.3 $	21.8	12.4 :	14.2	9.4	...	...	13.7 :	13.7 :	14.3	11.0 +
RS21C	-149.7	-12.8	-5.1	-17.9	-16.5	...	-30.3	...	-13.3	-24.7	-3.3
	14.6 $	23.3	14.8	16.9	12.4	...	13.7 :	...	9.6	17.5	13.4
RS21N	-136.4	.5	8.2	-4.6	-3.1	...	-17.0	13.3	...	-11.4	10.0
	14.6 $	23.3	14.8	16.9	12.4	...	13.7 :	9.6	...	17.5	13.4
RS 80	-125.0	11.9	19.6	6.8	8.2	...	-5.6	24.7	11.4	...	21.4
	17.5 $	24.1	15.8	16.7	13.9	...	14.3	17.5	17.5	...	15.0
V1392	-146.4	-9.5	-1.8	-14.6	-13.1	...	-27.0	3.3	-10.0	-21.4	...
	13.8 $	21.9	12.5	14.3	9.6	...	11.0 +	13.4	13.4	15.0	...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 100 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	315.0 ... 1	... .	... .	309.0 ... 1	311.0 ... 1	... .	... .
ASA	... .	... .	... .	... .	-6.0 34.0 3	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	-20.0 ... 1	-17.7 + 3.5 3	... .	-18.5 47.4 2	-7.0 ... 1	-36.0 ... 1	-7.0 ... 1	8.5 10.6 2
SP 76	... .	... .	20.0 ... 1	... .	1.0 30.6 4	... .	-79.0 ... 1	... .	... .	15.0 ... 1	21.0 ... 1
SWISS	-315.0 ... 1	6.0 34.0 3	17.7 + 3.5 3	-1.0 30.6 4	... .	... .	-6.7 47.9 6	19.0 29.8 3	-1.0 18.7 3	-6.5 29.0 2	13.2 23.3 6
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	18.5 47.4 2	79.0 ... 1	6.7 47.9 6	... .	... .	45.0 ... 1	16.0 ... 1	-3.0 26.9 2	26.7 44.8 3
RS21C	-309.0 ... 1	... .	7.0 ... 1	... .	-19.0 29.8 3	... .	-45.0 ... 1	... .	-20.0 19.2 3	... .	3.5 27.6 2
RS21N	-311.0 ... 1	... .	36.0 ... 1	... .	1.0 18.7 3	... .	-16.0 ... 1	20.0 19.2 3	... .	... .	34.5 24.7 2
RS 80	... .	... .	7.0 ... 1	-15.0 ... 1	6.5 29.0 2	... .	3.0 26.9 2	... .	... .	... .	17.0 ... 1
V1392	... .	... .	-8.5 10.6 2	-21.0 ... 1	-13.2 23.3 6	... .	-26.7 44.8 3	-3.5 27.6 2	-34.5 24.7 2	-17.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 100 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	...	310.1	317.3	308.3	304.1	...	291.7	319.9	299.9	301.4	320.3
	...	28.0 $	23.8 $	24.5 $	22.0 $	...	23.2 $	22.0 $	22.0 $	24.9 $	23.1 $
ASA	-310.1	...	7.2	-1.8	-6.0	...	-18.4	9.8	-10.2	-8.7	10.2
	28.0 $	...	20.2	20.6	17.3	...	19.4	20.8	20.8	21.2	19.4
GR 78	-317.3	-7.2	...	-9.0	-13.2	...	-25.6	2.6	-17.4	-15.9	3.0
	23.8 $	20.2	...	13.6	10.4	...	11.4 :	13.9	13.9	14.1	11.4
SP 76	-308.3	1.8	9.0	...	-4.2	...	-16.5	11.6	-8.4	-6.9	12.1
	24.5 $	20.6	13.6	...	11.2	...	12.7	15.4	15.4	14.7	12.7
SWISS	-304.1	6.0	13.2	4.2	...	...	-12.4	15.8	-4.2	-2.7	16.2
	22.0 $	17.3	10.4	11.2	...	...	8.7	11.6	11.6	12.3	8.7
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	-291.7	18.4	25.6	16.5	12.4	...	...	28.1	8.1	9.6	28.6
	23.2 $	19.4	11.4 :	12.7	8.7	...	...	13.0 :	13.0 :	12.7	10.1 *
RS21 C	-319.9	-9.8	-2.6	-11.6	-15.8	...	-28.1	...	-20.0	-18.5	.4
	22.0 $	20.8	13.9	15.4	11.6	...	13.0 :	...	19.2	15.9	12.4
RS21 N	-299.9	10.2	17.4	8.4	4.2	...	-8.1	20.0	...	1.5	20.4
	22.0 $	20.8	13.9	15.4	11.6	...	13.0 :	19.2	...	15.9	12.4
RS 80	-301.4	8.7	15.9	6.9	2.7	...	-9.6	18.5	-1.5	...	19.0
	24.9 $	21.2	14.1	14.7	12.3	...	12.7	15.9	15.9	...	13.3
V1392	-320.3	-10.2	-3.0	-12.1	-16.2	...	-28.6	-.4	-20.4	-19.0	...
	23.1 $	19.4	11.4	12.7	8.7	...	10.1 *	12.4	12.4	13.3	...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 70 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-3.0 32.0 3	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	-11.0 ... 1	-20.0 + 4.4 3	... .	-23.5 65.8 2	-7.0 ... 1	-35.0 ... 1	-3.0 ... 1	10.5 16.3 2
SP 76	... .	... .	11.0 ... 1	... .	-8.8 25.1 4	... .	-102.0 ... 1	... .	... .	21.0 ... 1	10.0 ... 1
SWISS	... .	3.0 32.0 3	20.0 + 4.4 3	8.8 25.1 4	... .	... .	-11.7 59.9 6	6.5 13.4 2	-4.5 10.6 2	8.0 15.6 2	12.0 25.2 5
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	23.5 65.8 2	102.0 ... 1	11.7 59.9 6	... .	... .	63.0 ... 1	35.0 ... 1	-9.5 23.3 2	31.7 56.9 3
RS21C	... .	... .	7.0 ... 1	... .	-6.5 13.4 2	... .	-63.0 ... 1	... .	-11.0 24.0 2	... .	29.0 ... 1
RS21N	... .	... .	35.0 ... 1	... .	4.5 10.6 2	... .	-35.0 ... 1	11.0 24.0 2	... .	... .	57.0 ... 1
RS 80	... .	... .	3.0 ... 1	-21.0 ... 1	-8.0 15.6 2	... .	9.5 23.3 2	... .	... .	... .	17.0 ... 1
V1392	... .	... .	-10.5 16.3 2	-10.0 ... 1	-12.0 25.2 5	... .	-31.7 56.9 3	-29.0 ... 1	-57.0 ... 1	-17.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 70 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	10.7 24.5	11.0 24.9	−3.0 20.9	... ...	−19.5 23.4	8.1 26.9	−2.9 26.9	−1.5 25.6	15.2 23.7
GR 78	... ...	−10.7 24.5	... ...	.3 16.4	−13.7 12.7	... ...	−30.2 13.7 :	−2.6 18.7	−13.6 18.7	−12.1 17.0	4.5 14.1
SP 76	... ...	−11.0 24.9	−.3 16.4	... ...	−14.0 13.5	... ...	−30.5 15.3	−2.9 20.7	−13.9 20.7	−12.4 17.7	4.2 15.6
SWISS	... ...	3.0 20.9	13.7 12.7	14.0 13.5	... ...	... ...	−16.5 10.6	11.1 17.0	.1 17.0	1.5 14.8	18.2 11.2
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	19.5 23.4	30.2 13.7 :	30.5 15.3	16.5 10.6	... ...	... ...	27.6 17.9	16.6 17.9	18.1 15.3	34.7 12.5 *
RS21C	... ...	−8.1 26.9	2.6 18.7	2.9 20.7	−11.1 17.0	... ...	−27.6 17.9	... ...	−11.0 24.0	−9.5 21.3	7.1 18.1
RS21N	... ...	2.9 26.9	13.6 18.7	13.9 20.7	−.1 17.0	... ...	−16.6 17.9	11.0 24.0	... ...	1.5 21.3	18.1 18.1
RS 80	... ...	1.5 25.6	12.1 17.0	12.4 17.7	−1.5 14.8	... ...	−18.1 15.3	9.5 21.3	−1.5 21.3	... ...	16.6 16.3
V1392	... ...	−15.2 23.7	−4.5 14.1	−4.2 15.6	−18.2 11.2	... ...	−34.7 12.5 *	−7.1 18.1	−18.1 18.1	−16.6 16.3	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 50 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-8.7 37.9 3	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	-10.0 ... 1	-23.7 * 4.0 3	... .	-22.0 84.9 2	-2.0 ... 1	-36.0 ... 1	-5.0 ... 1	12.0 17.0 2
SP 76	... .	... .	10.0 ... 1	... .	-25.7 13.6 3	... .	-121.0 ... 1	... .	... .	18.0 ... 1	10.0 ... 1
SWISS	... .	8.7 37.9 3	23.7 * 4.0 3	25.7 13.6 3	... .	... .	-13.3 70.4 6	8.0 25.5 2	-3.0 7.1 2	18.0 ... 1	13.0 34.9 5
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	22.0 84.9 2	121.0 ... 1	13.3 70.4 6	... .	... .	80.0 ... 1	46.0 ... 1	-18.5 34.6 2	38.0 62.2 3
RS21C	... .	... .	2.0 ... 1	... .	-8.0 25.5 2	... .	-80.0 ... 1	... .	-11.0 32.5 2	... .	26.0 ... 1
RS21N	... .	... .	36.0 ... 1	... .	3.0 7.1 2	... .	-46.0 ... 1	11.0 32.5 2	... .	... .	60.0 ... 1
RS 80	... .	... .	5.0 ... 1	-18.0 ... 1	-18.0 ... 1	... .	18.5 34.6 2	... .	... .	... .	18.0 ... 1
V1392	... .	... .	-12.0 17.0 2	-10.0 ... 1	-13.0 34.9 5	... .	-38.0 62.2 3	-26.0 ... 1	-60.0 ... 1	-18.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 50 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	7.5 29.7	17.2 30.9	-8.7 25.3	... ...	-26.0 28.5	9.0 32.6	-2.0 32.6	-7.8 32.1	13.0 28.8
GR 78	... ...	-7.5 29.7	... ...	9.8 20.6	-16.1 15.6	... ...	-33.4 16.7	1.6 22.7	-9.4 22.7	-15.3 21.5	5.6 17.0
SP 76	... ...	-17.2 30.9	-9.8 20.6	... ...	-25.9 17.7	... ...	-43.2 19.3 :	-8.2 25.8	-19.2 25.8	-25.1 22.8	-4.2 19.7
SWISS	... ...	8.7 25.3	16.1 15.6	25.9 17.7	... ...	... ...	-17.3 13.0	17.7 20.6	6.7 20.6	.9 19.8	21.7 13.7
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	26.0 28.5	33.4 16.7	43.2 19.3 :	17.3 13.0	... ...	... ...	35.0 21.8	24.0 21.8	18.1 19.6	39.0 15.1 +
RS21C	... ...	-9.0 32.6	-1.6 22.7	8.2 25.8	-17.7 20.6	... ...	-35.0 21.8	... ...	-11.0 32.5	-16.8 26.8	4.0 22.0
RS21N	... ...	2.0 32.6	9.4 22.7	19.2 25.8	-6.7 20.6	... ...	-24.0 21.8	11.0 32.5	... ...	-5.8 26.8	15.0 22.0
RS 80	... ...	7.8 32.1	15.3 21.5	25.1 22.8	-.9 19.8	... ...	-18.1 19.6	16.8 26.8	5.8 26.8	... ...	20.8 20.8
V1392	... ...	-13.0 28.8	-5.6 17.0	4.2 19.7	-21.7 13.7	... ...	-39.0 15.1 +	-4.0 22.0	-15.0 22.0	-20.8 20.8	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 30 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-10.3 37.0 3	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	5.0 ... 1	-36.3 + 6.7 3	... .	-56.5 136.5 2	3.0 ... 1	-39.0 ... 1	-12.0 ... 1	10.5 13.4 2
SP 76	... .	... .	-5.0 ... 1	... .	-27.0 : 8.9 3	... .	-145.0 ... 1	... .	... .	... .	-4.0 ... 1
SWISS	... .	10.3 37.0 3	36.3 + 6.7 3	27.0 : 8.9 3	... .	... .	-43.4 102.6 5	28.5 23.3 2	4.5 2.1 2	26.0 ... 1	12.6 49.4 5
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	56.5 136.5 2	145.0 ... 1	43.4 102.6 5	... .	... .	156.0 ... 1	114.0 ... 1	-16.5 50.2 2	68.0 96.9 3
RS21C	... .	... .	-3.0 ... 1	... .	-28.5 23.3 2	... .	-156.0 ... 1	... .	-24.0 25.5 2	... .	17.0 ... 1
RS21N	... .	... .	39.0 ... 1	... .	-4.5 2.1 2	... .	-114.0 ... 1	24.0 25.5 2	... .	... .	59.0 ... 1
RS 80	... .	... .	12.0 ... 1	... .	-26.0 ... 1	... .	16.5 50.2 2	... .	... .	... .	30.0 ... 1
V1392	... .	... .	-10.5 13.4 2	4.0 ... 1	-12.6 49.4 5	... .	-68.0 96.9 3	-17.0 ... 1	-59.0 ... 1	-30.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 30 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	11.2 40.7	28.4 43.0	-10.3 34.6	... ...	-57.0 39.3	28.9 44.6	4.9 44.6	-30.0 45.3	12.2 39.4
GR 78	... ...	-11.2 40.7	... ...	17.2 29.4	-21.5 21.4	... ...	-68.1 23.0 *	17.8 31.0	-6.2 31.0	-41.2 31.1	1.0 23.3
SP 76	... ...	-28.4 43.0	-17.2 29.4	... ...	-38.7 25.6	... ...	-85.4 28.2 $	.5 36.3	-23.5 36.3	-58.4 36.6	-16.2 28.3
SWISS	... ...	10.3 34.6	21.5 21.4	38.7 25.6	... ...	... ...	-46.6 18.7 +	39.3 28.2	15.3 28.2	-19.6 29.3	22.5 18.9
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	57.0 39.3	68.1 23.0 *	85.4 28.2 $	46.6 18.7 +	... ...	... ...	85.9 29.9 *	61.9 29.9 *	27.0 28.7	69.1 20.9 $
RS21C	... ...	-28.9 44.6	-17.8 31.0	-.5 36.3	-39.3 28.2	... ...	-85.9 29.9 *	... ...	-24.0 25.5	-58.9 38.1	-16.8 30.0
RS21N	... ...	-4.9 44.6	6.2 31.0	23.5 36.3	-15.3 28.2	... ...	-61.9 29.9 *	24.0 25.5	... ...	-34.9 38.1	7.2 30.0
RS 80	... ...	30.0 45.3	41.2 31.1	58.4 36.6	19.6 29.3	... ...	-27.0 28.7	58.9 38.1	34.9 38.1	... ...	42.1 30.2
V1392	... ...	-12.2 39.4	-1.0 23.3	16.2 28.3	-22.5 18.9	... ...	-69.1 20.9 $	16.8 30.0	-7.2 30.0	-42.1 30.2	... ...

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 20 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-16.0 58.0 2	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	16.0 ... 1	-44.0 : 11.5 3	... .	44.0 ... 1	-10.0 ... 1	-43.0 ... 1	2.0 ... 1	12.5 17.7 2
SP 76	... .	... .	-16.0 ... 1	... .	-39.0 + 8.0 3	... .	... .	... .	... .	... .	-16.0 ... 1
SWISS	... .	16.0 58.0 2	44.0 : 11.5 3	39.0 + 8.0 3	... .	... .	84.5 10.6 2	16.0 38.2 2	9.0 1.4 2	50.0 ... 1	14.4 59.4 5
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	-44.0 ... 1	... .	-84.5 10.6 2	... .	... .	... .	... .	-3.0 55.2 2	7.5 55.9 2
RS21C	... .	... .	10.0 ... 1	... .	-16.0 38.2 2	... .	... .	... .	-7.0 36.8 2	... .	35.0 ... 1
RS21N	... .	... .	43.0 ... 1	... .	-9.0 1.4 2	... .	... .	7.0 36.8 2	... .	... .	68.0 ... 1
RS 80	... .	... .	-2.0 ... 1	... .	-50.0 ... 1	... .	3.0 55.2 2	... .	... .	... .	11.0 ... 1
V1392	... .	... .	-12.5 17.7 2	16.0 ... 1	-14.4 59.4 5	... .	-7.5 55.9 2	-35.0 ... 1	-68.0 ... 1	-11.0 ... 1	... .

