# Documentation and Task Lists for 2007/2008

This document describes how raw LTER meteorological data files are post-processed along with notes from station visits. Station notes document datalogger time adjustments, sensor status, sensor maintenance, time of storage module changes, equipment and data problems, maintenance, and other observations. Files are listed alphabetically by file name.

#### File description and task list for files:

- o1=omit from level 1
- ok= no changes to get to level 1
- rclow= reverse temperatures to mV and apply clow subroutine to mV values using Steinhart-Hart equation
- bad= normally would be included in level 1 but number is suspect or know to be incorrect
- flag= reasonable number but needs a note attached concerning its collection

**Relative humidity correction note**: All of the relative humidity (RH) values were corrected for a systematic error in the measurement created by an instrument manufacturer error. All RH data with air temperatures below freezing were corrected using the vapor pressure over ice (rather than over water which was used initially). The error became quite large for very cold temperatures (the correction could grow to around 30%). The polynomials used for the correction is based on Lowe (1977).

```
= [RH3m]*(6.107799961 + [AirT3m] * (0.4436518521 + [AirT3m] * (0.01428945805 + [AirT3m] * (0.0002650648471 + [AirT3m] * (0.000003031240396 + [AirT3m] * (0.0000002034080948 + 0.0000000006136820929 * [AirT3m]))))) / (6.109177956 + [AirT3m] * (0.503469897 + [AirT3m] * (0.01886013408 + [AirT3m] * (0.0004176223716 + [AirT3m] * (0.00000582472028 + [AirT3m] * (0.00000004838803174 + 0.000000001838826904 * [AirT3m])))))
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#### Array I.D. key found at document end.

#### Stations

The following stations are included in this document (*click to advance*):

- Lake Bonney Lake Brownworth Canada Glacier Commonwealth Glacier Explorers Cove Lake Fryxell Fryxell Snowfence Howard Glacier Lake Hoare Lake Hoare Precipitation Taylor Glacier Lake Vanda
- Lake Vida

Beacon Valley Filename: ben07801.dat Beacon Valley met station Station: November 27, 2000 by Susan Kaspari, Thomas Nylen and Adrian Green Date of Establishment: Author of this report: Hassan Basagic File Period: November 30, 2006 (334) @ 1415 to December 8, 2007 (342) @ 1045 Sampling Frequency: wind every 4 secs.; others: every 30 secs. every 15 min Averaging and Output Interval: Program Name: ben034v1 1. array I.D. o1 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rclow 5. corrected mean R.H. @ 3 meters (%) ok (see correction note on page 1) 7. mean solar flux going up (W/m2) - PY18400 ok 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean P.A.R. (micromols/s/m2) - Q32567 multiply by 1.38 15. mean soil temperature @ 0 cm in soil (C) rclow 16. mean soil temperature @ 5 cm in soil (C) rclow 17. mean soil temperature @ 10 cm in soil (C) rclow 18. sample of battery voltage **o**1

- 1. No missing data.
- 2. Adjusted CR10x time back 40 seconds on December 8, 2007 @ 0925
- 3. Checked input values and wind direction on December 8, 2007 @ 0925, everything appears in order.
- 4. Swapped upward facing pyranometer (old#20567, new#45665) and baseplate on December 8, 2007 @ 0956.
- 5. Power off CR10x on December 8, 2007 from 1000 to 1023 to replace battery (100 A hr).
- 6. SM swapped on December 8, 2007 at 1045.

Filename: ben07802.dat Station: Beacon Valley met station November 27, 2000 by Susan Kaspari, Thomas Nylen and Adrian Green Date of Establishment: Author of this report: Hassan Basagic December 8, 2007 (342) @ 1045 to January 29, 2008 (29) at 1500 File Period: Sampling Frequency: wind every 4 secs.; others: every 30 secs. Averaging and Output Interval: every 15 min Program Name: ben034v1 1. array I.D. **o**1 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rclow 5. corrected mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - PY45665 ok 7. mean solar flux going up (W/m2) - PY18400 ok 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean P.A.R. (micromols/s/m2) - Q32567 multiply by 2.27 15. mean soil temperature @ 0 cm in soil (C) rclow 16. mean soil temperature @ 5 cm in soil (C) rclow 17. mean soil temperature @ 10 cm in soil (C) rclow 18. sample of battery voltage **o**1

- 1. No missing data.
- 2. Adjusted CR10x time back by 9 min on January 29, 2008 (29) @ 1510.
- 3. Checked input values and wind direction on January 29, 2008 (29) at 1510, everything appears in order.
- 4. Tightened guy lines.
- 5. SM swapped on January 29, 2008 (29) at 1515. Loaded new program: BEN078v1, which removed the sonic ranger subroutine (not installed at this site).

#### Lake Bonney

Filename: boy07801.dat Lake Bonney met station Station: Date of Establishment: November 24, 1993 by Peter Doran Hassan Basagic Author of this report: File Period: January 29, 2007 @ 1100 to October 31, 2007 at 1945 Sampling Frequency: sonic and prec. every 60 minutes, wind speed every 4 sec, other every 30 sec Averaging and Output Interval: every 15 minutes boy045v1 Program name: array I.D. 1. o1 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rclow 5. corrected mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming up (W/m2) - PY28170ok 7. mean solar flux going down (W/m2) - PY18395 ok 8. mean P.A.R. (micromols/s/m2) - Q30801 divide by 200, multiply by 217.56 9. mean horizontal wind speed (m/s) ok 10. resultant mean wind speed (m/s) o1 11. resultant mean wind direction (degrees from north) ok 12. standard deviation of wind direction (degrees) ok 13. maximum wind speed (m/s) ok 14. minimum wind speed (m/s) ok 15. mean up-facing pyrgeometer, rad. comp. (W/m2) 29786F3 - divide by 250; multiple by 271.74 16. mean up-facing pyrgeometer hemisphere temp Eppley 17. mean up-facing pyrgeometer thermopile (W/m2) Eppley 18. mean up-facing pyrgeometer case temp Eppley 19. mean down-facing pyrgeometer, rad. comp. (W/m2) 32348F3 - divide by 250; multiple by 261.10 20. mean down-facing pyrgeometer hemisphere temp Eppley 21. mean down-facing pyrgeometer thermopile (W/m2) Eppley 22. mean down-facing pyrgeometer case temp Eppley 23. mean soil temperature @ 0 cm in soil (C) rclow

- 24. mean soil temperature @ 5 cm in soil (C) rclow
- 25. mean soil temperature @ 10 cm in soil (C) rclow
- 26. sample depth from sensor to surface (cm) Measured depth (0.412) + Value) \* 100
- 27. sample precipitation (mm)
- ok 28. sample of battery voltage

01

- 1. No power to station upon arrival. Missing data from October 31, 2007 at 1945 to present. Power failure caused by corrosion of power cable. Repaired cable and powered station on November 25, 2007 @ 930. Adjusted CR10x time which was 13 minutes slow.
- 2. Replaced Cr10x datalogger at 0943.
- 3. Checked input values and wind alignment on November 25, 2007 @ 942. All channels are working properly.
- 4. Swapped the following sensors: up-facing pyranometer (old# PY28170, new# PY41099) at 11:35. down-facing pyranometer (old# 18395, new# 40424) at 1145, up-facing pyrgeometer (old# PIR29786, new# PIR30831) at 1430, down-facing (old# 32348, new# 32059) at 1430.
- 5. Swapped storage module n November 25, 2007 @ 0942.

Filename: Station: Date of Establishment: Author of this report: File Period: Sampling Frequency: Averaging and Output Interval: Program name:		boy07802.dat Lake Bonney met station November 24, 1993 by Peter Doran Hassan Basagic November 25, 2007 at 945 to December 20, 2007 at 1000 sonic and prec. every 60 minutes, wind speed every 4 sec, other every 30 sec every 15 minutes boy045v1	
1.	array I.D.		
2.	day ok		
3.	time		
4.	mean air temp. @ 3 m rclow	neters (C)	
5.	corrected mean R.H. ok (see correction	@ 3 meters (%) n note on page 1)	
6.	mean solar flux comir ok	ng up (W/m2) – PY28170	
7.	mean solar flux going ok	down (W/m2) – PY18395	
8.	mean P.A.R. (microm divide by 200, m	ols/s/m2) – Q30801 ultiply by 217.56	
9.	mean horizontal wind speed (m/s) ok		
10.	resultant mean wind speed (m/s) o1		
11.	resultant mean wind direction (degrees from north) ok		
12.	standard deviation of wind direction (degrees) ok		
13.	maximum wind speed ok	l (m/s)	
14.	minimum wind speed ok	(m/s)	
15.	mean up-facing pyrge 30831F - divide b	cometer, rad. comp. (W/m2) by 250; multiple by 277.01	
16.	mean up-facing pyrge Eppley	cometer hemisphere temp	
17.	mean up-facing pyrge Eppley	cometer thermopile (W/m2)	
18.	mean up-facing pyrgeometer case temp Eppley		
19.	mean down-facing pyrgeometer, rad. comp. (W/m2) 32059F3 - divide by 250; multiple by 227.79		
20.	mean down-facing pyrgeometer hemisphere temp Eppley		
21.	mean down-facing py Eppley	rgeometer thermopile (W/m2)	
22.	mean down-facing py Eppley	rgeometer case temp	
23.	mean soil temperature rclow	e @ 0 cm in soil (C)	
24.	mean soil temperature rclow	e @ 5 cm in soil (C)	

- 25. mean soil temperature @ 10 cm in soil (C) rclow
- 26. sample depth from sensor to surface (cm) Measured depth (0.412) + Value) \* 100
- 27. sample precipitation (mm)
  - ok
- 28. sample of battery voltage o1

- 1. Missing two lines of data on December 20, 2007 at 930 and 945.
- 2. Datalogger time correct on December 20, 2007 at 0919.
- 3. Checked input values and wind alignment on December 20, 2007 at 0919. All channels are working properly.
- 4. Maintenance: swapped out power cable between battery and datalogger.
- 5. Swapped storage module on December 20, 2007 at 1005.

Filename: Station: Date of Establishment: Author of this report: File Period: Sampling Frequency: Averaging and Output Interval: Program name:		boy07803.dat Lake Bonney met station November 24, 1993 by Peter Doran Hassan Basagic January 30, 2008 at 1400 to April 9, 2008 at 10:00 sonic and prec. every 60 minutes, wind speed every 4 sec, other every 30 sec every 15 minutes boy045v1		
1.	array I.D. 01			
2.	day ok			
3.	time			
4.	mean air temp. @ 3 m	neters (C)		
5.	corrected mean R.H.	@ 3 meters (%) n note on page 1)		
6.	mean solar flux comir	ng up (W/m2) – PY28170		
7.	mean solar flux going	down (W/m2) – PY18395		
8.	mean P.A.R. (microm	$aols/s/m^2) - Q^{3}0801$		
9.	mean horizontal wind	mean horizontal wind speed (m/s)		
10.	resultant mean wind speed (m/s)			
11.	resultant mean wind direction (degrees from north)			
12.	standard deviation of wind direction (degrees)			
13.	ok maximum wind speed (m/s)			
14.	minimum wind speed	minimum wind speed (m/s)		
15.	mean up-facing pyrge	cometer, rad. comp. (W/m2)		
16.	mean up-facing pyrge	cometer hemisphere temp		
17.	mean up-facing pyrge	cometer thermopile (W/m2)		
18.	Eppley mean up-facing pyrgeometer case temp			
19.	Eppley mean down-facing pyrgeometer, rad. comp. (W/m2)			
20.	32059F3 - divide by 250; multiple by 227.79 mean down-facing pyrgeometer hemisphere temp			
21.	Eppley mean down-facing pyrgeometer thermopile (W/m2)			
22.	mean down-facing py	rgeometer case temp		
23.	mean soil temperature	e @ 0 cm in soil (C)		
24.	mean soil temperature	e @ 5 cm in soil (C)		
	ICIOW			

- 25. mean soil temperature @ 10 cm in soil (C) rclow
- 26. sample depth from sensor to surface (cm) Measured depth (0.412) + Value) \* 100
- 27. sample precipitation (mm)
  - ok
- 28. sample of battery voltage o1

- 1. No missing data.
- 2. SM removed by John Priscu as part of extended season on April 9, 2008 between 1045 and returned at 1320.

#### Lake Brownworth brh07801.dat Filename: Station: Lake Brownworth met station Date of Establishment: November 13, 1996 by Peter Doran and D.J. Osborne Author of this report: Hassan Basagic January 11, 2007 (11) @ 1330 to January 8, 2008 at 1145 File Period: Sampling Frequency: wind speed every 4 sec; sonic every 60 minutes; other every 30 sec Averaging and Output Interval: every 15 min Program Name: brh045v1 1. array I.D. **o**1 2. day ok 3. time ok mean air temp. @ 3 meters (C) 4. rclow corrected mean R.H. @ 3 meters (%) 5. ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - PY33985 ok mean solar flux going up (W/m2) - PY28167 7. ok mean horizontal wind speed (m/s) 8. ok resultant mean wind speed (m/s) 9. 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean P.A.R. (micromols/s/m2) - Q33906 multiply by 1.47824 15. mean soil temperature @ 0 cm in soil (C) rclow 16. mean soil temperature @ 5 cm in soil (C) rclow 17. mean soil temperature @ 10 cm in soil (C) rclow 18. sample depth from sensor to surface (cm) Measured depth (0.589) + Value) \* 10019. sample of battery voltage 01

- 1. Missing data from January 19, 2007 at 1630 to September 10, 2007 at 1015. Unknown cause.
