Meteorological Post Processing Documentation and Task Lists for 2008/2009

McMurdo Dry Valley Long Term Ecological Research (LTER)

This document compiles the steps taken to post-process raw meteorological data files and notes from station visits. Each numbered output value is identified by column header name, unit of measurement, and post-processing instruction. Station notes document datalogger time adjustments, sensor status, sensor and station maintenance, time of storage module changes, equipment and data problems, and other observations. Files are listed alphabetically by file name.

Beacon Valley
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

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
Lowe= see note for relative humidity below

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] * (0.00000002034080948 + 0.000000000006136820929 * [AirT3m])))))) / (6.109177956 + [AirT3m] * (0.503469897 + [AirT3m] * (0.01886013408 + [AirT3m] * (0.0004176223716 + [AirT3m] * (0.00000582472028 + [AirT3m] * (0.00000004838803174 + 0.000000001838826904 * [AirT3m]))))))

Array I.D. key is located at document end.

Prepared by
Hassan Basagic, 2009
Portland State University, OR

Beacon Valley

Filename:	ben08901.dat
Station:	Beacon Valley met station
Date of Establishment:	November 27, 2000 by Susan Kaspari, Thomas Nylen and Adrian Green
Author of this report:	Hassan Basagic
File Period:	January 29, 2008 (29) at 1515 to December 16, 2008 at 1445
Sampling Frequency:	wind every 4 sec.; others: every 30 sec.
Averaging and Output Interval:	every 15 min
Program Name:	ben087v1

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 (%)
   Lowe correction
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)
   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) –
    Q32567 -multiply by 1.38
    Q20275 - multiply by 1.18
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
    o1

Notes:

1. No missing data.
2. Datalogger time adjusted back by 9 min 10 sec on December 16, 2008 at 1410.
3. Input values and wind direction appear correct on December 16, 2008 at 1415.
4. Maintenance: December 16, 2008 swapped wind sensor at 1425, RH at 1427, quantum PAR sensor (old#Q232567, new#Q20275) at 1438. Datalogger swapped at 1446, station offline for 1 min.
5. SM swapped on December 16, 2008 at 1448 January 29, 2008 (29) at 1515.

Lake Bonney

Filename:	boy08901.dat
Station:	Lake Bonney met station
Date of Establishment:	November 24, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	April 9, 2008 at 10:00 to November 25, 2008 1015
Sampling Frequency:	sonic and prec. every 60 minutes, wind speed every 4 sec, other every 30 sec
Averaging and Output Interval:	every 15 minutes
Program name:	boy045v1

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 (%)
   Lowe correction
6. mean solar flux coming up (W/m2) – PY28170
   ok
7. mean solar flux going down (W/m2) – PY18395
   ok
8. mean P.A.R. (micromols/s/m2) –
   Before November 25, 2008 at 1000 (Q30801) -divide by 200, multiply by 217.56
   After November 25, 2008 at 1000Q33906 - divide by 200, multiply by 292.51
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)
    30831F - divide by 250; multiple by 277.01
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)
    32059F3 - divide by 250; multiple by 227.79
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
    o1

Notes:

1. No missing data. Replicate data is found at beginning and end of file. Delete lines 1 through 1822 and lines 28787 to 30608.
2. Adjusted time back by 5 min 30 sec on November 25, 2008 at 0932. Date is correct.
3. All input values appear correct. Wind is in alignment and ultrasonic height is correct = 40.5 cm. Sensit height is correct at 20 cm.
4. Maintenance: on November 25, 2008 swapped quatum sensor (old#Q30801, new#Q33906) at 10:00, RH at 3m at 10:05, and wind monitor at 10:14.
5. SM swapped on November 25, 2008 at 10:27.

