Institute of
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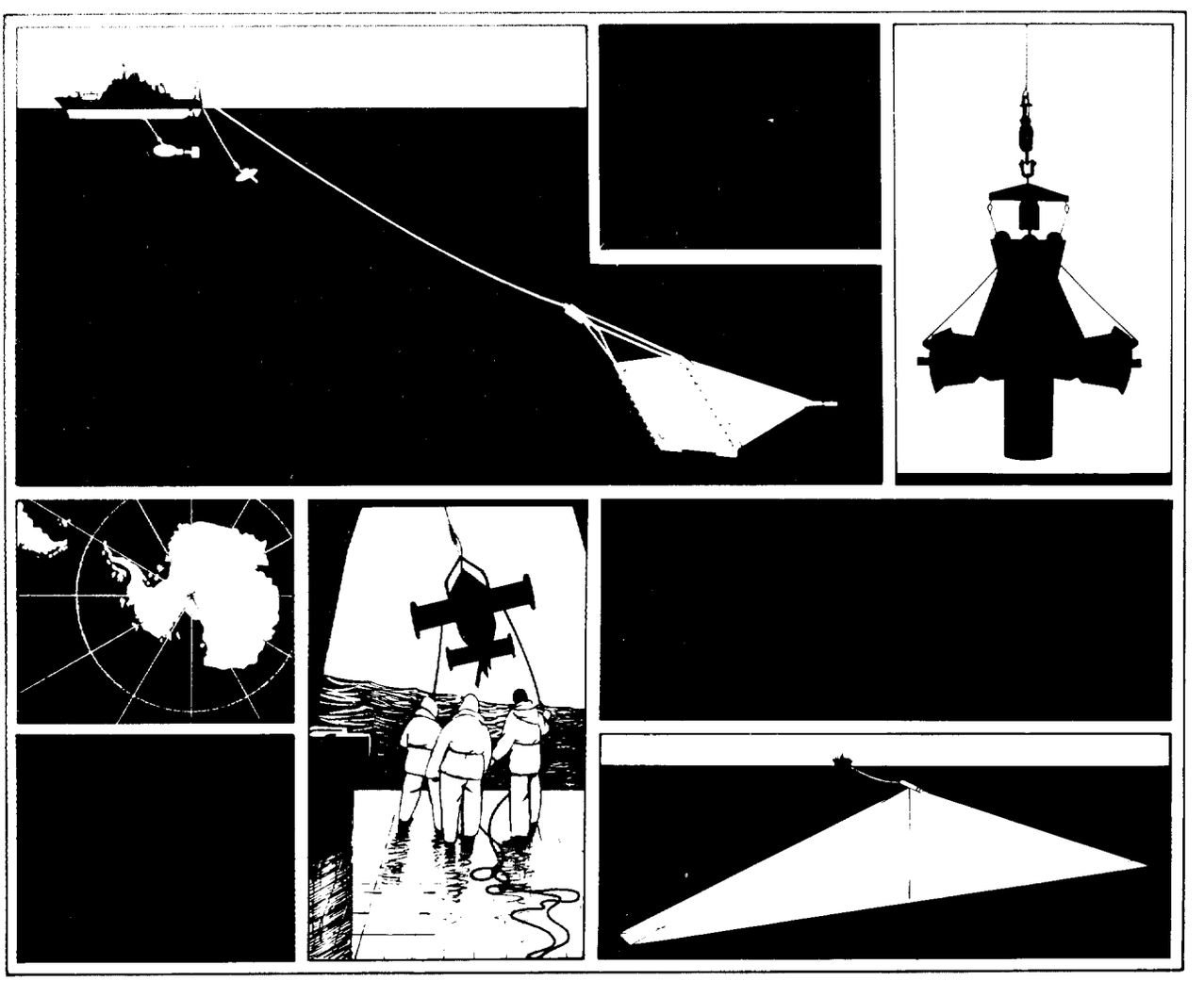
Radiosonde data collected on the first Tyrrhenian Eddy Multi-Platform Observations Experiment (TEMPO-1)

T N Forrester & T H Guymer

Report No 305 1993



Natural Environment Research Council

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ABSTRACT

This report presents radiosonde measurements made between 27 September and 09 October 1989 in a survey region in the North Tyrrhenian Sea (between Italy and Corsica).

A total of 19 radiosondes were launched (approximately two per day). Data from 18 ascents processed between values of pressure at the surface and 200mb (approximately 11.8km high) are presented in this report.

Atmospheric temperature and relative humidity were observed and height, potential temperature, specific humidity and water vapour density were calculated from these observations.

KEYWORDS

ATMOSPHERIC TEMPERATURE
ERS-1
MEDITERRANEAN(W)
POTENTIAL TEMPERATURE
PROJECT - TEMPO-1
RADIOSONDE
RELATIVE HUMIDITY
SPECIFIC HUMIDITY
TYRRHENIAN SEA
VALIDATION
WATER VAPOUR

ISSUING ORGANISATION

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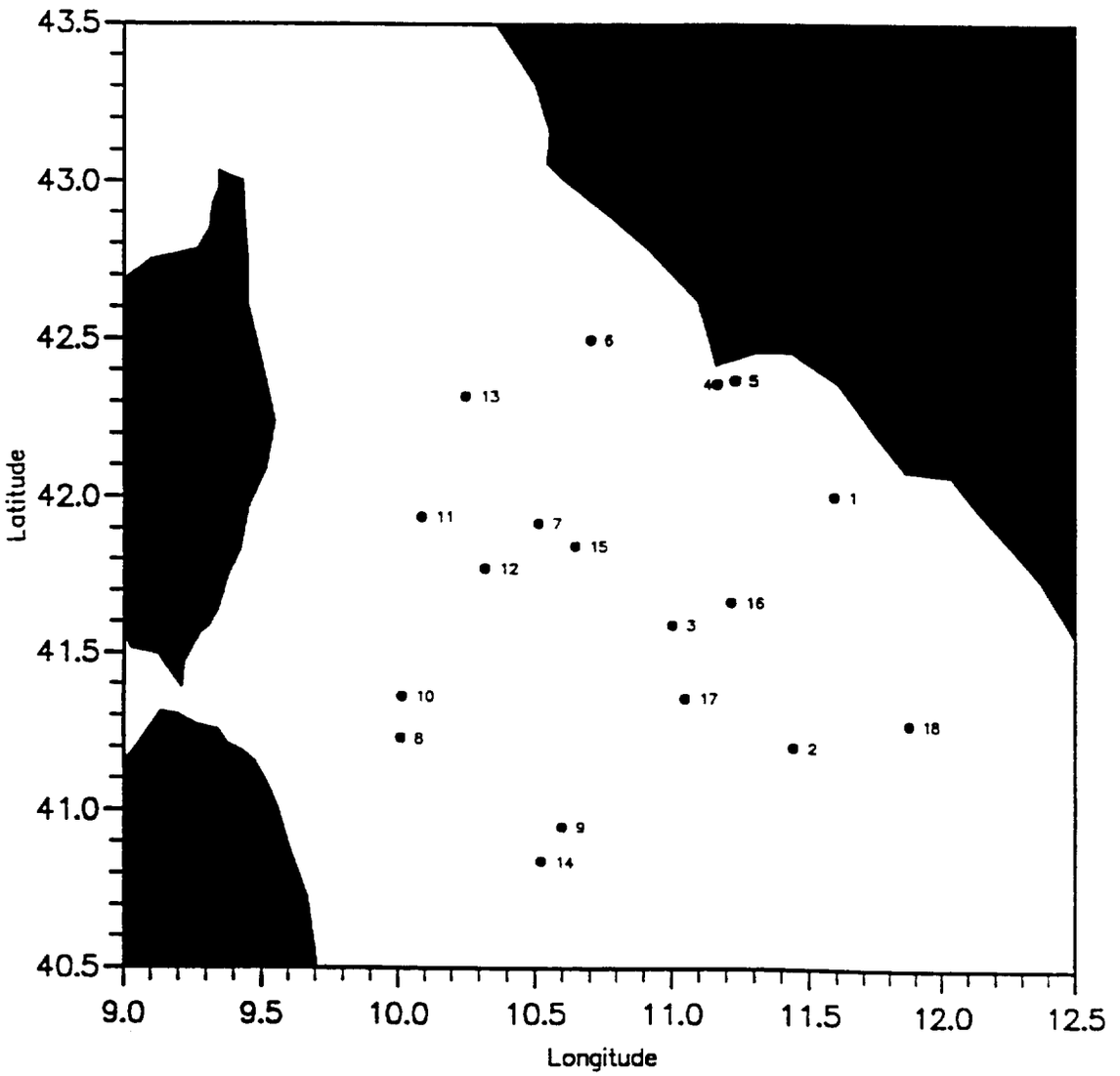
CONTENTS

1. INTRODUCTION

The Institute of Oceanographic Sciences Deacon Laboratory (IOSDL) jointly collaborated in the first Tyrrhenian Eddy Multi-Platform Observations experiment (TEMPO-1), from 27 September to 09 October 1989 (TEMPO-Group, 1991). The IOSDL contribution to the cruise included meteorological, satellite, sea surface temperature (SST) and radiosonde measurements. The radiosonde data gives a description of the prevailing atmospheric conditions. It can also be used to generate revised coefficients for atmospheric correction algorithms in the generation of SST retrievals from Advanced Very High Resolution Radiometer (AVHRR) data. The cruise took place in the Northern Tyrrhenian Sea between Italy, Corsica and Sardinia (see Figure 1).

Figure 1. The location and order of radiosonde ascents during the TEMPO-1 cruise in the Northern Tyrrhenian Sea



2. COLLECTION OF RADIOSONDE DATA

Vaisala RS-80-15 sondes, measuring temperature, pressure and relative humidity were launched twice per day from Days 270 to 280 using 200g TOTEX balloons fitted with string unwinders. Ascents were generally timed for 0200Z and 1500Z . A total of 18 successful flights were made most of which reached a height of greater than 60 mb, well into the stratosphere (see Table 1).

The Vaisala RS-80-15 sondes were connected to a power supply and the reception of their signal were tested. The calibration data supplied with each sonde from the manufactures were put into the PTU Processor, as were any corrections for the temperature sensor (T_{cor}, Table 1), which were calibrated against a dry bulb mercury thermometer, plus any corrections to the humidity sensor (U_{cor}, Table 1), which were determined by placing the sensor into a sealed tub containing a dessicant, thereby creating an environment of zero humidity. As close as possible to the launch a water activated battery was connect to the sonde.

Balloons were inflated in a restrainer, placed on the aft portion of the upper deck with plastic tubing connecting it to helium bottles secured on the aft deck. Launching usually required two people, although in light winds (< 10 m/s) one would be sufficient. Provided the relative wind was at least 20 degrees on the starboard bow balloons could be released clear of obstructions for all wind strengths. In light winds a wide range of relative wind directions could be tolerated. Successful launches were made in winds up to 20 m/s. On two or three of the strong wind occasions, however, the balloons were caught in eddies shed by the ship which caused the sondes to come very close to hitting the sea. The best way of avoiding this was for the person launching the balloon to wait for a suitable lull using the pull of the wind on the balloon to judge the optimum moment for release.

Signals from the sondes were received by a LO-CATE W2 ground receiver via an omni-directional antenna. After passing through the Vaisala processor the calibrated data were displayed and written to floppies using a BBC Master microcomputer. During the cruise initial analysis of relative humidity data showed that dry conditions dominated with particularly dry profiles (<50% throughout) on day 278. In order to check the accuracy of the humidity sensor, on day 276 (3rd October 1989) a radiosonde was fixed to the bow flag staff and data were logged for comparison with the Multi-Met psychrometer and a clockwork Assmann. Excellent agreement in dry bulbs were found but differences of ~0.5°C in wet bulb were observed.

3. PROCESSING OF RADIOSONDE DATA

The data were transferred to 3.5" floppy disks in MSDOS format on the BBC Master and then transferred to the SUN's via an Apple Macintosh. The radiosonde measured temperature (°C), relative humidity (%) and pressure(mb) and the parameters height (km), potential temperature (°C), specific humidity (g/kg) and water vapour density (g/m^{-3}) were calculated. Radiosonde data can be very spiky owing to a poor transmitted signal, excessive rate of ascent or excess precipitation. Various standard and adapted programs from the IOSDL and James Rennell Centre for Ocean Circulation (JRC) in house data processing software (PSTAR) were used to process and plot the data. A shell script linked the processing steps together and automated the process. An outline of the various processing steps is given below:

PROCESS	PROGRAM (*) = PSTAR program
EDIT raw data	-
⇓	
CONVERT to PSTAR format	pascin*
⇓	
LIMIT set max and min thresholds	datpik*
⇓	
DE-SPIKE	pressjump
⇓	
LIMIT	datpik*
⇓	
CREATE NEW PARAMETERS	sonde
⇓	
AVERAGE	pavrge*
⇓	
PLOT	sond_plt vdisplay* pgridh*

Data smoothing

Initially the redundant data which were recorded just prior to ascent and after maximum elevation were deleted. Once the data had been converted into PSTAR format initial de-spiking were done by deleting all data outside set threshold limits e.g.:

Variable	maximum	minimum
Pressure (mb)	1100	10
Temperature (°c)	25	-60
Relative Humidity (%)	100	0

The most sensitive parameter to rogue measurements were pressure, so the data were further de-spiked by checking for and deleting any data which corresponded to an increase in pressure as the radiosonde made its ascent through the atmosphere.

Calculating Potential Temperature, Specific Humidity, Water Vapour Density and Height

Potential temperature (θ) was calculated from the observed pressure and temperature. The equation was taken from (Stull, 1988) with the form:

$$\theta = T * (P_o/P)^{0.288}$$

where T is the air temperature (K), P is the air pressure and P_o is a reference pressure set to 1000mb.

Specific humidity was calculated using the observed pressure, temperature and relative humidity in the form:

$$q = [(0.662 * E) / (P-0.378 * E)] * 1000.0$$
$$E = RH * EW/100.$$
$$EW = 6.1078 * \exp [17.2694 * T / (T+237.)]$$

where T is temperature (°C), RH is relative humidity (%) EW is the saturation vapour pressure and q is specific humidity (g/kg).

The equation for water vapour density was in the form:

$$QB = q * [0.622 * (1.004 * EW) / \{P - (1.004 * EW)\}]$$

Where P is pressure (mb) , EW is the saturation vapour pressure, q is specific humidity (g/kg) and QB is water vapour density (g/m^{-3}).

Height was calculated using:

$$H_{i+1} = (H_i + \Delta P/r * g)/ 1000.0$$

$$r = 0.34838 * P / (T_{virt} + 273.15)$$

$$T_{virt} = (T + 273.15) * RW * 0.6078 * (1.0 /(1.0 + RW)) * RH * 0.1 + T$$

$$RW = 0.622* (1.004 * EW) / P - (1.004 * EW)$$

where H_i is the current height, ΔP is the change in pressure (mb), r is air density, T_{virt} is the virtual temperature, T is temperature (°C), RH is relative humidity (%) and g (ms^{-2}) is the acceleration due to gravity.

4. PLOTS AND LISTINGS OF DATA

Atmospheric profiles of temperature and relative humidity and profiles of potential temperature and specific humidity for each ascent are shown in Figures 2 to 27. In these plots a decrease in pressure represents an increase in height through the atmosphere and the data shown has been restricted to pressure levels below 200 mb. Time (Julian days) and height (km) contour plots for temperature, relative humidity, specific humidity and potential temperature covering all ascents over the whole cruise period are shown in Figures 28 to 31.

Listings of the processed data for each ascent are given on pages 35 to 52. They include the maximum and minimum range of values for each variable at 20 mb (pressure) intervals.

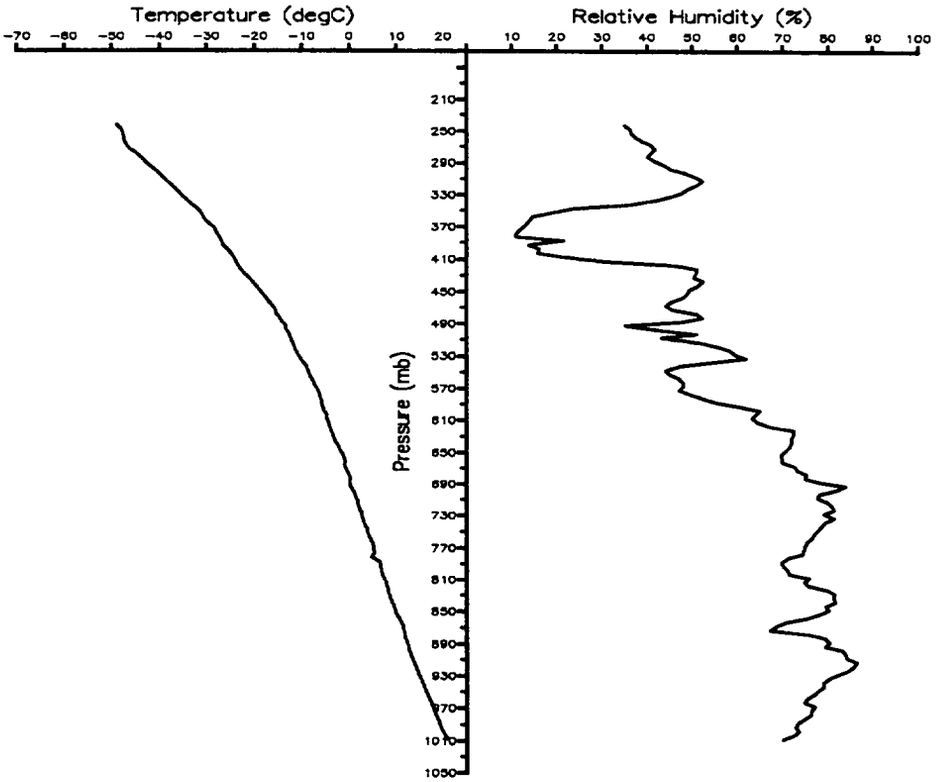
5. REFERENCES

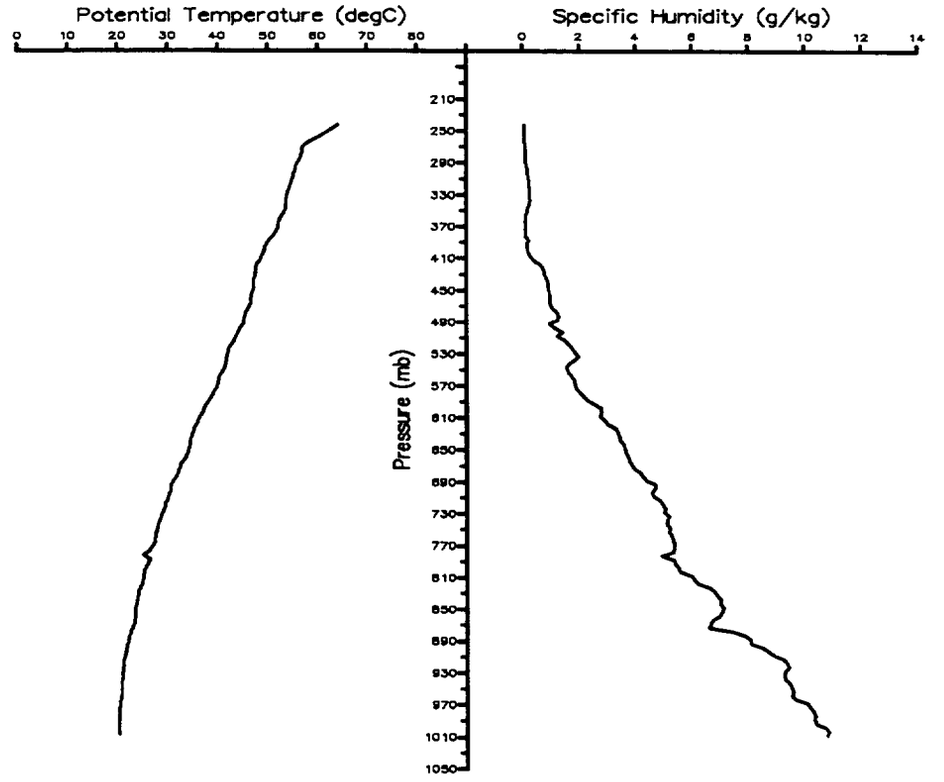
STULL, R., 1988: An introduction to boundary layer meteorology.
Dordrecht: Kluwer Academic Publishers. 649 pp.