- 2. Datalogger clock adjusted ahead 15 min 20 sec on January 8, 2008 at 1056.
- 3. Check input values and wind alignment on January 8, 2008 at 1100, all values look good. Ultrasonic ranger height was 58 cm (bare-ground).
- 4. Maintenance: swapped up-facing pyranometer (old#33985, new#25306) at 1110 and quantum PAR sensor (old#Q33906, new#Q28265) at 1110 on January 8, 2008. Swapped SM on January 8, 2008 at 1157.

brh07802.dat Filename: Station: Lake Brownworth met station Date of Establishment: November 13, 1996 by Peter Doran and D.J. Osborne Author of this report: Hassan Basagic File Period: January 11, 2007 (11) @ 1430 to January 8, 2008 at 1145 Sampling Frequency: wind speed every 4 sec; sonic every 60 minutes; other every 30 sec Averaging and Output Interval: every 15 min brh045v1 Program Name: array I.D. 1. 01 2. day ok 3. time ok mean air temp. @ 3 meters (C) 4. rclow corrected mean R.H. @ 3 meters (%) 5. ok (see correction note on page 1) mean solar flux coming down (W/m2) - PY25306 6. ok mean solar flux going up (W/m2) - PY28167 7. ok mean horizontal wind speed (m/s) 8. ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean P.A.R. (micromols/s/m2) - Q28265 multiply by 1.1792 15. mean soil temperature @ 0 cm in soil (C) rclow 16. mean soil temperature @ 5 cm in soil (C) rclow 17. mean soil temperature @ 10 cm in soil (C) rclow 18. sample depth from sensor to surface (cm) Measured depth (0.589) + Value) \* 100 19. sample of battery voltage 01 Notes: 1. One line of missing data on January 18, 2008 at 1545. 2. Datalogger clock correct on January 18, 2008 at 1526.

- 3. Check input values and wind alignment on January 18, 2008 at 1530, all values look good. Ultrasonic ranger height was 58.5 cm (bare-ground).
- 4. Maintenance: swapped battery and power cable on January 18, 2008 at 1550.
- 5. Swapped SM on January 18, 2008 at 1600.

## Canada Glacier

Filename:		caa07801.dat		
Station:		Canada Glacier met station		
Date of Establishment:		Nov 20, 1995 by Karen Lewis		
Reinstalled on glacier:		Jan 13, 1998 by Karen Lewis		
Author of this report:		Hassan Basagic		
File Period:	-	January 27, 2007 at 1230 to June 26, 2007 1:15		
Sampling Fre	equency:	wind speed every 4 sec; all other every 30 sec		
Averaging a	nd Output Interval:	every 15 minutes		
Program nan	ne:	caa67v1		
U				
1.	arrav I.D.			
	o1			
2.	dav			
	ok			
3.	time			
0.	ok			
4	mean air temp (C)			
	rclow			
5	corrected mean RH @	) (%)		
5.	ok (see correction	n note on page 1)		
6	mean solar flux comir	n hote on page 1)		
0.	ok			
7	UK maan solar flux going	up(W/m2)		
7.	incan solar nux going	up(w/mz)		
o	UK maan harizantal wind	anad (m/a)		
0.		speed (m/s)		
0	OK	1( /)		
9.	resultant mean wind s	peed (m/s)		
10				
10.	resultant mean wind d	irection (degrees from north)		
	ok			
11.	standard deviation of	wind direction (degrees)		
	ok			
12.	maximum wind speed	. (m/s)		
	ok			
13.	minimum wind speed	(m/s)		
	ok			
14.	ice temperature - orig	inal depth was 50.0 cm from the surface (mV)		
	poly (n0=-106.23	n1=239.65, 2=-512.50, n3=693.49, n4=-551.71, n5=254.79, n6=-63.07, n7=6.492		
15.	ice temperature - orig	inal depth was 100.0 cm from the surface (mV)		
	poly (n0=-105.87	n1=237.58, 2=-507.11, n3=686.25, n4=-546.23, n5=252.43, n6=-62.53, n7=6.442		
16.	ice temperature - orig	inal depth was 25.0 cm from the surface (mV)		
	o1			
17.	ice temperature - orig	inal depth was 50.0 cm from the surface (mV)		
	o1			
18.	ice temperature - orig	inal depth was 75.0 cm from the surface (mV)		
	o1	•		
19.	ice temperature - orig	inal depth was 100.0 cm from the surface (mV)		
	ol			
20.	saltation particle coun	t		
	ol			
21.	mean ice surface temr	berature		
	ok			
22.	sample battery voltage	2		
	ol			

- 1. Missing data beginning June 26, 2007 at 01:15 when station power failed. Power restored during station visit on November 9, 2007 at 14:56.
- 2. CR10X clock corrected 18 minutes ahead on November 9, 2007 (27) at 1501.
- 3. Checked input values and wind alignment, all appear in good condition except for 'new ice temps' which were not operating and omitted.
- 4. Sensit sensor height = 29.5 cm..
- 5. Replaced one (1) SM4M with one (1) SM4M) November 9, 2007 at 1504.

Filename:		caa07802.dat		
Station:		Canada Glacier met station		
Date of Establishment:		Nov 20, 1995 by Karen Lewis		
Reinstalled on glacier:		Jan 13, 1998 by Karen Lewis		
Author of thi	s report:	Hassan Basagic		
File Period:		November 9, 2007 15:15 to November 29, 2007 13:45		
Sampling Fre	equency:	wind speed every 4 sec; all other every 30 sec		
Averaging a	nd Output Interval:	every 15 minutes		
Program nan	ne:	caa6/v1		
1.	arrav I.D.			
	o1			
2.	day			
	ok			
3.	time			
	ok			
4.	mean air temp. (C)			
	rclow			
5.	corrected mean RH @	(%)		
	ok (see correction	n note on page 1)		
6.	mean solar flux comin	g down (W/m2)		
_	ok			
7.	mean solar flux going	up (W/m2)		
0	ok			
8.	mean horizontal wind	speed (m/s)		
0	OK	1( /)		
9.	resultant mean wind s	peed (m/s)		
10	01	inaction (decrease from north)		
10.	resultant mean wind d	nection (degrees from north)		
11	standard deviation of s	wind direction (degrees)		
11.	ok	while direction (degrees)		
12	maximum wind speed	(m/s)		
12.	ok			
13.	minimum wind speed	(m/s)		
	ok			
14.	ice temperature - orig	inal depth was 50.0 cm from the surface (mV)		
	poly (n0=-106.23	,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492		
15.	ice temperature - orig	inal depth was 100.0 cm from the surface (mV)		
	poly (n0=-105.87	, n1 = 237.58, 2 = -507.11, n3 = 686.25, n4 = -546.23, n5 = 252.43, n6 = -62.53, n7 = 6.442		
23.	ice temperature - orig	inal depth was 25.0 cm from the surface (mV)		
	o1			
24.	ice temperature - orig	inal depth was 50.0 cm from the surface (mV)		
	01			
25.	ice temperature – orig	inal depth was 75.0 cm from the surface (mV)		
	o1			
26.	ice temperature – orig	inal depth was 100.0 cm from the surface (mV)		
16				
16.	saltation particle coun	t (counts in one minute)		
17	UI	voratura		
1/.	ok			
18	sample battery voltage	3		
10.	01			

- 1. No missing data.
- 2. CR10X clock corrected 10 seconds back on November 29, 2007 (27) at 1317.
- 3. Checked input values and wind alignment, all appear in good condition.
- 4. Replaced one (1) SM4M with one (1) SM4M) November 29, 2007 at 1345. New program loaded (CAA078v2). This program eliminated "new ice temps" at 25, 50, 75, and 100 cm depth, which were no longer operating. Old ice temps at 50 and 100 cm are still included in program.

Filename:		caa07803.dat
Station:		Canada Glacier met station
Date of Estab	olishment:	Nov 20, 1995 by Karen Lewis
Reinstalled on glacier:		Jan 13, 1998 by Karen Lewis
Author of thi	s report:	Hassan Basagic
File Period:	1	November 29, 2007 1400 to December 15, 2007 at 1715
Sampling Fre	equency:	wind speed every 4 sec; all other every 30 sec
Averaging an	nd Output Interval:	every 15 minutes
Program nam	ie:	caa078v2
1.	array I.D.	
	01	
2.	day	
-	ok	
3.	time	
	ok	
4.	mean air temp. (C)	
	rclow	
5.	corrected mean relativ	e humidity (%)
	ok (see correction	n note on page 1)
6.	mean solar flux comin	g down (W/m2)
	ok	
7.	mean solar flux going	up (W/m2)
	ok	
8.	mean horizontal wind	speed (m/s)
	ok	
9.	resultant mean wind sp	peed (m/s)
	o1	
10.	resultant mean wind d	irection (degrees from north)
	ok	
11.	standard deviation of	wind direction (degrees)
	ok	
12.	maximum wind speed	(m/s)
	ok	
13.	minimum wind speed	(m/s)
	ok	
14.	ice temperature - orig	inal depth was 50.0 cm from the surface (mV)
	poly (n0=-106.23	,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492
15.	ice temperature - orig	inal depth was 100.0 cm from the surface (mV)
	poly (n0=-105.87	,n1=237.58,2=-507.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.442
16.	mean ice surface temp	erature
	ol	
17.	sample battery voltage	
	ol	

- 1. No missing data.
- 2. CR10X clock was correct on December 15, 2007 at 1644.
- 3. Checked input values and wind alignment, all appear in good condition.
- 4. Sensit sensor height = 32 cm. Readjust to 20 cm.
- 5. Station offline on December 15, 2007 from 1649 to 1652 to replace datalogger. Swapped SMon December 15, 2007 at 1722

Filename:		caa07804.dat
Station:		Canada Glacier met station
Date of Estab	olishment:	Nov 20, 1995 by Karen Lewis
Reinstalled on glacier:		Jan 13, 1998 by Karen Lewis
Author of thi	s report:	Hassan Basagic
File Period:	-	December 15, 2007 at 1715 to January 15, 2008 at 1445
Sampling Fre	equency:	wind speed every 4 sec; all other every 30 sec
Averaging ar	nd Output Interval:	every 15 minutes
Program nan	ne:	caa078v2
1.	array I.D.	
	ol	
2.	day	
2	ok	
3.	time	
	ok	
4.	mean air temp. (C)	
_	rclow	
5.	corrected mean relativ	e humidity (%)
<i>.</i>	ok (see correction	n note on page 1)
6.	mean solar flux comin	$g \operatorname{down}(W/m^2)$
_	OK	
7.	ok	
8.	mean horizontal wind	speed (m/s)
	ok	
9.	resultant mean wind sp	peed (m/s)
	o1	
10.	resultant mean wind d	irection (degrees from north)
	ok	
11.	standard deviation of v	wind direction (degrees)
	ok	
12.	maximum wind speed	(m/s)
	ok	
13.	minimum wind speed	(m/s)
	ok	
14.	ice temperature – original depth was 50.0 cm from the surface (mV) poly (n0=-106.23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.49	
15.	ice temperature – original depth was 100.0 cm from the surface (mV) poly (n0=-105.87,n1=237.58,2=-507.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.44	
16.	mean ice surface temp	erature
	ol	
17.	sample battery voltage	
	ol	

- 1. No missing data.
- 2. Datalogger time was adjusted ahead by 1 min 10 sec on January 15, 2008 at 1404.
- 3. Checked input values and wind alignment, all appear in good condition.
- 4. Maintenance: removed old Everest IRT and installed new IRT (Apogee sensor, serial number #1091). This sensor has been placed onto Canada datalogger#2 (CA2).
- 5. New program (caa078v3) uploaded and swapped SM on January 15, 2008 at 1448.