Filename:	boy08902.dat
Station:	Lake Bonney met station
Date of Establishment:	November 24, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	November 25, 2008 1030 to January 2, 2009 at 1100
Sampling Frequency:	sonic and prec. every 60 minutes, wind speed every 4 sec, other every 30 sec
Averaging and Output Interval:	every 15 minutes
Program name:	boy045v1

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 (%)	Lowe correction
6	mean solar flux going down (W/m2) – PY41099	ok
7	mean solar flux going up (W/m2) – PY40424	ok
8	mean P.A.R. (micromols/s/m2) – Q33906	divide by 200, multiply by 292.51
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)	30831F - divide by 250; multiply by 277.01
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)	32059F3 - divide by 250; multiply by 227.79
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	o1

o1

Notes:

1. No missing data.
2. Time and date is correct on January 2, 2009 at 1052.
3. All input values appear correct. Wind is in alignment and ultrasonic height is correct = 40.5 cm. Sensit height is correct at 20 cm.
4. SM swapped on January 2, 2009 at 1101.

Filename:	boy08903.dat
Station:	Lake Bonney met station
Date of Establishment:	November 24, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	January 2, 2009 at 1115 to January 10, 2009 at 1315
Sampling Frequency:	sonic and prec. every 60 minutes, wind speed every 4 sec, other every 30 sec
Averaging and Output Interval:	every 15 minutes
Program name:	boy089v1

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 (%)	Lowe correction
6	mean solar flux going down (W/m2) – PY41099	ok
7	mean solar flux going up (W/m2) – PY40424	ok
8	mean P.A.R. (micromols/s/m2) – Q33906	divide by 200, multiply by 292.51
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)	30831F - divide by 250; multiply by 277.01
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)	32059F3 - divide by 250; multiply by 227.79
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	o1

Notes:

1. No missing data.
2. Time and date is correct on January 10, 2009 at 1310.
3. All input values appear correct. Wind is in alignment and ultrasonic height is correct = 40.5 cm.
4. SM swapped on January 10, 2009 at 1317.

Lake Brownworth

Filename:	brh08901.dat
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 18, 2008 at 1615 to December 30, 2008 at 1300
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.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	corrected mean R.H. @ 3 meters (%)	Lowe correction
6	mean solar flux coming down (W/m2) – PY25306	ok
7	mean solar flux going up (W/m2) – PY28167	ok
8	mean horizontal wind 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 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	o1

Notes:

1. One line of repeat data on December 30, 2008 at 1245 caused by clock reset. Deleted second line.
2. Datalogger clock corrected back 10 min on December 30, 2008 at 1240.
3. Check input values and wind alignment on December 30, 2008 at 1240, all values look good. Ultrasonic ranger height was 58.5 cm (bare-ground).
4. Maintenance: on December 30, 2008 swapped RH at 1250 and wind sensor at 1301.
5. Swapped SM on December 30, 2008 at 1304 .

Canada Glacier

Filename:	caa08901.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 26, 2008 at 1815 to November 15, 2008 at 1315
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 relative humidity (%)	Lowe correction
6	mean solar flux coming 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 speed (m/s)	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	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=6.492
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=6.442
16	sample battery voltage	o1

Notes:

1. Data - Missing data between January 28, 2008 at 1815 to October 5, 2008 at 0100. Unknown cause of data loss. SM ribbon was detached.
2. Datalogger time - Adjusted ahead 9m 30 sec on November 5, 2008 at 1657. Time correct on November 15, 2008 at 1303. Date was correct.
3. Input values - Checked input values and wind alignment, all appear in good condition.
4. Maintenance – November 17, 2008 – swapped wind senor at 1335, swapped upfacing pyranometer (old#PY27937, new#28170) at 1409, downfacing pyranomter (old#PY18656, new#20565) at 1415.Lowered sensit from 32 cm to 20 cm.
5. Data storage - Swapped SM on November 15, 2008 at 1438.

Filename:	caa08902.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:	November 15, 2008 at 1445 to December 21, 2008 at 1245
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 relative humidity (%)	Lowe correction
6	mean solar flux coming 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 speed (m/s)	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	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=6.492
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=6.442
16	sample battery voltage	o1

Notes:

1. Missing data on December 21, 2008 from to 1245 to 1315 for maintenance.
2. Adjusted back 30 sec on December 21, 2008 at 1234.
3. Input values - Checked input values and wind alignment, all appear in good condition.
4. Maintenance – December 21, 2008 – removed 2 remaining ice thermistors which were damaged and no longer in the ice.
5. Data storage - Swapped SM on December 21, 2008 at 1308. New program loaded: CC089v1, which removes ice temperature measurement.

