

## Antarctic Automatic Weather Station Data for the calendar year 2000

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 December 2004

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## **1. INTRODUCTION**

A network of automatic weather station (AWS) units is deployed to collect Antarctic surface weather observations in support of specific meteorological research projects as well as operational activities in Antarctica. The 2000 network consisted of 52 installed AWS units providing observations on the Ross Ice Shelf, east of the Transantarctic Mountains and north of McMurdo to the Adelie Coast, along the Antarctic Peninsula, West Antarctica, and climatological locations such as the South Pole. Each unit measures air temperature, wind speed, and wind direction at the top of the unit's tower at a nominal height of three meters and air pressure at the electronics enclosure (Figure 1). Some AWS units also measure the relative humidity at three meters and vertical air temperature difference between 0.5 and 3 meters. Measurement heights relative to the actual surface at the site are nominal due to snow accumulation around the AWS unit.

## **2. DATA TRANSMISSION**

The transmitted AWS data are received and stored by the ARGOS data collection system on the NOAA series of polar orbiting satellites. The data are retransmitted by the satellite for use in the High Resolution Picture Transmission (HRPT) broadcast at McMurdo, Antarctica. The data are processed into scientific units and are available for local use. The complete data set is received at the University of Wisconsin-Madison from Service ARGOS, Largo, Maryland, for processing and distribution to the users.

## **3. AWS IDENTIFICATION AND LOCATION**

Site location is defined by the latitude and longitude which is determined by various methods: sun shots, angles to geographical features, aircraft data, ice breaker data, the platform location system of Service ARGOS, and the Global Positioning System. AWS elevation is obtained by barometry and Global Positioning System (GPS) and should be correct to within +/- 5 meters. Site names were introduced for convenience. Table 3.1 lists the site name, ARGOS identification number, latitude, longitude, elevation, start date for the site, and the World Meteorological Organization (WMO) number for the site. Figures 2, 3, and 4 show the locations of the AWS units in the Antarctic for 2000.

The ARGOS identification number (ID) is used to identify the data sets distributed to the users. AWS units are sometimes moved from one location to another, and as a result, the ID at a given site may change from year to year. The site name does not change. Table 3.2 lists the site name with the ARGOS ID, the site start date, and the ID start and stop dates.

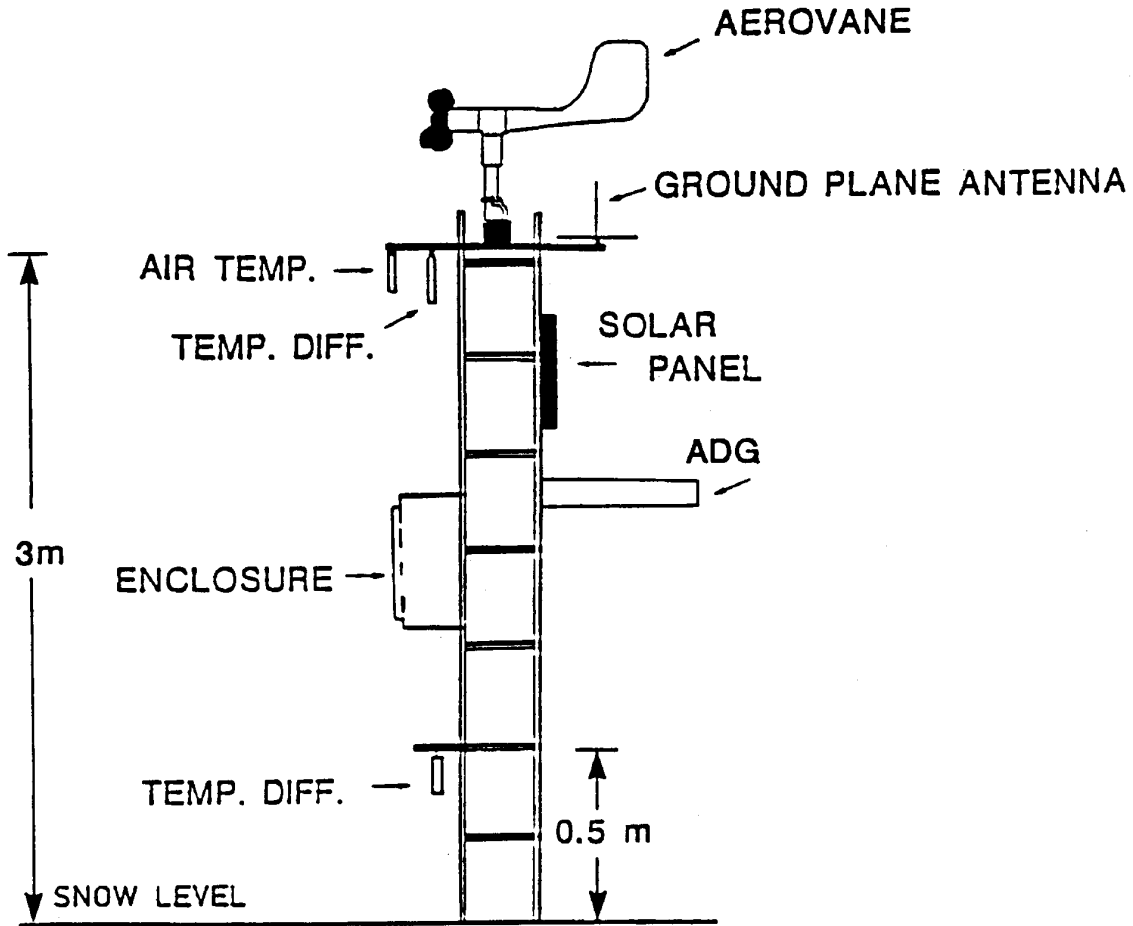


Figure 1. Layout of the AWS unit used in the Antarctic. The installed AWS unit has a 3-meter tower with a horizontal boom supporting the antenna, aerovane for measuring wind speed and direction, air temperature resistance thermometer, upper thermopile for measuring vertical air temperature difference, and the relative humidity sensor. The electronics enclosure is mounted at the midpoint of the tower. The gel cell batteries are placed at the tower base. The solar panel, located near the tower top, faces north. The Acoustic Depth Gauge (ADG) is installed on some of the AWS units to measure snow depth for precipitation studies.

**Table 3.1**

AWS site name, geographic location and elevation, site start date, and WMO number for 2000.

Site Name	ARGOS ID	Lat. (deg )	Long. (deg)	Elev. (m)	Site Start Date	WMO No.
<b>Adelie Land</b>						
D-10	8914	66.71°S	139.83°E	243	08 Jan 80	89832
D-47	8986	67.397°S	138.726°E	1560	24 Nov 82	89834
D-57	8912	68.20°S	137.54°E	2105 M	16 Jan 81	
Dome C II	8989	75.121°S	123.374°E	3250	12 Dec 95	89828
Port Martin	#8909	66.82°S	141.40°E	39	19 Jan 90	
Cape Denison	8988	67.009°S	142.664°E	31	20 Jan 90	
Penguin Point	8910	67.617°S	146.18°E	30	24 Dec 92	89847
Sutton	8939	67.08°S	141.37°E	871	26 Dec 94	
<b>West Antarctica</b>						
Byrd Station	8903	80.007°S	119.404°W	1530	05 Feb 80	89324
Mount Siple	8981	73.198°S	127.052°W	230	20 Feb 92	89327
Theresa	21358	84.599°S	115.811°W	1463	29 Nov 94	89314
Doug	8922	82.315°S	113.24°W	1433	29 Nov 94	
Elizabeth	21361	82.607°S	137.078°W	519	30 Nov 94	89332
Brianna	21362	83.889°S	134.150°W	526	30 Nov 94	
Harry	8900	83.003S	121.393W	945	29 Nov 94	
Erin	21363	84.904°S	128.828°W	990	29 Nov 94	
Siple Dome	8938	81.656°S	148.773°W	668	21 Jan 97	89345
Swithinbank	21356	81.20°S	126.174°W	945	18 Jan 97	
Noel/ITASE*	#8936	79.334°S	111.077°W	1833	19 Jan 00	
<b>Ross Island Region</b>						
Marble Point	8906	77.439°S	163.754°E	108	05 Feb 80	89866
Ferrell	#21355	77.910°S	170.817°E	45	10 Dec 80	89872
Pegasus North	#21357	77.952°S	166.500°E	8	23 Jan 90	89667
Pegasus South	8937	77.99°S	166.576°E	10	14 Jan 91	
Minna Bluff	8935	78.554°S	166.656°E	920	22 Jan 91	89768
Linda	8919	78.464°S	168.382°E	47	21 Jan 91	89769
Willie Field	8929	77.865°S	167.017°E	40	25 Jan 92	
Windless Bight	8927	77.728°S	167.703°E	61	09 Dec 98	
Herbie Alley	8697	78.10°S	166.67°E	30	11 Jan 99	
Cape Spencer	8722	77.97°S	167.55°E	30	11 Jan 99	
Cape Bird	8901	77.224°S	166.440°E	42	28 Jan 99	
Laurie II*	#21364	77.549°S	170.817°E	30	1 Feb 00	
<b>Ocean Islands</b>						
Whitlock	8921	76.144°S	168.392°E	274	23 Jan 82	89865
Possession Is.	8984	71.891°S	171.21°E	30	29 Dec 92	89879
Manuela	8905	74.946°S	163.687°E	80	06 Feb 84	89864
<b>Ross Ice Shelf</b>						
Marilyn	8931	79.954°S	165.13°E	75	16 Jan 84	89869
Schwerdtfeger	8913	79.904°S	169.973°E	60	24 Jan 85	89868
Gill	8911	79.985°S	178.611°W	55	24 Jan 85	89376
Lettau	8908	82.518°S	174.452°W	55	29 Jan 86	89377
Elaine	8915	83.134°S	174.169°E	60	28 Jan 86	89873

Site Name	ARGOS ID	Lat. (deg)	Long. (deg)	Elev. (m)	Site Start Date	WMO No.
<b>Antarctic Peninsula</b>						
Larsen Ice	8926	66.949°S	60.897°W	17	21 Oct 85	89262
Butler Island	8902	72.207°S	60.160°W	91	01 Mar 86	89266
Uranus Glacier	8920	71.43°S	68.93°W	780	06 Mar 86	89264
Limbert	8925	75.422°S	59.851°W	40	30 Nov 95	
Racer Rock	8947	64.067°S	61.613°W	17	15 Oct 89	89261
Bonaparte Pt.	8923	64.778°S	64.067°W	8	05 Jan 92	89269
Sky-Blu	8917	74.972°S	71.489°W		07 Feb 99	
Santa Claus Is.	8933	64.964°S	65.67°W	25	10 Dec 94	
<b>High Polar Plateau</b>						
Clean Air	8987	90.00°S		2835	29 Jan 86	89208
Henry	8985	89.011°S	1.025°W	2755	26 Jan 93	89108
Nico	8924	89.00°S	89.669°E	2935	26 Jan 93	89799
Relay Station	8918	74.017°S	43.062°E	3353	01 Feb 95	89744
Mizuho*	#21359	70.70°S	44.29°E	2260	07 Oct 00	

\* New sites started during 2000

# New ARGOS ID for 2000 at the site



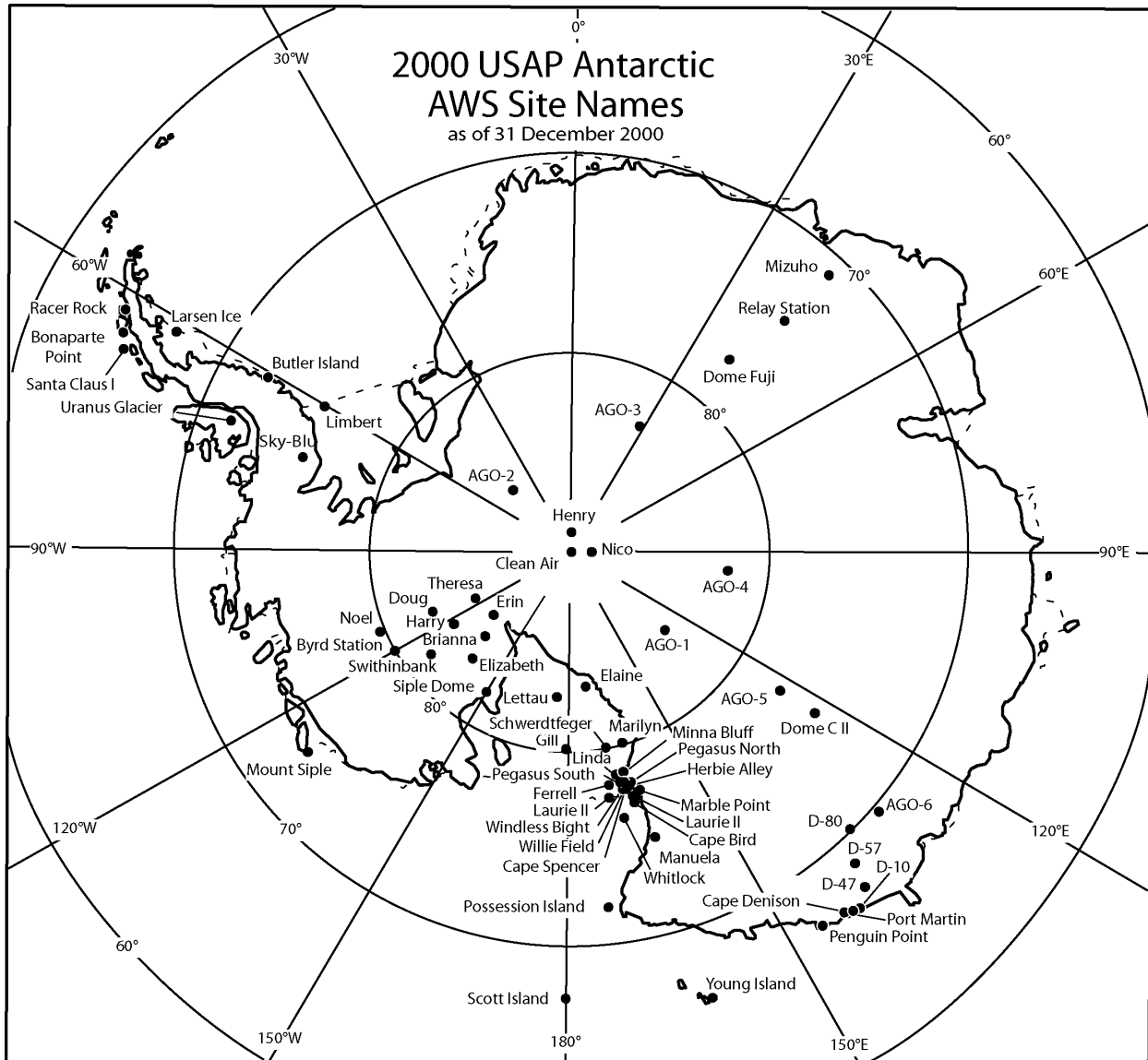


Figure 2. Antarctic automatic weather station locations during 2000 identified by the site name. Area around Ross Island is shown in Figure 3. Adelie Coast area is shown in Figure 4.