Filename:	caa07805.dat	
Station:	Canada Glacier met station	
Date of Establishment:	Nov 20, 1995 by Karen Lewis	
Reinstalled on glacier:	Jan 13, 1998 by Karen Lewis	
Author of this report:	Hassan Basagic	
File Period:	January 15, 2008 at 1445 to January 26, 2008 at 1800	
Sampling Frequency:	wind speed every 4 sec; all other every 30 sec	
Averaging and Output Interval:	every 15 minutes	
Program name:	caa078v3	
1. array I.D.		
o1		
2. day		
ok		
3. time		
ok		
4. mean air temp. (C)		
rclow		
5. corrected mean relat	ive humidity (%)	
ok (see correcti	on note on page 1)	
6. mean solar flux com	ing down (W/m2)	
ok		
7. mean solar flux goin	g up (W/m2)	
ok		
8. mean horizontal win	d speed (m/s)	
ok		
9. resultant mean wind	speed (m/s)	
o1		
10. resultant mean wind	direction (degrees from north)	
ok		
11. standard deviation of	f wind direction (degrees)	
ok		
12. maximum wind spee	ed (m/s)	
ok		
13. minimum wind spee	d (m/s)	
ok		
14. ice temperature – ori	ginal depth was 50.0 cm from the surface (mV)	
poly (n0=-106.2	23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492	
15. ice temperature – ori	ginal depth was 100.0 cm from the surface $(mV)$	
poly (n0=-105.8	5/,n1=25/.58,2=-50/.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.442	
16. sample battery voltag	ge	
01		

- 1. No missing data.
- 2. Datalogger time was adjusted ahead 30 sec on January 28, 2008 at 1750.
- 3. Checked input values and wind alignment, all appear in good condition.
- 4. Swapped SM on January 28, 2008 at 1800.

# **Commonwealth Glacier**

Filename:		coh07801.dat		
Station:		Commonwealth Glacier Station		
Date of Estab	olishment:	Nov 22, 1993 by Peter Doran		
Author of this report:		Hassan Basagic		
File Period:	1	January 18, 2007 (18) at 1130 to November 12, 2007 at 1515		
Sampling Fre	equency:	sonic every 60 minutes, wind every 4 secs.; other every 30 secs.		
Averaging ar	nd Output Interval:	every 15 minutes		
Program nan	ne:	coh045v1 (program signature: 4080)		
U				
1.	array I.D.			
	01			
2.	day			
	ok			
3.	time			
	ok			
4.	mean air temp. @ 3 m	eters (C)		
	rClow			
5.	corrected mean R.H.	@ 3 meters (%)		
	ok (see correction	n note on page 1)		
6.	mean solar flux comin	ng down (W/m2) – 30853F3		
	divide by 100; m	ultiply by 121.5		
7.	mean solar flux going	up (W/m2) – 32058F3		
	divide by 100; m	ultiply by 116.82		
8.	mean horizontal wind	speed (m/s)		
	ok			
9.	resultant mean wind s	resultant mean wind speed (m/s)		
	o1			
10.	resultant mean wind d	irection (degrees from north)		
	ok			
11.	standard deviation of	wind direction (degrees)		
	ok			
12.	maximum wind speed	. (m/s)		
	ok			
13.	minimum wind speed	(m/s)		
	ok			
14.	mean incoming IR py	rgeometer output (pins A-B) (W/m <sup>2</sup> )		
1.5	(34316F3) divide	by 250; multiply by 242.72		
15.	mean incoming IR nei	misphere temp. (pins A-C) (mV)		
16	Eppley	$r_{r} = r_{r} = \frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i$		
10.	Earless	rmopile output (pins F-G)(w/m2)		
17	Eppley	$(\min E D)(mu)$		
17.	Employ	se temp. (pins E-D)(mv)		
18	moon outgoing IP pyr	$R_{a}$ compared to the probability of the probabi		
10.	(32311E3) divido	by 250: multiply by 222.72		
10	(323111-3) ulviue	$r_{0}$ solution $r_{0$		
19.	Fooley	inspirere temp. (pins 1.40) (inv)		
20	mean outgoing IR the	rmonile (nins $A_{-}C$ ) (W/m <sup>2</sup> )		
20.	Fooley	mopile (pills A-C) (W/m2)		
21	mean outgoing IR cas	e temp (pins F-D) (mv)		
21.	Ennley	comp. (pms E D) (mv)		
22	ice temperature @ 50a	cm (original depth, mV*0.01)		
22.	poly (n0=-105.05	.n1=232.89.2=-494.81.n3=669.70.n4=-533.67.n5=247.01.n6=-61.29. n7=6.325		
23.	ice temperature @ 100	Ocm (original depth, mV*0.01)		
	*			

poly (n0=-106.23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492 24. Surface Temperature (C)

ok

- 25. sample depth from sensor to surface (m) Measured depth (0.60) + Value) \* 100
- 26. sample of battery voltage

01

- 1. No missing data.
- 2. Adjust CR10X back by 1 minute and 15 seconds on November 12, 2007 at 1508.
- 3. Checked input values and wind alignment on November 12, 2007 at 1510, everything appears correct.
- 4. Swapped one (1) SM4M with one (1) SM4M on November 12, 2007 at 1516.
- 5. Sonic sensor height was 75.5 without board.
- 6. There is a large amount of snow drift at station.

coh07802.dat Filename: Station: Commonwealth Glacier Station Date of Establishment: Nov 22, 1993 by Peter Doran Author of this report: Hassan Basagic File Period: November 12, 2007 at 1530 to November 19, 2007 at 1515 Sampling Frequency: sonic every 60 minutes, wind every 4 secs.; other every 30 secs. Averaging and Output Interval: every 15 minutes Program name: coh045v1 (program signature: 4080) array I.D. 1. 01 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rClow 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - 30853F3divide by 100; multiply by 121.5 7. mean solar flux going up (W/m2) - 32058F3 divide by 100; multiply by 116.82 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean incoming IR pyrgeometer output (pins A-B) (W/m2) (34316F3) divide by 250; multiply by 242.72 15. mean incoming IR hemisphere temp. (pins A-C) (mv) Eppley 16. mean incoming IR thermopile output (pins F-G)(W/m2) Eppley 17. mean incoming IR case temp. (pins E-D)(mv) Eppley 18. mean outgoing IR pyrgeometer output (pins A-B)(W/m2) -(32311F3) divide by 250; multiply by 222.72. 19. mean outgoing IR hemisphere temp. (pins F-G) (mv) Eppley 20. mean outgoing IR thermopile (pins A-C) (W/m2) Eppley 21. mean outgoing IR case temp. (pins E-D) (mv) Eppley 22. ice temperature @ 50cm (original depth, mV\*0.01) poly (n0=-105.05,n1=232.89,2=-494.81,n3=669.70,n4=-533.67,n5=247.01,n6=-61.29, n7=6.325 23. ice temperature @ 100cm (original depth, mV\*0.01) poly (n0=-106.23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492 24. Surface Temperature (C) ok

- 25. sample depth from sensor to surface (m)
  - Measured depth (0.60) + Value) \* 100
- 26. sample of battery voltage
  - o1

- 1. No missing data.
- 2. Adjust CR10X back by 20 seconds on November 19, 2007 at 1401.
- 3. Checked input values and wind alignment on November 19, 2007 at 1403, everything appears correct.
- 4. Maintenance: swapped RH probe at 3m on November 19, 2007 at 1450, swapped upfacing pyranometer (old# 30853F3, new#31437F3) on November 19, 2007 at 1320, and wind sensor on November 19, 2007 at 1403.
- 5. Swapped one (1) SM4M with one (1) SM4M on November 19, 2007 at 1534.
- 6. Sonic sensor height was 76.0 without board.
- 7. There is a large amount of snow drift at station.

coh07803.dat Filename: Station: Commonwealth Glacier Station Date of Establishment: Nov 22, 1993 by Peter Doran Author of this report: Hassan Basagic File Period: November 12, 2007 at 1530 to December 28, 2007 at 1200 Sampling Frequency: sonic every 60 minutes, wind every 4 secs.; other every 30 secs. Averaging and Output Interval: every 15 minutes coh045v1 Program name: array I.D. 1. 01 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rClow 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - 31437F3divide by 100; multiply by 124.7 7. mean solar flux going up (W/m2) - 32058F3 divide by 100; multiply by 116.82 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean incoming IR pyrgeometer output (pins A-B) (W/m2) (34316F3) divide by 250; multiply by 242.72 15. mean incoming IR hemisphere temp. (pins A-C) (mv) Eppley 16. mean incoming IR thermopile output (pins F-G)(W/m2) Eppley 17. mean incoming IR case temp. (pins E-D)(mv) Eppley 18. mean outgoing IR pyrgeometer output (pins A-B)(W/m2) -(32311F3) divide by 250; multiply by 222.72. 19. mean outgoing IR hemisphere temp. (pins F-G) (mv) Eppley 20. mean outgoing IR thermopile (pins A-C) (W/m2) Eppley 21. mean outgoing IR case temp. (pins E-D) (mv) Eppley 22. ice temperature @ 50cm (original depth, mV\*0.01) poly (n0=-105.05,n1=232.89,2=-494.81,n3=669.70,n4=-533.67,n5=247.01,n6=-61.29, n7=6.325 23. ice temperature @ 100cm (original depth, mV\*0.01) poly (n0=-106.23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492 24. Surface Temperature (C) ok

- 25. sample depth from sensor to surface (m)
  - Measured depth (0.60) + Value) \* 100
- 26. sample of battery voltage

o1

- 1. No missing data.
- 2. CR10X time is correct on December 28, 2007 at 0924.
- 3. Checked input values and wind alignment on December 28, 2007 at 0925, everything appears correct except for wind direction.
- 4. Swapped one (1) SM4M with one (1) SM4M on December 28, 2007 at 1201.
- 5. Sonic sensor height was 75.8 without board. Ice stake height was 76.6, 76.5, 76.5, 76.7 and snow heights of 6.6, 7.4, 4.6, 8.0 without board. Temp at 302 cm, RH at 294, and wind at 337 cm.

coh07804.dat Filename: Station: Commonwealth Glacier Station Date of Establishment: Nov 22, 1993 by Peter Doran Author of this report: Hassan Basagic File Period: December 28, 2007 at 1200 to January 5, 2008 at 1515 Sampling Frequency: sonic every 60 minutes, wind every 4 secs.; other every 30 secs. Averaging and Output Interval: every 15 minutes coh045v1 Program name: array I.D. 1. 01 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rClow 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - 31437F3divide by 100; multiply by 124.7 7. mean solar flux going up (W/m2) - 32058F3 divide by 100; multiply by 116.82 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean incoming IR pyrgeometer output (pins A-B) (W/m2) (34316F3) divide by 250; multiply by 242.72 15. mean incoming IR hemisphere temp. (pins A-C) (mv) Eppley 16. mean incoming IR thermopile output (pins F-G)(W/m2) Eppley 17. mean incoming IR case temp. (pins E-D)(mv) Eppley 18. mean outgoing IR pyrgeometer output (pins A-B)(W/m2) -(32311F3) divide by 250; multiply by 222.72. 19. mean outgoing IR hemisphere temp. (pins F-G) (mv) Eppley 20. mean outgoing IR thermopile (pins A-C) (W/m2) Eppley 21. mean outgoing IR case temp. (pins E-D) (mv) Eppley 22. ice temperature @ 50cm (original depth, mV\*0.01) poly (n0=-105.05,n1=232.89,2=-494.81,n3=669.70,n4=-533.67,n5=247.01,n6=-61.29, n7=6.325 23. ice temperature @ 100cm (original depth, mV\*0.01) poly (n0=-106.23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492 24. Surface Temperature (C) ok

- 25. sample depth from sensor to surface (m)
  - Measured depth (0.60) + Value) \* 100
- 26. sample of battery voltage

o1

- 1. No missing data.
- 2. Adjusted CR10X time ahead 1 minute on January 5, 2008 at 1447.
- 3. Checked input values and wind alignment on December 28, 2007 at 0925, everything appears correct except for wind direction.
- 4. Maintenance: repaired wiring problem on wind direction. Replaced power cable between CR10x datalogger and battery, station offline on January 5, 2008 from 1455 to 1457.
- 5. Swapped one (1) SM4M with one (1) SM4M on January 5, 2008 at 1520.

coh07805.dat Filename: Station: Commonwealth Glacier Station Date of Establishment: Nov 22, 1993 by Peter Doran Author of this report: Hassan Basagic File Period: January 5, 2008 at 1530 to January 19, 2008 at 1345. Sampling Frequency: sonic every 60 minutes, wind every 4 secs.; other every 30 secs. Averaging and Output Interval: every 15 minutes coh045v1 Program name: array I.D. 1. 01 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rClow 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - 31437F3divide by 100; multiply by 124.7 7. mean solar flux going up (W/m2) - 32058F3 divide by 100; multiply by 116.82 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) 01 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean incoming IR pyrgeometer output (pins A-B) (W/m2) (34316F3) divide by 250; multiply by 242.72 15. mean incoming IR hemisphere temp. (pins A-C) (mv) Eppley 16. mean incoming IR thermopile output (pins F-G)(W/m2) Eppley 17. mean incoming IR case temp. (pins E-D)(mv) Eppley 18. mean outgoing IR pyrgeometer output (pins A-B)(W/m2) -(32311F3) divide by 250; multiply by 222.72. 19. mean outgoing IR hemisphere temp. (pins F-G) (mv) Eppley 20. mean outgoing IR thermopile (pins A-C) (W/m2) Eppley 21. mean outgoing IR case temp. (pins E-D) (mv) Eppley 22. ice temperature @ 50cm (original depth, mV\*0.01) poly (n0=-105.05,n1=232.89,2=-494.81,n3=669.70,n4=-533.67,n5=247.01,n6=-61.29, n7=6.325 23. ice temperature @ 100cm (original depth, mV\*0.01) poly (n0=-106.23,n1=239.65,2=-512.50,n3=693.49,n4=-551.71,n5=254.79,n6=-63.07, n7=6.492 24. Surface Temperature (C) ok

- 25. sample depth from sensor to surface (m) Measured depth (0.60) + Value) \* 100
- 26. sample of battery voltage

o1

Notes:

1. No missing data. LAWN datasheet missing.

#### **Explorers** Cove

Filename:	exe07801.dat
Station:	Explorer's Cove Station
Date of Establishment	t: Nov 21, 1997 by Peter Doran, D.J. Osborne and Keith Sauter
Author of this report:	Hassan Basagic
File Period:	January 30, 2007 at 1115 to December 4, 2007 at 1100
Sampling Frequency:	prec every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and Outpu	t Interval: every 15 minutes
Program name:	exe023v1
1. array I.I	Э.
