

60  
24  
420  
1200  
1620

1620  
3240

30 NOVEMBER Powerd up for @ 10:30  
KEPT RAD COVERS ON  
ALL RADS WARMED UP TO 50.

FILE: 33456243

19H : 298

19V : 298

37H : 297

37V : 297

89H : 292

89V : 294

File: 33457702.sbr

19V : 301

19H : 301

37V : 298

37H : 299

89V : 292

89H : 295

\* FIRST REAL DATA! \*

COVERS OFF RADS / SET AT 53° / WET SNOW  
FALLING ~ 3 cm ON GRASS

FILE 33460005

19V : 262

19H : 257

37V : 263

37H : 258

89V : 263

89H : 259

snow stopped before lunch

Sun coming out ~ 1300

air temp > 0°C ~ 1300

RTD #2 → Tips in snow 273°K

DATA ACQUISITION STOPPED ~ 1330

Outside Temp @  $0^{\circ}\text{C}$  (windy NW)  
Indside CPU Temps @  $30^{\circ}\text{C}$  each.  
- after 2.5 hrs.

DATE TO TRY TO REPAIR/REPLACE FAN ON  
CPU BOX.

~~Nov. 31/11.~~ DEC 01

Done to try first attempt.

Starting Acquisition for day @ Integration 60  
repeats 3240

CPU Box @ 9:30  $15^{\circ}\text{C}$   $\rightarrow$  RTD1 @  $0^{\circ}\text{C}$

File: 33552594 19v : 259

19H : 251

37v : 258

37H : 250

89v : 259

89H : 253

Error @ 12:32

- Connection reset by peer (10054)

Do you wish to reconnect to 192.168.127

CPU Box @ 12:30  $36^{\circ}\text{C}$   $\rightarrow$  RTD1 @  $5.5^{\circ}\text{C}$

Fan In-line

CPU Box @ 2:35  $28^{\circ}\text{C}$   $\rightarrow$  RTD1 @  $4.5^{\circ}\text{C}$

4860 = 72

Dec. 5/11.

@ 9:30 am

- Fire up CPU Box to monitor temp.

@ 9:40 RTD 1 & 2 = 5°C / CPU 1 & 2 = 15°C  
@ 10:45 RTD 1 & 2 = 5°C / CPU 1 & 2 = 25°C  
@ 11:50 RTD 1 & 2 = 5°C / CPU 1 & 2 = 29°C  
@ 12:50 RTD 1 & 2 = 4°C / CPU " = 30°C  
@ 2:50 pm RTD " = 4°C / CPU " = 30°C

CPU Temps leveled @ 30°C = A-OK ✓

∴ Power up reads

- new config file name 72hr

- 72 = 60s, 2 samples, 4860 repeats

→ 3 day file

① File: 33969773  
19v → 264  
19H → 263  
37v → 265  
37H → 264  
89v → 271  
89H → 270

② Dec. 6/11.

- 1 cm snow overnight

- 2nd file of 72hr config.

② File : 34000056

19v  $\rightarrow$  261

19H  $\rightarrow$  259

37v  $\rightarrow$  262

37H  $\rightarrow$  261

89v  $\rightarrow$  266

89H  $\rightarrow$  265

RTD's = 0°C / CPU's = 27°C

③ File : 34100040

Not around to record BT's.

④ Full  
Dec 8/11.

④ File : 34200008

19v  $\rightarrow$  261

19H  $\rightarrow$  258

37v  $\rightarrow$  262

37H  $\rightarrow$  260

89v  $\rightarrow$  264

89H  $\rightarrow$  263

- light dusting of snow in morn  
but gone with sun.
- shut down @ 2pm Dec 8/11.

Dec. 12/11.

- Arr & I to do 'hot' loads, sky shot & sandbox today.
- Sunny day,  $0^{\circ}\text{C}$ , no clouds, no wind, no snow,

### Sky Shot

- Using 'calibration' config file  $\rightarrow$  180 repeats, <sup>1 sec integration</sup> ↓
- rads @  $180^{\circ}$
- start time @ 9:20 am
- Data file 34651424.sbr
- problem with 37  $\rightarrow$  seems to drop from 22 BT to zero intermitantly.
- Arr to unplug cards & plug back in ON/OFF
- resend 'calibration' file (3 min = 180 repeats)
- same problem 22-0 for 37 only
- ignore data file 34652294.
- sent different file 72hr as quick test
- baselines look ok, BT remain constant.
- again as test load 'can't data collect' file
- same problem with 37  $\rightarrow$  Ignore 34652866.
- switched 37 & 89 power cables. - same prob
- turn power off rads, shut-down laptop.

Problem Solved.

$\rightarrow$  37 cannot use a data file with a 1 second integration time.



## Sky Shot.

- using 'calibration' file w 5 sec integration time
  - start @ 10:22 for 15 min run time
  - p Data file # 34655159.sbr
- 15 minute run time

## Warm Shot

- TP1 on 19, TP2 on 37/89.
- using 'calibration' file w 5 sec integration time
- 180 repeats = 15 min
- start @ 11 am
- Data file # 34657458.sbr
- air temp +2.7 TP1 & 2 warming slowly  
Through calibration
- TP1 +3.2 → 4.0°, TP2 +3.7 → 4.6°

## Sand Box Shot.

- start @ 13:35
- using 'sandbox 1hr' config w  
integration 5 sec. @ 720 repeats.
- Data file # 34666888

19v → 42.8

19H → 39.6

37v → 45.4

37H → 40.0

89v → 94.5

89H → 59.1

Current Air Temp → 5.5°C

CPU → 42°C

## Dry Grass Check

- Start @ 15:12
- using 15 min 'calibration' file
- Data file # 34672750

19v → 259

19H → 254

37v → 261

37H → 259

89v → 265

89H → 264

Air Temp → 5°C

CPU → 40°C (fan on ... now)

Dec. 16 / 11.

