

AWS Field Report 2021-22

Field Team: Lee Welhouse and Dave Mikolajczyk

1. Nov. 20 – **Mizuho (21359)** JARE visit; instrument heights and pictures taken
2. Nov. 26 – **Relay Station (8918)** JARE visit; instrument heights and pictures taken
3. Nov. 30 – **D-85 (8912)** IPEV visit; raise
4. Dec. 2 – **Dome Fuji (8904)** JARE visit; instrument heights and pictures taken
5. Dec. 9 – **Dome C II (8989)** IPEV visit; power-cycled station
6. Dec. 19 – **Cape Denison (8909)** Mawson's Hut Foundation visit; reinstalled the AWS
7. Dec. 23 – **Phoenix (8908)** Removed enclosure to replace Vaisala pressure sensor with Paroscientific
8. Dec. 26 – **D-47 (8916)** IPEV visit; raised
9. Dec. 31 – **White Island (99610)** Replaced power system, removed damaged RM Young wind monitor
10. Jan. 6 – **Minna Bluff (99606)** Replaced power system and antenna cable, Taylor HWdir not working
11. Jan. 12 – **Willie Field (99607)** Removed enclosure to replace CR1000 with CR1000X
12. Jan. 12 – **Sarah (99613)** Removed enclosure to replace electronics board, removed power system to replace damaged Pelican case hinge
13. Jan. 13 – **Phoenix (8908)** Reinstalled enclosure, but station did not transmit
14. Jan. 13 – **Willie Field (99607)** PRT would not read, so brought enclosure back to lab
15. Jan. 13 – **D-10 (8914)** IPEV visit; raised, swapped RH, ADG, and lower temperature radiation shield
16. Jan. 14 – **Elaine (21357)** Raised with 7' section; replaced power system, wind monitor, and Argos modem; removed upper temp and put lower temp at upper
17. Jan. 15 – **Marilyn (8934)** Raised with 7' section; replaced wind monitor; removed lower temp; swapped CR1000 datalogger core
18. Jan. 20 – **Willie Field (99607)** Reinstalled enclosure
19. Jan. 20 – **Windless Bight (99611)** Raised with 7' section, swapped enclosure with new CR1000 datalogger and Paros pressure sensor
20. Jan. 25 – **Alexander Tall Tower! (99601)** Riggers visit to check guy wires
21. Jan. 26 – **Schwerdtfeger (8913)** Raised power system and lower instruments
22. Jan. 26 – **Skomik (99614)** Installed PCWS, though transmissions did not work
23. Jan. 28 – **Skomik (99614)** Uploaded new firmware, swapped antenna and modem cable
24. Jan. 28 – **Emilia (8939)** Raised with 10' tower section
25. Feb. 3 – **Sarah (99614)** Upload new firmware but didn't transmit; **Willie Field (99607)** install lower temperature; **Phoenix (8908)** Attempt to reinstall enclosure
26. Feb. 3 – **Cape Bird (99609)** Checkup
27. Feb. 6 – **Phoenix (8908)** Reinstall enclosure
28. Feb. 6 – **Sarah (99614)** Reupload new firmware

11/20/21: Mizuho (MIZ) AWS

Visit by JARE (Japanese Antarctic Research Expedition):

Dr. Nakazawa, Fumio

Dr. Tsutaki, Shun

Dr. Motoyama, Hideaki

Mr. Morino, Shohei

Mr. Kokubo, Keisuke

Mr. Haishima, yoshiki

Mr. Tsuruno, Takaharu

Mr. Inoue, Shun

Mr. Ohtani, Subaru

Mr. Furumi, Naoto

Mr. Miyazaki, Eiji

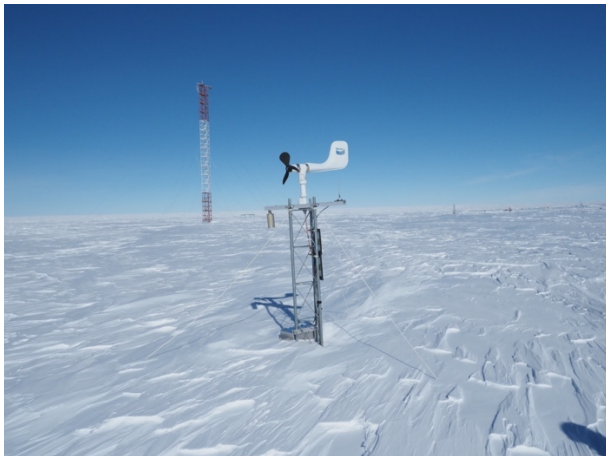
Mr. Nimi, Rei

Photos taken by Dr. Motoyama

Height of sensors from the surface

- Wind speed: 185 cm (73") (up to the middle of propeller)

- Temperature: 128 cm (50") (up to the bottom of the shield)



MIZ upon arrival



MIZ temperature sensor



MIZ with person for scale

11/26/21: Relay Station (RLS) AWS

Visit by JARE (Japanese Antarctic Research Expedition):