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Filename:	caa08903.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:	December 21, 2008 at 1315 to January 17, 2009 at 1600
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 relative humidity (%)	Lowe correction
6	mean solar flux coming 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 speed (m/s)	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	ice temperature – original depth was 50.0 cm from the surface (mV)	o1
15	ice temperature – original depth was 100.0 cm from the surface (mV)	o1
16	sample battery voltage	o1

Notes:
1. No missing data.
2. Time ok on January 17, 2009 at 1600.
3. Swapped SM on January 17, 2009 at 1602.

Commonwealth Glacier

Filename:	coh08901.dat
Station:	Commonwealth Glacier Station
Date of Establishment:	Nov 22, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	January 19, 2008 at 1400 to November 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
Program name:	coh045v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rClow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean solar flux coming down (W/m2) – 31437F3	divide 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)	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 incoming IR pyrgeometer output (pins A-B) (W/m2)	(34316F3) divide by 250; multiply by 242.72 - before November 18, 2008 at 11:00
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 - before November 18, 2008 at 11:
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.
2. Time adjust back 3 min and 30 sec on November 5, 2008 at 1517. Date is correct.
3. Swapped SM4M at November 5, 2008 at 1521.

Filename:	coh08902.dat
Station:	Commonwealth Glacier Station
Date of Establishment:	Nov 22, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	November 5, 2008 at 1530 to November 18, 2008 at 1200.
Sampling Frequency:	sonic every 60 minutes, wind every 4 secs.; other every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	coh089v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rClow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean solar flux coming down (W/m2) – 31437F3	divide 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)	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 incoming IR pyrgeometer output (pins A-B) (W/m2)	(34316F3) divide by 250; multiply by 242.72 - before November 18, 2008 at 11:00 (29786F3) divide by 250; multiply by 262.47 – after November 18, 2008 at 11:00
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 - before November 18, 2008 at 11:45 (29786F3) divide by 250; multiply by 276.24 – after November 18, 2008 at 11:45
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. Time and date are correct..
2. All input values appear correct. Wind is in alignment and ultrasonic height is correct = 68.5 cm.
3. Maintenance: performed on November 18, 2008. Swapped upfacing pyrgeometer (old#34316F3, new #32348F3) at 10:59. Swapped downfacing pyranometer (old#32311F3, new#29786F3) at 11:39. Swapped CR10x datalogger at 12:08 with new program (coh089v1.dld). New program accommodates new Apogee IRT. IRT will not operate until 1k resistors are transferred to individual thermisters on multiplexor.
4. Swapped SM4M at November 18, 2008 at 12:08

Filename:	coh08903.dat
Station:	Commonwealth Glacier Station
Date of Establishment:	Nov 22, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	November 18, 2008 at 1215 to January 19, 2009 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:	coh089v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rClow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean solar flux coming down (W/m2) – 31437F3	divide 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)	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 incoming IR pyrgeometer output (pins A-B) (W/m2)	(34316F3) divide by 250; multiply by 242.72 - before November 18, 2008 at 11:00 (29786F3) divide by 250; multiply by 262.47 – after November 18, 2008 at 11:00
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 - before November 18, 2008 at 11:45 (29786F3) divide by 250; multiply by 276.24 – after November 18, 2008 at 11:45
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	IRT thermistor (mV)	o1
25	IRT raw ice surface temp mV	o1
26	Surface Temperature (C)	ok
27	sample depth from sensor to surface (m)	Measured depth (0.60) + Value) * 100
28	sample of battery voltage	o1

Notes:

1. No missing data. Time and date are correct.
2. All input values appear correct.
3. Swapped SM4M at January 19, 2009 at 1320.