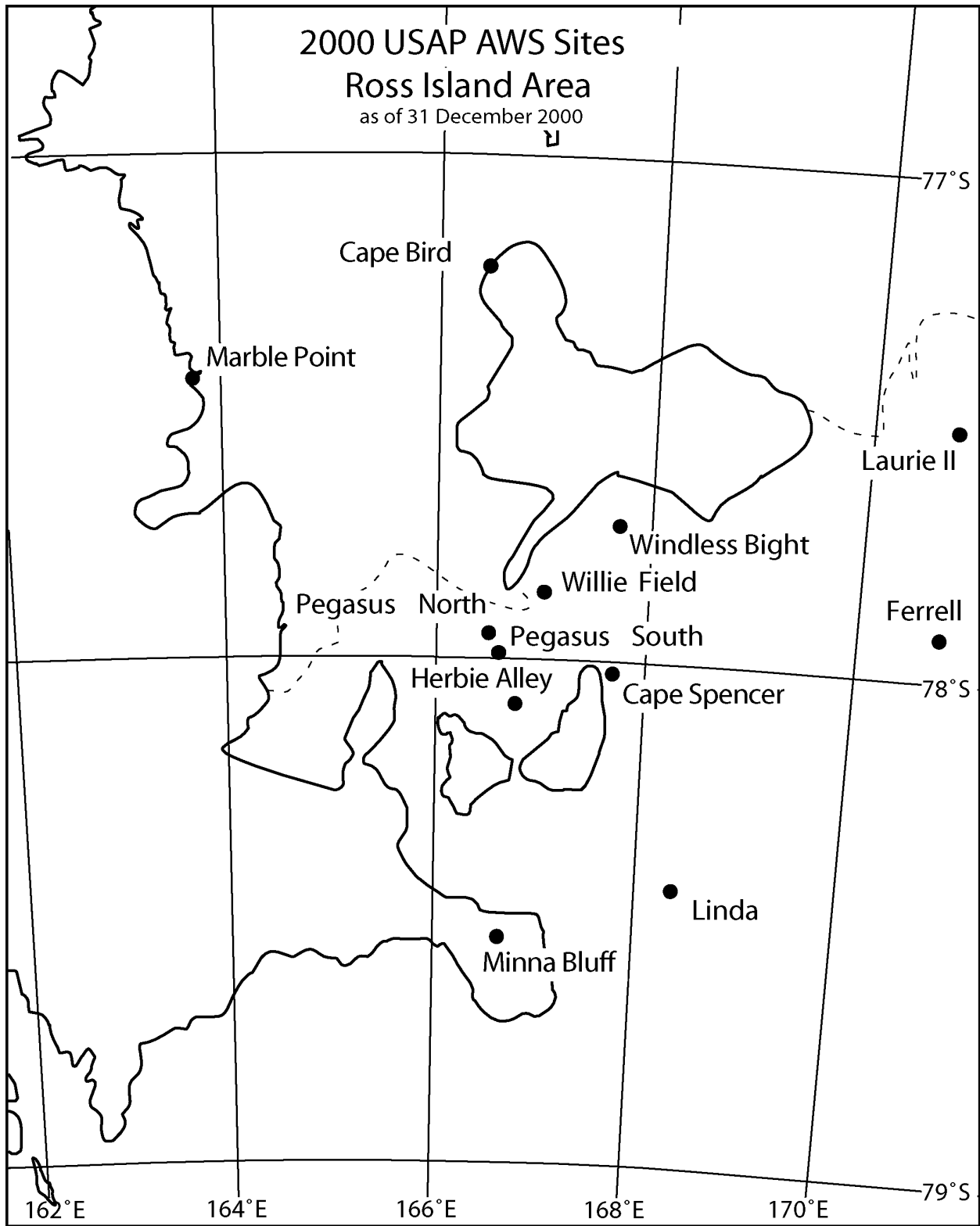


Figure 3. Location of Antarctic automatic weather stations in the vicinity of Ross Island, Antarctica during 2000.



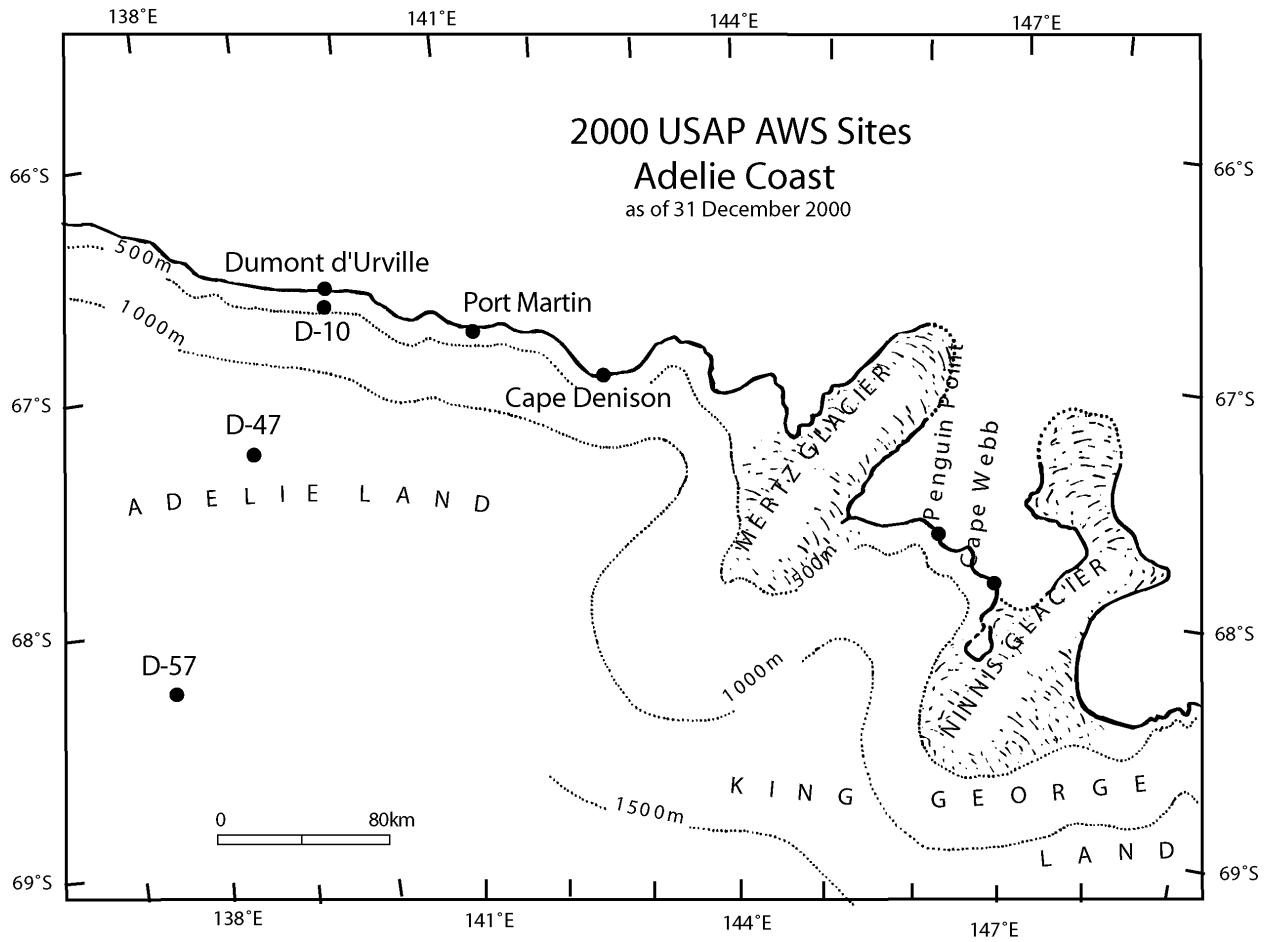


Figure 4. Location of Antarctic automatic weather stations along the Adelie Coast during 2000.

**Table 3.2**

2000 Antarctic AWS site name, ARGOS identification number (ID), site start date, ID start date, and ID stop date if occurring in 2000.

Site	ARGOS ID	Site Start Date	ID Start Date	ID Stop Date
D-10	8914	08 Jan 80	28 Jan 98	
D-47	8986	24 Nov 82	11 Feb 96	
Dome C II	8989	12 Dec 95	12 Dec 95	
Port Martin	8930	19 Jan 90	23 Dec 92	18 Dec 00
	8909		18 Dec 00	
Cape Denison	8988	20 Jan 90	17 Dec 99	
Penguin Point	8910	24 Dec 92	21 Dec 98	
Sutton	8939	26 Dec 94	26 Dec 94	
Byrd Station	8903	05 Feb 80	05 Feb 80	
Mount Siple	8981	20 Feb 92	20 Feb 92	
Theresa	21358	29 Nov 94	29 Nov 94	
Doug	8922	29 Nov 94	20 Jan 97	
Brianna	21362	30 Nov 94	30 Nov 94	
Harry	8900	29 Nov 94	26 Jan 99	
Elizabeth	21361	30 Nov 94	17 Jan 96	
Erin	21363	29 Nov 94	18 Jan 96	
Siple Dome	8938	21 Jan 97	24 Jan 99	
Swithinbank	21356	18 Jan 97	18 Jan 97	
Noel/ITASE	8936	19 Jan 00	19 Jan 00	
Marble Point	8906	05 Feb 80	05 Feb 80	
Ferrell	8934	10 Dec 80	13 Jan 93	01 Feb 00
	21355		01 Feb 00	
Pegasus North	8928	23 Jan 90	13 Jan 99	03 Feb 00
	21357		03 Feb 00	
Pegasus South	8937	14 Jan 91	14 Jan 91	
Minna Bluff	8935	22 Jan 91	25 Jan 99	
Linda	8919	21 Jan 91	15 Jan 98	
Willie Field	8929	25 Jan 92	16 Jan 99	
Windless Bight	8927	09 Dec 98	25 Jan 99	
Herbie Alley	8697	11 Jan 99	11 Jan 99	
Cape Spencer	8722	11 Jan 99	11 Jan 99	
Cape Bird	8901	28 Jan 99	28 Jan 99	
Laurie II	21364	01 Feb 00	01 Feb 00	
Whitlock	8921	23 Jan 82	23 Feb 94	
Possession Island	8984	29 Dec 92	29 Dec 92	
Marilyn	8931	16 Jan 84	18 Jan 91	
Schwerdtfeger	8913	24 Jan 85	22 Jan 93	
Gill	8911	24 Jan 85	25 Jan 91	
Elaine	8915	23 Jan 93	02 Jan 97	
Lettau	8908	29 Jan 86	29 Jan 86	
Manuela	8905	06 Feb 84	15 Feb 87	
Larsen Ice Shelf	8926	21 Oct 85	01 Jan 86	
Butler Island	8902	01 Mar 86	01 Mar 86	
Uranus Glacier	8920	06 Mar 86	24 Jan 92	
Limbirt	8925	30 Nov 95	30 Nov 95	
Racer Rock	8947	15 Oct 89	08 Dec 91	
Bonaparte Point	8923	05 Jan 92	23 Dec 96	
Sky-Blu	8917	07 Feb 99	07 Feb 99	
Santa Claus Is.	8933	10 Dec 94	07 Dec 99	
Clean Air	8987	29 Jan 86	25 Jan 94	
Henry	8985	26 Jan 93	26 Jan 93	
Nico	8924	26 Jan 93	26 Jan 93	
Relay Station	8918	01 Feb 95	01 Feb 95	
Dome Fuji	8904	08 Feb 95	04 Feb 97	
Mizuho	21359	07 Oct 00	07 Oct 00	

## 4. AWS DATA SUMMARIES

The data received by the University of Wisconsin, Space Science and Engineering Center, contain all the information received by the ARGOS system including duplicate and erroneous transmissions. Invalid data are eliminated during a quality check, and the valid data are converted to scientific units producing the complete data set. Data selected at three hourly intervals, plus or minus forty minutes, produce a three hourly data set for each AWS unit month. Section 6.1, AWS Performance, provides some explanations for missing and invalid data.

Use of the 2000 Antarctic AWS data for publication should acknowledge the support of NSF-OPP Grant 9726040 or reference this publication.

### 4.1. Monthly Data Summaries

The monthly summaries consist of the monthly means, from the three hourly data set, and the extremes, from the complete data set. For monthly values to be included, 25% of the three hourly observations must be available. Months with 50-75% of data missing occur most often when a station is started or stopped in the middle of the month. This can cause a bias in the monthly mean, especially during seasons when parameters such as temperature change rapidly. Annual means are calculated only when twelve months of data are available. The data are presented in the same order as the sites listed in Table 3.1. Definitions of the monthly data summary headings are listed below.

Heading	Definition
Mean air temperature, °C.	Mean value for the month.
Percent of monthly data missing.	Ratio of the number of missing observations to the number of possible observations X 100.
Maximum air temperature, °C.	Maximum value for the month.
Minimum air temperature, °C.	Minimum value for the month.
Mean wind speed, m/s.	Mean value for the month.
Percent of monthly data missing.	Ratio of the number of missing observations to the number of possible observations X 100.
Resultant wind speed, dir/vv.	Resultant speed and direction for the month.
Constancy.	Ratio of the monthly resultant to the monthly mean wind speed.
Maximum wind speed, dir/vv.	Maximum wind speed and direction for the month.
Mean air pressure, mb.	Mean value for the month.
Percent of monthly data missing.	Ratio of the number of missing observations to the number of possible observations X 100.
Maximum air pressure, mb.	Maximum value for the month.
Minimum air pressure, mb.	Minimum value for the month.
Potential temperature, K	Mean value for the month.

Mon	Mean	% of			Mean	% of				Max	Mean	% of			Min	Air	Potential	
	Air	Mon	Max	Air	Min	Air	Wind	Mon	Result	Wind	Wind	Air	Mon	Max	Air	Min	Air	Potential
Temp	Data	Temp	Temp	Temp	Speed	Data	Wind	(dir	vv)	Con	(dir	vv)	(mb)	Data	Press	Press	Press	Temp
(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	(dir	vv)	(mb)	Abs	(mb)	(mb)	(mb)	(K)			

D-10 (8914)		66.71S				139.83E				243 M						
Jan	-6.0	02	2.5	-13.8	8.5	02	148	7.5	0.88	132	24	948.5	02	967.7	926.7	271.2
Feb	-8.4	03	-0.8	-17.5	10.3	02	155	9.8	0.95	156	34	951.4	02	969.6	936.0	268.5
Mar	-12.4	03	-5.8	-21.4	10.8	03	157	10.3	0.95	146	29	951.4	03	962.8	935.3	264.5
Apr	-20.0	05	-8.0	-28.1	11.0	05	163	10.6	0.96	161	34	951.1	05	968.9	933.0	256.9
May	-17.0	08	-10.1	-27.9	14.2	08	160	13.6	0.96	165	35	943.9	08	982.5	921.4	260.4
Jun	-18.6	06	-12.0	-32.4	10.6	08	154	10.1	0.95	156	33	953.8	06	969.9	934.2	258.0
Jul																
Aug	-16.7	30	-2.2	-36.0	8.4	38	161	6.6	0.79	178	28	960.8	30	977.8	934.4	259.4
Sep	-12.0	70	-3.1	-24.0	9.1	70	150	8.9	0.98	157	30	973.0	70	988.3	947.5	263.2
Oct																
Nov	-7.3	25	1.8	-15.5	9.8	25	149	8.8	0.90	180	25	955.6	25	970.2	938.1	269.3
Dec	-4.1	08	1.9	-11.6	9.1	08	144	8.5	0.93	149	24	959.8	08	977.1	950.1	272.2

D-47 (8986)		67.40S				138.73E				1560 M						
Jan					10.3	02	055	9.6	0.93	046	22	805.1	00	819.8	789.4	
Feb					11.0	00	049	10.2	0.92	021	24	807.2	00	822.7	795.3	
Mar					12.0	01	057	11.4	0.95	049	23	805.5	01	814.9	792.4	
Apr					13.2	01	068	12.9	0.98	078	23	801.7	01	816.1	787.2	
May					13.8	08	061	13.3	0.97	060	26	796.6	08	832.3	780.3	
Jun					12.7	12	056	12.2	0.97	050	23	804.0	12	820.4	788.1	
Jul					12.5	37	067	11.7	0.93	043	24	806.4	37	819.1	793.0	
Aug					11.9	64	071	11.7	0.98	074	21	803.9	64	817.2	783.0	
Sep					12.6	39	050	11.8	0.94	050	25	799.7	39	807.6	789.8	
Oct					11.1	16	057	10.7	0.96	043	25	795.6	16	808.0	775.9	
Nov					12.1	19	061	11.4	0.95	036	25	810.9	19	825.1	794.9	
Dec					10.6	04	056	10.3	0.97	053	20	815.8	04	832.4	808.4	
MEAN					12.0		059	11.4	0.95			804.4				

D-57 (8912)		68.20S				137.54E				2105 M						
Jan	-18.6	47	-9.0	-28.5	8.4	47	128	7.2	0.85	084	19	747.4	47	760.5	736.4	276.7