TEMPO-Group, 1991: Tyrrhenian Multi-platform Observations 1989 Experiment.
Rome: Telespazio Earth Observation Division. 69pp. (Marine Science and Technology (MAST), Contract number: MAST-0041-C,)

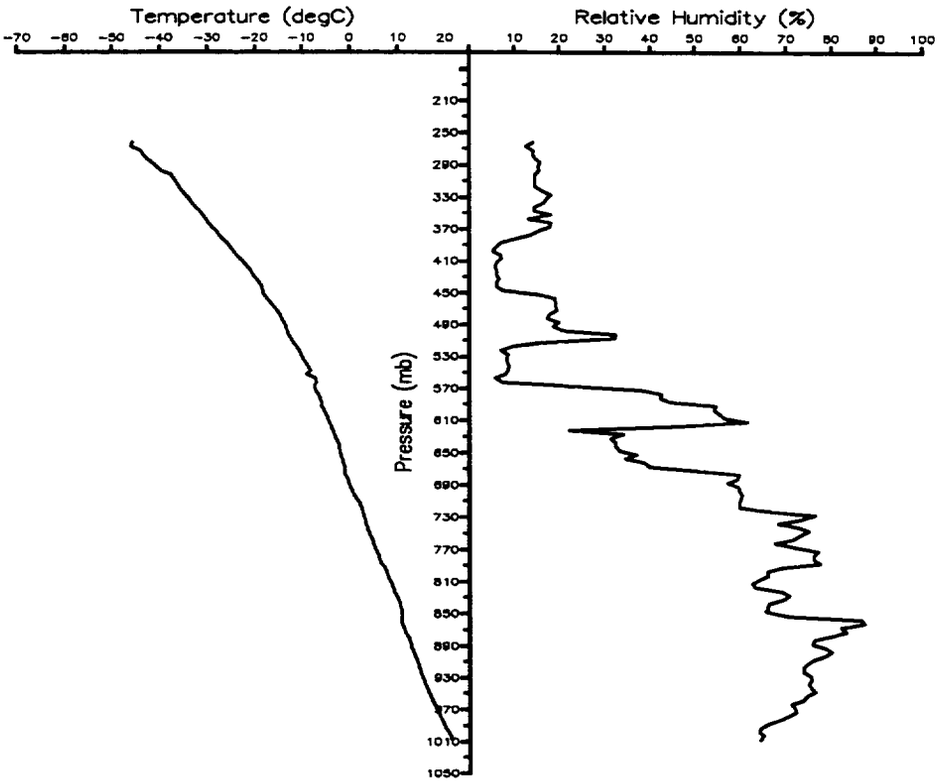
Table 1 Successful radiosonde ascents during TEMPO-1

Ascent number	Day/Time Julian Day Hours	Tcor (°C)	Ucor (%)	Height Pressure mb	Latitude (°N)	Longitude (°E)
1	270-1300	-0.2	2	40	42 00.18	11 35.22
2	271-0200	-0.2	1	50	41 12.30	11 26.58
3	271-1500	-0.1	0	143	41 35.52	11 00.18
4	272-0300	-0.2	1	44	42 21.48	11 10.02
5	272-1500	0.1	1	50	42 22.20	11 13.86
6	273-0300	-0.3	2	65	42 49.90	10 42.36
7	273-1500	-0.3	1	37	41 55.08	10 30.78
8	274-0100	-0.3	2	31	41 13.92	10 00.66
9	274-1500	-0.1	0	43	40 57.00	10 35.88
10	275-0300	-0.1	1	69	41 21.78	10 00.90
11	275-1500	-0.2	1	59	41 56.22	10 05.28
12	276-0300	-0.2	2	53	41 46.32	10 19.08
13	276-1500	-0.3	1	41	42 19.14	10 15.18
14	277-0300	-0.2	1	172	40 50.40	10 31.38
15	279-0300	-0.4	1	101	41 50.58	10 38.70
16	279-1400	-0.2	1	67	41 39.84	11 12.96
17	279-1600	-0.2	1	45	41 21.42	11 02.94
18	280-0300	-0.2	1	109	41 16.68	11 52.44





Jday = 270
time = 13:00 hrs
Figure 2 . Atmospheric profiles for ascent 1



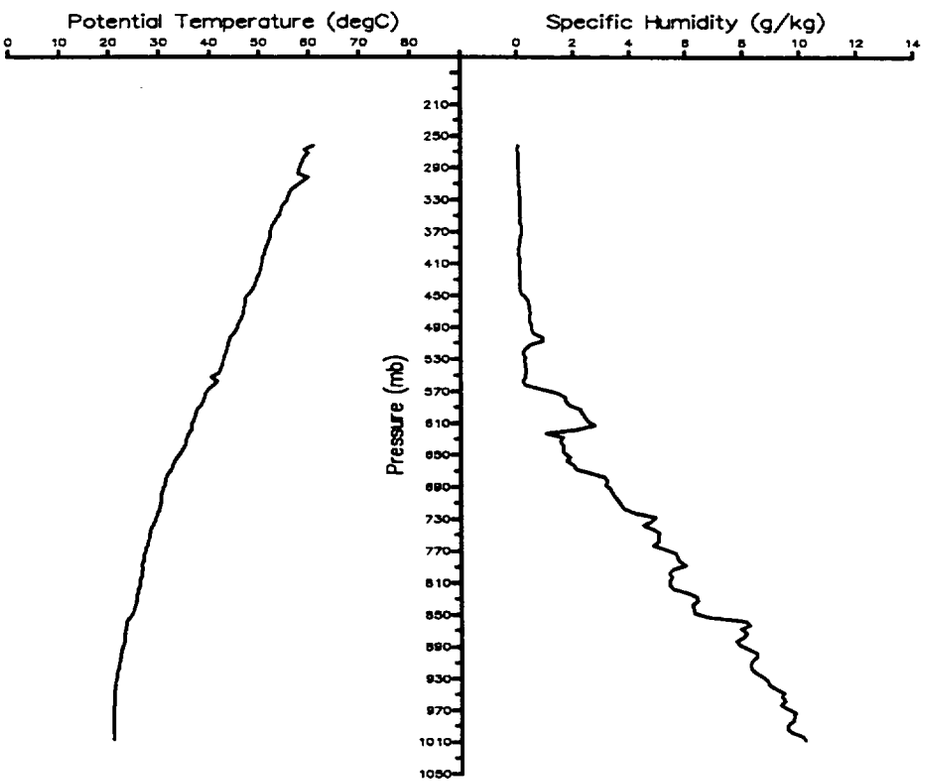


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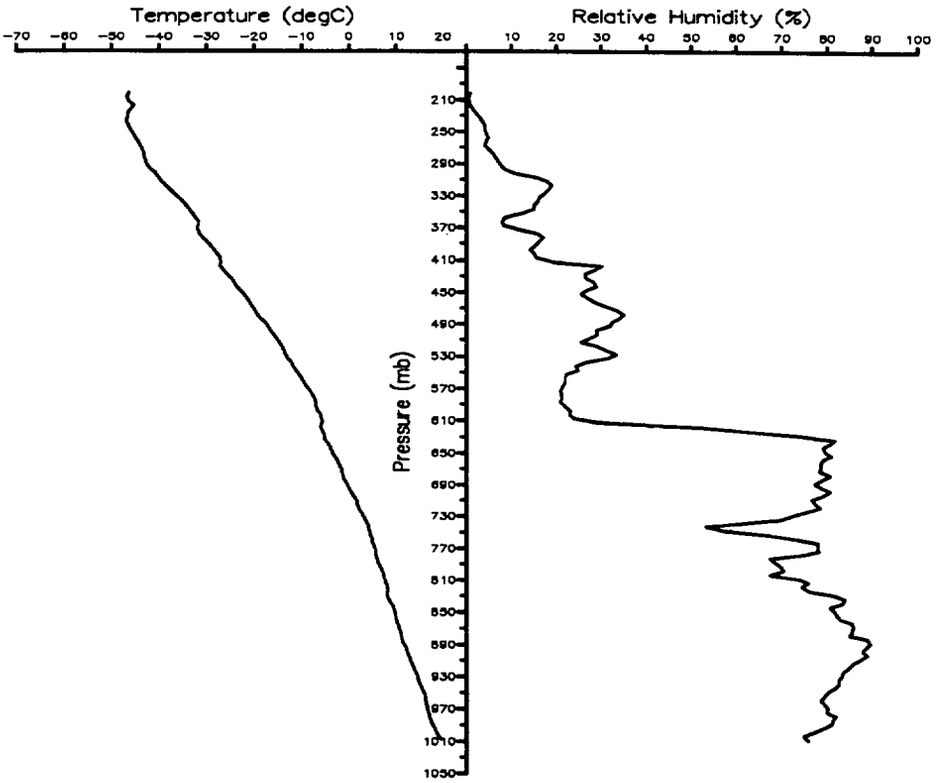
Figure 3 . Atmospheric profiles for ascent 2



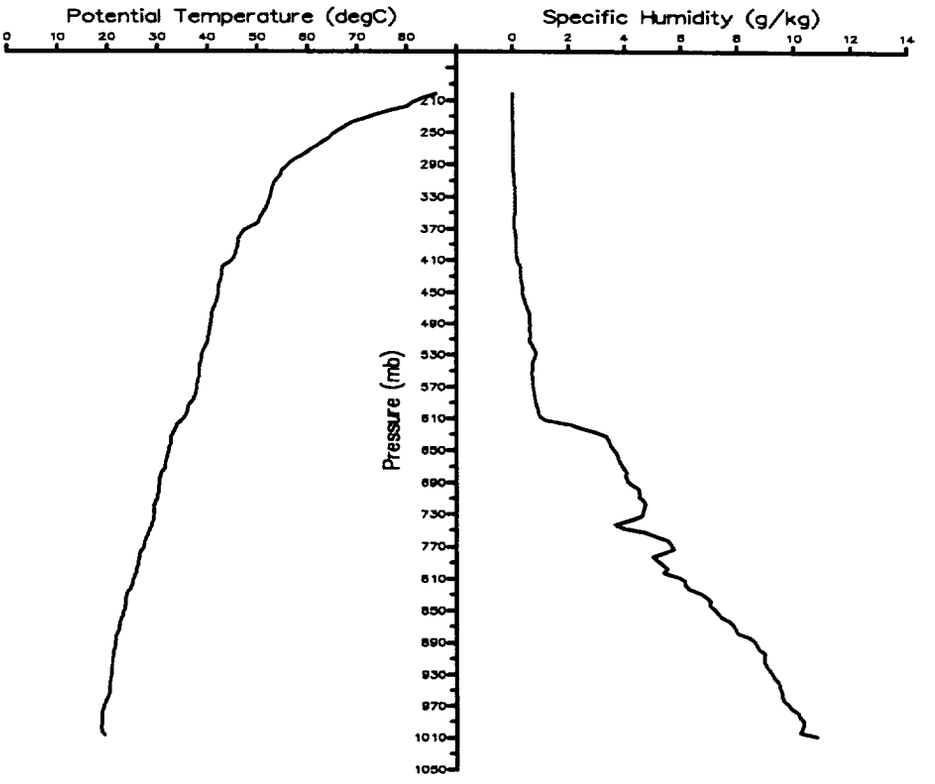


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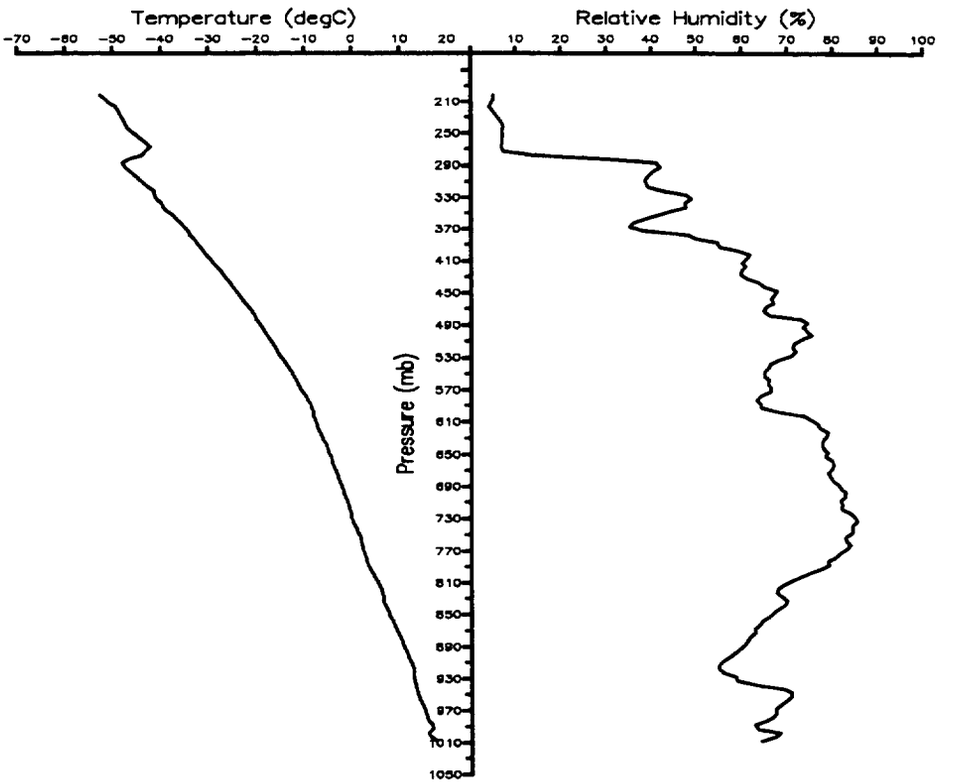
Figure 4 . Atmospheric profiles for ascent 3



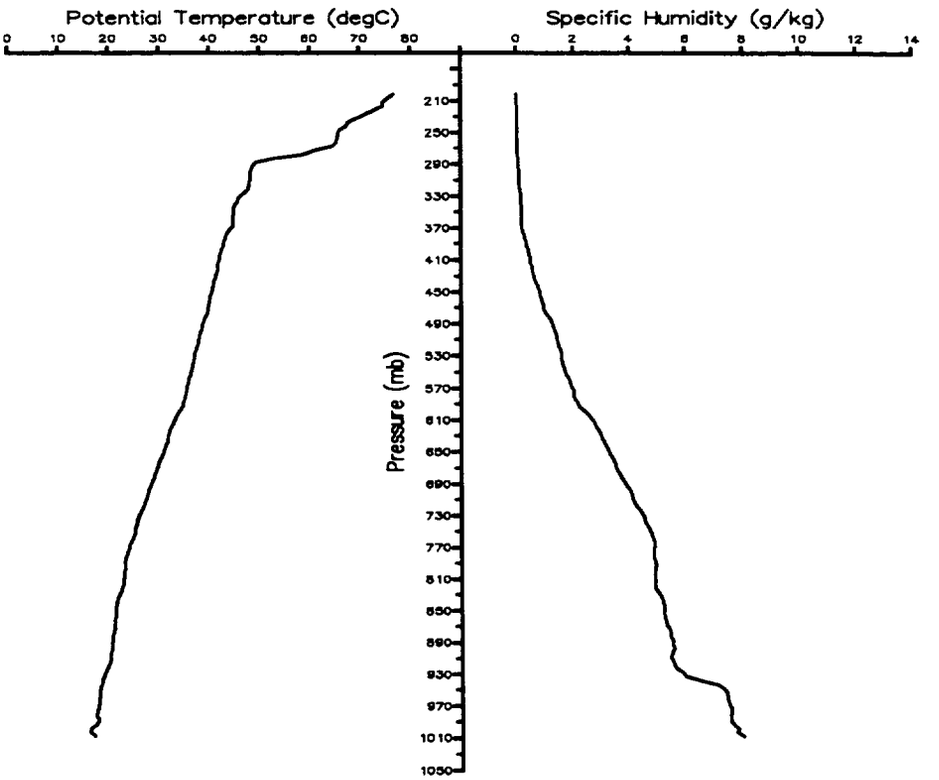


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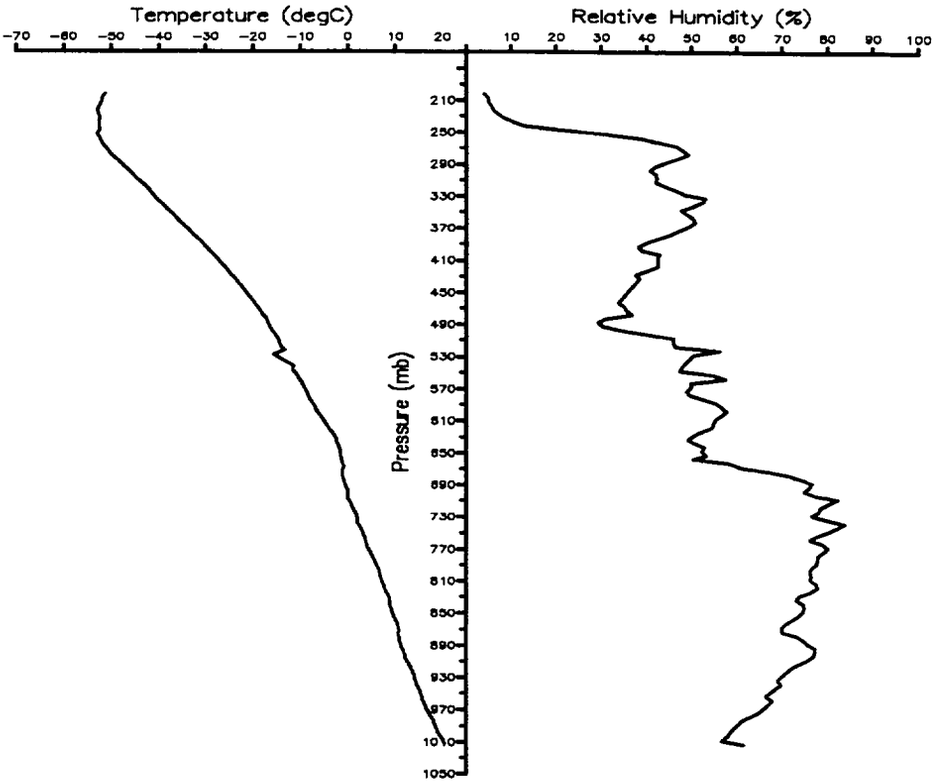
Figure 5 . Atmospheric profiles for ascent 4



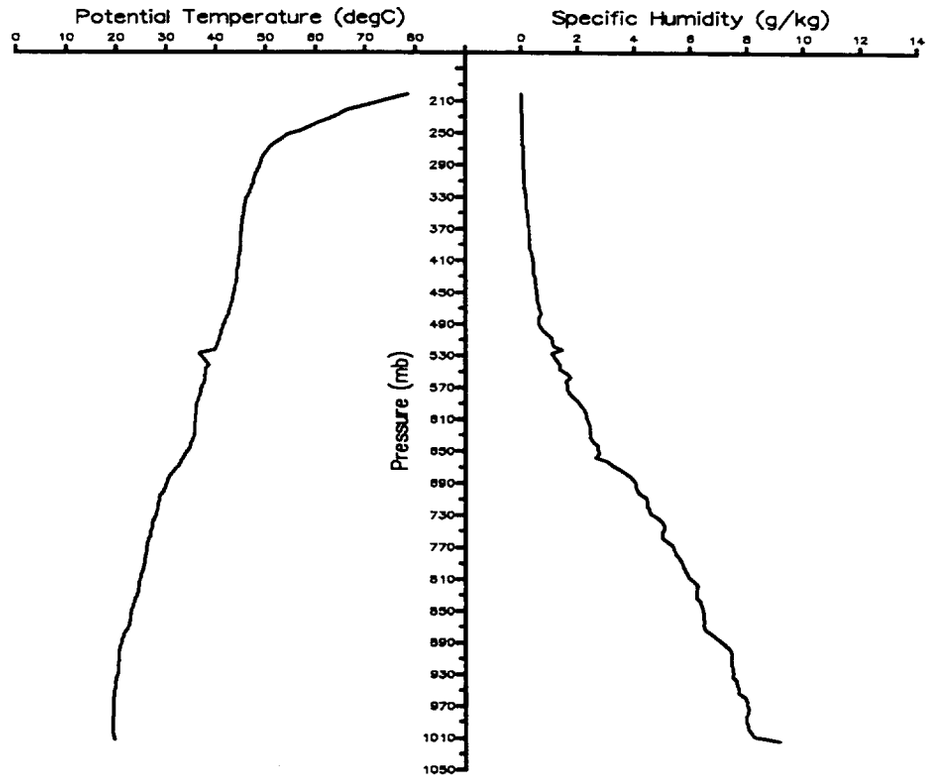


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Figure 6 . Atmospheric profiles for ascent 5

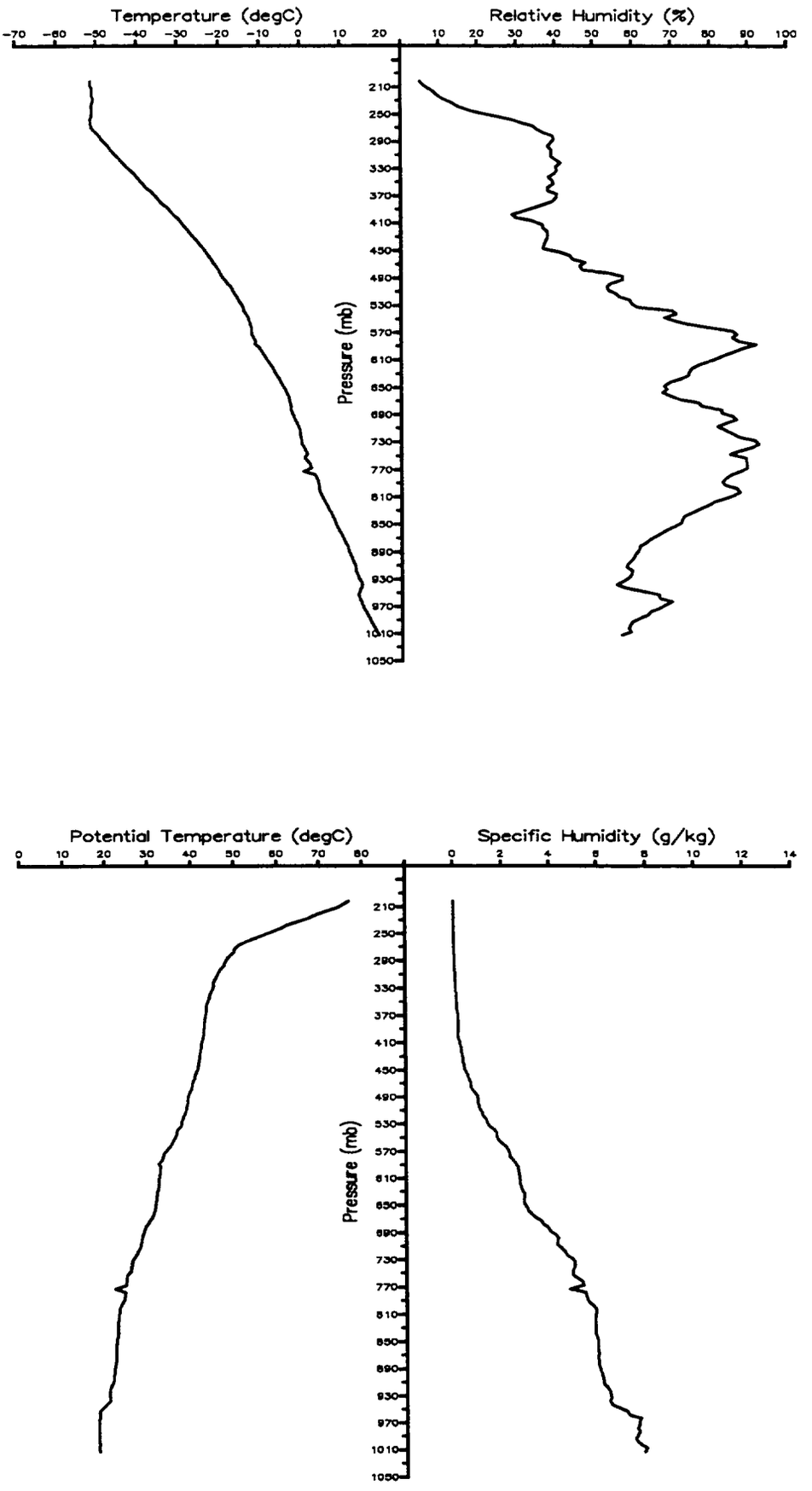

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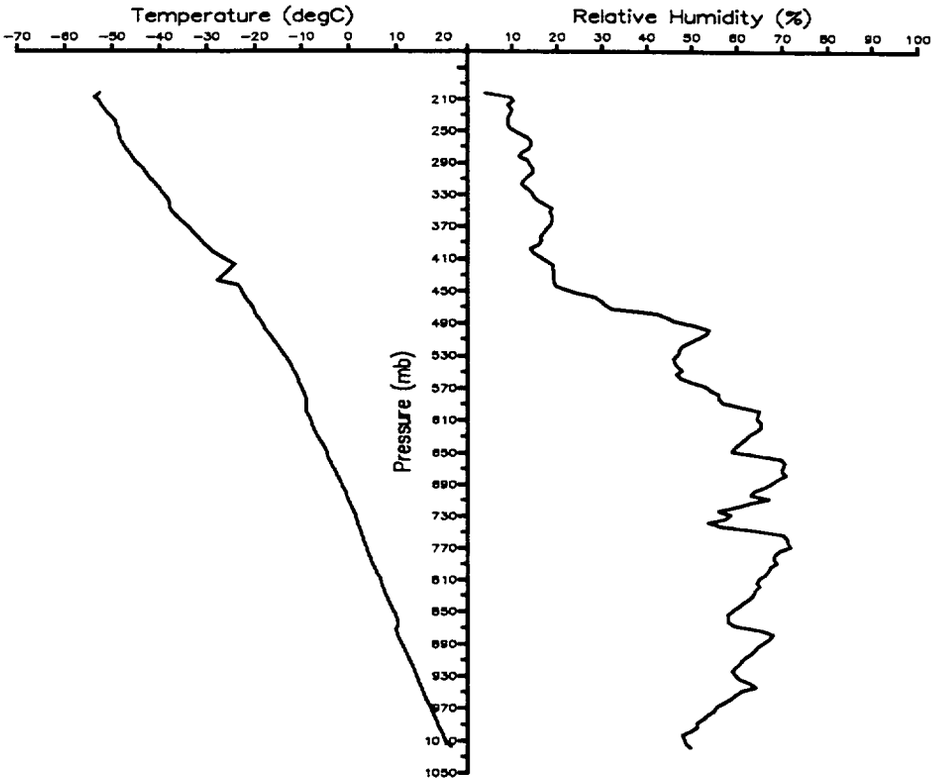
Figure 7 . Atmospheric profiles for ascent 6