Explorers Cove

Filename:	exe08901.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 30, 2008 at 1245 to December 3, 2008 at 1315
Sampling Frequency:	prec every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	exe078v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming up (~W/m2)	ok
7	mean solar flux going down (~W/m2)	ok
8	mean horizontal wind 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 wind direction (degrees)	o1
12	maximum wind speed (m/s)	ok
13	minimum wind speed (m/s)	ok
14	mean P.A.R. (micromols/s/m2)	#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	o1

Notes:

1. No missing data.
2. CR10x time was adjusted back 1 min 50 sec on December 3, 2008 at 1315
3. Checked input values and wind alignment on December 3, 2008 at 1117, everything appears correct.
4. Maintenance: December 3, 2008 – swapped wind sensor at 1215, swapped soil probe at 0 cm at 1230 (old temp probe had corroded wire), swapped old batteries for new 100 amp hr, and swapped datalogger at 1258. Station power off during battery change.
5. Swapped SM on December 3, 2008 at 1315.

Filename:	exe08902.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 3, 2008 at 1330 to January 9, 2009 at 1130
Sampling Frequency:	prec every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	exe078v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming up (~W/m2)	ok
7	mean solar flux going down (~W/m2)	ok
8	mean horizontal wind 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 wind direction (degrees)	o1
12	maximum wind speed (m/s)	ok
13	minimum wind speed (m/s)	ok
14	mean P.A.R. (micromols/s/m2)	(#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	o1

Notes:

1. No missing data.
2. CR10x time was adjusted back 1 min on January 9, 2009 at 1131.
3. Checked input values and wind alignment on January 9, 2009 at 1130, everything appears correct.
4. Maintenance: January 9, 2009 – moved sensit from station to ground and installed new solar panel, cr10x, and two 32 A hr batteries. Battery needs one terminal bolt (improvised with U- bolt).
5. Precipitation: added 60 ml on January 9, 2009 at 1130
6. Swapped SM on January 9, 2009 at 1135. New program loaded (exe089v1) which removes sensit commands.

Lake Fryxell

Filename:	frl08901.dat
Station:	Lake Fryxell met station
Date of Establishment:	Jan 6, 1994 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	April 9, 2008 at 1130 to December 3, 2008 at 1700
Sampling Frequency:	sonic every 60 minutes, wind every 4 sec; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	frl078v1.dld

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming down (W/m2) – PY23276	ok
7	mean solar flux going up (W/m2) – PY20562	ok
8	mean horizontal wind 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 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) – Q23199	divide by 200, multiply by 295.12
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	particle count Sensit (1 min sample: hits per min)	ok
20	sample of battery voltage	o1

Notes:

1. No missing data.
2. CR10x time was adjusted back 7 min 50 sec on December 3, 2008 at 1601.
3. Checked input values and wind alignment on December 3, 2008 at 1117, everything appears correct, except for wind speed minimum.
4. Maintenance: swapped wind sensor at 1625. Swapped power cable (station off line for 2 min).
5. SM swapped on December 3, 2008 at 1709.

Filename:	frl08902.dat
Station:	Lake Fryxell met station
Date of Establishment:	Jan 6, 1994 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	December 3, 2008 at 1700 to January 9, 2009 at 930
Sampling Frequency:	sonic every 60 minutes, wind every 4 sec; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	frl078v1.dld

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming down (W/m2) – PY23276	ok
7	mean solar flux going up (W/m2) – PY20562	ok
8	mean horizontal wind 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 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) – Q23199	divide by 200, multiply by 295.12
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	particle count Sensit (1 min sample: hits per min)	ok
20	sample of battery voltage	o1

Notes:

1. No missing data.
2. CR10x time was adjusted back 20 sec on January 9, 2009 at 918.
3. Checked input values and wind alignment on January 9, 2009 at 918, everything appears correct, except for wind speed minimum.
4. Maintenance: relocated sensit from station to ground (20 cm height).
5. SM swapped on January 9, 2009 at 918. New program loaded : frl089v1 which attempts to fix sensit problem.