ADJUSTED DIFFERENCE MATRIX FOR I GEOPOTENTIAL [GPM] I I 20 MB LEVEL I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	14.8 29.9	26.8 31.5	-16.0 26.4	... ...	39.4 31.0	-3.0 32.8	-10.0 32.8	26.2 32.5	18.4 29.1
GR 78	... ...	-14.8 29.9	... ...	12.0 19.8	-30.8 14.0 :	... ...	24.6 18.1	-17.8 21.1	-24.8 21.1	11.4 20.1	3.6 15.1
SP 76	... ...	-26.8 31.5	-12.0 19.8	... ...	-42.8 17.2 :	... ...	12.6 22.6	-29.8 25.0	-36.8 25.0	-.6 24.5	-8.5 19.1
SWISS	... ...	16.0 26.4	30.8 14.0 :	42.8 17.2 :	... ...	... ...	55.4 16.4 $	13.0 19.4	6.0 19.4	42.2 19.0 :	34.4 12.3 +
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-39.4 31.0	-24.6 18.1	-12.6 22.6	-55.4 16.4 $	... ...	... ...	-42.4 24.0	-49.4 24.0	-13.2 19.0	-21.0 16.6
RS21C	... ...	3.0 32.8	17.8 21.1	29.8 25.0	-13.0 19.4	... ...	42.4 24.0	... ...	-7.0 36.8	29.2 25.8	21.3 20.6
RS21N	... ...	10.0 32.8	24.8 21.1	36.8 25.0	-6.0 19.4	... ...	49.4 24.0	7.0 36.8	... ...	36.2 25.8	28.3 20.6
RS 80	... ...	-26.2 32.5	-11.4 20.1	.6 24.5	-42.2 19.0 :	... ...	13.2 19.0	-29.2 25.8	-36.2 25.8	... ...	-7.8 19.3
V1392	... ...	-18.4 29.1	-3.6 15.1	8.5 19.1	-34.4 12.3 +	... ...	21.0 16.6	-21.3 20.6	-28.3 20.6	7.8 19.3	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 900 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-2.70 7.81 4	3.70 + .14 2	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	2.70 7.81 4	... .	... .	... .	.78 3.56 9	.40 2.40 4	.08 3.44 8	-2.08 3.33 5	.10 1.81 7	.64 2.37 12
THOMM	... .	-3.70 + .14 2	... .	... .	-.78 3.56 9	... .	-1.70 5.09 2	.80 2.55 2	-1.20 ... 1	1.87 1.67 3	-1.02 3.48 6
RS 18	... .	... .	... .	... .	-.40 2.40 4	1.70 5.09 2	... .	... .	... .	.65 1.77 2	-1.30 .71 2
RS21 C	... .	... .	... .	... .	-.08 3.44 8	-.80 2.55 2	... .	... .	-2.32 2.42 6	... .	-1.07 2.98 3
RS21 N	... .	... .	... .	... .	2.08 3.33 5	1.20 ... 1	... .	2.32 2.42 6	... .	... .	1.00 ... 1
RS 80	... .	... .	... .	... .	-.10 1.81 7	-1.87 1.67 3	-.65 1.77 2	... .	... .	... .	-1.20 2.19 3
V1392	... .	... .	... .	... .	-.64 2.37 12	1.02 3.48 6	1.30 .71 2	1.07 2.98 3	-1.00 ... 1	1.20 2.19 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 900 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
ASA	...	...	...	...	-.91	.12	-.51	-.30	-2.62	.13	-.75
	...	...	...	...	1.35	1.41	1.69	1.61	1.61	1.58	1.48
GR 78	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SP 76	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SWISS	...	.91	...	...	...	1.02	.39	.61	-1.71	1.03	.16
	...	1.35	...	...	...	.74	1.08	.93	.93	.89	.70
THOMM	...	-.12	...	...	-1.02	...	-.63	-.41	-2.73	.01	-.87
	...	1.41	...	...	.74	...	1.17	1.08	1.08	1.00	.83
RS 18	...	.51	...	...	-.39	.63	...	.22	-2.10	.64	-.24
	...	1.69	...	...	1.08	1.17	...	1.38	1.38	1.23	1.15
RS21C	...	.30	...	...	-.61	.41	-.22	...	-2.32	.43	-.45
	...	1.61	...	...	.93	1.08	1.38	...	2.42	1.24	1.04
RS21N	...	2.62	...	...	1.71	2.73	2.10	2.32	...	2.74	1.86
	...	1.61	...	...	.93	1.08	1.38	2.42	...	1.24	1.04
RS 80	...	-.13	...	...	-1.03	-.01	-.64	-.43	-2.74	...	-.88
	...	1.58	...	...	.89	1.00	1.23	1.24	1.24	...	.99
V1392	...	.75	...	...	-.16	.87	.24	.45	-1.86	.88	...
	...	1.48	...	...	.70	.83	1.15	1.04	1.04	.99	...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 850 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	−3.98 8.62 4	5.80 + .14 2	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	3.98 8.62 4	... .	... .	... .	2.08 5.42 9	2.88 1.99 4	.19 3.12 8	1.41 3.21 7	−.30 2.24 7	3.26 6.83 15
THOMM	... .	−5.80 + .14 2	... .	... .	−2.08 5.42 9	... .	−5.10 10.61 2	−.55 1.63 2	.05 1.06 2	.10 2.02 3	−1.67 6.97 6
RS 18	... .	... .	... .	... .	−2.88 1.99 4	5.10 10.61 2	... .	... .	... .	−1.35 .21 2	−3.85 3.61 2
RS21 C	... .	... .	... .	... .	−.19 3.12 8	.55 1.63 2	... .	... .	1.27 : 1.57 9	... .	−1.40 3.15 3
RS21 N	... .	... .	... .	... .	−1.41 3.21 7	−.05 1.06 2	... .	−1.27 : 1.57 9	... .	... .	−2.80 1.31 3
RS 80	... .	... .	... .	... .	.30 2.24 7	−.10 2.02 3	1.35 .21 2	... .	... .	... .	4.58 13.86 5
V1392	... .	... .	... .	... .	−3.26 6.83 15	1.67 6.97 6	3.85 3.61 2	1.40 3.15 3	2.80 1.31 3	−4.58 13.86 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 850 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-1.79 2.58	1.43 2.71	.52 3.24	-.36 3.09	.91 3.09	-1.82 2.99	.72 2.80
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	1.79 2.58	... ...	... ...	... ...	3.22 1.40 :	2.31 2.06	1.43 1.77	2.70 1.77	-.03 1.63	2.52 1.24 :
THOMM	... ...	-1.43 2.71	... ...	... ...	-3.22 1.40 :	... ...	-.91 2.23	-1.79 2.06	-.53 2.06	-3.25 1.86	-.71 1.55
RS 18	... ...	-.52 3.24	... ...	... ...	-2.31 2.06	.91 2.23	... ...	-.88 2.64	.39 2.64	-2.34 2.32	.20 2.17
RS21C	... ...	.36 3.09	... ...	... ...	-1.43 1.77	1.79 2.06	.88 2.64	... ...	1.27 1.57 :	-1.46 2.31	1.09 1.95
RS21N	... ...	-.91 3.09	... ...	... ...	-2.70 1.77	.53 2.06	-.39 2.64	-1.27 1.57 :	... ...	-2.73 2.31	-.18 1.95
RS 80	... ...	1.82 2.99	... ...	... ...	.03 1.63	3.25 1.86	2.34 2.32	1.46 2.31	2.73 2.31	... ...	2.55 1.72
V1392	... ...	-.72 2.80	... ...	... ...	-2.52 1.24 :	.71 1.55	-.20 2.17	-1.09 1.95	.18 1.95	-2.55 1.72	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 700 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-.20 3.02 5	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	.20 3.02 5	... .	... .	... .	.32 4.00 9	3.20 9.32 4	-2.50 : 2.38 7	-3.15 + 2.18 6	-2.00 2.61 7	.05 3.04 11
THOMM	... .	... .	... .	... .	-.32 4.00 9	... .	-.75 2.76 2	-4.55 8.84 2	-4.20 8.06 2	-6.00 8.49 2	-.26 5.62 5
RS 18	... .	... .	... .	... .	-3.20 9.32 4	.75 2.76 2	... .	... .	... .	-20.50 ... 1	4.05 5.02 2
RS21C	... .	... .	... .	... .	2.50 : 2.38 7	4.55 8.84 2	... .	... .	.11 1.21 8	... .	1.50 4.31 3
RS21N	... .	... .	... .	... .	3.15 + 2.18 6	4.20 8.06 2	... .	-.11 1.21 8	... .	... .	3.20 2.26 2
RS 80	... .	... .	... .	... .	2.00 2.61 7	6.00 8.49 2	20.50 ... 1	... .	... .	... .	1.50 1.13 2
V1392	... .	... .	... .	... .	-.05 3.04 11	.26 5.62 5	-4.05 5.02 2	-1.50 4.31 3	-3.20 2.26 2	-1.50 1.13 2	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 700 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-.20 2.14	.94 2.44	2.39 2.71	-2.48 2.58	-2.36 2.58	-3.84 2.57	.31 2.40
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	.20 2.14	... ...	... ...	... ...	1.14 1.16	2.59 1.66	-2.28 1.43	-2.16 1.43	-3.64 1.43 +	.51 1.09
THOMM	... ...	-.94 2.44	... ...	... ...	-1.14 1.16	... ...	1.46 1.81	-3.41 1.66 :	-3.30 1.66 :	-4.77 1.66 *	-.63 1.32
RS 18	... ...	-2.39 2.71	... ...	... ...	-2.59 1.66	-1.46 1.81	... ...	-4.87 2.12 :	-4.76 2.12 :	-6.23 2.02 $	-2.09 1.78
RS21C	... ...	2.48 2.58	... ...	... ...	2.28 1.43	3.41 1.66 :	4.87 2.12 :	... ...	.11 1.21	-1.36 1.96	2.78 1.59
RS21N	... ...	2.36 2.58	... ...	... ...	2.16 1.43	3.30 1.66 :	4.76 2.12 :	-.11 1.21	... ...	-1.47 1.96	2.67 1.59
RS 80	... ...	3.84 2.57	... ...	... ...	3.64 1.43 +	4.77 1.66 *	6.23 2.02 $	1.36 1.96	1.47 1.96	... ...	4.14 1.62 +
V1392	... ...	-.31 2.40	... ...	... ...	-.51 1.09	.63 1.32	2.09 1.78	-2.78 1.59	-2.67 1.59	-4.14 1.62 +	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 500 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	2.04 3.56 5	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-2.04 3.56 5	... .	... .	... .	-.83 2.55 7	-1.43 2.05 4	-1.14 3.93 8	-2.20 5.53 7	.41 4.01 7	-.05 8.97 14
THOMM	... .	... .	... .	... .	.83 2.55 7	... .	.75 3.32 2	.10 ... 1	.20 ... 1	... .	.33 4.95 4
RS 18	... .	... .	... .	... .	1.43 2.05 4	-.75 3.32 2	... .	... .	... .	1.30 ... 1	.70 4.67 2
RS21 C	... .	... .	... .	... .	1.14 3.93 8	-.10 ... 1	... .	... .	-1.34 2.36 9	... .	1.87 3.52 3
RS21 N	... .	... .	... .	... .	2.20 5.53 7	-.20 ... 1	... .	1.34 2.36 9	... .	... .	4.33 + .90 3
RS 80	... .	... .	... .	... .	-.41 4.01 7	... .	-1.30 ... 1	... .	... .	... .	.83 1.91 4
V1392	... .	... .	... .	... .	.05 8.97 14	-.33 4.95 4	-.70 4.67 2	-1.87 3.52 3	-4.33 + .90 3	-.83 1.91 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 500 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	2.04 2.32	1.22 2.74	1.11 2.94	.77 2.78	-.57 2.78	2.06 2.79	2.12 2.56
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-2.04 2.32	... ...	... ...	... ...	-.82 1.46	-.93 1.80	-1.27 1.53	-2.61 1.53	.02 1.55	.08 1.09
THOMM	... ...	-1.22 2.74	... ...	... ...	.82 1.46	... ...	-.11 2.05	-.44 1.98	-1.79 1.98	.85 2.04	.90 1.58
RS 18	... ...	-1.11 2.94	... ...	... ...	.93 1.80	.11 2.05	... ...	-.34 2.30	-1.68 2.30	.95 2.20	1.01 1.90
RS21C	... ...	-.77 2.78	... ...	... ...	1.27 1.53	.44 1.98	.34 2.30	... ...	-1.34 2.36	1.29 2.12	1.34 1.69
RS21N	... ...	.57 2.78	... ...	... ...	2.61 1.53	1.79 1.98	1.68 2.30	1.34 2.36	... ...	2.63 2.12	2.69 1.69
RS 80	... ...	-2.06 2.79	... ...	... ...	-.02 1.55	-.85 2.04	-.95 2.20	-1.29 2.12	-2.63 2.12	... ...	.05 1.66
V1392	... ...	-2.12 2.56	... ...	... ...	-.08 1.09	-.90 1.58	-1.01 1.90	-1.34 1.69	-2.69 1.69	-.05 1.66	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 400 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	.63 4.19 4	.70 .99 2	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-.63 4.19 4	... .	... .	... .	-2.23 5.46 6	-.40 2.15 4	.37 5.52 8	1.31 6.91 8	-.10 1.10 7	.30 4.31 13
THOMM	... .	-.70 .99 2	... .	... .	2.23 5.46 6	... .	-.35 .64 2	2.10 ... 1	2.60 ... 1	... .	2.95 3.89 2
RS 18	... .	... .	... .	... .	.40 2.15 4	.35 .64 2	... .	... .	... .	.50 ... 1	3.30 3.25 2
RS21 C	... .	... .	... .	... .	-.37 5.52 8	-2.10 ... 1	... .	... .	.88 2.48 10	... .	-1.23 2.35 3
RS21 N	... .	... .	... .	... .	-1.31 6.91 8	-2.60 ... 1	... .	-.88 2.48 10	... .	... .	-2.80 3.92 3
RS 80	... .	... .	... .	... .	.10 1.10 7	... .	-.50 ... 1	... .	... .	... .	-.73 1.65 4
V1392	... .	... .	... .	... .	-.30 4.31 13	-2.95 3.89 2	-3.30 3.25 2	1.23 2.35 3	2.80 3.92 3	.73 1.65 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 400 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	1.25 1.56	-.55 1.68	-.12 1.97	1.90 1.88	2.78 1.88	1.45 1.90	1.51 1.73
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-1.25 1.56	... ...	... ...	... ...	-1.80 1.10	-1.36 1.29	.65 1.10	1.53 1.10	.20 1.12	.26 .82
THOMM	... ...	.55 1.68	... ...	... ...	1.80 1.10	... ...	.43 1.50	2.45 1.46	3.33 1.46	1.99 1.51	2.06 1.25
RS 18	... ...	.12 1.97	... ...	... ...	1.36 1.29	-.43 1.50	... ...	2.01 1.65	2.89 1.65	1.56 1.58	1.62 1.38
RS21C	... ...	-1.90 1.88	... ...	... ...	-.65 1.10	-2.45 1.46	-2.01 1.65	... ...	.88 2.48	-.45 1.52	-.39 1.23
RS21N	... ...	-2.78 1.88	... ...	... ...	-1.53 1.10	-3.33 1.46	-2.89 1.65	-.88 2.48	... ...	-1.33 1.52	-1.27 1.23
RS 80	... ...	-1.45 1.90	... ...	... ...	-.20 1.12	-1.99 1.51	-1.56 1.58	.45 1.52	1.33 1.52	... ...	.06 1.20
V1392	... ...	-1.51 1.73	... ...	... ...	-.26 .82	-2.06 1.25	-1.62 1.38	.39 1.23	1.27 1.23	-.06 1.20	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 300 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	1.72 2.22 6	3.40 8.06 2	... .	... .	... .	... .	-5.20 1.13 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-1.72 2.22 6	... .	... .	... .	-.40 6.93 6	-1.90 1.86 4	-.07 4.97 8	.08 5.49 8	-3.17 5.42 6	-3.42 7.18 17
THOMM	... .	-3.40 8.06 2	... .	... .	.40 6.93 6	... .	-1.75 1.34 2	.30 ... 1	.20 ... 1	... .	-1.57 7.05 3
RS 18	... .	... .	... .	... .	1.90 1.86 4	1.75 1.34 2	... .	... .	... .	-1.90 ... 1	4.05 1.77 2
RS21C	... .	... .	... .	... .	.07 4.97 8	-.30 ... 1	... .	... .	.05 2.16 10	... .	-4.67 9.81 3
RS21N	... .	... .	... .	... .	-.08 5.49 8	-.20 ... 1	... .	-.05 2.16 10	... .	... .	-3.33 10.11 3
RS 80	... .	... .	... .	... .	3.17 5.42 6	... .	1.90 ... 1	... .	... .	... .	-.48 3.01 4
V1392	... .	5.20 1.13 2	... .	... .	3.42 7.18 17	1.57 7.05 3	-4.05 1.77 2	4.67 9.81 3	3.33 10.11 3	.48 3.01 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 300 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
ASA	...	...	...	...	1.43	.96	-1.70	1.70	1.75	-1.80	-1.91
	...	...	...	...	1.82	2.16	2.57	2.40	2.40	2.47	1.96
GR 78	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SP 76	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SWISS	...	-1.43	...	...	...	-.47	-3.13	.27	.32	-3.23	-3.35
	...	1.82	...	...	...	1.58	1.94	1.64	1.64	1.75	1.09 $
THOMM	...	-.96	...	...	.47	...	-2.66	.74	.79	-2.76	-2.88
	...	2.16	...	...	1.58	...	2.22	2.15	2.15	2.27	1.71
RS 18	...	1.70	...	...	3.13	2.66	...	3.40	3.45	-.10	-.22
	...	2.57	...	...	1.94	2.22	...	2.48	2.48	2.41	2.03
RS21C	...	-1.70	...	...	-.27	-.74	-3.40	...	.05	-3.49	-3.61
	...	2.40	...	...	1.64	2.15	2.48	...	2.16	2.34	1.80 :
RS21N	...	-1.75	...	...	-.32	-.79	-3.45	-.05	...	-3.54	-3.66
	...	2.40	...	...	1.64	2.15	2.48	2.16	...	2.34	1.80 :
RS 80	...	1.80	...	...	3.23	2.76	.10	3.49	3.54	...	-.12
	...	2.47	...	...	1.75	2.27	2.41	2.34	2.34	...	1.82
V1392	...	1.91	...	...	3.35	2.88	.22	3.61	3.66	.12	...
	...	1.96	...	...	1.09 $	1.71	2.03	1.80 :	1.80 :	1.82	...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 250 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	3.10 4.10 4	1.40 1.84 2	... .	... .	... .	... .	24.90 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-3.10 4.10 4	... .	... .	... .	-.18 5.28 5	-3.38 4.21 4	-1.16 3.78 8	.74 5.39 8	-1.50 2.86 6	.38 8.84 17
THOMM	... .	-1.40 1.84 2	... .	... .	.18 5.28 5	... .	-7.90 ... 1	-.30 ... 1	.50 ... 1	... .	-2.95 7.57 2
RS 18	... .	... .	... .	... .	3.38 4.21 4	7.90 ... 1	... .	... .	... .	-1.10 ... 1	4.35 6.72 2
RS21C	... .	... .	... .	... .	1.16 3.78 8	.30 ... 1	... .	... .	1.78 : 2.29 9	... .	-3.47 2.65 3
RS21N	... .	... .	... .	... .	-.74 5.39 8	-.50 ... 1	... .	-1.78 : 2.29 9	... .	... .	-4.17 3.53 3
RS 80	... .	... .	... .	... .	1.50 2.86 6	... .	1.10 ... 1	... .	... .	... .	-4.03 5.19 4
V1392	... .	-24.90 ... 1	... .	... .	-.38 8.84 17	2.95 7.57 2	-4.35 6.72 2	3.47 2.65 3	4.17 3.53 3	4.03 5.19 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 250 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	5.73 2.60 :	5.79 2.92	2.10 3.47	5.77 3.19	7.55 3.19	5.89 3.28	5.58 2.78 :
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-5.73 2.60 :	... ...	... ...	... ...	.06 2.11	-3.64 2.42	.03 1.96	1.81 1.96	.16 2.08	-.15 1.32
THOMM	... ...	-5.79 2.92	... ...	... ...	-.06 2.11	... ...	-3.69 2.98	-.02 2.70	1.75 2.70	.10 2.88	-.21 2.29
RS 18	... ...	-2.10 3.47	... ...	... ...	3.64 2.42	3.69 2.98	... ...	3.67 3.04	5.45 3.04	3.80 2.95	3.48 2.53
RS21C	... ...	-5.77 3.19	... ...	... ...	-.03 1.96	.02 2.70	-3.67 3.04	... ...	1.78 2.29 :	.13 2.79	-.19 2.15
RS21N	... ...	-7.55 3.19	... ...	... ...	-1.81 1.96	-1.75 2.70	-5.45 3.04	-1.78 2.29 :	... ...	-1.65 2.79	-1.96 2.15
RS 80	... ...	-5.89 3.28	... ...	... ...	-.16 2.08	-.10 2.88	-3.80 2.95	-.13 2.79	1.65 2.79	... ...	-.31 2.17
V1392	... ...	-5.58 2.78 :	... ...	... ...	.15 1.32	.21 2.29	-3.48 2.53	.19 2.15	1.96 2.15	.31 2.17	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 200 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-.38 3.18 4	.75 .92 2	... .	... .	... .	... .	-9.80 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	.38 3.18 4	... .	... .	... .	3.35 .92 2	-.60 2.43 3	-1.79 3.09 7	.61 2.85 7	-2.52 + 1.80 6	-.25 8.81 16
THOMM	... .	-.75 .92 2	... .	... .	-3.35 .92 2	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	.60 2.43 3	... .	... .	... .	... .	2.10 ... 1	-3.20 ... 1
RS21C	... .	... .	... .	... .	1.79 3.09 7	... .	... .	... .	.61 1.61 7	... .	.35 6.58 2
RS21N	... .	... .	... .	... .	-.61 2.85 7	... .	... .	-.61 1.61 7	... .	... .	-.77 2.05 3
RS 80	... .	... .	... .	... .	2.52 + 1.80 6	... .	-2.10 ... 1	... .	... .	... .	.28 4.35 4
V1392	... .	9.80 ... 1	... .	... .	.25 8.81 16	... .	3.20 ... 1	-.35 6.58 2	.77 2.05 3	-.28 4.35 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 200 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-2.15 2.40	.97 3.16	-2.83 3.56	-3.84 3.08	-3.22 3.08	-3.86 2.99	-3.15 2.61
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	2.15 2.40	... ...	... ...	... ...	3.13 3.16	-.68 2.66	-1.69 1.97	-1.07 1.97	-1.71 1.85	-1.00 1.26
THOMM	... ...	-.97 3.16	... ...	... ...	-3.13 3.16	... ...	-3.81 4.12	-4.81 3.72	-4.20 3.72	-4.83 3.65	-4.12 3.36
RS 18	... ...	2.83 3.56	... ...	... ...	.68 2.66	3.81 4.12	... ...	-1.01 3.28	-.39 3.28	-1.03 2.98	-.32 2.79
RS21C	... ...	3.84 3.08	... ...	... ...	1.69 1.97	4.81 3.72	1.01 3.28	... ...	.61 1.61	-.02 2.65	.69 2.18
RS21N	... ...	3.22 3.08	... ...	... ...	1.07 1.97	4.20 3.72	.39 3.28	-.61 1.61	... ...	-.63 2.65	.08 2.18
RS 80	... ...	3.86 2.99	... ...	... ...	1.71 1.85	4.83 3.65	1.03 2.98	.02 2.65	.63 2.65	... ...	.71 1.94
V1392	... ...	3.15 2.61	... ...	... ...	1.00 1.26	4.12 3.36	.32 2.79	-.69 2.18	-.08 2.18	-.71 1.94	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 150 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-1.00 1.22 4	... .	... .	... .	... .	... .	-.30 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	1.00 1.22 4	... .	... .	... .	... .	.33 3.43 3	-1.14 4.91 7	-.16 4.86 7	-.50 1.65 6	1.12 7.68 15
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-.33 3.43 3	... .	... .	... .	... .	-.20 ... 1	3.20 ... 1
RS21 C	... .	... .	... .	... .	1.14 4.91 7	... .	... .	... .	-.33 .95 7	... .	1.30 3.82 2
RS21 N	... .	... .	... .	... .	.16 4.86 7	... .	... .	.33 .95 7	... .	... .	10.90 15.70 2
RS 80	... .	... .	... .	... .	.50 1.65 6	... .	.20 ... 1	... .	... .	... .	1.60 2.55 4
V1392	... .	.30 ... 1	... .	... .	-1.12 7.68 15	... .	-3.20 ... 1	-1.30 3.82 2	-10.90 15.70 2	-1.60 2.55 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 150 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-1.08 2.33	... ...	-1.36 3.30	-2.01 2.90	-2.34 2.90	-1.58 2.82	.03 2.50
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	1.08 2.33	... ...	... ...	... ...	... ...	-.28 2.37	-.93 1.75	-1.26 1.75	-.49 1.64	1.12 1.15
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	1.36 3.30	... ...	... ...	.28 2.37	... ...	... ...	-.65 2.92	-.98 2.92	-.22 2.65	1.39 2.49
RS21C	... ...	2.01 2.90	... ...	... ...	.93 1.75	... ...	.65 2.92	... ...	-.33 .95	.44 2.35	2.05 1.95
RS21N	... ...	2.34 2.90	... ...	... ...	1.26 1.75	... ...	.98 2.92	.33 .95	... ...	.77 2.35	2.37 1.95
RS 80	... ...	1.58 2.82	... ...	... ...	.49 1.64	... ...	.22 2.65	-.44 2.35	-.77 2.35	... ...	1.61 1.73
V1392	... ...	-.03 2.50	... ...	... ...	-1.12 1.15	... ...	-1.39 2.49	-2.05 1.95	-2.37 1.95	-1.61 1.73	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 100 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-1.02 3.05 6	... .	... .	... .	... .	... .	1.05 3.32 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	1.02 3.05 6	... .	... .	... .	... .	-3.33 5.95 3	-1.60 1.42 5	.72 4.18 6	-1.58 2.49 6	.47 9.18 15
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	3.33 5.95 3	... .	... .	... .	... .	10.20 ... 1	-2.40 ... 1
RS21 C	... .	... .	... .	... .	1.60 1.42 5	... .	... .	... .	1.83 3.68 6	... .	-7.10 ... 1
RS21 N	... .	... .	... .	... .	-.72 4.18 6	... .	... .	-1.83 3.68 6	... .	... .	8.60 20.51 2
RS 80	... .	... .	... .	... .	1.58 2.49 6	... .	-10.20 ... 1	... .	... .	... .	-.60 4.14 4
V1392	... .	-1.05 3.32 2	... .	... .	-.47 9.18 15	... .	2.40 ... 1	7.10 ... 1	-8.60 20.51 2	.60 4.14 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 100 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-.43 2.27	... ...	-4.08 3.63	-.63 3.42	1.21 3.42	-.58 2.96	-.71 2.47
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	.43 2.27	... ...	... ...	... ...	... ...	-3.65 2.89	-.20 2.60	1.64 2.60	-.15 2.00	-.28 1.40
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	4.08 3.63	... ...	... ...	3.65 2.89	... ...	... ...	3.45 3.86	5.28 3.86	3.50 3.23	3.37 3.03
RS21C	... ...	.63 3.42	... ...	... ...	.20 2.60	... ...	-3.45 3.86	... ...	1.83 3.68	.05 3.24	-.08 2.84
RS21N	... ...	-1.21 3.42	... ...	... ...	-1.64 2.60	... ...	-5.28 3.86	-1.83 3.68	... ...	-1.79 3.24	-1.91 2.84
RS 80	... ...	.58 2.96	... ...	... ...	.15 2.00	... ...	-3.50 3.23	-.05 3.24	1.79 3.24	... ...	-.13 2.11
V1392	... ...	.71 2.47	... ...	... ...	.28 1.40	... ...	-3.37 3.03	.08 2.84	1.91 2.84	.13 2.11	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 70 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	2.48 4.95 6	... .	... .	... .	... .	... .	-1.40 5.09 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-2.48 4.95 6	... .	... .	... .	... .	-4.50 6.68 3	2.76 5.41 5	1.44 5.25 5	-.88 4.41 5	-2.47 5.79 13
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	4.50 6.68 3	... .	... .	... .	... .	18.10 ... 1	2.80 ... 1
RS21C	... .	... .	... .	... .	-2.76 5.41 5	... .	... .	... .	.18 1.18 5	... .	-8.00 ... 1
RS21N	... .	... .	... .	... .	-1.44 5.25 5	... .	... .	-.18 1.18 5	... .	... .	-9.30 ... 1
RS 80	... .	... .	... .	... .	.88 4.41 5	... .	-18.10 ... 1	... .	... .	... .	-2.55 4.19 4
V1392	... .	1.40 5.09 2	... .	... .	2.47 5.79 13	... .	-2.80 ... 1	8.00 ... 1	9.30 ... 1	2.55 4.19 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 70 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	2.18 1.93	... ...	-5.12 3.08	5.37 2.90	5.55 2.90	2.77 2.57	-.50 2.12
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-2.18 1.93	... ...	... ...	... ...	... ...	-7.30 2.45 *	3.19 2.20	3.37 2.20	.58 1.80	-2.69 1.25 :
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	5.12 3.08	... ...	... ...	7.30 2.45 *	... ...	... ...	10.49 3.27 $	10.67 3.27 $	7.89 2.77 *	4.61 2.59
RS21C	... ...	-5.37 2.90	... ...	... ...	-3.19 2.20	... ...	-10.49 3.27 $	... ...	.18 1.18	-2.60 2.80	-5.87 2.43 :
RS21N	... ...	-5.55 2.90	... ...	... ...	-3.37 2.20	... ...	-10.67 3.27 $	-.18 1.18	... ...	-2.78 2.80	-6.05 2.43 :
RS 80	... ...	-2.77 2.57	... ...	... ...	-.58 1.80	... ...	-7.89 2.77 *	2.60 2.80	2.78 2.80	... ...	-3.27 1.86
V1392	... ...	.50 2.12	... ...	... ...	2.69 1.25 :	... ...	-4.61 2.59	5.87 2.43 :	6.05 2.43 :	3.27 1.86	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 50 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-.50 4.08 6	... .	... .	... .	... .	... .	1.25 5.44 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	.50 4.08 6	... .	... .	... .	... .	5.93 15.40 3	-.98 2.21 5	-2.60 2.52 5	1.20 2.95 3	-1.76 7.26 13
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-5.93 15.40 3	... .	... .	... .	... .	... .	-1.10 ... 1
RS21 C	... .	... .	... .	... .	.98 2.21 5	... .	... .	... .	-1.14 1.82 7	... .	-1.10 ... 1
RS21 N	... .	... .	... .	... .	2.60 2.52 5	... .	... .	1.14 1.82 7	... .	... .	-.70 ... 1
RS 80	... .	... .	... .	... .	-1.20 2.95 3	... .	... .	... .	... .	... .	3.00 6.36 2
V1392	... .	-1.25 5.44 2	... .	... .	1.76 7.26 13	... .	1.10 ... 1	1.10 ... 1	.70 ... 1	-3.00 6.36 2	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 50 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	.13 2.39	... ...	4.66 4.08	-.63 3.60	-1.77 3.60	-.66 3.80	-.64 2.64
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-.13 2.39	... ...	... ...	... ...	... ...	4.53 3.35	-.76 2.73	-1.90 2.73	-.79 3.05	-.77 1.60
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-4.66 4.08	... ...	... ...	-4.53 3.35	... ...	... ...	-5.29 4.30	-6.44 4.30	-5.32 4.47	-5.30 3.54
RS21C	... ...	.63 3.60	... ...	... ...	.76 2.73	... ...	5.29 4.30	... ...	-1.14 1.82	-.03 4.05	-.01 3.03
RS21N	... ...	1.77 3.60	... ...	... ...	1.90 2.73	... ...	6.44 4.30	1.14 1.82	... ...	1.12 4.05	1.13 3.03
RS 80	... ...	.66 3.80	... ...	... ...	.79 3.05	... ...	5.32 4.47	.03 4.05	-1.12 4.05	... ...	.02 3.13
V1392	... ...	.64 2.64	... ...	... ...	.77 1.60	... ...	5.30 3.54	.01 3.03	-1.13 3.03	-.02 3.13	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 30 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-1.15 5.76 4	... .	... .	... .	... .	... .	3.90 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	1.15 5.76 4	... .	... .	... .	... .	-2.17 1.58 3	-.24 2.63 5	1.80 1.45 4	-1.90 1.13 2	1.36 6.42 12
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	2.17 1.58 3	... .	... .	... .	... .	... .	... .
RS21C	... .	... .	... .	... .	.24 2.63 5	... .	... .	... .	.78 1.70 6	... .	-4.90 ... 1
RS21N	... .	... .	... .	... .	-1.80 1.45 4	... .	... .	-.78 1.70 6	... .	... .	-4.00 ... 1
RS 80	... .	... .	... .	... .	1.90 1.13 2	... .	... .	... .	... .	... .	-3.50 4.73 3
V1392	... .	-3.90 ... 1	... .	... .	-1.36 6.42 12	... .	... .	4.90 ... 1	4.00 ... 1	3.50 4.73 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 30 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-.27 2.38	... ...	-2.44 3.87	.46 3.20	1.24 3.20	1.46 3.38	.38 2.60
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	.27 2.38	... ...	... ...	... ...	... ...	-2.17 3.05	.72 2.17	1.51 2.17	1.73 2.50	.65 1.37
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	2.44 3.87	... ...	... ...	2.17 3.05	... ...	... ...	2.89 3.74	3.67 3.74	3.89 3.94	2.81 3.34
RS21C	... ...	-.46 3.20	... ...	... ...	-.72 2.17	... ...	-2.89 3.74	... ...	.78 1.70	1.00 3.25	-.08 2.44
RS21N	... ...	-1.24 3.20	... ...	... ...	-1.51 2.17	... ...	-3.67 3.74	-.78 1.70	... ...	.22 3.25	-.86 2.44
RS 80	... ...	-1.46 3.38	... ...	... ...	-1.73 2.50	... ...	-3.89 3.94	-1.00 3.25	-.22 3.25	... ...	-1.08 2.42
V1392	... ...	-.38 2.60	... ...	... ...	-.65 1.37	... ...	-2.81 3.34	.08 2.44	.86 2.44	1.08 2.42	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 20 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-1.57 1.34 3	... .	... .	... .	... .	... .	2.15 1.77 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	1.57 1.34 3	... .	... .	... .	... .	5.30 ... 1	.68 3.32 4	-.30 .85 2	1.50 2.12 2	4.70 9.74 9