Dr. Nakazawa, Fumio

Dr. Tsutaki, Shun

Dr. Motoyama, Hideaki

Mr. Morino, Shohei

Mr. Kokubo, Keisuke

Mr. Haishima, yoshiki

Mr. Tsuruno, Takaharu

Mr. Inoue, Shun

Mr. Ohtani, Subaru

Mr. Furumi, Naoto

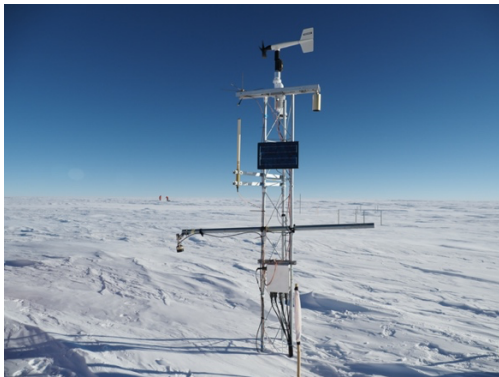
Mr. Miyazaki, Eiji

Mr. Nimi, Rei

Photos taken by Dr. Motoyama

Height of sensors from the ground

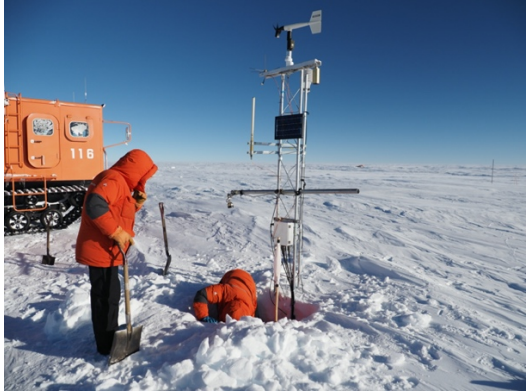
- wind speed: 300 cm (118") (up to the middle of propeller)
- Temperature: 234 cm (92") (up to the bottom of the shield)
- Relative Humidity: 250 cm (98") (up to the middle of the shield)
- Snow Depth: 85 cm (33")
- Logger box: 60 cm (24") (up to the bottom)



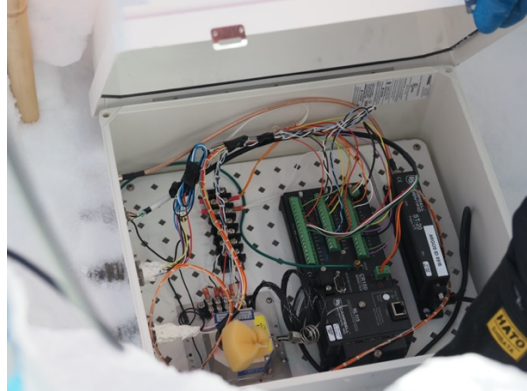
RLS



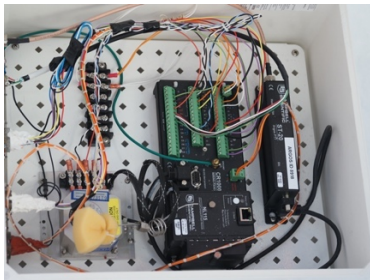
RLS



RLS digging out enclosure



RLS enclosure



RLS enclosure

11/30/21: D-85 (D85) AWS

Visit by IPEV (French Polar Institute Paul-Émile Vistor)

Field team: Gauthier Lamotte and Vincent Favier

Field notes:

Snow removal and new position.

Position : 70° 25, 537' S – 134° 08,809' E



D85 before (left) and after (right)

12/02/21: Dome Fuji (FUJ) AWS

Visit by JARE (Japanese Antarctic Research Expedition):

Dr. Nakazawa, Fumio

Dr. Tsutaki, Shun

Dr. Motoyama, Hideaki

Mr. Morino, Shohei

Mr. Kokubo, Keisuke

Mr. Haishima, yoshiki

Mr. Tsuruno, Takaharu

Mr. Inoue, Shun

Mr. Ohtani, Subaru

Mr. Furumi, Naoto

Mr. Miyazaki, Eiji

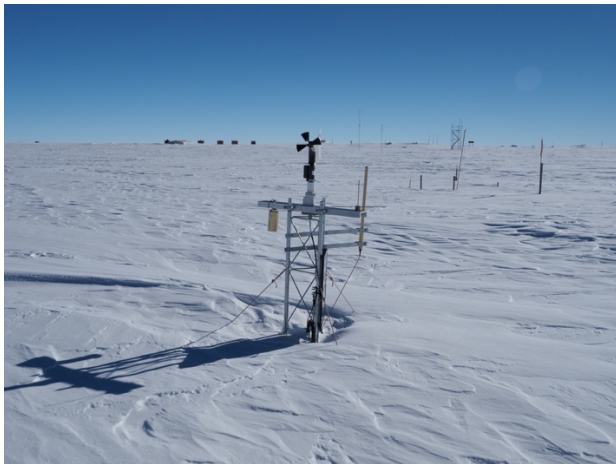
Mr. Nimi, Rei

Photos taken by Dr. Motoyama

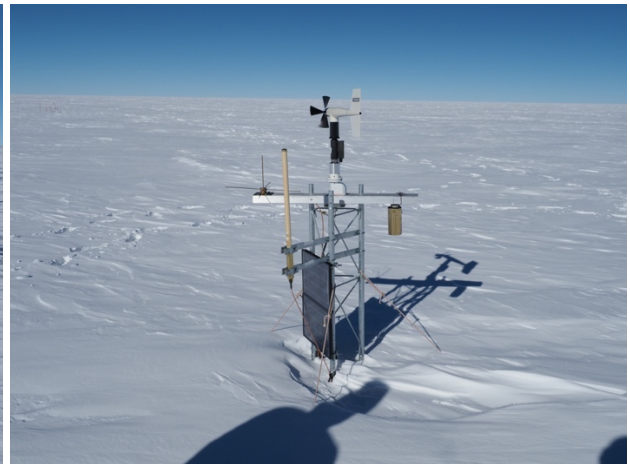
Height of sensors from the ground

- wind speed: 143 cm (56") (up to the middle of propeller)

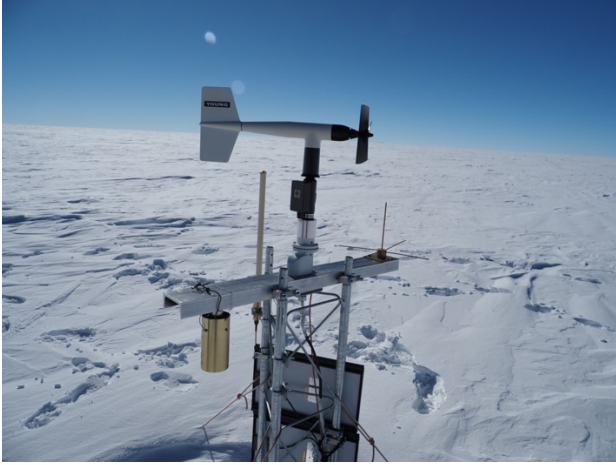
- Temperature: 77 cm (30") (up to the bottom of the shield)



FUJ



FUJ



FUJ

12/09/21: Dome C II (DC2) AWS

Visit by IPEV (French Polar Institute Paul-Émile Vistor)

Field team: Gauthier Lamotte and Vincent Favier

Field notes:

Position : 75° 06,369' S – 123° 20,832' E

Battery voltage : 12,95V.