Fryxell Snowfence

Filename:	fsn08901.dat
Station:	Lake Fryxell Snow Fence
Date of Establishment:	January 2001 by Thomas Nylen
Author of this report:	Hassan Basagic
File Period:	January 29, 2008 at 1330 to December 4, 2008 at 1345
Sampling Frequency:	sonic every 60 minutes, every 30 sec for all the others
Averaging and Output Interval:	every 15 min
Program Name:	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)	(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) multiply by 1.18
7	mean air temp. @ 1.3 m (C)	rclow
8	mean soil temperature @ 0 cm in soil -4.5 m (west) of snow fence (C)	rclow
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 horizontal wind speed (m/s)	o1
14	resultant mean wind speed (m/s)	o1
15	mean wind direction	o1
16	max wind speed	o1
17	min wind speed	o1
18	sample of battery voltage	o1

Notes:

1. No data missing.
2. Datalogger time adjusted forward 1 min and 45 sec at on December 4, 2008 at 1200.
3. Input values look good on December 4, 2008 at 1201.
4. Maintenance: December 4, 2008 power off for battery and power cable swap from 1350 to 1419, repaired wind direction.
5. Ultrasonic height measured at 100.5 cm.
6. Storage module swapped on December 4, 2008 at 1346.

Howard Glacier

Filename :	hod08901.dat
Station:	Howard Glacier Station
Date of Establishment:	Nov 20, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	January 22, 2008 at 1400 to November 7, 2008 at 1500
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.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
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)
8	mean horizontal wind 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 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)	o1
15	ice temperature @ 100cm (original depth, mV*0.01)	o1
16	mean air temp @ 1 meter m (C)	rclow
17	mean rh @ 1 meter (%)	Lowe correction
18	sample depth from sensor to surface (cm)	Measured depth (1.01) + Value) * 100
19	sample of battery voltage	o1

Notes:

1. No data missing, except for WDir.
2. Datalogger time adjusted back 1 min 30 sec on November 7, 2008 at 1436.
3. All channel inputs are good except WDir reading zero.
4. Maintenance: November 7, 2008 - repaired broken wire WDir (at 2L) at 1450.
5. Swapped SM on November 7, 2008 at 1505.

Filename :	hod08902.dat
Station:	Howard Glacier Station
Date of Establishment:	Nov 20, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	November 7, 2008 at 1515 to December 22, 2008 at 930
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.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
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)
8	mean horizontal wind 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 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)	o1
15	ice temperature @ 100cm (original depth, mV*0.01)	o1
16	mean air temp @ 1 meter m (C)	rclow
17	mean rh @ 1 meter (%)	Lowe correction
18	sample depth from sensor to surface (cm)	Measured depth (1.01) + Value) * 100
19	sample of battery voltage	o1

Notes:
1. No data missing.
2. Datalogger time on December 22, 2008 at 930.
3. All channel inputs are good.
4. Maintenance: swapped RH.
5. Swapped SM December 22, 2008

Filename:	hod08903.dat
Station:	Howard Glacier Station
Date of Establishment:	Nov 20, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	December 22, 2008 at 945 to January 15, 2009 at 1430
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.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
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)
8	mean horizontal wind 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 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)	o1
15	ice temperature @ 100cm (original depth, mV*0.01)	o1
16	mean air temp @ 1 meter m (C)	rclow
17	mean rh @ 1 meter (%)	Lowe correction
18	sample depth from sensor to surface (cm)	Measured depth (1.01) + Value) * 100
19	sample of battery voltage	o1

Notes:

1. No data missing. Swapped SM on January 15, 2009 at 1440.

.