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-5.30 ... 1	... .	... .	... .	... .	... .	... .
RS21C	... .	... .	... .	... .	-.68 3.32 4	... .	... .	... .	.80 1.73 3	... .	1.20 3.82 2
RS21N	... .	... .	... .	... .	.30 .85 2	... .	... .	-.80 1.73 3	... .	... .	-3.80 ... 1
RS 80	... .	... .	... .	... .	-1.50 2.12 2	... .	... .	... .	... .	... .	2.73 1.59 3
V1392	... .	-2.15 1.77 2	... .	... .	-4.70 9.74 9	... .	... .	-1.20 3.82 2	3.80 ... 1	-2.73 1.59 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I 20 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-1.79 2.90	... ...	3.51 6.94	-.31 3.82	.49 3.82	-.27 4.00	2.48 3.01
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	1.79 2.90	... ...	... ...	... ...	... ...	5.30 6.30	1.47 2.64	2.27 2.64	1.52 3.01	4.27 1.77 :
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-3.51 6.94	... ...	... ...	-5.30 6.30	... ...	... ...	-3.83 6.83	-3.03 6.83	-3.78 6.98	-1.03 6.54
RS21C	... ...	.31 3.82	... ...	... ...	-1.47 2.64	... ...	3.83 6.83	... ...	.80 1.73	.05 3.84	2.80 2.83
RS21N	... ...	-.49 3.82	... ...	... ...	-2.27 2.64	... ...	3.03 6.83	-.80 1.73	... ...	-.75 3.84	2.00 2.83
RS 80	... ...	.27 4.00	... ...	... ...	-1.52 3.01	... ...	3.78 6.98	-.05 3.84	.75 3.84	... ...	2.75 2.90
V1392	... ...	-2.48 3.01	... ...	... ...	-4.27 1.77 :	... ...	1.03 6.54	-2.80 2.83	-2.00 2.83	-2.75 2.90	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 900 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	5.1 21.9 4	105.9 113.4 2	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	−5.1 21.9 4	... .	... .	... .	−.3 94.0 9	10.3 34.9 4	6.2 17.4 8	−29.9 97.3 5	−8.3 88.4 7	3.3 65.8 12
THOMM	... .	−105.9 113.4 2	... .	... .	.3 94.0 9	... .	−56.3 64.8 2	159.0 24.5 2	155.3 ... 1	−41.9 50.5 3	−15.4 45.8 6
RS 18	... .	... .	... .	... .	−10.3 34.9 4	56.3 64.8 2	... .	... .	... .	64.0 62.2 2	−.3 .1 2
RS21C	... .	... .	... .	... .	−6.2 17.4 8	−159.0 24.5 2	... .	... .	−21.5 91.7 6	... .	−6.7 41.3 3
RS21N	... .	... .	... .	... .	29.9 97.3 5	−155.3 ... 1	... .	21.5 91.7 6	... .	... .	−5.3 ... 1
RS 80	... .	... .	... .	... .	8.3 88.4 7	41.9 50.5 3	−64.0 62.2 2	... .	... .	... .	12.9 45.8 3
V1392	... .	... .	... .	... .	−3.3 65.8 12	15.4 45.8 6	.3 .1 2	6.7 41.3 3	5.3 ... 1	−12.9 45.8 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 900 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-26.6 27.9	-10.4 29.3	-38.8 35.0	9.2 33.4	3.3 33.4	-21.1 32.7	-13.0 30.7
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	26.6 27.9	... ...	... ...	... ...	16.2 15.3	-12.2 22.4	35.8 19.2	29.9 19.2	5.5 18.5	13.6 14.5
THOMM	... ...	10.4 29.3	... ...	... ...	-16.2 15.3	... ...	-28.3 24.1	19.6 22.3	13.7 22.3	-10.7 20.8	-2.6 17.2
RS 18	... ...	38.8 35.0	... ...	... ...	12.2 22.4	28.3 24.1	... ...	47.9 28.5	42.1 28.5	17.6 25.5	25.7 23.9
RS21C	... ...	-9.2 33.4	... ...	... ...	-35.8 19.2	-19.6 22.3	-47.9 28.5	... ...	-5.9 90.0	-30.3 25.7	-22.2 21.4
RS21N	... ...	-3.3 33.4	... ...	... ...	-29.9 19.2	-13.7 22.3	-42.1 28.5	5.9 90.0	... ...	-24.5 25.7	-16.3 21.4
RS 80	... ...	21.1 32.7	... ...	... ...	-5.5 18.5	10.7 20.8	-17.6 25.5	30.3 25.7	24.5 25.7	... ...	8.1 20.5
V1392	... ...	13.0 30.7	... ...	... ...	-13.6 14.5	2.6 17.2	-25.7 23.9	22.2 21.4	16.3 21.4	-8.1 20.5	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 850 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	17.4 32.6 4	80.9 113.4 2	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-17.4 32.6 4	... .	... .	... .	-10.5 102.8 9	-9.0 12.4 4	1.1 40.9 8	16.8 35.5 7	-9.9 38.6 7	6.6 53.4 15
THOMM	... .	-80.9 113.4 2	... .	... .	10.5 102.8 9	... .	22.5 29.7 2	-33.9 11.4 2	-21.4 8.6 2	-19.1 82.5 3	10.8 63.6 6
RS 18	... .	... .	... .	... .	9.0 12.4 4	-22.5 29.7 2	... .	... .	... .	3.5 7.8 2	30.4 42.7 2
RS21C	... .	... .	... .	... .	-1.1 40.9 8	33.9 11.4 2	... .	... .	11.7 : 14.6 9	... .	-9.9 45.8 3
RS21N	... .	... .	... .	... .	-16.8 35.5 7	21.4 8.6 2	... .	-11.7 : 14.6 9	... .	... .	-23.4 21.6 3
RS 80	... .	... .	... .	... .	9.9 38.6 7	19.1 82.5 3	-3.5 7.8 2	... .	... .	... .	20.0 41.8 5
V1392	... .	... .	... .	... .	-6.6 53.4 15	-10.8 63.6 6	-30.4 42.7 2	9.9 45.8 3	23.4 21.6 3	-20.0 41.8 5	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 850 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	29.5 22.3	57.3 23.4 +	30.7 28.0	36.0 26.7	47.7 26.7	21.8 25.8	45.0 24.2
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-29.5 22.3	... ...	... ...	... ...	27.8 12.1 :	1.2 17.8	6.4 15.3	18.2 15.3	-7.8 14.1	15.4 10.7
THOMM	... ...	-57.3 23.4 +	... ...	... ...	-27.8 12.1 :	... ...	-26.6 19.3	-21.3 17.8	-9.6 17.8	-35.5 16.1 :	-12.4 13.4
RS 18	... ...	-30.7 28.0	... ...	... ...	-1.2 17.8	26.6 19.3	... ...	5.2 22.8	17.0 22.8	-9.0 20.0	14.2 18.8
RS21C	... ...	-36.0 26.7	... ...	... ...	-6.4 15.3	21.3 17.8	-5.2 22.8	... ...	11.7 14.6 :	-14.2 20.0	9.0 16.9
RS21N	... ...	-47.7 26.7	... ...	... ...	-18.2 15.3	9.6 17.8	-17.0 22.8	-11.7 14.6 :	... ...	-25.9 20.0	-2.7 16.9
RS 80	... ...	-21.8 25.8	... ...	... ...	7.8 14.1	35.5 16.1 :	9.0 20.0	14.2 20.0	25.9 20.0	... ...	23.2 14.9
V1392	... ...	-45.0 24.2	... ...	... ...	-15.4 10.7	12.4 13.4	-14.2 18.8	-9.0 16.9	2.7 16.9	-23.2 14.9	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 700 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	−6.0 25.1 5	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	6.0 25.1 5	... .	... .	... .	−10.4 16.2 9	4.5 18.8 4	−16.5 36.9 7	−26.1 87.5 6	−3.3 14.4 7	−10.9 69.8 11
THOMM	... .	... .	... .	... .	10.4 16.2 9	... .	−3.0 29.8 2	−7.5 26.4 2	−8.6 31.5 2	5.3 21.8 2	3.9 76.5 5
RS 18	... .	... .	... .	... .	−4.5 18.8 4	3.0 29.8 2	... .	... .	... .	−12.0 ... 1	71.9 117.7 2
RS21C	... .	... .	... .	... .	16.5 36.9 7	7.5 26.4 2	... .	... .	−7.8 61.2 8	... .	30.8 45.9 3
RS21N	... .	... .	... .	... .	26.1 87.5 6	8.6 31.5 2	... .	7.8 61.2 8	... .	... .	61.8 40.8 2
RS 80	... .	... .	... .	... .	3.3 14.4 7	−5.3 21.8 2	12.0 ... 1	... .	... .	... .	3.4 .7 2
V1392	... .	... .	... .	... .	10.9 69.8 11	−3.9 76.5 5	−71.9 117.7 2	−30.8 45.9 3	−61.8 40.8 2	−3.4 .7 2	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 700 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-6.0 20.0	-15.3 22.8	-19.7 25.4	-25.1 24.1	-50.7 24.1	-9.8 24.1	3.2 22.5
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	6.0 20.0	... ...	... ...	... ...	-9.3 10.9	-13.7 15.6	-19.1 13.4	-44.7 13.4	-3.8 13.4	9.2 10.2
THOMM	... ...	15.3 22.8	... ...	... ...	9.3 10.9	... ...	-4.4 16.9	-9.8 15.5	-35.5 15.5	5.5 15.5	18.4 12.3
RS 18	... ...	19.7 25.4	... ...	... ...	13.7 15.6	4.4 16.9	... ...	-5.4 19.8	-31.1 19.8	9.9 18.9	22.8 16.7
RS21 C	... ...	25.1 24.1	... ...	... ...	19.1 13.4	9.8 15.5	5.4 19.8	... ...	-25.7 58.2	15.3 18.3	28.2 14.8
RS21 N	... ...	50.7 24.1	... ...	... ...	44.7 13.4	35.5 15.5	31.1 19.8	25.7 58.2	... ...	41.0 18.3	53.9 14.8
RS 80	... ...	9.8 24.1	... ...	... ...	3.8 13.4	-5.5 15.5	-9.9 18.9	-15.3 18.3	-41.0 18.3	... ...	12.9 15.2
V1392	... ...	-3.2 22.5	... ...	... ...	-9.2 10.2	-18.4 12.3	-22.8 16.7	-28.2 14.8	-53.9 14.8	-12.9 15.2	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 500 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-4.0 11.9 5	... .	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	4.0 11.9 5	... .	... .	... .	5.2 45.6 7	-11.4 22.8 4	-7.6 17.0 8	-4.7 15.7 7	18.0 23.1 7	15.6 61.7 14
THOMM	... .	... .	... .	... .	-5.2 45.6 7	... .	-18.0 13.1 2	-48.2 ... 1	-28.2 ... 1	... .	6.2 88.2 4
RS 18	... .	... .	... .	... .	11.4 22.8 4	18.0 13.1 2	... .	... .	... .	3.0 ... 1	13.9 20.6 2
RS21C	... .	... .	... .	... .	7.6 17.0 8	48.2 ... 1	... .	... .	1.9 11.7 9	... .	-6.7 20.7 3
RS21N	... .	... .	... .	... .	4.7 15.7 7	28.2 ... 1	... .	-1.9 11.7 9	... .	... .	-5.4 14.7 3
RS 80	... .	... .	... .	... .	-18.0 23.1 7	... .	-3.0 ... 1	... .	... .	... .	-6.1 4.1 4
V1392	... .	... .	... .	... .	-15.6 61.7 14	-6.2 88.2 4	-13.9 20.6 2	6.7 20.7 3	5.4 14.7 3	6.1 4.1 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 500 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-4.0 18.6	.1 22.0	-8.5 23.5	-5.7 22.3	-3.8 22.3	16.0 22.4	17.7 20.5
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	4.0 18.6	... ...	... ...	... ...	4.1 11.7	-4.5 14.5	-1.7 12.3	.2 12.3	20.0 12.5	21.7 8.7 +
THOMM	... ...	-.1 22.0	... ...	... ...	-4.1 11.7	... ...	-8.5 16.5	-5.8 15.9	-3.9 15.9	15.9 16.4	17.6 12.6
RS 18	... ...	8.5 23.5	... ...	... ...	4.5 14.5	8.5 16.5	... ...	2.8 18.4	4.6 18.4	24.4 17.7	26.2 15.3
RS21C	... ...	5.7 22.3	... ...	... ...	1.7 12.3	5.8 15.9	-2.8 18.4	... ...	1.9 11.7	21.7 17.0	23.4 13.6
RS21N	... ...	3.8 22.3	... ...	... ...	-.2 12.3	3.9 15.9	-4.6 18.4	-1.9 11.7	... ...	19.8 17.0	21.5 13.6
RS 80	... ...	-16.0 22.4	... ...	... ...	-20.0 12.5	-15.9 16.4	-24.4 17.7	-21.7 17.0	-19.8 17.0	... ...	1.7 13.3
V1392	... ...	-17.7 20.5	... ...	... ...	-21.7 8.7 +	-17.6 12.6	-26.2 15.3	-23.4 13.6	-21.5 13.6	-1.7 13.3	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 400 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-6.9 17.5 4	1.8 5.9 2	... .	... .	... .	... .	... .
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	6.9 17.5 4	... .	... .	... .	-1.1 10.8 6	2.2 8.3 4	1.5 12.2 8	4.2 16.7 8	5.2 14.7 7	10.9 41.9 13
THOMM	... .	-1.8 5.9 2	... .	... .	1.1 10.8 6	... .	-15.6 : 1.4 2	-23.4 ... 1	-24.1 ... 1	... .	-22.8 13.7 2
RS 18	... .	... .	... .	... .	-2.2 8.3 4	15.6 : 1.4 2	... .	... .	... .	7.0 ... 1	-7.2 12.3 2
RS21C	... .	... .	... .	... .	-1.5 12.2 8	23.4 ... 1	... .	... .	2.4 8.0 10	... .	.9 20.9 3
RS21N	... .	... .	... .	... .	-4.2 16.7 8	24.1 ... 1	... .	-2.4 8.0 10	... .	... .	1.8 22.0 3
RS 80	... .	... .	... .	... .	-5.2 14.7 7	... .	-7.0 ... 1	... .	... .	... .	-2.9 4.3 4
V1392	... .	... .	... .	... .	-10.9 41.9 13	22.8 13.7 2	7.2 12.3 2	-.9 20.9 3	-1.8 22.0 3	2.9 4.3 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 400 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-7.6 9.9	3.1 10.7	-4.0 12.5	-5.8 11.9	-3.3 11.9	.2 12.1	1.3 11.0
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	7.6 9.9	... ...	... ...	... ...	10.7 7.0	3.6 8.2	1.8 7.0	4.3 7.0	7.8 7.1	9.0 5.2
THOMM	... ...	-3.1 10.7	... ...	... ...	-10.7 7.0	... ...	-7.1 9.5	-8.9 9.3	-6.4 9.3	-2.9 9.6	-1.7 7.9
RS 18	... ...	4.0 12.5	... ...	... ...	-3.6 8.2	7.1 9.5	... ...	-1.7 10.5	.7 10.5	4.2 10.0	5.4 8.8
RS21C	... ...	5.8 11.9	... ...	... ...	-1.8 7.0	8.9 9.3	1.7 10.5	... ...	2.5 8.0	6.0 9.7	7.1 7.8
RS21N	... ...	3.3 11.9	... ...	... ...	-4.3 7.0	6.4 9.3	-.7 10.5	-2.5 8.0	... ...	3.5 9.7	4.6 7.8
RS 80	... ...	-.2 12.1	... ...	... ...	-7.8 7.1	2.9 9.6	-4.2 10.0	-6.0 9.7	-3.5 9.7	... ...	1.1 7.6
V1392	... ...	-1.3 11.0	... ...	... ...	-9.0 5.2	1.7 7.9	-5.4 8.8	-7.1 7.8	-4.6 7.8	-1.1 7.6	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 300 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	3.1 16.8 6	5.1 7.7 2	... .	... .	... .	... .	80.7 21.2 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-3.1 16.8 6	... .	... .	... .	-1.7 5.1 6	-5.0 12.0 4	6.7 19.0 8	7.1 19.7 8	-7.9 16.4 6	23.6 58.2 17
THOMM	... .	-5.1 7.7 2	... .	... .	1.7 5.1 6	... .	-34.2 42.7 2	2.9 ... 1	2.0 ... 1	... .	8.3 56.0 3
RS 18	... .	... .	... .	... .	5.0 12.0 4	34.2 42.7 2	... .	... .	... .	-4.0 ... 1	14.6 24.5 2
RS21C	... .	... .	... .	... .	-6.7 19.0 8	-2.9 ... 1	... .	... .	.1 3.0 10	... .	-12.9 23.5 3
RS21N	... .	... .	... .	... .	-7.1 19.7 8	-2.0 ... 1	... .	-.1 3.0 10	... .	... .	-13.7 20.9 3
RS 80	... .	... .	... .	... .	7.9 16.4 6	... .	4.0 ... 1	... .	... .	... .	-6.3 : 3.0 4
V1392	... .	-80.7 21.2 2	... .	... .	-23.6 58.2 17	-8.3 56.0 3	-14.6 24.5 2	12.9 23.5 3	13.7 20.9 3	6.3 : 3.0 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 300 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	13.3 12.0	18.7 14.2	7.6 17.0	27.5 15.8	27.6 15.8	18.6 16.3	36.2 13.0 *
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-13.3 12.0	... ...	... ...	... ...	5.4 10.5	-5.7 12.8	14.2 10.9	14.3 10.9	5.3 11.5	23.0 7.2 $
THOMM	... ...	-18.7 14.2	... ...	... ...	-5.4 10.5	... ...	-11.1 14.7	8.8 14.2	9.0 14.2	-.0 15.0	17.6 11.3
RS 18	... ...	-7.6 17.0	... ...	... ...	5.7 12.8	11.1 14.7	... ...	19.9 16.4	20.1 16.4	11.1 15.9	28.7 13.4 :
RS21C	... ...	-27.5 15.8	... ...	... ...	-14.2 10.9	-8.8 14.2	-19.9 16.4	... ...	.1 3.0	-8.9 15.5	8.7 11.9
RS21N	... ...	-27.6 15.8	... ...	... ...	-14.3 10.9	-9.0 14.2	-20.1 16.4	-.1 3.0	... ...	-9.0 15.5	8.6 11.9
RS 80	... ...	-18.6 16.3	... ...	... ...	-5.3 11.5	.0 15.0	-11.1 15.9	8.9 15.5	9.0 15.5	... ...	17.6 12.0
V1392	... ...	-36.2 13.0 *	... ...	... ...	-23.0 7.2 $	-17.6 11.3	-28.7 13.4 :	-8.7 11.9	-8.6 11.9	-17.6 12.0	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 250 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-9.7 10.6 4	.6 3.5 2	... .	... .	... .	... .	-32.8 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	9.7 10.6 4	... .	... .	... .	5.9 9.6 5	-16.5 15.0 4	-3.7 18.2 8	.8 18.8 8	7.3 30.2 6	.8 56.5 17
THOMM	... .	-.6 3.5 2	... .	... .	-5.9 9.6 5	... .	-80.7 ... 1	-7.0 ... 1	-5.2 ... 1	... .	-77.5 119.2 2
RS 18	... .	... .	... .	... .	16.5 15.0 4	80.7 ... 1	... .	... .	... .	10.0 ... 1	-38.4 60.5 2
RS21C	... .	... .	... .	... .	3.7 18.2 8	7.0 ... 1	... .	... .	4.3 5.8 9	... .	-5.4 8.4 3
RS21N	... .	... .	... .	... .	-.8 18.8 8	5.2 ... 1	... .	-4.3 5.8 9	... .	... .	-10.4 10.4 3
RS 80	... .	... .	... .	... .	-7.3 30.2 6	... .	-10.0 ... 1	... .	... .	... .	-2.4 20.6 4
V1392	... .	32.8 ... 1	... .	... .	-.8 56.5 17	77.5 119.2 2	38.4 60.5 2	5.4 8.4 3	10.4 10.4 3	2.4 20.6 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 250 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-15.9 16.0	9.2 17.9	-24.9 21.3	-17.9 19.6	-13.6 19.6	-14.3 20.1	-25.3 17.1
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	15.9 16.0	... ...	... ...	... ...	25.1 13.0	-9.0 14.9	-2.0 12.0	2.3 12.0	1.6 12.8	-9.4 8.1
THOMM	... ...	-9.2 17.9	... ...	... ...	-25.1 13.0	... ...	-34.1 18.3	-27.0 16.6	-22.7 16.6	-23.5 17.7	-34.4 14.1 +
RS 18	... ...	24.9 21.3	... ...	... ...	9.0 14.9	34.1 18.3	... ...	7.0 18.7	11.3 18.7	10.6 18.1	-.3 15.6
RS21C	... ...	17.9 19.6	... ...	... ...	2.0 12.0	27.0 16.6	-7.0 18.7	... ...	4.3 5.8	3.5 17.1	-7.4 13.2
RS21N	... ...	13.6 19.6	... ...	... ...	-2.3 12.0	22.7 16.6	-11.3 18.7	-4.3 5.8	... ...	-.8 17.1	-11.7 13.2
RS 80	... ...	14.3 20.1	... ...	... ...	-1.6 12.8	23.5 17.7	-10.6 18.1	-3.5 17.1	.8 17.1	... ...	-10.9 13.3
V1392	... ...	25.3 17.1	... ...	... ...	9.4 8.1	34.4 14.1 +	.3 15.6	7.4 13.2	11.7 13.2	10.9 13.3	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 200 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-4.0 18.6 4	2.8 .4 2	... .	... .	... .	... .	115.0 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	4.0 18.6 4	... .	... .	... .	-11.2 + .4 2	-12.9 15.7 3	15.2 42.1 7	10.2 28.5 7	-8.1 29.0 6	10.5 82.3 16
THOMM	... .	-2.8 .4 2	... .	... .	11.2 + .4 2	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	12.9 15.7 3	... .	... .	... .	... .	9.0 ... 1	.8 ... 1
RS21C	... .	... .	... .	... .	-15.2 42.1 7	... .	... .	... .	-6.6 20.7 7	... .	-2.9 7.2 2
RS21N	... .	... .	... .	... .	-10.2 28.5 7	... .	... .	6.6 20.7 7	... .	... .	-9.0 16.4 3
RS 80	... .	... .	... .	... .	8.1 29.0 6	... .	-9.0 ... 1	... .	... .	... .	-9.1 17.7 4
V1392	... .	-115.0 ... 1	... .	... .	-10.5 82.3 16	... .	-.8 ... 1	2.9 7.2 2	9.0 16.4 3	9.1 17.7 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 200 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	15.1 22.3	3.3 29.4	11.2 33.2	35.6 28.7	28.3 28.7	21.8 27.9	37.6 24.3
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-15.1 22.3	... ...	... ...	... ...	-11.7 29.4	-3.9 24.8	20.5 18.3	13.2 18.3	6.7 17.2	22.6 11.7
THOMM	... ...	-3.3 29.4	... ...	... ...	11.7 29.4	... ...	7.8 38.4	32.3 34.6	25.0 34.6	18.4 33.9	34.3 31.3
RS 18	... ...	-11.2 33.2	... ...	... ...	3.9 24.8	-7.8 38.4	... ...	24.5 30.6	17.1 30.6	10.6 27.8	26.5 26.0
RS21C	... ...	-35.6 28.7	... ...	... ...	-20.5 18.3	-32.3 34.6	-24.5 30.6	... ...	-7.3 20.7	-13.9 24.7	2.0 20.3
RS21N	... ...	-28.3 28.7	... ...	... ...	-13.2 18.3	-25.0 34.6	-17.1 30.6	7.3 20.7	... ...	-6.5 24.7	9.3 20.3
RS 80	... ...	-21.8 27.9	... ...	... ...	-6.7 17.2	-18.4 33.9	-10.6 27.8	13.9 24.7	6.5 24.7	... ...	15.9 18.1
V1392	... ...	-37.6 24.3	... ...	... ...	-22.6 11.7	-34.3 31.3	-26.5 26.0	-2.0 20.3	-9.3 20.3	-15.9 18.1	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 150 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-7.7 10.5 4	... .	... .	... .	... .	... .	-13.8 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	7.7 10.5 4	... .	... .	... .	... .	2.5 27.0 3	-.3 17.0 7	9.5 53.9 7	-4.6 23.9 6	3.3 26.2 15
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-2.5 27.0 3	... .	... .	... .	... .	7.0 ... 1	33.8 ... 1
RS21C	... .	... .	... .	... .	.3 17.0 7	... .	... .	... .	8.7 45.6 7	... .	14.1 18.0 2
RS21N	... .	... .	... .	... .	-9.5 53.9 7	... .	... .	-8.7 45.6 7	... .	... .	-8.4 14.1 2
RS 80	... .	... .	... .	... .	4.6 23.9 6	... .	-7.0 ... 1	... .	... .	... .	5.6 10.8 4
V1392	... .	13.8 ... 1	... .	... .	-3.3 26.2 15	... .	-33.8 ... 1	-14.1 18.0 2	8.4 14.1 2	-5.6 10.8 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 150 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
ASA	...	...	...	...	-10.0	...	-16.1	-12.3	4.0	-13.0	-4.9
	...	...	...	...	9.6	...	13.5	11.9	11.9	11.5	10.2
GR 78	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SP 76	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SWISS	...	10.0	...	...	...	...	-6.2	-2.3	14.0	-3.1	5.1
	...	9.6	...	...	...	...	9.7	7.2	7.2	6.7	4.7
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	...	16.1	...	...	6.2	...	...	3.8	20.1	3.1	11.2
	...	13.5	...	...	9.7	...	...	11.9	11.9	10.9	10.2
RS21C	...	12.3	...	...	2.3	...	-3.8	...	16.3	-.7	7.4
	...	11.9	...	...	7.2	...	11.9	...	44.8	9.6	8.0
RS21N	...	-4.0	...	...	-14.0	...	-20.1	-16.3	...	-17.1	-8.9
	...	11.9	...	...	7.2	...	11.9	44.8	...	9.6	8.0
RS 80	...	13.0	...	...	3.1	...	-3.1	.7	17.1	...	8.1
	...	11.5	...	...	6.7	...	10.9	9.6	9.6	...	7.1
V1392	...	4.9	...	...	-5.1	...	-11.2	-7.4	8.9	-8.1	...
	...	10.2	...	...	4.7	...	10.2	8.0	8.0	7.1	...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 100 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	−6.8 12.5 6	... .	... .	... .	... .	... .	1.4 3.5 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	6.8 12.5 6	... .	... .	... .	... .	−1.3 12.5 3	−.6 8.4 5	−1.2 6.9 6	−11.1 12.7 6	3.9 51.7 15
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	1.3 12.5 3	... .	... .	... .	... .	3.0 ... 1	−114.7 ... 1
RS21 C	... .	... .	... .	... .	.6 8.4 5	... .	... .	... .	2.6 9.2 6	... .	−84.0 ... 1
RS21 N	... .	... .	... .	... .	1.2 6.9 6	... .	... .	−2.6 9.2 6	... .	... .	−135.9 74.7 2
RS 80	... .	... .	... .	... .	11.1 12.7 6	... .	−3.0 ... 1	... .	... .	... .	4.7 14.2 4
V1392	... .	−1.4 3.5 2	... .	... .	−3.9 51.7 15	... .	114.7 ... 1	84.0 ... 1	135.9 74.7 2	−4.7 14.2 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 100 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	-5.0 13.9	... ...	15.6 22.3	8.7 21.0	11.3 21.0	-10.4 18.2	-4.2 15.2
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	5.0 13.9	... ...	... ...	... ...	... ...	20.6 17.7	13.6 15.9	16.2 15.9	-5.4 12.3	.7 8.6
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-15.6 22.3	... ...	... ...	-20.6 17.7	... ...	... ...	-7.0 23.6	-4.4 23.6	-26.0 19.8	-19.9 18.6
RS21C	... ...	-8.7 21.0	... ...	... ...	-13.6 15.9	... ...	7.0 23.6	... ...	2.6 9.2	-19.0 19.9	-12.9 17.4
RS21N	... ...	-11.3 21.0	... ...	... ...	-16.2 15.9	... ...	4.4 23.6	-2.6 9.2	... ...	-21.7 19.9	-15.5 17.4
RS 80	... ...	10.4 18.2	... ...	... ...	5.4 12.3	... ...	26.0 19.8	19.0 19.9	21.7 19.9	... ...	6.2 12.9
V1392	... ...	4.2 15.2	... ...	... ...	-.7 8.6	... ...	19.9 18.6	12.9 17.4	15.5 17.4	-6.2 12.9	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 70 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	4.2 14.1 6	... .	... .	... .	... .	... .	119.1 + 3.5 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-4.2 14.1 6	... .	... .	... .	... .	-7.0 6.1 3	8.9 22.1 5	-.5 15.8 5	.6 10.1 5	21.5 73.5 13
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	7.0 6.1 3	... .	... .	... .	... .	13.0 ... 1	-13.9 ... 1
RS21C	... .	... .	... .	... .	-8.9 22.1 5	... .	... .	... .	-2.0 4.1 5	... .	-26.0 ... 1
RS21N	... .	... .	... .	... .	.5 15.8 5	... .	... .	2.0 4.1 5	... .	... .	-18.8 ... 1
RS 80	... .	... .	... .	... .	-.6 10.1 5	... .	-13.0 ... 1	... .	... .	... .	-6.0 16.8 4
V1392	... .	-119.1 + 3.5 2	... .	... .	-21.5 73.5 13	... .	13.9 ... 1	26.0 ... 1	18.8 ... 1	6.0 16.8 4	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 70 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	28.5 17.5	... ...	30.2 28.1	43.1 26.4	41.1 26.4	39.7 23.4	46.2 19.3 :
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-28.5 17.5	... ...	... ...	... ...	... ...	1.8 22.3	14.6 20.1	12.6 20.1	11.3 16.4	17.7 11.4
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-30.2 28.1	... ...	... ...	-1.8 22.3	... ...	... ...	12.8 29.8	10.8 29.8	9.5 25.2	15.9 23.5
RS21C	... ...	-43.1 26.4	... ...	... ...	-14.6 20.1	... ...	-12.8 29.8	... ...	-2.0 4.1	-3.3 25.5	3.1 22.1
RS21N	... ...	-41.1 26.4	... ...	... ...	-12.6 20.1	... ...	-10.8 29.8	2.0 4.1	... ...	-1.3 25.5	5.1 22.1
RS 80	... ...	-39.7 23.4	... ...	... ...	-11.3 16.4	... ...	-9.5 25.2	3.3 25.5	1.3 25.5	... ...	6.4 16.9
V1392	... ...	-46.2 19.3 :	... ...	... ...	-17.7 11.4	... ...	-15.9 23.5	-3.1 22.1	-5.1 22.1	-6.4 16.9	... ...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 50 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	23.4 58.4 6	... .	... .	... .	... .	... .	-3.0 21.2 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-23.4 58.4 6	... .	... .	... .	... .	19.1 15.7 3	22.2 70.3 5	60.3 66.8 5	-3.6 14.4 3	-12.7 67.1 13
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-19.1 15.7 3	... .	... .	... .	... .	... .	-23.2 ... 1
RS21C	... .	... .	... .	... .	-22.2 70.3 5	... .	... .	... .	-10.8 56.5 7	... .	-108.4 ... 1
RS21N	... .	... .	... .	... .	-60.3 66.8 5	... .	... .	10.8 56.5 7	... .	... .	-110.4 ... 1
RS 80	... .	... .	... .	... .	3.6 14.4 3	... .	... .	... .	... .	... .	-93.9 118.5 2
V1392	... .	3.0 21.2 2	... .	... .	12.7 67.1 13	... .	23.2 ... 1	108.4 ... 1	110.4 ... 1	93.9 118.5 2	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 50 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
ASA	...	...	...	...	27.6	...	40.4	54.7	30.7	51.4	-1.2
	...	...	...	...	21.9	...	37.4	33.0	33.0	34.9	24.3
GR 78	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SP 76	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SWISS	...	-27.6	...	...	...	...	12.9	27.1	3.1	23.8	-28.8
	...	21.9	...	...	...	...	30.8	25.1	25.1	28.0	14.7
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	...	-40.4	...	...	-12.9	...	...	14.2	-9.7	11.0	-41.6
	...	37.4	...	...	30.8	...	...	39.5	39.5	41.1	32.5
RS21C	...	-54.7	...	...	-27.1	...	-14.2	...	-24.0	-3.3	-55.9
	...	33.0	...	...	25.1	...	39.5	...	54.6	37.2	27.8
RS21N	...	-30.7	...	...	-3.1	...	9.7	24.0	...	20.7	-31.9
	...	33.0	...	...	25.1	...	39.5	54.6	...	37.2	27.8
RS 80	...	-51.4	...	...	-23.8	...	-11.0	3.3	-20.7	...	-52.6
	...	34.9	...	...	28.0	...	41.1	37.2	37.2	...	28.7
V1392	...	1.2	...	...	28.8	...	41.6	55.9	31.9	52.6	...
	...	24.3	...	...	14.7	...	32.5	27.8	27.8	28.7	...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 30 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-3.2 12.5 4	... .	... .	... .	... .	... .	-12.3 ... 1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	3.2 12.5 4	... .	... .	... .	... .	-21.7 16.3 3	32.9 28.5 5	39.7 34.3 4	-6.5 16.3 2	11.5 35.5 12
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	21.7 16.3 3	... .	... .	... .	... .	... .	... .
RS21C	... .	... .	... .	... .	-32.9 28.5 5	... .	... .	... .	.5 11.1 6	... .	-25.6 ... 1
RS21N	... .	... .	... .	... .	-39.7 34.3 4	... .	... .	-.5 11.1 6	... .	... .	-20.6 ... 1
RS 80	... .	... .	... .	... .	6.5 16.3 2	... .	... .	... .	... .	... .	4.5 34.2 3
V1392	... .	12.3 ... 1	... .	... .	-11.5 35.5 12	... .	... .	25.6 ... 1	20.6 ... 1	-4.5 34.2 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 30 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
ASA	...	...	...	...	-6.9	...	-28.6	27.1	27.7	-6.2	2.4
	...	...	...	...	12.9	...	20.9	17.3	17.3	18.3	14.1
GR 78	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SP 76	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
SWISS	...	6.9	...	...	...	...	-21.7	34.0	34.6	.7	9.3
	...	12.9	...	...	...	...	16.5	11.7 *	11.7 *	13.5	7.4
THOMM	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
RS 18	...	28.6	...	...	21.7	...	...	55.7	56.3	22.3	31.0
	...	20.9	...	...	16.5	...	...	20.2 +	20.2 +	21.3	18.1
RS21C	...	-27.1	...	...	-34.0	...	-55.7	...	.6	-33.3	-24.7
	...	17.3	...	...	11.7 *	...	20.2 +	...	11.1	17.6	13.2
RS21N	...	-27.7	...	...	-34.6	...	-56.3	-.6	...	-33.9	-25.3
	...	17.3	...	...	11.7 *	...	20.2 +	11.1	...	17.6	13.2
RS 80	...	6.2	...	...	-.7	...	-22.3	33.3	33.9	...	8.7
	...	18.3	...	...	13.5	...	21.3	17.6	17.6	...	13.1
V1392	...	-2.4	...	...	-9.3	...	-31.0	24.7	25.3	-8.7	...
	...	14.1	...	...	7.4	...	18.1	13.2	13.2	13.1	...