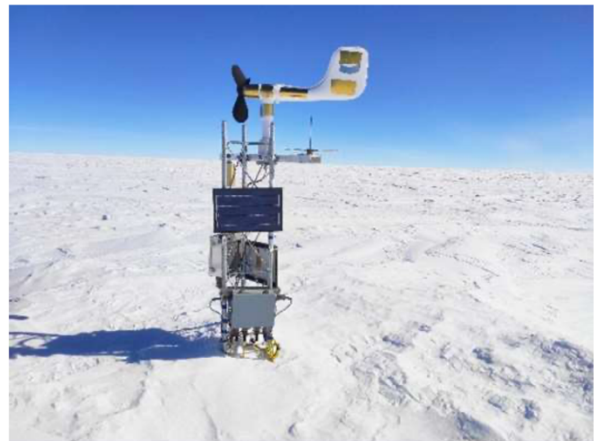
I switched off the station, tight the connector and switch on the station.

The station seems working well after that. I don't know if it's due to the restart, the untight connector or both.

I think, it could be a good thing to remove the snow of this station next year.



DC2 upon arrival



DC2 junction box



Power switch box. Cables 2 and 3 were loose.

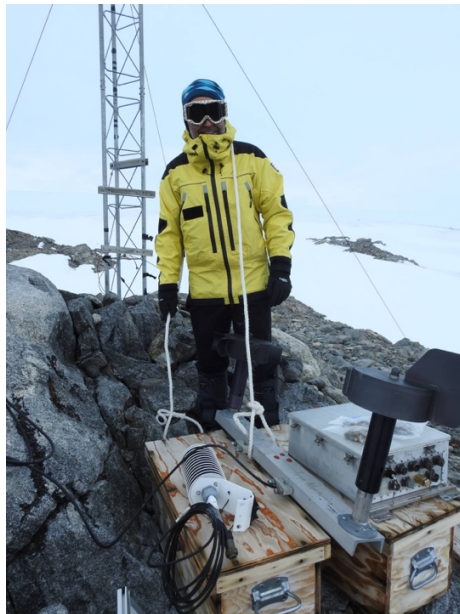


Inside power switch box

12/19/21: Cape Denison (CDN) AWS

Purpose: Reinstall CDN by Mawson's Hut Foundation personnel

Field team: David Killick (expedition communications and photographer), Dr. Roger Booth (expedition doctor), Martin Passingham (expedition leader and heritage carpenter)





CDN after installation completed

12/23/21: PistenBully to Phoenix (PHX) AWS

Purpose: Checkup, swap Vaisala pressure for Paroscientific pressure

Pax: Nikko Bayou (UNAVCO, PistenBully driver), Dave, Lee

1415: Depart McMurdo

1537: Arrive PHX

Surface conditions: Sunny, light winds

Coordinates from Lee's InReach: 77.9479° S / 166.7485° E

Arrival heights:

Enclosure: 23"

Lower temperature: 25"

We removed the enclosure to swap out the Vaisala PTB110 pressure sensor with a Paroscientific pressure sensor (SN 54535). The plan is to revisit PHX to reinstall the enclosure.

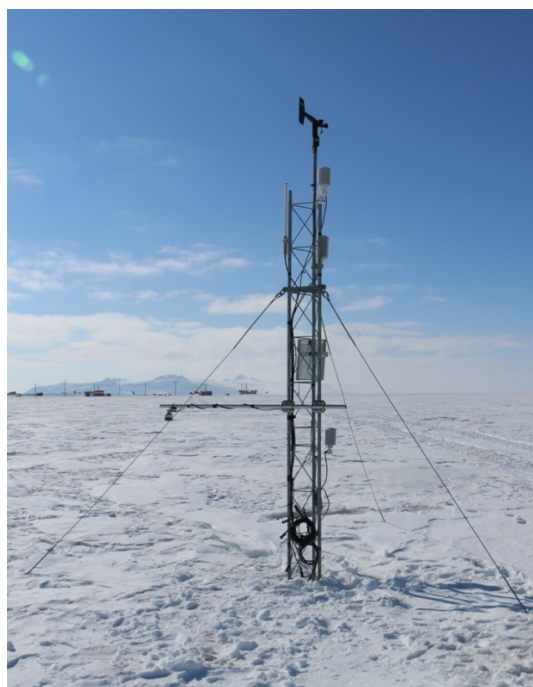
In the lab, when we tested the Paros pressure sensor, it read 1.1 hPa higher than the Crary Paroscientific pressure calibration instrument.