Lake Hoare

Filename:	hoe08901.dat
Station:	Lake Hoare
Date of Establishment:	Dec 1, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	April 9, 2008 at 1130 to November 2, 2008 at 1415
Sampling Frequency:	wind speed every 4 sec; other every 30 sec
Averaging and Output Interval:	every 15 minutes
Program Name:	hoe078v2

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming down (W/m2) – PY23275	ok
7	mean solar flux going up (W/m2) – PY56364	ok
8	mean horizontal wind 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 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) –Q23210	divide by 200, multiply by 300.98
15	sample station barometric pressure (mbar)	ok
16	mean temperature difference 1&3 m (C)	multiply -1
17	total particle count – Sensit (count min^{-1})	ol
18	sample of battery voltage	ol

Notes:

1. No missing data
2. Datalogger time was adjusted back 2 min 30 sec on November 2, 2008 at 1400. Date correct.
3. Checked input values, everything looks good. Sonic height = 48 cm, sensit height = 20 cm.
4. Swapped SM on November 2, 2008 at 1416.

Filename:	hoe08902.dat
Station:	Lake Hoare
Date of Establishment:	Dec 1, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	November 2, 2008 at 1430 to January 2, 2009 at 1945
Sampling Frequency:	wind speed every 4 sec; other every 30 sec
Averaging and Output Interval:	every 15 minutes
Program Name:	hoe078v2

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming down (W/m2) – PY23275	ok
7	mean solar flux going up (W/m2) – PY56364	ok
8	mean horizontal wind 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 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) –Q23210	divide by 200, multiply by 300.98
15	sample station barometric pressure (mbar)	ok
16	mean temperature difference 1&3 m (C)	multiply -1
17	total particle count – Sensit (count min^{-1}	ol
18	sample of battery voltage	ol

Notes:

1. No missing data
2. Datalogger time was correct on January 2, 2009 at 1942.
3. No station checks were made during visit. Swapped SM on January 2, 2009 at 1746.

Filename:	hoe08903.dat
Station:	Lake Hoare
Date of Establishment:	Dec 1, 1993 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	January 2, 2009 at 2000 to January 23, 2009 at 2030
Sampling Frequency:	wind speed every 4 sec; other every 30 sec
Averaging and Output Interval:	every 15 minutes
Program Name:	hoe078v2

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean RH @ 3 meters	Lowe correction
6	mean solar flux coming down (W/m2) – PY23275	ok
7	mean solar flux going up (W/m2) – PY56364	ok
8	mean horizontal wind 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 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) –Q23210	divide by 200, multiply by 300.98
15	sample station barometric pressure (mbar)	ok
16	mean temperature difference 1&3 m (C)	multiply -1
17	total particle count – Sensit (count min^{-1}	ol
18	sample of battery voltage	ol

Notes:

1. No missing data
2. Datalogger time was correct on January 23, 2009 at 2009.
3. No station checks were made during visit. Swapped SM on January 23, 2009 at 2032.

Lake Hoare Precipitation

Filename:	lhp08901.dat
Station:	Lake Hoare precipitation station
Date of Establishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of this report:	Hassan Basagic
File Period:	April 9, 2008 at 1130 to November 2, 2008 at 1415
Sampling Frequency:	every 30 sec
Averaging and Output Interval:	every 15 minutes
Program Name:	l lhp078v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	total precipitation (mm)	ok
5	mean soil temperature @ 0 cm	rClow
6	mean soil temperature @ 5 cm	rClow
7	mean soil temperature @ 10 cm	rClow
8	distance to surface (m)	ok
9	sample of battery voltage	ol

Notes:
1. No missing data.
2. Time was correct on November 2, 2008 at 1420.
3. All channels appear correct, including sonic ranger (height 48 cm).
4. SM swapped on November 2, 2008 at 1424..

Filename:	lhp08902.dat
Station:	Lake Hoare precipitation station
Date of Establishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of this report:	Hassan Basagic
File Period:	November 2, 2008 at 1430 to January 2, 2009 at 1945
Sampling Frequency:	every 30 sec
Averaging and Output Interval:	every 15 minutes
Program Name:	l lhp078v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	total precipitation (mm)	ok
5	mean soil temperature @ 0 cm	rClow
6	mean soil temperature @ 5 cm	rClow
7	mean soil temperature @ 10 cm	rClow
8	distance to surface (m)	ok
9	sample of battery voltage	ol

Notes:
1. No missing data.
2. Time was correct on January 2, 2009 at 1944.
3. SM swapped on January 2, 2009 at 1950.