01	
2. day	
ok	
3. time	
ok	
4. mean ai	r temp. @ 3 meters (C)
rclo	) W
5. mean R	H @ 3 meters
ok	(see correction note on page 1)
6. mean so	plar flux coming up (~W/m2)
ok	
7. mean so	olar flux going down (~W/m2)
ok	
8. mean ho	prizontal wind speed (m/s)
ok	
9. resultan	t mean wind speed (m/s)
o1	-
10. resultan	t mean wind direction (degrees from north)
ok	
11. standard	d deviation of wind direction (degrees)
01	
12. maximu	Im wind speed (m/s)
ok	
13. minimu	m wind speed (m/s)
ok	
14. mean P.	A.R. (micromols/s/m2)
mu	ltiple by 1.35264
15. mean so	oil temperature @ 0 cm (C)
rclo	)W
16. mean so	oil temperature @ 5 cm (C)
rclo	)W
17. mean so	oil temperature @ 10 cm (C)
rclo	)W
18. sample	precipitation (mm)
ok	
19. sample	battery voltage

Notes:

1. No missing data.

o1

- 2. CR10x time corrected back 1 min 50 sec on December 4, 2007 at 0948.
- 3. Checked input values and wind alignment on December 4, 2007 at 0949, everything appears correct.
- 4. Maintenance: RH sensor was swapped on December 4, 2007 at 0955. Swapped upfacing (old# 23271, new#56386) and downfacing (old#18655, new#25307) pyranometers on December 4, 2008 at 1017. The quantum sensor was swapped (old# 33694, new#23207) on December 4, 2007 at 1027.

5. Datalogger power off on December 4, 2007 at 1105 to 1106 to upload new program:EXE078v1, designed to measure sensit (not yet installed). Swapped storage module while power off.

Filename: exe07802.dat Station: Explorer's Cove Station Date of Establishment: Nov 21, 1997 by Peter Doran, D.J. Osborne and Keith Sauter Author of this report: Hassan Basagic File Period: December 4, 2007 at 1115 to January 5, 2008 at 1315 prec every 60 minutes, wind every 4 secs.; others: every 30 secs. Sampling Frequency: Averaging and Output Interval: every 15 minutes Program name: exe078v1 array I.D. 1. o1 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rclow mean RH @ 3 meters 5. ok (see correction note on page 1) 6. mean solar flux coming up (~W/m2) ok 7. mean solar flux going down ( $\sim$ W/m2) ok 8. mean horizontal wind speed (m/s) ok 9. resultant mean wind speed (m/s) **o**1 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) 01 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. mean P.A.R. (micromols/s/m2) serial number: Q23207 divide by 200, multiply by 319.00 15. mean soil temperature @0 cm(C)rclow 16. mean soil temperature @ 5 cm (C) rclow 17. mean soil temperature @ 10 cm (C) rclow 18. sample precipitation (mm) ok 19. sample battery voltage 01

- 1. No missing data.
- 2. CR10x time was correct on January 5, 2008 at 1107.
- 3. Checked input values and wind alignment on January 5, 2008 at 1111, everything appears correct, except for wind speed minimum.
- 4. Maintenance: precip bucket was serviced, including removal of existing fluid and sediment, then replaced with new fluid. Pre-service was 529, post service was 164.89. Added sensit to station at 20cm height.
- 5. Swapped SM on January 5, 2008 at 1316.

Filename:		exe07803.dat
Station:		Explorer's Cove Station
Date of Establishment:		Nov 21, 1997 by Peter Doran, D.J. Osborne and Keith Sauter
Author of this report:		Hassan Basagic
File Period:		January 5, 2008 at 1330 to January 30, 2008 at 1230
Sampling Fr	equency:	prec every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging a	nd Output Interval:	every 15 minutes
Program nar	ne:	exe0/8v1
1	array I D	
1.	ol	
2.	day	
	ok	
3.	time	
	ok	
4.	mean air temp. @ 3 m	neters (C)
	rclow	
5.	mean RH @ 3 meters	
	ok (see correctio	n note on page 1)
6.	mean solar flux comir	ng up (~W/m2)
	ok	
7.	mean solar flux going	down (~W/m2)
	ok	• / / /
8.	mean horizontal wind	speed (m/s)
0	OK	······································
9.	resultant mean wind s	peed (m/s)
10	01 regularity mean wind d	lization (degrees from north)
10.	ok	mection (degrees from norm)
11	standard deviation of	wind direction (degrees)
11.	ol	which direction (degrees)
12.	maximum wind speed	l (m/s)
	ok	()
13.	minimum wind speed (m/s)	
	ok	
14.	mean P.A.R. (microm	ols/s/m2) serial number: Q23207
	divide by 200, m	ultiply by 319.00
15.	mean soil temperature	e @ 0 cm (C)
	rclow	
16.	mean soil temperature	e @ 5 cm (C)
	rclow	
17.	mean soil temperature	e @ 10 cm (C)
10	rclow	
18.	sample precipitation (	mm)
10	OK	
19.	sample battery voltage	
Notes:	01	
110005.		

- 1. No missing data.
- 2. CR10x time was correct on January 30, 2008 at 1226
- 3. Checked input values and wind alignment on January 30, 2008 at 1228, everything appears correct, except for wind speed minimum.
- 4. Maintenance: 60 ml added to precip bucket as calibration check.
- 5. New program loaded (exe078v2) which should remedy the min wind speed conflict. Swapped SM on January 30, 2008 at 1238.

#### Lake Fryxell

frl07801.dat Filename: Lake Fryxell met station Station: Date of Establishment: Jan 6, 1994 by Peter Doran Author of this report: Hassan Basagic File Period: December 21, 2006 (355) @ 1345 to January 30, 2007 at 1000 Sampling Frequency: sonic every 60 minutes, wind every 4 sec; others: every 30 secs. every 15 minutes Averaging and Output Interval: frl067v1.dld Program name:

array I.D. 1. 01 2. day ok 3. time ok 4. mean air temp. @ 3 meters (C) rClow mean R.H. @ 3 meters (%) 5. ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) - PY51355 ok 7. mean solar flux going up (W/m2) – PY51356 ok mean horizontal wind speed (m/s) 8. ok resultant mean wind speed (m/s) 9. o1 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s)

ok

- 14. mean P.A.R. (micromols/s/m2) Q99253 divide by 200, multiply by 242.41
- 15. mean soil temperature @ 0 cm in soil (C) rClow
- 16. mean soil temperature @ 5 cm in soil (C) rClow
- 17. mean soil temperature @ 10 cm in soil (C) rClow
- 18. sample depth from sensor to surface (m) Measured depth \* (-1)
- 19. sample of battery voltage o1

- 1. No missing data.
- 2. CR10x time was correct on January 30, 2007 at 1002.
- 3. Checked input values and wind alignment on January 30, 2007 at 1004. All channels appear correct.
- 4. Datalogger power off on January 30, 2007 at 1009 to 1010 to load new program (fry067v2). Wired Sensit sensor and loaded new program. New program (frl067v2) contains command to measure particle count (not

included in this file). Swapped 1 SM with another SM on January 30, 2007 at 1009, but this SM was not removed from site until the following season (2007/2008).

Filename:		fr107802.dat	
Station:		Lake Fryxell met station	
Date of Establishment:		Jan 6, 1994 by Peter Doran	
Author of this report:		Hassan Basagic	
File Period:		January 30, 2007 at 1015 to December 3, 2007 at 1200	
Sampling Fr	equency:	sonic every 60 minutes, wind every 4 sec; others: every 30 secs.	
Averaging a	nd Output Interval:	every 15 minutes	
Program nar	ne:	frl067v2.dld	
1.	array I.D.		
2	01		
2.	day		
2	ok		
3.	time		
4	OK O 2		
4.	mean air temp. @ 3 m	neters (C)	
-	rClow	(0/)	
5.	mean R.H. @ 3 meter	S (%)	
C	OK (see correctio	n note on page 1) $(W/m^2) = DV51255$	
0.	mean solar flux comin	$\log \operatorname{down}(w/m_2) - PY51555$	
7	UK maan salar flux going	$W_{m2} = 0.0000000000000000000000000000000000$	
7.	niean solar nux going	$up(w/m^2) - r 151550$	
Q	UK meen horizontel wind	speed (m/s)	
о.	ok	speed (III/s)	
0	resultant mean wind s	need (m/s)	
).	ol		
10	U1 resultant mean wind direction (degrees from north)		
10.	ok	incention (degrees from north)	
11	standard deviation of	wind direction (degrees)	
	ok	(ind direction (degrees)	
12	maximum wind speed	(m/s)	
	ok		
13.	minimum wind speed	(m/s)	
	ok		
14.	mean P.A.R. (microm	ols/s/m2) – O99253	
	divide by 200, m	ultiply by 242.41	
15.	mean soil temperature	e @ 0  cm in soil (C)	
	rClow		
16.	mean soil temperature	e @ 5 cm in soil (C)	
	rClow		
17.	mean soil temperature	e @ 10 cm in soil (C)	
	rClow		
18.	sample depth from set	nsor to surface (m)	
	Measured depth <sup>3</sup>	* (-1)	
19.	sample of battery volt	age	
	o1		
Notes:			
1. No miss	sing data.		

- 2. CR10x time was adjusted back 6 minutes on December 3, 2007 at 1148.
- 3. Checked input values and wind alignment on December 3, 2007 at 1150 . All channels appear correct.
- 4. Maintenance: swapped RH at 3m at 1236; upfacing pyranometer (old#51355, new#23276) at 1248; downfacing pyranometer (old#51356, new#20562) at 1300; quantum PAR (old#99253, new#23199) at 1311 on December 3, 2007.
- 5. Datalogger power off on December 3, 2007 at 1200 1216 to load new program (fry078v1), swap SM, and swap batteries. New program moves sensit into main table and cleans up program error.

Filename: Station: Date of Esta	blishment <sup>.</sup>	frl07803.dat Lake Fryxell met station Jan 6, 1994 by Peter Doran
Author of this report:		Hassan Basagic
File Period:		December 3, 2007 at 1215 to January 30, 2008 at 1130
Sampling Fr	requency:	sonic every 60 minutes, wind every 4 sec; others: every 30 secs.
Averaging a	and Output Interval:	every 15 minutes
Program nar	me:	frl078v1.dld
1.	array I.D.	
	01	
2.	day	
2	ok	
3.	time	
4	OK maan air tamp @ 3 r	matars (C)
4.	rClow	lieters (C)
5	mean R H @ 3 mete	rs (%)
5.	ok (see correction	on note on page 1)
6.	mean solar flux comi	$\frac{1}{100} \frac{1}{100} = \frac{1}{1$
	ok	
7.	mean solar flux going	g up (W/m2) – PY20562
	ok	
8.	mean horizontal wind	d speed (m/s)
	ok	
9.	resultant mean wind	speed (m/s)
	01	
10.	resultant mean wind	direction (degrees from north)
	ok	
11.	standard deviation of	wind direction (degrees)
12	OK maximum wind anaa	d(m/c)
12.	ok	
13	minimum wind speed	1 (m/s)
15.	ok	. (1100)
14.	. mean P.A.R. (micron	nols/s/m2) – Q23199
	divide by 200, m	nultiply by 295.12
15.	. mean soil temperatur	e @ 0 cm in soil (C)
	rClow	
16.	. mean soil temperatur	e @ 5 cm in soil (C)
	rClow	
17.	. mean soil temperatur	e @ 10 cm in soil (C)
	rClow	
18.	sample depth from se	ensor to surface (m)
10	Measured depth	*(-1)
19.	particle count Sensit	(1 min sample: hits per min)
20	01 somple of bottomy vol	tago
20.		lage
Notes:	01	
1.	No missing data. CR	10x time was correct on January 30. 2008 at 1117.
2.	Checked input value	es and wind alignment on January 30, 2008 at 1130. RH was not operating
	properly.	