- Data file # 35056427
- Start @ 10:30 am
- ~~Send~~ 72hr config → changed 4320 repeats.
- Shooting dry grass
- Sunny day, couple clouds, 2°C
- CPU 28°C (fan on)
- ★ - 4 pm <sup>light</sup> snow starting to fly.

19v → 264

19H → 260

37v → 264

37H → 263

89v → 269

89H → 268

Dec. 19/2011

- @ 9:00 snow coverage 1cm - 2cm
- CPU temp @ 36°C, air temp 4°C
- Dec 16 → data file # 35056427 start
- Dec 17 → data file # 35100000
- Dec 18 → data file # 35200001
- Dec 19 → data file # 35300031 finish

Shut system down @ 10:30

19v → 250

19H → 230

37v → 256

37H → 244

89v → 265

89H → 261

Dec. 28/2011.

- @ 9:45 snow accumulation from last night around 6" or 1.5 on depth probe.
- TP1 mid-pack of snow; TP2 @ snow base
- Both probes located @ tower base
- weather coming in from north, wind & heavy snow fall.
- CPU temps @ 11°C, Air @ -10°C
- Data file # 36255280.sbr



19v → 260

19H → 251

37v → 257

37H → 248

89v → 224

89H → 217

Dec 29/11.

- 72 hr run from yesterday still going
- today's data file # 36300056
- 8:45 stopping run for calibrations/SB
- snow depth @ base 15-20 cm

19v → 255

19H → 248

37v → 244

37H → 236

89v → 210

89H → 204

Sky Shot

- using "calibration" file
- 5sec integration time, 180 repeats, 15min
- Data file # 36350484

- Overcast  
skies

19v → 18

19H → 18

37v → 23

37H → 24

89v → 31

89H → 32

## Warm Shot

- using "calibration" file
  - 5 sec integration time, 180 repeats, 15 min
  - TP1 on 19 ; TP2 on 37/89
  - Air temp -12°C
  - TP1 -11      TP2 -12
  - Data file # 36351889
  - overcast/sunny.
- |     |   |     |
|-----|---|-----|
| 19v | → | 261 |
| 19H | → | 261 |
| 37v | → | 261 |
| 37H | → | 261 |
| 89v | → | 260 |
| 89H | → | 261 |

## Sandbox Shot

- overcast, Air temp -10°C
- using "sandbox 1hr" file
- starting @ 10:13am
- Data file # 36354755

			<u>end of hour</u>
<u>snow depth</u> 10, 11, 12 cms	19v	→ 54	59
	19H	→ 50	54
	37v	→ 82	87
	37H	→ 74	79
	89v	→ 184	187
	89H	→ 180	184

## Regular Snow Sampling

- '24 hr' config file
- 15-20 cm snow @ tower base
- overcast in some sun.
- Data file # 36360194
- TP1 → 1/2 snow pack, TP2 → base.

19v → 257

19H → 250

37v → 247

37H → 239

89v → 216

89v → 211

Dec. 30/2011

- '24hr' config still running from yesterday.
- Today's Data file # 36400056
- Overcast skies, Air temp -6, light snow last night.
- stopped a bit early @ 11:50
- Ice fog

~~Xan!~~

Jan. 3/2012.

- blue skies, sunny day, Air temp  $-20^{\circ}\text{C}$   
20 cm snow @ tower base.
- run '72 hr' config file.
- Data file # 00354712
- TP1  $\rightarrow$   $\frac{1}{2}$  midpack, TP2  $\rightarrow$  base.

19v  $\rightarrow$  252

19H  $\rightarrow$  241

37v  $\rightarrow$  236

37H  $\rightarrow$  223

89v  $\rightarrow$  198

89H  $\rightarrow$  189

Jan 5/2012

72 hr config continues  $\rightarrow$

- not present on Jan 4; Data file # 00400022

- Today's data file # 00500014

- @ 9:00 am overcast skies, no new

precip, Air temp  $-4^{\circ}\text{C}$ , CPU temp  $31^{\circ}\text{C}$

- RT1  $\rightarrow$  -2 mid-snow pack

- RT2  $\rightarrow$  0 base of snow pack

- 19v  $\rightarrow$  254

19H  $\rightarrow$  241

37v  $\rightarrow$  242

37H  $\rightarrow$  229

89v  $\rightarrow$  219

89H  $\rightarrow$  211

\* earlier data File 00600005

Jan 6 Friday 0945 hrs

- shutting down system & then re-starting

72 run

\* mainly overcast, no precip overnight

air temp -0.16

cpu  $\approx$  35C

Please record 19V 253.5

both data H 240.9

File #'s 37V 240.9 RTD1 -0.64

from same H 228.0 2 +0.13

day! 89V 211.0

H 203.2

Friday

data file 00652932. ← later data

file.

Sat = 00700057, Sun = 00800051

Jan 9 / 2012.

please measure

the snow depth

properly using

the 11:00

snow depth

probe \*

- Weekend run still going # 00900028

- CPU box temp peaked @ 45°C when

Air temp peaked @ +5°C

- 2" total snow coverage but warmer temps expected.

- Run ended @ 11; sent new 49hr config

- New data file # 00957527

⇒ light overcast, AT = 0 degC, Rads @ 53° ✓

19v - 252

H - 238

37v - 236

H - 222

89v - 186

H - 181

JAN 11/2012 - WEDNESDAY

44 hr run still going.

Data files: 01000053

0110016

Lost 37 GHz overnight

→ No 37 GHz

Overcast, +1°C

Unplugged & replugged 37 rad. Problem solved.

Shut down system & tarped rad's in  
advance of wet weather.