Filename:	lhp08903.dat
Station:	Lake Hoare precipitation station
Date of Establishment:	January 26, 2002 @ 1545 by Thomas Nylen
Author of this report:	Hassan Basagic
File Period:	January 2, 2009 at 2009 to January 23, 2009 at 2030
Sampling Frequency:	every 30 sec
Averaging and Output Interval:	every 15 minutes
Program Name:	l lhp078v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	total precipitation (mm)	ok
5	mean soil temperature @ 0 cm	rClow
6	mean soil temperature @ 5 cm	rClow
7	mean soil temperature @ 10 cm	rClow
8	distance to surface (m)	ok
9	sample of battery voltage	ol

Notes:
1. No missing data.
2. Time was correct on January 23, 2009 at 2028.
3. SM swapped on January 23, 2009 at 2031.

Taylor Glacier

Filename:	tar08901.dat
Station:	Taylor Glacier Station
Date of Establishment:	1994 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	January 23, 2008 at 1245 to November 8, 2008 at 1315
Sampling Frequency:	depth every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	tar078v3

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean air temp @ 1m (C)	rclow
7	mean RH at 1m (%)	Lowe correction
8	mean solar flux coming down (W/m2) – (33733F3)	divide by 100; multiply by 117.23
9	mean solar flux going up (W/m2) - (31435F3)	divide by 100; multiply by 126.58
10	mean horizontal wind speed (m/s)	ok
11	resultant mean wind speed (m/s)	o1
12	resultant mean wind direction (degrees from north)	flag
13	standard deviation of wind direction (degrees)	ok
14	maximum wind speed (m/s)	ok
15	minimum wind speed (m/s)	ok
16	ice temp	o1
17	surface temperature internal thermister output (mV)	o1
18	surface temperature (mV)	o1
19	surface temperature (C)	ok
20	sample depth from sensor to surface (cm)	ok
21	sample of battery voltage	o1

Notes:

1. No missing data. Datalogger time corrected back 3 min 14 sec on November 8, 2008 at 1312.
2. Input values and wind alignment appear correct November 8, 2008 at 1320.
3. Sonic ranger height is 61.4 cm.
4. Replaced SM with November 8, 2008 at 1323.

Filename:	tar08902.dat
Station:	Taylor Glacier Station
Date of Establishment:	1994 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	November 8, 2008 1330 to December 1, 2008 at 1345
Sampling Frequency:	depth every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	tar078v3

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean air temp @ 1m (C)	rclow
7	mean RH at 1m (%)	Lowe correction
8	mean solar flux coming down (W/m2) – (33733F3)	divide by 100; multiply by 117.23
9	mean solar flux going up (W/m2) - (31435F3)	divide by 100; multiply by 126.58
10	mean horizontal wind speed (m/s)	ok
11	resultant mean wind speed (m/s)	o1
12	resultant mean wind direction (degrees from north)	flag
13	standard deviation of wind direction (degrees)	ok
14	maximum wind speed (m/s)	ok
15	minimum wind speed (m/s)	ok
16	ice temp	o1
17	surface temperature internal thermister output (mV)	o1
18	surface temperature (mV)	o1
19	surface temperature (C)	ok
20	sample depth from sensor to surface (cm)	ok
21	sample of battery voltage	o1

Notes:

1. No missing data. Data logger time correct on December 1, 2008 at 1112.
2. Input values and wind alignment appear correct December 1, 2008 at 1115.
3. Sonic ranger height is 64.0 cm.
4. Maintenance: performed on December 1, 2008 – swapped wind sensor at 1143, swapped upward pyranometer (old#33733F3; new#29777F3) at 1200, downward pyranometer (old#31435F3, new#29776F3), swapped CR10x and installed new power cable at 1312. Upgraded IRT mount at 1345.
5. Replaced SM with December 1, 2008 at 1352.