Mon	Mean	% of					Mean	% of					Mean	% of				
	Air	Mon	Max Air	Min Air	Wind	Mon	Result				Max	Air	Mon	Max Air	Min Air	Potential		
	Temp	Data	Temp	Temp	Speed	Data	Wind	vv	Con	Wind	Press	Data	Press	Press	Temp			
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir			(dir	(mb)	Abs	(mb)	(mb)	(K)			
Dome C II (8989)			75.12S				123.37E				3250 M							
Jan	-30.1	00	-18.2	-45.9	3.0	00	191	2.0	0.65	106	10	650.2	00	660.6	643.8	274.9		
Feb	-40.8	03	-23.6	-60.2	2.6	03	282	1.3	0.50	023	9	649.4	03	663.6	632.7	262.9		
Mar	-55.1	00	-35.8	-69.4	3.0	00	209	1.5	0.49	201	9	647.8	00	659.6	640.5	246.9		
Apr	-64.4	00	-51.0	-76.6	4.0	00	202	3.6	0.90	213	15	649.4	00	659.6	636.6	236.3		
May	-62.6	01	-45.2	-76.0	3.3	01	162	1.6	0.47	133	12	647.0	01	676.9	634.5	238.5		
Jun	-61.0	00	-41.8	-75.4	3.0	00	193	2.0	0.67	168	11	651.7	00	665.3	634.5	239.8		
Jul	-62.5	00	-38.1	-79.1	2.4	00	216	0.5	0.20	054	14	651.2	00	675.9	631.0	238.2		
Aug	-60.9	02	-33.0	-78.9	3.5	02	254	1.2	0.34	309	13	651.0	02	666.1	632.1	240.0		
Sep	-53.7	00	-30.0	-74.4	2.8	00	251	0.2	0.08	275	9	653.7	00	683.3	634.5	247.8		
Oct	-52.9	00	-34.6	-67.8	3.3	00	165	1.3	0.38	262	13	641.4	00	651.5	632.2	250.0		
Nov	-38.5	00	-22.8	-62.2	4.2	00	214	3.3	0.79	261	11	658.4	00	670.8	633.7	264.5		
Dec	-28.8	00	-16.5	-39.9	3.0	00	180	2.5	0.83	188	10	659.1	00	672.6	650.0	275.3		
MEAN	-50.9				3.2		202	1.5	0.53			650.9						
Port Martin (8909)			66.82S				141.40E				39 M							
Jan	-3.9	04	1.8	-11.5	13.9	04	166	13.2	0.95	165	34	980.7	04	1000.0	958.4	270.7		
Feb	-6.8	06	0.6	-15.2	17.3	50	171	16.8	0.97	176	46	984.2	06	1004.3	969.1	267.6		
Mar	-11.5	06	-3.2	-20.9								985.0	06	997.5	969.4	262.8		
Apr	-19.1	07	-6.0	-26.2								985.4	07	1003.6	965.1	255.1		
May	-16.1	07	-9.0	-26.4								978.0	07	1019.3	953.5	258.7		
Jun	-17.5	08	-9.8	-29.1								987.7	08	1006.1	967.9	256.6		
Jul	-16.1	10	-8.5	-29.6								989.1	11	1009.2	968.2	257.8		
Aug	-16.3	10	-1.1	-30.4								994.0	10	1011.7	967.6	257.3		
Sep	-12.5	10	-1.8	-22.6								988.3	10	1023.3	959.7	261.6		
Oct	-13.9	09	-4.6	-21.6								975.6	09	991.2	947.9	261.1		
Nov	-6.7	12	2.5	-17.6								988.9	12	1007.5	969.6	267.3		
Dec	-1.9	10	3.6	-8.2								991.9	10	1009.2	981.8	271.9		
MEAN	-11.9											985.7						
Cape Denison (8988)			67.01S				142.67E				30 M							
Jan	-2.8	02	3.5	-10.1	13.9	02	152	13.1	0.94	164	32	980.0	02	999.4	958.7	272.0		
Feb	-6.1	03	1.1	-13.0	20.2	03	159	20.0	0.97	158	50	983.5	03	1003.1	969.3	268.3		
Mar	-12.0	04	-1.2	-21.6	25.0	04	163	24.5	0.98	157	46	984.1	04	997.3	967.2	262.3		
Apr	-20.5	10	-6.4	-27.5	27.6	10	163	27.2	0.98	167	50	985.6	11	1003.0	966.2	253.8		
May																		
Jun	-17.0	28	-8.9	-28.5	24.5	28	162	23.7	0.97	167	56	988.9	28	1005.8	969.2	256.9		
Jul	-15.9	20	-8.0	-25.5	22.9	20	165	22.4	0.98	161	49	988.3	20	1002.2	973.3	258.1		
Aug	-15.9	26	-0.1	-32.0	17.2	26	165	16.2	0.94	156	56	994.2	26	1009.1	967.9	257.6		
Sep	-13.7	54	-4.1	-23.1	23.0	54	162	22.5	0.98	140	53	994.4	54	1025.5	968.1	259.8		
Oct	-12.9	39	-3.2	-20.9	21.5	39	162	19.9	0.92	170	52	977.4	40	990.8	949.2	262.0		
Nov	-6.4	08	3.4	-18.8	19.6	08	160	18.8	0.96	170	47	987.9	08	1007.3	968.1	267.7		
Dec	-0.8	08	5.9	-7.1	14.5	08	150	13.7	0.95	161	39	991.2	08	1007.5	981.5	273.1		



Mon	Mean	% of			Mean	% of					Mean	% of			Potential	
	Air	Mon	Max Air	Min Air	Wind	Mon	Result		Max	Air	Mon	Max Air	Min Air	Press	Temp	
	Temp	Data	Temp	Temp	Speed	Data	Wind		Wind	Press	Data	Press	Press			
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)

Penguin Point (8910)

	67.62S				146.18E				30 M							
Jan	-3.8	03	2.6	-10.8	7.5	03	168	7.0	0.93	147	21	973.3	03	990.6	955.9	271.5
Feb	-7.3	04	-0.1	-15.0	12.9	03	169	12.2	0.94	150	45	977.0	03	997.5	964.8	267.7
Mar	-11.9	04	-2.6	-22.5	14.3	03	178	13.7	0.95	181	37	977.4	03	993.8	958.8	262.9
Apr	-20.5	04	-7.8	-30.0	15.4	04	184	14.8	0.96	192	38	977.8	04	996.9	958.7	254.3
May	-15.7	03	-5.8	-28.6	16.0	03	168	14.9	0.93	178	49	970.1	03	1007.7	948.3	259.7
Jun	-20.0	03	-11.4	-34.4	17.0	28	171	16.2	0.95	174	38	981.4	03	1005.7	964.2	254.5
Jul	-17.8	04	-7.0	-35.8	15.2	04	172	14.1	0.93	171	41	981.8	04	1003.7	960.2	256.7
Aug	-17.2	25	-3.9	-30.9	11.5	25	175	10.6	0.92	201	48	989.6	25	1004.2	971.6	256.8
Sep	-13.9	04	-0.2	-29.2	15.5	04	164	14.6	0.94	178	37	983.1	04	1020.4	953.7	260.5
Oct	-14.7	03	-4.9	-24.4	14.3	03	171	13.4	0.93	174	47	968.2	03	982.4	947.3	260.9
Nov	-7.9	03	3.1	-21.4	11.6	03	173	11.1	0.96	180	40	980.7	03	1001.1	961.0	266.7
Dec	-1.7	02	3.6	-7.4	10.2	02	154	9.7	0.95	178	33	985.3	02	1000.1	976.7	272.6
MEAN	-12.7				13.5		171	12.6	0.94			978.8				

Sutton (8939)

	67.08S				141.37E				871 M							
Jan	-11.9	00	-2.9	-21.2								878.6	00	893.6	860.3	271.2
Feb	-15.0	05	-6.8	-25.2								881.1	05	898.5	867.9	267.7
Mar	-20.6	02	-11.2	-31.0								879.8	02	891.6	864.1	262.0
Apr	-29.0	02	-16.0	-35.9								876.8	02	893.5	861.1	253.5
May	-25.2	04	-16.8	-36.5								871.3	04	904.6	851.5	257.9
Jun	-26.6	04	-18.4	-39.5								879.8	04	896.4	861.1	255.7
Jul	-25.2	04	-17.9	-35.2								882.2	04	901.2	865.3	257.0
Aug	-26.8	74	-20.8	-33.1								883.9	74	892.3	874.1	255.2
Sep																
Oct	-20.4	67	-12.8	-30.4								872.1	67	884.5	849.0	262.8
Nov	-14.2	37	-4.9	-27.4								886.9	37	901.2	868.7	268.0
Dec	-10.1	49	-2.9	-17.9								887.4	49	893.5	880.2	272.2

Byrd (8903)

	80.01S				119.4W				1530 M							
Jan	-17.3	00	-9.6	-27.4								809.8	00	820.7	800.6	271.8
Feb	-19.7	00	-10.2	-33.8								812.6	00	823.5	789.1	268.9
Mar	-22.7	00	-10.6	-42.3								813.6	00	829.1	802.0	265.7
Apr	-35.0	00	-14.6	-51.4								808.6	00	820.7	795.6	253.1
May	-30.3	01	-16.9	-50.7								809.7	01	835.4	789.5	258.0
Jun	-30.9	00	-11.0	-50.9								811.0	00	822.7	788.2	257.2
Jul	-30.3	00	-14.7	-55.0								805.7	00	828.1	779.3	258.4
Aug	-35.2	00	-18.9	-56.0								809.2	00	828.5	788.3	252.9

Mon	Mean % of				Mean % of				Max Wind (dir	Mean % of				
	Air Temp (C)	Mon Data Abs	Max Temp (C)	Min Temp (C)	Wind Speed (m/s)	Mon Data Abs	Result Wind (dir	vv)		Con	Air Press (mb)	Mon Data Abs	Max Press (mb)	Min Press (mb)

Mount Siple (8981)      73.20S    127.0W    230 M

Jan	-3.4	02	1.9	-7.9											
Feb	-4.3	03	0.1	-9.4											
Mar	-6.2	01	-1.6	-13.1						955.1	01	983.4	926.6	270.6	
Apr	-13.9	00	-2.9	-27.0						953.4	00	971.8	938.5	262.8	
May	-11.8	06	-2.6	-23.8						952.3	06	983.1	922.6	265.0	
Jun	-15.1	05	-2.0	-26.4						955.9	05	982.1	921.5	261.4	
Jul	-15.1	06	-3.0	-33.9						949.7	06	979.3	913.7	261.9	
Aug	-14.6	08	-4.6	-29.4						953.5	08	976.4	918.4	262.1	
Sep	-13.8	03	-1.4	-26.0						959.0	03	1000.5	915.5	262.6	
Oct	-12.5	03	-1.6	-22.9						947.4	03	969.4	917.3	264.8	
Nov	-6.3	05	0.4	-15.0						952.5	28	975.3	926.4	269.9	
Dec	-3.7	02	0.5	-7.6											
MEAN	-10.1														

Theresa (21358)      84.60S    115.8W    1463 M

Jan	-14.2	02	-7.1	-21.2	6.6	02	072	6.2	0.94	073	16	815.7	02	829.4	808.7	274.5
Feb	-16.4	00	-10.5	-24.4	8.5	00	077	8.2	0.96	085	25	818.1	00	830.2	798.8	272.0
Mar	-20.7	00	-9.1	-33.9	9.9	07	077	9.3	0.95	071	28	820.2	00	833.2	807.8	267.2
Apr	-26.9	00	-13.6	-37.0	10.5	00	079	9.6	0.92	094	21	816.1	00	826.8	800.5	261.0
May	-27.5	01	-14.5	-50.8	9.0	01	062	8.0	0.89	068	22	814.8	01	842.3	799.4	260.5
Jun																
Jul	-29.5	69	-19.5	-38.9	14.1	69	082	13.0	0.92	105	26	808.1	69	819.6	793.6	259.0
Aug																
Sep																
Oct	-22.4	00	-11.2	-36.5	9.3	07	073	8.7	0.94	085	22	810.0	00	823.5	795.4	266.3
Nov	-16.9	00	-8.0	-25.6	9.5	00	084	9.0	0.94	073	27	820.6	00	834.2	794.8	271.1
Dec	-13.6	00	-8.0	-18.6	6.2	00	081	5.5	0.88	080	13	829.0	00	841.2	821.6	273.8

Doug (8922)      82.32 S    113.2W    1433 M

Jan	-16.5	06	-7.6	-23.2	6.2	06	092	5.5	0.88	080	14	810.8	06	823.9	803.1	272.6
Feb	-17.9	00	-10.5	-25.1	7.1	00	084	6.5	0.91	067	18	813.5	00	824.7	791.4	270.8
Mar	-22.0	00	-10.2	-37.6	8.7	00	087	7.9	0.91	071	22	815.4	00	828.2	804.5	266.3
Apr	-31.5	00	-14.8	-41.6	9.0	00	086	7.3	0.81	077	21	810.5	00	820.9	795.3	256.6
May	-28.9	01	-16.0	-49.4	6.3	01	066	5.4	0.86	077	18	810.4	01	837.1	794.2	259.4
Jun	-28.2	00	-11.1	-44.1	9.9	05	050	7.4	0.75	358	25	812.9	00	824.8	793.3	260.0
Jul	-28.9	00	-15.8	-49.9	9.9	00	038	7.5	0.76	082	27	808.0	00	828.1	785.6	259.6
Aug	-31.5	00	-18.9	-44.8	9.4	00	044	8.5	0.90	016	18	810.1	00	829.3	790.3	256.6
Sep	-30.8	00	-12.0	-55.4	9.8	26	034	7.5	0.77	122	23	813.2	00	835.7	791.1	257.1
Oct	-23.8	00	-13.0	-39.1	8.6	00	030	7.0	0.82	360	22	805.6	00	819.0	789.1	265.3
Nov	-16.6	03	-8.4	-24.5	7.0	03	093	6.1	0.88	074	20	814.7	03	829.0	787.2	272.0

Dec	-15.9	09	-7.6	-21.2	4.6	09	085	3.4	0.73	097	12	823.4	09	834.6	814.8	272.0	
MEAN	-24.4				8.0		064	6.1	0.83			812.4					
	Mean	% of			Mean	% of						Mean	% of				
	Air	Mon	Max Air	Min Air	Wind	Mon	Result			Max		Air	Mon	Max Air	Min Air	Potential	
	Temp	Data	Temp	Temp	Speed	Data	Wind			Wind		Press	Data	Press	Press	Temp	
Mon	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir		vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)

Elizabeth (21361)      82.61S      137.0W      549 M

Jan	-11.6	02	-3.0	-21.9	4.4	02	047	3.4	0.77	035	11	917.2	02	931.4	902.6	268.1
Feb	-17.2	00	-5.5	-30.8	3.4	00	049	2.3	0.68	358	12	921.4	00	936.3	893.4	262.1
Mar	-21.1	00	-6.6	-38.2	6.1	00	048	5.4	0.89	043	17	921.7	00	942.3	901.3	258.1
Apr	-29.5	00	-8.2	-44.1	6.8	00	056	6.5	0.95	068	16	918.3	00	932.8	900.9	249.7
May	-29.3	01	-11.9	-48.8	6.7	01	043	5.9	0.89	052	17	918.9	01	951.7	900.4	249.9
Jun	-30.4	00	-11.5	-46.6	6.5	00	050	5.6	0.86	081	17	921.2	00	933.5	900.1	248.5
Jul	-29.8	00	-12.4	-47.8	9.6	69	063	8.8	0.92	084	23	915.6	00	941.1	886.1	249.6
Aug	-32.4	00	-12.1	-49.4								918.6	00	937.8	897.0	246.7
Sep	-30.9	00	-7.8	-56.9								922.5	00	951.4	893.6	247.9
Oct	-24.5	00	-11.0	-39.4								912.4	00	934.8	887.5	255.2
Nov	-12.9	00	-1.2	-31.8	5.5	00	050	4.5	0.81	071	16	921.4	00	942.5	890.0	266.4
Dec	-10.7	00	-2.9	-18.2	3.0	00	039	1.6	0.53	056	8	934.2	00	947.3	927.5	267.6
MEAN	-23.4											920.3				

Brianna (21362)      83.89S      134.1W      549 M

Jan	-11.0	59	-6.2	-15.1	7.7	59	077	7.4	0.96	092	16	917.7	59	930.5	909.9	268.7
Feb	-15.7	00	-6.6	-25.2	4.8	00	063	4.4	0.92	057	15	920.5	00	935.1	890.5	263.6
Mar	-19.1	00	-5.2	-36.4	8.2	00	068	7.9	0.96	098	23	922.2	00	940.8	900.8	260.0
Apr	-26.0	00	-10.2	-36.8	11.0	00	077	10.8	0.98	085	22	919.9	00	933.2	901.4	253.1
May	-27.6	01	-11.5	-46.9	8.9	01	071	8.6	0.96	068	22	919.5	01	952.6	902.9	251.5
Jun	-26.6	00	-9.1	-41.4	9.6	00	071	9.1	0.95	099	21	922.3	00	936.3	898.7	252.3
Jul	-26.3	00	-11.2	-44.2	9.0	00	078	8.4	0.93	092	27	916.9	00	940.8	883.7	253.1
Aug	-28.5	00	-14.8	-42.1	9.7	00	072	9.4	0.96	081	18	919.5	00	938.8	898.1	250.6
Sep	-28.8	00	-7.8	-51.6	9.6	02	074	8.7	0.91	092	25	923.5	00	951.8	894.2	250.0
Oct	-22.7	00	-10.0	-36.8	7.6	00	067	6.8	0.90	097	23	912.9	00	933.5	887.9	257.1
Nov	-12.2	00	-3.8	-30.2	7.7	00	075	6.9	0.89	105	19	920.9	00	940.8	889.9	267.2
Dec	-10.2	00	-3.1	-16.1	4.4	00	070	3.7	0.84	088	12	932.3	00	945.3	925.1	268.3
MEAN	-21.2				8.2		073	7.7	0.93			920.7				