Jan. 12/2012

- overcast w fog, Air temp 0°C, light snow <sup>Falling</sup>
- sent 24 hr config but may shut down early  
weather pending.
- Data file # 01254040
- risk of freezing rain overnight → shut down  
& tarp.
- currently 5-10 cm
- TP# 1 & 2 exposed to open air

*[Signature]*

Jan. 13/2012. (Fri)

\* - Plates left on.

- overcast skies, Air temp  $-3^{\circ}\text{C}$ , 5cm snow at tower base w grass breaking through.
- TP# 1 & 2 both exposed to air.
- sent new 72 config for weekend.
- Data file # 01354107
- soil moisture battery @ 11.94 vcc
- no new precip.

File 013 - File

01600003

NFG

19v - 309

H - 308

37v - 296

Sat = 01400013

H - 297

Sun = 01500053

89v - 289

H - 291

- light snow flying @ 4pm overcast,  $-6^{\circ}\text{C}$

Jan. 16/2012 (Mon)

- 72 config still coming from weekend.
- current Data file # 01600003
- blue skies w sun, Air temp  $-6^{\circ}\text{C}$ ,
- ~~no new snow~~
- Snow depth near tower 7-10cm
- Rads still set to  $53^{\circ}$  ✓
- soil moisture battery @ 10.8

\*\*

- Done! F'd UP!!  
Plates left ON!

## Files

@ 8:15 am 19v → 308

H → 308

37v → 295

H → 296

89v → 288

H → 290

- stopped @ 10:10 am local

## Sky Shot

- light overcast,  $-4^{\circ}\text{C}$  Air,
- calibration config, start @ 10:15 am
- Data file # 01654780

19v → 21

19# → 21

37v → 24

H → 25

89v → 36

H → 36

## Warm Shot

- slight overcast, Air temp.  $-3.5$
- calibration config, started @ 10:40
- Data file # 01656347

19v → 270

H → 270

37v → 270

H → 271

89v → 269

H → 270

NFG

19 → drifted



## Warm Shot #2

- Thin cloud, Air temp  $-3.5^{\circ}\text{C}$
- calibration config, state
- TP1 on 19, TP2 on 37 + 89
- TP1 =  $-3^{\circ}\text{C}$ , TP2 =  $-2.7$
- Data file # 01657042

19v  $\rightarrow$  270

H  $\rightarrow$  270

37v  $\rightarrow$  270

H  $\rightarrow$  270

89v  $\rightarrow$  270

H  $\rightarrow$  271

\* Ignore Data file # 01658392  $\rightarrow$  test

## Sand Box Shot

- 1-5 cm snow
- sun thin cloud mix, Air temp  $-2.5^{\circ}\text{C}$
- 'sandbox 1hr' config, sent @ 11:45
- Data file # 01660248

	Start	Finish
19v $\rightarrow$	48	77
H $\rightarrow$	43	61
37v $\rightarrow$	51	119
H $\rightarrow$	45	98
89v $\rightarrow$	139	202
H $\rightarrow$	101	174

## Regular Snow Sampling

- TP1 @ Base, TP2 @ midpack
- 12 cm snow

~1330 Set up 24 hour run on grass shot  
TP1 0.01 TP2 0.03 Air 0.57  
datafile 01665963

sun, thin cloud SW winds

19v 253

h 238

37v 234

h 221

89v 189

h 182

Stopped ~ 1600.

SKY SHOT (16:05) FILE: 01675844

HIGH CIRCUS, GETTING THICKER, ALMOST COMPLETELY  
OBSCURING SUN.

19v 22

h 22

37v 24

h 25

89v 39

h 40

TARPED RADIOMETERS FOR NIGHT.

Tuesday Jan 17 0930 hrs

drizzle fog +1  
forecast for +6 and rain  
temps to drop overnight to -7

3pm +2 fog drizzle some rain

Wed Jan 18 0815 hrs Sunny

-11.8 some light snow falling  
light breeze from N  
about 3cm fresh snow overnight.

SKY shot - use "calibration" config file  
data file = 01850516

0905	19v	18	very light snow
	h	18	almost unseen but
	37v	21	can feel on face
	h	21	
	89v	24	
	h	24	

winds picking up, snow on ground  
drifting

re-position TP1 in middle of snowpack  
TP2 solid in base still

~~\*~~ drop out in the 89 during the run, will re-run

data file: 01851642

very light snow has stopped = clear sunny

19 v 18

h 18

37 v 21

h 21

89 v 24

h 24

} twice spiked to 27 K  
} ?? near end of run

set up 48 hr config file

data file name: 01853300

19 v 252

h 239

37 v 230

h 219

89 v 179

h 174

7 cm on  
ground

Air -12.4

TP1 middle of snowpack -1.29

TP2 base: -2.55

Jan 19/2012. (Thurs.)

### Regular Snow Shot

- Overcast skies, no new precip,  
Air temp  $-4^{\circ}\text{C}$ , strong SW winds
- Arrv 48 hr confy still running  
from last night
- Data file # 01900003
- Snow Depth 5-7cm, TP1 exposed to air  
19v  $\rightarrow$  252 TP2 buried.  
H  $\rightarrow$  236  
37v  $\rightarrow$  230  
H  $\rightarrow$  217  
89v  $\rightarrow$  176  
H  $\rightarrow$  171

stopped @ 9:50 am

### Sky Shot

- Overcast, sun cannot be determined?
- strong SW winds
- Data File # 01954088

### 2nd Sky Shot

Data File # 01955348

19v $\rightarrow$ 21	19v $\rightarrow$ 21
H $\rightarrow$ 20	H $\rightarrow$ 20
37v $\rightarrow$ 22	37v $\rightarrow$ 22
H $\rightarrow$ 23	H $\rightarrow$ 23
89v $\rightarrow$ 31	89v $\rightarrow$ 33
H $\rightarrow$ 32	H $\rightarrow$ 34

} spiked up  
to 80  
= possibly strong winds  
blowing snow over  
roofs??