Filename:	tar08903.dat
Station:	Taylor Glacier Station
Date of Establishment:	1994 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	December 1, 2008 at 1400 to January 16, 2009 at 1230
Sampling Frequency:	depth every 60 minutes, wind every 4 secs.; others: every 30 secs.
Averaging and Output Interval:	every 15 minutes
Program name:	tar078v3

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean air temp @ 1m (C)	rclow
7	mean RH at 1m (%)	Lowe correction
8	mean solar flux coming down (W/m2) – (33733F3)	divide by 100; multiply by 117.23
9	mean solar flux going up (W/m2) - (31435F3)	divide by 100; multiply by 126.58
10	mean horizontal wind speed (m/s)	ok
11	resultant mean wind speed (m/s)	o1
12	resultant mean wind direction (degrees from north)	flag
13	standard deviation of wind direction (degrees)	ok
14	maximum wind speed (m/s)	ok
15	minimum wind speed (m/s)	ok
16	ice temp	o1
17	surface temperature internal thermister output (mV)	o1
18	surface temperature (mV)	o1
19	surface temperature (C)	ok
20	sample depth from sensor to surface (cm)	ok
21	sample of battery voltage	o1

Notes:

1. No missing data. Data logger time correct on January 16, 2009 at 1228.
2. Input values and wind alignment appear correct January 16, 2009 at 1229..
3. Replaced SM with January 16, 2009 at 1232.

Lake Vanda

Filename:	vaa08901.dat
Station:	Lake Vanda met station
Date of Establishment:	November 24, 1994 by Peter Doran, rebuilt
Author of this report:	Hassan Basagic
File Period:	January 18, 2008 at 1300 to December 30, 2008 at 1015
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	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean solar flux coming down (W/m2) – PY41090	ok
7	mean solar flux going up (W/m2) – PY23277 (new#PY20561)	ok
8	mean horizontal wind 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 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) - Q17248	divide by 200, multiply by 313.57
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	distance to surface (m)	ok
19	sample of battery voltage	o1

Notes:

1. No missing data. Adjusted datalogger ahead 3 min on December 30, 2008 at 9:37.
2. Checked input values and wind alignment on December 30, 2008 at 9:38, all appear correct.
3. Sonic sensor depth is 65.5 cm on December 30, 2008 at 9:40.
4. Maintenance: on December 30, 2008 swapped wind sensor at 10:00, downfacing pyranometer (old#PY23277, new#PY20561) at 1020, station power off from 1025 to 1054 to swap battery (new: 100 A hr) and swapped power cable.
5. Swapped SM on December 30, 2008 at 1100.

Lake Vida

Filename:	via08901.dat
Station:	Lake Vida met station
Date of Establishment:	November 24, 1995 by Peter Doran
Author of this report:	Hassan Basagic
File Period:	January 18, 2008 at 1500 to December 30, 2008 at 1200
Sampling Frequency:	wind every 4 secs.; ultrasonic every 3600 secs; others: every 30 secs.
Averaging and Output Interval:	every 15 min
Program Name:	via045v1

1	array I.D.	o1
2	day	ok
3	time	ok
4	mean air temp. @ 3 meters (C)	rclow
5	mean R.H. @ 3 meters (%)	Lowe correction
6	mean solar flux coming down (W/m2) – PY23250 (new#20523)	ok
7	mean solar flux going up (W/m2) – PY20561	ok
8	mean horizontal wind 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 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) - Q30803	divide by 200, multiply by 222.83
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	distance to surface (m)	ok
19	sample of battery voltage	o1

Notes:

1. No missing data.
2. Time adjusted ahead 14 minutes on December 30, 2008 at 1135.
3. Input values and wind alignment on December 30, 2008 at 1137 appear correct.
4. Sonic sensor depth = 51.5 cm.
5. Maintenance: on December 30, 2008 replaced upfacing pyranometer (old#23250, new#20523) at 1152.
6. SM swapped out at 1211.
7. Soil temperatures are now 1.2 m from lake edge. It appears the soil is saturated.

Array I.D. meaning:

First and Second Digit

01 = Hoare
02 = Fryxell
03 = Bonney
04 = Commonwealth
05 = Howard
06 = Taylor
07 = Vanda
08 = Brownworth
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