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 20 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	0.0 0.0 3	... .	... .	... .	... .	... .	-7.3 $ 0.0 2
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	0.0 0.0 3	... .	... .	... .	... .	165.0 ... 1	5.9 54.1 4	-7.0 75.0 2	-61.0 75.0 2	-5.4 58.2 9
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-165.0 ... 1	... .	... .	... .	... .	... .	... .
RS21C	... .	... .	... .	... .	-5.9 54.1 4	... .	... .	... .	5.0 11.0 3	... .	-32.2 17.5 2
RS21N	... .	... .	... .	... .	7.0 75.0 2	... .	... .	-5.0 11.0 3	... .	... .	-35.8 ... 1
RS 80	... .	... .	... .	... .	61.0 75.0 2	... .	... .	... .	... .	... .	9.5 13.8 3
V1392	... .	7.3 $ 0.0 2	... .	... .	5.4 58.2 9	... .	... .	32.2 17.5 2	35.8 ... 1	-9.5 13.8 3	... .

ADJUSTED DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I 20 MB LEVEL I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
ASA	... ...	... ...	... ...	... ...	3.2 21.1	... ...	168.2 50.5 $	11.3 27.8	16.3 27.8	-36.1 29.1	-12.1 21.9
GR 78	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SP 76	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
SWISS	... ...	-3.2 21.1	... ...	... ...	... ...	... ...	165.0 45.9 $	8.1 19.2	13.1 19.2	-39.3 21.9	-15.4 12.9
THOMM	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
RS 18	... ...	-168.2 50.5 $	... ...	... ...	-165.0 45.9 $	... ...	... ...	-156.9 49.7 $	-151.9 49.7 $	155.7 50.8 $	179.6 47.6 $
RS21C	... ...	-11.3 27.8	... ...	... ...	-8.1 19.2	... ...	156.9 49.7 $	... ...	5.0 11.0	-47.4 28.0	-23.5 20.6
RS21N	... ...	-16.3 27.8	... ...	... ...	-13.1 19.2	... ...	151.9 49.7 $	-5.0 11.0	... ...	-52.4 28.0	-28.5 20.6
RS 80	... ...	36.1 29.1	... ...	... ...	39.3 21.9	... ...	-155.7 50.8 $	47.4 28.0	52.4 28.0	... ...	24.0 21.1
V1392	... ...	12.1 21.9	... ...	... ...	15.4 12.9	... ...	-179.6 47.6 $	23.5 20.6	28.5 20.6	-24.0 21.1	... ...