## Resume Regular Shot

- @ 11:00 am, sent new 24 config file
- Strong SW winds, Air temp  $-4^{\circ}\text{C}$
- Snow depth 5-7 cm, TP1 exposed to air
- TP2 buried, overcast,
- Data File # 01957572

19v  $\rightarrow$  252

H  $\rightarrow$  237

37v  $\rightarrow$  234

H  $\rightarrow$  222

89v  $\rightarrow$  191

H  $\rightarrow$  175

end file.

020 00032

- snow blowing - can't tell if its new precip or drift?

- 14:00 TP1  $\rightarrow$  midpack ~~TP1~~ @  $-0.91^{\circ}\text{C}$

05 TP2  $\rightarrow$  Base @  $-0.29^{\circ}\text{C}$

- 14:10 snow squall - Total white out

- 14:15 ~~blue~~ bright sun, blue sky, some cloud

- 14:30 heavy cloud cover, blue patches.

- 14:40 Intense sun, blue sky AT  $-3^{\circ}\text{C}$

Fri Jan 20<sup>R</sup> 0820 hrs.

Air temp -14.3 overcast  
overnight run stopped: 020 00032

sky shot 0830 light wind  
file: 020 48215

19 v 20

h 20

37 v 25

h 25

89 v 33

h 33

5 cms of  
snow in  
footprint.

Set up 72 hr run 0920 hrs.

file: 020 51292

19 v 253

h 240

37 v 233

h 224

89 v 186

h 182

TP1 -3.25

TP2 -0.86

Taut -13.44

Sat. = 02100052

Sun. = 02200020

Mon. Jan 23/2012.

9:10am

922

- 72hr config still running from weekend
- thick cloud, overcast, raining, Air temp +2°C
- Current Data file # 02300033
- Rainy is no sky shot
- Strong South winds

19v → 260

H → 248

37v → 265

H → 261

89v → 272

H → 271

5 cm in  
footprint.

- shut down @ 9:22am = rain

Tues. Jan 24/2012.

- Very thick overcast, no sun, Air temp -1°C  
very light snow falling
- Footprint is grass w small  
patches of snow

Sky Shot @ 09:50

- file # 02453488

19v → 30

H → 30

37v → 44

H → 44

89v → 87

H → 87



- Non-linear baseline for first sky shot on 2<sup>nd</sup> attempt.

### Sky Shot @ 10:45

- Snow falling light  $\rightarrow$  med.

19v  $\rightarrow$  25

H  $\rightarrow$  25

37v  $\rightarrow$  30

H  $\rightarrow$  30

89v  $\rightarrow$  53

H  $\rightarrow$  54

Data file # 02454805

### Warm Shot @ 10:55

- <sup>heavy</sup> Overcast, ~~heavy~~, mid-light snow falling

AT =  $-1^{\circ}\text{C}$

- TP 1 on 19 =  $1.24^{\circ}\text{C}$

- TP 2 on 37/89 =  $1.26^{\circ}\text{C}$

- Data file # 02457168

19v  $\rightarrow$  276

H  $\rightarrow$  276

37v  $\rightarrow$  275

H  $\rightarrow$  275

89v  $\rightarrow$  272

H  $\rightarrow$  272

- TP 1 & 2 once out of the wind increased temps by the end of warm shot to 2 & 3  $^{\circ}\text{C}$  respectively. Air temp still  $-1^{\circ}\text{C}$

## Regular Footprint Shot @ 11:35

- heavy overcast, no sun, Air temp  $-1^{\circ}\text{C}$   
light - mid snow falling, wind from West.
- grassy footprint, patches of snow.
- 48hr config file
- Data file # 02459788

19v = 257

H = 248

37v = 256

H = 250

89v = 252

H = 248

- more flurries @ ~~03~~ 15:00 but  
finished by 15:30

II

Wed. Jan 25 / 2012.

- called up from Downsview  
b/c of power outage last night
- arrived @ 10:30 to find  
laptop on but all windows have  
been closed.
- light to <sup>heavy</sup> med overcast, Air temp  $-2^{\circ}\text{C}$   
no precip, footprint = grass w snow  
patches.
- Data file # 02500010

## Sky Shot @ 11:00

- No precip
- heavy overcast → cannot locate sun
- Data file # 02557505

19v → 28

H → 28

37v → 40

H → 41

89v → 82

H → 83

## Warm Shot @ 11:45

- Air temp  $-2^{\circ}\text{C}$
- TP1 on 19 =  $+2.51^{\circ}\text{C}$
- TP2 on 37/89 =  $+1.84^{\circ}\text{C}$
- Data file # 02558581

19v → 275

H → 275

37v → 274

H → 274

89v → 274

H → 275

Regular Footprint 53° @ 12:25

- heavy overcast, no sun detection,  
Air temp -2°C
- Data file # 02562727
- 24hr config

19v → 260

H → 252

37v → 258

H → 252

89v → 253

H → 249

Thurs. Jan 26/2012

- 24hr config still running from yesterday.
- stopped @ 9:45, Data file # 02600053

Sky Shot @ 9:50

- heavy overcast, no sun detectable,  
Air temp -2°C, South wind, no precip.
- Data file # 02653473

19v → 27

H → 27

37v → 36

H → 36

89v → 75

H → 75

## Warm Slot

- Air temp  $-2^{\circ}\text{C}$
- TP1 on 19 =  $+1.94^{\circ}\text{C}$
- TP2 on 37/89 =  $+1.89^{\circ}\text{C}$
- Data file # 02655974

19v  $\rightarrow$  274

H  $\rightarrow$  274

37v  $\rightarrow$  274

H  $\rightarrow$  274

89v  $\rightarrow$  272

H  $\rightarrow$  273

Removed soil moisture probes

- possible source of short particularly soil probe # 2, looks damaged.