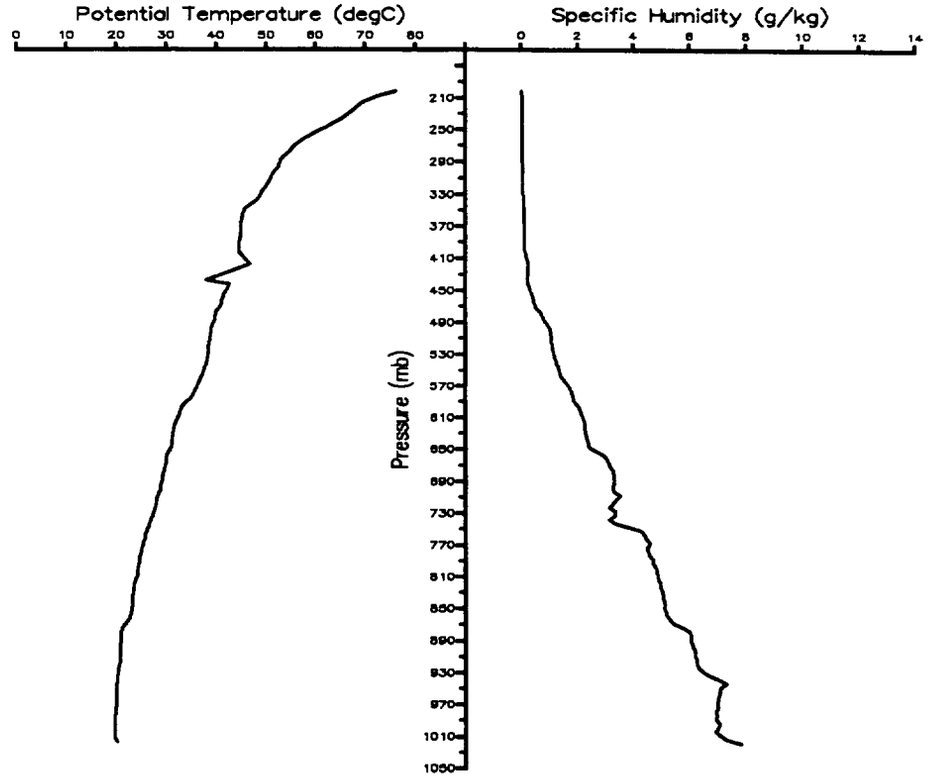


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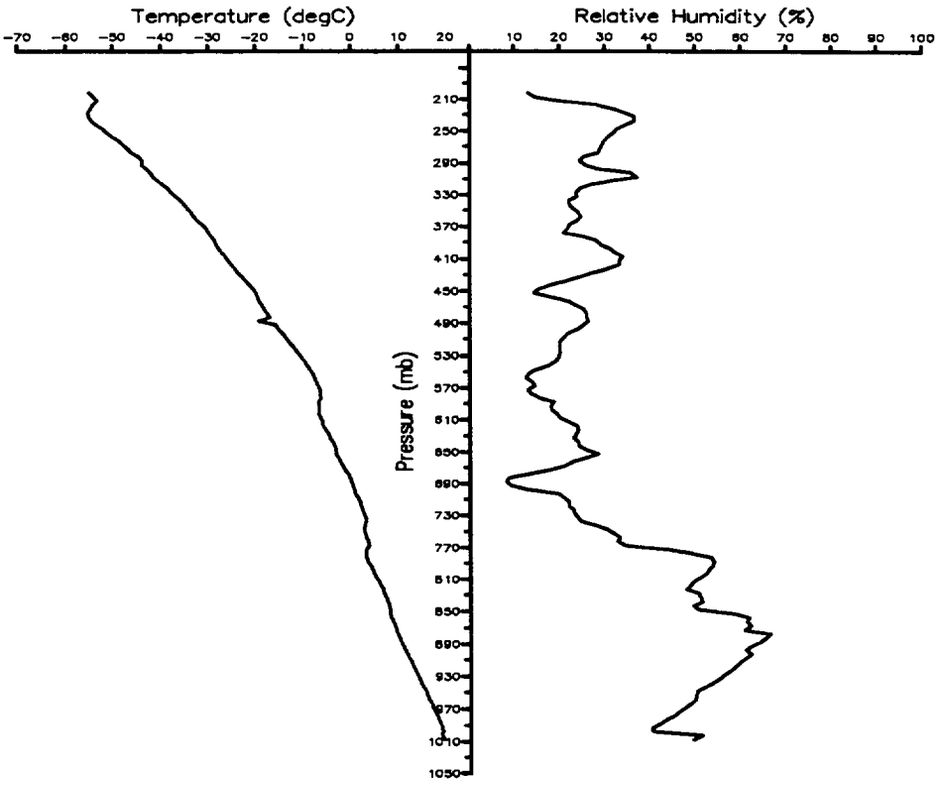
Figure 8 . Atmospheric profiles for ascent 7



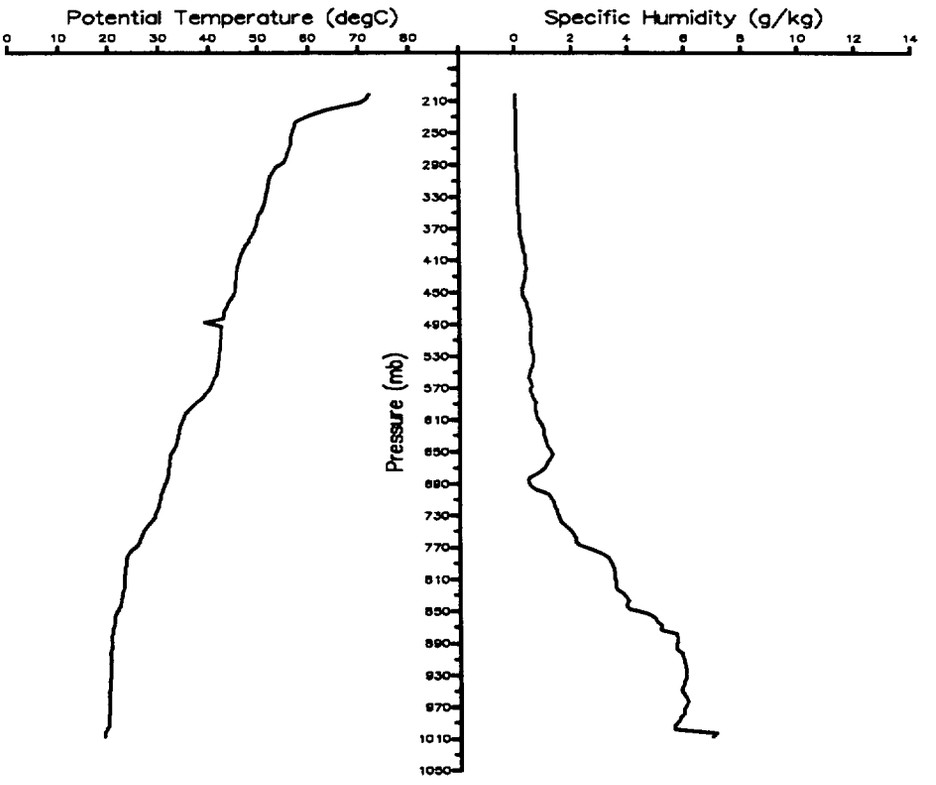


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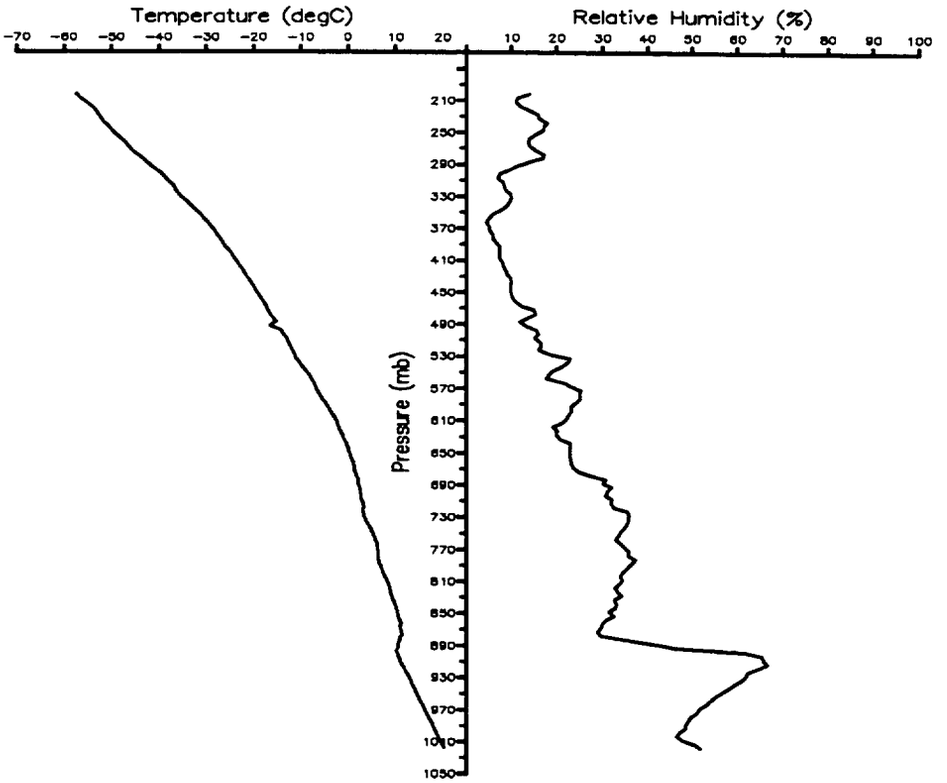
Figure 9 . Atmospheric profiles for ascent 8



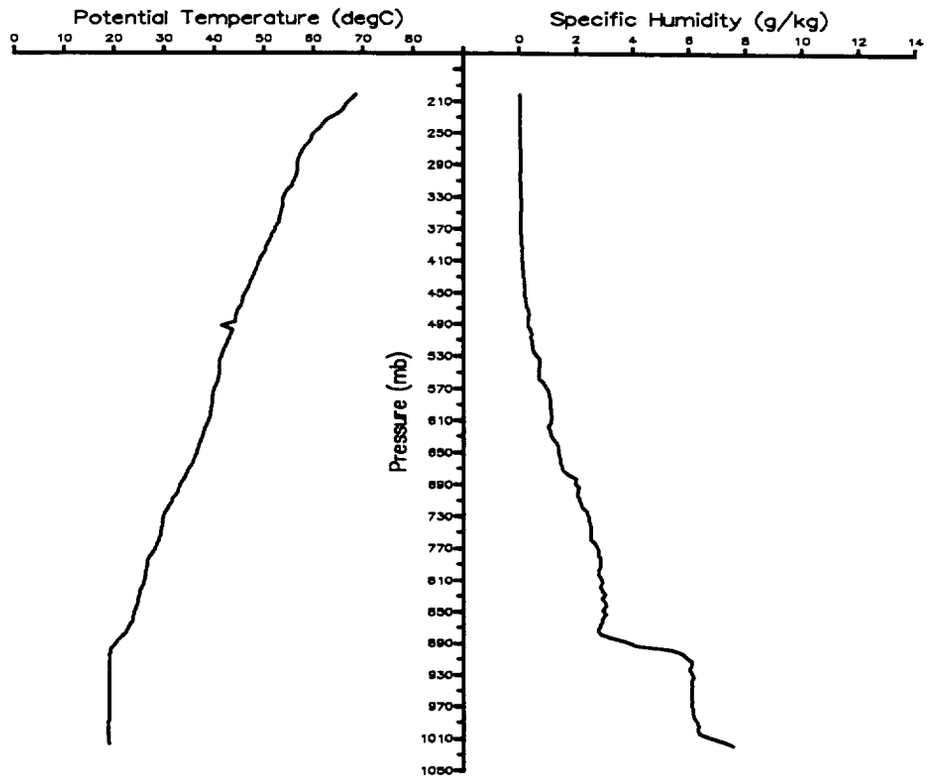


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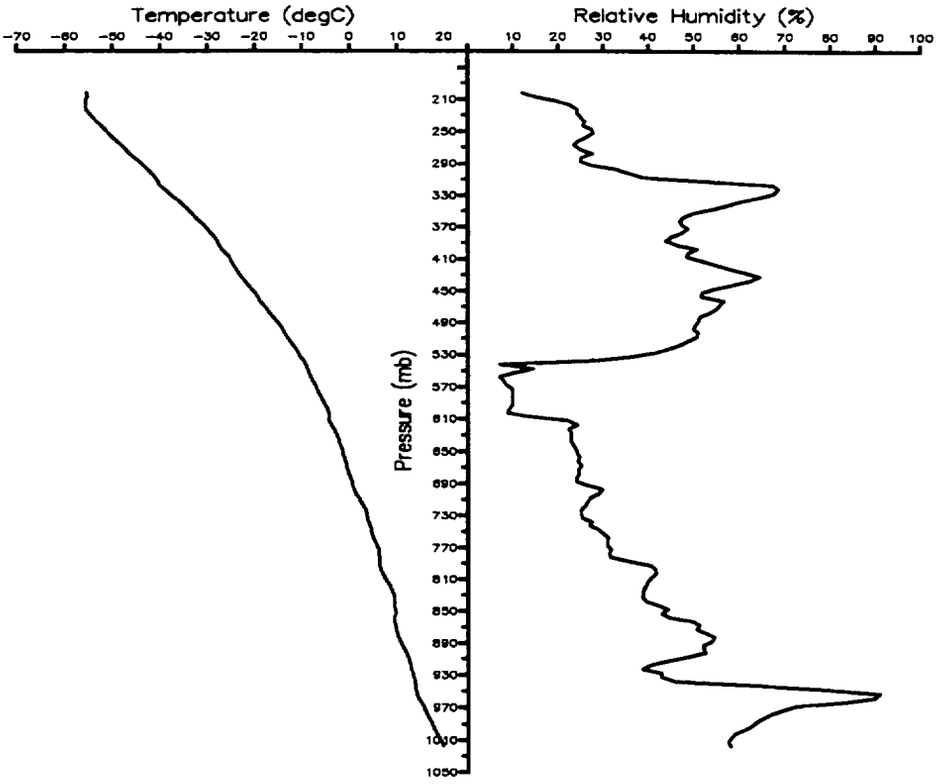
Figure 10. Atmospheric profiles for ascent 9



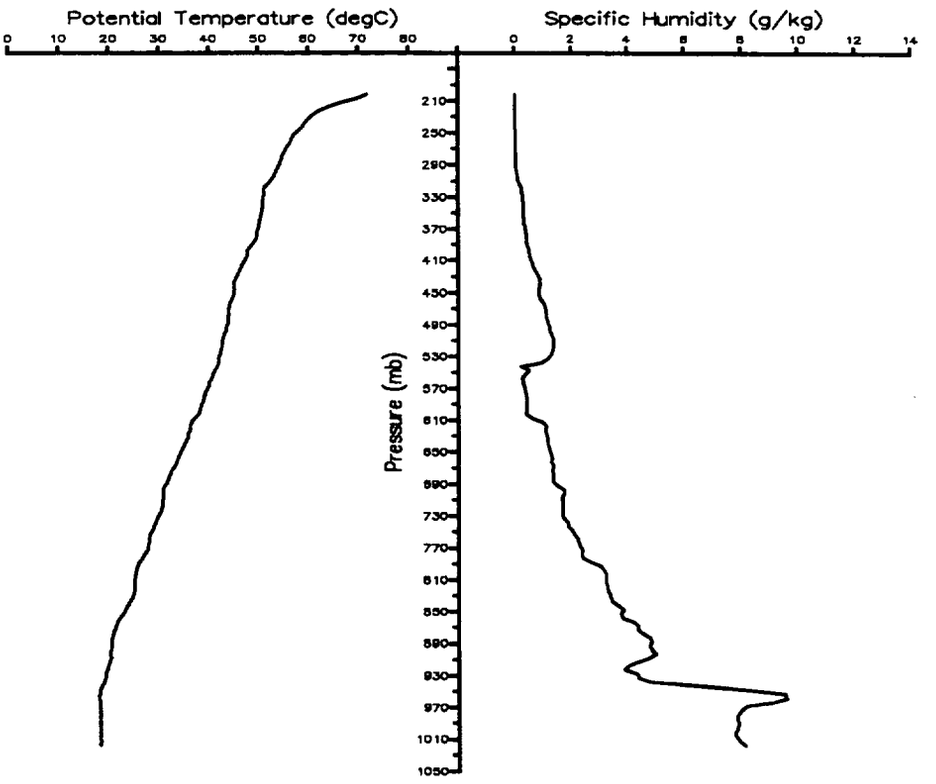


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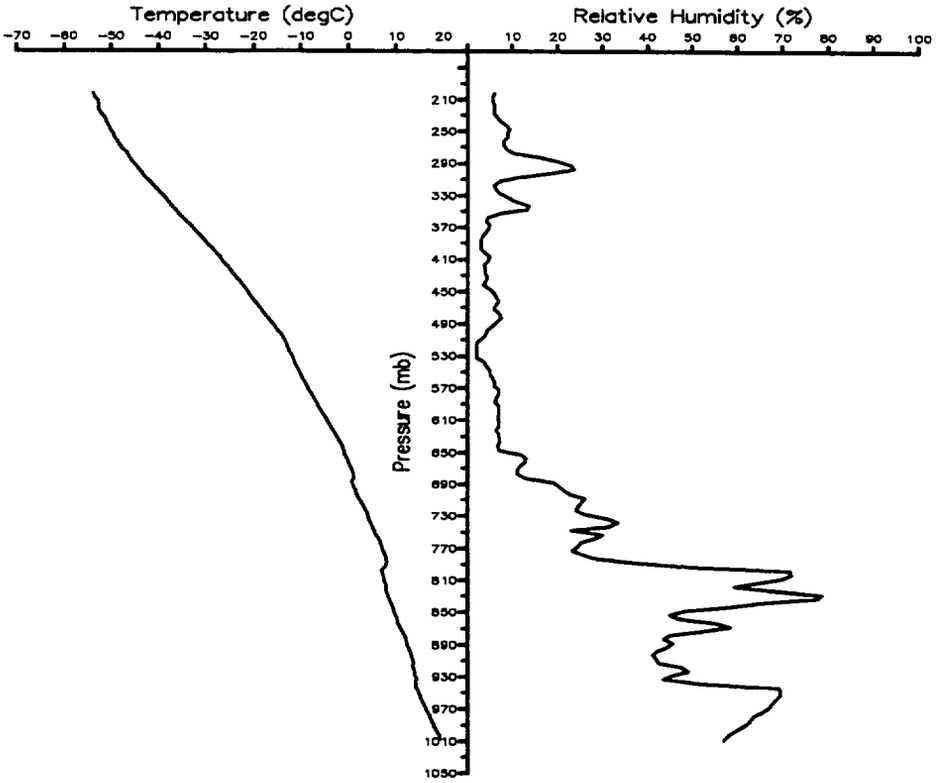
Figure 11. Atmospheric profiles for ascent 10



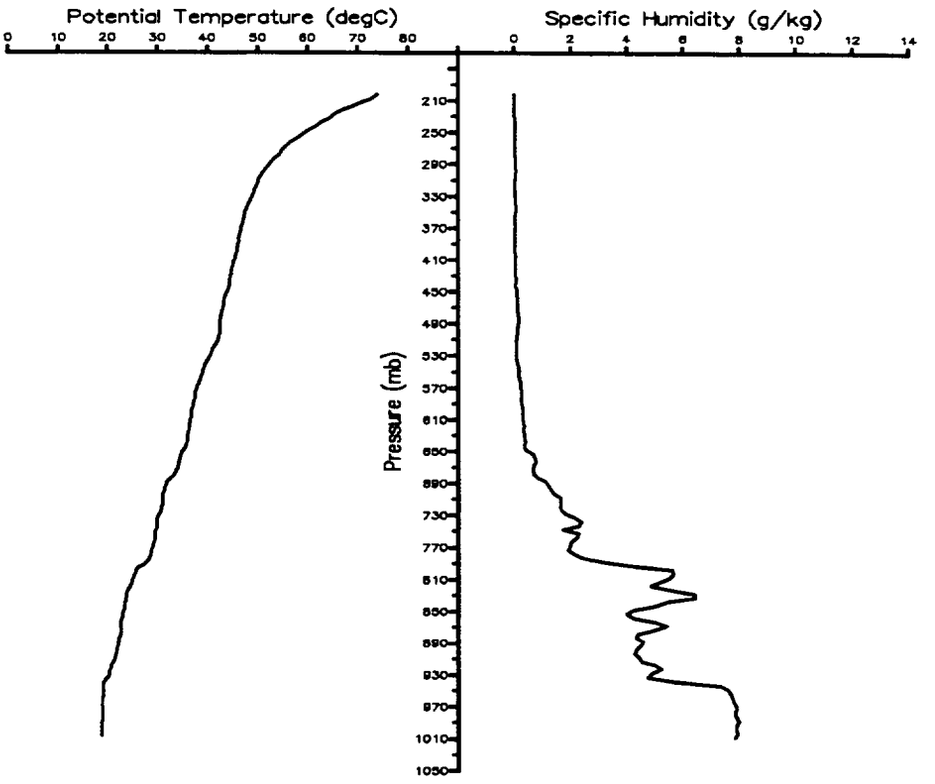


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Figure 12. Atmospheric profiles for ascent 11