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I LEVELS 900 MB TO 150 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	4.70 $ 5.36 28	... .	... .	5.20 + 7.68 16	-3.21 + 7.87 40	7.68 $ 6.42 36	8.33 $ 6.93 36	.77 7.54 31	4.16 : 10.38 31
ASA	... .	... .	... .	... .	... .	3.09 6.13 8	... .	-3.12 4.11 9	-3.38 : 4.03 9	... .	... .
GR 78	-4.70 $ 5.36 28	... .	... .	-.42 2.30 36	... .	... .	-4.21 $ 2.07 27	1.25 * 2.56 36	1.65 $ 2.15 36	.77 2.87 27	1.40 4.68 27
SP 76	... .	... .	.42 2.30 36	... .	... .	... .	.72 16.51 18	-.52 1.70 9	.18 1.29 9	-.66 1.88 9	-.51 3.49 27
SWISS	... .	... .	... .	... .	... .	... .	-1.87 4.53 7	... .	... .	... .	-1.30 + 1.73 14
THOMM	-5.20 + 7.68 16	-3.09 6.13 8	... .	... .	... .	... .	-3.69 * 4.48 14	2.58 9.42 19	2.97 8.36 19	... .	-2.58 3.57 3
RS 18	3.21 + 7.87 40	... .	4.21 $ 2.07 27	-.72 16.51 18	1.87 4.53 7	3.69 * 4.48 14	... .	4.26 : 5.48 9	5.20 : 6.60 9	5.08 $ 4.77 36	5.64 $ 6.30 52
RS21 C	-7.68 $ 6.42 36	3.12 4.11 9	-1.25 * 2.56 36	.52 1.70 9	... .	-2.58 9.42 19	-4.26 : 5.48 9	... .	.41 : 1.94 99	... .	.07 4.07 27
RS21 N	-8.33 $ 6.93 36	3.38 : 4.03 9	-1.65 $ 2.15 36	-.18 1.29 9	... .	-2.97 8.36 19	-5.20 : 6.60 9	-.41 : 1.94 99	... .	... .	-.35 3.51 27
RS 80	-.77 7.54 31	... .	-.77 2.87 27	.66 1.88 9	... .	... .	-5.08 $ 4.77 36	... .	... .	... .	2.29 : 5.35 27
V1392	-4.16 : 10.38 31	... .	-1.40 4.68 27	.51 3.49 27	1.30 + 1.73 14	2.58 3.57 3	-5.64 $ 6.30 52	-.07 4.07 27	.35 3.51 27	-2.29 : 5.35 27	... .

ADJUSTED DIFF. MATRIX I PRESSURE [MB] I I LEVELS 900 MB TO 150 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	4.77 1.46 $	3.16 .55 $	2.69 .70 $	3.76 1.30 $	4.08 .81 $	-1.22 .52 +	4.92 .57 $	5.33 .57 $	2.54 .59 $	4.01 .54 $
ASA	-4.77 1.46 $	... .	-1.61 1.48	-2.08 1.54.	-1.00 1.89	-.68 1.41	-5.99 1.47 $	.15 1.40	.56 1.40	-2.23 1.52	-.76 1.47
GR 78	-3.16 .55 $	1.61 1.48	... .	-.47 .63	.60 1.30	.92 .87	-4.38 .54 $	1.76 .58 $	2.17 .58 $	-.62 .60	.85 .54
SP 76	-2.69 .70 $	2.08 1.54	.47 .63	... .	1.08 1.35	1.40 .96	-3.91 .66 $	2.23 .72 $	2.64 .72 $	-.15 .72	1.32 .64 :
SWISS	-3.76 1.30 $	1.00 1.89	-.60 1.30	-1.08 1.35	... .	.32 1.46	-4.99 1.25 $	1.16 1.33	1.57 1.33	-1.23 1.32	.24 1.22
THOMM	-4.08 .81 $	.68 1.41	-.92 .87	-1.40 .96	-.32 1.46	... .	-5.30 .82 $	.84 .80	1.25 .80	-1.55 .91	-.08 .85
RS 18	1.22 .52 +	5.99 1.47 $	4.38 .54 $	3.91 .66 $	4.99 1.25 $	5.30 .82 $	... .	6.14 .61 $	6.55 .61 $	3.76 .57 $	5.23 .49 $
RS21C	-4.92 .57 $	-.15 1.40	-1.76 .58 $	-2.23 .72 $	-1.16 1.33	-.84 .80	-6.14 .61 $	... .	.41 1.81 :	-2.38 .69 $	-.91 .59
RS21N	-5.33 .57 $	-.56 1.40	-2.17 .58 $	-2.64 .72 $	-1.57 1.33	-1.25 .80	-6.55 .61 $	-.41 1.81 :	... .	-2.79 .69 $	-1.33 .59
RS 80	-2.54 .59 $	2.23 1.52	.62 .60	.15 .72	1.23 1.32	1.55 .91	-3.76 .57 $	2.38 .69 $	2.79 .69 $	... .	1.47 .58 +
V1392	-4.01 .54 $	.76 1.47	-.85 .54	-1.32 .64 :	-.24 1.22	.08 .85	-5.23 .49 $	.91 .59	1.33 .59	-1.47 .58 +	... .

PRIMARY DIFFERENCE MATRIX FOR I PRESSURE [MB] I I LEVELS 100 MB TO 20 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	18.43 26.25 2	... .	... .	... .	8.57 10.88 4	25.84 16.77 4	26.47 17.26 4	8.53 10.87 4	6.08 8.61 2
ASA	... .	... .	... .	... .	... .	... .	... .	.93 1.08 5	1.02 1.19 5	... .	... .
GR 78	-18.43 26.25 2	... .	... .	1.47 $ 1.98 20	... .	... .	-.38 2.56 15	1.15 $ 1.43 20	1.34 $ 1.63 20	-.05 2.23 15	.65 3.10 15
SP 76	... .	... .	-1.47 $ 1.98 20	... .	... .	... .	-.94 1.14 8	.32 .60 5	.08 .52 5	-.55 2.95 3	-1.79 $ 1.65 15
SWISS	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	.02 1.18 5
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-8.57 10.88 4	... .	.38 2.56 15	.94 1.14 8	... .	... .	... .	1.13 1.39 5	1.42 1.73 5	.36 : .68 20	.57 1.46 24
RS21 C	-25.84 16.77 4	-.93 1.08 5	-1.15 $ 1.43 20	-.32 .60 5	... .	... .	-1.13 1.39 5	... .	.14 + .38 51	... .	-1.20 $ .77 11
RS21 N	-26.47 17.26 4	-1.02 1.19 5	-1.34 $ 1.63 20	-.08 .52 5	... .	... .	-1.42 1.73 5	-.14 + .38 51	... .	... .	-1.28 * 1.21 11
RS 80	-8.53 10.87 4	... .	.05 2.23 15	.55 2.95 3	... .	... .	-.36 : .68 20	... .	... .	... .	1.17 : 1.79 15
V1392	-6.08 8.61 2	... .	-.65 3.10 15	1.79 $ 1.65 15	-.02 1.18 5	... .	-.57 1.46 24	1.20 $ .77 11	1.28 * 1.21 11	-1.17 : 1.79 15	... .

ADJUSTED DIFF. MATRIX I PRESSURE [MB] I I LEVELS 100 MB TO 20 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	13.03	12.07	13.33	12.05	...	11.39	13.95	14.09	11.37	12.05
	....	1.32 $	.67 $	.72 $	1.30 $	....	.67 $	.69 $	.69 $	.68 $	.67 $
ASA	-13.03	...	-.96	.29	-.99	...	-1.64	.92	1.06	-1.66	-.99
	1.32 $	....	1.19	1.22	1.64	....	1.21	1.12	1.12	1.23	1.20
GR 78	-12.07	.96	...	1.26	-.02	...	-.68	1.88	2.02	-.70	-.02
	.67 $	1.19	....	.39 $	1.17	....	.37	.41 $	.41 $	.40	.36
SP 76	-13.33	-.29	-1.26	...	-1.28	...	-1.94	.63	.76	-1.96	-1.28
	.72 $	1.22	.39 $	....	1.19	....	.43 $	.49	.49	.48 $	.41 $
SWISS	-12.05	.99	.02	1.28	...	...	-.66	1.91	2.04	-.68	-.00
	1.30 $	1.64	1.17	1.19	....	....	1.17	1.20	1.20	1.19	1.12
THOMM	...	...	...	...	...	...	...	...	...	...	...
	....	....	....	....	....	....	....	....	....	....	....
RS 18	-11.39	1.64	.68	1.94	.66	...	...	2.56	2.70	-.02	.66
	.67 $	1.21	.37	.43 $	1.17	....	....	.46 $	.46 $	.39	.35
RS21C	-13.95	-.92	-1.88	-.63	-1.91	...	-2.56	...	.14	-2.58	-1.91
	.69 $	1.12	.41 $	.49	1.20	....	.46 $	....	.35 *	.51 $	.44 $
RS21N	-14.09	-1.06	-2.02	-.76	-2.04	...	-2.70	-.14	...	-2.72	-2.04
	.69 $	1.12	.41 $	.49	1.20	....	.46 $	.35 *	....	.51 $	.44 $
RS 80	-11.37	1.66	.70	1.96	.68	...	.02	2.58	2.72	...	.68
	.68 $	1.23	.40	.48 $	1.19	....	.39	.51 $	.51 $	....	.40
V1392	-12.05	.99	.02	1.28	-.00	...	-.66	1.91	2.04	-.68	...
	.67 $	1.20	.36	.41 $	1.12	....	.35	.44 $	.44 $	.40	....

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I LEVELS 900 MB TO 150 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	.35 1.17 2	1.19 $ 1.68 36	1.33 $ 1.25 16	1.49 $ 1.94 62	-.27 2.98 13	.49 1.89 39	2.46 $ 2.05 35	2.50 $ 1.89 35	1.81 $ 1.41 28	.65 $ 1.62 59
ASA	-.35 1.17 2	... .	... .	... .	.68 : 1.95 36	1.71 $ 1.54 16	-.39 3.49 18	1.09 $ 1.27 18	1.67 $ 1.27 18	... .	... .
GR 78	-1.19 $ 1.68 36	... .	... .	-.08 .39 36	-.19 1.37 72	... .	-1.02 $ .82 27	.69 $ .31 36	.91 $ .29 36	.34 + .51 18	-.79 $ .82 44
SP 76	-1.33 $ 1.25 16	... .	.08 .39 36	... .	-.01 1.43 36	... .	... .	.89 : 1.05 9	.93 : 1.06 9	.47 : .57 9	-.93 $ .95 26
SWISS	-1.49 $ 1.94 62	-.68 : 1.95 36	.19 1.37 72	.01 1.43 36	... .	-.09 1.72 59	-.98 $ 1.69 79	1.00 $ 1.42 45	1.30 $ 1.54 45	.31 : 1.00 45	-.55 $ 1.2 103
THOMM	.27 2.98 13	-1.71 $ 1.54 16	... .	... .	.09 1.72 59	... .	.89 2.36 18	1.42 : 3.23 24	1.24 : 2.88 24	-.21 2.32 16	-.58 2.16 35
RS 18	-.49 1.89 39	.39 3.49 18	1.02 $ .82 27	... .	.98 $ 1.69 79	-.89 2.36 18	... .	2.07 $ .94 18	2.17 $ .87 18	1.08 $ .79 27	.02 .78 52
RS21C	-2.46 $ 2.05 35	-1.09 $ 1.27 18	-.69 $ .31 36	-.89 : 1.05 9	-1.00 $ 1.42 45	-1.42 : 3.23 24	-2.07 $ .94 18	... .	.13 : .52 72	... .	-1.90 $ 1.10 18
RS21N	-2.50 $ 1.89 35	-1.67 $ 1.27 18	-.91 $ .29 36	-.93 : 1.06 9	-1.30 $ 1.54 45	-1.24 : 2.88 24	-2.17 $ .87 18	-.13 : .52 72	... .	... .	-1.93 $ 1.17 18
RS 80	-1.81 $ 1.41 28	... .	-.34 + .51 18	-.47 : .57 9	-.31 : 1.00 45	.21 2.32 16	-1.08 $ .79 27	... .	... .	... .	-1.01 $ .61 53
V1392	-.65 $ 1.62 59	... .	.79 $ .82 44	.93 $ .95 26	.55 $ 1.2 103	.58 2.16 35	-.02 .78 52	1.90 $ 1.10 18	1.93 $ 1.17 18	1.01 $ .61 53	... .