1602: Depart PHX

1815: Arrive McMurdo



PHX before



PHX after

12/26/21: D-47 (D47) AWS

Visit by IPEV (French Polar Institute Paul-Émile Vistor)

Field team: Gauthier Lamotte and Vincent Favier

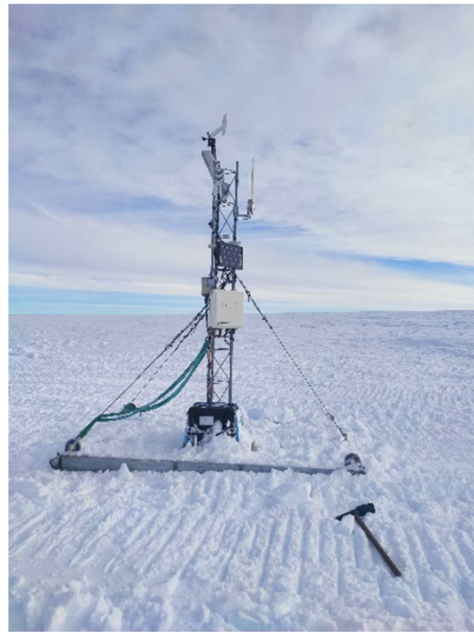
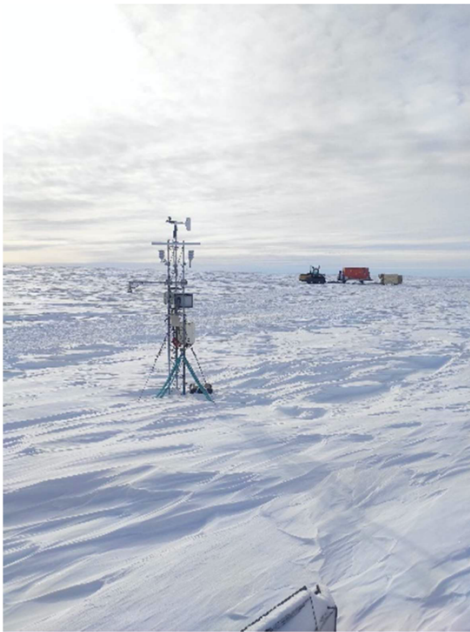
Field notes:

The SR50 is broken. Height to snow before snow removal= 180cm, after 230cm + 20cm sled

The station has been move to 67° 22,993' S – 138° 43,847' E with the beam oriented to North/South. Before there was an offset of 8°.

We've connected the remote control, here are the values :

- Warning CF out of bound
- Battery voltage : 13,4V
- sensors seems OK instead of the SR50 and the FC variable



D47 before (left) and after (right)

12/31/21: Helo to White Island (WTI) AWS

Purpose: Replace power system, check wind

Helo pilot: Slinky

AWS Team: Dave, Lee

Boondogglers: Madeline Hunt (PASSCAL)

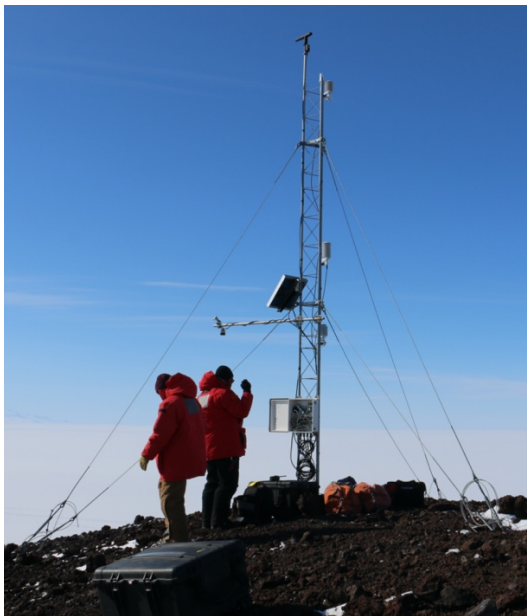
1446: Depart McMurdo

1506: Arrive WTI

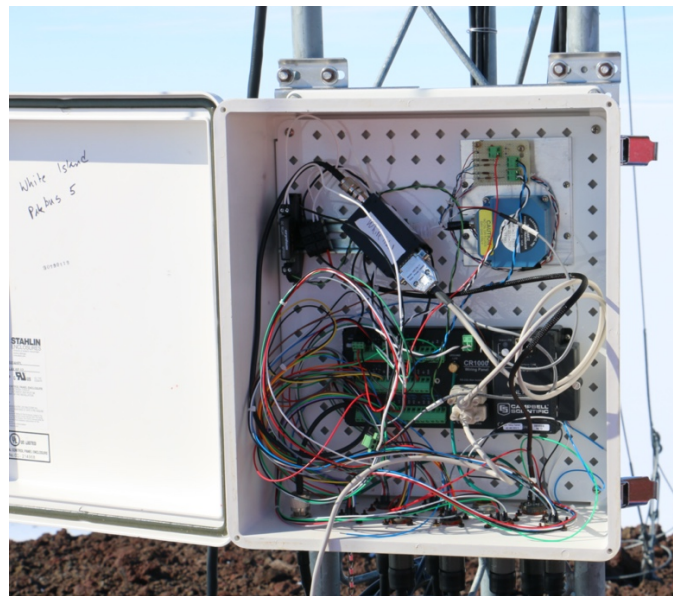
Conditions: Windy, mostly sunny, temps around -5C

CR1000 program running: IridiumWhiteIsland2019.CR1

WTI had not been transmitting. Upon arrival, it was noted the wind monitor was missing its nose cone, propeller, and tail. We removed the wind monitor. The datalogger was still running, and the power system looked fine. We swapped data cards. The power system (3 100-AHr batteries) was good, but we replaced that with a new 3 100-AHr battery power system. We swapped the data card. The antenna cable was disconnected from the Iridium antenna (this is why WTI hadn't been transmitting) so we replaced the antenna cable. We plan to return to WTI to install a Taylor High Wind System.