2	Maintan an an an aire	d DII on January 20, 2009 at 1122

- 3. Maintenance: repaired RH on January 30, 2008 at 1122.
- Ultrasonic height: 106.3 cm.
  Swap SM on January 30, 2008 at 1139.

Filename:		fr107804.dat
Station:		Lake Fryxell met station
Date of Establishment:		Jan 6, 1994 by Peter Doran
Author of the	is report:	Hassan Basagic
File Period:		January 30, 2008 at 1145 to April 9, 2008 at 1130
Sampling Fr	equency:	sonic every 60 minutes, wind every 4 sec; others: every 30 secs.
Averaging a	nd Output Interval:	every 15 minutes
Program nan	ne:	fri0/8v1.dld
1	array I D	
	o1	
2.	day	
	ok	
3.	time	
	ok	
4.	mean air temp. @ 3 m	neters (C)
	rClow	
5.	mean R.H. @ 3 meter	rs (%)
	ok (see correctio	n note on page 1)
6.	mean solar flux comi	ng down (W/m2) – PY $23276$
7	OK	$A = \frac{1}{2} \left( \frac{W}{m^2} \right) = \frac{W^2}{2} \left( \frac{1}{2} \right)^2 \left( \frac$
7.	mean solar nux going	$up(w/m^2) - P I 20362$
8	0K 8 mean horizontal wind speed (m/s)	
0.	ok	
9.	resultant mean wind s	speed (m/s)
	o1	
10.	resultant mean wind d	lirection (degrees from north)
	ok	
11.	standard deviation of	wind direction (degrees)
10	ok	
12.	maximum wind speed	1 (m/s)
12	OK minimum wind speed	(m/c)
15.	ok	(11/8)
14	mean P A R (microm	$ols/s/m^2) = O23199$
17.	divide by 200 m	ultiply by 295 12
15 mean soil temperature		e @ 0  cm in soil (C)
101	rClow	
16.	16. mean soil temperature @ 5 cm in soil (C)	
	rClow	
17.	17. mean soil temperature @ 10 cm in soil (C)	
	rClow	
18. sample depth from sensor to surface (m)		nsor to surface (m)
	Measured depth	* (-1)
19.	particle count Sensit (	1 min sample: hits per min)
•	ol	
20. sample of battery volt		age
Notes:	01	
roles.		

- 1. No missing data.
- 2. SM swapped by John Priscu as part of extended season on April 9, 2008.

# **Fryxell Snowfence**

Filename:		fsn07801.dat
Station:		Lake Fryxell Snow Fence
Date of Establishment:		January 2001 by Thomas Nylen
Author of this report:		Hassan Basagic
File Period:		January 29, 2007 at 1315 to December 3, 2007 at 1545
Sampling Fr	requency:	sonic every 60 minutes, every 30 sec for all the others
Averaging a	nd Output Interval:	every 15 min
Program Na	me:	fs067v2.dld
1.	array I.D.	
2	01	
2.	day	
2	OK	
5.	ok	
4	$\frac{0K}{100}$	R m (east) from snow fence (micromols/s/m2) 020766
4.	multiply by 1 18	$\sin(\text{cast})$ from show reflect (interofilous/s/m2) - Q29700
5	mean soil $P \land R = 10^{-10}$	m (east) from snow fence (micromols/s/m <sup>2</sup> ) - 029773
5.	multiply by 1 31	
6.	mean Air P.A.R. @ 1	.6 m (micromols/s/m2)
0.	O29764 - multipl	v bv 1.18
7.	mean air temp. @ 1.3	m (C)
	rclow	
8.	mean soil temperature	e @ 0 cm in soil -4.5 m (west) of snow fence (C)
	rclow	
9.	mean soil temperature	e @ 0 cm in soil +1.0 m (east) of snow fence (C)
	rclow	
10.	mean soil temperature	e @ 0 cm in soil +1.9 m (east) of snow fence (C)
	rclow	
11.	mean soil temperature	e @ 0 cm in soil +3.8 m (east) of snow fence (C)
	rclow	
12.	Sonic Ranger Depth (	cm)
12	Measured depth (	(1.01) + Value) * 100
13.	mean wind speed	
14	01 maan wind snood	
14.	niean wind speed	
15	mean wind direction	
15.		
16	max wind speed	
10.	ol	
17.	min wind speed	
17.	01	
18.	sample of battery volt	age
	ol	-
Notes:		

- 1. No data missing.
- Datalogger time adjusted back 1 min 10 sec at 1547
  Input values look good on December 3, 2007 at 1548.
- 4. Storage module swapped on December 3, 2007 at 1552.

Filename:		fsn07802.dat
Station:		Lake Fryxell Snow Fence
Date of Establishment:		January 2001 by Thomas Nylen
Author of this report:		Hassan Basagic
File Period:		December 3, 2007 at 1545 to January 12, 2008 at 1015
Sampling Fre	equency:	sonic every 60 minutes, every 30 sec for all the others
Averaging an	nd Output Interval:	every 15 min
Program Nar	ne:	fs067v2.dld
1.	array I.D.	
	o1	
2.	day	
	ok	
3.	time	
	ok	
4.	mean soil P.A.R. +3.8	m (east) from snow fence (micromols/s/m2) – Q29766
_	multiply by 1.18	
5.	mean soil P.A.R. +1.9	m (east) from snow fence (micromols/s/m2) – $Q297/3$
-	multiply by 1.31	
6.	mean Air P.A.R. @ 1.	6 m (micromols/s/m <sup>2</sup> )
-	Q29764 - multipl	y by 1.18
7.	mean air temp. @ 1.3	m(C)
0	rclow	
8.	mean soil temperature	@ 0 cm in soil -4.5 m (west) of snow fence (C)
0	rclow	
9.	mean soil temperature	@ 0  cm in soil +1.0  m (east) of snow fence (C)
10	rciow	
10.	mean soil temperature	(0  cm in soll + 1.9  m (east) of snow tence (C))
11	ICIOW	$\bigcirc 0$ am in soil + 2.8 m (asst) of snow fance (C)
11.	relow	(0.011111) soli +5.8 III (east) of show fence (C)
12	Sonic Panger Depth (	m)
12.	Measured depth (	$1.01) \pm Value) * 100$
13	mean wind speed	1.01) + Value) 100
15.	ol	
14	mean wind speed	
14.	ol	
15	mean wind direction	
15.		
16	max wind speed	
10.	ol	
17.	min wind speed	
17.	01	
18.	sample of battery volta	age
10.	01	
Notos:		

- Notes:
  - 1. No data missing.
  - 2. Datalogger time adjusted back 30 sec at on January 12, 2008 at 0905.
  - 3. Input values look good on January 12, 2008 at 0908.
  - 4. Maintenance: swapped quantum PAR sensors at 3.6m (old#29766, new#28259) and at 1.8m (old#297773, new#20266) at 930.
  - 5. Ultrasonic height measured at 100 cm.
  - 6. Storage module swapped on January 12, 2008 at 1022.

Filename Station:	e: Zetel	l'alamané.	fsn07803.dat Lake Fryxell Snow Fence
Author of	estat	s report:	January 2001 by Thomas Nylen
File Peri	n un od·	s report.	Lanuary 12, 2008 at 1030 to Lanuary 29, 2008 at 1315
Sampling	ou. o Fre	equency.	sonic every 60 minutes, every 30 sec for all the others
Averagir	ng ar	nd Output Interval:	every 15 min
Program	Nar	ne:	fs067v2.dld
8	1.	array I.D.	
		o1	
	2.	day	
		ok	
	3.	time	
		ok	
	4.	mean soil P.A.R. +3.8	m (east) from snow fence (micromols/s/m2) – Q28259
		multiply by 1.14	
	5.	mean soil P.A.R. +1.9	m (east) from snow fence (micromols/s/m2) – $Q20266$
		multiply by 1.37	
	6.	mean Air P.A.R. @ 1.	6 m (micromols/s/m2)
	-	Q29764 - multipl	y by 1.18
	1.	mean air temp. @ 1.3	$m(\mathbf{C})$
	8	ICIOW mean soil temperature	$\emptyset$ 0 cm in soil 4.5 m (west) of snow fance (C)
	0.	rclow	(west) of show rence (C)
	9.	mean soil temperature	@ 0 cm in soil +1.0 m (east) of snow fence (C)
		rclow	
	10.	mean soil temperature	@ 0 cm in soil +1.9 m (east) of snow fence (C)
		rclow	
	11.	mean soil temperature	@ 0 cm in soil +3.8 m (east) of snow fence (C)
		rclow	
	12.	Sonic Ranger Depth (	cm)
		Measured depth (	1.01) + Value) * 100
	13.	mean wind speed	
		ol	
	14.	mean wind speed	
	1.7		
	15.	mean wind direction	
	16	01 may wind speed	
	10.	max wind speed	
	17	01 min wind speed	
	1/.	ol	
	19	UI sample of bottory volt	And the second se
	10.		
		01	

1. No data missing.

## **Howard Glacier**

Filename : Station:		hod07801.dat Howard Glacier Station
Date of Establishment:		Nov 20, 1993 by Peter Doran
Author of this report:		Hassan Basagic
File Period:		January 19, 2007 at 1530 to November 13, 2007 at 1500
Sampling Free	quency:	wind every 4 sec others: every 30 sec
Averaging and	d Output Interval:	every 15 minutes
Program name	2:	hod045v1.dld
1.	array I.D.	
	01	
2.	day	
	ok	
3.	time	
	ok	
4.	mean air temp. @ 3 n	neters (C)
	rclow	
5.	mean R.H. @ 3 meter	rs (%)
	ok (see co	prrection note on page 1)
6.	mean solar flux comin	ng down (W/m2)
	divide by	100; multiply by 120.48 (30853F3)
7.	mean solar flux going	; up (W/m2)
	divide by	100; multiply by 109.89 (32058F3)
8.	mean horizontal wind	speed (m/s)
	ok	
9.	resultant mean wind s	speed (m/s)
	01	
10.	resultant mean wind o	lirection (degrees from north)
	ok	
11.	standard deviation of	wind direction (degrees)
	ok	
12.	maximum wind speed	1 (m/s)
	ok	
13.	minimum wind speed	(m/s)
	ok	
14.	ice temperature @ 50	cm (original depth, mV*0.01)
	poly (n0=	-105.87, n1=237.58, n2=-507.11, n3=686.25, n4=-546.23, n5=252.43, n6=-62.53, n5=252.43, n6=-62.53, n5=252.43, n6=-62.53, n5=252.43, n6=-62.53, n5=252.43, n6=-62.53, n5=252.43, n5=252.45, n5=252.45
	n7=6.44	
15.	ice temperature @ 10	0cm (original depth, mV*0.01)
	poly (n0=	-105.87.n1=237.58.n2=-507.11.n3=686.25.n4=-546.23.n5=252.43.n6=-62.53.
	n7=6.44	
16.	mean air temp @ 1 m	eter m (C)
101	rclow	
17	mean rh @ 1 meter (9	(a)
17.	ok (see co	prrection note on page 1)
18	sample depth from se	nsor to surface (cm)
10.	Measured	depth $(1.01) + \text{Value} * 100$
10	sample of hattery volt	
1).		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Notes:	01	

1. No data missing. CR10X time corrected back 2 minutes 28 seconds on November 13, 2007 at 1504

2. Sonic height is 91.0 cm.

3. Swapped out SM on November 13, 2007 at 1505.

hod07802.dat Filename : Station: Howard Glacier Station Date of Establishment: Nov 20, 1993 by Peter Doran Author of this report: Hassan Basagic File Period: November 13, 2007 at 1515 to January 7, 2008 at 1300 Sampling Frequency: wind every 4 sec others: every 30 sec Averaging and Output Interval: every 15 minutes hod045v1.dld Program name: array I.D. 1. **o**1 day 2. ok 3. time ok mean air temp. @ 3 meters (C) 4. rclow 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1) mean solar flux coming down (W/m2) 6. divide by 100; multiply by 120.48 (30853F3) mean solar flux going up (W/m2) 7. divide by 100; multiply by 109.89 (32058F3) mean horizontal wind speed (m/s) 8. ok resultant mean wind speed (m/s) 9. **o**1 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. ice temperature @ 50cm (original depth, mV\*0.01) poly (n0=-105.87,n1=237.58,n2=-507.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.44 15. ice temperature @ 100cm (original depth, mV\*0.01) poly (n0=-105.87,n1=237.58,n2=-507.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.44 16. mean air temp @ 1 meter m (C) rclow 17. mean rh @ 1 meter (%) ok (see correction note on page 1) 18. sample depth from sensor to surface (cm) Measured depth (1.01) + Value) \* 10019. sample of battery voltage **o**1

- 1. One line of data missing on January 7, 2008 1030 to swap batteries.
- 2. CR10X time correct on January 7, 2008 at 0927.
- 3. Checked input values and wind alignment on January 7, 2008 at 0933, all appear good. Sonic height is 98.0 cm.