## Regular Footprint Shot $53^{\circ}$

- sent 24hr config @ 11:30
- heavy overcast, no sun detection, no precip, Air temp  $-2^{\circ}\text{C}$
- shooting grass with very little snow

TP1 & 2

left on tower

since there is

NO snow

- Data file # 02659566

19v  $\rightarrow$  260

H  $\rightarrow$  252

37v  $\rightarrow$  258

H  $\rightarrow$  252

89v  $\rightarrow$  250

H  $\rightarrow$  246

~~19:45~~  
~~sun breaks~~  
~~through~~

Today  
30 0810  
Data logger back on-line.  
Faulty Soil moisture probe removed. #2  
Collecting data again.

Fri. Jan 27/2012.

- 24 hr config still running from yesterday
  - heavy overcast, no sun detection, Air temp  $-2^{\circ}\text{C}$
  - about 2-3cm fresh accumulation,  
grass now covered, snowing heavily,
  - Data file # 02700006
  - Snow stopped @ 11:00
- |     |   |     |
|-----|---|-----|
| 19v | → | 259 |
| H   | → | 253 |
| 37v | → | 257 |
| H   | → | 254 |
| 89v | → | 254 |
| H   | → | 253 |

Sky Shot @ 12:10

- overcast but very bright, Air temp  $+1^{\circ}\text{C}$   
North wind, no precip

- Data file # 02765190

19v	→	28
H	→	28
37v	→	36
H	→	36
89v	→	81
H	→	82

- light snow falling again 13:50
- Gusts of wind too strong for warm shot.

Regular Footprint Shot @ 14:00

- \* - Very bright overcast, sun detectable  
Air temp, +1°C, light precip.
- TP1a2 - Foot print < 2cm
- still coiled - Sent 72hr config for weekend
- Up on tower - Data file # 02768420

19v → 266

H → 260

37v → 268

H → 263

89v → 270

H → 267

file name at end 02900006

Jan 30 never went out & new file name  
0810 hrs. 030 000 41

Monday

Jan 30 0810 hrs. overcast, some blue hazy

air temp -5.4 no wind

no fresh snow at all on ground

3 cms of hard crusty snow

0815 sky shot "calibration" file

data file 03047734

19v 22

h 21

37v 25

h 25

89v 34

h 35

★ Noticed <sup>human</sup> footprints through the footprint 20

0840 setup 24 hr file

file 03049847

re-inserted

TP1 = base

TP2 = mid pack

19v 253

h 245

37v 241

h 234

89v 207

89h 202

TP1 -0.61

TP2 -2.15

air = -4.99

03100025 END FILE

16:00 snow  
flying



TUES JAN 31 0830  
Air -0.60

TP1 -0.26 TP2 -0.56

light overcast no wind

close down radiometers

set up for 72 hr run in case it  
doesn't rain

6cm depth in footprint 3cm fresh snow

03148608

		@ shutdown
19 v	255	243
h	245	207
37 v	246	255
h	240	233
89 v	220	266
h	217	258

shutdown at 1345 hrs

Air +5.9 TP1 -0.06 TP2 +0.05

cpu's @ +42 and climbing

Thurs  
Feb. 2 / 2012

- Rads targeted & OFF
- SBR Rad OFF & blowing in wind.
- 

Sky Shot @ 00:10 am

- Overcast, no sun detection, Air temp -3°C
- no wind, no precip.
- Data file # 03354856

19v → 24  
 H → 24  
 37v → 30  
 H → 30  
 89v → 51  
 H → 52

Warm Shot @ 10:45

- Air temp -3°C
- TP1 on 19 = +4.23°C
- TP2 on 37/89 = +7.91°C
- Data file # 03356839

19v → 278  
 H → 278  
 37v → 275  
 H → 275  
 89v → 272  
 H → 272

## Regular Footprint @ 53°

- Dull overcast skies, no sun detected
- Air temp  $-3^{\circ}\text{C}$ , no precip.
- Footprint entirely grass
- TP 1 & 2 resting on grass footprint
- Created & sent new '96 hr config'
- Data file # 03359926

19v  $\rightarrow$  260

H  $\rightarrow$  254

37v  $\rightarrow$  259

H  $\rightarrow$  256

89v  $\rightarrow$  259

H  $\rightarrow$  256

Friday. Data file # = 03400003

Sat. Data file # = 03500027

Sun. Data file # = 03600039

Mon. Feb. 6 / 2012.

- Rads still running '96 hr' config from Thurs.

- Today's Data file # 03700019

- Sunny, Blue skies, Air temp  $+0.2^{\circ}\text{C}$

- No snow in footprint!

- stopped run to do a sky shot.

19v 258

37v 258

89v 259

H 253

H 254

H 256

### Sky Shot @ 09:40

- Blue sky & sun, Air temp  $0^{\circ}\text{C}$   
wind from West, no precip.

- Data file # 03752718

19v  $\rightarrow$  23

H  $\rightarrow$  23

37v  $\rightarrow$  24

H  $\rightarrow$  24

89v  $\rightarrow$  35

H  $\rightarrow$  36

### Warm Shot @ 10:05

- Air temp  $+1.22^{\circ}\text{C}$

- TP1 on 19 =  $+4.63^{\circ}\text{C}$

- TP2 on 37/89 =  $+5.23^{\circ}\text{C}$

- Data file # 03754394

19v  $\rightarrow$  277

H  $\rightarrow$  277

37v  $\rightarrow$  277

H  $\rightarrow$  277

89v  $\rightarrow$  274

H  $\rightarrow$  275

### Regular Footprint @ $53^{\circ}$

- Blue skies, sunny day, Air temp  $+3.2^{\circ}\text{C}$

- Footprint entirely grass

- TP1 & 2 resting on top of grass

- Data file # 03758915

- CPU box approaching  $40^{\circ}\text{C}$  but fan is on

19v → 261

H → 255

37v → 261

H → 258

89v → 264

H → 261

Tues. → Data file # 03800024

Wed Feb 08

0815

partly cloudy → Air -8.75

no new snow

bare ground

running  
as is

03900038

19v 257

h 252

37v 257

h 253

89v 254

h 250

Temp @ Arrv drop by on way to Heronica for  
the day

Thursday Feb 9 1000 hrs.