WTI upon arrival



WTI enclosure



WTI after

01/06/22: Helo to Minna Bluff (MNB) AWS

Purpose: Replace power system, check wind

Helo pilot: Eddy; Helo tech: Clay

AWS Team: Dave, Lee

Boondogglers: Madeline Hunt and Avi Cramer (PASSCAL)

1333: Depart McMurdo

1404: Arrive MNB

Conditions: Sunny and calm winds

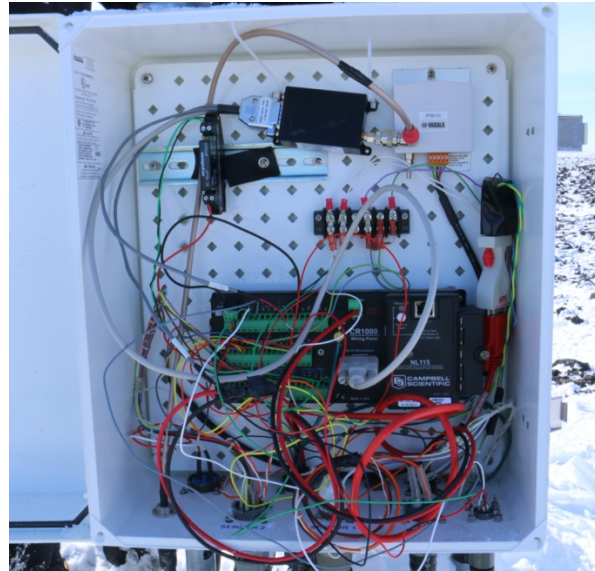
CR1000 program running: IridiumMinnaBluff2019.CR1

MNB had not been transmitting and was in rough shape. The datalogger wasn't running. The vibrations had backthreaded a lot of things, resulting in damage. The tape used to attach the cables to the tower broke, resulting in the cables pulling away from the tower. The boom cables had pulled themselves slightly out of the enclosure under the boom. The temperature sensor cable pulled, and the outer sheath was broken. We are relatively certain this resulted in damage to the cables that connect the wind direction. As such, the wind direction is not reporting correctly. Wind speed still seems to be valid. The I-beam mount is missing one bolt. HMP doesn't seem to be functioning. The antenna cable fully broke. The solar panel had fallen off its mount and was buried in snow a few feet from the tower. The existing power system Pelican case was damaged on the side facing the tower due to the twisting of the tower base scraping against it. The 2 100-AHr batteries were at 3 Volts with massive bulging batteries.

We replaced the power system with 3 100-AHr batteries and used wire to tie down the boom as well as cabling. We wedged some rocks between the power system and tower base to prevent damage to the Pelican case. We reinstalled the solar panel, which has a 2-pin plug connecting to the power system. We replaced the antenna cable, retrieved the data card, confirmed the internal lithium was in good shape and confirmed transmission.



MNB upon arrival



MNB enclosure



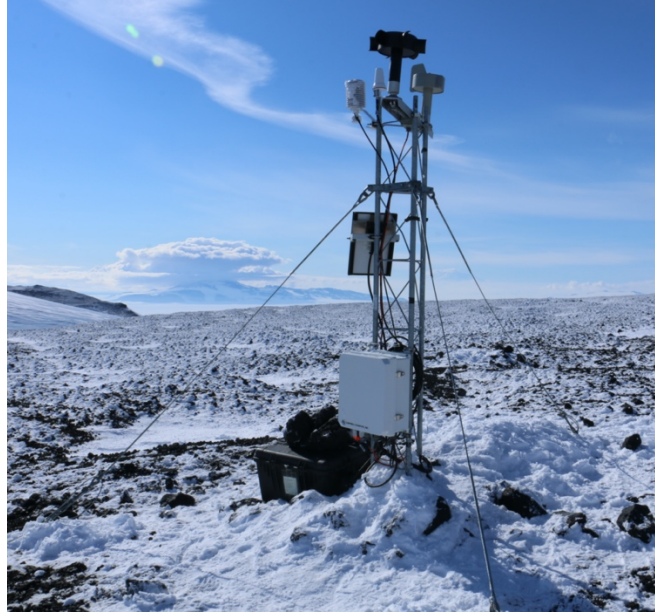
Damage to temperature sensor cable



Damage to old power system case



New power system



MNB after

01/12/22: PistenBully to Willie Field (WFD) and Sarah (SRH)

Purpose: Replace power system, check wind

Pax: Nikko Bayou (UNAVCO, PistenBully driver), Dave, Lee

0925: Depart McMurdo

1008: Arrive WFD

Coordinates from Lee's InReach: 77.8682° S / 166.8984° E

WFD heights from surface:

Lower temperature (PRT): 3"

Enclosure: 16"

Upper temperatures (PRT and thermistor) and Relative humidity: 92"

Wind: 122"

We removed both WFD and SRH enclosure to be reinstalled later in the season. WFD will get the CR1000 swapped with a CR1000X for testing. SRH will get a new PCWS board installed.

We raised the WFD power system to the surface. We removed SRH's power system because the Pelican case hinge was damaged. The top of the Pelican case was replaced in the lab.

1216: Depart WFD

1258: Arrive McMurdo



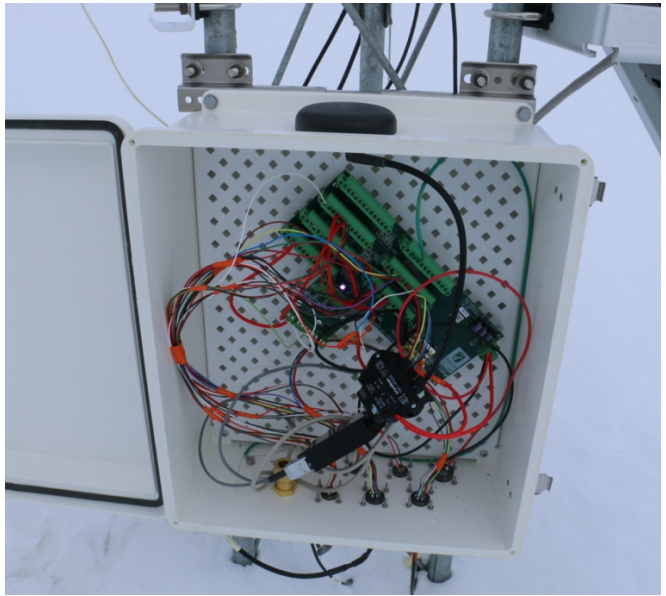
WFD upon arrival



WFD after



SRH before



SRH enclosure



SRH after

01/13/22: PistenBully to Phoenix (PHX) and Willie Field (WFD)

Purpose: Reinstall PHX and WFD enclosures

Pax: Nikko Bayou (UNAVCO, PistenBully driver), Dave, Lee

1000: Depart McMurdo

1117: Arrive PHX

We installed the new enclosure, with new Paroscientific pressure sensor (SN 4730), but we could not get successful Argos transmissions. We will return later to troubleshoot.