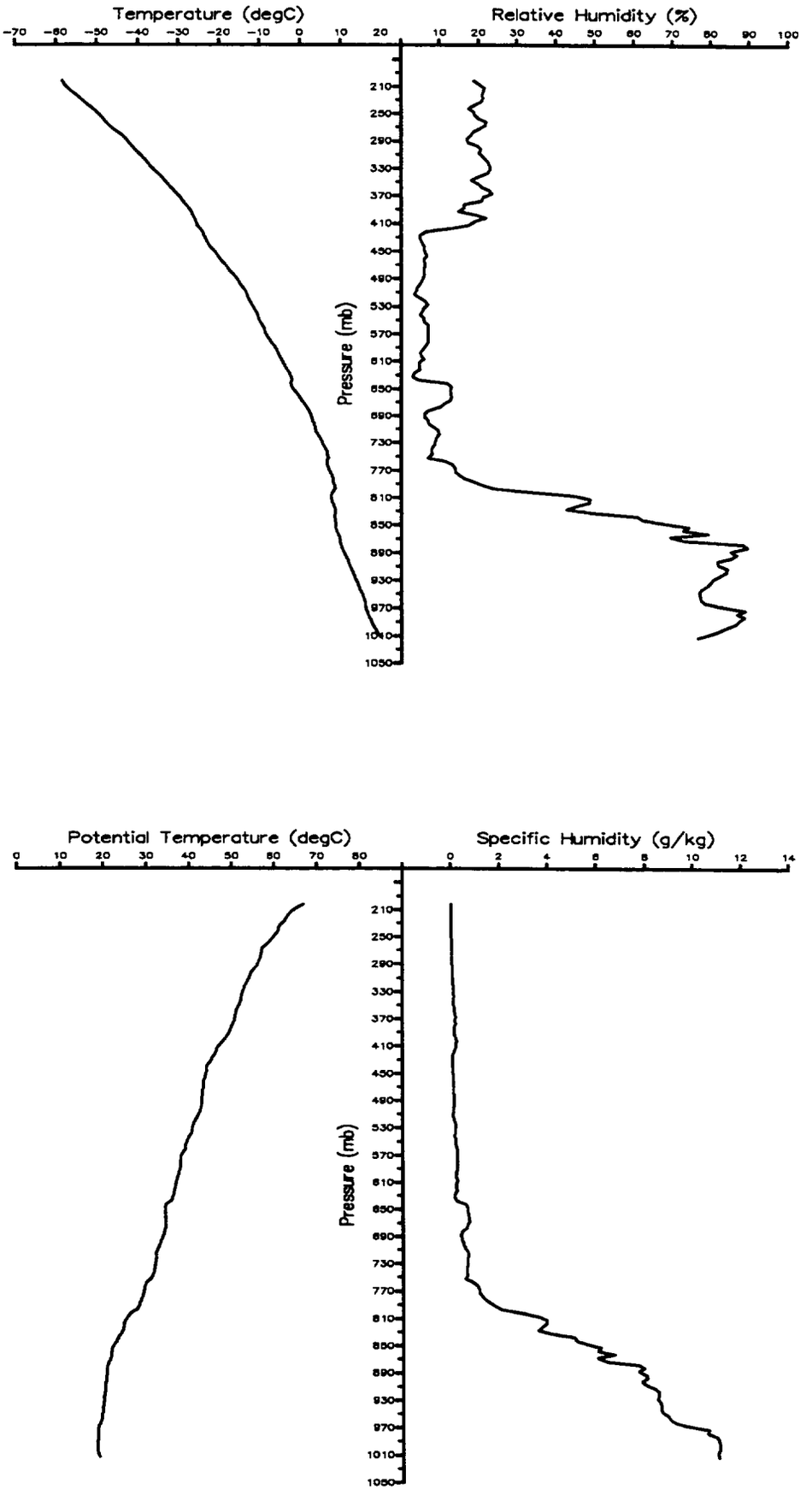

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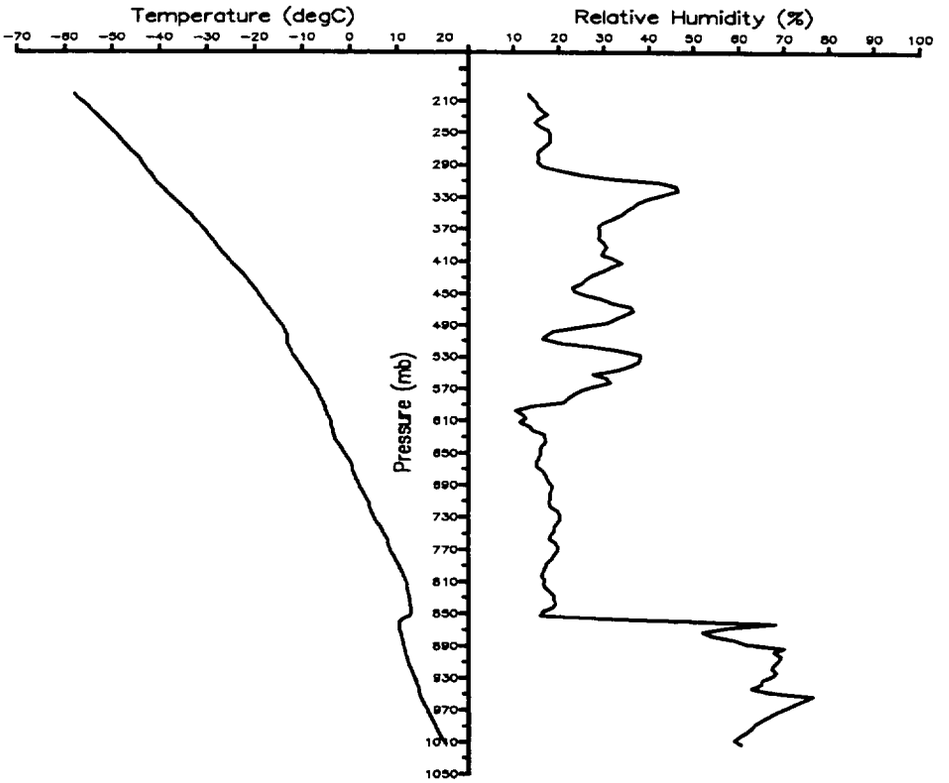
Figure 13. Atmospheric profiles for ascent 12



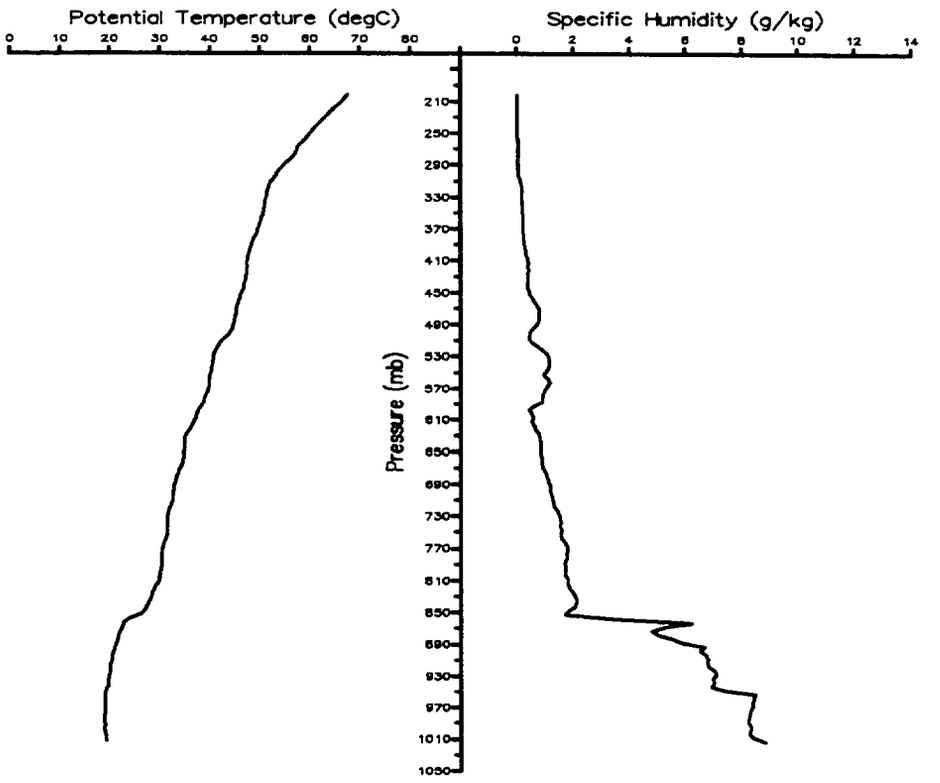


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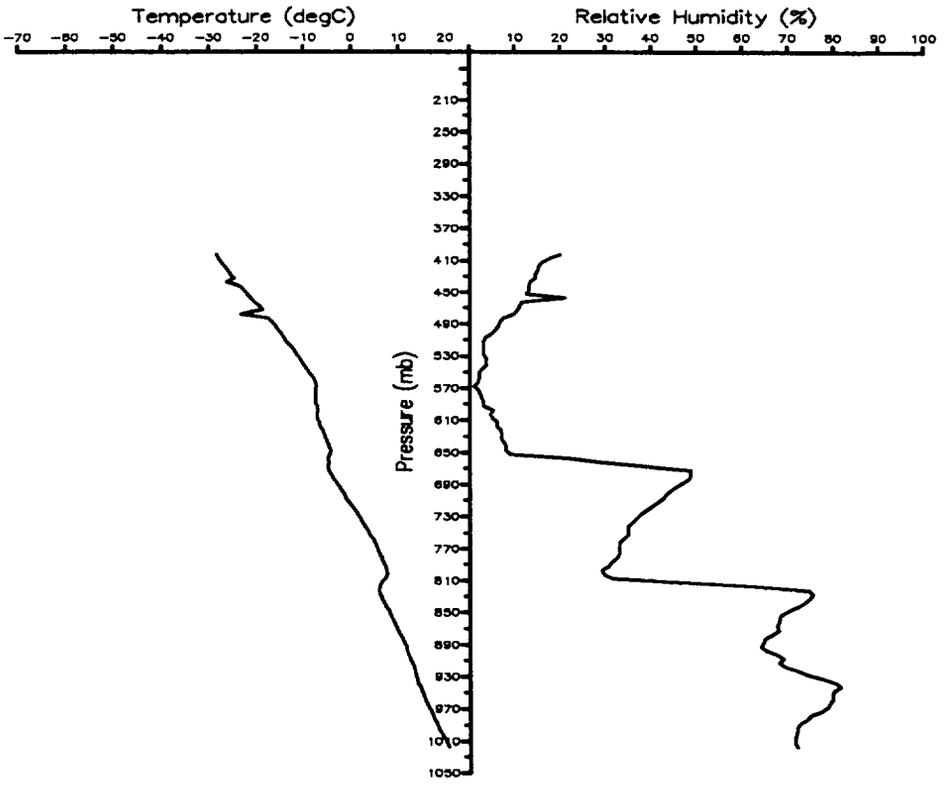
Figure 14. Atmospheric profiles for ascent 13



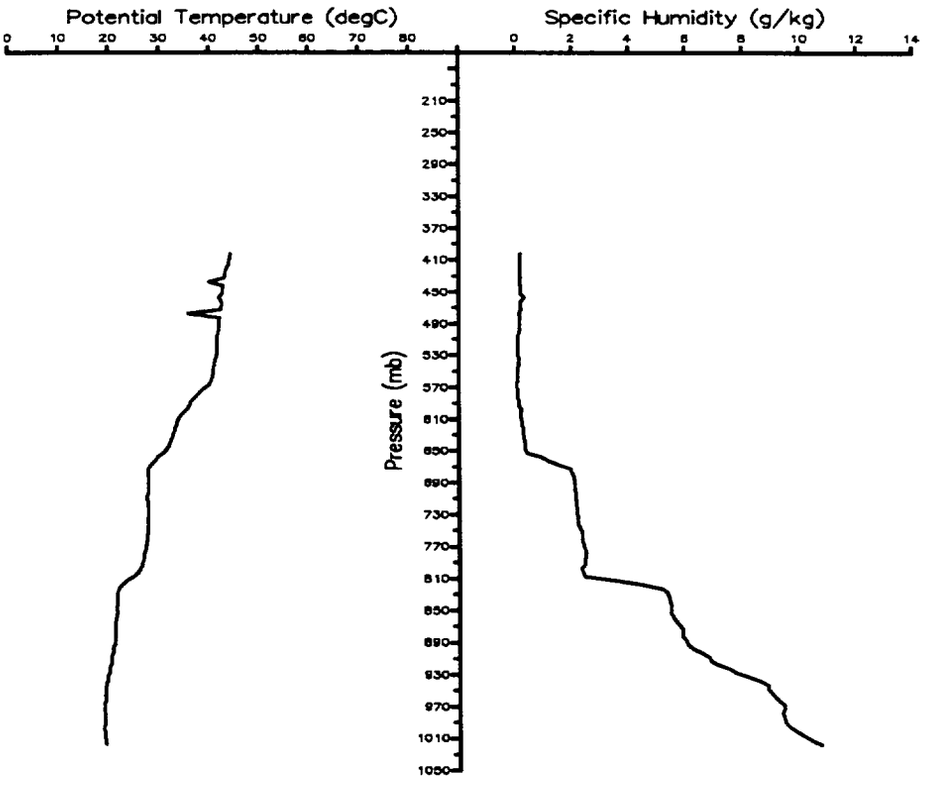


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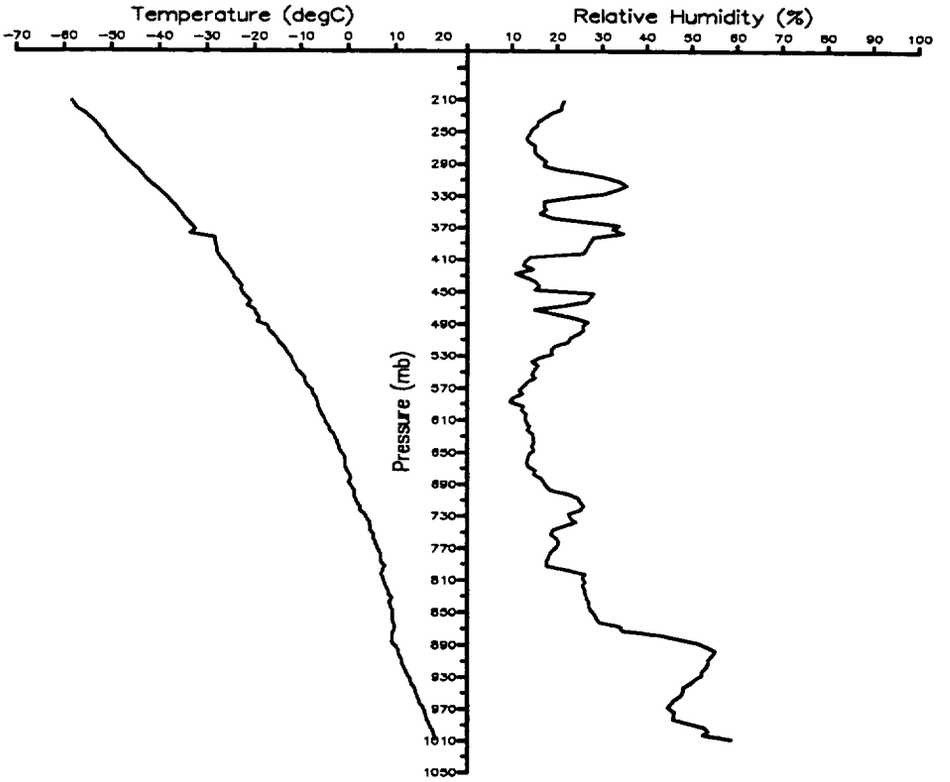
Figure 15. Atmospheric profiles for ascent 14



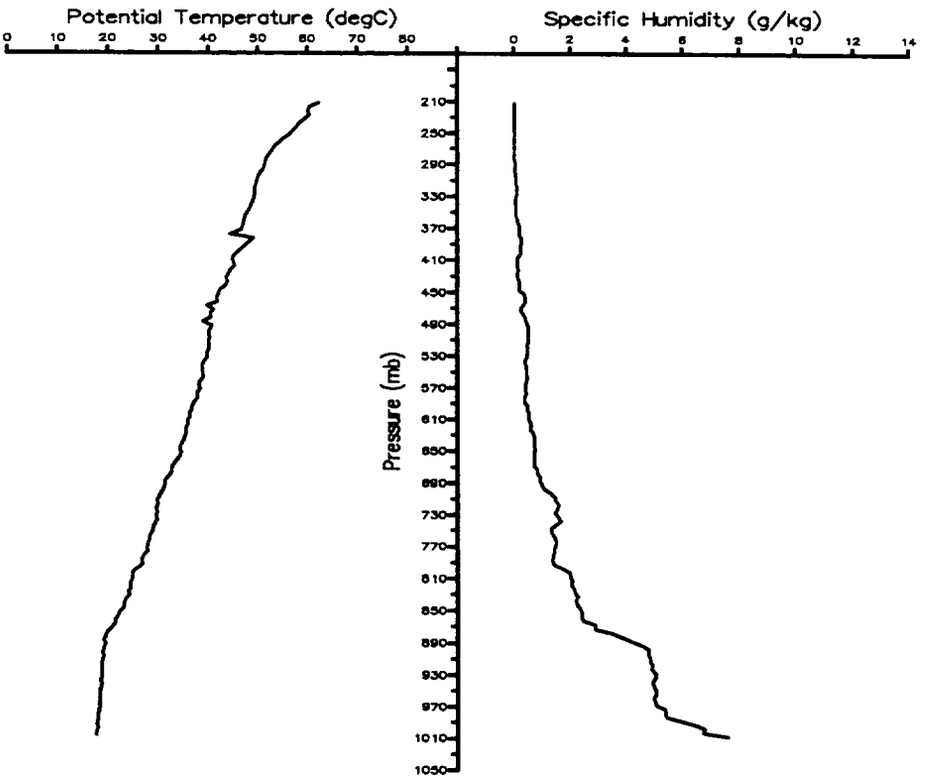


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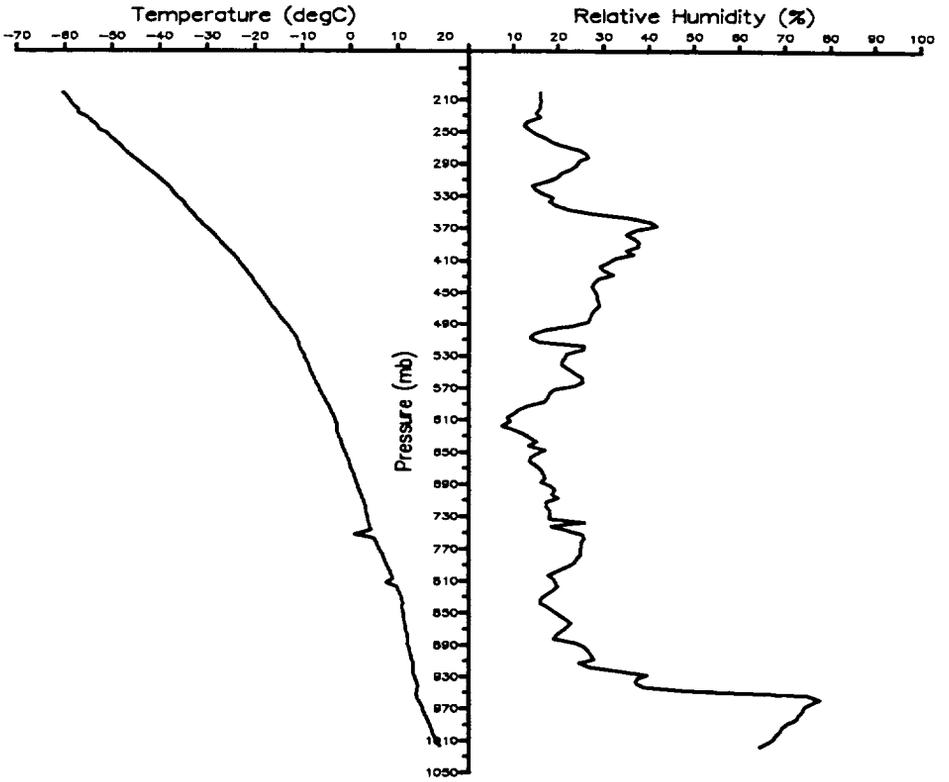
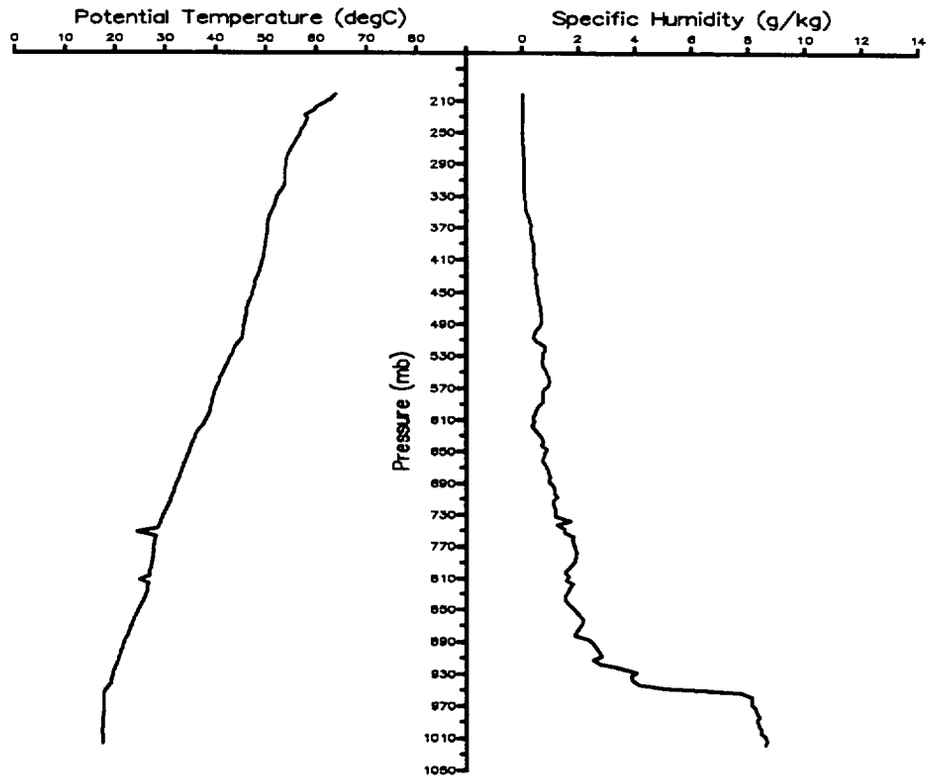
Figure 16. Atmospheric profiles for ascent 15