clear skies Air -1.26

closing down file: 04000053

19v 259

h 254

37v 259

h 256

89v 261

h 258

still no new snow

= bare ground

sky shot  
1005 hrs

would not acquire after closing  
The comments box

re boot the system

sky shot file: 04054914  
1015 hrs

19v 20

h 20

37v 22

h 22

89v 25

h 26

~~★ what is the  
file # for  
the Red sky  
shot?  
~~04054914~~~~

CPU temps @ 35° fans running well

1040 hrs

Warm load file: 04056345

Tair = 0.01 19v 274

h 273

TP1 = 0.71 37v 273

on the 19 GHz h 273

89v 273

TP2 = 0.63 h 273

on 37/89

Set up rods for 96 hr run

1107 hrs

file: 04057988

19v 260

h 256

37v 261

h 258

89v 263

h 260

Tair +0.34

TP1 9.5 TP2 7.9

TP1 & TP2 placed on grass awaiting the snow tomorrow.

Friday → 04100051

Sat → 04200021

Sun → 04300023

Monday Feb 13 0800 hrs

end file : 041 00051  
044 00007

Tair -3.48 TP1 -1.32 TP2 -2.60 slight overcast

3cms snow on  
ground

skyspot 04447104

0810

19v 21

h 21

37v 23

h 24

89v 31

h 32

from Feb 6.

Regular Footprint @ 53°

- Blue skies, sunny day, Air temp -3.25°C
- TP2 @ base -1.34°C
- TP1 @ midpack -1.07°C
- CPU Box @ 31°C ✓
- Data file # 04450009

19v → 261

H → 255

37v → 260

H → 255

89v → 252

H → 248



Tues Feb. 14 / 2012.

Regular Footprint 53°

- 24 hr config. still running
- overcast, Air temp.  $-2.31^{\circ}\text{C}$ ,
- after melt yesterday there is fresh dusting of snow approx. 1cm.

- Data file # 04500035

19v  $\rightarrow$  259

H  $\rightarrow$  251

37v  $\rightarrow$  253

H  $\rightarrow$  246

89v  $\rightarrow$  240

H  $\rightarrow$  237

Sky Slot @ 9:10

- overcast skies, Air temp  $-2.31^{\circ}\text{C}$
- Data file # 04550707

19v  $\rightarrow$  24

H  $\rightarrow$  23

37v  $\rightarrow$  26

H  $\rightarrow$  26

89v  $\rightarrow$  41

H  $\rightarrow$  42

Warm Shot @ 9:40

- Air Temp  $-1.54^{\circ}\text{C}$
- TP1 on 19 =  $+1.76^{\circ}\text{C}$
- TP2 on 37/89 =  $+1.76^{\circ}\text{C}$
- Data file # 04552832
- 19v  $\rightarrow$  273
- H  $\rightarrow$  273
- 37v  $\rightarrow$  274
- H  $\rightarrow$  274
- 89v  $\rightarrow$  273
- H  $\rightarrow$  274

from Feb 13

Regular Footprint  $53^{\circ}$  @ 10:22

- overcast, Air temp  $-0.7^{\circ}\text{C}$
- total snow in footprint 3-4cm
- sent 48 hr config.
- Data file # 04554910
- 19v  $\rightarrow$  261
- H  $\rightarrow$  253
- 37v  $\rightarrow$  258
- H  $\rightarrow$  252
- 89v  $\rightarrow$  251
- H  $\rightarrow$  248

- TP 1 & 2 both at base; not @ midpack since there is only 3cm.

Wed  $\rightarrow$  Data file # 04600039

Thurs. Feb. 16 / 2012.

Regular Footprint @ 53°

- 48hr confg still running from Tues.
- Overcast skies, Air Temp +0.6°C
- ~~0.3cm footprint snow~~ <sup>no new precip</sup>, dusty < 1cm new precip
- CPU Box @ 35°C
- Data file# 04700044

19v - 264

H - 255

37v - 263

H - 254

89v - 266

H - 264

Sky Shot @ 09:40

- overcast skies, Air Temp +0.6°C
- Data file # 04752727

19v - 30

H - 30

37v - 38

H - 38

89v - 81

H - 82

Sky Slot @ 10:00

- Overcast skies, Air temp +1°C
- Data file # 04753967

19v	33	34
H	33	33
37v	46	49
H	46	49
89v	101	108
H	101	109

Finish from Feb 14

Regular Footprint @ 53°

- Overcast skies, Air temp +1°C
- Footprint is snow/grass mix 0-3 cm
- Sent a '96 hr' config
- Data file # 04756130
- TP1 & 2 @ base @ 10:35

19v	262
H	251
37v	262
H	254
89v	268
H	266

- Fri. 17 → 04800036
- Sat. 18 → 04900054
- Sun. 19 → 05000005

Feb.  
Mon. Jan. 20/2012.