ADJUSTED DIFF. MATRIX I TEMPERATURE [C] I I LEVELS 900 MB TO 150 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	.56 .19 $	1.43 .12 $	1.36 .16 $	1.29 .11 $	1.04 .15 $	.51 .12 $	2.30 .14 $	2.42 .14 $	1.60 .14 $	.60 .11 $
ASA	-.56 .19 $	... .	.87 .19 $	.80 .22 $	.74 .17 $	.49 .19 +	-.05 .18	1.74 .19 $	1.87 .19 $	1.04 .20 $	.05 .19
GR 78	-1.43 .12 $	-.87 .19 $	... .	-.07 .15	-.14 .11	-.39 .15 +	-.92 .13 $	.87 .14 $	.99 .14 $	.17 .14	-.83 .12 $
SP 76	-1.36 .16 $	-.80 .22 $	.07 .15	... .	-.07 .15	-.32 .18	-.85 .17 $	.94 .17 $	1.06 .17 $	.24 .17	-.76 .15 $
SWISS	-1.29 .11 $	-.74 .17 $	.14 .11	.07 .15	... .	-.25 .13 :	-.79 .11 $	1.00 .12 $	1.13 .12 $	.30 .12 +	-.69 .09 $
THOMM	-1.04 .15 $	-.49 .19 +	.39 .15 +	.32 .18	.25 .13 :	... .	-.54 .14 $	1.25 .15 $	1.38 .15 $	.56 .16 $	-.44 .13 $
RS 18	-.51 .12 $	.05 .18	.92 .13 $	.85 .17 $	.79 .11 $	.54 .14 $	... .	1.79 .14 $	1.92 .14 $	1.09 .14 $	.10 .11
RS21C	-2.30 .14 $	-1.74 .19 $	-.87 .14 $	-.94 .17 $	-1.00 .12 $	-1.25 .15 $	-1.79 .14 $	... .	.13 .48 :	-.70 .16 $	-1.69 .13 $
RS21N	-2.42 .14 $	-1.87 .19 $	-.99 .14 $	-1.06 .17 $	-1.13 .12 $	-1.38 .15 $	-1.92 .14 $	-.13 .48 :	... .	-.83 .16 $	-1.82 .13 $
RS 80	-1.60 .14 $	-1.04 .20 $	-.17 .14	-.24 .17	-.30 .12 +	-.56 .16 $	-1.09 .14 $	.70 .16 $	.83 .16 $	... .	-.99 .13 $
V1392	-.60 .11 $	-.05 .19	.83 .12 $	.76 .15 $	.69 .09 $	.44 .13 $	-.10 .11	1.69 .13 $	1.82 .13 $	.99 .13 $	... .

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I LEVELS 100 MB TO 20 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	2.03 2.13 3	2.60 ... 1	1.36 1.72 7	... .	2.83 3.64 4	5.22 4.66 4	5.38 4.63 4	4.45 4.24 4	3.72 : 2.75 5
ASA	... .	... .	... .	... .	-1.88 $ 2.18 19	... .	-2.10 5.13 10	1.46 : 1.78 9	1.58 + 1.58 9	... .	... .
GR 78	-2.03 2.13 3	... .	... .	1.58 $ 1.67 20	-.70 $ 1.09 36	... .	-.16 .88 15	2.14 $ .63 20	2.40 $ .64 20	1.77 $ .68 10	-.73 $ .98 25
SP 76	-2.60 ... 1	... .	-1.58 $ 1.67 20	... .	-2.13 $ 1.80 17	... .	... .	.52 1.77 5	.76 1.79 5	.38 .72 5	-2.57 $ 1.04 15
SWISS	-1.36 1.72 7	1.88 $ 2.18 19	.70 $ 1.09 36	2.13 $ 1.80 17	... .	... .	.11 2.33 39	2.99 $ 1.52 24	3.20 $ 1.36 24	3.12 $ 1.30 25	.64 $ 1.10 50
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-2.83 3.64 4	2.10 5.13 10	.16 .88 15	... .	-.11 2.33 39	... .	... .	2.43 $ .70 10	2.60 $ .91 10	2.33 $ .97 15	-.07 1.32 25
RS21 C	-5.22 4.66 4	-1.46 : 1.78 9	-2.14 $ .63 20	-.52 1.77 5	-2.99 $ 1.52 24	... .	-2.43 $ .70 10	... .	.22 $ .34 40	... .	-3.20 $ 1.19 10
RS21 N	-5.38 4.63 4	-1.58 + 1.58 9	-2.40 $ .64 20	-.76 1.79 5	-3.20 $ 1.36 24	... .	-2.60 $ .91 10	-.22 $ .34 40	... .	... .	-3.35 $ 1.37 10
RS 80	-4.45 4.24 4	... .	-1.77 $ .68 10	-.38 .72 5	-3.12 $ 1.30 25	... .	-2.33 $ .97 15	... .	... .	... .	-2.36 $ .76 30
V1392	-3.72 : 2.75 5	... .	.73 $ .98 25	2.57 $ 1.04 15	-.64 $ 1.10 50	... .	.07 1.32 25	3.20 $ 1.19 10	3.35 $ 1.37 10	2.36 $ .76 30	... .

ADJUSTED DIFF. MATRIX I TEMPERATURE [C] I I LEVELS 100 MB TO 20 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	...	3.93	2.80	4.41	1.96	...	2.32	5.05	5.27	4.77	2.34
	....	.35 $	.29 $	.32 $	.28 $	....	.29 $	.30 $	.30 $	.30 $	.28 $
ASA	-3.93	...	-1.14	.48	-1.97	...	-1.62	1.12	1.34	.84	-1.59
	.35 $	....	.26 $	.30	.24 $	....	.25 $	.26 $	.26 $	.28 $	.26 $
GR 78	-2.80	1.14	...	1.61	-.84	...	-.48	2.26	2.48	1.98	-.45
	.29 $	.26 $	....	.20 $	.14 $	....	.17 *	.18 $	.18 $	.19 $	.16 $
SP 76	-4.41	-.48	-1.61	...	-2.45	...	-2.09	.64	.86	.36	-2.07
	.32 $	.30	.20 $	....	.19 $	....	.22 $	.23 *	.23 *	.23	.20 $
SWISS	-1.96	1.97	.84	2.45	...	...	.36	3.09	3.32	2.82	.38
	.28 $	.24 $	.14 $	.19 $	....	....	.15 +	.17 $	.17 $	.17 $	.13 $
THOMM	...	...	...	...	...	...	...	...	...	...	...
	....	....	....	....	....	....	....	....	....	....	....
RS 18	-2.32	1.62	.48	2.09	-.36	...	...	2.74	2.96	2.46	.03
	.29 $	.25 $	.17 *	.22 $	.15 +	....	....	.19 $	.19 $	.19 $	.16
RS21C	-5.05	-1.12	-2.26	-.64	-3.09	...	-2.74	...	.22	-.28	-2.71
	.30 $	.26 $	.18 $	.23 *	.17 $	....	.19 $	....	.31 $	.22	.19 $
RS21N	-5.27	-1.34	-2.48	-.86	-3.32	...	-2.96	-.22	...	-.50	-2.93
	.30 $	.26 $	.18 $	.23 *	.17 $	....	.19 $	.31 $	....	.22	.19 $
RS 80	-4.77	-.84	-1.98	-.36	-2.82	...	-2.46	.28	.50	...	-2.43
	.30 $	.28 $	.19 $	.23	.17 $	....	.19 $	.22	.22	....	.17 $
V1392	-2.34	1.59	.45	2.07	-.38	...	-.03	2.71	2.93	2.43	...
	.28 $	.26 $	.16 $	.20 $	.13 $	....	.16	.19 $	.19 $	.17 $	....

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I LEVELS 900 MB TO 150 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	1.37 2.20 9	1.70 2.71 9	1.41 + 2.93 27	-1.06 2.76 10	.78 2.00 21	2.09 * 2.90 18	2.19 + 3.25 18	.23 .32 3	.75 2.53 19
ASA	... .	... .	... .	... .	.43 1.71 43	... .	... .	... .	... .	... .	1.19 2.28 9
GR 78	-1.37 2.20 9	... .	... .	.05 1.26 18	-.37 : .90 32	... .	-.43 1.00 18	-.17 .40 9	-.27 .57 9	-.28 .48 9	-.04 .80 23
SP 76	-1.70 2.71 9	... .	-.05 1.26 18	... .	-.14 1.36 45	... .	-1.14 $ 1.12 18	-.50 1.25 9	-.60 1.39 9	.30 .62 9	.08 1.25 18
SWISS	-1.41 + 2.93 27	-.43 1.71 43	.37 : .90 32	.14 1.36 45	... .	-.04 3.42 10	.11 1.34 54	.32 .97 27	.69 + 1.29 27	-.09 1.69 18	.24 : .92 64
THOMM	1.06 2.76 10	... .	... .	... .	.04 3.42 10	... .	1.99 4.85 14	-.97 1.22 3	-.17 .35 3	2.07 4.81 7	1.48 5.02 10
RS 18	-.78 2.00 21	... .	.43 1.00 18	1.14 $ 1.12 18	-.11 1.34 54	-1.99 4.85 14	... .	.69 : .80 9	.59 : .74 9	-.11 1.14 18	.37 1.21 27
RS21C	-2.09 * 2.90 18	... .	.17 .40 9	.50 1.25 9	-.32 .97 27	.97 1.22 3	-.69 : .80 9	... .	.36 * .63 27	... .	.11 .93 18
RS21N	-2.19 + 3.25 18	... .	.27 .57 9	.60 1.39 9	-.69 + 1.29 27	.17 .35 3	-.59 : .74 9	-.36 * .63 27	... .	... .	-.28 1.83 18
RS 80	-.23 .32 3	... .	.28 .48 9	-.30 .62 9	.09 1.69 18	-2.07 4.81 7	.11 1.14 18	... .	... .	... .	.40 .86 9
V1392	-.75 2.53 19	-1.19 2.28 9	.04 .80 23	-.08 1.25 18	-.24 : .92 64	-1.48 5.02 10	-.37 1.21 27	-.11 .93 18	.28 1.83 18	-.40 .86 9	... .

ADJUSTED DIFF. MATRIX I TEMPERATURE [C] I I LEVELS 900 MB TO 150 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	.52 .27	1.40 .20 $	1.42 .20 $	1.04 .17 $	-.30 .25	.99 .18 $	1.36 .20 $	1.72 .20 $	1.09 .23 $	1.31 .18 $
ASA	-.52 .27	... .	.87 .27 $	.89 .27 $	.51 .22 :	-.82 .32 *	.47 .26	.84 .28 $	1.20 .28 $	.57 .29	.78 .24 $
GR 78	-1.40 .20 $	-.87 .27 $	... .	.02 .19	-.36 .16 :	-1.69 .26 $	-.41 .18 :	-.03 .21	.33 .21	-.30 .23	-.09 .17
SP 76	-1.42 .20 $	-.89 .27 $	-.02 .19	... .	-.38 .15 +	-1.72 .26 $	-.43 .18 +	-.06 .21	.31 .21	-.33 .22	-.11 .17
SWISS	-1.04 .17 $	-.51 .22 :	.36 .16 :	.38 .15 +	... .	-1.34 .23 $	-.05 .14	.32 .18	.68 .18	.05 .20	.27 .13 :
THOMM	.30 .25	.82 .32 *	1.69 .26 $	1.72 .26 $	1.34 .23 $	... .	1.29 .23 $	1.66 .27 $	2.02 .27 $	1.39 .27 $	1.61 .24 $
RS 18	-.99 .18 $	-.47 .26	.41 .18 :	.43 .18 +	.05 .14	-1.29 .23 $	... .	.37 .20	.73 .20	.10 .21	.32 .15 :
RS21C	-1.36 .20 $	-.84 .28 $	.03 .21	.06 .21	-.32 .18	-1.66 .27 $	-.37 .20	... .	.36 .45 $	-.27 .25	-.05 .19
RS21N	-1.72 .20 $	-1.20 .28 $	-.33 .21	-.31 .21	-.68 .18	-2.02 .27 $	-.73 .20	-.36 .45 $	... .	-.63 .25	-.41 .19
RS 80	-1.09 .23 $	-.57 .29	.30 .23	.33 .22	-.05 .20	-1.39 .27 $	-.10 .21	.27 .25	.63 .25	... .	.22 .21
V1392	-1.31 .18 $	-.78 .24 $	.09 .17	.11 .17	-.27 .13 :	-1.61 .24 $	-.32 .15 :	.05 .19	.41 .19	-.22 .21	... .

PRIMARY DIFFERENCE MATRIX FOR I TEMPERATURE [C] I I LEVELS 100 MB TO 20 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	4.20 ... 1	... .	... .	6.40 ... 1	6.80 ... 1	... .	... .
ASA	... .	... .	... .	... .	.55 1.31 23	... .	... .	... .	... .	... .	1.36 * 1.32 10
GR 78	... .	... .	... .	.39 1.50 10	.15 2.99 20	... .	-.03 1.30 9	.10 .61 5	-.04 .59 5	-.00 1.01 5	.63 3.75 15
SP 76	... .	... .	-.39 1.50 10	... .	-.07 1.57 22	... .	-1.11 + 1.01 8	.04 .76 5	-.10 .80 5	.23 .29 3	-.64 1.58 10
SWISS	-4.20 ... 1	-.55 1.31 23	-.15 2.99 20	.07 1.57 22	... .	... .	-.30 1.92 25	.61 1.89 11	.77 1.85 11	.79 1.00 7	.04 1.57 35
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	.03 1.30 9	1.11 + 1.01 8	.30 1.92 25	... .	... .	.78 .97 4	.63 .79 4	.12 1.24 10	.12 1.32 14
RS21 C	-6.40 ... 1	... .	-.10 .61 5	-.04 .76 5	-.61 1.89 11	... .	-.78 .97 4	... .	.16 .50 11	... .	-.25 .70 6
RS21 N	-6.80 ... 1	... .	.04 .59 5	.10 .80 5	-.77 1.85 11	... .	-.63 .79 4	-.16 .50 11	... .	... .	-.27 1.10 6
RS 80	... .	... .	.00 1.01 5	-.23 .29 3	-.79 1.00 7	... .	-.12 1.24 10	... .	... .	... .	-.36 1.47 5
V1392	... .	-1.36 * 1.32 10	-.63 3.75 15	.64 1.58 10	-.04 1.57 35	... .	-.12 1.32 14	.25 .70 6	.27 1.10 6	.36 1.47 5	... .

ADJUSTED DIFF. MATRIX I TEMPERATURE [C] I I LEVELS 100 MB TO 20 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	4.32 1.06 $	4.93 1.05 $	5.44 1.05 $	5.08 1.03 $	... .	4.86 1.05 $	5.52 1.03 $	5.69 1.03 $	5.34 1.07 $	5.20 1.04 $
ASA	-4.32 1.06 $	... .	.61 .32	1.12 .32 $	.76 .26 $	... .	.54 .31	1.20 .37 $	1.37 .37 $	1.02 .38 *	.88 .28 $
GR 78	-4.93 1.05 $	-.61 .32	... .	.51 .24 :	.15 .20	... .	-.06 .24	.60 .30 :	.76 .30 :	.42 .31	.27 .22
SP 76	-5.44 1.05 $	-1.12 .32 $	-.51 .24 :	... .	-.36 .21	... .	-.58 .24 +	.08 .30	.25 .30	-.09 .32	-.24 .23
SWISS	-5.08 1.03 $	-.76 .26 $	-.15 .20	.36 .21	... .	... .	-.22 .19	.44 .27	.61 .27	.26 .29	.12 .17
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	-4.86 1.05 $	-.54 .31	.06 .24	.58 .24 +	.22 .19	... .	... .	.66 .30 :	.82 .30 :	.48 .29	.33 .21
RS21C	-5.52 1.03 $	-1.20 .37 $	-.60 .30 :	-.08 .30	-.44 .27	... .	-.66 .30 :	... .	.16 .33	-.18 .37	-.33 .29
RS21N	-5.69 1.03 $	-1.37 .37 $	-.76 .30 :	-.25 .30	-.61 .27	... .	-.82 .30 :	-.16 .33	... .	-.34 .37	-.49 .29
RS 80	-5.34 1.07 $	-1.02 .38 *	-.42 .31	.09 .32	-.26 .29	... .	-.48 .29	.18 .37	.34 .37	... .	-.15 .30
V1392	-5.20 1.04 $	-.88 .28 $	-.27 .22	.24 .23	-.12 .17	... .	-.33 .21	.33 .29	.49 .29	.15 .30	... .

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I LEVELS 900 MB TO 700 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	-10.1 18.7 2	.2 14.3 13	-7.9 22.2 5	-2.3 14.4 22	-9.8 23.5 6	-2.1 11.2 16	-16.2 + 18.1 12	-15.2 + 19.2 12	-4.8 11.4 10	-1.9 15.9 21
ASA	10.1 18.7 2	... .	... .	... .	7.7 18.9 12	-1.9 6.0 6	6.8 10.1 6	-.8 18.1 6	-3.9 18.1 6	... .	... .
GR 78	-.2 14.3 13	... .	... .	-1.6 4.5 11	-2.2 19.6 23	... .	-10.2 19.0 9	-13.3 $ 7.8 12	-11.4 $ 7.3 12	-17.0 25.0 5	-7.2 13.9 13
SP 76	7.9 22.2 5	... .	1.6 4.5 11	... .	6.7 16.4 12	... .	... .	-11.3 13.9 3	-13.5 16.6 3	-.3 2.1 3	2.0 5.0 9
SWISS	2.3 14.4 22	-7.7 18.9 12	2.2 19.6 23	-6.7 16.4 12	... .	10.3 $ 10.3 24	3.4 9.3 27	-12.6 + 17.2 15	-11.8 : 17.7 15	1.7 9.5 15	4.4 + 10.3 36
THOMM	9.8 23.5 6	1.9 6.0 6	... .	... .	-10.3 $ 10.3 24	... .	-4.3 11.3 9	-12.4 18.3 9	-10.4 17.1 9	-4.0 10.7 6	-3.6 8.0 15
RS 18	2.1 11.2 16	-6.8 10.1 6	10.2 19.0 9	... .	-3.4 9.3 27	4.3 11.3 9	... .	-10.7 $ 4.3 6	-8.0 8.9 6	-2.5 8.1 9	-1.2 5.0 18
RS21C	16.2 + 18.1 12	.8 18.1 6	13.3 $ 7.8 12	11.3 13.9 3	12.6 + 17.2 15	12.4 18.3 9	10.7 $ 4.3 6	... .	1.3 3.3 24	... .	9.0 10.1 6
RS21N	15.2 + 19.2 12	3.9 18.1 6	11.4 $ 7.3 12	13.5 16.6 3	11.8 : 17.7 15	10.4 17.1 9	8.0 8.9 6	-1.3 3.3 24	... .	... .	9.9 13.1 6
RS 80	4.8 11.4 10	... .	17.0 25.0 5	.3 2.1 3	-1.7 9.5 15	4.0 10.7 6	2.5 8.1 9	... .	... .	... .	3.5 $ 4.3 18
V1392	1.9 15.9 21	... .	7.2 13.9 13	-2.0 5.0 9	-4.4 + 10.3 36	3.6 8.0 15	1.2 5.0 18	-9.0 10.1 6	-9.9 13.1 6	-3.5 $ 4.3 18	... .