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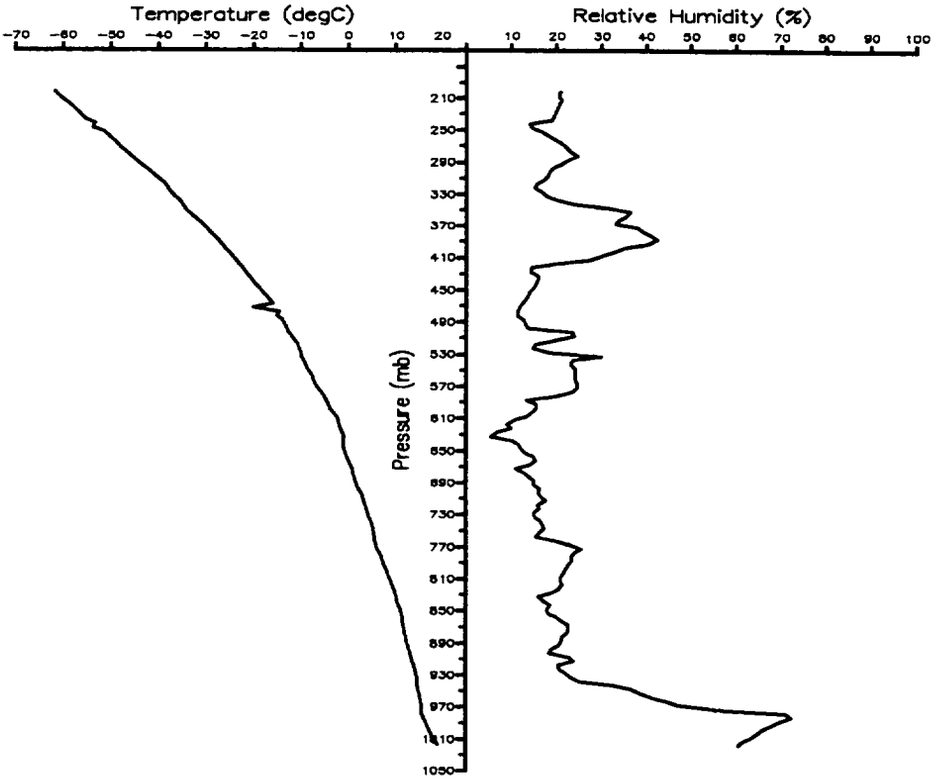

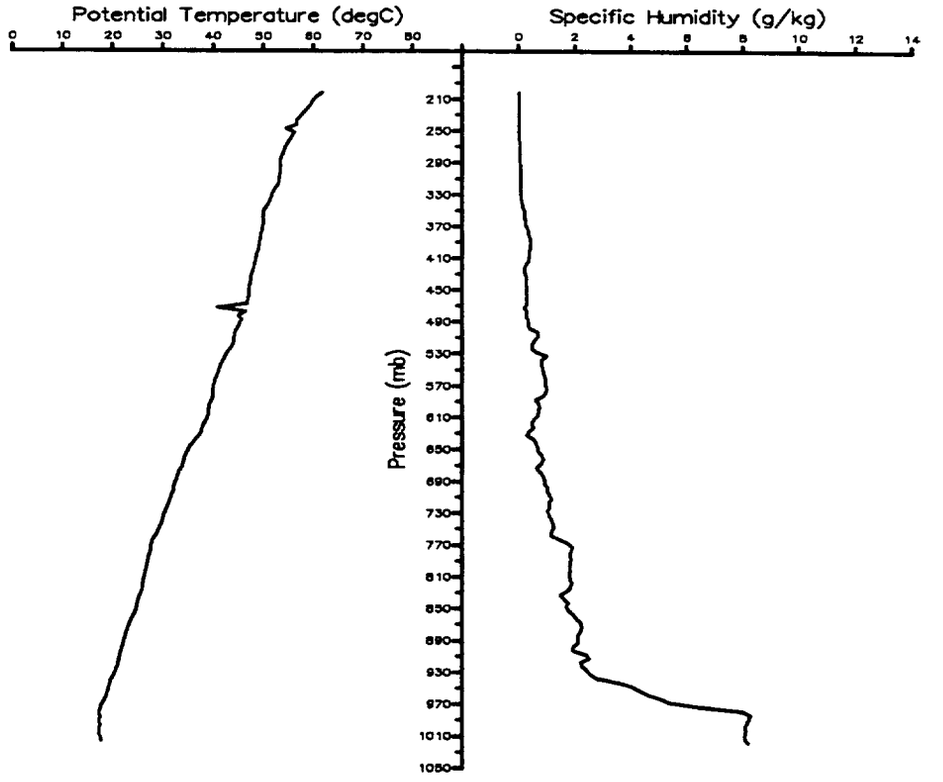

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Figure 18. Atmospheric profiles for ascent 17

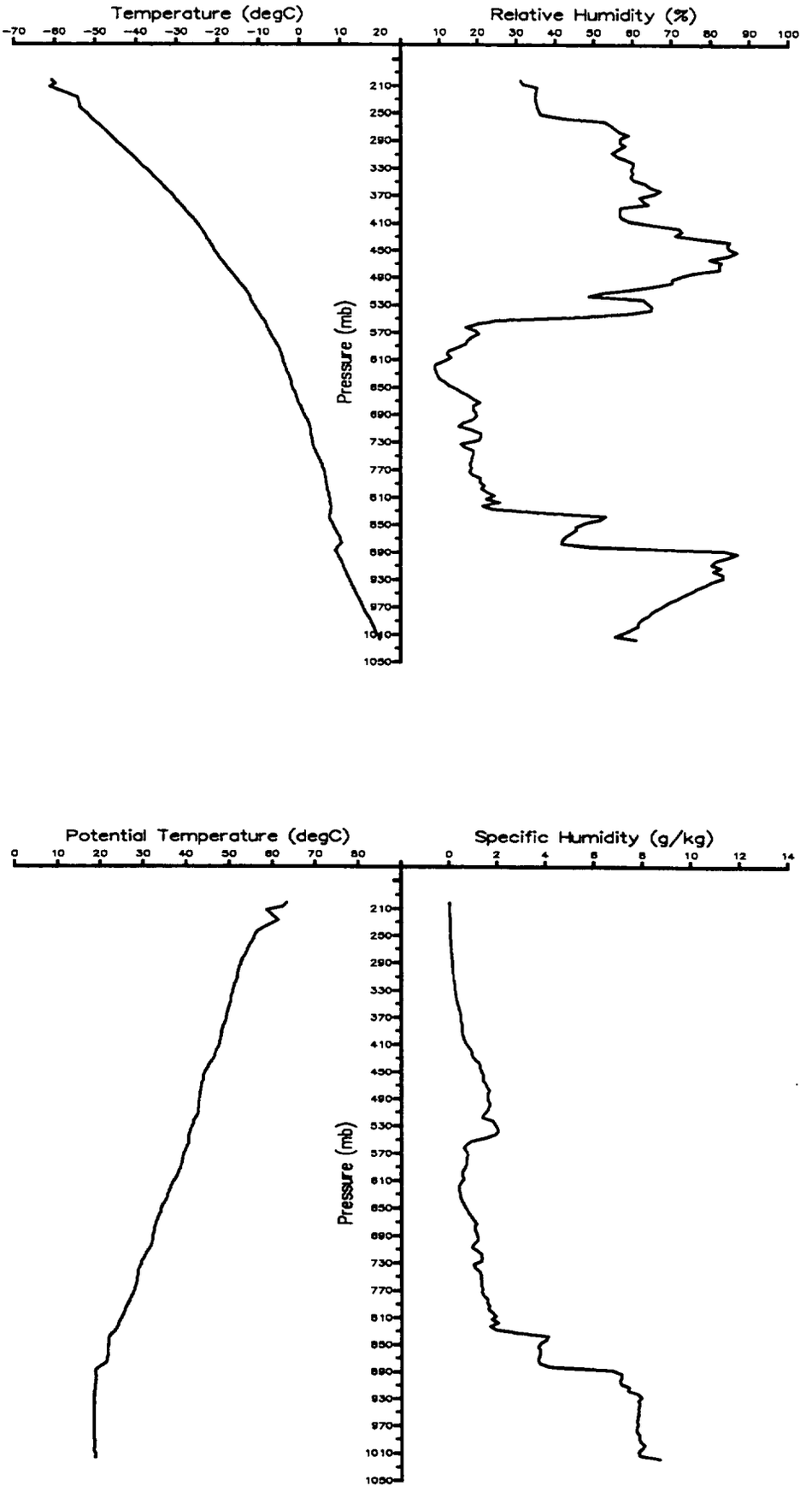

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Figure 19. Atmospheric profiles for ascent 18

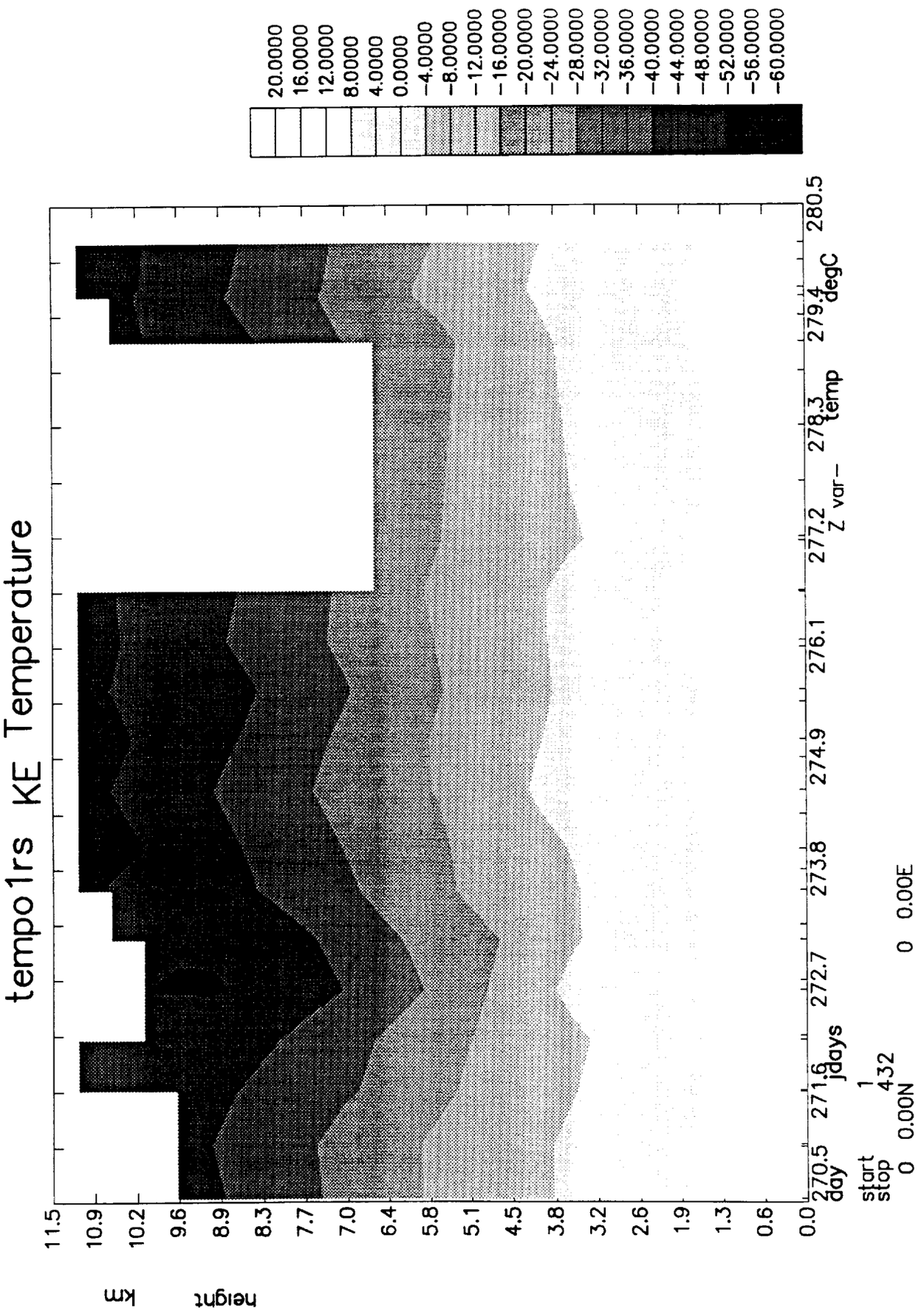

Figure 20. A contour plot of temperature over the duration of the survey

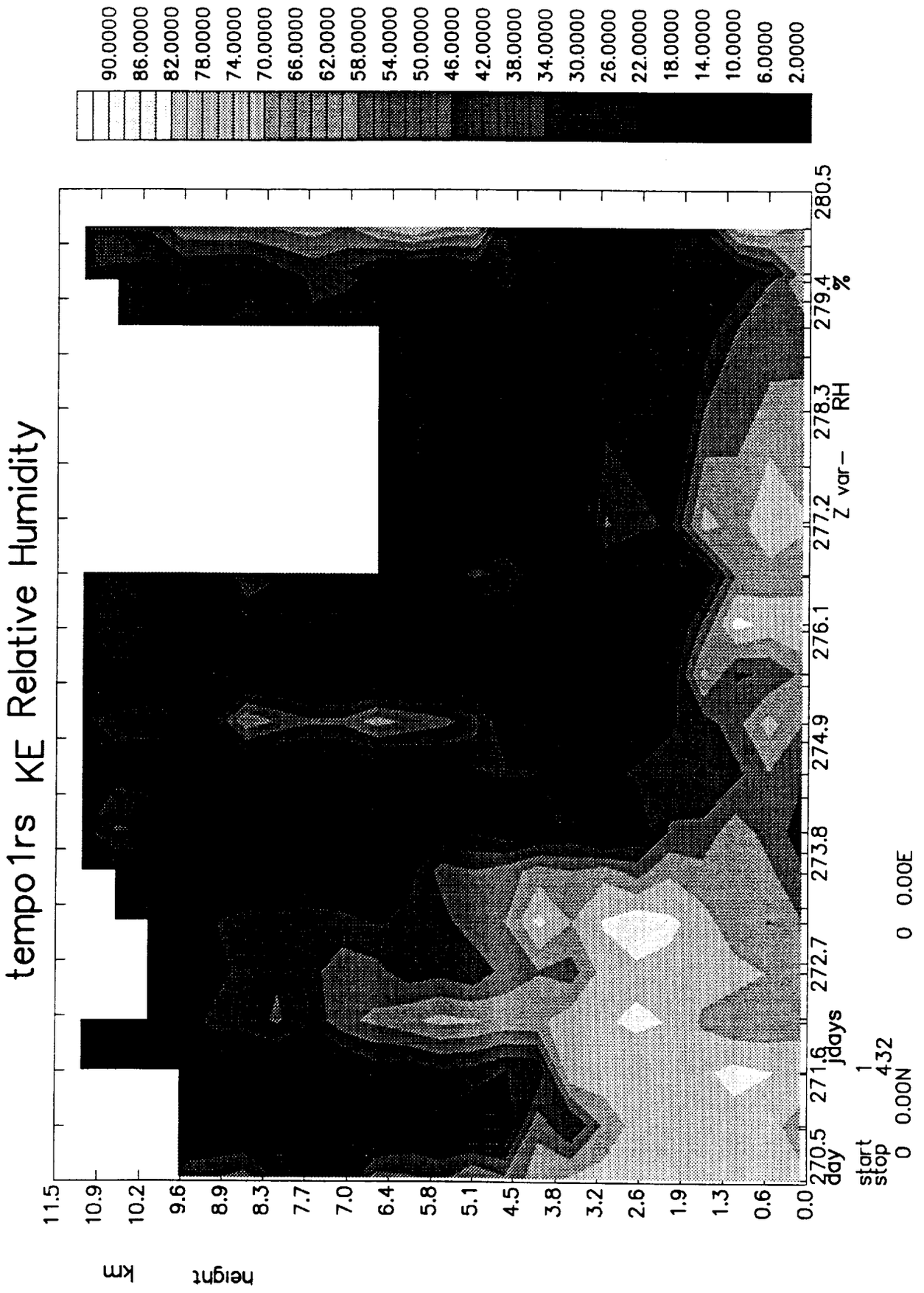

Figure 21. A contour plot of relative humidity over the duration of the survey

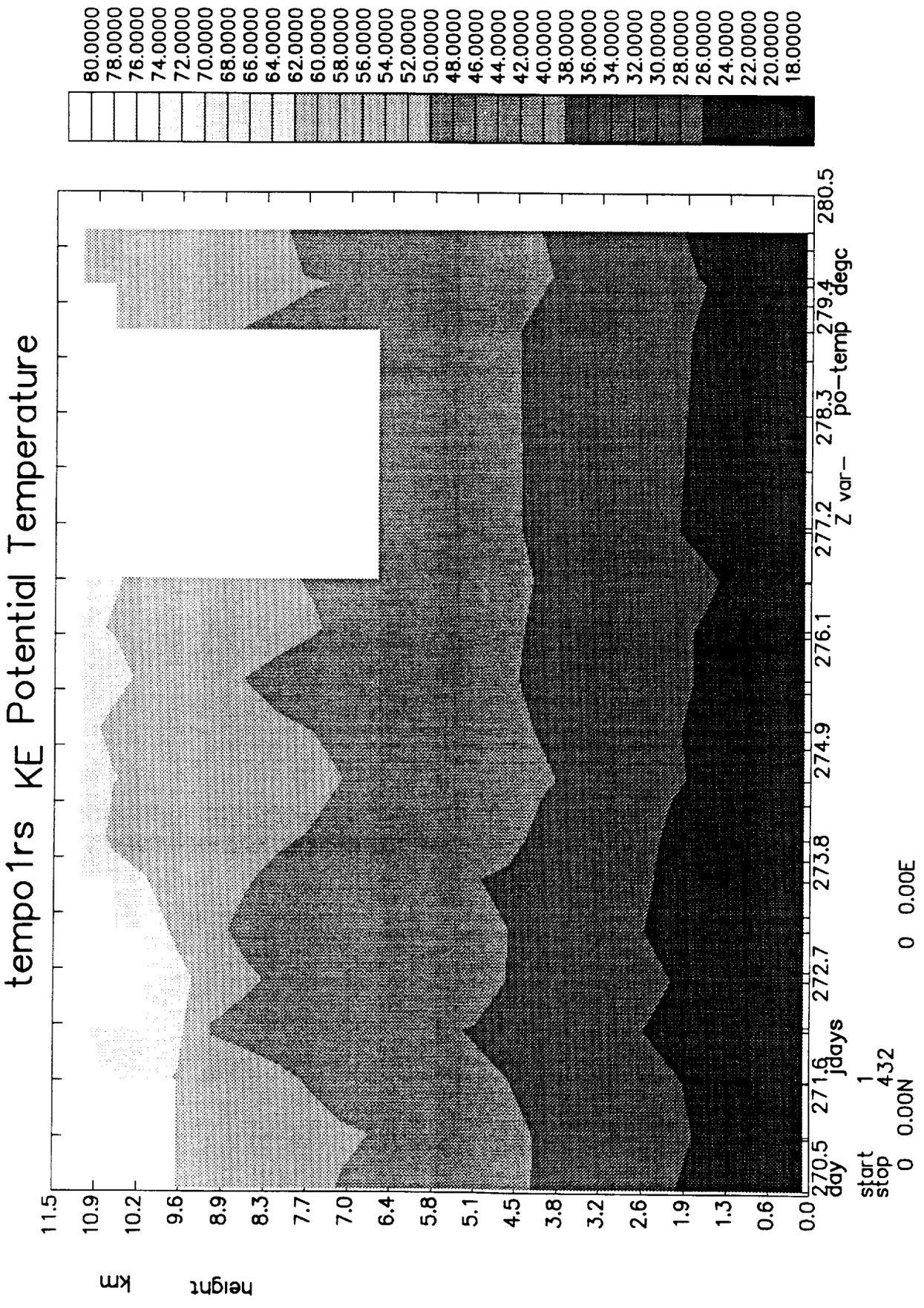

Figure 22. A contour plot of potential temperature over the duration of the survey