Harry (8900)      83.00S      121.3W      945 M

Jan	-13.9	02	-4.2	-19.0	6.1	02	029	5.8	0.95	021	16	869.2	02	883.3	859.3	269.9
Feb	-16.7	03	-8.8	-25.9	6.6	03	025	6.3	0.96	015	20	872.0	03	885.2	845.2	266.7
Mar	-20.7	00	-7.8	-35.2	8.8	06	031	8.5	0.97	049	21	873.9	00	890.6	859.2	262.4
Apr	-28.9	00	-12.5	-38.2	10.2	03	036	10.0	0.99	037	19	870.3	00	882.1	852.6	254.2
May	-29.2	01	-14.1	-48.2	9.2	13	031	8.9	0.96	053	17	869.9	01	899.0	854.6	254.0
Jun	-26.8	00	-9.0	-40.6	10.0	18	037	9.6	0.97	060	23	872.4	00	886.0	850.2	256.1
Jul	-27.3	00	-13.1	-48.0	11.3	38	035	10.8	0.96	045	24	867.3	00	888.6	839.6	256.1
Aug	-30.2	00	-17.1	-44.2	9.9	12	030	9.7	0.98	360	19	869.5	00	890.1	848.7	252.9
Sep	-29.7	00	-10.5	-53.4	9.4	66	032	8.8	0.93	049	26	873.5	00	898.9	848.6	253.1
Oct	-23.0	00	-10.9	-36.5								863.9	00	878.8	844.4	260.8
Nov	-14.7	00	-6.8	-26.2	7.3	02	033	6.9	0.94	039	19	873.5	00	891.0	843.0	268.6

Month	Mean Air Temp (C)	Mon Data Abs	Max Air Temp (C)	Min Air Temp (C)	Wind Speed (m/s)	Mon Data Abs	Result Wind (dir)	Con (vv)	Max Wind (dir)	Mean Air Press (mb)	Mon Data Abs	Max Air Press (mb)	Min Air Press (mb)	Potential Temp (K)		
Dec	-13.2	00	-6.8	-18.5	5.1	00	032	4.5	0.89	015	13	883.7	00	896.3	876.0	269.3
MEAN	-22.9													871.6		

Erin (21363) 84.90S 128.8W 1006 M

Jan	-12.9	04	-7.5	-18.5	11.2	60	083	11.0	0.98	097	23	872.8	04	887.1	863.1	270.6
Feb	-15.5	00	-9.0	-22.2	10.2	00	074	10.0	0.97	087	32	875.1	00	888.7	851.1	267.7
Mar	-19.9	00	-7.8	-35.5	12.8	03	080	12.6	0.98	082	36	877.3	00	890.2	860.0	262.9
Apr	-26.5	00	-13.9	-34.8	15.7	00	092	15.2	0.97	108	30	875.0	00	886.4	858.8	256.3
May	-26.8	01	-14.0	-46.8	12.9	01	081	12.5	0.97	097	25	873.2	01	902.6	858.9	256.1
Jun	-25.2	00	-9.9	-37.5	14.2	02	088	13.6	0.96	077	31	876.4	00	890.1	855.4	257.5
Jul	-26.0	00	-13.4	-44.6	16.5	15	088	16.0	0.97	082	36	871.4	00	890.8	847.0	257.1
Aug	-27.2	00	-15.5	-36.5	14.5	07	085	13.9	0.96	087	29	873.5	00	891.6	854.2	255.7
Sep	-28.7	00	-9.8	-49.9	13.0	11	084	12.3	0.95	087	29	876.9	00	900.0	855.7	253.8
Oct	-22.1	00	-11.5	-33.8	13.2	26	075	12.9	0.97	085	26	867.1	00	882.5	847.4	261.5
Nov	-14.8	00	-7.8	-26.0	13.9	05	085	13.6	0.98	084	38	877.7	00	894.0	847.1	268.2
Dec	-11.8	00	-6.6	-18.1	7.8	00	080	7.5	0.96	081	20	887.3	00	900.4	881.3	270.4
MEAN	-21.5				13.0		084	12.5	0.97			875.3				

Siple Dome (8938) 81.66S 148.7W 620 M

Jan	-13.0	00	-3.4	-21.9	3.0	00	110	0.6	0.21	347	11	883.0	00	897.5	867.3	269.6
Feb	-15.6	00	-7.4	-27.5	3.0	00	102	0.7	0.24	046	10	887.3	00	902.1	862.4	266.5
Mar	-20.1	00	-9.6	-34.6	3.5	00	056	1.8	0.51	102	14	886.2	00	906.3	865.7	262.0
Apr	-25.5	00	-7.2	-44.1	1.5	00	068	1.1	0.75	084	15	882.3	00	897.3	866.8	256.7
May	-25.8	01	-13.6	-40.6	3.0	06	052	1.7	0.56	022	14	883.2	01	914.1	865.2	256.3
Jun	-28.7	00	-11.9	-45.0	1.8	13	082	1.5	0.87	352	18	884.7	00	896.5	863.4	253.2
Jul	-29.1	00	-14.6	-47.5	8.5	64	046	6.7	0.78	005	21	878.8	00	906.7	852.7	253.3
Aug	-26.7	00	-11.6	-44.9								883.0	00	901.3	862.1	255.4
Sep	-28.5	00	-9.5	-46.5								885.9	00	912.8	856.9	253.3
Oct	-24.6	00	-11.9	-43.1								877.0	00	901.7	853.1	258.1
Nov	-13.8	00	-3.0	-31.9	4.1	28	062	2.5	0.63	039	13	886.4	00	909.2	854.9	268.5
Dec	-11.7	00	0.4	-19.0	2.0	00	036	0.5	0.26	059	9	900.3	00	914.2	893.4	269.4
MEAN	-21.9											884.8				

Swithinbank (21356) 81.20S 126.1W 945 M

Jan	-11.2	02	-2.6	-18.0	6.1	02	352	5.5	0.90	360	16	867.4	02	880.3	856.3	272.8
Feb	-14.5	03	-5.0	-25.2	6.5	03	352	6.1	0.94	016	21	870.5	03	884.9	844.4	269.1
Mar	-18.2	00	-6.1	-32.9	8.7	00	002	8.3	0.95	354	21	871.7	00	891.1	855.4	265.1
Apr	-26.9	00	-9.6	-38.8	10.6	00	004	10.4	0.98	355	23	867.4	00	881.5	851.8	256.5
May	-25.1	01	-10.6	-41.6	9.5	01	358	9.0	0.95	360	24	868.3	01	897.6	848.8	258.3
Jun	-25.4	00	-7.1	-40.0	9.8	00	003	9.3	0.95	001	20	869.9	00	881.8	846.0	257.8
Jul	-25.5	00	-11.4	-44.5	10.2	00	001	9.5	0.93	354	27	864.5	00	888.2	835.1	258.2
Aug	-28.7	00	-14.1	-47.4	10.4	00	359	10.3	0.99	360	24	867.7	00	887.8	844.9	254.6
Sep	-26.4	00	-6.1	-49.6	9.4	00	355	8.6	0.91	360	25	871.6	00	898.4	843.0	256.7
Oct	-20.6	00	-7.8	-35.0	8.7	00	357	8.0	0.92	018	25	862.0	00	878.1	840.5	263.5

Nov	-12.5	01	-2.9	-30.6	7.1	00	002	6.4	0.90	001	19	871.4	00	890.1	842.1	271.2
Dec	-10.7	00	-2.6	-16.6	4.0	00	346	3.2	0.80	004	11	882.6	00	895.3	875.6	272.0
MEAN	-20.5				8.4		359	7.9	0.93			869.6				

	Mean	% of		Mean	% of							Mean	% of			
Mon	Air	Mon	Max Air	Min Air	Wind	Mon	Result			Max		Air	Mon	Max Air	Min Air	Potential
	Temp	Data	Temp	Temp	Speed	Data	Wind	vv	Con	Wind	vv	Press	Data	Press	Press	Temp
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir			(dir		(mb)	Abs	(mb)	(mb)	(K)

Noel/ITASE (8936) 79.33S 111.0W 1833 M

Jan	-20.7	58	-11.1	-29.5	6.3	59	038	5.9	0.93	029	16	778.3	58	786.8	773.1	271.2
Feb	-21.0	00	-12.1	-33.4	7.7	00	035	5.8	0.76	018	23	778.9	00	789.1	758.5	270.8
Mar	-23.9	00	-12.6	-41.9	10.6	00	029	9.0	0.85	040	30	780.4	00	791.7	768.8	267.6
Apr	-37.5	00	-17.9	-49.9	6.3	07	045	5.7	0.92	037	19	774.5	00	785.0	761.3	253.5
May	-30.5	01	-16.8	-50.4	4.8	14	025	3.2	0.67	025	28	775.9	01	799.5	756.3	260.9
Jun	-31.6	00	-13.5	-52.5	8.8	20	028	7.2	0.82	068	28	777.3	00	789.3	756.0	259.6
Jul	-30.4	41	-18.6	-46.5	15.6	44	032	14.2	0.91	037	34	768.2	41	784.5	749.7	261.8

Marble Point (8906) 77.44S 163.76E 120 M

Jan	-3.6	00	2.2	-11.8	3.2	00	124	1.7	0.51	160	15	971.0	00	988.6	956.6	271.9
Feb	-8.9	00	-1.4	-17.2	4.4	00	145	3.3	0.75	127	16	975.5	00	990.7	957.4	266.1
Mar	-14.8	00	-6.2	-24.8	3.7	00	154	2.8	0.75	137	19	977.2	00	995.5	964.6	260.1
Apr	-18.5	00	-6.1	-28.8	4.2	00	162	3.6	0.87	182	16	976.6	00	992.2	961.4	256.4
May	-22.6	01	-8.8	-36.4	3.1	01	161	2.3	0.74	123	17	977.0	01	1017.3	947.0	252.3
Jun	-24.8	00	-3.1	-36.1	3.2	00	161	2.1	0.65	133	26	979.1	00	995.1	954.8	249.9
Jul	-23.1	00	-4.9	-38.0	3.8	00	170	2.6	0.67	140	19	976.1	00	999.2	951.5	251.8
Aug	-25.2	00	-7.1	-36.6	3.6	00	159	2.5	0.71	122	18	977.8	00	993.8	959.9	249.5
Sep	-25.5	00	-7.5	-38.1	3.7	00	161	2.3	0.63	184	23	982.2	00	1010.5	957.4	249.0
Oct	-20.7	00	-6.8	-32.6	2.5	00	158	1.5	0.59	129	17	969.5	00	995.4	946.2	254.7
Nov	-7.1	00	1.9	-22.5	4.2	00	148	3.0	0.71	127	20	974.5	00	996.4	953.6	268.0
Dec	-4.2	00	1.8	-10.2	3.6	00	114	0.9	0.26	127	11	987.8	00	1004.0	980.7	269.9
MEAN	-16.6				3.6		154	2.3	0.65			977.0				

Ferrell (21355) 77.93S 170.82E 45 M

Jan																
Feb	-12.7	57	-3.9	-21.1	3.7	61	185	2.6	0.70	201	14	984.2	60	998.7	963.2	261.4

Pegasus North (21357) 77.95S 166.51E 10 M

Jan																
Feb	-13.7	13	-5.2	-22.5	4.6	13	081	2.7	0.58	172	26	986.7	13	999.1	969.1	260.5
Mar	-19.3	00	-5.5	-34.6	3.6	00	073	2.2	0.60	127	19	990.0	00	1008.1	976.9	254.6
Apr	-22.1	00	-2.2	-39.9	5.5	00	108	3.1	0.55	174	26	989.0	00	1004.9	973.7	251.8
May	-27.2	01	-9.0	-45.9	3.4	01	098	1.5	0.44	165	27	989.7	01	1030.9	956.8	246.7
Jun	-30.3	00	-4.6	-46.2	3.0	00	084	1.4	0.48	191	27	992.0	00	1008.1	963.7	243.5
Jul	-28.4	00	-7.0	-47.0	3.9	00	105	1.6	0.41	160	31	988.8	00	1012.8	963.5	245.6
Aug	-31.5	00	-7.2	-48.1	3.6	00	095	1.6	0.43	164	29	990.7	00	1006.9	972.9	242.3
Sep	-32.0	00	-8.5	-48.1	4.6	16	116	1.9	0.41	164	36	995.3	00	1023.8	968.7	241.5
Oct	-24.1	00	-6.4	-39.8	3.0	00	066	1.2	0.41	160	23	982.1	00	1008.5	956.1	250.4

Nov

Dec -5.8 15 0.6 -14.9 3.4 15 051 2.3 0.68 161 14 999.5 15 1008.9 992.3 267.4

Mon	Mean	% of		Mean	% of							Mean	% of						
	Air	Mon	Max	Air	Min	Air	Wind	Mon	Result		Max	Air	Mon	Max	Air	Min	Air	Potential	
	Temp	Data	Temp	Temp	Speed	Data	Wind		vv	Con	Wind	Press	Data	Press	Press	Press	Temp		
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir				(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)		
Pegasus South (8937)		77.99S				166.58E				10 M									
Jan	-6.7	01	1.1	-16.9								985.6	00	1003.2	970.9	267.6			
Feb	-13.6	00	-4.6	-26.1	4.6	10	105	2.3	0.49	203	23	991.1	00	1005.6	971.9	260.2			
Mar	-19.7	00	-5.4	-35.1	3.3	00	090	1.8	0.53	170	21	993.2	00	1011.7	980.2	254.0			
Apr	-22.6	00	-1.9	-40.5	5.8	00	149	3.3	0.57	195	27	992.5	00	1008.5	977.3	251.1			
May	-27.5	01	-9.0	-46.0	4.3	28	128	1.7	0.40	198	28	993.3	01	1034.6	961.9	246.1			
Jun	-30.6	00	-5.2	-46.9	1.3	58	119	0.8	0.60	157	17	995.6	00	1011.6	967.0	242.9			
Jul	-29.2	00	-7.2	-48.2								992.5	00	1016.4	967.1	241.2			
Aug	-32.3	00	-7.1	-47.1								994.4	00	1011.4	976.7	240.8			
Sep	-32.4	00	-9.1	-49.4								999.2	00	1030.5	972.9	244.5			
Oct	-24.6	00	-7.0	-40.9								985.8	00	1012.2	960.1	249.6			
Nov	-9.1	00	-0.1	-26.1	10.2	43	169	9.3	0.91	184	30	990.1	00	1011.8	969.3	264.8			
Dec	-6.5	00	1.0	-16.5	3.3	00	061	2.0	0.60	184	14	1003.1	00	1019.5	995.9	266.5			
MEAN	-21.2											993.0							
Minna Bluff (8935)		78.55S				166.66E				920 M									
Jan	-10.7	00	-4.9	-20.4	5.6	22	201	4.7	0.84	219	33	873.4	00	889.1	861.3	272.9			
Feb	-16.5	00	-7.1	-28.2	6.4	02	201	4.2	0.65	202	35	877.5	00	891.5	857.2	266.5			
Mar	-21.4	00	-12.5	-31.8	6.5	48	210	5.6	0.87	196	32	878.4	00	895.2	865.9	261.3			
Apr	-25.4	00	-11.1	-34.0	1.2	21	313	0.2	0.13	217	8	877.6	00	891.5	858.0	257.2			
May	-26.2	01	-16.2	-39.4	5.0	33	212	2.9	0.59	213	19	877.4	01	912.6	848.6	256.4			
Jun	-27.8	00	-14.1	-41.4	2.6	10	203	1.9	0.74	187	35	878.3	00	891.2	852.5	254.6			
Jul	-27.7	00	-14.9	-41.2	2.8	03	189	2.3	0.81	191	27	875.7	00	897.7	852.1	255.0			
Aug	-28.2	00	-15.6	-38.2	5.6	00	191	4.7	0.85	181	43	878.1	00	893.4	860.2	254.2			
Sep	-28.0	08	-16.2	-42.5	8.8	18	192	6.7	0.76	188	38	883.5	08	908.5	854.3	254.0			
Linda (8919)		78.48S				168.38E				50 M									
Jan	-8.1	00	0.5	-17.1	4.9	00	196	3.8	0.78	201	18	960.5	00	978.2	946.1	268.2			
Feb	-15.4	00	-3.5	-27.0	6.1	00	196	4.7	0.76	203	28	964.8	00	980.9	945.0	260.4			
Mar	-22.8	00	-10.2	-38.5	7.1	00	201	5.8	0.82	202	26	966.0	00	984.6	952.0	252.9			
Apr	-24.9	00	-6.8	-40.4	12.5	08	197	12.4	1.00	201	27	964.7	00	981.0	949.6	250.9			
May	-28.8	01	-13.5	-46.2	9.2	27	199	8.8	0.96	201	24	965.3	01	1006.6	934.3	246.9			
Jun	-30.8	00	-10.4	-47.8	9.4	40	199	8.9	0.95	201	34	967.3	00	983.2	940.5	244.7			
Jul	-30.0	00	-13.6	-49.5	12.4	42	201	12.3	0.99	202	32	964.1	00	988.8	938.5	245.7			
Aug	-32.3	00	-11.9	-47.8	12.4	52	200	12.4	1.00	202	27	966.3	00	982.6	947.4	243.3			
Sep	-33.6	00	-14.2	-49.4	12.3	58	199	12.3	1.00	199	31	971.0	00	998.7	942.2	241.6			
Oct	-26.7	00	-10.4	-43.8								958.0	00	984.7	932.5	249.5			
Nov	-11.1	00	-1.8	-26.4	10.7	29	199	10.4	0.97	203	28	963.4	00	985.6	941.2	264.8			
Dec	-8.0	00	0.8	-16.5	3.8	00	186	1.8	0.49	199	14	978.0	00	994.9	969.6	266.9			
MEAN	-22.7											965.8							