Instrument heights:

Enclosure: 39"

Lower temperature: 45"

Boom: 61"

Relative humidity: 113"

Upper temperature: 135"

Wind: 164"

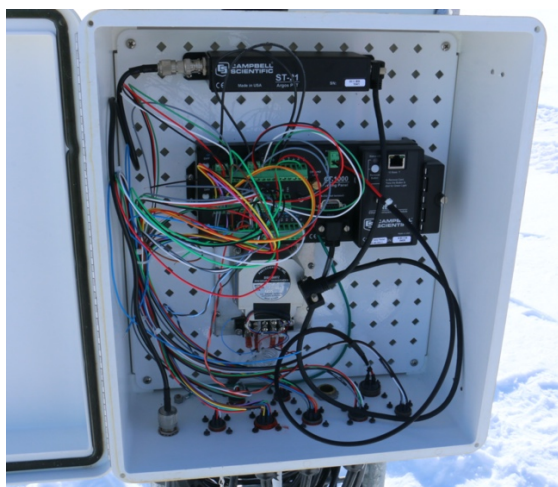
1208: Depart PHX

1303: Arrive WFD

We reinstalled the enclosure with the new datalogger (CR1000X) and Paroscientific pressure sensor (SN 107327), but the PRT temperature sensor would not read properly (it output NaN). We took it back to the lab to later discover that we needed to edit the program to have an increased voltage range for the PRT.

1522: Depart WFD

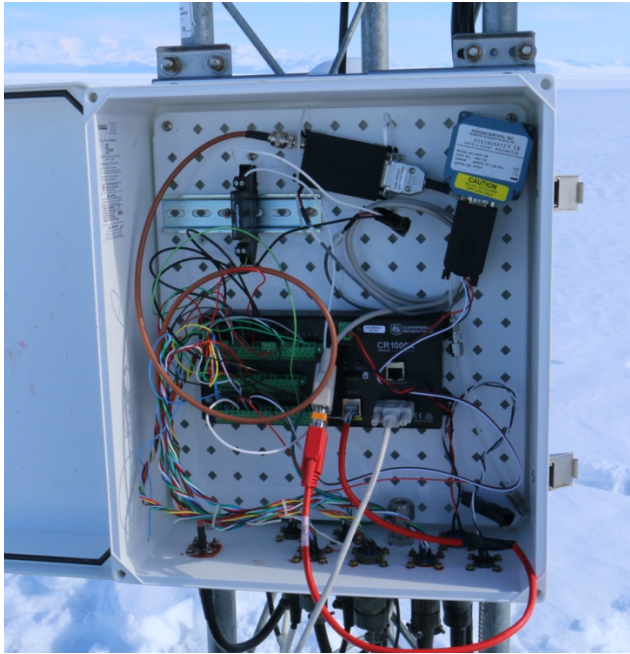
1600: Arrive McMurdo



PHX enclosure



PHX after



WFD enclosure



WFD after

01/13/22: D-10 (D10) AWS

Visit by IPEV (French Polar Institute Paul-Émile Vistor)

Field team: Gauthier Lamotte and Vincent Favier

Field notes:

The station was at 147 cm under the snow.

We removed the snow and move the station at 66° 42,227 S – 139° 50,552 E

We change the HMP155 as requested. We also change the SR50 which was broken (there was a spare in Prud'homme) and we changed the cover of the low temperature sensor.

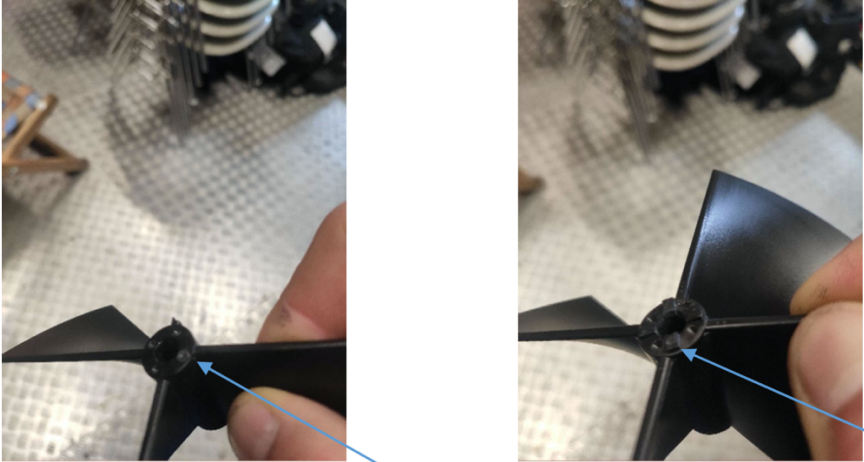
The anemometer was not well holded, during the work, we broke the propeller (13/01/2022). There was a spare in Prud'homme, we change it the 17/01/2022. We saw that the old propeller (the broken one) had not the little plastic part to maintain the propeller (see below).



