

21 June 2021

+JEB +APB

Site: South Dome p. + dug by DVA  
 lat  $63^{\circ}8.9253'$  lon  $44^{\circ}49.0487'$  sampling JEB

all weights tared \* small wedge cutter

d, cm	g	Q	T	notes
0 - 10	83*	2	-8	
10 - 20	81	1	-10	1mm e 18
30	81	1	-11	
40	82	2	-13	
50	88	2	-13	
60	89, 92	3, 2	-14	
70	100	2	-14	1mm 67
80	93	1	-15.5	near 77
90	89, 97	3, 2	-15	1cm
90 - 100	93		-16	near
110	103		-16	below 67
110 - 120	94		-18.5	
130	111*	1	-18	round
140	111*		-18.3	cutter
140 - 150	104 +	2	-18	
160	101 +	2	-17.5	
170	117 +	2	-19	
180	106 +	2	-19	ice 181
180 - 190			-20	

Q = quality, 1 highest  
 NTR + GoPro photos taken

major time sink, Scale: 1 square = 1 minimum

S.D.M. 21 June  
South Dome 2021

clear sky, 16 kt winds  
existing AWS - 126

- frost on net rad domes
- wind just buried
- shattered top solar glass
- radium @ 73 cm
- bottom of sonic 46
- top of mast 166
- tippy top pipe 264
- top of solart 184 cm
- wind 2 axel 0 cm
- upper boom leaning up eastward  
↳ top of boom - 25 cm  
other end is - 39 cm
- middle of logger box <sup>(enc)</sup> top - 93 cm
- bottom lower sonic - 50 cm

➤ Wind 2-propeller not tight  
and spins off axel

➤ top temp/Mann (3rd plate) - 9 cm  
with broken top plate

➤ Main mast angle  $5^\circ$  towards W

Scale: 1 square =



SDM June 21, 2021

# PROBING

PSS (cm) → hard layers (cm)

185 ?

189

135

177

136

196

131

200

135

195

63, 135

~~144~~

196

59, 153

196

53, 134

199

58

198

55, 130

notes on melt complex  
took NIR photos

④  
- we think this 724 g  
belongs to 10 cm of  
2019? which would mean  
that the 135 'hard  
layer' is the 2020 PSS.

adding this melt complex  
to the 8 cm from above  
is warranted

piece ④ has thickest  
ice, inclined - lens  
see photos

hole:  
Total depth of 228 cm



South Dome 21 June 2021

(SDM) core 13 cm

R. (nm no.)	Q	at
1 7533 g	1	49
2 1228	1	19L
2 2093	1	32L
3 1178	2	~14L
3 764	2	11L
4 2866 mostly half chips?	1	43L 161
5 chips 117 g	2	
5 chunky 501 g	2	
5 nice core end		21,5L
5 1436		
5 575 ice layer + core piece	8 L	193

↓  
3,5 cm  
thick  
ice chunks

↓  
+ 4,5 cm  
well defined

hard layer  
(ice?)

hypothesis:  
maybe 2019 layer  
rather than 2020

L: piece length (cm) count

Scale: 1 square =

SDM June 21, 2021

CORE 2

9 cm corer

Run Quality

(cm)

(cm)

Notes

R Q

g

d

L

1 2

1003

90

—

1 2

1053

NA

2 — chips (208)

2 2

659

115

NA

25,5

3 — chips (697)

3 2

1427

166

NA

53

4 — chips (1330)

4 2

609

225

NA

4 2 ice layer 248

4 2 ice layer

4 2 firm

702

25

23

5

Scale: 1 square =



new awg  
final survey  
ENC door bottom 195

boom bottom 231

Luff + vent 250

lower mast  
junction 20

profile separation 120

solar panel bottom ~~273~~ ~~273~~

wind 173

radion 341

The whole job took  
6 hours!

Weather was 10-20 kt  
-10--12, sunny, drift  
coming + going.

Removed old A/Ws but mast  
+ battery

Scale: 1 square =

Station name	SDM
People present	JEB APA DVA CLAN BOREK: Jim,
Purpose	Maintenance/Installation/ take-down / quick visit / emergency chantelle
Date	21 June 2021

Notes:

site moved 275 mW from orig? position to 2018 koni field note

AWS to do list		Check after maintenance		
Part	Part shipped (Y/N)	Shipped part number	Part number upon departure.	
Radiometer				Clean? Y/N
Iridium modem IMEI number				
Inclinometer/compass		Attached to the radiometer? Y/N		
Satellite antenna				
Wind sensor		Black box pointing toward the radiometer (i.e. along the boom)? Y/N		
Temperature / humidity assembly		Fan spins? Y/N Sounds OK? Y/N		
Sonic ranger (lower)		Old sensor with new membrane? Y/N		
Sonic ranger (upper)		Old sensor with new membrane? Y/N NB: make sure not being buried next winter		
Thermistor string		Initial depth of upper sensor:		
Solar panel		Clean? Y/N		
GPS antenna		At top of logger enclosure? Y/N		
Data logger		Type is CR1000 or CR1000X or what?		
Multiplexer		Clicking during measurement cycle? Y/N		
Logger enclosure		Replaced (including everything inside)? Y/N New desiccant bags? Y/N		
Battery box		New box? Y/N New desiccant bags? Y/N		
Extension inserted?		Length: Notes:		
Mast		New AWS mast? Y/N		



**Metadata maintenance**

	Arrival	Departure
Time difference between logger clock and UTC ( $\pm$ mm:ss)		
Download data to PC and/or change CF Card (wait for green light)	Y / N	Y / N
Name of logger program		
Screen dump of values in fast scan mode	Y / N	Y / N
Photos: mast, sensors, wiring etc. (more is better)	Y / N	Y / N
Mast tilt towards radiometer (- if tilting towards anemometer)	°	°
Mast tilt across boom looking from radiometer (- if clockwise)	°	°
Boom direction relative to north	° true/magn.	° true/magn.
Box on wind sensor exactly towards mast? If not, measure.	Y / N	Y / N
Radiometer exactly aligned with inclinometer? If not, measure.	Y / N	Y / N
Temperature / humidity height (bottom of casing to surface)	cm	cm
Apparent damage to sensors? If yes, which?	Y / N	Y / N

**Notes:**