Mon	Mean	% of		Mean	% of				Mean	% of							
	Air	Mon	Max	Air	Min	Air	Wind	Mon	Result	Max	Air	Mon	Max	Air	Min	Air	Potential
	Temp	Data	Temp	Temp	Speed	Data	Wind			Wind	Press	Data	Press	Press	Press	Temp	
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)	
Willie Field (8929)		77.87S		167.02E		20 M											
Jan	-6.0	00	3.1	-16.8	2.6	00	076	1.6	0.60	178	12	982.8	00	1000.1	968.4	268.5	
Feb	-13.3	00	-1.1	-25.6	3.8	00	085	2.5	0.66	161	18	987.4	00	1002.2	968.1	260.8	
Mar	-19.4	00	-5.4	-35.8	3.1	00	078	2.1	0.68	174	19	989.0	00	1007.1	975.9	254.6	
Apr	-22.5	00	-2.9	-42.1	4.0	00	094	2.4	0.60	182	20	988.4	00	1004.0	972.7	251.5	
May	-27.5	01	-10.4	-46.2	1.3	01	125	0.8	0.58	175	21	988.9	01	1030.2	957.9	246.5	
Jun	-30.0	00	-5.2	-45.8	1.0	00	089	0.8	0.73	098	14	991.1	00	1006.8	964.3	243.8	
Jul	-28.6	00	-8.2	-49.0	0.9	00	102	0.4	0.40	188	24	988.1	00	1011.5	961.8	245.5	
Aug	-32.1	00	-8.2	-48.6	1.6	00	096	0.8	0.50	178	21	990.0	00	1008.5	971.9	241.8	
Sep	-32.5	00	-10.0	-50.6	0.1	00	001	0.1	0.99	187	3	994.7	00	1022.6	967.7	241.0	
Oct	-24.9	00	-6.8	-43.2	2.2	00	099	0.6	0.28	149	20	981.2	00	1007.3	956.5	249.7	
Nov	-8.8	00	1.1	-26.9	4.7	00	141	2.9	0.62	188	23	986.4	00	1007.8	964.8	265.4	
Dec	-5.9	01	1.1	-16.9	2.7	00	068	1.7	0.62	161	11	1000.1	00	1016.5	992.1	267.2	
MEAN	-21.0				2.3		095	1.3	0.61			989.0					
Windless Bight (8927)		77.73S		167.70E		61 M											
Jan	-5.8	01	3.2	-18.8	1.9	00	035	0.6	0.30	209	8.2	982.8	00	999.9	967.6	268.7	
Feb	-13.0	00	-1.2	-31.1	2.7	00	077	1.2	0.44	201	17	988.6	00	1003.2	969.3	261.0	
Mar	-19.8	00	-5.0	-36.6	2.3	00	056	1.2	0.52	078	10	990.8	00	1008.8	977.6	254.1	
Apr	-22.7	00	-3.4	-41.5	2.7	00	041	1.3	0.46	171	11	990.5	00	1006.2	974.2	251.2	
May	-27.9	01	-9.5	-47.8	1.9	01	033	0.7	0.36	198	13	990.7	01	1031.9	959.5	246.0	
Jun	-31.0	00	-3.6	-50.9	2.0	00	034	0.7	0.35	215	19	992.9	00	1008.2	968.8	242.7	
Jul	-28.2	00	-7.5	-52.5	2.5	00	041	0.8	0.30	182	14	990.1	00	1013.2	963.8	245.7	
Aug	-32.5	00	-7.5	-52.1	1.8	00	032	0.7	0.42	352	10	991.9	00	1010.3	973.5	241.2	
Sep	-33.4	00	-9.6	-52.8	2.1	00	030	1.0	0.46	210	12	996.6	00	1024.4	969.6	240.0	
Oct	-25.9	00	-6.4	-44.8	1.6	00	026	0.6	0.41	165	9	983.0	00	1008.8	958.3	248.5	
Nov	-8.4	00	1.1	-32.5	2.5	00	005	0.6	0.25	219	15	988.7	00	1010.1	966.6	265.7	
Dec	-5.8	00	1.6	-16.2	1.3	00	073	0.8	0.59	063	6	1001.8	00	1018.2	994.5	267.2	
MEAN	-21.2				2.1		043	0.8	0.41			990.7					
Herbie Alley (8697)		78.10S		166.67E		30 M											
Jan	-6.2	03	1.9	-17.1	4.6	03	148	2.0	0.44	172	22	984.1	04	1000.8	969.9	268.2	
Feb	-13.0	03	-3.1	-24.2	4.2	03	143	1.5	0.35	189	26	988.5	06	1003.5	969.3	260.9	
Mar	-19.5	00	-6.1	-34.0	4.1	00	159	1.4	0.34	206	27	990.0	00	1008.8	977.0	254.4	
Apr	-22.6	00	-4.0	-41.1	6.3	00	176	4.3	0.68	192	32	988.6	05	1005.3	973.9	252.2	
May	-27.4	01	-9.6	-46.4	4.1	01	176	1.6	0.40	157	28	985.1	19	1017.6	956.7	249.6	
Jun	-29.4	00	-5.6	-45.6	3.7	00	155	1.5	0.40	199	31	992.2	25	1008.1	963.8	246.9	
Jul	-29.0	00	-8.1	-49.5	4.6	00	177	2.4	0.52	212	38	988.4	11	1013.1	964.1	246.0	
Aug	-32.1	00	-8.0	-48.6	4.1	00	175	1.9	0.48	181	33	992.3	37	1007.6	973.6	245.8	
Sep	-32.2	00	-8.9	-49.8	4.6	00	180	2.1	0.46	194	36	996.5	28	1024.0	967.9	244.4	
Oct	-24.3	00	-5.5	-42.1	3.7	00	166	1.2	0.32	175	27	982.3	07	1008.9	958.1	249.8	
Nov	-8.8	00	0.5	-24.4	7.4	00	173	5.5	0.74	213	30	987.5	16	1008.8	966.2	265.4	
Dec	-6.1	00	2.4	-16.0	3.8	00	087	1.3	0.33	154	18	1001.3	09	1017.8	992.4	266.8	



MEAN	-20.9				4.6		166	2.1	0.46			989.7				
	Mean	% of			Mean	% of						Mean	% of			
	Air	Mon	Max Air	Min Air	Wind	Mon	Result			Max	Air	Mon	Max Air	Min Air	Potential	
	Temp	Data	Temp	Temp	Speed	Data	Wind			Wind	Press	Data	Press	Press	Temp	
Mon	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)

Cape Spencer (8722) 77.97S 167.55E 30 M

Jan	-7.3	00	0.8	-19.9	3.6	00	151	1.1	0.30	194	19	978.7	00	996.8	963.7	267.5
Feb	-14.1	03	-5.5	-26.4	4.1	03	123	2.2	0.52	212	27	985.1	03	999.3	965.2	260.2
Mar	-20.5	00	-6.6	-35.4	4.0	00	114	0.9	0.21	212	26	987.7	00	1007.6	975.9	253.6
Apr	-24.3	00	-4.2	-43.4	4.3	00	137	0.6	0.14	219	26	987.9	00	1005.1	972.0	249.8
May	-28.0	01	-10.9	-46.0	3.8	01	208	1.0	0.26	209	30	988.8	01	1031.8	954.2	246.0
Jun	-30.0	00	-5.5	-46.5	4.0	00	230	1.0	0.26	219	33	991.3	00	1008.3	960.4	243.8
Jul	-29.0	00	-9.1	-51.6	4.3	00	196	1.2	0.29	213	29	988.1	00	1011.4	961.6	245.0
Aug	-32.2	00	-7.9	-48.6	3.7	00	195	0.9	0.24	205	28	990.6	00	1007.4	973.2	241.6
Sep	-32.7	00	-9.8	-52.1	4.5	00	194	1.1	0.25	213	34	995.1	00	1022.8	967.1	240.8
Oct	-25.2	00	-7.1	-42.4	3.9	00	198	0.6	0.15	225	23	980.2	00	1006.1	954.6	249.4
Nov	-9.6	00	-0.1	-25.6	5.7	00	188	3.4	0.59	216	25	982.8	00	1003.8	962.9	264.9
Dec	-7.0	00	0.0	-17.2	3.2	00	117	1.2	0.38	223	12	995.8	00	1012.6	988.0	266.5
MEAN	-21.7				4.1		171	1.0	0.30			987.7				

Cape Bird (8901) 77.22S 166.43E 70 M

Jan	-2.1	00	3.2	-6.9	4.5	00	266	0.3	0.07	208	24					
Feb	-6.2	00	0.5	-12.1	4.1	00	103	1.1	0.26	211	24	984.0	13	1002.1	964.8	267.9
Mar	-11.9	00	-4.2	-20.5	4.3	00	066	0.8	0.18	012	20	986.1	00	1005.4	974.1	262.3
Apr	-16.1	00	-2.9	-26.4	4.8	00	049	2.4	0.50	206	31	984.3	00	1002.1	967.6	258.2
May	-20.1	01	-6.1	-32.2	3.6	01	070	1.6	0.44	199	22	986.1	01	1027.3	954.2	254.1
Jun	-23.3	00	-2.4	-34.6	4.2	00	108	0.9	0.21	215	34	988.1	00	1004.9	956.3	250.7
Jul	-20.1	00	-4.8	-31.6	5.6	00	149	1.0	0.18	222	41	984.3	00	1009.2	959.9	254.2
Aug	-22.9	00	-3.8	-32.8	3.4	00	084	1.1	0.32	214	32	986.9	00	1003.2	969.6	251.2
Sep	-22.6	01	-5.6	-34.0	3.4	01	055	1.2	0.34	197	20	995.2	19	1019.5	969.4	249.0
Oct	-18.9	00	-8.0	-29.6	3.5	00	036	1.2	0.35	256	30	979.6	12	1006.5	956.8	255.0
Nov	-5.8	01	2.9	-23.6	6.1	01	188	1.4	0.22	213	33	982.9	10	1005.9	964.1	268.7
Dec	-3.1	00	1.5	-6.2	3.5	00	019	2.4	0.69	207	12	997.9	00	1014.6	987.6	270.2
MEAN	-14.4				4.3		069	0.9	0.31							

Laurie II (21364) 77.55S 170.82E 30 M

Jan																
Feb	-14.8	00	-1.1	-26.0	5.4	00	175	4.0	0.74	198	19	983.8	00	999.8	964.8	259.6
Mar	-21.8	00	-10.2	-37.9	6.7	00	183	5.2	0.78	181	30	985.5	00	1004.6	973.3	252.4
Apr	-25.8	00	-7.0	-41.0	11.0	00	188	10.7	0.97	195	31	984.0	00	999.8	969.0	248.5
May	-29.2	01	-14.5	-46.2	7.2	10	192	6.2	0.86	201	31	985.0	01	1025.9	954.5	245.0

Mon	Mean	% of		Mean	% of				Mean	% of							
	Air	Mon	Max	Air	Min	Air	Wind	Mon	Result	Max	Air	Mon	Max	Air	Min	Air	Potential
	Temp	Data	Temp	Temp	Speed	Data	Wind	vv	Con	Wind	Press	Data	Press	Press	Temp		
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir			(dir	(mb)	Abs	(mb)	(mb)	(K)		
Possession Is (8984)		71.89S				171.21E				30 M							
Jan	0.3	12	7.2	-3.2							971.7	12	988.7	958.3	275.7		
Feb	-2.1	06	2.4	-9.1							975.1	05	992.6	960.3	273.1		
Mar	-7.7	02	-1.2	-13.9							975.6	02	993.5	959.4	267.3		
Apr	-14.8	07	-3.0	-24.5							974.7	07	993.6	958.1	260.3		
May	-17.0	04	-9.8	-26.1							975.6	04	1010.1	951.2	258.0		
Jun	-19.9	02	-5.9	-28.5							980.2	02	997.3	958.9	254.8		
Jul	-19.1	03	-8.0	-28.5							976.8	03	1001.3	957.3	255.8		
Aug	-20.4	03	-5.4	-30.5							977.0	03	997.5	960.2	254.5		
Sep	-18.2	05	-5.9	-28.6							982.2	05	1012.1	957.0	256.3		
Oct	-15.4	09	-6.0	-24.9							969.0	09	991.7	950.9	260.1		
Nov	-4.9	24	2.5	-18.0							973.1	24	996.2	950.0	270.4		
Dec	-0.4	37	5.2	-3.2							988.4	35	1001.6	979.2	273.6		
MEAN	-11.6										976.6						
Manuela (8905)		74.95S				163.69E				80 M							
Jan	-5.3	00	1.4	-11.4							975.1	00	993.6	961.5	269.8		
Feb	-12.0	00	-2.2	-21.2							979.1	00	995.7	960.9	262.8		
Mar	-20.2	00	-11.4	-31.8							980.8	00	999.5	966.5	254.4		
Apr	-24.5	00	-10.5	-33.9							980.1	00	997.2	963.3	250.1		
May	-25.1	01	-14.1	-35.2							980.3	01	1021.1	950.4	249.5		
Jun	-25.9	00	-7.6	-37.0							982.3	00	999.4	956.7	248.6		
Jul	-25.4	00	-13.9	-36.9							979.4	00	1004.3	956.3	249.3		
Aug	-27.3	00	-10.6	-39.8							980.5	00	998.5	957.3	247.3		
Sep	-22.2	00	-11.2	-33.4							984.7	00	1014.9	955.9	252.1		
Oct	-20.6	00	-7.9	-29.2							972.7	00	999.9	950.9	254.6		
Nov	-9.5	00	2.4	-23.2							978.7	00	1001.8	956.1	265.3		
Dec	-4.7	00	1.9	-11.4							992.1	00	1008.6	984.2	269.1		
MEAN	-18.6										980.5						
Marilyn (8931)		79.95S				165.13E				75 M							
Jan	-8.5	00	0.4	-18.0	2.8	00	216	1.7	0.60	193	11	976.9	00	993.0	962.3	266.4	
Feb	-16.2	00	-6.8	-28.9	5.5	00	255	4.0	0.73	257	22	981.0	00	996.4	959.0	258.4	
Mar	-23.0	00	-6.5	-34.4	6.5	02	251	5.4	0.83	262	26	982.2	00	1000.4	965.7	251.4	
Apr	-26.8	00	-6.5	-39.8	6.7	00	244	6.1	0.90	179	17	982.8	00	998.3	966.1	247.6	
May	-28.9	01	-13.6	-48.8	7.4	03	251	6.2	0.85	266	26	981.7	01	1021.0	952.1	245.6	
Jun	-31.2	00	-7.8	-44.1	6.1	05	239	4.7	0.77	247	20	984.1	00	999.5	956.8	243.1	
Jul	-30.1	00	-15.6	-49.2	8.9	06	255	8.1	0.92	273	29	980.9	00	1004.0	955.1	244.4	