D10 upon arrival



D10 ADG and lower temperature



D10 old propellor (left) and new (right)

01/14/22: Otter to Elaine (ELN) AWS

Purpose: Raise with 7' tower section and fix transmission issue

CKB: Rodney and Jenia

Pax: Dave and Lee (AWS), Monty Chaney-Geib (NIWC)

0824: Depart Willie Field

1048: Land to taxi to South +200 fuel cache (fuel cache on South Pole Traverse Road)

1113: Arrive South +200 fuel cache

1154: Depart fuel cache

1235: Arrive ELN

Conditions: Sunny, light winds

Coordinates from Lee's InReach: 83.0567° S / 174.2182° E

Instrument heights before (after):

Lower temperature: 10" (not installed)

Boom: 29" (84")

Enclosure: 36" (91")

Upper temperature and Relative humidity: 77" (162")

Wind: 101" (188")

We got out to Elaine and the data logger was functioning and we were able to recover the data card. The temperature sensor was reading "NAN" and we couldn't determine why. The lower temperature sensor was reading good values, so with some changes to the code we changed that to be the upper temperature sensor. We changed the wind monitor. The nose cone was found on the ground at the station, and both that nose cone and the vane itself had cracks/damage. We tried a different antenna with no success transmitting and moved on to trying a separate modem. That did the trick and we got it transmitting again. We added a 7-foot section. The power system was swapped out, and the old batteries were recovered (this likely wasn't needed but we felt it was better to do this now. There seemed to be an oddity with the power cable (one we purchased from PEI genesis in the past) that resulted in the A and B sockets being on the wrong side of the plug. This resulted in the power being swapped (we discovered this prior to plugging in the data logger and corrected the wiring in the enclosure). The UNAVCO GPS was setup throughout the visit.

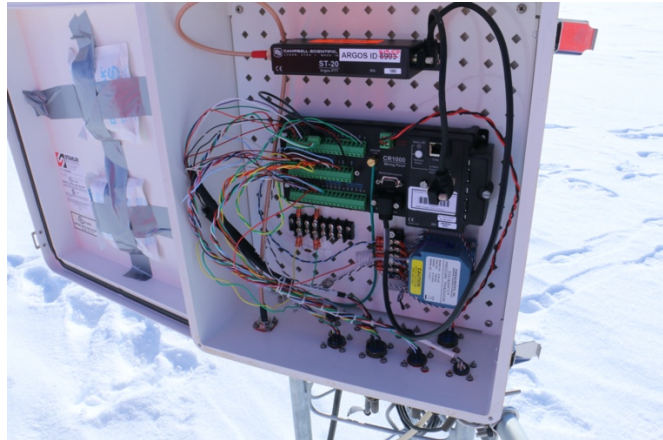
Monty serviced the collocated NIWC Wind Alert AWS.

1719: Depart ELN

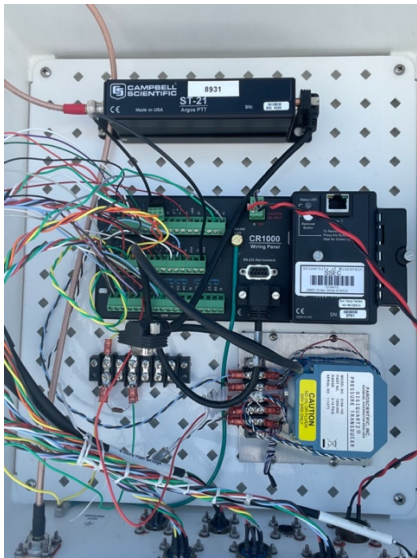
1917: Arrive Willie Field



ELN upon arrival



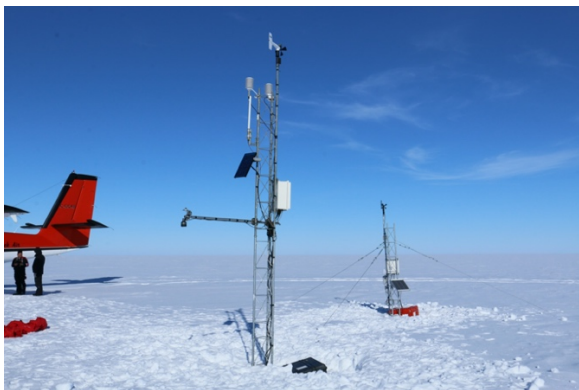
Enclosure upon arrival



ELN enclosure after



ELN after



ELN (foreground) and NIWC AWS (background)

01/15/22: Otter to Marilyn (MLN) AWS

Purpose: Raise with 7' tower section and replace wind monitor

CKB: Rodney and Jenia

Pax: Dave and Lee (AWS), Avi and Madeline (PASSCAL), Monty Chaney-Geib (NIWC)

0824: Depart Willie Field

0930: Arrive MLN

Conditions: Sunny, calm winds

Coordinates from Lee's InReach: 79.8974° S / 165.8561° E

The UNAVCO GPS was setup throughout the visit.

Instrument heights before (after):

Enclosure: buried (71")

Lower temperature: 17" (not installed)

Boom: 28" (93")

Upper temperature and Relative humidity: 84" (171")

Wind: 109" (196")

We were successful in getting Marilyn back online. The lower temperature sensor wasn't working, and our efforts to repair it didn't work so we removed it. Perhaps we should consider having some spare half wire bridge replacements on hand to swap out in the future since we are seeing some of them fail (it is our best guess that these are the parts failing since the rest of the connections seemed good and we've seen them fail at other sites). The power system was in great shape upon arrival. We were able to recover the data card. The new wind bird still read bad values, so we swapped data logger cores and that fixed the issue. This seems to indicate the wind bird wasn't the issue, but the data logger half wire bridge measurement for the wind bird channel was. We are going to test that in the lab. Plus side, the only other measurement that would be similarly off would be the PRTs and the upper temperature measured the same on both data logger cores, so that shouldn't be impacted. We added a 7-foot tower section. The UNAVCO GPS was setup throughout the visit.

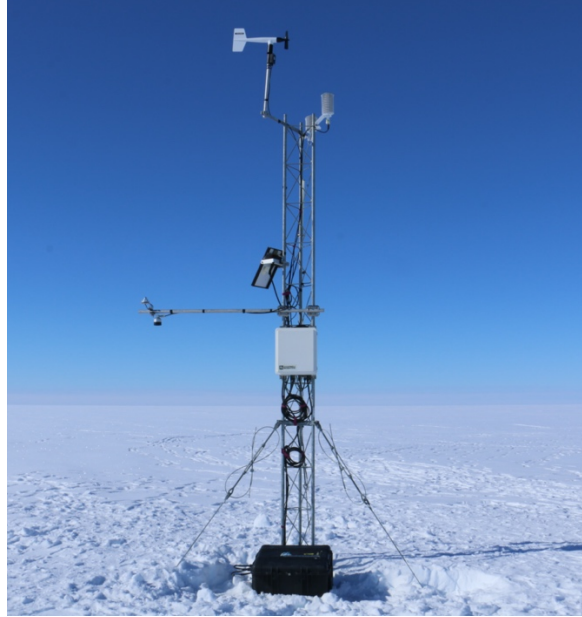
Monty serviced the collocated NIWC High Wind Alert AWS.