ADJUSTED DIFF. MATRIX I REL. HUMIDITY [%] I I LEVELS 900 MB TO 700 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	-9.3 2.3 $	.7 1.6	-6.0 2.0 $	-4.9 1.3 $	.0 1.7	-3.0 1.5 :	-14.3 1.7 $	-13.0 1.7 $	-5.8 1.7 $	-2.8 1.4 :
ASA	9.3 2.3 $	... .	10.0 2.4 $	3.4 2.7	4.5 2.1 :	9.3 2.3 $	6.4 2.2 $	-4.9 2.3 :	-3.7 2.3 :	3.6 2.5	6.5 2.3 $
GR 78	-.7 1.6	-10.0 2.4 $	... .	-6.6 2.0 $	-5.5 1.4 $	-.7 1.8	-3.6 1.6 :	-14.9 1.7 $	-13.7 1.7 $	-6.4 1.8 $	-3.5 1.5 :
SP 76	6.0 2.0 $	-3.4 2.7	6.6 2.0 $	... .	1.1 1.9	6.0 2.2 *	3.0 2.1	-8.3 2.2 $	-7.0 2.2 $	.2 2.2	3.2 1.9
SWISS	4.9 1.3 $	-4.5 2.1 :	5.5 1.4 $	-1.1 1.9	... .	4.9 1.4 $	1.9 1.3	-9.4 1.5 $	-8.1 1.5 $	-.9 1.5	2.1 1.2
THOMM	-.0 1.7	-9.3 2.3 $	.7 1.8	-6.0 2.2 *	-4.9 1.4 $	... .	-3.0 1.7	-14.3 1.8 $	-13.0 1.8 $	-5.8 1.9 $	-2.8 1.5
RS 18	3.0 1.5 :	-6.4 2.2 $	3.6 1.6 :	-3.0 2.1	-1.9 1.3	3.0 1.7	... .	-11.3 1.7 $	-10.0 1.7 $	-2.8 1.7	.2 1.4
RS21C	14.3 1.7 $	4.9 2.3 :	14.9 1.7 $	8.3 2.2 $	9.4 1.5 $	14.3 1.8 $	11.3 1.7 $	... .	1.3 3.0 :	8.5 2.0 $	11.5 1.7 $
RS21N	13.0 1.7 $	3.7 2.3 :	13.7 1.7 $	7.0 2.2 $	8.1 1.5 $	13.0 1.8 $	10.0 1.7 $	-1.3 3.0 :	... .	7.2 2.0 $	10.2 1.7 $
RS 80	5.8 1.7 $	-3.6 2.5	6.4 1.8 $	-.2 2.2	.9 1.5	5.8 1.9 $	2.8 1.7	-8.5 2.0 $	-7.2 2.0 $	... .	3.0 1.6
V1392	2.8 1.4 :	-6.5 2.3 $	3.5 1.5 :	-3.2 1.9	-2.1 1.2	2.8 1.5	-.2 1.4	-11.5 1.7 $	-10.2 1.7 $	-3.0 1.6	... .

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I LEVELS 500 MB TO 300 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	16.4 36.0 3	30.8 ... 1	11.1 32.9 6	22.3 7.9 2	-4.7 25.7 4	-14.2 37.5 4	-14.5 33.8 4	.6 29.6 2	-3.1 27.6 5
ASA	... .	... .	... .	... .	8.3 19.9 12	3.2 4.1 6	.3 2.4 6	-25.3 $ 8.1 6	-24.3 $ 8.1 6	... .	... .
GR 78	-16.4 36.0 3	... .	... .	-6.9 + 5.8 8	-7.9 32.9 16	... .	-26.0 $ 10.5 6	-36.7 $ 15.3 8	-35.5 $ 13.2 8	-17.0 32.6 4	-20.4 $ 15.6 10
SP 76	-30.8 ... 1	... .	6.9 + 5.8 8	... .	14.8 35.8 12	... .	... .	-12.7 16.5 3	-14.3 18.6 3	5.3 6.6 3	-4.1 : 4.6 9
SWISS	-11.1 32.9 6	-8.3 19.9 12	7.9 32.9 16	-14.8 35.8 12	... .	1.0 10.7 22	-18.0 $ 21.1 27	-34.5 $ 21.2 15	-33.4 $ 22.2 15	-9.8 33.8 15	-13.0 + 29.1 35
THOMM	-22.3 7.9 2	-3.2 4.1 6	... .	... .	-1.0 10.7 22	... .	-2.4 12.7 7	-19.8 $ 7.9 9	-19.4 $ 8.7 9	1.2 11.8 6	1.1 7.2 13
RS 18	4.7 25.7 4	-.3 2.4 6	26.0 $ 10.5 6	... .	18.0 $ 21.1 27	2.4 12.7 7	... .	-9.7 + 6.7 6	-8.0 7.9 6	-1.1 14.9 9	-2.5 10.0 18
RS21 C	14.2 37.5 4	25.3 $ 8.1 6	36.7 $ 15.3 8	12.7 16.5 3	34.5 $ 21.2 15	19.8 $ 7.9 9	9.7 + 6.7 6	... .	.8 2.1 24	... .	12.2 $ 3.5 6
RS21 N	14.5 33.8 4	24.3 $ 8.1 6	35.5 $ 13.2 8	14.3 18.6 3	33.4 $ 22.2 15	19.4 $ 8.7 9	8.0 7.9 6	-.8 2.1 24	... .	... .	12.6 $ 3.0 6
RS 80	-.6 29.6 2	... .	17.0 32.6 4	-5.3 6.6 3	9.8 33.8 15	-1.2 11.8 6	1.1 14.9 9	... .	... .	... .	-7.8 $ 5.8 18
V1392	3.1 27.6 5	... .	20.4 $ 15.6 10	4.1 : 4.6 9	13.0 + 29.1 35	-1.1 7.2 13	2.5 10.0 18	-12.2 $ 3.5 6	-12.6 $ 3.0 6	7.8 $ 5.8 18	... .

ADJUSTED DIFF. MATRIX I REL. HUMIDITY [%] I I LEVELS 500 MB TO 300 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	4.6 4.9	19.8 4.2 $	4.0 4.6	13.6 3.7 $	7.1 4.2	-.7 4.0	-15.9 4.1 $	-15.0 4.1 $	4.7 4.2	-.2 3.8
ASA	-4.6 4.9	... .	15.1 4.3 $	-.7 4.7	9.0 3.5 +	2.5 3.9	-5.3 3.8	-20.5 3.9 $	-19.7 3.9 $	.0 4.2	-4.9 3.8
GR 78	-19.8 4.2 $	-15.1 4.3 $	... .	-15.8 3.7 $	-6.1 2.7 :	-12.6 3.4 $	-20.4 3.1 $	-35.6 3.3 $	-34.8 3.3 $	-15.1 3.4 $	-20.0 2.9 $
SP 76	-4.0 4.6	.7 4.7	15.8 3.7 $	... .	9.7 3.3 $	3.2 3.9	-4.6 3.7	-19.9 3.9 $	-19.0 3.9 $	.7 3.8	-4.2 3.4
SWISS	-13.6 3.7 $	-9.0 3.5 +	6.1 2.7 :	-9.7 3.3 $	... .	-6.5 2.5 +	-14.3 2.3 $	-29.5 2.7 $	-28.7 2.7 $	-9.0 2.7 $	-13.9 2.0 $
THOMM	-7.1 4.2	-2.5 3.9	12.6 3.4 $	-3.2 3.9	6.5 2.5 +	... .	-7.8 2.9 *	-23.0 3.2 $	-22.2 3.2 $	-2.5 3.2	-7.4 2.7 *
RS 18	.7 4.0	5.3 3.8	20.4 3.1 $	4.6 3.7	14.3 2.3 $	7.8 2.9 *	... .	-15.2 3.1 $	-14.4 3.1 $	5.4 3.0	.5 2.5
RS21C	15.9 4.1 $	20.5 3.9 $	35.6 3.3 $	19.9 3.9 $	29.5 2.7 $	23.0 3.2 $	15.2 3.1 $	... .	.8 1.9 :	20.6 3.5 $	15.7 2.9 $
RS21N	15.0 4.1 $	19.7 3.9 $	34.8 3.3 $	19.0 3.9 $	28.7 2.7 $	22.2 3.2 $	14.4 3.1 $	-.8 1.9 :	... .	19.7 3.5 $	14.8 2.9 $
RS 80	-4.7 4.2	-.0 4.2	15.1 3.4 $	-.7 3.8	9.0 2.7 $	2.5 3.2	-5.4 3.0	-20.6 3.5 $	-19.7 3.5 $	... .	-4.9 2.7
V1392	.2 3.8	4.9 3.8	20.0 2.9 $	4.2 3.4	13.9 2.0 $	7.4 2.7 *	-.5 2.5	-15.7 2.9 $	-14.8 2.9 $	4.9 2.7	... .

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I LEVELS 900 MB TO 700 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	7.7 12.8 3	-5.6 13.8 3	-2.5 20.7 9	-9.1 15.4 6	-2.0 5.4 9	-12.3 $ 5.1 6	-8.1 * 4.7 6	-14.8 26.2 3	-11.9 : 13.7 9
ASA	... .	... .	... .	... .	7.5 + 11.0 15	... .	... .	... .	... .	... .	... .
GR 78	-7.7 12.8 3	... .	... .	-7.6 22.7 6	12.2 : 13.4 9	... .	-4.2 20.8 6	-17.7 24.6 3	-14.0 22.1 3	-3.7 4.7 3	-6.4 17.8 6
SP 76	5.6 13.8 3	... .	7.6 22.7 6	... .	10.6 27.4 15	... .	2.6 14.2 6	-4.4 10.2 3	-.7 7.0 3	10.3 19.3 3	1.3 5.1 6
SWISS	2.5 20.7 9	-7.5 + 11.0 15	-12.2 : 13.4 9	-10.6 27.4 15	... .	7.6 9.8 6	-3.8 18.6 18	-11.0 17.4 9	-8.5 17.7 9	-23.0 $ 10.0 6	-7.5 : 13.0 18
THOMM	9.1 15.4 6	... .	... .	... .	-7.6 9.8 6	... .	7.5 15.6 6	-18.0 22.4 3	-18.9 23.3 3	-.7 22.3 3	-10.4 12.2 6
RS 18	2.0 5.4 9	... .	4.2 20.8 6	-2.6 14.2 6	3.8 18.6 18	-7.5 15.6 6	... .	-7.3 9.5 3	-3.7 4.6 3	-8.0 + 5.7 6	-5.7 10.5 9
RS21 C	12.3 $ 5.1 6	... .	17.7 24.6 3	4.4 10.2 3	11.0 17.4 9	18.0 22.4 3	7.3 9.5 3	... .	2.5 4.5 9	... .	4.6 8.5 6
RS21 N	8.1 * 4.7 6	... .	14.0 22.1 3	.7 7.0 3	8.5 17.7 9	18.9 23.3 3	3.7 4.6 3	-2.5 4.5 9	... .	... .	3.2 4.2 6
RS 80	14.8 26.2 3	... .	3.7 4.7 3	-10.3 19.3 3	23.0 $ 10.0 6	.7 22.3 3	8.0 + 5.7 6	... .	... .	... .	-4.6 17.3 3
V1392	11.9 : 13.7 9	... .	6.4 17.8 6	-1.3 5.1 6	7.5 : 13.0 18	10.4 12.2 6	5.7 10.5 9	-4.6 8.5 6	-3.2 4.2 6	4.6 17.3 3	... .

ADJUSTED DIFF. MATRIX I REL. HUMIDITY [%] I I LEVELS 900 MB TO 700 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	-7.8 4.0	-4.0 2.8	-10.8 2.7 $	-.3 2.2	-3.3 2.8	-3.9 2.3	-14.3 2.8 $	-11.8 2.8 $	-11.4 3.0 $	-10.2 2.3 $
ASA	7.8 4.0	... .	3.9 4.1	-3.0 4.0	7.5 3.4 :	4.5 4.3	3.9 3.9	-6.5 4.2	-4.0 4.2	-3.6 4.3	-2.4 3.9
GR 78	4.0 2.8	-3.9 4.1	... .	-6.8 2.8 +	3.7 2.4	.7 3.3	.1 2.6	-10.3 3.0 $	-7.8 3.0 $	-7.5 3.2 :	-6.2 2.6 +
SP 76	10.8 2.7 $	3.0 4.0	6.8 2.8 +	... .	10.5 2.2 $	7.5 3.2 +	6.9 2.5 *	-3.5 2.9	-1.0 2.9	-.6 3.1	.6 2.5
SWISS	.3 2.2	-7.5 3.4 :	-3.7 2.4	-10.5 2.2 $	... .	-3.0 2.7	-3.6 1.9	-14.0 2.5 $	-11.5 2.5 $	-11.1 2.7 $	-9.9 1.9 $
THOMM	3.3 2.8	-4.5 4.3	-.7 3.3	-7.5 3.2 +	3.0 2.7	... .	-.6 2.7	-11.0 3.2 $	-8.5 3.2 $	-8.1 3.3 +	-6.9 2.7 +
RS 18	3.9 2.3	-3.9 3.9	-.1 2.6	-6.9 2.5 *	3.6 1.9	.6 2.7	... .	-10.4 2.7 $	-7.9 2.7 $	-7.5 2.8 *	-6.3 2.2 $
RS21C	14.3 2.8 $	6.5 4.2	10.3 3.0 $	3.5 2.9	14.0 2.5 $	11.0 3.2 $	10.4 2.7 $	... .	2.5 3.2 :	2.9 3.4	4.1 2.7
RS21N	11.8 2.8 $	4.0 4.2	7.8 3.0 $	1.0 2.9	11.5 2.5 $	8.5 3.2 $	7.9 2.7 $	-2.5 3.2 :	... .	.4 3.4	1.6 2.7
RS 80	11.4 3.0 $	3.6 4.3	7.5 3.2 :	.6 3.1	11.1 2.7 $	8.1 3.3 +	7.5 2.8 *	-2.9 3.4	-.4 3.4	... .	1.2 2.9
V1392	10.2 2.3 $	2.4 3.9	6.2 2.6 +	-.6 2.5	9.9 1.9 $	6.9 2.7 +	6.3 2.2 $	-4.1 2.7	-1.6 2.7	-1.2 2.9	... .

PRIMARY DIFFERENCE MATRIX FOR I REL. HUMIDITY [%] I I LEVELS 500 MB TO 300 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	16.8 ... 1	20.5 ... 1	25.9 20.8 3	14.0 ... 1	23.9 7.8 2	2.4 15.1 2	6.0 13.9 2	... .	-7.1 26.9 2
ASA	... .	... .	... .	... .	20.9 $ 18.9 15	... .	... .	... .	... .	... .	-4.1 4.7 4
GR 78	-16.8 ... 1	... .	... .	-1.6 15.7 4	8.0 25.0 7	... .	-10.3 29.1 4	-30.0 43.9 2	-26.0 38.6 2	-21.0 29.7 2	-11.2 11.7 5
SP 76	-20.5 ... 1	... .	1.6 15.7 4	... .	17.8 $ 17.8 15	... .	11.7 $ 4.3 6	-21.1 26.1 3	-18.1 22.4 3	8.0 12.8 3	-7.7 + 5.3 6
SWISS	-25.9 20.8 3	-20.9 $ 18.9 15	-8.0 25.0 7	-17.8 $ 17.8 15	... .	-2.2 4.5 3	-7.2 15.6 18	-33.9 * 29.0 9	-31.9 * 28.0 9	-3.5 9.6 6	-24.1 $ 20.1 22
THOMM	-14.0 ... 1	... .	... .	... .	2.2 4.5 3	... .	2.6 10.6 6	... .	... .	11.0 15.6 2	1.0 8.7 3
RS 18	-23.9 7.8 2	... .	10.3 29.1 4	-11.7 $ 4.3 6	7.2 15.6 18	-2.6 10.6 6	... .	-34.3 42.1 3	-31.3 38.5 3	10.0 14.3 5	-11.4 : 13.0 9
RS21C	-2.4 15.1 2	... .	30.0 43.9 2	21.1 26.1 3	33.9 * 29.0 9	... .	34.3 42.1 3	... .	2.0 $ 1.3 9	... .	13.7 $ 1.3 6
RS21N	-6.0 13.9 2	... .	26.0 38.6 2	18.1 22.4 3	31.9 * 28.0 9	... .	31.3 38.5 3	-2.0 $ 1.3 9	... .	... .	11.5 $ 2.9 6
RS 80	... .	... .	21.0 29.7 2	-8.0 12.8 3	3.5 9.6 6	-11.0 15.6 2	-10.0 14.3 5	... .	... .	... .	-12.7 20.7 2
V1392	7.1 26.9 2	4.1 4.7 4	11.2 11.7 5	7.7 + 5.3 6	24.1 $ 20.1 22	-1.0 8.7 3	11.4 : 13.0 9	-13.7 $ 1.3 6	-11.5 $ 2.9 6	12.7 20.7 2	... .

ADJUSTED DIFF. MATRIX I REL. HUMIDITY [%] I I LEVELS 500 MB TO 300 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	7.6 5.3	21.8 4.8 $	12.1 4.6 *	27.9 4.2 $	15.1 5.3 *	19.1 4.4 $	-7.4 4.7	-5.4 4.7	22.1 5.2 $	5.7 4.4
ASA	-7.6 5.3	... .	14.2 4.4 $	4.5 4.0	20.3 3.3 $	7.5 5.0	11.4 3.9 $	-15.1 4.4 $	-13.0 4.4 $	14.5 4.6 $	-1.9 3.6
GR 78	-21.8 4.8 $	-14.2 4.4 $	... .	-9.6 3.4 *	6.1 3.0 :	-6.7 4.7	-2.7 3.3	-29.2 3.9 $	-27.2 3.9 $	.4 4.1	-16.1 3.2 $
SP 76	-12.1 4.6 *	-4.5 4.0	9.6 3.4 *	... .	15.8 2.5 $	3.0 4.4	6.9 2.8 +	-19.6 3.5 $	-17.6 3.5 $	10.0 3.7 *	-6.4 2.8 :
SWISS	-27.9 4.2 $	-20.3 3.3 $	-6.1 3.0 :	-15.8 2.5 $	... .	-12.8 3.9 $	-8.8 2.2 $	-35.4 3.0 $	-33.3 3.0 $	-5.8 3.4	-22.2 2.1 $
THOMM	-15.1 5.3 *	-7.5 5.0	6.7 4.7	-3.0 4.4	12.8 3.9 $	... .	4.0 3.8	-22.5 4.7 $	-20.5 4.7 $	7.0 4.6	-9.4 4.0 :
RS 18	-19.1 4.4 $	-11.4 3.9 $	2.7 3.3	-6.9 2.8 +	8.8 2.2 $	-4.0 3.8	... .	-26.5 3.3 $	-24.5 3.3 $	3.1 3.5	-13.4 2.5 $
RS21C	7.4 4.7	15.1 4.4 $	29.2 3.9 $	19.6 3.5 $	35.4 3.0 $	22.5 4.7 $	26.5 3.3 $	... .	2.0 1.4 $	29.6 4.3 $	13.1 3.2 $
RS21N	5.4 4.7	13.0 4.4 $	27.2 3.9 $	17.6 3.5 $	33.3 3.0 $	20.5 4.7 $	24.5 3.3 $	-2.0 1.4 $	... .	27.6 4.3 $	11.1 3.2 $
RS 80	-22.1 5.2 $	-14.5 4.6 $	-.4 4.1	-10.0 3.7 *	5.8 3.4	-7.0 4.6	-3.1 3.5	-29.6 4.3 $	-27.6 4.3 $	... .	-16.4 3.6 $
V1392	-5.7 4.4	1.9 3.6	16.1 3.2 $	6.4 2.8 :	22.2 2.1 $	9.4 4.0 :	13.4 2.5 $	-13.1 3.2 $	-11.1 3.2 $	16.4 3.6 $	... .

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [%] I I LEVELS 900 MB TO 20 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	.65 .95 2	.42 $ .44 39	.16 1.03 17	.56 $ .80 69	2.53 4.54 13	.23 + .57 43	.63 $ .47 39	.42 $ .43 39	.70 $ .58 32	.24 $ .49 64
ASA	-.65 .95 2	... .	... .	... .	.09 .48 53	.31 .87 16	-.22 1.03 28	.30 $ .25 25	.40 $ .29 25	... .	... .
GR 78	-.42 $ .44 39	... .	... .	-.06 .41 56	.09 : .4 108	... .	-.43 $ .19 42	.29 $ .07 56	.19 $ .15 56	.19 $ .13 28	-.29 $ .24 62
SP 76	-.16 1.03 17	... .	.06 .41 56	... .	.23 + .67 53	... .	... .	.66 * .80 14	.45 * .54 14	.27 * .31 14	-.20 $ .38 34
SWISS	-.56 $ .80 69	-.09 .48 53	-.09 : .4 108	-.23 + .67 53	... .	1.23 $ 2.47 59	-.29 $ .6 118	.28 $ .50 69	.22 $ .54 69	.07 .31 70	-.24 $ .5 136
THOMM	-2.53 4.54 13	-.31 .87 16	... .	... .	-1.23 $ 2.47 59	... .	-1.85 4.15 18	-.51 1.47 24	-.79 * 1.36 24	-.74 $ .79 16	-1.77 $ 2.84 35
RS 18	-.23 + .57 43	.22 1.03 28	.43 $ .19 42	... .	.29 $ .6 118	1.85 4.15 18	... .	.77 $ .26 28	.66 $ .38 28	.46 $ .22 42	.06 .26 77
RS21C	-.63 $ .47 39	-.30 $ .25 25	-.29 $ .07 56	-.66 * .80 14	-.28 $ .50 69	.51 1.47 24	-.77 $ .26 28	... .	-.12 $ .2 112	... .	-.69 $ .34 28
RS21N	-.42 $ .43 39	-.40 $ .29 25	-.19 $ .15 56	-.45 * .54 14	-.22 $ .54 69	.79 * 1.36 24	-.66 $ .38 28	.12 $ .2 112	... .	... .	-.49 $ .29 28
RS 80	-.70 $ .58 32	... .	-.19 $ .13 28	-.27 * .31 14	-.07 .31 70	.74 $ .79 16	-.46 $ .22 42	... .	... .	... .	-.35 $ .21 76
V1392	-.24 $ .49 64	... .	.29 $ .24 62	.20 $ .38 34	.24 $ .5 136	1.77 $ 2.84 35	-.06 .26 77	.69 $ .34 28	.49 $ .29 28	.35 $ .21 76	... .