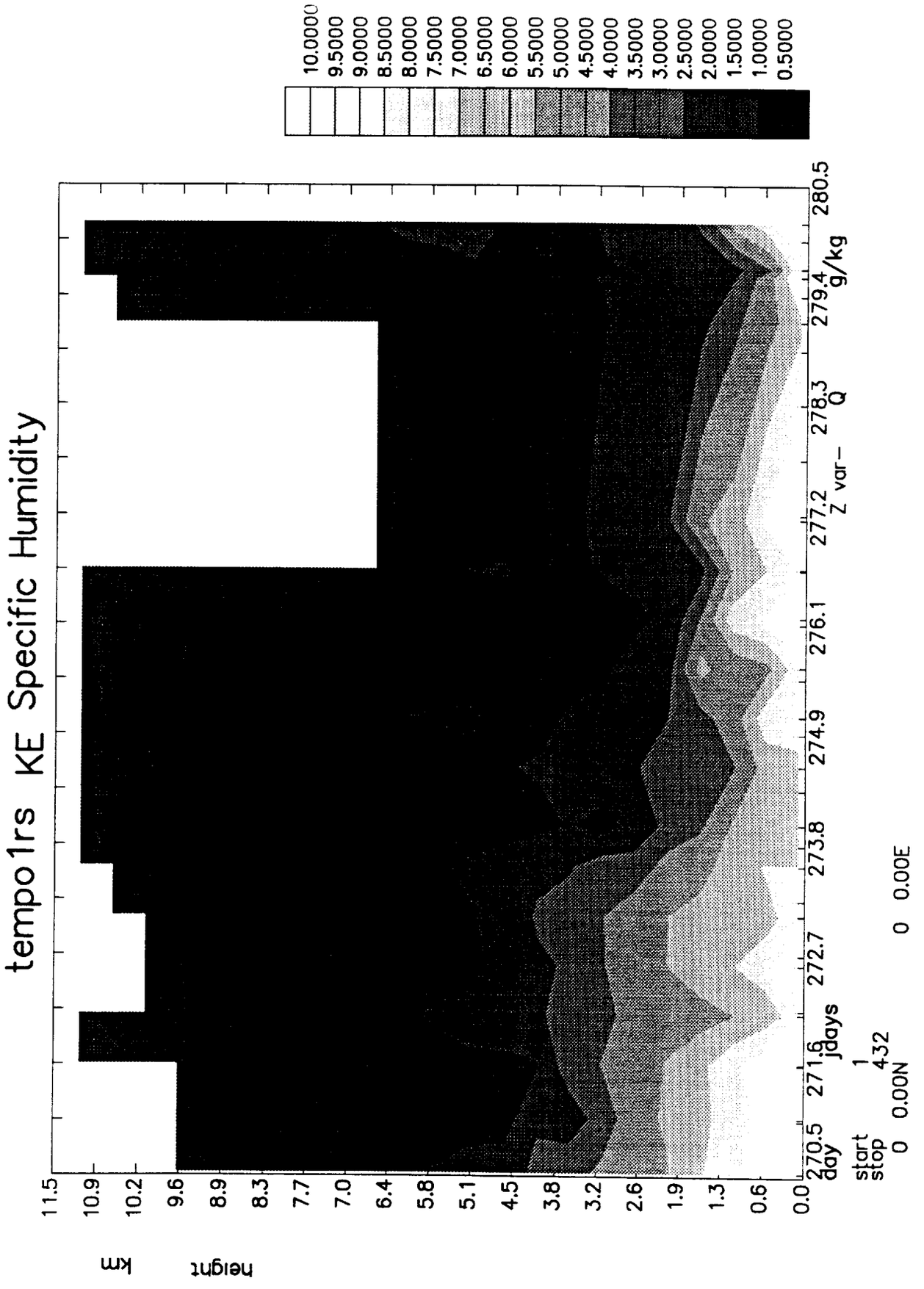

Figure 23. A contour plot of specific humidity of the duration of the survey

Ascent 1

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	km	0.076	10.227	-999.000
2.press	mb	240.000	1000.000	-999.000
3.temp	degC	-48.250	20.116	-999.000
4.RH	%	14.288	84.833	-999.000
5.po-temp	degc	20.119	63.192	-999.000
6.Q	g/kg	0.067	10.692	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0756	1000.0000	20.1158	72.4211	20.1189	10.6923
2.	0.2398	980.0000	18.5762	75.2381	20.2514	10.2923
3.	0.4149	960.0000	17.1385	76.1154	20.5989	9.7142
4.	0.5858	940.0000	15.6154	79.2692	20.8190	9.3707
5.	0.7599	920.0000	14.1533	84.8333	21.1367	9.3212
6.	0.9484	900.0000	12.8208	82.3750	21.7415	8.4940
7.	1.1121	880.0000	11.9030	76.0606	22.5187	7.5310
8.	1.3075	860.0000	10.7172	73.4138	23.3575	6.8702
9.	1.4965	840.0000	9.2036	80.8214	23.7917	7.0046
10.	1.6760	820.0000	8.1538	78.2308	24.6166	6.4589
11.	1.8777	800.0000	6.9233	72.3000	25.4964	5.6255
12.	2.0338	780.0000	5.7615	71.0000	25.9571	5.2147
13.	2.3105	760.0000	4.3870	76.3913	27.5409	5.2631
14.	2.5022	740.0000	3.1516	79.6452	28.3260	5.1529
15.	2.7076	720.0000	2.1242	80.3939	29.4986	4.9638
16.	2.9083	700.0000	0.9278	80.0556	30.4396	4.6509
17.	3.1504	680.0000	-0.1900	75.4250	31.9484	4.1714
18.	3.3811	660.0000	-1.1321	70.6071	33.5378	3.7535
19.	3.6070	640.0000	-2.5844	71.5625	34.5066	3.5190
20.	3.8267	620.0000	-3.9630	70.0370	35.4990	3.1988
21.	4.1319	600.0000	-5.3783	62.5652	37.4679	2.6706
22.	4.3492	580.0000	-6.2521	51.1250	39.0386	2.1008
23.	4.6148	560.0000	-7.8441	46.9706	40.3614	1.7680
24.	4.8992	540.0000	-9.6400	52.7250	41.6841	1.7811
25.	5.1661	520.0000	-11.5758	55.8788	42.6421	1.6870
26.	5.4557	500.0000	-13.0816	43.2653	44.4124	1.2023
27.	5.7522	480.0000	-15.1240	49.3600	45.6299	1.2062
28.	6.0591	460.0000	-17.4617	46.5957	46.6275	0.9741
29.	6.3817	440.0000	-20.2839	50.8750	47.2323	0.8744
30.	6.7041	420.0000	-23.1360	45.4200	47.8059	0.6390
31.	7.0581	400.0000	-25.6067	16.5778	49.2990	0.1966
32.	7.3994	380.0000	-27.7000	14.2881	51.1411	0.1464
33.	7.7830	360.0000	-30.4983	15.5000	52.6445	0.1269
34.	8.1609	340.0000	-33.6481	35.8269	53.6169	0.2251
35.	8.5829	320.0000	-37.3945	50.2182	54.4130	0.2352
36.	8.9904	300.0000	-40.8429	47.0000	55.4291	0.1649
37.	9.4338	280.0000	-44.5560	40.9000	56.6142	0.1022
38.	9.9304	260.0000	-47.4554	37.9821	59.8267	0.0738
39.	10.2271	240.0000	-48.2500	35.9375	63.1925	0.0669

Ascent 2

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	km	0.081	9.777	-999.000
2.press	mb	260.000	1000.000	-999.000
3.temp	degC	-45.927	20.592	-999.000
4.RH	%	5.902	81.531	-999.000
5.po-temp	degc	20.684	59.719	-999.000
6.Q	g/kg	0.029	9.800	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0809	1000.0000	20.5917	64.3750	20.7059	9.8005
2.	0.2458	980.0000	18.8903	69.6774	20.6840	9.7279
3.	0.4046	960.0000	17.3677	72.6774	20.7794	9.4008
4.	0.5818	940.0000	15.8172	75.6207	21.0371	9.0581
5.	0.7614	920.0000	14.5387	74.3226	21.6004	8.3772
6.	0.9305	900.0000	13.3848	78.2727	22.1853	8.3554
7.	1.1168	880.0000	12.1294	78.9118	22.8502	7.9328
8.	1.3039	860.0000	10.8687	81.5312	23.5243	7.7163
9.	1.4958	840.0000	10.3917	67.0556	25.0759	6.2926
10.	1.6892	820.0000	9.0350	66.0500	25.7261	5.8022
11.	1.8797	800.0000	7.6865	66.4865	26.3600	5.4486
12.	2.0819	780.0000	5.9881	76.6667	26.7506	5.7396
13.	2.2830	760.0000	4.7209	71.2093	27.5985	5.0039
14.	2.4918	740.0000	3.4500	72.0652	28.5341	4.7567
15.	2.6960	720.0000	2.4615	65.8718	29.7358	4.1632
16.	2.9208	700.0000	0.7216	59.9459	30.3490	3.4373
17.	3.1419	680.0000	-0.7086	56.5429	31.2734	3.0066
18.	3.3616	660.0000	-1.5235	37.8824	32.8811	1.9508
19.	3.6166	640.0000	-2.4524	32.2381	34.7837	1.6017
20.	3.8458	620.0000	-3.7810	40.5000	35.9446	1.8625
21.	4.0911	600.0000	-5.2864	55.3182	37.1014	2.3652
22.	4.3477	580.0000	-6.5000	42.0000	38.7449	1.6942
23.	4.6112	560.0000	-7.7463	12.0000	40.4530	0.4587
24.	4.8893	540.0000	-9.0706	8.4510	42.2678	0.2995
25.	5.1651	520.0000	-11.0490	10.4314	43.2911	0.3235
26.	5.4586	500.0000	-13.0392	25.8824	44.5336	0.7230
27.	5.7569	480.0000	-14.6620	18.6000	46.2913	0.4721
28.	6.0580	460.0000	-17.0984	18.1129	47.0932	0.3931
29.	6.3823	440.0000	-19.0433	6.4833	48.8277	0.1241
30.	6.7065	420.0000	-21.3738	5.9016	50.0897	0.0965
31.	7.0496	400.0000	-24.2422	6.2031	50.9232	0.0829
32.	7.4156	380.0000	-27.1879	11.6970	51.9762	0.1228
33.	7.7737	360.0000	-30.1053	16.7763	52.9782	0.1435
34.	8.1725	340.0000	-32.8833	15.5667	54.7457	0.1074
35.	8.4912	320.0000	-35.2000	16.5789	56.0472	0.0962
36.	9.0999	300.0000	-40.0459	15.2432	58.0838	0.0587
37.	9.4344	280.0000	-42.8667	14.5833	58.9553	0.0439
38.	9.7773	260.0000	-45.9273	12.9091	59.7190	0.0295

Ascent 3

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	km	0.061	11.347	-999.000
2.press	mb	200.000	1000.000	-999.000
3.temp	degC	-46.579	18.486	-999.000
4.RH	%	0.574	88.241	-999.000
5.po-temp	degc	18.643	84.511	-999.000
6.Q	g/kg	0.002	10.315	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0608	1000.0000	18.4857	77.2143	18.6430	10.3149
2.	0.2059	980.0000	17.1714	81.1905	18.8075	10.1636
3.	0.3864	960.0000	16.3517	79.4828	19.8349	9.6514
4.	0.5529	940.0000	15.2240	81.8400	20.4108	9.4335
5.	0.7296	920.0000	13.7879	84.5455	20.7814	9.0736
6.	0.8978	900.0000	12.4621	88.2414	21.1810	8.8656
7.	1.0780	880.0000	11.2154	87.6923	21.7903	8.2960
8.	1.2683	860.0000	10.1571	84.2143	22.7080	7.5990
9.	1.4649	840.0000	8.9529	82.5294	23.5462	7.0333
10.	1.6569	820.0000	8.0241	76.7241	24.6349	6.2865
11.	1.8634	800.0000	6.9833	69.9667	25.7689	5.4779
12.	2.0586	780.0000	5.7233	73.1333	26.5537	5.3766
13.	2.2371	760.0000	4.9067	75.1667	27.6374	5.3454
14.	2.4542	740.0000	3.8607	59.8214	28.9099	4.0517
15.	2.6904	720.0000	1.9806	76.5484	29.4935	4.6834
16.	2.8909	700.0000	0.5027	78.6757	30.1224	4.4420
17.	3.1105	680.0000	-1.1805	78.6829	30.7471	4.0404
18.	3.3291	660.0000	-2.5176	79.2353	31.7524	3.7922
19.	3.5681	640.0000	-4.3100	80.3250	32.4881	3.4676
20.	3.8134	620.0000	-5.6414	53.6207	33.8355	2.1599
21.	4.0626	600.0000	-6.4025	23.0000	35.8971	0.9033
22.	4.3121	580.0000	-7.6154	21.0769	37.4580	0.7785
23.	4.5822	560.0000	-9.8846	21.8718	38.0415	0.7008
24.	4.8271	540.0000	-11.9903	26.1613	38.5180	0.7301
25.	5.1286	520.0000	-14.2209	29.2093	39.5489	0.7119
26.	5.4152	500.0000	-16.4659	29.6364	40.3855	0.6203
27.	5.6971	480.0000	-19.0075	33.7358	40.8084	0.5928
28.	6.0028	460.0000	-21.3768	27.9286	41.7544	0.4184
29.	6.3184	440.0000	-24.1091	27.5909	42.3841	0.3378
30.	6.6308	420.0000	-26.6246	26.0351	43.2583	0.2645
31.	6.9743	400.0000	-28.2705	15.0164	45.6761	0.1378
32.	7.3412	380.0000	-31.2620	14.5400	46.6842	0.1065
33.	7.6976	360.0000	-32.4016	9.1111	50.0324	0.0621
34.	8.0714	340.0000	-34.8548	15.4521	51.8889	0.0878
35.	8.4891	320.0000	-38.3903	18.0645	52.9099	0.0764
36.	8.9087	300.0000	-41.3509	10.4912	54.7892	0.0353
37.	9.3545	280.0000	-43.2984	6.0645	58.5422	0.0174
38.	9.8179	260.0000	-44.7469	4.2500	63.3488	0.0111
39.	10.3386	240.0000	-46.5687	3.6250	68.5935	0.0084
40.	10.9318	220.0000	-46.1418	1.1940	78.5491	0.0031
41.	11.3468	200.0000	-46.5787	0.5745	84.5108	0.0016

Ascent 4

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.060	11.162	-999.000
2.press	*mb	200.000	1000.000	-999.000
3.temp	*degC	-51.715	16.659	-999.000
4.RH	*%	4.325	84.778	-999.000
5.po-temp	*degc	16.709	75.571	-999.000
6.Q	*g/kg	0.007	7.830	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0599	1000.0000	16.6588	66.0000	16.7095	7.8296
2.	0.2135	980.0000	15.9708	65.3750	17.5934	7.5647
3.	0.3810	960.0000	14.6000	68.9583	17.9338	7.4597
4.	0.5506	940.0000	13.3783	66.7826	18.4491	6.8160
5.	0.7379	920.0000	12.7667	56.0000	19.7770	5.6132
6.	0.9150	900.0000	11.5722	58.1667	20.4078	5.5071
7.	1.0793	880.0000	10.2810	61.5238	20.8073	5.4566
8.	1.2822	860.0000	8.5636	64.5909	21.1758	5.2330
9.	1.4585	840.0000	7.1238	68.8095	21.5532	5.1663
10.	1.6451	820.0000	6.1808	68.5769	22.5699	4.9403
11.	1.8552	800.0000	4.4840	74.6000	23.0465	4.9009
12.	2.0473	780.0000	2.9889	80.3704	23.5472	4.8718
13.	2.2531	760.0000	1.9880	83.3200	24.7347	4.8293
14.	2.4580	740.0000	0.6741	84.7778	25.5809	4.5893
15.	2.6543	720.0000	-0.3156	83.4375	26.6930	4.3112
16.	2.8785	700.0000	-1.5324	82.4706	27.8782	4.0116
17.	3.0992	680.0000	-2.7128	80.1538	29.0748	3.6765
18.	3.3315	660.0000	-4.0432	79.7297	30.2460	3.4116
19.	3.5575	640.0000	-5.3479	78.2500	31.3844	3.1248
20.	3.7977	620.0000	-6.9468	78.0426	32.3633	2.8455
21.	4.0403	600.0000	-8.1380	70.8400	33.8516	2.4318
22.	4.3005	580.0000	-9.6348	64.6304	35.2058	2.0408
23.	4.5548	560.0000	-11.5978	65.8043	35.9564	1.8394
24.	4.8190	540.0000	-13.6064	66.4681	36.7811	1.6348
25.	5.1017	520.0000	-15.8878	71.4286	37.5160	1.5124
26.	5.3867	500.0000	-18.1245	74.3208	38.3414	1.3551
27.	5.6749	480.0000	-20.2286	69.4643	39.3811	1.1017
28.	5.9693	460.0000	-22.6316	66.5439	40.1386	0.8887
29.	6.2892	440.0000	-25.2985	64.4265	40.9046	0.7099
30.	6.6153	420.0000	-28.0200	60.4000	41.6908	0.5412
31.	6.9481	400.0000	-30.8776	59.2069	42.4036	0.4254
32.	7.2844	380.0000	-33.4833	48.0455	43.5040	0.2823
33.	7.6691	360.0000	-36.4356	38.1333	44.8195	0.1748
34.	7.9714	340.0000	-39.3057	46.7429	45.1279	0.1671
35.	8.4706	320.0000	-42.5533	41.0667	47.7012	0.1131
36.	8.8449	300.0000	-45.9493	40.2533	48.3121	0.0803
37.	9.2769	280.0000	-45.3807	23.3523	55.4974	0.0471
38.	9.7600	260.0000	-43.5537	6.9750	65.3243	0.0210
39.	10.1464	240.0000	-46.6593	7.0370	66.6057	0.0159
40.	10.9393	220.0000	-50.0800	4.3250	74.5231	0.0075
41.	11.1621	200.0000	-51.7148	5.0000	75.5708	0.0074

Ascent 5

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.001	10.221	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-52.547	20.400	-999.000
4.RH	*%	4.426	81.792	-999.000
5.po-temp	*degc	19.217	76.605	-999.000
6.Q	*g/kg	0.007	9.151	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0008	1020.0000	20.4000	61.5000	19.5433	9.1514
2.	0.0850	1000.0000	19.2150	58.2000	19.2171	8.1128
3.	0.2546	980.0000	17.5480	62.6000	19.2795	8.0200
4.	0.4105	960.0000	16.0538	66.7308	19.3751	7.9273
5.	0.5932	940.0000	14.6154	68.9231	19.8057	7.6316
6.	0.7639	920.0000	13.4037	71.6667	20.3453	7.4892
7.	0.9461	900.0000	11.8029	76.8286	20.6101	7.3933
8.	1.1246	880.0000	10.8958	73.5000	21.5553	6.8070
9.	1.3083	860.0000	10.1650	71.7500	22.7441	6.4725
10.	1.4954	840.0000	8.9946	74.4324	23.5195	6.3542
11.	1.6898	820.0000	7.8905	76.4286	24.4464	6.2006
12.	1.8911	800.0000	6.6049	76.5122	25.2632	5.8302
13.	2.0842	780.0000	5.2000	78.2105	25.8684	5.5395
14.	2.2804	760.0000	3.7484	78.3871	26.4640	5.1412
15.	2.4922	740.0000	2.3458	81.7917	27.2898	4.9878
16.	2.7065	720.0000	1.1159	78.5000	28.3398	4.5032
17.	2.9245	700.0000	-0.1362	77.7872	29.4170	4.1909
18.	3.1399	680.0000	-0.9750	72.8393	30.9318	3.7949
19.	3.3878	660.0000	-1.3130	54.9130	33.3959	2.8821
20.	3.6111	640.0000	-2.1133	51.4444	35.0752	2.6199
21.	3.8581	620.0000	-4.0513	53.2821	35.7448	2.4221
22.	4.1137	600.0000	-6.4245	56.7551	36.0236	2.2293
23.	4.3456	580.0000	-8.2259	52.0185	36.6898	1.8347
24.	4.6047	560.0000	-10.0407	52.2593	37.6838	1.6466
25.	4.7810	540.0000	-11.5500	47.5000	38.0510	1.3633
26.	4.1791	520.0000	-14.3214	49.9286	39.4547	1.2140
27.	4.3991	500.0000	-15.9231	36.2308	41.1842	0.8025
28.	4.7167	480.0000	-18.1105	34.2105	42.5018	0.6517
29.	4.9031	460.0000	-19.5187	34.4375	43.1254	0.5983
30.	5.4131	440.0000	-23.9000	38.5238	44.2485	0.4882
31.	5.6061	420.0000	-25.7986	40.6575	44.3764	0.4456
32.	5.9475	400.0000	-28.9405	40.7703	44.8336	0.3525
33.	6.2853	380.0000	-32.2316	43.5823	45.0538	0.2865
34.	6.6631	360.0000	-35.9026	49.8462	45.3183	0.2420
35.	7.0533	340.0000	-39.5141	51.1647	45.8386	0.1810
36.	7.4343	320.0000	-42.5611	45.2333	47.0166	0.1235
37.	7.8643	300.0000	-46.1152	41.7475	48.2091	0.0820
38.	8.2845	280.0000	-49.5055	47.1376	49.5136	0.0670
39.	8.7549	260.0000	-52.2528	39.6604	52.5451	0.0442
40.	9.2499	240.0000	-52.4839	13.2458	59.7732	0.0153
41.	9.7933	220.0000	-52.5474	5.9197	68.1886	0.0074
42.	10.2206	200.0000	-51.5382	4.4265	76.6055	0.0067

Ascent 6

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.009	10.667	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-51.542	19.200	-999.000
4.RH	*%	5.848	89.615	-999.000
5.po-temp	*degc	18.045	75.742	-999.000
6.Q	*g/kg	0.009	7.884	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0092	1020.0000	19.2000	57.2500	18.2160	7.8844
2.	0.1116	1000.0000	17.9941	59.4118	18.0550	7.6770
3.	0.2623	980.0000	16.4474	64.1053	18.0447	7.6458
4.	0.4397	960.0000	14.7750	68.1000	18.1830	7.4612
5.	0.6041	940.0000	14.8455	59.2273	19.9578	6.6399
6.	0.7968	920.0000	13.8222	59.2963	20.9190	6.3761
7.	0.9658	900.0000	12.8229	59.9714	21.6633	6.1668
8.	1.1489	880.0000	11.4000	62.8148	22.1240	6.0148
9.	1.3323	860.0000	9.6852	68.6296	22.2879	5.9947
10.	1.5203	840.0000	8.0781	73.8750	22.6146	5.9274
11.	1.7045	820.0000	6.3929	80.4286	22.8190	5.8817
12.	1.9018	800.0000	4.8700	86.1667	23.3425	5.8153
13.	2.0939	780.0000	3.4769	85.0385	23.9457	5.3766
14.	2.2634	760.0000	2.4154	89.6154	24.6724	5.3251
15.	2.5076	740.0000	1.1389	89.4722	26.0019	5.0020
16.	2.7129	720.0000	0.1457	87.7429	27.2114	4.6897
17.	2.9336	700.0000	-0.9943	84.8571	28.4395	4.2917
18.	3.1541	680.0000	-2.2333	80.4545	29.5689	3.8224
19.	3.3769	660.0000	-3.0806	70.1613	31.1724	3.2231
20.	3.6101	640.0000	-4.9225	71.0750	31.7854	2.9258
21.	3.8571	620.0000	-6.9674	76.7174	32.3344	2.7904
22.	4.1111	600.0000	-9.2676	85.7027	32.6777	2.6939
23.	4.3627	580.0000	-11.3763	87.9737	33.2194	2.4220
24.	4.0721	560.0000	-12.2667	77.0278	35.3342	2.0439
25.	4.3320	540.0000	-13.5808	67.8077	36.9322	1.6749
26.	4.6026	520.0000	-15.3075	58.1509	38.1825	1.2932
27.	4.8827	500.0000	-17.4348	55.0217	39.0800	1.0617
28.	5.1796	480.0000	-19.8180	51.0800	39.8878	0.8402
29.	5.4837	460.0000	-22.1163	44.3469	40.8997	0.6220
30.	5.8071	440.0000	-24.7222	37.5111	41.7884	0.4352
31.	6.1201	420.0000	-27.5684	37.3860	42.2466	0.3497
32.	6.4574	400.0000	-30.5623	31.3585	42.8430	0.2324
33.	6.7879	380.0000	-33.6909	37.8182	43.1802	0.2155
34.	7.1672	360.0000	-37.2211	39.1930	43.6546	0.1667
35.	7.5352	340.0000	-40.3167	39.6481	44.5684	0.1288
36.	7.9343	320.0000	-43.6781	40.2329	45.5693	0.0971
37.	8.3420	300.0000	-46.6500	38.7639	47.2591	0.0715
38.	8.7933	280.0000	-49.7000	37.8205	49.5082	0.0529
39.	9.2386	260.0000	-51.3871	29.8000	53.7181	0.0364
40.	9.7506	240.0000	-51.1135	16.1798	61.9507	0.0221
41.	10.2912	220.0000	-51.0041	9.1327	70.5804	0.0138
42.	10.6665	200.0000	-51.5424	5.8485	75.7423	0.0088