Regular Footprint @ 53°

- 96hr run still going
- 37 not working → zero's
- ~~will attempt re-start~~ Stopped Fri midnight
- Blue sky, sun, Air temp -9.6°C
- Footprint 9-10 cm snow from wknd.
- Data file # 05100035

19v 257

H 248

37v 0

H 0

89v 220

H 215

stopped @ 0910 = 37 still @ 50°C

Sky Shot @ 0910

- Data file # 05151970
- stopped! 37 still zero
- ∴ restart laptop
- 

⇒ re-start laptop → could not re-connect

- Turned off SBR & cleaned off antenna
- Turning OFF/ON SBR worked
- connection made
- Rads ok ∴ flakiness likely in SBR

Sky Slot @ 1015

- Blue sky, bright sun, Air temp  $-4.5^{\circ}\text{C}$
- Data file # 05154704

19v 21

H 20

37v 22

H 23

89v 29

H 29

Warm Shot @

- Air Temp  $-3.6^{\circ}\text{C}$
- TP1 on 19 =  $+3.35^{\circ}\text{C}$
- TP2 on 37/89 =  $+2.22^{\circ}\text{C}$
- Data file # 05156417

19v 277

H 276

37v 278

H 278

89v 276

H 276

Regular Footprint  $53^{\circ}$  @ 11:20

- Blue skies, bright sun, Air temp  $-1.21$
- total snow in footprint 9-10 cm
- sent 72 hr config.
- Data file # 05158814
- TP1 @ ~~midpack~~ base =  $-0.16^{\circ}\text{C}$
- TP2 @ ~~base~~ midpack =  $+0.06^{\circ}\text{C}$

19v	258
H	250
37v	255
H	248
89v	229
H	222

From Feb 16

Tues. Feb 21/2012.

Regular Footprint @ 53°

- Rads all running ok ✓
- 72hr config still going
- = overcast, Air temp = 1.44
- Data file # 05200008

19v	257
H	248
37v	251
H	241
89v	214
H	209

Wed. 22 → 05300042

Thurs. Feb. 23/2012

Regular Footprint @ 53°

- 72hr contig still going ok ✓
- ~~Overcast~~ Cloud with blue patches,  
Air temp.  $-1.11^{\circ}\text{C}$
- TP1 @ base = ~~X~~  $+0.13^{\circ}\text{C}$  Both exposed
- TP2 @ midpack = ~~X~~  $+0.71^{\circ}\text{C}$  - melt.
- Total footprint depth = 0-4cm grass patches.
- Data file # 05400033

19v → 254

H 247

37v 248

H 244

89v 204

H 202

Run stopped @ 09:30

Sky Shot @ 09:50

- mix of cloud & sun, Air temp  $+0.5^{\circ}\text{C}$
- Data file # 05453122

19v 23

H 23

37v 23

H 24

89v 32

H 33

- cloud coverage rolled in, @ end of slot.



### Warm shot @ 10:20

- Air temp  $+1^{\circ}\text{C}$
- TP 1 on 19 =  $+4.95^{\circ}\text{C}$
- TP 2 on 37/89 =  $+5.76^{\circ}\text{C}$
- Data file # 05455198

19v 277

H 277

37v 276

H 276

89v 275

H 275

### Regular Footprint @ $53^{\circ}$

- light overcast, sun visible, Air temp  $+1.5$
- Footprint 0-4cm, patches of grass.
- TP 1 & 2  $\rightarrow$  not enough snow to bury sitting on grass.
- Sent 24hr config
- Data file # 05457526

19v 267

H 262

37v 266

H 263

89v 252

H 250

Fri. Feb. 24/2012.

Regular Footprint @ 53°

- 24 hr config still going from yesterday
- Heavy overcast, no sun detectable,  
Snow falling, Air temp  $-0.4^{\circ}\text{C}$
- 2cm fresh accumulation = 2-5 footprint
- Data file # 05500046

19v	258
H	252
37v	258
H	257
89v	266
H	265

Snow falling = no sky slot.

From Feb 21

Regular Footprint @ 53°

- Heavy overcast, no sun detectable,  
snow falling, Air temp  $-0.4^{\circ}\text{C}$
- Footprint total = 2-5cm
- Sent 72hr config for weekend
- Data file # 05554142

Sent 25 → 05600045	19v	256
	H	246
Sent 26 → 05700007	37v	251
	H	249
	89v	240
	H	237

TP1 #2  
on Base

Mon. Feb. 27/2012.

Regular Footprint @ 53°

- Blue sky & sun, Air temp +3.3°C
- 72hr config still running but again the 37 GHz has craped out!
- TP1 & 2 on Base b/c there was min snow on Fri.
- 10-15 cm in Footprint  $\Rightarrow$  moved TP's
- Data file# 05800027

19v 250

H 238

37v 0

H 0

89v 213

H 207

Run stopped @ 09:50 / Turn OFF/ON SBR

Regular Footprint @ 53°

- Blue sky sun, Air temp +4°C
- TP1 on Base = -0.2°C
- TP2 in midpack = -0.01°C
- Footprint 10-15 cm
- Sent 72hr config @ 1005
- Data file# 05854275

19v 255 37v 245 89v 240

H 246 H 239 H 235

from  
Feb 24

Tues. Feb. 28/2012

Regular Footprint @ 53°

- Overcast skies, Air temp  $-4.4^{\circ}\text{C}$
- 72hr config still going ok ✓
- TP1 on Base =  $-0.3^{\circ}\text{C}$
- TP2 @ midpack =  $-0.7^{\circ}\text{C}$
- Data file # 05900017

19v 245

H 229

37v 226

H 211

89v 188

H 182

Footprint = 5-10 cm @ 3pm.

Wed → 06000033

~~Thurs. Feb 2~~

Thurs. Mar. 1/2012

Regular Footprint @ 53°

- 72 hrs config still running ok ✓
- Heavy overcast skies, Air temp  $-2.4^{\circ}\text{C}$

Footprint 20-21 cm

- TP1 on Base =  $-0.11^{\circ}\text{C}$

- TP2 at midpack =  $-0.16^{\circ}\text{C}$

- Data file # 06100029

19v 246 37v 227 89v 214

H 228 H 211 H 211

- Stopped @ 0945

- Last night looks like it was freezing rain followed by snow
- One icicle hanging in front of 37/89.
- Decided to do trench & sandbox work here today.