ADJUSTED DIFF. MATRIX I GEOPOTENTIAL [%] I I LEVELS 900 MB TO 20 MB I I DAY ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	.59 .10 $	.49 .07 $	.35 .08 $	.54 .06 $	1.74 .08 $	.19 .06 $	.86 .07 $	.75 .07 $	.65 .07 $	.23 .06 $
ASA	-.59 .10 $	... .	-.10 .09	-.24 .11 :	-.05 .08	1.14 .10 $	-.40 .09 $	.27 .09 $	.15 .09 $	.06 .10	-.36 .09 $
GR 78	-.49 .07 $	.10 .09	... .	-.14 .07	.05 .05	1.24 .08 $	-.30 .06 $	.37 .07 $	.26 .07 $	.16 .07 +	-.26 .06 $
SP 76	-.35 .08 $	.24 .11 :	.14 .07	... .	.19 .07 *	1.38 .10 $	-.16 .08 :	.51 .08 $	.40 .08 $	.30 .08 $	-.12 .07
SWISS	-.54 .06 $	.05 .08	-.05 .05	-.19 .07 *	... .	1.19 .07 $	-.35 .05 $	.32 .06 $	.20 .06 $	.11 .06	-.31 .05 $
THOMM	-1.74 .08 $	-1.14 .10 $	-1.24 .08 $	-1.38 .10 $	-1.19 .07 $	... .	-1.54 .08 $	-.87 .08 $	-.99 .08 $	-1.08 .08 $	-1.50 .08 $
RS 18	-.19 .06 $	.40 .09 $	.30 .06 $	.16 .08 :	.35 .05 $	1.54 .08 $	... .	.67 .07 $	.56 .07 $	.46 .07 $	.04 .06
RS21C	-.86 .07 $	-.27 .09 $	-.37 .07 $	-.51 .08 $	-.32 .06 $	.87 .08 $	-.67 .07 $	... .	-.11 .21 $	-.21 .08 *	-.63 .07 $
RS21N	-.75 .07 $	-.15 .09 $	-.26 .07 $	-.40 .08 $	-.20 .06 $	.99 .08 $	-.56 .07 $	.11 .21 $	... .	-.10 .08 *	-.51 .07 $
RS 80	-.65 .07 $	-.06 .10	-.16 .07 +	-.30 .08 $	-.11 .06	1.08 .08 $	-.46 .07 $	.21 .08 *	.10 .08 *	... .	-.42 .06 $
V1392	-.23 .06 $	.36 .09 $	.26 .06 $	.12 .07	.31 .05 $	1.50 .08 $	-.04 .06	.63 .07 $	.51 .07 $	.42 .06 $	... .

PRIMARY DIFFERENCE MATRIX FOR I GEOPOTENTIAL [%] I I LEVELS 900 MB TO 20 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	.36 .54 9	... .	.51 $ .74 28	.12 1.88 10	.18 $ .24 21	.71 $ .88 19	.50 : .95 19	.21 .27 3	-.03 .57 19
ASA	... .	... .	... .	... .	-.20 : .72 57	... .	... .	... .	... .	... .	... .
GR 78	-.36 .54 9	... .	... .	-.13 .31 14	-.09 $ .16 42	... .	-.16 : .36 27	-.01 .10 14	-.25 $ .27 14	.01 .19 14	-.07 .33 28
SP 76	... .	... .	.13 .31 14	... .	-.02 .35 53	... .	-.38 * .45 13	... .	... .	.12 + .15 12	.12 .33 14
SWISS	-.51 $ .74 28	.20 : .72 57	.09 $ .16 42	.02 .35 53	... .	.65 2.75 10	-.05 .36 79	.14 + .32 38	-.02 .36 38	-.02 .21 25	.08 * .28 80
THOMM	-.12 1.88 10	... .	... .	... .	-.65 2.75 10	... .	-.20 2.14 14	-3.17 4.23 3	-3.21 4.12 3	-1.12 1.41 7	-1.78 $ .93 10
RS 18	-.18 $ .24 21	... .	.16 : .36 27	.38 * .45 13	.05 .36 79	.20 2.14 14	... .	.31 * .34 13	.06 .19 13	.06 .22 28	.08 .35 41
RS21C	-.71 $ .88 19	... .	.01 .10 14	... .	-.14 + .32 38	3.17 4.23 3	-.31 * .34 13	... .	-.16 $ .25 38	... .	-.13 .54 24
RS21N	-.50 : .95 19	... .	.25 $ .27 14	... .	.02 .36 38	3.21 4.12 3	-.06 .19 13	.16 $ .25 38	... .	... .	.07 .34 24
RS 80	-.21 .27 3	... .	-.01 .19 14	-.12 + .15 12	.02 .21 25	1.12 1.41 7	-.06 .22 28	... .	... .	... .	.05 .23 14
V1392	.03 .57 19	... .	.07 .33 28	-.12 .33 14	-.08 * .28 80	1.78 $ .93 10	-.08 .35 41	.13 .54 24	-.07 .34 24	-.05 .23 14	... .

ADJUSTED DIFF. MATRIX I GEOPOTENTIAL [%] I I LEVELS 900 MB TO 20 MB I I NIGHT ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	.44 .10 $	.33 .07 $	.26 .08 $	.25 .06 $	1.03 .09 $	.19 .06 $	.37 .07 $	.21 .07 $	.24 .08 $	.23 .06 $
ASA	-.44 .10 $	... .	-.11 .09	-.19 .09 :	-.20 .07 *	.59 .11 $	-.25 .09 $	-.07 .09	-.23 .09	-.20 .10 :	-.22 .09 +
GR 78	-.33 .07 $	.11 .09	... .	-.07 .07	-.08 .05	.70 .09 $	-.14 .06 +	.04 .07	-.12 .07	-.09 .07	-.10 .06
SP 76	-.26 .08 $	.19 .09 :	.07 .07	... .	-.01 .06	.78 .10 $	-.06 .06	.12 .08	-.04 .08	-.02 .07	-.03 .06
SWISS	-.25 .06 $	.20 .07 *	.08 .05	.01 .06	... .	.79 .08 $	-.05 .04	.13 .06 :	-.03 .06 :	-.01 .06	-.02 .04
THOMM	-1.03 .09 $	-.59 .11 $	-.70 .09 $	-.78 .10 $	-.79 .08 $	... .	-.84 .08 $	-.66 .09 $	-.82 .09 $	-.80 .09 $	-.81 .08 $
RS 18	-.19 .06 $	.25 .09 $	.14 .06 +	.06 .06	.05 .04	.84 .08 $	... .	.18 .06 *	.02 .06 *	.04 .06	.03 .05
RS21C	-.37 .07 $	.07 .09	-.04 .07	-.12 .08	-.13 .06 :	.66 .09 $	-.18 .06 *	... .	-.16 .20 $	-.13 .08	-.15 .06 +
RS21N	-.21 .07 $	.23 .09	.12 .07	.04 .08	.03 .06 :	.82 .09 $	-.02 .06 *	.16 .20 $	... .	.03 .08	.02 .06 +
RS 80	-.24 .08 $	.20 .10 :	.09 .07	.02 .07	.01 .06	.80 .09 $	-.04 .06	.13 .08	-.03 .08	... .	-.01 .06
V1392	-.23 .06 $	.22 .09 +	.10 .06	.03 .06	.02 .04	.81 .08 $	-.03 .05	.15 .06 +	-.02 .06 +	.01 .06	... .

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I LEVELS 900 MB TO 150 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	.06 5.28 40	2.63 4.84 12	... .	... .	... .	... .	.88 13.40 5
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-.06 5.28 40	... .	... .	... .	.24 5.11 53	-.10 4.73 34	-.75 4.33 69	-.23 5.18 63	-1.01 + 3.12 59	.17 7.4 130
THOMM	... .	-2.63 4.84 12	... .	... .	-.24 5.11 53	... .	-1.98 7.38 13	-.64 5.06 10	-.67 4.48 9	-.76 5.74 8	-.74 6.60 28
RS 18	... .	... .	... .	... .	.10 4.73 34	1.98 7.38 13	... .	... .	... .	-1.93 6.97 11.	1.41 5.37 16
RS21 C	... .	... .	... .	... .	.75 4.33 69	.64 5.06 10	... .	... .	.18 2.13 75	... .	-.88 6.08 25
RS21 N	... .	... .	... .	... .	.23 5.18 63	.67 4.48 9	... .	-.18 2.13 75	... .	... .	.03 7.81 23
RS 80	... .	... .	... .	... .	1.01 + 3.12 59	.76 5.74 8	1.93 6.97 11	... .	... .	... .	.36 7.07 34
V1392	... .	-.88 13.40 5	... .	... .	-.17 7.4 130	.74 6.60 28	-1.41 5.37 16	.88 6.08 25	-.03 7.81 23	-.36 7.07 34	... .

ADJUSTED DIFF. MATRIX I WIND SPEED [M/S] I I LEVELS 900 MB TO 150 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	.54 .71	1.18 .80	.10 .94	.24 .88	.42 .88	-.36 .87	.49 .78
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-.54 .71	... .	... .	... .	.64 .50	-.44 .64	-.30 .53	-.12 .53	-.89 .52	-.05 .37
THOMM	... .	-1.18 .80	... .	... .	-.64 .50	... .	-1.08 .74	-.94 .68	-.76 .68	-1.54 .67 :	-.69 .55
RS 18	... .	-.10 .94	... .	... .	.44 .64	1.08 .74	... .	.14 .81	.32 .81	-.45 .75	.39 .68
RS21C	... .	-.24 .88	... .	... .	.30 .53	.94 .68	-.14 .81	... .	.18 2.22	-.60 .72	.25 .59
RS21N	... .	-.42 .88	... .	... .	.12 .53	.76 .68	-.32 .81	-.18 2.22	... .	-.78 .72	.07 .59
RS 80	... .	.36 .87	... .	... .	.89 .52	1.54 .67 :	.45 .75	.60 .72	.78 .72	... .	.84 .56
V1392	... .	-.49 .78	... .	... .	.05 .37	.69 .55	-.39 .68	-.25 .59	-.07 .59	-.84 .56	... .

PRIMARY DIFFERENCE MATRIX FOR I WIND SPEED [M/S] I I LEVELS 100 MB TO 20 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-.14 4.69 25	... .	... .	... .	... .	... .	1.11 5.56 9
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	.14 4.69 25	... .	... .	... .	... .	-.53 10.47 13	.10 3.70 24	.23 4.09 22	-.62 3.64 18	.17 8.09 62
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	.53 10.47 13	... .	... .	... .	... .	14.15 20.78 2	-.23 2.72 3
RS21 C	... .	... .	... .	... .	-.10 3.70 24	... .	... .	... .	.41 2.50 27	... .	-3.12 5.81 6
RS21 N	... .	... .	... .	... .	-.23 4.09 22	... .	... .	-.41 2.50 27	... .	... .	-.10 13.85 6
RS 80	... .	... .	... .	... .	.62 3.64 18	... .	-14.15 20.78 2	... .	... .	... .	-.56 5.17 16
V1392	... .	-1.11 5.56 9	... .	... .	-.17 8.09 62	... .	.23 2.72 3	3.12 5.81 6	.10 13.85 6	.56 5.17 16	... .

ADJUSTED DIFF. MATRIX I WIND SPEED [M/S] I I LEVELS 150 MB TO 20 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	.19 1.06	... .	-1.66 1.78	.90 1.52	1.15 1.52	.81 1.46	.18 1.15
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-.19 1.06	... .	... .	... .	... .	-1.85 1.45	.70 1.12	.96 1.12	.62 1.06	-.01 .66
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	1.66 1.78	... .	... .	1.85 1.45	... .	... .	2.55 1.82	2.81 1.82	2.47 1.70	1.84 1.53
RS21C	... .	-.90 1.52	... .	... .	-.70 1.12	... .	-2.55 1.82	... .	.26 2.15	-.08 1.52	-.71 1.23
RS21N	... .	-1.15 1.52	... .	... .	-.96 1.12	... .	-2.81 1.82	-.26 2.15	... .	-.34 1.52	-.97 1.23
RS 80	... .	-.81 1.46	... .	... .	-.62 1.06	... .	-2.47 1.70	.08 1.52	.34 1.52	... .	-.63 1.08
V1392	... .	-.18 1.15	... .	... .	.01 .66	... .	-1.84 1.53	.71 1.23	.97 1.23	.63 1.08	... .

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I LEVELS 900 MB TO 150 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	-1.4 22.2 40	32.9 92.8 12	... .	... .	... .	... .	46.0 62.0 5
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	1.4 22.2 40	... .	... .	... .	-3.1 65.5 53	-3.8 23.4 34	.3 28.5 69	.2 50.6 63	-1.2 41.8 59	7.8 61. 130
THOMM	... .	-32.9 92.8 12	... .	... .	3.1 65.5 53	... .	-22.3 56.6 13	16.0 28.7 10	4.4 62.9 9	-21.6 76.2 8	-5.7 80.3 28
RS 18	... .	... .	... .	... .	3.8 23.4 34	22.3 56.6 13	... .	... .	... .	14.1 30.4 11	12.8 68.4 16
RS21 C	... .	... .	... .	... .	-.3 28.5 69	-16.0 28.7 10	... .	... .	.1 39.3 75	... .	-.3 37.9 25
RS21 N	... .	... .	... .	... .	-.2 50.6 63	-4.4 62.9 9	... .	-.1 39.3 75	... .	... .	-3.4 25.4 23
RS 80	... .	... .	... .	... .	1.2 41.8 59	21.6 76.2 8	-14.1 30.4 11	... .	... .	... .	1.8 27.3 34
V1392	... .	-46.0 62.0 5	... .	... .	-7.8 61. 130	5.7 80.3 28	-12.8 68.4 16	.3 37.9 25	3.4 25.4 23	-1.8 27.3 34	... .

ADJUSTED DIFF. MATRIX I WIND DIRECTION [DEG] I I LEVELS 900 MB TO 150 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	.2 6.1	11.5 6.9	-5.1 8.1	6.4 7.5	6.5 7.5	3.2 7.5	12.6 6.7
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-.2 6.1	... .	... .	... .	11.3 4.3 *	-5.3 5.5	6.1 4.6	6.3 4.6	2.9 4.5	12.4 3.2 $
THOMM	... .	-11.5 6.9	... .	... .	-11.3 4.3 *	... .	-16.6 6.3 *	-5.1 5.9	-5.0 5.9	-8.3 5.8	1.1 4.7
RS 18	... .	5.1 8.1	... .	... .	5.3 5.5	16.6 6.3 *	... .	11.5 7.0	11.6 7.0	8.3 6.5	17.7 5.8 $
RS21C	... .	-6.4 7.5	... .	... .	-6.1 4.6	5.1 5.9	-11.5 7.0	... .	.1 35.2	-3.2 6.2	6.2 5.1
RS21N	... .	-6.5 7.5	... .	... .	-6.3 4.6	5.0 5.9	-11.6 7.0	-.1 35.2	... .	-3.3 6.2	6.1 5.1
RS 80	... .	-3.2 7.5	... .	... .	-2.9 4.5	8.3 5.8	-8.3 6.5	3.2 6.2	3.3 6.2	... .	9.4 4.8
V1392	... .	-12.6 6.7	... .	... .	-12.4 3.2 $	-1.1 4.7	-17.7 5.8 $	-6.2 5.1	-6.1 5.1	-9.4 4.8	... .

PRIMARY DIFFERENCE MATRIX FOR I WIND DIRECTION [DEG] I I LEVELS 100 MB TO 20 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21 C	RS21 N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	4.5 34.1 25	... .	... .	... .	... .	... .	23.1 $ 14.8 9
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-4.5 34.1 25	... .	... .	... .	... .	10.2 57.1 13	14.2 47.7 24	19.8 48.4 22	-11.6 32.7 18	4.2 61.3 62
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	... .	... .	... .	-10.2 57.1 13	... .	... .	... .	... .	8.0 13.3 2	-50.6 83.3 3
RS21 C	... .	... .	... .	... .	-14.2 47.7 24	... .	... .	... .	-1.9 33.1 27	... .	-51.4 64.4 6
RS21 N	... .	... .	... .	... .	-19.8 48.4 22	... .	... .	1.9 33.1 27	... .	... .	-76.2 : 71.3 6
RS 80	... .	... .	... .	... .	11.6 32.7 18	... .	-8.0 13.3 2	... .	... .	... .	-9.4 55.7 16
V1392	... .	-23.1 $ 14.8 9	... .	... .	-4.2 61.3 62	... .	50.6 83.3 3	51.4 64.4 6	76.2 : 71.3 6	9.4 55.7 16	... .

ADJUSTED DIFF. MATRIX I WIND DIRECTION [DEG] I I LEVELS 150 MB TO 20 MB I I ALL ASCENTS I

	AIRSD	ASA	GR 78	SP 76	SWISS	THOMM	RS 18	RS21C	RS21N	RS 80	V1392
AIRSD	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
ASA	... .	... .	... .	... .	10.8 8.4	... .	25.2 14.1	30.9 12.1 +	30.1 12.1 +	9.5 11.6	8.8 9.1
GR 78	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SP 76	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
SWISS	... .	-10.8 8.4	... .	... .	... .	... .	14.4 11.4	20.1 8.9 :	19.3 8.9 :	-1.2 8.4	-2.0 5.2
THOMM	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .	... .
RS 18	... .	-25.2 14.1	... .	... .	-14.4 11.4	... .	... .	5.7 14.4	4.9 14.4	-15.6 13.5	-16.4 12.1
RS21C	... .	-30.9 12.1 +	... .	... .	-20.1 8.9 :	... .	-5.7 14.4	... .	-.9 33.6	-21.4 12.0	-22.1 9.7 :
RS21N	... .	-30.1 12.1 +	... .	... .	-19.3 8.9 :	... .	-4.9 14.4	.9 33.6	... .	-20.5 12.0	-21.3 9.7 :
RS 80	... .	-9.5 11.6	... .	... .	1.2 8.4	... .	15.6 13.5	21.4 12.0	20.5 12.0	... .	-.8 8.5
V1392	... .	-8.8 9.1	... .	... .	2.0 5.2	... .	16.4 12.1	22.1 9.7 :	21.3 9.7 :	.8 8.5	... .

Appendix C. Glossary of terms

This glossary defines terms as they are used in this report.

adjusted mean difference matrix:

A matrix, the elements of which have been made coherent[=] by resort to a least squares adjustment analysis. The elements in fact contain three items of information – the adjusted difference between two sonde types, the standard error and the significance of the difference, whereby these last two items are also computed in the least squares adjustment procedure.

coherent:

Differences within a matrix are coherent if the differences between sondes A and B are equal to the sum of the differences between sondes A and C and sondes C and B.

comparison:

The mutual testing of two radiosonde types in order to find their systematic differences.

direct (as in 'direct intercomparison[=]'):

The mutual testing of radiosonde types by flying them on the same balloon or launching them in quick succession.

indirect (as in 'indirect comparison[=]'):

The mutual testing of a number of radiosonde types using data collected over a period of time at various locations.

intercomparison:

The mutual testing of three or more radiosonde types in order to find their systematic differences.

multiple ascent:

A method of direct[=] comparison[=] in which the sondes are flown on the same balloon.

parallel ascents:

A method of direct[=] comparison[=] in which the sondes are flown on different balloons launched simultaneously or in quick succession.

primary difference matrix:

A matrix, the elements of which have been determined by direct[=] comparisons[=] of radiosonde type pairs. The elements are in general not coherent[=]. Each element comprises four items of information – the primary difference between two sonde types, the associated standard deviation and significance, and the number of direct[=] comparisons[=] of the sonde type pair used.

significant (as used in Sections 5 and 6 only):

A result is significant if its statistical significance is 1% or less.