Ascent 7

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.028	11.321	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-52.964	21.187	-999.000
4.RH	*%	5.320	71.033	-999.000
5.po-temp	*degc	19.535	75.270	-999.000
6.Q	*g/kg	0.006	7.634	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0283	1020.0000	21.1875	49.2500	19.8335	7.6338
2.	0.1582	1000.0000	19.5632	49.3684	19.5354	7.0239
3.	0.3308	980.0000	17.9364	53.0455	19.6695	6.9601
4.	0.5026	960.0000	16.3682	57.9091	19.8548	7.0254
5.	0.6629	940.0000	14.9731	62.1538	20.0981	7.0366
6.	0.8456	920.0000	13.5250	59.9286	20.5222	6.3129
7.	1.0208	900.0000	11.9407	63.2963	20.7316	6.1394
8.	1.1990	880.0000	10.3583	66.7917	20.9764	5.9633
9.	1.3853	860.0000	10.0935	58.4839	22.6806	5.2489
10.	1.5840	840.0000	8.5280	61.4400	23.1649	5.0841
11.	1.7573	820.0000	7.1935	64.2581	23.6249	4.9630
12.	1.9646	800.0000	5.7759	66.5517	24.3680	4.7842
13.	2.1603	780.0000	4.2870	68.6957	24.9145	4.5629
14.	2.3647	760.0000	3.0000	71.0333	25.7777	4.4224
15.	2.5704	740.0000	1.8806	57.9677	26.8462	3.4215
16.	2.7898	720.0000	0.5656	59.7500	27.8615	3.2938
17.	2.9811	700.0000	-0.6500	64.8824	28.6785	3.3594
18.	3.2298	680.0000	-2.4440	69.6800	29.5115	3.2637
19.	3.4431	660.0000	-4.0462	68.8718	30.1601	2.9448
20.	3.6712	640.0000	-5.5333	60.1282	31.1166	2.3638
21.	3.9207	620.0000	-7.5308	64.5897	31.7514	2.2502
22.	4.1626	600.0000	-8.8800	63.5778	33.0494	2.0598
23.	4.4111	580.0000	-9.3732	55.6585	35.4363	1.7930
24.	4.6605	560.0000	-10.7383	49.5957	36.8303	1.4837
25.	4.9424	540.0000	-12.5957	46.5870	38.0496	1.2462
26.	5.2198	520.0000	-15.0306	48.0816	38.5346	1.0924
27.	5.5022	500.0000	-17.5519	52.3077	38.9841	1.0012
28.	5.7981	480.0000	-19.7704	40.5370	39.9806	0.6711
29.	6.1085	460.0000	-21.9114	27.9773	41.2706	0.4006
30.	6.3616	440.0000	-24.6370	20.0741	41.0904	0.2452
31.	6.7194	420.0000	-24.3000	19.0000	46.6580	0.2399
32.	7.0187	400.0000	-29.7829	14.8571	44.4979	0.1191
33.	7.3162	380.0000	-32.6111	16.8889	44.7861	0.1075
34.	7.6566	360.0000	-35.8925	18.7358	45.0581	0.0907
35.	8.0882	340.0000	-38.3244	16.0976	47.7634	0.0648
36.	8.4373	320.0000	-40.4444	13.2222	49.7685	0.0451
37.	8.8852	300.0000	-43.4421	14.1404	51.9965	0.0373
38.	9.3184	280.0000	-46.3118	12.5921	54.2415	0.0258
39.	9.7864	260.0000	-48.3120	13.1446	58.3232	0.0231
40.	10.2915	240.0000	-49.4773	9.1364	64.3001	0.0152
41.	10.8105	220.0000	-51.8900	9.6750	68.7295	0.0132
42.	11.3210	200.0000	-52.9640	5.3200	75.2703	0.0062

Ascent 8

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.079	11.301	-999.000
2.press	*mb	200.000	1000.000	-999.000
3.temp	*degC	-54.533	19.139	-999.000
4.RH	*%	11.881	63.906	-999.000
5.po-temp	*degc	19.152	71.860	-999.000
6.Q	*g/kg	0.015	6.249	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0793	1000.0000	19.1391	45.0870	19.1524	6.2490
2.	0.2468	980.0000	18.0444	44.3333	19.7677	5.8514
3.	0.4176	960.0000	16.3655	49.4138	19.8321	5.9901
4.	0.5900	940.0000	14.7774	53.0323	20.0066	5.9267
5.	0.7582	920.0000	13.1607	58.0714	20.1086	5.9677
6.	0.9345	900.0000	11.4576	61.6061	20.2074	5.7861
7.	1.1143	880.0000	9.8406	63.9062	20.4324	5.5117
8.	1.2943	860.0000	8.5200	60.9429	20.9706	4.9157
9.	1.4827	840.0000	7.6571	50.6857	22.0834	3.9430
10.	1.6799	820.0000	6.3030	49.1515	22.7805	3.5720
11.	1.8726	800.0000	4.5412	52.5000	23.0008	3.4569
12.	2.0704	780.0000	3.1839	50.0323	23.7141	3.0708
13.	2.2664	760.0000	3.3282	33.2821	26.0302	2.1156
14.	2.4830	740.0000	2.9000	26.4138	27.9750	1.6718
15.	2.6968	720.0000	2.2061	22.4545	29.6088	1.3925
16.	2.9061	700.0000	0.8366	16.0488	30.4612	0.9320
17.	3.1275	680.0000	-0.4571	11.8810	31.5441	0.6359
18.	3.3599	660.0000	-2.4184	24.5263	32.0124	1.1785
19.	3.5943	640.0000	-3.7048	24.2381	33.2724	1.0958
20.	3.8385	620.0000	-5.5286	23.2619	34.0443	0.9458
21.	4.0801	600.0000	-6.6660	18.9574	35.5874	0.7287
22.	4.3333	580.0000	-6.5392	15.1569	38.7545	0.6071
23.	4.5927	560.0000	-7.4478	13.5652	40.8063	0.5261
24.	4.8719	540.0000	-9.4918	17.8367	41.7723	0.6089
25.	5.1498	520.0000	-12.0533	19.9556	42.1135	0.5791
26.	5.4402	500.0000	-14.8229	23.0571	42.3611	0.5528
27.	5.7307	480.0000	-18.0717	25.8043	42.0283	0.5090
28.	6.0468	460.0000	-19.4550	18.9167	44.3266	0.3360
29.	6.3469	440.0000	-21.7173	19.7500	45.3453	0.2956
30.	6.6805	420.0000	-24.8426	31.1111	45.7175	0.3718
31.	7.0099	400.0000	-27.4417	31.7000	46.7192	0.3150
32.	7.3575	380.0000	-29.6830	24.2453	48.4490	0.2057
33.	7.7678	360.0000	-32.8652	23.8261	49.8086	0.1568
34.	8.1225	340.0000	-35.5724	22.7931	51.0622	0.1209
35.	8.5223	320.0000	-39.1562	26.5938	51.7648	0.1029
36.	8.9213	300.0000	-42.5644	32.4444	52.7197	0.0947
37.	9.3117	280.0000	-44.7437	25.6250	55.3205	0.0616
38.	9.9062	260.0000	-50.1366	30.9024	56.5857	0.0445
39.	10.3844	240.0000	-54.2209	35.5522	57.8193	0.0338
40.	10.8670	220.0000	-54.3045	28.4432	65.2868	0.0284
41.	11.3012	200.0000	-54.5333	13.8182	71.8596	0.0148

Ascent 9

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.025	11.449	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-56.910	20.011	-999.000
4.RH	*%	5.083	63.737	-999.000
5.po-temp	*degc	18.709	67.993	-999.000
6.Q	*g/kg	0.010	7.375	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0250	1020.0000	20.0111	51.1111	18.7707	7.3753
2.	0.1475	1000.0000	18.7000	47.5000	18.7094	6.4071
3.	0.3118	980.0000	17.1071	49.5714	18.7938	6.1683
4.	0.4804	960.0000	15.4176	53.4118	18.8249	6.0887
5.	0.6562	940.0000	13.6368	58.8421	18.8388	6.1085
6.	0.8260	920.0000	11.9947	63.7368	18.9310	6.0678
7.	0.9980	900.0000	10.5789	59.8421	19.2814	5.2978
8.	1.1905	880.0000	11.0652	32.8261	21.8207	3.0614
9.	1.3655	860.0000	10.9130	30.7826	23.5244	2.9126
10.	1.5591	840.0000	9.9296	32.6296	24.5679	2.9627
11.	1.7561	820.0000	8.7923	33.5769	25.4946	2.8943
12.	1.9407	800.0000	7.5935	34.6774	26.2257	2.8194
13.	2.1408	780.0000	6.4515	36.3939	27.1942	2.8059
14.	2.3468	760.0000	5.8625	34.0000	28.8296	2.5842
15.	2.5514	740.0000	4.3867	35.1333	29.4990	2.4710
16.	2.7664	720.0000	3.2212	34.0606	30.6322	2.2677
17.	2.9863	700.0000	2.6333	31.5278	32.4662	2.0710
18.	3.2216	680.0000	1.7949	27.9231	34.2121	1.7827
19.	3.4418	660.0000	0.9425	23.2500	35.7847	1.4346
20.	3.6757	640.0000	-0.3302	22.5349	37.0526	1.3075
21.	3.9222	620.0000	-1.8870	20.1304	38.1570	1.0744
22.	4.1746	600.0000	-3.5737	22.8158	39.1894	1.1100
23.	4.4232	580.0000	-5.7361	24.8611	39.6342	1.0612
24.	4.6808	560.0000	-7.5794	20.5588	40.5681	0.7907
25.	4.9635	540.0000	-10.1182	21.4545	40.9898	0.6977
26.	5.2369	520.0000	-12.0526	16.9211	42.0303	0.4909
27.	5.5273	500.0000	-14.3500	15.0238	42.8449	0.3833
28.	5.8226	480.0000	-16.1814	13.8837	44.3112	0.3089
29.	6.1273	460.0000	-18.2700	10.8800	45.5942	0.2133
30.	6.4472	440.0000	-20.4531	9.8367	46.9711	0.1664
31.	6.7701	420.0000	-22.6583	8.5208	48.3760	0.1246
32.	7.1191	400.0000	-25.0865	7.3846	49.8593	0.0909
33.	7.4851	380.0000	-27.6073	5.8000	51.4711	0.0599
34.	7.8539	360.0000	-30.2600	5.0833	52.9685	0.0427
35.	8.2256	340.0000	-33.5741	8.8621	53.6338	0.0568
36.	8.6450	320.0000	-36.8388	8.6866	55.0592	0.0432
37.	9.0566	300.0000	-40.0187	8.5469	56.5056	0.0319
38.	9.5116	280.0000	-44.2220	15.9153	57.1619	0.0411
39.	9.9916	260.0000	-47.7954	14.3231	59.1240	0.0267
40.	10.4968	240.0000	-51.2052	16.9351	61.7609	0.0231
41.	11.0375	220.0000	-54.0859	13.1176	65.8224	0.0140
42.	11.4485	200.0000	-56.9100	12.4000	67.9931	0.0098

Ascent 10

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.026	11.407	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-55.535	19.500	-999.000
4.RH	*%	8.391	83.259	-999.000
5.po-temp	*degc	18.043	70.546	-999.000
6.Q	*g/kg	0.013	9.042	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0257	1020.0000	19.5000	57.8000	18.2283	8.0789
2.	0.1463	1000.0000	18.2474	59.7895	18.2051	7.8363
3.	0.3192	980.0000	16.4240	66.3200	18.1438	7.9099
4.	0.4799	960.0000	14.6704	83.2593	18.0425	9.0422
5.	0.6571	940.0000	13.6138	56.5862	18.8061	5.8697
6.	0.8366	920.0000	12.7125	41.6250	19.7574	4.1550
7.	1.0105	900.0000	11.4939	51.5455	20.3304	4.8532
8.	1.1842	880.0000	10.0875	52.9062	20.7109	4.6376
9.	1.3749	860.0000	9.4121	46.7576	22.0371	4.0063
10.	1.5570	840.0000	9.3667	41.1389	23.9392	3.5958
11.	1.7490	820.0000	8.3857	39.3714	24.9726	3.2988
12.	1.9420	800.0000	6.7500	41.1389	25.3321	3.1583
13.	2.1474	780.0000	6.1513	32.6154	26.9406	2.4638
14.	2.3465	760.0000	5.1083	30.8056	28.0103	2.2212
15.	2.5493	740.0000	4.0944	27.1667	29.1627	1.8727
16.	2.7647	720.0000	3.0882	25.6176	30.4732	1.6885
17.	3.0003	700.0000	1.0516	28.3548	30.8862	1.6659
18.	3.2072	680.0000	0.0263	24.2632	32.1025	1.3590
19.	3.4509	660.0000	-1.0187	24.5938	33.7287	1.3175
20.	3.6756	640.0000	-2.0450	23.2750	35.1718	1.1905
21.	3.9088	620.0000	-3.5386	22.9773	36.1908	1.0841
22.	4.1646	600.0000	-4.6636	10.5682	37.9140	0.4736
23.	4.4235	580.0000	-6.2721	9.9302	39.1271	0.4074
24.	4.6772	560.0000	-7.8761	8.3913	40.2963	0.3140
25.	4.9444	540.0000	-9.4609	21.0870	41.6637	0.7114
26.	5.2134	520.0000	-11.5525	44.9000	42.4571	1.3495
27.	5.5320	500.0000	-14.1163	50.5116	43.3042	1.2901
28.	5.8185	480.0000	-16.5260	52.7400	43.9451	1.1452
29.	6.1161	460.0000	-19.1192	54.0192	44.5095	0.9825
30.	6.4384	440.0000	-21.8618	60.0364	45.2093	0.8951
31.	6.7642	420.0000	-24.2415	56.5849	46.4303	0.7189
32.	7.0924	400.0000	-26.4979	48.7234	47.8568	0.5265
33.	7.4533	380.0000	-28.9327	46.0727	49.5094	0.4168
34.	7.8311	360.0000	-32.1606	48.0758	50.3630	0.3378
35.	8.2032	340.0000	-35.5879	59.0000	50.8794	0.3108
36.	8.6181	320.0000	-39.4468	63.9839	51.4202	0.2438
37.	9.0400	300.0000	-42.2958	33.5775	53.4840	0.1014
38.	9.4869	280.0000	-45.9240	25.7333	54.8397	0.0553
39.	9.9468	260.0000	-49.4753	25.3596	56.5327	0.0388
40.	10.4581	240.0000	-52.9482	25.8795	59.1663	0.0288
41.	10.9957	220.0000	-55.5352	22.4176	63.6489	0.0197
42.	11.4071	200.0000	-55.3391	13.8696	70.5461	0.0133

Acsent 11

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	km	0.068	11.352	-999.000
2.press	mb	200.000	1000.000	-999.000
3.temp	degC	-53.900	18.495	-999.000
4.RH	%	2.056	68.087	-999.000
5.po-temp	degc	18.697	73.742	-999.000
6.Q	g/kg	0.007	7.900	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0675	1000.0000	18.4947	59.1579	18.6968	7.9001
2.	0.2193	980.0000	17.0240	63.6800	18.7735	7.8951
3.	0.3821	960.0000	15.4391	68.0870	18.8489	7.7831
4.	0.5547	940.0000	14.1905	58.7143	19.3691	6.3164
5.	0.7309	920.0000	13.6821	46.0000	20.6953	4.8911
6.	0.9051	900.0000	12.8966	42.4483	21.7156	4.3794
7.	1.0905	880.0000	11.7074	46.4815	22.4443	4.5345
8.	1.2715	860.0000	10.1750	51.1429	22.7735	4.6218
9.	1.4571	840.0000	8.9242	62.0606	23.4499	5.2511
10.	1.6443	820.0000	7.8962	67.8462	24.3820	5.5013
11.	1.8485	800.0000	7.2812	65.9375	25.9445	5.2397
12.	2.0454	780.0000	7.6629	28.3143	28.5055	2.3775
13.	2.2493	760.0000	6.3647	26.9412	29.3541	2.1144
14.	2.4595	740.0000	4.7000	30.0625	29.8809	2.1577
15.	2.6766	720.0000	3.3125	24.9750	30.7937	1.6753
16.	2.9024	700.0000	1.5086	22.2571	31.3532	1.3529
17.	3.1173	680.0000	0.9163	13.4419	33.1450	0.8008
18.	3.3452	660.0000	-0.2348	12.3696	34.4696	0.7004
19.	3.5885	640.0000	-1.6068	7.0227	35.7361	0.3709
20.	3.8235	620.0000	-3.5442	6.8372	36.2718	0.3225
21.	4.0709	600.0000	-5.6024	6.9524	36.8196	0.2899
22.	4.3254	580.0000	-7.6200	6.6222	37.5050	0.2442
23.	4.5883	560.0000	-9.4600	5.6200	38.5074	0.1865
24.	4.8617	540.0000	-11.2843	3.6078	39.6676	0.1080
25.	5.1335	520.0000	-12.7704	2.0556	41.2261	0.0561
26.	5.4187	500.0000	-14.7574	4.5370	42.3573	0.1086
27.	5.7142	480.0000	-17.5018	6.7895	42.7035	0.1361
28.	6.0196	460.0000	-20.1088	6.4035	43.3512	0.1069
29.	6.3338	440.0000	-22.5600	4.3167	44.3156	0.0608
30.	6.6585	420.0000	-25.4220	4.0508	44.9070	0.0460
31.	6.9991	400.0000	-28.2266	3.7188	45.7921	0.0347
32.	7.3445	380.0000	-31.3677	3.6935	46.3110	0.0262
33.	7.7178	360.0000	-34.5937	5.3281	47.1062	0.0291
34.	8.0960	340.0000	-37.7224	11.6269	48.1158	0.0501
35.	8.4932	320.0000	-40.7371	6.6571	49.5653	0.0220
36.	8.9100	300.0000	-43.9397	19.2308	51.0628	0.0471
37.	9.3572	280.0000	-46.5692	13.6026	53.8531	0.0276
38.	9.8325	260.0000	-49.0753	8.5529	57.3050	0.0138
39.	10.3318	240.0000	-50.8747	8.0482	62.2534	0.0114
40.	10.8500	220.0000	-52.5928	5.9277	67.7411	0.0074
41.	11.3517	200.0000	-53.9000	5.9167	73.7418	0.0069

Ascent 12

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.016	11.400	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-58.233	19.980	-999.000
4.RH	*%	4.475	88.409	-999.000
5.po-temp	*degc	18.455	66.159	-999.000
6.Q	*g/kg	0.013	11.088	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0163	1020.0000	19.9800	76.6000	18.9896	11.0813
2.	0.1232	1000.0000	18.3556	83.7222	18.4550	11.0879
3.	0.2906	980.0000	16.7364	88.4091	18.5398	10.7924
4.	0.4434	960.0000	15.8458	79.2917	19.2109	9.3096
5.	0.6300	940.0000	14.5143	78.6071	19.7890	8.6609
6.	0.7964	920.0000	13.1241	82.8966	20.0997	8.5155
7.	0.9721	900.0000	11.6808	83.9615	20.4566	8.0127
8.	1.1520	880.0000	10.2400	83.7000	20.8644	7.4252
9.	1.3425	860.0000	9.1677	73.9677	21.7708	6.2434
10.	1.5324	840.0000	8.7000	58.7647	23.3133	4.9159
11.	1.7137	820.0000	8.1677	46.3548	24.7057	3.8235
12.	1.9165	800.0000	8.2579	30.3421	27.0072	2.5577
13.	2.1234	780.0000	7.8914	15.7714	28.8782	1.3449
14.	2.3244	760.0000	6.9257	10.9429	30.0574	0.8924
15.	2.5290	740.0000	6.3033	8.2667	31.6555	0.6641
16.	2.7425	720.0000	4.5842	9.4737	32.1660	0.6938
17.	2.9660	700.0000	3.2400	7.1500	33.2093	0.4911
18.	3.1850	680.0000	1.8717	8.6957	34.1811	0.5522
19.	3.4253	660.0000	-0.4711	12.8889	34.3120	0.7187
20.	3.6455	640.0000	-1.9767	8.3488	35.1628	0.4261
21.	3.8964	620.0000	-3.3125	4.4750	36.5695	0.2143
22.	4.1393	600.0000	-5.1111	5.5333	37.3644	0.2396
23.	4.3945	580.0000	-7.2106	6.8511	37.9607	0.2609
24.	4.6571	560.0000	-9.0756	6.7073	38.9322	0.2293
25.	4.9207	540.0000	-10.6673	5.5918	40.2482	0.1742
26.	5.2104	520.0000	-12.6082	5.1429	41.4808	0.1435
27.	5.4945	500.0000	-14.4860	4.7544	42.7329	0.1168
28.	5.7831	480.0000	-17.1412	6.0196	43.1011	0.1241
29.	6.0805	460.0000	-19.8531	6.2449	43.5172	0.1062
30.	6.4230	440.0000	-22.6357	5.5179	44.4315	0.0774
31.	6.7248	420.0000	-24.4571	10.2321	46.0508	0.1239
32.	7.0872	400.0000	-26.3977	18.4545	48.3457	0.2023
33.	7.4223	380.0000	-28.5452	18.5890	50.0282	0.1737
34.	7.7999	360.0000	-31.6460	21.6984	51.0479	0.1614
35.	8.1971	340.0000	-34.8635	21.0952	52.1981	0.1196
36.	8.5845	320.0000	-38.0306	22.0694	53.3032	0.0970
37.	8.9998	300.0000	-41.1083	19.4028	54.9521	0.0659
38.	9.4403	280.0000	-44.3883	18.3000	56.7086	0.0463
39.	9.9395	260.0000	-48.2739	20.5797	58.5095	0.0366
40.	10.4337	240.0000	-51.6798	18.9663	60.9745	0.0243
41.	10.9741	220.0000	-55.7099	21.2308	63.2775	0.0183
42.	11.3997	200.0000	-58.2333	19.5556	66.1593	0.0131