### Sandbox Shot

- 4 corner depths = 14, 15, 16 & 9 cm
- overcast, sun <sup>NOT</sup> detectable, Air temp  $-2^{\circ}\text{C}$
- 'sandbox/hr' config sent @ 1030
- Data file # 06155614

	Start	Finish
19v	70	
H	66	* we moved the radiometers back before they were finished
37v	109	
H	104	
89v	218	16:35 → is void otherwise the last 5 min otherwise ok ✓
H	215	

### Sky Shot @ 1100

- overcast, sun not detectable, Air temp  $-1.24^{\circ}\text{C}$
- Data file # 06160955

19v	32	37v	43	89v	90
H	31	H	43	H	91

### Warm Spot @

- Air temp  $-0.6^{\circ}\text{C}$
- TP 1 on 19 =  $+4.3^{\circ}\text{C}$
- TP 2 on  $37/84$  =  $+3.1^{\circ}\text{C}$
- Data file # 06162732

19 v = 278

H = 278

37 v = 277

H = 277

89 v = 276

H = 276

### Regular Footprint @ $53^{\circ}$

- overcast, no detectable sun, Air temp  $+0.16^{\circ}\text{C}$
- Footprint 20-22cm
- TP 1 on base =  $-0.14^{\circ}\text{C}$
- TP 2 at midpack =  $-0.06^{\circ}\text{C}$
- sent 24hr confy @ 13:00
- Data file # 06164804

19 v = 257

H = 245

37 v = 252

H = 241

89 v = 254

H = 251

Fri. Mar. 2 / 2012.

Regular Footprint @ 53°

- 24hr config still going from yesterday
- Bright overcast, no detectable sun
- Air temp +0.81°C
- TP1 on Base = -0.11°C
- TP2 at midpack = -0.06°C
- Footprint 15 - 20cm
- Data file # 06200023

19v	256
H	246
37v	251
H	241
89v	251
H	247

from Feb 27

Regular Footprint @ 53°

- Bright overcast skies, Air temp +1.1°C
- Footprint → 15-20cm (15 nearest tower)
- TP1 on Base = -0.11°C
- TP2 at midpack = -0.06°C
- Data file # 06254546
- sent 72hr config over wktd.

19v	260	37v	259	89v	261
H	252	H	251	H	257

Sat → 06300010      Sun → N/A

Mon. Mar. 5/2012

- Massive wind storm came through on Saturday
- Power @ CARE had gone out & radiometer cases were found knocked off position
- No physical damage found
- Re-start rads and test.

Sky Shot @ 1005

- Blue sky & sun, Air temp =  $-12^{\circ}\text{C}$
- Data file # 06554049

19v 20

H 20

37v 22

H 23

89v 24

H 25

Warm Shot @ 1125

- Air temp =  $-9.6^{\circ}\text{C}$
- TP1 on 19 =  $-8.6^{\circ}\text{C}$
- TP2 on 37/89 =  $-8.4^{\circ}\text{C}$
- Data file # 06559138

#2.

19v	264	37v	264	89v	264
H	264	H	268	H	264



~~NFG~~

#1

Warm Shot @ 1037

- Air temp  $-11^{\circ}\text{C}$
- TP 1 on 19 =  $-8.35^{\circ}\text{C}$
- TP 2 on 37/89 =  $-9.28^{\circ}\text{C}$
- Data file# 06555946

19v	265
H	265
37v	264
H	264
89v	262
H	262

from  
marg 2

- No Good  $\rightarrow$  wind Blew off targets

Regular Footprint @  $53^{\circ}$

- Blue sky & sun, Air temp  $-9^{\circ}\text{C}$
- Footprint 2-4 cm
- TP1 on Base =  $-0.3^{\circ}\text{C}$
- TP2 at midback =  $-0.08^{\circ}\text{C}$
- Data file# 06561329
- sent 72hr config.

19v	242
H	226
37v	217
H	206
89v	194
H	189

- Very Windy again--

Tues. Mar. 6/2012.

Regular Footprint @ 53°

- 72 hr config still going from yesterday
- Heavy overcast with strong winds & blowing snow, Air temp  $-5.27^{\circ}\text{C}$
- Footprint 2 - 4cm
- TP1 on base =  $-1.37^{\circ}\text{C}$
- TP2 at midpack =  $-1.04^{\circ}\text{C}$
- confirmed both rads still @ 53°
- Data file # 06600052

19v 232

H 215

37v 207

H 196

89v 203

H 198

Wed → 06700057

Thurs. Mar. 8 / 2012.

Regular Footprint 53°

- Heavy dark cloud cover,  
Air temp +3.76°C, Footprint  
entirely grass.
- TP 1 & 2 on grass
- Data file # 06800004
- 72 hr confy still going from Mon.

19v	263
H	259
37v	268
H	266
89v	275
H	275

Regular Footprint @ 53°

- Heavy overcast, light drizzle,  
Air temp +2.44°C, No snow!
- Footprint on wet grass
- 24 hr confy
- Data file # 06869150

19v	261
H	257
37v	264
H	262
89v	271
H	270

Fri. Mar 9/2012

Regular Footprint @ 53°

- 24hr contng going ok from yesterday.
- < 2cm from overnight
- Heavy overcast, Fog, Air temp -2°
- snow squall through @ 9:30
- Data file # 06900030

19v 260

H 256

37v 261

H 258

89v 261

H 258

- 1100 Blue sky with sun, some cloud

Cold Pt. LN2 calibration 1240 hrs  
data file 06962732

19v 86.2 } LN2  
h 86.6 }

37v 33.5

h 33.0

89v 49

h 50

Cold Pt LN2 calibration

1255 hrs

data file 069 639 45

19 v 26.9

h 26.7

37 v 83.8

h 84.3

89 v 81.6

h 81.8

} LN2

Warm Pt. Calibration

1320 hrs

19 v 276.

h 276

37 v 274

h 274

89 v 271

h 271

Air temp -1.3°C

data file 069 654 85