- 4. Maintenance: swapped wind monitor at 1007; swapped RH at 1051; up facing pyranometer (old#29762FY, new# 30884 FY) at 1200, down facing pyranometer (old#29763F3, new#32057F3) at 1240 on January 30, 2008.
- 5. Power off on January 7, 2008 at 1022 1038 to swap batteries and 1056 1058 to swap CR10x datalogger. Changed out power cable. .Swapped out SM at 1310.

hod07803.dat Filename : Howard Glacier Station Station: Nov 20, 1993 by Peter Doran Date of Establishment: Author of this report: Hassan Basagic File Period: January 7, 2008 at 1315 to January 22, 2008 at 1400 Sampling Frequency: wind every 4 sec others: every 30 sec Averaging and Output Interval: every 15 minutes Program name: hod045v1.dld 1. array I.D. 01 2. day ok 3. time ok mean air temp. @ 3 meters (C) 4. rclow 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1) 6. mean solar flux coming down (W/m2) divide by 100; multiply by 120.77 (30884F3) 7. mean solar flux going up (W/m2)divide by 100; multiply by 114.29 (32057F3) mean horizontal wind speed (m/s) 8. ok 9. resultant mean wind speed (m/s) **o**1 10. resultant mean wind direction (degrees from north) ok 11. standard deviation of wind direction (degrees) ok 12. maximum wind speed (m/s) ok 13. minimum wind speed (m/s) ok 14. ice temperature @ 50cm (original depth, mV\*0.01) poly (n0=-105.87,n1=237.58,n2=-507.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.44 15. ice temperature @ 100cm (original depth, mV\*0.01) poly (n0=-105.87,n1=237.58,n2=-507.11,n3=686.25,n4=-546.23,n5=252.43,n6=-62.53, n7=6.44 16. mean air temp @ 1 meter m (C) rclow 17. mean rh @ 1 meter (%) ok (see correction note on page 1) 18. sample depth from sensor to surface (cm) Measured depth (1.01) + Value) \* 10019. sample of battery voltage 01 Notes:

- 1. No data missing.
- 2. Missing worksheet.
- 3. Swapped out SM after 1400 on January 22, 2008.

Lаке поаге	2	
Filename:		hoe070801.dat
Station:		Lake Hoare
Date of Establishment:		Dec 1, 1993 by Peter Doran
Author of this report:		Hassan Basagic
File Period:	•	January 29, 2007 (29) at 2030 to November 08, 2007 at 1200
Sampling Fre	equency:	wind speed every 4 sec; other every 30 sec
Averaging a	nd Output Interval:	every 15 minutes
Program Nai	ne:	hoe067v2
C		
1.	array I.D.	
	o1	
2.	day	
	ok	
3.	time	
	ok	
4.	mean air temp. @ 3 m	neters ©
	rclow	
5.	mean R.H. @ 3 meters	s (%)
	ok (see correction	n note on page 1)
1.	mean solar flux comin	ng down (W/m2) – PY28370
	ok	
2.	mean solar flux going	up (W/m2) – PY40423
	ok	
6.	mean horizontal wind	speed (m/s)
	ok	
7.	resultant mean wind s	peed (m/s)
	o1	
8.	resultant mean wind d	lirection (degrees from north)
	ok	
9.	standard deviation of	wind direction (degrees)
	ok	
10.	maximum wind speed	(m/s)
	ok	
11.	minimum wind speed	(m/s)
	ok	
12.	mean P.A.R. (microm	ols/s/m2) –
	Q20275 = divide	e by 200, multiply by 277.79
13.	sample station barome	etric pressure (mbar)
	ok	
14.	mean temperature diff	ference 1-3 m ©
	Multiply by -1	
15.	total particle count	
	01	
16.	sample of battery volta	age

- 1. No missing data. Duplicate data caused by clock change on Nov 08, 2007 at 1200, first line deleted.
- Datalogger time corrected 11 minutes on Nov 08, 2007 at 1155. 2.
- 3. Check input values and wind alignment on Nov 08, 2007 at 1158., all appear correct.
- 4. Swapped RH sensor at 3m on Nov 08, 2007 at 1202.
- 5. Swapped SM at Nov 08, 2007 at 1205.

01

Filename: Station: Date of Establishment: Author of this report: File Period: Sampling Frequency: Averaging and Output Interval: Program Name:	hoe070802.dat Lake Hoare Dec 1, 1993 by Peter Doran Hassan Basagic November 08, 2007 at 1215 to November 21, 2007 at 1800 wind speed every 4 sec; other every 30 sec every 15 minutes hoe067v2	
3. array I.D.		
4. day		
5. time		
6. mean air temp. @ 3	B meters ©	
7. mean R.H. @ 3 me	ters (%)	
8. mean solar flux cor	ning down (W/m2) – PY28370	
9. mean solar flux goi	ng up (W/m2) – PY40423	
10. mean horizontal wi	nd speed (m/s)	
11. resultant mean win	d speed (m/s)	
12. resultant mean win	d direction (degrees from north)	
13. standard deviation	of wind direction (degrees)	
14. maximum wind speed (m/s)		
15. minimum wind spe	ed (m/s)	
16. mean P.A.R. (micro Q20275 = div O23210 = div	mean P.A.R. (micromols/s/m2) – Q20275 = divide by 200, multiply by 277.79 Q23210 = divide by 200 multiply by 498.68	
17. sample station baro	metric pressure (mbar)	
18. mean temperature of Multiply by 1	lifference 1-3 m ©	
19. total particle count		
20. sample of battery v	oltage	

- 1. No missing data.
- 2. Datalogger time correct on November 21, 2007 at 1645.
- 3. Check input values and wind alignment on November 21, 2007 at 1647., all appear correct.
- 4. Sensor maintenance: swapped up-facing pyranometer (old# 28370, new# 23275) on November 21, 2007 at 1729, down-facing pyranometer (old# 40423, new# 56364) at 1734, quantum sensor (old #20275, new# 23210) at 1715.
- 5. CR10x datalogger power off November 21, 2007 at 1802 to 1804. to replace CR10x and swapped SM.

Filename:

hoe070803.dat

Station: Date of Establishment: Author of this report: File Period: Sampling Frequency: Averaging and Output Interval: Program Name:

Lake Hoare Dec 1, 1993 by Peter Doran Hassan Basagic November 21, 2007 at 1815 to December 1, 2007 at 1430 wind speed every 4 sec; other every 30 sec every 15 minutes hoe067v2

- array I.D. 1.
- o1 2.
  - day
- ok 3.
  - time ok
- mean air temp. @ 3 meters © 4. rclow
- 5. mean R.H. @ 3 meters (%) ok (see correction note on page 1)
- 1. mean solar flux coming down (W/m2) - PY23275 ok
- mean solar flux going up (W/m2) PY56364 2. ok
- 6. mean horizontal wind speed (m/s) ok
- 7. resultant mean wind speed (m/s) 01
- 8. resultant mean wind direction (degrees from north) ok
- 9. standard deviation of wind direction (degrees) ok
- 10. maximum wind speed (m/s) ok
- 11. minimum wind speed (m/s) ok
- 12. mean P.A.R. (micromols/s/m2) Q23210 divide by 200, multiply by 300.98
- 13. sample station barometric pressure (mbar) ok
- 14. mean temperature difference 1-3 m © Multiply by -1
- 15. total particle count
- o1 16. sample of battery voltage

01

- 1. One line of missing data on December 01, 2007 at 1415.
- Datalogger time correct on December 01, 2007 at 1310. 2.
- Check input values and wind alignment on December 01, 2007 at 1310, all appear correct. 3.
- 4. Sensor maintenance: swapped wind sensor on December 01, 2007 and offline 1330 to 1345.
- 5. CR10x datalogger power off December 01, 2007 from 1604 to 1616. New program loaded: hoe078v1. SM swapped on December 01, 2007 at 1432.

Filename: Station: Date of Establishment: Author of this report: File Period: Sampling Frequency: Averaging and Output Interval: Program Name:		hoe070804.dat Lake Hoare Dec 1, 1993 by Peter Doran Hassan Basagic December 1, 2007 at 1445 to January 14, 2008 at 1030 wind speed every 4 sec; other every 30 sec every 15 minutes hoe078v1	
1.	array I.D. 01		
2.	day ok		
3.	time ok		
4.	mean air temp. @ 3 m	eters ©	
5.	mean R.H. @ 3 meters	S(%)	
3.	mean solar flux coming down (W/m2) – PY23275		
4.	mean solar flux going up (W/m2) – PY56364		
6.	mean horizontal wind speed (m/s)		
7.	resultant mean wind speed (m/s)		
8.	resultant mean wind di	irection (degrees from north)	
9.	standard deviation of v	wind direction (degrees)	
10.	ok maximum wind speed (m/s)		
11.	minimum wind speed	(m/s)	
12.	P.A.R. (micromols/s/m2) – Q23210		
13.	. sample station barometric pressure (mbar)		
14.	mean temperature diff	erence 1-3 m ©	
15.	Multiply by -1 5. total particle count		
16.	ol sample of battery voltage ol		

- 1. No missing data.
- 2. Datalogger time adjusted ahead 2 minutes 30 seconds on January 14, 2008 at 1034.
- 3. Check input values and wind alignment on January 14, 2008 at 1037, all appear correct.
- 4. SM swapped on January 14, 2008 at 1039.

Filename:	hoe070805.dat	
Station:	Lake Hoare	
Date of Establishment:	Dec 1, 1993 by Peter Doran	
Author of this report:	Hassan Basagic	
File Period:	January 14, 2008 at 1030 to January 28, 2008 at 1330	
Sampling Frequency:	wind speed every 4 sec; other every 30 sec	
Averaging and Output Interv	al: every 15 minutes	
Program Name:	hoe0/8v1	
1. array I.D.		
01 2 day		
2. day		
3 time		
J. time		
4 mean air tem	n @ 3 meters ©	
rclow		
5. mean R.H. @	3 meters (%)	
ok (see c	correction note on page 1)	
6. mean solar fl	ux coming down ( $W/m2$ ) – PY23275	
ok		
7. mean solar fl	ux going up (W/m2) – PY56364	
ok		
8. mean horizon	8. mean horizontal wind speed (m/s)	
ok	ok	
9. resultant mea	n wind speed (m/s)	
o1		
10. resultant mea	n wind direction (degrees from north)	
ok		
11. standard devi	ation of wind direction (degrees)	
ok		
12. maximum wi	nd speed (m/s)	
ok	• • • • • •	
13. minimum wii	nd speed (m/s)	
OK	1 / / 0) 022210	
14. P.A.R. (micr	comols/s/m2) = Q23210	
divide by	7 200, multiply by 300.98	
15. sample station	a barometric pressure (mbar)	
OK 16. maan tampar	atura difforma 1.2 m (	
10. mean tempera	$\frac{1}{1000}$	
17 total particle	count	
	Joun	
18 sample of bat	terv voltage	
	in forme	

- 1. No missing data.
- 2. Datalogger time adjusted ahead 20 seconds on January 28, 2008 at 1154.
- 3. Check input values and wind alignment on January 28, 2008 at 1156, all appear correct, except for min wind speed which is reading zero.
- 4. Sensor maintenance: moved Sensit off met tower legs to ground rebar approximately 2 meters south from the station, same 20 cm height.
- 5. SM swapped on January 28, 2008 at 1344. New program loaded (HOE078v2) which corrects min wind speed conflict.

Filename: Station: Date of Establ Author of this File Period: Sampling Free Averaging and Program Nam	ishment: report: quency: 1 Output Interval: e:	hoe070806.dat Lake Hoare Dec 1, 1993 by Peter Doran Hassan Basagic January 28, 2008 at 1330 to April 9, 2008 at 1115 wind speed every 4 sec; other every 30 sec every 15 minutes hoe078v2
1.	array I.D.	
2.	day ok	
3.	time	
4.	mean air temp. @ 3 mean air temp. @ 3 mean air temp.	eters ©
5.	mean R.H. @ 3 meters	s (%) note on page 1)
6.	mean solar flux coming down (W/m2) – PY23275	
7.	mean solar flux going up (W/m2) – PY56364	
8.	mean horizontal wind speed (m/s)	
9.	resultant mean wind speed (m/s)	
10.	resultant mean wind di	rection (degrees from north)
11.	standard deviation of wind direction (degrees)	
12.	maximum wind speed (m/s)	
13.	minimum wind speed	(m/s)
14.	. P.A.R. (micromols/s/m2) – Q23210 divide by 200 multiply by 200 08	
15.	sample station barome	tric pressure (mbar)
16.	mean temperature diffe	erence 1-3 m ©
17.	total particle count	
18.	sample of battery volta	ge

- 1. No missing data
- 2. SM removed by John Priscu as part of extended season on April 9, 2008 between 1115 and returned at 1305.