Mon	Mean	% of		Mean	% of				Mean	% of						
	Air	Mon	Max Air	Min Air	Wind	Mon	Result		Max	Air	Mon	Max Air	Min Air	Potential		
	Temp	Data	Temp	Temp	Speed	Data	Wind		Wind	Press	Data	Press	Press	Temp		
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)	
Schwertfeger (8913)		79.90S			169.97E				60 M							
Jan	-10.1	00	-1.6	-19.8	3.7	00	191	2.5	0.68	180	12	974.9	00	991.3	958.8	265.0
Feb	-18.5	00	-7.8	-34.4	4.6	00	224	2.1	0.47	253	16	979.2	00	995.2	959.6	256.2
Mar	-26.2	00	-14.1	-43.6	5.3	00	234	4.0	0.76	258	22	979.9	00	997.8	964.1	248.4
Apr	-30.5	00	-10.4	-43.0	6.2	00	215	5.4	0.87	167	19	979.6	00	995.2	964.5	244.1
May	-33.0	01	-14.8	-54.0	5.7	01	235	4.5	0.80	257	16	979.3	01	1019.6	947.6	241.7
Jun	-36.1	00	-10.4	-52.4	5.1	00	218	3.6	0.71	178	18	981.5	00	996.2	955.0	238.3
Jul	-34.1	00	-11.5	-53.8	7.0	04	235	5.8	0.82	187	20	978.0	00	1002.1	950.5	240.6
Aug	-36.3	00	-11.1	-52.0	8.5	64	240	7.4	0.87	260	22	980.1	00	997.4	957.8	238.3
Sep	-37.5	00	-18.9	-54.6	7.5	35	236	6.0	0.80	254	22	984.9	00	1012.7	953.5	236.7
Oct	-29.8	00	-13.8	-45.6	4.0	00	246	2.0	0.50	182	19	971.8	00	998.0	945.6	245.4
Nov	-13.2	00	-1.8	-32.9	5.6	00	188	4.2	0.76	168	17	977.7	00	999.9	954.7	261.6
Dec	-9.6	01	-2.5	-17.4	2.4	00	202	0.6	0.25	158	9	992.3	00	1010.0	984.9	264.1
MEAN	-26.2				5.5		226	3.8	0.69			979.9				
Gill (8911)		79.99S			178.6W				55 M							
Jan	-10.6	00	-4.0	-20.4	3.8	00	207	2.9	0.77	243	10	976.6	00	992.3	957.3	264.3
Feb	-17.8	00	-9.4	-32.1	4.1	00	193	1.7	0.42	100	13	982.0	00	997.0	959.9	256.6
Mar	-23.9	00	-10.5	-37.2	4.4	00	244	1.9	0.43	211	14	981.3	00	999.3	963.5	250.7
Apr	-33.0	00	-13.2	-50.1	2.2	00	212	1.9	0.88	127	8	979.4	00	994.3	962.1	241.6
May	-36.0	01	-15.0	-51.0	0.2	01	263	0.1	0.68	256	5	980.2	01	1020.1	950.8	238.6
Jun	-39.5	00	-12.5	-59.2	5.8	64	228	4.0	0.70	136	15	982.6	00	1000.0	955.7	234.8
Jul	-36.6	00	-14.4	-53.1								977.5	00	1004.5	950.2	238.2
Aug	-38.6	00	-10.4	-57.8								980.6	00	997.9	956.9	235.8
Sep	-37.9	00	-11.8	-57.2								985.4	00	1008.2	953.6	236.2
Oct	-30.6	00	-14.0	-45.2								974.7	00	1001.0	948.7	244.3
Nov	-13.9	00	-1.4	-31.2	5.4	26	189	4.5	0.84	218	16	978.9	00	1003.1	953.7	260.9
Dec	-9.6	00	-1.9	-18.0	2.6	00	223	1.0	0.37	142	8	995.6	00	1013.5	986.2	263.9
MEAN	-27.3											981.2				
Lettau (8908)		82.52S			174.4W				55 M							
Jan	-8.4	54	-2.5	-17.2	3.6	54	148	2.6	0.72	139	13	980.2	54	992.8	958.8	266.3
Feb	-18.5	22	-7.2	-31.4	3.2	21	152	1.5	0.45	122	11	982.4	21	998.1	958.9	256.0
Mar	-23.6	00	-8.1	-39.4	4.5	00	143	3.1	0.68	053	13	983.0	00	1000.1	960.2	250.8
Apr	-30.6	00	-12.9	-48.5	5.2	00	148	4.9	0.93	132	16	982.2	00	997.9	962.2	243.8
May	-34.2	01	-13.9	-54.0	4.4	01	152	3.5	0.79	135	15	982.2	01	1020.1	957.2	240.2
Jun	-35.2	00	-10.1	-53.0	5.4	00	150	4.5	0.83	130	20	984.6	00	999.7	958.4	239.0
Jul	-32.3	00	-12.4	-50.4	6.5	00	154	5.2	0.81	136	23	979.2	00	1006.6	954.1	242.4
Aug	-36.0	00	-11.4	-54.0	4.1	00	151	3.4	0.82	164	14	982.5	00	999.4	956.3	238.4
Sep	-35.9	00	-13.9	-57.8	5.6	00	109	0.3	0.05	354	22	987.1	00	1013.9	954.8	238.2
Oct	-28.6	00	-10.8	-46.2	2.7	69	151	0.7	0.28	023	18	975.4	00	1000.6	949.4	246.3
Nov	-14.6	74	0.8	-30.2								982.2	74	1005.7	952.5	259.9
Dec	-8.0	75	-3.6	-12.0								993.4	75	999.9	987.7	265.7

MEAN									982.9											
	Mean	% of		Mean	% of		Mean	% of		Mean	% of		Max	Air	Mon	Max	Air	Min	Air	Potential
Mon	Air	Mon	Max	Min	Wind	Mon	Result			Max	Air	Mon	Max	Air	Min	Air	Potential			
	Temp	Data	Temp	Temp	Speed	Data	Wind			Wind	Press	Data	Press	Press	Press	Temp				
	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)				
Elaine (8915)		83.13S				174.17E				60 M										
Jan	-7.5	00	-1.4	-15.8	3.1	00	125	1.8	0.58	111	17	981.9	00	996.6	966.8	267.0				
Feb	-16.2	00	-3.4	-33.6	2.7	00	129	1.5	0.56	208	20	986.5	00	1001.7	963.2	257.9				
Mar	-21.0	00	-2.8	-41.0	4.8	00	128	3.9	0.80	108	20	987.9	00	1005.8	966.2	253.1				
Apr	-27.1	00	-6.5	-44.8	4.0	00	142	3.2	0.80	116	19	988.7	00	1003.5	971.8	246.9				
May	-30.4	01	-8.5	-57.9	4.6	01	132	3.3	0.72	109	20	987.5	01	1025.4	964.3	243.7				
Jun	-31.0	00	-5.8	-50.8	4.6	00	136	3.2	0.70	109	23	990.1	00	1005.6	962.4	242.9				
Jul	-29.5	00	-9.5	-53.1	4.9	00	138	3.4	0.70	119	28	985.6	00	1009.6	961.7	244.7				
Aug	-31.0	00	-11.8	-52.4	3.4	00	136	2.5	0.74	109	20	988.0	00	1006.9	962.7	243.0				
Sep	-35.3	00	-12.4	-57.9	4.3	03	141	2.5	0.57	109	24	992.7	00	1020.5	965.4	238.4				
Oct	-26.5	00	-7.4	-48.4	3.1	00	121	2.4	0.77	109	29	979.8	00	1003.3	956.4	248.2				
Nov	-9.6	01	-1.5	-25.9	4.5	00	124	3.9	0.85	112	24	987.6	00	1008.3	957.7	264.5				
Dec	-6.8	00	0.9	-12.4	1.4	00	098	0.3	0.19	113	9	999.9	00	1014.7	993.5	266.4				
MEAN	-22.7				3.8		132	2.6	0.67			988.0								
Larsen Ice Shelf (8926)		66.95S				60.91W				17 M										
Jan	-2.9	05	4.6	-10.9	4.5	04	106	0.6	0.14	002	14	975.2	04	989.8	957.0	272.3				
Feb	-4.7	04	4.2	-18.4	3.6	04	004	0.8	0.23	012	13	987.7	04	1005.2	974.5	269.4				
Mar	-12.7	03	4.1	-30.6	3.0	03	233	0.2	0.06	008	11	997.5	03	1018.9	969.6	260.7				
Apr	-21.0	04	-4.9	-35.2	3.5	04	183	2.2	0.63	187	15	983.4	04	996.5	959.6	253.4				
May	-22.7	06	1.6	-40.1	3.2	06	236	0.5	0.17	274	17	991.0	06	1029.3	960.2	251.1				
Jun	-19.8	05	0.5	-33.8	1.2	05	226	0.6	0.48	223	11	990.0	05	1012.1	964.7	254.1				
Jul	-21.0	04	0.5	-39.0	1.5	04	296	0.7	0.49	208	18	998.0	04	1019.5	980.5	252.3				
Aug	-29.4	05	-0.8	-45.6	1.9	05	200	1.1	0.59	178	10	988.6	05	1007.0	965.0	244.5				
Sep	-21.1	05	1.1	-38.1	3.6	05	231	1.5	0.42	137	19	994.3	05	1036.0	962.8	252.5				
Oct	-11.1	07	1.0	-26.8	3.8	07	175	1.6	0.41	188	15	983.8	07	1008.5	960.3	263.3				
Nov	-6.2	07	5.5	-20.6	3.1	07	029	1.0	0.32	360	10	989.5	07	1004.6	977.9	267.8				
Dec	-2.0	05	4.9	-14.4	3.9	05	051	1.3	0.32	039	10	986.8	05	997.0	973.4	272.2				
MEAN	-14.6				3.1		195	0.3	0.36			988.8								
Butler Island (8902)		72.21S				60.17W				91 M										
Jan	-4.2	04	2.2	-10.0	3.7	01	159	1.1	0.30	180	11	968.1	01	983.5	957.1	271.5				
Feb	-7.2	03	8.9	-16.2	4.0	02	215	1.1	0.27	170	14	978.1	03	991.0	964.9	267.7				
Mar	-13.7	03	4.2	-26.6	5.5	02	210	1.5	0.27	185	16	986.3	03	1006.1	966.8	260.5				
Apr	-23.0	01	-13.0	-31.9	4.4	01	196	3.3	0.76	198	17	974.2	01	988.8	954.3	252.0				
May	-22.6	01	2.4	-34.1	4.6	01	216	1.6	0.35	178	22	978.7	01	1012.7	956.6	252.1				
Jun	-17.7	00	-0.2	-29.6	4.9	67	192	4.2	0.86	180	22	978.2	00	998.0	951.8	257.1				
Jul	-16.5	00	3.4	-34.4								984.0	00	1006.2	962.5	257.8				
Aug	-24.9	00	-5.5	-33.1								977.5	01	992.9	957.8	249.8				
Sep	-19.2	02	-1.8	-30.5								980.9	02	1020.3	944.9	255.5				
Oct	-14.3	00	4.6	-22.6								974.0	00	991.5	952.5	260.9				
Nov	-7.2	01	2.9	-15.4								977.7	00	987.9	968.2	267.7				
Dec	-3.2	04	1.9	-8.9								978.0	01	986.1	969.1	271.7				

MEAN -14.5

978.0

Mon	Mean	% of		Mean	% of				Mean	% of						
	Air	Mon	Max Air	Min Air	Wind	Mon	Result		Max	Air	Mon	Max Air	Min Air	Potential		
Temp	Data	Temp	Temp	Temp	Speed	Data	Wind		Wind	Press	Data	Press	Press	Temp		
(C)	Abs	(C)	(C)	(C)	(m/s)	Abs	(dir	vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(K)

Uranus Glacier (8920) 71.43S 68.93W 780 M

Jan	-4.7	40	1.8	-12.6	5.2	40	022	4.4	0.85	040	19	894.9	40	906.5	882.3	277.2
Feb	-4.7	01	2.2	-17.2	5.3	00	004	4.3	0.80	338	23	905.2	00	922.6	885.9	276.2
Mar	-6.2	00	3.6	-19.1	4.3	00	009	3.5	0.83	007	20	913.0	00	934.3	887.3	274.0
Apr	-11.5	00	-2.6	-25.6	5.6	00	010	4.8	0.86	338	28	895.8	00	910.4	868.8	270.0
May	-10.7	01	-0.6	-23.5	5.1	01	358	4.6	0.89	338	23	904.3	01	940.5	879.4	270.2
Jun	-11.5	00	0.6	-26.8	6.1	00	358	5.3	0.87	025	24	905.3	00	931.9	877.0	269.2
Jul	-10.9	01	-1.9	-24.2	6.3	01	360	5.7	0.90	338	35	911.8	01	933.1	886.6	269.3
Aug	-17.8	00	-2.6	-34.5	4.6	00	003	3.9	0.86	030	26	901.8	00	918.4	875.3	263.1
Sep	-16.3	00	-2.6	-37.1	6.2	00	352	5.6	0.91	004	25	909.5	00	952.4	875.5	263.9
Oct	-11.5	75	-3.1	-19.0	5.4	75	347	5.0	0.91	338	24	908.3	75	928.7	890.3	269.0
Nov	-6.0	33	2.1	-15.6	3.7	32	357	3.0	0.81	337	22	907.4	32	917.4	891.4	274.7
Dec	-5.1	22	5.6	-14.1	3.3	19	025	2.5	0.75	022	15	905.0	19	917.3	893.6	275.8
	-9.7				5.1		002	4.3	0.85			905.2				

Limbert (8925) 75.42S 59.85W 40 M

Jan																
Feb	-13.9	34	2.2	-26.8	1.6	34	206	0.4	0.25	202	8	989.8	34	1001.5	978.7	260.0
Mar	-20.6	00	1.0	-37.1	1.7	00	208	1.0	0.59	184	8	997.8	00	1015.2	980.8	252.7
Apr	-28.7	00	-16.5	-42.1	2.9	00	206	2.7	0.93	213	16	986.0	00	999.2	967.1	245.5
May	-31.5	01	-11.1	-44.5	2.3	01	202	1.9	0.82	202	13	991.4	01	1024.3	976.6	242.3
Jun	-25.6	00	-5.5	-40.1	1.7	00	210	1.3	0.78	201	13	990.5	00	1010.3	964.6	248.3
Jul	-28.8	03	-5.6	-42.4								995.8	03	1020.0	971.0	244.7
Aug	-31.8	62	-20.6	-48.6								990.8	62	1004.0	974.1	242.0
Sep	-30.7	37	-15.0	-40.4								986.6	37	1008.3	956.5	243.4
Oct	-21.0	00	-10.9	-32.6								986.5	00	1004.0	963.4	253.1
Nov	-11.5	00	0.1	-26.8								988.9	00	1000.3	975.9	262.5
Dec	-4.3	02	1.1	-14.2								990.6	00	1000.4	976.4	269.6

Racer Rock (8947) 64.07S 61.61W 17 M

Jan	1.5	13	6.1	-1.4	6.4	13	011	1.1	0.18	341	21	977.6	13	993.1	961.5	276.4
Feb	1.3	16	5.2	-2.0	5.2	16	044	1.4	0.27	068	24	992.0	16	1010.2	976.3	275.1
Mar	0.4	15	4.9	-3.5	4.9	14	044	1.3	0.27	077	22	999.7	14	1017.5	977.0	273.6
Apr	-1.0	12	2.9	-6.8	6.9	12	017	2.3	0.33	289	30	984.4	12	998.9	959.1	273.4
May	-2.6	15	2.2	-7.6	5.2	15	002	1.4	0.26	330	26	994.3	15	1031.1	964.2	271.0
Jun	-3.3	15	0.8	-7.2	7.8	15	025	2.3	0.30	078	33	993.5	15	1014.3	959.9	270.4
Jul	-3.9	14	1.0	-8.4	5.0	14	078	1.8	0.37	059	24	1001.8	14	1029.0	960.9	269.2
Aug	-6.0	14	0.1	-11.9	6.6	14	084	1.4	0.21	230	26	989.0	14	1005.4	956.8	268.0
Sep	-6.0	14	1.0	-16.1	6.8	14	254	0.7	0.11	292	27	998.2	14	1034.8	968.8	267.3
Oct	-1.8	34	2.8	-6.0	6.0	33	156	1.0	0.18	219	30	986.5	33	1016.7	953.5	272.4
Nov	-0.7	18	3.6	-4.0	5.0	16	110	1.2	0.24	203	22	992.0	16	1007.3	970.5	273.1
Dec	1.0	15	6.1	-2.9	5.9	13	082	2.2	0.38	067	23	987.0	13	1002.1	968.1	275.2