Ascent 13

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.002	11.377	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-57.470	20.150	-999.000
4.RH	*%	12.410	73.316	-999.000
5.po-temp	*degc	18.858	67.085	-999.000
6.Q	*g/kg	0.010	8.846	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0016	1020.0000	20.1500	60.5000	19.2274	8.8462
2.	0.1027	1000.0000	18.7933	61.2667	18.9018	8.3279
3.	0.2505	980.0000	17.2437	65.8125	18.8584	8.2613
4.	0.4268	960.0000	15.5105	73.3158	18.9226	8.4193
5.	0.6000	940.0000	14.3105	65.1053	19.4974	7.0659
6.	0.7749	920.0000	12.9944	67.8889	19.9750	6.9111
7.	0.9518	900.0000	11.8500	69.0909	20.6537	6.6662
8.	1.1316	880.0000	11.0238	56.8095	21.6969	5.3060
9.	1.3219	860.0000	11.1423	43.6538	23.8483	4.0819
10.	1.5063	840.0000	12.7846	18.3846	27.5433	2.0153
11.	1.6994	820.0000	12.1867	17.6000	28.9969	1.9002
12.	1.8977	800.0000	11.1647	16.6765	30.0652	1.7247
13.	2.0946	780.0000	9.4167	18.5417	30.3507	1.7464
14.	2.3059	760.0000	7.9143	18.7714	31.0622	1.6427
15.	2.5140	740.0000	6.1318	19.5000	31.4385	1.5485
16.	2.7411	720.0000	4.4000	18.7812	32.0891	1.3619
17.	2.9459	700.0000	2.8641	18.2308	32.7063	1.2167
18.	3.1734	680.0000	1.2280	17.2000	33.4770	1.0523
19.	3.4012	660.0000	-0.1263	15.3947	34.5742	0.8782
20.	3.6410	640.0000	-2.2919	16.5405	34.9015	0.8300
21.	3.8857	620.0000	-3.7000	13.8947	36.1569	0.6487
22.	4.1287	600.0000	-4.8564	12.4103	37.6927	0.5481
23.	4.3846	580.0000	-6.2571	22.8810	39.1108	0.9379
24.	4.6521	560.0000	-8.3045	29.3409	39.9225	1.0662
25.	4.9113	540.0000	-10.5083	35.9167	40.4557	1.1323
26.	5.1921	520.0000	-12.5960	29.7000	41.4015	0.8289
27.	5.4829	500.0000	-13.5286	19.5102	43.8856	0.5199
28.	5.7799	480.0000	-15.6396	33.5472	45.0248	0.7828
29.	6.0850	460.0000	-18.1893	30.8929	45.7388	0.6116
30.	6.4008	440.0000	-20.5852	24.4259	46.7927	0.4077
31.	6.7328	420.0000	-23.5661	30.8393	47.3244	0.4133
32.	7.0689	400.0000	-26.6263	30.5789	47.8187	0.3274
33.	7.4252	380.0000	-29.4356	29.2203	48.9220	0.2530
34.	7.7976	360.0000	-32.3387	31.1290	50.1349	0.2143
35.	8.1797	340.0000	-35.6375	37.2083	50.9628	0.1956
36.	8.5648	320.0000	-39.0844	44.6562	51.6477	0.1754
37.	9.0033	300.0000	-42.2309	22.8971	53.5372	0.0699
38.	9.4426	280.0000	-44.7296	15.4507	56.3967	0.0378
39.	9.9265	260.0000	-48.1038	17.7949	58.7067	0.0321
40.	10.4181	240.0000	-51.2395	15.9884	61.5400	0.0218
41.	10.9643	220.0000	-54.7489	15.9778	64.7267	0.0156
42.	11.3770	200.0000	-57.4696	13.7174	67.0846	0.0101

Ascent 14

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.020	6.914	-999.000
2.press	*mb	400.000	1020.000	-999.000
3.temp	*degC	-28.162	20.180	-999.000
4.RH	*%	1.744	79.947	-999.000
5.po-temp	*degc	18.874	44.167	-999.000
6.Q	*g/kg	0.065	10.482	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0195	1020.0000	20.1800	71.6000	19.1225	10.4819
2.	0.1277	1000.0000	18.8294	71.8235	18.8737	9.7913
3.	0.2837	980.0000	17.3091	74.5909	18.9428	9.4112
4.	0.4578	960.0000	15.6500	79.4000	19.0584	9.2094
5.	0.6323	940.0000	14.1895	79.9474	19.3799	8.6213
6.	0.8065	920.0000	13.1455	70.7727	20.1278	7.2808
7.	0.9789	900.0000	11.8545	66.6364	20.6078	6.4299
8.	1.1580	880.0000	10.4286	65.8095	21.0225	5.8997
9.	1.3410	860.0000	8.8000	68.0455	21.2720	5.5949
10.	1.5356	840.0000	6.9783	72.9130	21.4450	5.4228
11.	1.7165	820.0000	5.9600	66.4000	22.3218	4.6953
12.	1.9200	800.0000	7.2000	30.2727	25.8507	2.3953
13.	2.1193	780.0000	6.1583	32.4583	26.9153	2.4524
14.	2.3213	760.0000	4.6043	33.8696	27.4670	2.3560
15.	2.5249	740.0000	2.6850	35.5500	27.6449	2.2166
16.	2.6772	720.0000	1.1444	38.1111	27.6642	2.1699
17.	2.9668	700.0000	-1.8333	44.2857	27.6669	2.1060
18.	3.1719	680.0000	-3.9077	48.2308	27.6979	2.0196
19.	3.4049	660.0000	-4.7433	24.1333	29.4416	0.9692
20.	3.6260	640.0000	-4.7677	7.6774	31.9740	0.3198
21.	3.8692	620.0000	-6.2161	6.4516	33.1644	0.2488
22.	4.1256	600.0000	-7.1743	4.3143	35.0909	0.1599
23.	4.3830	580.0000	-7.6111	2.3889	37.6040	0.0880
24.	4.6502	560.0000	-7.9590	1.7436	40.3687	0.0647
25.	4.9199	540.0000	-10.1409	3.2955	41.0570	0.1068
26.	5.1836	520.0000	-12.4929	3.0000	41.4757	0.0839
27.	5.4777	500.0000	-15.2705	5.1591	41.7601	0.1182
28.	5.7582	480.0000	-18.7848	8.3636	40.9742	0.1536
29.	6.0518	460.0000	-20.6500	12.3333	42.4161	0.1946
30.	6.3936	440.0000	-24.6406	13.4688	41.8033	0.1625
31.	6.7163	420.0000	-26.5310	15.1667	43.6073	0.1557
32.	6.9139	400.0000	-28.1625	18.0000	44.1667	0.1634

Ascent 15

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.086	10.796	-999.000
2.press	*mb	220.000	1000.000	-999.000
3.temp	*degC	-57.028	17.700	-999.000
4.RH	*%	10.667	53.875	-999.000
5.po-temp	*degc	17.805	60.567	-999.000
6.Q	*g/kg	0.015	6.823	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0856	1000.0000	17.7000	53.7692	17.8047	6.8235
2.	0.2379	980.0000	16.4308	47.0769	18.0913	5.6110
3.	0.4183	960.0000	14.8182	46.0909	18.3235	5.0594
4.	0.5810	940.0000	13.4200	49.0000	18.5908	5.0119
5.	0.7530	920.0000	11.8429	52.6429	18.7742	4.9602
6.	0.9289	900.0000	10.4625	53.8750	19.2035	4.7344
7.	1.1139	880.0000	9.1600	43.7000	19.8163	3.5926
8.	1.2801	860.0000	9.3154	30.3077	21.7468	2.5749
9.	1.4663	840.0000	8.9800	27.1000	23.3928	2.3029
10.	1.6612	820.0000	8.0000	26.0000	24.4629	2.1188
11.	1.8601	800.0000	7.2000	22.6000	25.7792	1.7812
12.	2.0516	780.0000	6.6667	18.0667	27.3067	1.4109
13.	2.2582	760.0000	5.4714	19.7857	28.2974	1.4607
14.	2.4794	740.0000	4.2417	21.7500	29.4226	1.5139
15.	2.6861	720.0000	2.5167	24.5000	29.8519	1.5493
16.	2.9175	700.0000	1.0562	20.6250	30.8572	1.2130
17.	3.1366	680.0000	0.1727	15.6364	32.3737	0.8863
18.	3.3532	660.0000	-0.8000	13.4286	33.7740	0.7289
19.	3.6002	640.0000	-2.3125	14.6250	34.9270	0.7334
20.	3.8508	620.0000	-4.1385	13.6154	35.7731	0.6162
21.	4.0711	600.0000	-5.7467	12.6000	36.5215	0.5192
22.	4.3313	580.0000	-7.2167	10.6667	37.9139	0.4051
23.	4.6028	560.0000	-9.4273	13.6364	38.5875	0.4523
24.	4.8515	540.0000	-11.5250	15.1875	39.1251	0.4411
25.	5.1261	520.0000	-13.6118	19.5294	39.9972	0.4967
26.	5.4106	500.0000	-16.3053	24.5789	40.2663	0.5199
27.	5.7277	480.0000	-19.5300	20.9000	40.2977	0.3544
28.	6.0062	460.0000	-21.4625	26.0000	41.4522	0.3850
29.	6.3421	440.0000	-23.3056	15.0556	43.4710	0.1987
30.	6.6505	420.0000	-25.5353	12.2941	44.6613	0.1377
31.	6.9166	400.0000	-27.7571	22.4286	45.3170	0.2123
32.	7.4557	380.0000	-32.5250	32.5000	46.3597	0.2121
33.	7.7108	360.0000	-34.4595	23.5476	47.2661	0.1346
34.	8.1046	340.0000	-37.3556	18.8704	48.8088	0.0830
35.	8.4900	320.0000	-40.8180	33.4426	49.4742	0.1093
36.	8.9076	300.0000	-44.2597	23.5484	50.6501	0.0577
37.	9.3432	280.0000	-47.7426	16.0000	52.0498	0.0281
38.	9.7905	260.0000	-50.5861	13.9722	54.5924	0.0188
39.	10.2342	240.0000	-52.9857	15.2381	57.7892	0.0165
40.	10.7962	220.0000	-57.0278	20.3889	60.5668	0.0147

Ascent 16

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	km	0.037	11.434	-999.000
2.press	mb	200.000	1020.000	-999.000
3.temp	degC	-59.946	18.562	-999.000
4.RH	%	9.773	75.565	-999.000
5.po-temp	degc	17.364	63.459	-999.000
6.Q	g/kg	0.009	8.627	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0365	1020.0000	18.5625	65.3750	17.3640	8.6269
2.	0.1625	1000.0000	17.2875	68.5625	17.3735	8.4780
3.	0.3192	980.0000	15.8684	72.4211	17.5517	8.3382
4.	0.4969	960.0000	14.2174	75.5652	17.7133	7.9959
5.	0.6531	940.0000	13.8667	40.7143	18.9762	4.2802
6.	0.8323	920.0000	13.1381	31.0000	20.1022	3.1766
7.	1.0107	900.0000	12.4615	26.8077	21.2810	2.6872
8.	1.1864	880.0000	11.8840	20.7200	22.5429	2.0416
9.	1.3160	860.0000	11.4000	22.2308	23.4178	2.1566
10.	1.5850	840.0000	10.8250	16.5417	25.7174	1.5905
11.	1.7462	820.0000	9.4437	18.5938	25.9971	1.6788
12.	1.9504	800.0000	8.2607	19.7143	26.9634	1.6747
13.	2.1529	780.0000	6.7071	24.4286	27.5193	1.9166
14.	2.3487	760.0000	4.4156	25.2188	27.2039	1.7682
15.	2.5597	740.0000	3.8972	21.1667	28.9926	1.4394
16.	2.7748	720.0000	3.0394	17.6061	30.4643	1.1573
17.	2.9853	700.0000	1.9077	18.9744	31.5920	1.1825
18.	3.2162	680.0000	0.7028	16.5000	32.8817	0.9710
19.	3.4505	660.0000	-0.6000	14.4737	34.1116	0.7983
20.	3.6756	640.0000	-1.8634	14.8049	35.2903	0.7672
21.	3.9129	620.0000	-2.8818	9.7727	36.9028	0.4838
22.	4.1701	600.0000	-3.9786	10.6667	38.6727	0.5009
23.	4.4295	580.0000	-5.8590	17.8974	39.5749	0.7565
24.	4.6929	560.0000	-7.5283	24.4783	40.7832	0.9433
25.	4.9535	540.0000	-9.0064	21.4681	42.1968	0.7637
26.	5.2368	520.0000	-10.4900	22.0500	43.8982	0.7242
27.	5.5398	500.0000	-12.3189	17.5849	45.4418	0.5142
28.	5.8220	480.0000	-14.8047	27.1628	45.9382	0.6801
29.	6.1396	460.0000	-17.3915	28.7234	46.7663	0.6055
30.	6.4561	440.0000	-19.7839	28.1429	47.8339	0.5045
31.	6.7693	420.0000	-22.1906	30.6415	48.8535	0.4659
32.	7.1305	400.0000	-25.2691	35.5091	49.6543	0.4296
33.	7.4940	380.0000	-28.5734	36.5781	50.2034	0.3443
34.	7.8436	360.0000	-31.8770	36.9180	50.5734	0.2692
35.	8.2389	340.0000	-35.0116	19.8986	51.8100	0.1124
36.	8.6400	320.0000	-38.0667	15.7576	53.2608	0.0688
37.	9.0797	300.0000	-42.1466	22.0411	53.8500	0.0666
38.	9.5070	280.0000	-46.1645	25.4342	54.3667	0.0532
39.	9.9697	260.0000	-49.7423	17.7179	56.0622	0.0267
40.	10.5159	240.0000	-54.1536	13.8261	57.8328	0.0131
41.	11.0087	220.0000	-57.9267	15.7209	59.8010	0.0103
42.	11.4340	200.0000	-59.9462	15.9487	63.4587	0.0086

Ascent 17

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	*km	0.030	11.399	-999.000
2.press	*mb	200.000	1020.000	-999.000
3.temp	*degC	-61.445	18.556	-999.000
4.RH	*%	9.257	68.864	-999.000
5.po-temp	*degc	17.348	61.233	-999.000
6.Q	*g/kg	0.009	8.108	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0298	1020.0000	18.5556	61.3333	17.4450	8.0964
2.	0.1466	1000.0000	17.2684	65.6842	17.3485	8.1079
3.	0.2918	980.0000	15.8591	68.8636	17.4197	7.9153
4.	0.4664	960.0000	15.2962	43.2692	18.6492	4.8922
5.	0.6468	940.0000	14.6111	28.7037	19.8254	3.1694
6.	0.8165	920.0000	14.0103	21.7241	20.9836	2.3542
7.	0.9967	900.0000	12.9625	20.1667	21.8007	2.0888
8.	1.1787	880.0000	11.9917	21.9167	22.7222	2.1769
9.	1.3623	860.0000	11.3870	20.3913	24.0489	1.9916
10.	1.5468	840.0000	10.4833	17.4583	25.0808	1.6434
11.	1.7416	820.0000	9.3731	20.3462	26.0120	1.8193
12.	1.9348	800.0000	8.0290	21.8387	26.6841	1.8274
13.	2.1362	780.0000	6.6394	24.0909	27.4027	1.8798
14.	2.3355	760.0000	5.5333	18.6667	28.4105	1.3848
15.	2.5536	740.0000	4.6897	16.3103	29.9182	1.1734
16.	2.7599	720.0000	3.6045	16.0909	31.0425	1.0994
17.	2.9843	700.0000	2.2654	15.9615	32.0987	1.0223
18.	3.2147	680.0000	0.9714	12.8929	33.2862	0.7755
19.	3.4303	660.0000	-0.2061	14.3939	34.4414	0.8164
20.	3.6723	640.0000	-1.0588	9.8529	36.2839	0.5404
21.	3.9232	620.0000	-1.9400	9.2571	38.2109	0.4919
22.	4.1547	600.0000	-3.4875	14.6250	39.1591	0.7138
23.	4.4307	580.0000	-5.6697	20.8485	39.9087	0.8895
24.	4.6809	560.0000	-7.6195	24.2439	40.6291	0.9277
25.	4.9606	540.0000	-9.4300	25.1500	41.8798	0.8648
26.	5.2377	520.0000	-10.7795	17.1026	43.6665	0.5484
27.	5.5231	500.0000	-12.8914	18.7143	44.6512	0.5311
28.	5.7958	480.0000	-15.6875	11.9375	44.6342	0.2888
29.	6.1240	460.0000	-17.1804	13.2391	46.9498	0.2831
30.	6.4379	440.0000	-20.0609	15.5217	47.3715	0.2712
31.	6.7768	420.0000	-22.9174	19.1957	48.1560	0.2696
32.	7.1165	400.0000	-25.8118	34.5686	48.9113	0.3962
33.	7.4669	380.0000	-28.9213	40.2979	49.5402	0.3674
34.	7.8387	360.0000	-32.3944	34.6852	49.9847	0.2379
35.	8.2269	340.0000	-35.5629	23.3710	51.0819	0.1259
36.	8.6312	320.0000	-38.5604	16.1509	52.6572	0.0671
37.	9.0447	300.0000	-42.2924	19.0303	53.3576	0.0566
38.	9.4852	280.0000	-46.4625	23.2188	53.8487	0.0470
39.	9.9831	260.0000	-50.4226	18.6129	55.5539	0.0264
40.	10.3024	240.0000	-53.9500	14.7857	55.1905	0.0148
41.	11.1102	220.0000	-59.4437	20.8750	59.7205	0.0114
42.	11.3986	200.0000	-61.4455	20.7273	61.2326	0.0092

Ascent 18

Field	Units	Lower Limit	Upper Limit	Absent data val
1.height	km	0.022	11.342	-999.000
2.press	mb	200.000	1020.000	-999.000
3.temp	degC	-60.344	19.683	-999.000
4.RH	%	9.459	83.553	-999.000
5.po-temp	degc	18.286	62.798	-999.000
6.Q	g/kg	0.016	8.007	-999.000

DATA CYC.	height km	press mb	temp degC	RH %	po-temp degc	Q g/kg
1.	0.0225	1020.0000	19.6833	56.5000	18.6583	8.0070
2.	0.1342	1000.0000	18.2733	60.4000	18.3880	7.9457
3.	0.2921	980.0000	16.6048	64.6667	18.3294	7.8035
4.	0.4617	960.0000	14.8333	70.8333	18.2858	7.7896
5.	0.6288	940.0000	13.1737	77.7895	18.3307	7.8398
6.	0.8041	920.0000	11.5389	82.3333	18.4862	7.6204
7.	0.9740	900.0000	10.0091	83.3182	18.6948	7.1044
8.	1.1486	880.0000	9.7750	54.6250	20.2985	4.6246
9.	1.3441	860.0000	9.0889	44.5926	21.6605	3.7365
10.	1.5250	840.0000	7.7833	46.3000	22.2309	3.6282
11.	1.7149	820.0000	7.7148	23.4444	24.2083	1.8735
12.	1.9089	800.0000	7.0679	22.6786	25.6290	1.7775
13.	2.0972	780.0000	6.4233	19.8333	27.0022	1.5225
14.	2.3272	760.0000	5.2867	18.5000	28.3131	1.3511
15.	2.5175	740.0000	3.8893	17.7857	28.9111	1.2082
16.	2.7411	720.0000	2.9032	20.2258	30.3387	1.3172
17.	2.9578	700.0000	2.0667	17.5455	31.8618	1.1038
18.	3.1827	680.0000	0.4545	19.6061	32.6297	1.1331
19.	3.4134	660.0000	-0.9571	16.6286	33.6966	0.8952
20.	3.6529	640.0000	-2.1629	10.6857	35.1083	0.5425
21.	3.8827	620.0000	-3.4378	9.4595	36.3407	0.4488
22.	4.1305	600.0000	-4.5341	13.0488	38.0014	0.5895
23.	4.3895	580.0000	-6.2842	18.2632	39.0501	0.7463
24.	4.6405	560.0000	-7.9543	20.1143	40.1096	0.7462
25.	4.9191	540.0000	-10.1913	58.5217	40.8383	1.8881
26.	5.2065	520.0000	-12.0966	57.0345	42.0835	1.6530
27.	5.4902	500.0000	-14.3780	66.7317	42.8374	1.6612
28.	5.7995	480.0000	-17.1349	79.1860	43.3392	1.6348
29.	6.0914	460.0000	-19.6319	83.5532	43.9494	1.4525
30.	6.4075	440.0000	-21.7472	83.1389	45.3612	1.2579
31.	6.7338	420.0000	-23.8222	70.3778	46.9767	0.9270
32.	7.0842	400.0000	-26.6058	57.3846	48.0143	0.6170
33.	7.4311	380.0000	-29.6017	61.7759	48.7449	0.5258
34.	7.7978	360.0000	-32.6885	65.2131	49.6349	0.4363
35.	8.1792	340.0000	-36.0309	59.8909	50.3968	0.3038
36.	8.5849	320.0000	-39.5450	58.6500	51.2809	0.2206
37.	8.9913	300.0000	-43.0951	56.3607	52.1382	0.1540
38.	9.4506	280.0000	-46.9015	56.9846	53.4249	0.1098
39.	9.9168	260.0000	-50.5667	45.9861	55.0444	0.0635
40.	10.2655	240.0000	-53.3500	35.7333	56.2166	0.0367
41.	11.1189	220.0000	-60.3444	35.3333	58.9631	0.0183
42.	11.3423	200.0000	-60.1885	31.5000	62.7977	0.0163