# Lake Hoare Precipitation

Filename:		lhp07801.dat
Station:		Lake Hoare precipitation station
Date of Esta	ablishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of th	nis report:	Hassan Basagic
File Period:	•	January 29, 2007 at 2100 to November 8, 2007 at 1200
Sampling Fi	requency:	every 30 sec
Averaging a	and Output Interval:	every 15 minutes
Program Na	ime:	lhp023v2.dld
1.	array I.D.	•
	o1	
2.	day	
	ok	
3.	time	
	ok	
4.	total precipitation (mm	
	ok	
5.	mean soil temperature	@ 0 cm in soil (C)
	rClow	
6.	mean soil temperature	@ 5 cm in soil (C)
	rClow	
7.	mean soil temperature	@ 10 cm in soil (C)
	rClow	
8.	sample of battery volta	ge
	o1	

- 1. No missing data.
- 2. Datalogger time was adjusted back 8 min 20 sec on November 8, 2007 at 1155.
- 3. Checked input values on, everything looks good.
- 4. Maintenance: added water to upper reservoir in precip gage. Flagged data.
- 5. Swapped SM on November 8, 2007 at 1209.

Filename:		lhp07802.dat
Station:		Lake Hoare precipitation station
Date of Estab	lishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of this	report:	Hassan Basagic
File Period:		November 8, 2007 at 1215 to December 1, 2007 at 1815
Sampling Free	quency:	every 30 sec
Averaging an	d Output Interval:	every 15 minutes
Program Nam	ie:	lhp023v2
1.	array I.D.	
	o1	
2.	day	
	ok	
3.	time	
	ok	
4.	total precipitation (mn	n)
	ok	
5.	mean soil temperature	e @ 0 cm in soil (C)
	rClow	
6.	mean soil temperature	e @ 5 cm in soil (C)
	rClow	
7.	mean soil temperature	e @ 10 cm in soil (C)
	rClow	
8.	sample of battery volt	age
	o1	

- 1. No missing data, one line of duplicate data on November 8,2007 at 1200 caused by time adjustment. Delete second line of data.
- 2. Datalogger time was correct.
- 3. Checked input values on, everything looks good.
- 4. Station offline from 1652 1654 to install new batteries. Swapped SM on December 1, 2007 at 1801.
- 5. New program installed (lhp078v1) at 1804, which includes new air temperature and ultrasonic distance ranger.

Filename:			lhp07803.dat
Station:			Lake Hoare precipitation station
Date of Es	stabl	ishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of	this	report:	Hassan Basagic
File Perio	d:	-	December 1, 2007 at 1815 to January 14, at 1100
Sampling	Free	quency:	every 30 sec
Averaging	g and	d Output Interval:	every 15 minutes
Program 1	Nam	e:	lhp078v1
-	1.	array I.D.	-
		o1	
	2.	day	
		ok	
	3.	time	
		ok	
	4.	total precipitation (mn	n)
		ok	
	5.	mean soil temperature	@ 0 cm in soil (C)
		rClow	
	6.	mean soil temperature	@ 5 cm in soil (C)
		rClow	
	7.	mean soil temperature	@ 10 cm in soil (C)
		rClow	
	8.	distance to surface (m	)
		ok	
	9.	sample of battery volta	age
		o1	

- 1. No missing data.
- 2. Datalogger time adjusted ahead 1 min 10 sec on January, 14, 2008 at 1042. Ultrasonic ranger height is 49 cm.
- Checked input values on, everything looks good.
  Maintenance: replaced datalogger at 1047.
- 5. Swapped SM on January 14, 2008 at 1105.

Filename:		lhp07804.dat
Station:		Lake Hoare precipitation station
Date of Establ	lishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of this	report:	Hassan Basagic
File Period:		January 14, at 1115 to January 28, 2008 at 1415
Sampling Free	quency:	every 30 sec
Averaging and	d Output Interval:	every 15 minutes
Program Nam	e:	1 lhp078v1
1.	array I.D.	
	o1	
2.	day	
	ok	
3.	time	
	ok	
4.	total precipitation (mn	n)
	ok	
5.	mean soil temperature	@ 0 cm in soil (C)
	rClow	
6.	mean soil temperature	@ 5 cm in soil (C)
	rClow	
7.	mean soil temperature	@ 10 cm in soil (C)
	rClow	
8.	distance to surface (m)	)
	ok	
9.	sample of battery volta	age
	o1	

- No missing data.
  Datalogger time correct on January 28, 2008 at 1415.
  Checked input values on, everything looks good.
  Swapped SM on January 28, 2008 at 1417.

Filename	:		lhp07805.dat
Station:			Lake Hoare precipitation station
Date of E	stabl	lishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of	f this	report:	Hassan Basagic
File Perio	od:	-	January 28, 2008 at 1430 to April 9, 2008 at 1115
Sampling	Free	quency:	every 30 sec
Averagin	g an	d Output Interval:	every 15 minutes
Program	Nam	ie:	1 lhp078v1
-	1.	array I.D.	-
		o1	
	2.	day	
		ok	
	3.	time	
		ok	
	4.	total precipitation (mr	n)
		ok	
	5.	mean soil temperature	e @ 0 cm in soil (C)
		rClow	
	6.	mean soil temperature	e @ 5 cm in soil (C)
		rClow	
	7.	mean soil temperature	e @ 10 cm in soil (C)
		rClow	
	8.	distance to surface (m	)
		ok	
	9.	sample of battery volt	age
		o1	

No missing data.
 SM removed by John Priscu as part of extended season on April 9, 2008 between 1115 and returned at 1305.

# **Taylor Glacier**

Taylor Olaci	ci (i)	
Filename:		tar06701.dat
Station:		Taylor Glacier Station
Date of Establishment:		1994 by Peter Doran
Author of this	report:	Hassan Basagic
File Period:		January 20, 2007 (20) at 1300 to November 14, 2007 at 1245
Sampling Free	quency:	depth every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and	d Output Interval:	every 15 minutes
Program name	5:	tar045v1
1. :	array I.D.	
	o1	
2.	day	
2	ok	
3.	time	
	OK O 2	
4.	mean air temp. @ 3 m	eters (C)
-	rclow	
5.	mean R.H. @ 3 meters	S (%)
<i>.</i>	ok (see correction	n note on page 1)
6.	mean air temp @ Im (	(C) from 107 Temp. Probe
7	rclow	
/. 1	mean RH at Im (%) fr	om Vaisala HMP45C Probe
0	OK (see correction	1 note on page 1) $(22722F2)$
ð. 1	divide by 100 m	$g \operatorname{dOWn}(W/\operatorname{In}2) = (35/35F3)$
0	aivide by 100; mi	MUPIY DY 117.25
9. 1	mean solar flux going	$up(w/m_2) = (31435F3)$
10	aivide by 100; mi	maply by 120.58
10. 1	mean norizontal wind	speed (m/s)
11	OK ltont	
11. 1	resultant mean wind sj	peed (m/s)
12	01 regultant mean wind d	irration (dagrass from north)
12.	flog	nection (degrees non north)
13	tiag standard deviation of y	wind direction (degrees)
15.		whild direction (degrees)
14	UK maximum wind speed	(m/s)
14.	ok	(11/8)
15	minimum wind speed	(m/s)
15.	ok	(11/3)
16	ice temperature @ 50c	cm (original depth mV*0.01)
10.	nolv (n0105 87	n1-237 58 n2-507 11 n3-686 25 n4-546 23 n5-252 43 n6-62 53 n7-6 44
17	ice temperature @ 10	$r_{23}r_{23}r_{30}r_{12} = 307.117, r_{10} = 000.25, r_{11} = 310.25, r_{10} = 2.52, r_{10}r_{10} = 02.55, r_{11} = 0.117$
1/.	poly (n0=-106 57	$n_{1}=241 60 n_{2}=-517 58 n_{3}=700 30 n_{4}=-556 87 n_{5}=257 01 n_{6}=-63 57 n_{7}=6 54$
18.	surface temperature (	
10.	ok	
19.	sample depth from ser	usor to surface (cm)
1/.	ok	
20.	sample of battery volt	age
_0.	o1	
Notes:		
1. No missi	ng data. Datalogger tir	ne is correct November 14, 2007 at 1242.

Ro missing data. Datalogger time is correct November 14, 2007 at 1242.
 Input values and wind alignment appear correct November 14, 2007 at 1243 except for all ice temperatures and surface temperature. Sonic ranger height is 44.5 cm.

3. Replace (1) SM4M with another on November 14, 2007 at 1247.

Filename:		tar06702.dat	
Station:		Taylor Glacier Station	
Date of Estal	blishment:	1994 by Peter Doran	
Author of thi	is report:	Hassan Basagic	
File Period:	•	November 14, 2007 at 1245 to November 23, 2007 at 14:45	
Sampling Fre	equency:	depth every 60 minutes, wind every 4 secs.; others: every 30 secs.	
Averaging a	nd Output Interval:	every 15 minutes	
Program nan	ne:	tar045v1	
1.	arrav I.D.		
	o1		
2.	dav		
	ok		
3.	time		
	ok		
4.	mean air temp. @ 3 m	neters (C)	
	rclow	(-)	
5.	mean R.H. @ 3 meter	·s (%)	
	ok (see correctio	n note on page 1)	
6	mean air temp @ 1m	(C) from 107 Temp Probe	
0.	rclow		
7	mean RH at 1m (%) f	rom Vaisala HMP45C Probe	
<i>.</i>	ok (see correctio	n note on page 1)	
8	mean solar flux comi	$m down (W/m^2) = (33733F3)$	
0.	divide by 100 multiply by 117.23		
Q	mean solar flux going up $(W/m^2)$ (31/35F3)		
).	divide by 100: multiply by 126.58		
10	mean horizontal wind speed (m/s)		
10.	ok		
11	resultant mean wind s	meed (m/s)	
11.			
12	resultant mean wind d	lirection (degrees from north)	
12.	flag	incetion (degrees nom north)	
13	standard deviation of	wind direction (degrees)	
15.	ok	while direction (degrees)	
14	maximum wind speed	1 (m/s)	
14.	ok	(11 <i>1</i> /5)	
15	minimum wind speed	(m/c)	
15.	ninininini wind speed	(11/8)	
16	ico tomporaturo @ 50	cm (original depth mV*0.01)	
10.	nce temperature $@ 30$	$(11)$ (01) ginar deput, $110^{-0.01}$	
17	ico tomporaturo @ 10	/,111-257.56,112-507.11,115-080.25,114-540.25,115-252.45,110-62.55, 117-0.44	
17.	nce temperature $@ 10$	$\frac{1}{2}$ $\frac{1}$	
10	poly (II0=-100.57	7,111–241.00,112–-517.56,115–700.50,114–-550.67,115–257.01,110–-05.57, 117–0.54	
16.	surface temperature (		
10	UK somple donth from so	nsor to surface (am)	
19.	sample deput from se	iisor to surface (ciri)	
20	OK		
20.	sample of battery volt	age	
Notaa	01		
INOLES:	ina data		
1. INO MISS	sing data.	1 02 0007 (14.10	

- 2. Datalogger time is correct November 23, 2007 at 14:19.
- 3. Input values appear correct November 23, 2007 at 14:22, except for all ice temperatures and surface temperature.
- 4. Sonic ranger height is 45 cm.
- 5. Maintenance: replaced RH sensor at 1m on November 23, 2007 at 14:28.
- Datalogger power off on November 23, 2007 at 14:57 to 1458 to load new program (TAR078v2) and replace (1) SM with another. New program eliminated all non functioning ice temps (6) and adds new Apogee IRT (#1089).

Filename:		tar06703.dat
Station:		Taylor Glacier Station
Date of Establishment:		1994 by Peter Doran
Author of this report:		Hassan Basagic
File Period:	•	November 23, 2007 at 1500 to December 19, 2007 at 1200
Sampling Fre	equency:	depth every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging an	d Output Interval:	every 15 minutes
Program nam	ie:	tar078v2
1.	array I.D.	
	01	
2.	day	
	ok	
3.	time	
	ok	
4.	mean air temp. @ 3 m	neters (C)
	rclow	
5.	mean R.H. @ 3 meter	s (%)
	ok (see correction	n note on page 1)
6.	mean air temp @ 1m	(C) from 107 Temp. Probe
	rclow	
7.	mean RH at 1m (%) fr	rom Vaisala HMP45C Probe
	ok (see correction	n note on page 1)
8.	mean solar flux comin	ng down (W/m2) – (33733F3)
	divide by 100; m	ultiply by 117.23
9.	mean solar flux going	up (W/m2) - (31435F3)
	divide by 100; m	ultiply by 126.58
10.	mean horizontal wind	speed (m/s)
	ok	
11.	resultant mean wind s	peed (m/s)
	o1	
12.	resultant mean wind d	lirection (degrees from north)
	flag	
13.	standard deviation of	wind direction (degrees)
	ok	
14.	maximum wind speed	l (m/s)
	ok	
15.	minimum wind speed	(m/s)
	ok	
16.	surface temperature in	nternal thermister output (mV)
	o1	
17.	surface temperature (	mV)
	o1	
18.	surface temperature (C	C)
	ok	
19.	sample depth from ser	nsor to surface (cm)
	ok	
20.	sample of battery volt	age
	01	
Notes:	1.	