MEAN	-1.8	6.0	051	1.1	0.26	991.3
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Mon	Mean	% of		Mean	% of							Mean	% of			
	Air	Mon	Max Air	Min Air	Wind	Mon	Result	Max	Air	Mon	Max Air	Min Air	Potential			
Temp	Data	Temp	Temp	Speed	Data	Wind	Wind	Wind	Press	Data	Press	Press	Temp			
(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	(dir	(mb)	Abs	(mb)	(mb)	(K)			

Bonaparte Point (8923) 64.78S 64.07W 8 M

Jan	0.5	09	3.5	-2.5							961.4	07	974.5	940.8	276.8
Feb	0.7	08	4.6	-2.9							975.7	08	995.9	956.3	275.8
Mar	0.1	08	4.9	-5.5							982.9	07	1002.4	959.2	274.6
Apr	-0.7	07	3.6	-8.4							967.5	07	979.9	940.9	275.0
May	-2.1	08	3.8	-8.1							978.6	08	1017.5	943.6	272.7
Jun	-2.9	06	4.2	-8.1							976.8	06	1001.0	940.8	272.1
Jul	-3.4	07	3.8	-9.1							985.7	07	1015.3	944.4	270.9
Aug	-5.4	07	1.4	-13.0							973.6	07	990.0	937.9	269.8
Sep	-7.0	06	1.9	-18.9							984.1	06	1020.2	947.5	267.4
Oct	-1.9	09	3.6	-8.8											
Nov	-0.8	10	4.2	-9.6											
Dec	1.2	14	5.6	-2.1											
MEAN	-1.8														

Sky-Blu (8917) 74.97S 71.49W 1395 M

Jan	-10.1	00	1.9	-19.8	6.8	00	321	5.3	0.78	331	29	822.8	00	836.4	812.7	278.1
Feb	-12.4	07	1.1	-28.1	8.4	07	358	6.3	0.76	011	32	813.0	07	839.7	793.8	276.7
Mar	-14.4	01	-5.0	-40.8	11.0	01	014	9.6	0.87	360	36	813.3	01	833.9	792.7	274.5
Apr	-24.2	00	-10.5	-43.0	6.2	00	037	5.4	0.87	022	28	798.4	00	812.4	777.4	265.5
May	-21.6	01	-10.0	-38.0	9.3	01	023	8.4	0.91	007	30	804.2	01	836.2	784.0	267.7
Jun	-21.6	00	-8.1	-40.5	9.3	00	015	6.4	0.68	025	33	805.3	00	827.4	786.1	267.6
Jul	-19.9	00	-10.8	-36.1	13.4	00	010	11.7	0.87	005	45	808.9	00	827.1	788.6	269.1
Aug	-27.0	01	-12.4	-44.0	6.1	01	030	4.5	0.74	012	25	801.1	01	816.7	781.5	262.3
Sep	-25.6	00	-12.0	-45.0	9.9	00	349	5.3	0.53	011	45	806.1	00	844.4	773.6	263.3
Oct	-18.7	00	-6.0	-31.5	9.7	00	020	8.2	0.85	021	37	801.7	00	824.6	786.0	271.1
Nov	-13.8	10	-2.9	-24.5	7.8	10	017	5.4	0.69	007	35	808.4	10	818.0	791.5	275.7
Dec	-13.5	07	-0.2	-25.2	6.8	07	045	4.4	0.64	352	21	808.5	07	817.1	798.5	275.9
MEAN	-18.6				8.7		014	2.5	0.77			807.6				

Santa Claus Is (8933) 64.96S 65.67W 25 M

Jan	0.8	05	7.0	-1.9	7.0	05	207	1.6	0.23	255	24	975.6	05	987.8	953.9	275.9
Feb	1.0	06	5.6	-1.2	6.6	06	203	1.8	0.27	274	28	990.1	06	1010.3	968.8	274.9
Mar	0.5	04	3.5	-3.6	6.2	04	235	1.8	0.30	261	19	997.3	04	1016.0	972.0	273.8
Apr	-0.7	07	2.2	-5.5	7.7	07	188	2.3	0.30	144	24	981.5	07	995.1	954.5	273.9
May	-1.9	08	1.8	-5.6	6.6	08	165	1.6	0.25	260	22	992.1	08	1030.9	955.8	271.9
Jun	-2.5	06	1.2	-6.6	9.7	06	184	1.7	0.17	271	30	990.0	06	1014.5	955.5	271.4
Jul	-3.2	13	0.1	-7.6	6.5	19	252	3.1	0.48	274	27	999.1	13	1029.9	959.3	270.0
Aug	-4.8	48	-0.1	-12.8	7.2	48	141	1.6	0.22	261	24	984.2	48	1001.1	953.0	269.6

Mon	Mean	% of		Mean	% of							Mean	% of			
	Air	Mon	Max Air	Min Air	Wind	Mon	Result				Max	Air	Mon	Max Air	Min Air	Potential
Temp	Data	Temp	Temp	Speed	Data	Wind	vv	Con	dir	vv	Press	Data	Press	Press	Temp	
(C)	Abs	(C)	(C)	(m/s)	Abs	(dir					(mb)	Abs	(mb)	(mb)	(K)	
Clean Air (8987)		90.00S					2835 M									
Jan	-29.0	03	-21.9	-37.4	3.5	03	021	3.2	0.91	015	9	681.7	03	691.0	672.9	272.4
Feb	-42.3	00	-29.6	-57.2	3.0	00	011	2.0	0.68	352	11	682.2	19	694.9	671.2	259.0
Mar	-55.2	00	-36.4	-71.0	3.2	00	051	2.0	0.62	319	16					
Apr	-62.3	00	-46.5	-72.4	3.9	00	048	3.3	0.86	094	12					
May	-60.2	01	-40.6	-72.1	4.0	01	043	3.2	0.80	360	17	677.1	62	696.2	663.5	232.1
Jun	-59.9	00	-42.1	-75.6	4.3	00	031	3.3	0.77	285	12					
Jul	-61.3	00	-42.1	-75.1	4.8	00	019	3.7	0.77	355	13					
Aug	-59.8	00	-43.4	-74.9	4.1	00	025	3.1	0.76	004	13					
Sep	-61.3	00	-42.5	-75.8	4.4	00	033	3.3	0.76	360	12					
Oct	-50.3	00	-34.5	-64.0	4.5	00	001	3.4	0.76	347	13	674.1	72	682.6	660.4	256.6
Nov	-33.2	00	-23.6	-52.4	5.7	00	356	4.6	0.82	275	16	689.2	29	698.3	668.8	268.1
Dec	-26.2	00	-21.9	-30.8	3.3	00	011	2.9	0.89	340	10	692.1	00	700.3	681.7	274.3
MEAN	-50.1				4.1		023	3.0	0.78							
Henry (8985)		89.01S					1.03 W					2755 M				
Jan	-27.0	00	-21.1	-34.8	4.3	00	032	3.9	0.91	023	11	691.0	00	700.4	681.4	273.7
Feb	-40.5	03	-28.5	-54.2	3.2	03	053	2.6	0.81	046	8	690.7	03	705.8	680.4	258.6
Mar	-54.1	00	-35.1	-66.0	2.9	00	070	2.1	0.73	324	10	691.4	00	707.2	678.1	243.4
Apr	-59.9	00	-51.0	-69.0	5.7	00	060	5.3	0.93	026	10	689.9	00	702.6	675.9	237.1
May	-57.9	01	-39.4	-68.2	5.6	01	057	4.9	0.88	032	16	686.4	01	706.2	672.2	239.8
Jun	-57.2	00	-42.8	-69.8	5.8	00	051	5.3	0.91	033	14	691.5	00	711.7	674.6	240.0
Jul	-59.7	00	-41.9	-70.1	6.4	00	046	5.8	0.90	021	13	687.7	00	709.8	675.4	237.6
Aug	-59.0	00	-41.8	-73.5	5.7	00	054	5.0	0.87	028	12	687.0	00	704.7	673.2	238.5
Sep	-59.3	56	-41.1	-68.6	7.5	56	050	6.4	0.86	033	12	695.3	56	713.6	671.9	237.3
Oct	-48.8	35	-36.8	-56.9	5.1	35	033	4.5	0.88	047	11	682.4	35	691.1	669.4	250.3
Nov	-31.4	00	-22.5	-48.4	5.5	00	024	4.5	0.82	285	16	697.6	00	707.4	679.9	268.0
Dec	-23.9	00	-18.2	-27.9	3.1	00	035	2.8	0.92	029	8	701.3	00	709.8	690.6	275.8
MEAN	-48.2				5.1		048	4.3	0.87			691.0				
Nico (8924)		89.00S					89.67E					2935 M				
Jan	-28.3	00	-22.8	-35.6	3.0	00	287	2.6	0.89	251	10	671.8	00	680.3	662.4	274.4
Feb	-41.7	00	-29.6	-56.9	2.9	00	296	1.9	0.67	212	8	670.1	00	684.3	659.8	259.6
Mar	-55.2	00	-37.0	-69.6	1.9	00	332	1.1	0.58	229	13	670.5	00	685.1	658.2	244.3
Apr	-61.1	00	-47.0	-74.1	3.1	00	325	2.6	0.85	012	11	669.4	00	682.4	655.9	237.8
May	-59.4	01	-39.8	-72.1	3.3	01	319	2.7	0.82	270	14	666.1	01	685.4	653.6	240.1
Jun	-58.5	00	-43.5	-74.9	3.2	00	304	2.5	0.78	317	12	671.0	00	691.6	654.5	240.6
Jul	-60.7	00	-42.6	-73.5	4.0	00	306	3.0	0.75	002	14	666.7	00	686.8	654.2	238.6
Aug	-59.7	00	-42.6	-75.5	3.4	07	306	2.7	0.79	298	9	666.2	00	684.3	653.3	239.7
Sep	-60.9	00	-45.5	-74.5	4.5	00	316	3.3	0.74	360	13	668.3	00	692.0	648.7	238.2
Oct	-49.6	00	-34.0	-62.0	3.4	02	279	2.4	0.70	360	12	662.0	00	671.6	649.7	251.6
Nov	-32.8	00	-22.9	-49.4	4.6	00	270	3.7	0.80	210	14	678.0	00	688.1	658.4	268.6
Dec	-24.8	00	-18.0	-28.8	1.8	00	287	1.6	0.88	265	7	682.0	00	690.2	672.1	277.1



MEAN	-49.4				3.3		301	2.4	0.77				670.2				
	Mean	% of			Mean	% of							Mean	% of			
	Air	Mon	Max Air	Min Air	Wind	Mon	Result			Max			Air	Mon	Max Air	Min Air	Potential
	Temp	Data	Temp	Temp	Speed	Data	Wind			Wind			Press	Data	Press	Press	Temp
Mon	(C)	Abs	(C)	(C)	(m/s)	Abs	(dir	vv)	Con	(dir	vv)	(mb)	Abs	(mb)	(mb)	(mb)	(K)

Relay Station (8918)	74.02S						43.06E						3353				
													M				
Jan	-32.5	00	-23.9	-45.6	6.1	00	104	5.5	0.91	085	17	639.8	00	651.4	630.1	273.5	
Feb	-41.3	00	-27.2	-57.1	5.8	00	236	5.4	0.93	254	18	637.9	00	656.5	628.4	263.6	
Mar	-53.5	00	-39.5	-66.0	7.1	00	127	6.8	0.95	117	16	634.3	00	641.9	627.0	250.2	
Apr	-55.7	00	-37.4	-66.4	6.8	00	121	6.4	0.94	154	15	636.5	00	647.8	620.8	247.5	
May	-58.2	01	-41.9	-67.8	8.8	01	131	8.5	0.96	127	21	631.2	01	648.9	616.9	245.2	
Jun	-54.6	00	-38.4	-69.5	7.6	00	118	7.2	0.95	099	17	637.3	00	650.6	622.2	248.6	
Jul	-60.0	00	-46.9	-71.4	7.7	00	125	7.4	0.96	121	18	632.4	00	644.5	620.3	243.0	
Aug	-56.8	00	-37.5	-71.4	7.6	00	121	7.1	0.93	281	15	634.8	00	652.2	624.4	246.4	
Sep	-58.4	00	-50.2	-68.2	7.1	00	132	6.8	0.96	127	18	635.5	00	657.1	617.4	244.5	
Oct	-54.3	00	-37.4	-66.1	5.9	00	135	5.6	0.95	124	14	627.8	00	638.9	616.6	250.0	
Nov	-37.4	00	-22.9	-54.8	8.8	00	113	8.4	0.95	112	18	644.4	00	655.4	632.8	267.4	
Dec	-29.8	00	-22.2	-39.1	7.1	00	099	6.8	0.96	079	16	649.4	00	657.3	643.5	275.3	
MEAN	-49.4				7.2		125	6.1	0.95			636.8					

Mizuho (21359)	70.70S						44.29E						2260				
													M				
Aug																	
Sep																	
Oct	-34.5	21	-21.9	-47.8	9.0	21	090	8.7	0.97	101	19	730.3	21	741.7	716.4	261.1	
Nov	-23.6	00	-11.1	-40.2	9.8	00	093	9.6	0.98	078	17	742.9	00	759.3	729.5	271.7	
Dec	-17.8	02	-10.4	-26.9	7.7	02	087	7.5	0.97	091	20	748.4	02	756.3	739.0	277.4	

## 4.2. Three Hourly Data Summaries

After the data are received from Service ARGOS, ten minute interval data are created for each AWS unit. The data are calibrated for the individual station instruments, but no other corrections are made. This data set is created for those users who need fairly current information. These data are available by anonymous FTP (see Section 8).

The 10 minute data set for each AWS unit for the month is scanned to pick out the nearest observation within forty minutes of the UTC hours 00, 03, 06, 09, 12, 15, 18, and 21 to produce the three hourly data set. If valid data are not available within forty minutes of the three hourly time interval, then the entry is left blank to indicate missing data. The means, standard deviations, resultant wind speed and direction, the distribution of temperature, and wind speed with wind direction are determined from the three hourly observations and are presented as a monthly summary at the bottom of each page. A wind direction value of zero indicates a wind speed less than  $0.50 \text{ m s}^{-1}$ . North is indicated by a value of 360 degrees. The maximum and minimum values are taken from the complete 10 minute data set, not the three hourly data set. The appropriate monthly data from the three hourly data set are used for the monthly summaries presented in Section 4.1. In the presence of sunlight the air temperatures are questionable if the wind speed is less than  $1 \text{ m s}^{-1}$ . These summaries are available by anonymous FTP (see Section 8). If you are unable to access the Internet, we will send the information either on diskettes or paper. Please contact us for further information (the address is at end of Section 8).

## 5. AWS CALIBRATION

### 5.1. Temperature

The external and internal temperatures are calibrated using a 1000 ohm 0.05% resistor in place of the platinum resistance thermometers with 1000 ohms resistance at  $0^{\circ}\text{C}$ . Because the other resistances in the temperature circuit are known only to 1%, the temperature calibration will vary from one electronic unit to another. The correction factor determined from the calibration resistor is programmed into the read-only-memories for each unit. After the correction factors have been programmed into the AWS, a calibration box with 0.1% resistors is used to check the temperature calibration.

### 5.2. Pressure

The atmospheric pressure transducer is a Parascientific model 215A Digiquartz® pressure gauge. The transducer frequency changes from a nominal 40 kHz at zero pressure to a nominal 36 kHz at 1000 hPa. The pressure resolution is about 0.05 hPa.

Paulin aneroid barometers calibrated against a mercury barometer of 10 mm bore are used to check the pressure gauge calibration. Comparisons are made between AWS units, a Parascientific Model 760-16B accurate to  $\pm 0.1 \text{ hPa}$ , and with the mercury barometers at Scott Base, Antarctica. The calibrations should be within  $\pm 0.2 \text{ hPa}$ .

The reference vacuum on the older pressure transducers can degrade with time with a maximum observed 4 hPa shift to lower pressure after fifteen years. Recalibration of each pressure transducer would be desirable when each unit is serviced.