- 1. No missing data.
- 2. Datalogger time corrected back 30 seconds on December 19, 2007 at 1103.
- 3. Input values and wind alignment appear correct December 19, 2007 at 1105.
- 4. Sonic ranger height is 49 cm.
- 5. Maintenance: replaced RH sensor at 3m on December 19, 2007 at 11:26.
- 6. Datalogger power off on December 19, 2007 at 1213 to load new program (TAR078v3) and replace (1) SM with another. New program returns IceTemp to location 16.

Filename: Station: Date of Esta Author of th File Period: Sampling Fr Averaging a Program nar	blishment: is report: equency: nd Output Interval: ne:	tar06704.dat Taylor Glacier Station 1994 by Peter Doran Hassan Basagic December 19, 2007 at 1215 to January 23, 2008 at 1230 depth every 60 minutes, wind every 4 secs.; others: every 30 secs. every 15 minutes tar078v3	
1.	array I.D.		
2	ol day		
۷.	ok		
3.	time		
	ok		
4.	mean air temp. @ 3 m	neters (C)	
_	rclow		
5.	mean R.H. @ 3 meter	S (%)	
6	ok (see correction	n note on page 1) (C) from 107 Town, Proba	
0.	relow	(c) noili 107 Temp. Flobe	
7	mean RH at 1m (%) fr	rom Vaisala HMP45C Probe	
	ok (see correction	n note on page 1)	
8.	mean solar flux comir	mean solar flux coming down ( $W/m^2$ ) – (33733F3)	
	divide by 100; m	ultiply by 117.23	
9.	mean solar flux going	up (W/m2) - (31435F3)	
	divide by 100; m	ultiply by 126.58	
10.	mean horizontal wind	speed (m/s)	
	ok	14.45	
11.	resultant mean wind s	peed (m/s)	
12	01 resultant mean wind d	lization (degrees from north)	
12.	flag	mection (degrees from norm)	
13.	standard deviation of	wind direction (degrees)	
	ok		
14.	maximum wind speed	l (m/s)	
	ok		
15.	minimum wind speed	(m/s)	
	ok		
16.	ice temp		
17			
17.	surface temperature in	iternal thermister output (mV)	
18	01 surface temperature (	mV)	
10.			
19.	surface temperature (	C)	
	ok	- /	
20.	sample depth from ser	nsor to surface (cm)	
	ok		
21.	sample of battery volt	age	
<b>N</b> T	o1		
Notes:			

- 1. No missing data. Datalogger time correct on January 23, 2008 at 1206.
- 2. Input values and wind alignment appear correct January 23, 2008 at 1212. Ice temp does not appear correct.
- 3. Sonic ranger height is 50 cm.
- 4. Replace (1) SM with another on January 23, 2008 at 1230.

#### Lake Vanda

Filename:	vaa07801.dat
Station:	Lake Vanda met station
Date of Establishment:	November 24, 1994 by Peter Doran, rebuilt
Author of this report:	Hassan Basagic
File Period:	December 16, 2006 at 1000 to December 8, 2007 at 1300
Sampling Frequency:	wind every 4 secs.; sonic every 3600 secs.; other every 30 secs.
Averaging and Output Interval:	every 15 min
Program Name:	vaa045v1
1 amor ID	
1. affay I.D.	
$\frac{1}{2}$ day	
2. day	
3 time	
ok	
4. mean air temp. @	3 meters (C)
rclow	
5. mean R.H. @ 3 n	neters (%)
ok (see correction	on note on page 1)
6. mean solar flux c	oming down (W/m2) – PY28169
ok	
7. mean solar flux g	oing up (W/m2) - PY23277
ok	
8. mean horizontal	wind speed (m/s)
ok	
9. resultant mean w	ind speed (m/s)
ok	
10. resultant mean w	ind direction (degrees from north)
OK	
11. standard deviatio	n of wind direction (degrees)
OK 12 maximum wind a	$\mathbf{n}$
12. maximum wind s	peed (m/s)
UK 13 minimum wind su	peed (m/s)
ok	
14  mean PAR (mid	$cromols/s/m^2) = 0.29765$
divide by 200 n	nultiply by 263 64
15. mean soil temper	ature @ 0 cm in soil (C)
rclow	
16. mean soil temper	ature @ 5 cm in soil (C)
rclow	
17. mean soil temper	ature @ 10 cm in soil (C)
rclow	
18. distance to surfac	e (m)
ok	
19. sample of battery	voltage
o1	

- 1. No missing data. Two multiple lines on December 8, 2007 at 1200 and 1215, these were duplicate and were removed.
- 2. Adjusted datalogger clock ahead 5 minute and 52 seconds on December 8, 2007 at 1150.
- 3. Checked input values and wind alignment on December 8, 2007 at 1150, all appear correct except sonic ranger which is offline.

- 4. Maintenance: Swapped upfacing pyranometer (old#28169, new#41090) at 1205; swapped quantum PAR (old#29765, new#Q17248) at 1212; and RH sensor at 3m at 1215 on December 8, 2007. Repaired Ultrasonic distance ranger by replacing sensor (transducer had failed) at 1224.
- 5. Sonic sensor depth is 65.6 cm on December 8, 2007 after replacing the sensor.
- 6. Swapped SM on December 8, 2007 at 1305.

Filename:		vaa07802.dat	
Station:		Lake Vanda met station	
Date of Establishment:		November 24, 1994 by Peter Doran, rebuilt	
Author of this report:		Hassan Basagic	
File Period:	1	December 8, 2007 at 1315 to January 18, 2008 at 1245	
Sampling Fre	equency:	wind every 4 secs.: sonic every 3600 secs.: other every 30 secs.	
Averaging ar	nd Output Interval:	every 15 min	
Program Nar	ne.	vaa045v1	
1	array I D		
1.	o1		
2	dav		
2.	ok		
3	time		
5.	ok		
4	mean air temp @ 3 m	$a_{rs}(C)$	
4.	relow	eters (C)	
5	man P U @ 3 motor	s(0/2)	
5.	ok (and correction	S(%)	
6	ok (see correction	$\frac{1}{2} \frac{1}{2} \frac{1}$	
0.	inean solar nux comm	$g \operatorname{down}(w/\operatorname{In} z) - P 141090$	
7	OK		
7.	mean solar nux going	up (w/m2) - P125277	
0	OK		
8.	mean horizontal wind	speed (m/s)	
0	OK	1 ( )	
9.	resultant mean wind sj	peed (m/s)	
10	OK		
10.	resultant mean wind d	irection (degrees from north)	
11	OK		
11.	standard deviation of v	wind direction (degrees)	
10	OK		
12.	maximum wind speed	(m/s)	
10	OK		
13.	minimum wind speed	(m/s)	
1.4	OK DAD ( '	1 / / 0) 017049	
14.	mean P.A.R. (microm	OIS/S/M2) = QI/248	
	divide by 200, m	iultiply by 313.57	
15.	mean soil temperature	@ 0  cm in soil (C)	
	rclow		
16.	mean soil temperature	@ 5 cm in soil (C)	
15	rclow		
17.	mean soil temperature	@ 10  cm in soil (C)	
10	rclow		
18.	distance to surface (m)	)	
10	OK		
19.	sample of battery volta	age	
	01		

- 1. No missing data. Adjusted datalogger back 10 seconds on January 18, 2008 at 1232.
- 2. Checked input values and wind alignment on January 18, 2008 at 1233, all appear correct.
- 3. Sonic sensor depth is 65.3 cm on January 18, 2008 at 1235.
- 4. Swapped SM on January 18, 2008 at 1248.

Lake Vida		
Filename: Station: Date of Estat Author of thi File Period: Sampling Fre Averaging ar Program Nar	blishment: is report: equency: nd Output Interval: ne:	via07801.dat Lake Vida met station November 24, 1995 by Peter Doran Hassan Basagic December 16, 2006 at 1100 to January 8, 2008 at 1530 wind every 4 secs.; ultrasonic every 3600 secs; others: every 30 secs. every 15 min via045v1
1.	array I.D.	
2	10 dav	
۷.	ok	
3.	time	
	ok	
4.	mean air temp. @ 3 me	eters (C)
	rclow	
5.	mean R.H. @ 3 meters	
C	ok (see correction	note on page 1) a down $(W(m^2)) = DV22250$
0.	ok	g down (w/mz) - P f 23230
7.	mean solar flux going up (W/m2) – PY20561	
	ok	
8.	ok	
9.	resultant mean wind sp	peed (m/s)
10	o1	
10.	resultant mean wind di	urection (degrees from north)
11	ok standard deviation of v	wind direction (degrees)
11.	ok	which direction (degrees)
12.	maximum wind speed	(m/s)
	ok	
13.	minimum wind speed	(m/s)
	ok	
14.	mean P.A.R. (micromo	bls/s/m2) - Q30803
15	divide by 200, mi	(a) and in soil (C)
13.	relow	
16.	mean soil temperature	@ 5 cm in soil (C)
	rclow	
17.	mean soil temperature	@ 10 cm in soil (C)
	rclow	
18.	distance to surface (m)	
10	OK sample of battory volta	
19.	ol	
	<b>U</b> 1	

- 1. One line missing on January 8, 2008 at 1530.
- 2. Time adjusted back 3 minutes and 50 seconds on January 8, 2008 at 1351.
- 3. Checked input values and wind alignment on January 8, 2008 at 1358, everything looks good.
- 4. Sonic sensor depth = 51.5 cm.

- 5. Maintenance: replaced down facing pyranometer (old#20561, new#45668) at 1426; quantum PAR sensor (old#Q30803, new#Q23204) at 1410; and RH at 3m at 1408 on January 8, 2008.
- 6. Station offline from 1442 1444 to swap datalogger and 1453 1503 to swap battery (new 100 Ahr). SM swapped out at 1540.
- 7. Soil temperatures are now 1.2 m from lake edge. It appears the soil is saturated.

Filename:		via07802.dat	
Station:		Lake Vida met station	
Date of Establishment		November 24, 1995 by Peter Doran	
Author of this report:		Hassan Basagic	
File Period	b report.	January 8, 2008 at 1530 to January 18, 2008 at 1445	
Sampling Fr	equency	wind every 4 secs : ultrasonic every 3600 secs: others: every 30 secs	
Averaging a	Autout Interval	every 15 min	
Drogrom Nor	na Output mici vai.	vio045v1	
Flogram Na	ne.	V1d04JV1	
1.	array I.D.		
	o1		
2.	day		
	ok		
3.	time		
	ok		
4.	mean air temp. @ 3 m	eters (C)	
	rclow		
5	mean R H @ 3 meters	s (%)	
5.	ok (see correction	n note on nage 1)	
6	mean solar flux comin	$\log down (W/m^2) = PY^{23250}$	
0.	ok	$g \operatorname{down}(w/\operatorname{mz}) = 1.123230$	
7	UK maan solar flux going	$un(W/m^2) = DV 45669$	
7.	inean solar nux going	up(w/m2) - r 143008	
0	OK		
8.	mean horizontal wind	speed (m/s)	
_	ok		
9.	resultant mean wind sp	peed (m/s)	
	o1		
10.	resultant mean wind d	irection (degrees from north)	
	ok		
11.	standard deviation of v	wind direction (degrees)	
	ok		
12.	maximum wind speed	(m/s)	
	ok		
13.	minimum wind speed	(m/s)	
	ok		
14.	mean P.A.R. (microm	ols/s/m2) - 023204	
1.11	divide by 200 m	ultiply by 237.54	
15	mean soil temperature	(0, 0, cm in soil (C))	
15.	relow	e o chi ili son (C)	
16	moon soil tomporatura	$\emptyset$ 5 cm in soil (C)	
10.		e 5 chi hi son (C)	
17	iciów	(2) 10 and in a (1.0)	
1/.	mean son temperature		
10	rclow		
18.	distance to surface (m	)	
	ok		
19.	sample of battery volta	age	
	01		
NIAAAAA			

- Notes:
- 1. No missing data. Time adjusted back 10 seconds on January 18, 2008 at 1425.
- 2. Checked input values and wind alignment on January 8, 2008 at 1428, everything looks good.
- 3. Sonic sensor depth = 51 cm.
- 4. Maintenance: replaced wind sensor at 1442.
- 5. Swapped SM at 1146.

## Array I.D. meaning:

- First and Second Digit
- 01 = Hoare
- 02 = Fryxell
- 03 = Bonney
- 04 = Commonwealth
- 05 = Howard
- 06 = Taylor
- 07 = Vanda
- 08 = Brownsworth
- 09 = Explorer's Cove
- 10 =Canada Gl. (without Eddy Sensors)
- 11 = Vida
- 12 = Hoare Submerged
- 13 = Fryxell Submerged
- 14 = Bonney East Submerged
- 15 =Canada Gl. (with Eddy Sensors- not in use)
- 16 = Bonney West Submerged
- 17 = Fryxell Snow Fence
- 18 = Beacon Valley