### 5.3. Wind direction and Speed

The Belfort model 123 aerovane measures wind direction and speed. The aerovane rotates a potentiometer wiper, and the fraction of full scale of the potentiometer is measured. The wind direction is checked by positioning the aerovane to the cardinal directions relative to the boom supporting the aerovane. North or the potentiometer zero is towards the antenna on the boom and has a maximum dead zone of  $3^{\circ}$ . During the field installation, the boom is usually aligned along the north-south line as determined from the sun's azimuth, longitude, and Greenwich Mean Time. In some cases the  $180^{\circ}$  end of the boom may point in a direction other than south. At Manuela site, the  $180^{\circ}$  end of the boom points up the glacier and a correction is added to the data during processing. At Byrd site the wind is usually out of the north so the

boom was rotated 120° and the correction added during the data processing. The wind speed is determined from the aerovane tachometer voltage output as 0.0472 volt per meter per second. The aerovane tachometers are spun at 1800 rpm with a load of 1071.5 ohms, and the output should be 9.20 +/-0.05 vdc.

Additional wind sensors were used with AWS units for 2000. These were the R.M. Young wind monitor model 05103 and the Hydro-Tech WS-3 anemometer with the WP-3 aerovane. The Hydro-Tech system was used for measuring wind speed in the Adelie Coast area. The Hydro-Tech WS-3 is a disk rotor, 3 in. high and 12 in. overall diameter, with radial cups, and the threshold sensitivity is 3 mph. The anemometer utilizes a commercial dc tachometer generator. Output is 0 to +5 vdc (and 0 to 1 ma) over the desired full scale wind speed of 85 m/s. Accuracy is +/- 2%.

The R.M. Young monitor 05103 also used a 10,000 ohm potentiometer with a 3° dead zone so that the wind direction was recorded identically with the Belfort/Bendix aerovanes. The wind speed was from the range of 0 to 1.0 volt full scale corresponding to 50 m/s. Thus the calibration for wind speed was a nominal .195 m/s/bit for the R.M. Young with +/- 1% up to 50 m/s.

#### 5.4. Relative Humidity

The Vaisala HMP-35A/45A humidity sensor output voltage varies linearly with relative humidity (U). The sensor is calibrated by placing it over saturated salt solutions with known relative humidities at room temperature: sodium chloride (U=75%), and lithium chloride (U=12%) are used. In addition, a dry inert gas, forced past the sensor, gives a 0% U, and the sensor output can be zeroed. Then, the gain setting can be set directly using a salt solution with a high relative humidity, such as sodium chloride. The resolution of the humidity sensor is about 1% and the drift is 2 to 3% per year in the field. The relative humidity data are not included on the summary pages but are included in the 3 hourly data sets.

#### 5.5. Vertical Air Temperature Difference

Two junction thermocouples are used to measure the air temperature difference between 3 m and 0.5 m on the tower. The output is about 78 microvolts for 1°C temperature difference between the junctions at 0.0°C, dropping to 60 microvolts at -80°C. Zero output is adjusted to 0.4 volts, so that 0 to 1 volt corresponds to a -6°C to +9°C range of air temperature differences between 3 m and 0.5 m. The resolution is 0.05°C. Calibration of the individual systems is done by applying known voltages to the amplifier input. The vertical temperature difference data are not included on the summary pages but are included in the 3 hourly data sets.

## 6. AWS OPERATIONS SUMMARY FOR 2000

### 6.1. AWS Performance

Forty-seven AWS units were installed at the start of 2000 and 51 were installed by the end of 2000. Based on the installation months the AWS units delivered 85% of the temperature data, 82% of the pressure data and 72% of the wind data during 2000. Complete data sets were received from 12 AWS units and 38 AWS units operated for the installed period. Eleven AWS units were not received for one month or more during the year or stopped during the year. Some of the stations were not received during the winter months due to low battery voltage.

The wind system has the poorest performance. If the wind speed is zero or the wind direction is constant for extended periods (days to months) then the data is considered invalid. The reason for this behavior is not known but is believed to be due to the build up of frost on the wind system. This usually occurs in the winter season and at several AWS sites. The wind speed is most frequently zero when the wind direction is constant.

Site	Performance
D-10	The aerovane was "frozen" occasionally in July and August. The station transmitted erratically from July through the beginning of November and stopped transmitting 10

	September. Transmission resumed 5 November. The relative humidity sensor and delta-T sensor were not functioning.
D-47	Temperature sensor not functioning. Station transmitted erratically from July through early November. Station resumed normal transmission 5 November. No relative humidity or delta-T sensors.
D-57	Station stopped transmitting 18 January. No delta-T or extra high wind speed sensor.
Dome C II Port Martin	OK. The aerovane stopped functioning 16 February. No delta-T or extra high wind speed sensor. Pressure corrected for high wind speed conditions.
Cape Denison	Station stopped transmitting 29 April and resumed 27 May. Several transmission gaps of a week or more from June through October. New solar panel, batteries, and Junction box installed 18 December. Pressure corrected for high wind speed conditions. No delta-T or extra high wind speed sensor.
Penguin Point	The aerovane was "frozen" occasionally in July. The station stopped transmitting for part of August. Pressure corrected for high wind speed conditions. No delta-T or extra high wind speed sensor.
Sutton	Wind speed and direction not functioning properly because the tower may be leaning or have fallen. Station stopped transmitting from 9 August to 21 October and also parts of November and December. A few transmissions were received in September. Station removed 18 December.
Byrd	Station stopped transmitting 6 September due to low battery voltage. The wind direction was incorrect and so was removed.
Mount Siple	Site has a "dog house" AWS without wind speed and direction. Pressure sensor not functioning correctly January, February, parts of November, and December.
Theresa	Delta-T sensor buried. Station stopped transmitting 4 June, transmitted in mid-July, and then not until October.
Doug	Aerovane frozen occasionally in September. Relative humidity sensor not functioning.
Elizabeth Brianna	Aerovane "frozen" most of July to mid October. New batteries were installed and the station began transmitting on 18 January. The relative humidity sensor was not functioning until April, and it continued with sporadic problems through August.
Harry	The delta-T sensor is not functioning. The aerovane was "frozen" occasionally from May through October.
Erin	Aerovane not functioning until it was repaired 19 January. The aerovane was "frozen" occasionally from July through November.
JC Siple Dome	Site removed 19 January. Aerovane "frozen" occasionally from May through November. Delta-T sensor not installed.
Swithinbank Noel/ITASE	Delta-T sensor not functioning. Station installed on 19 January. Relative humidity sensor malfunctioning occasionally throughout the year. The aerovane was "frozen" occasionally from April through July. Station stopped transmitting 19 July.
Marble Point Ferrell	OK. New station installed 1 February. Erratic transmissions occurred by mid-February and the station stopped transmitting 11 March.
Pegasus North	Station was replaced on 3 February. Delta-T not functioning. The aerovane was "frozen" occasionally in September. Station transmitted erratically in November.
Pegasus South	Relative humidity sensor not functioning. Wind speed not functioning until the station was repaired 3 February. Aerovane "frozen" periodically May through November. Delta-T erratic all year.
Minna Bluff	Delta-T sensor not functioning. Aerovane occasionally "frozen" January, March through July, and September. Station stopped transmitting 28 September.
Linda	Aerovane occasionally "frozen" April through November.

Willie Field	Delta-T sensor not functioning.
Windless Bight	OK.
Herbie Alley	Pressure functioned erratically April through December.
Cape Spencer	OK.
Cape Bird	Pressure not functioning correctly January, February, and September through November.
Laurie II	New site established 1 February. Delta-T sensor not functioning. Aerovane occasionally "frozen" in May. Station stopped transmitting 5 June and began again on 26 October. Erratic transmissions in November and December.
Whitlock	Station stopped transmitting 9 January. Delta-T sensor not functioning.
Possession Island	Site has a "dog house" AWS without wind speed and direction. Increased instances of missing transmissions after October.
Manuela	Aerovane broken.
Marilyn	Aerovane occasionally "frozen" May through August. Station stopped transmitting 6 August due to low battery voltage.
Schwerdtfeger	Relative humidity sensor functioned erratically from mid March through October and then began working again for November and December. Aerovane "frozen" part of August and September.
Gill	Relative humidity sensor not functioning. Aerovane "frozen" part of June and July, all of August through October, and part of November.
Lettau	Transmitting with gaps in January and February. Aerovane "frozen" parts of October through December. November and December had many gaps in the transmission.
Elaine	Relative humidity sensor worked sporadically January through May.
Larsen Ice Shelf	OK.
Butler Island	Aerovane not functioning from mid-June through December. Pressure continues to need correction due to the failure of the precision time-based correction to the system clock.
Uranus Glacier	Station removed 19 January for repair and replaced 24 January. Large gaps in transmission October through December.
Limbart	Station removed for testing and reinstalled 10 February. Delta-T sensor not functioning. Aerovane stopped functioning 5 July. Large gaps in transmission in August and September due to low battery voltage.
Racer Rock	OK.
Bonaparte Point	Relative humidity sensor not functioning. Aerovane not functioning.
Sky Blu	OK.
Santa Claus Island	Station stopped transmitting 18 August with a few transmissions in October. No transmissions for November and December. Delta-T sensor not functioning. Relative humidity sensor erratic February through July. Aerovane "frozen" part of July.
Clean Air	Occasional problems with relative humidity sensor. Pressure functioning erratically March through November.
Henry	Station stopped transmitting 16 September and resumed transmitting 11 October as the battery recharged in the austral spring.
Nico	Aerovane occasionally "frozen" in August.
Relay Station	OK.
Mizuho	New site established 7 October. No relative humidity or delta-T sensors.

## 6.2. AWS Antarctic Field Activities

### McMurdo area

On 1 February, Ferrell site was visited by Jason Vandervest. A completely new station was installed (AWS 21355) with help from the Twin Otter crew. Later on 1 February, a new station site was establish near Cape Crozier (AWS 21364). This site will be called Laurie II.

On 3 February, Pegasus North and Pegasus South (AWS 8937) sites were visited by Dr. John Cassano and

Jason Vandervest. AWS 8928 at Pegasus North was removed and a new station (AWS 21357) was installed. At Pegasus South the aerovane was replaced.

### **West Antarctica**

Dr. John Cassano, Dr. Chris Shuman, and Jason Vandervest flew to Siple Dome on 15 January to conduct AWS field work in West Antarctica. GPS coordinates were recorded for Siple Dome (8938) site, and it was noted that the boom was not aligned with north. On 18 January, the team went to Brianna (21361) site. Two battery boxes and 1 battery cable were replaced, and GPS coordinates were recorded. The team moved on to Elizabeth (21361) site where two new battery boxes and cables were installed, and GPS coordinates were recorded. On 19 January, the team went to JC (21357) site. The site was anchored loosely, and the antenna was broken. They were unable to replace the antenna, so the entire site was removed. On to Erin (21363) site, the team recorded GPS coordinates. They installed 2 new battery boxes and cables, raised the lower delta T boom because the probe was covered with snow, and replaced the Bendix/Belfort aerovane. Finally, the team installed a new AWS (8936) at Noel/ITASE site. GPS coordinates were recorded.

### **Polar Plateau**

Dr. John Cassano reinstalled the Clean Air AWS (8987) at the new site at South Pole station on 26 January.

Mizuho AWS unit (21359) was installed at Mizuho Station on 7 October by members of JARE.

### **Adelie Coast**

Rob Flint met the USGS Polar Sea in Hobart for the trip along the Adelie Coast. On 18 December Rob Flint and Blake Moore went to Port Martin (8909). The solar panel had been smashed by an impact. Some of the connectors and the junction box were so corroded by salt that it was impossible to do any work. A return visit with better tools and equipment was made on 20 December. New batteries, solar panel and junction box were installed. Also on 18 December, Gerd Wendler and Drew Egressey went to Sutton (8939). The station was removed and returned to the ship.

On 19 December, Rob Flint and Rachel Smith went to Penguin Point. They replaced the batteries and tightened the guys. A visual inspection showed the station to be in good condition with no evidence of salt corrosion. On 20 December, Rob Flint and LCDR Jackson went to Cape Denison. The batteries were replaced, and no evidence of salt deposition was found on the station. Installation of Cape Webb was scrapped due to transportation problems.

### **Antarctic Peninsula**

The British Antarctic Survey serviced several of the units on the Antarctic Peninsula. Limbert (8925) site had stopped transmitting. The batteries were charged, so the unit was moved to Rothera on 14 January for further testing. A fault was found on the CPU board, and the unit was replaced on 10 February. A new tower section was added, and the boom was replaced. Uranus Glacier (8920) was visited on 7 January. The tower was raised, three new guys and deadmen were placed, and two new batteries and the junction box were replaced. The unit was removed to Rothera on 19 January because the transmissions were garbled. The 50 MHz oscillator was retuned, and the unit replaced on 24 January.

AWS unit 8917 (Sky-Blu) was revisited on 8 and 9 February. The tower was raised by two sections. Larsen Ice (8926) site was also visited on 9 February. Two new batteries were added and the guys were tightened. On 11 February, Butler Island (8902) site was visited. The tower was raised and new battery boxes added. The wind propeller was loose, and there is evidence of salt corrosion at the site.

## **7. GLOBAL TELECOMMUNICATIONS SYSTEM**

The data from 31 Antarctic AWS units were entered into the Global Telecommunications System (GTS) during 2000. The data are collected by Service ARGOS. As soon as the data are received, Service ARGOS processes them and sends them on to the National Weather Service which distributes the data to the GTS. The data headers are:

```
SMAA14 KARS YYGGgg  
SIAA14 KARS YYGGgg  
SNAA14 KARS YYGGgg
```

where S indicates surface, M is main observations (at 00, 06, 12, and 18 UT), I is intermediate observations (at 03, 09, 15, and 21 UT), and N is any other time. AA14 is for Antarctica, and KARS stands for the Largo receiving center (backup is LFPW for the center in Toulouse, France). YY indicates the day in the month, GG is the hour, and gg is the minutes. Table 3.1 contains the WMO identification number used by the GTS grouped according to their purpose and proximity where possible.

The University of Wisconsin-Madison is responsible for obtaining WMO numbers for AWS sites and for providing Service ARGOS with calibration information for processing the data. The main reason for getting the AWS data into the GTS is to make sure that the data are available in near real time for all organizations operating in Antarctica.

## 8. DATA AVAILABILITY

The data from our Automatic Weather Stations are available by anonymous FTP. The IP address and domain name are 128.104.109.33 (ice.ssec.wisc.edu). The login is "anonymous" (do not use the quotation marks), and the password is your email address. Once you have logged in, change to the pub/aws subdirectory. A listing of our station locations, names, and ARGOS ID numbers is located in the file "biglist" in this subdirectory. It is meant to serve as a guide to our stations as their ID numbers sometimes change. A complete guide for navigating the site may be found in the file "readme.faq".

Our three-hourly interval data for Antarctica in ASCII text format are contained in the year subdirectories of pub/aws/antrdr. The data have been corrected, i.e. an effort has been made to remove the bad data points. These data take longer to process, so the data for recent months are not available in this format. Within each of the year subdirectories of pub/aws/antrdr, there are text files named "3hrlist??" (where ?? indicates the last two digits of the year). These files list what station's data are contained in which files. The files "readme.updates?" in pub/aws/antrdr contain information on updates and/or corrections to the data, and the file "readme.3format" contains file name construction information and format of the three-hourly data. The file "readme.mailinglist" contains information on joining a mailing list which distributes information on data updates and changes. To subscribe, send email to aws@ssec.wisc.edu requesting to be added to our mailing list.

The directory pub/aws/summary/monthly contains ASCII printable text files of the paper data summary sheets. The format of the files can be found in the file "readme.sum" while updates and corrections to the data are located in "readme.sumupdates". The data are located in year subdirectories of pub/summary/monthly.

For those users who need more current information, we have created 10 minute interval data in ASCII text format for each station. These data are located in year subdirectories of pub/aws/10min/rdr. The data have been calibrated for the individual station instruments, but no other corrections have been made. The data are generally available up to and including the last full month of this year. The year subdirectories also contain a text file named "namelist??" (where ?? indicates the last two digits of the year in question). These files list what station's data are contained in which files.

Several important readme files are located in pub/aws/10min/rdr. The file "readme.format" contains information on filename construction of the data, as well as well as file content and is a must for those

unfamiliar with the data. The files "readme.updates?" contain important information on changes/additions to the data.

Our site is available 24 hours a day, 7 days a week. If you have questions or problems, send email to [aws@ssec.wisc.edu](mailto:aws@ssec.wisc.edu). We can also be reached by phone at (608) 265-2209 or (608) 265-4816 or fax at (608) 262-5947.

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