1428: Depart MLN

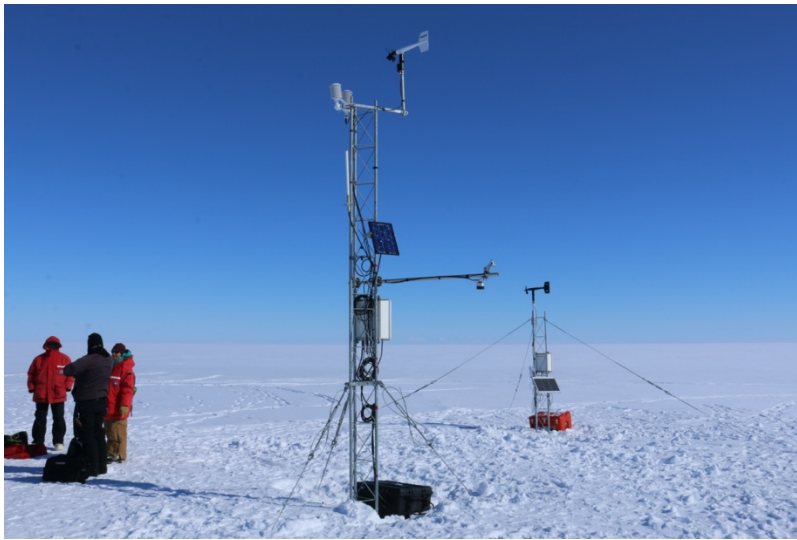
1520: Arrive Willie Field



MLN before



MLN after



MLN (foreground) and NIWC AWS (background)

01/20/22: Snow machine to Willie Field (WFD) and Windless Bight (WDB)

Purpose: Reinstall WFD with CR1000X, raise WDB and install new enclosure with new datalogger and Paroscientific pressure sensor

Pax: Dave and Lee

0913: Depart Snowmo depot

0940: Arrive WFD

We installed the enclosure with the CR1000X, and everything was reporting nominally. We will return to install the lower temperature sensor. Paros SN 4730.

Instrument heights:

Enclosure: 35"

Upper temperature and Relative humidity: 87"

Wind: 116"

1015: Depart WFD

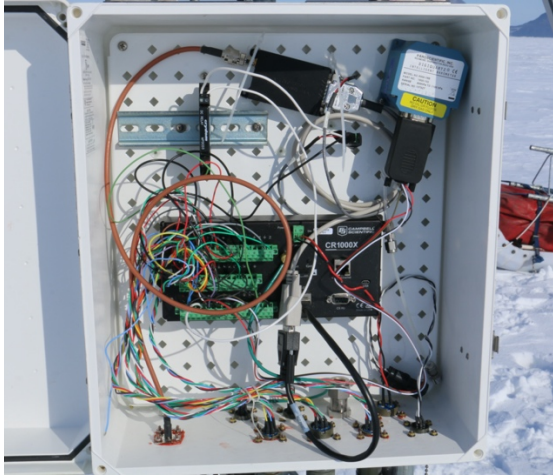
1100: Arrive WDB

Conditions were sunny at the start, cloudy at the end, windless, and warm (+1C).

The UNAVCO GPS was setup throughout the visit to WDB.

UNAVCP GPS coordinates from this visit at WDB: 77.731° S / 167.666° E

We swapped the enclosure due to the old CR1000 having a dysfunctional CF module. A Paroscientific pressure sensor (SN 52009) is now installed. We had to dig 7' 4" to get to the bottom of the power system. We raised that to the surface, added a 7-foot tower section, and raised instrumentation. One solar panel bolt is cross-threaded, so we will need to bring a new one for the next visit.



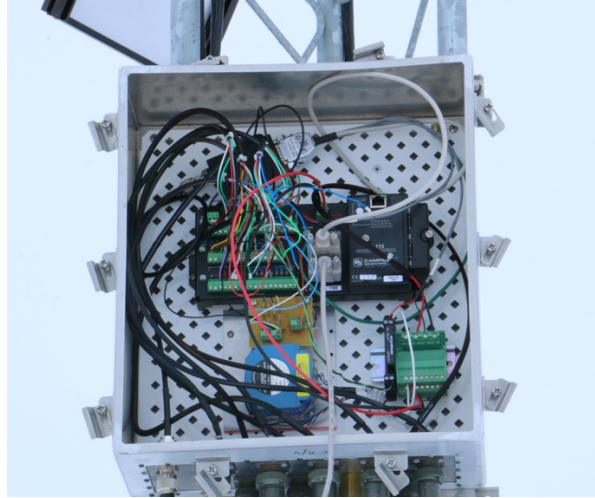
WFD enclosure with the CR1000X



WFD after



WDB before



WDB enclosure



WDB after

01/25/22: Twin Otter to Alexander Tall Tower! (BAT) AWS

Purpose: Riggers do tower checkup and maintenance

Per Emily Keifer, the tower, guy wires, and preforms were all in good condition. The guy wires were loosened slightly to prevent differential loading.

01/26/22: Twin Otter to Schwerdtfeger (SWT) AWS and Skomik (SKM) PCWS

Purpose: Raise SWT lower instrumentation, install SKM

CKB: Rodney and Jenia

Pax: Dave and Lee (AWS), Ryan Adamson (NIWC)

0853: Depart Willie Field

0950: Arrive SWT

Conditions: Mostly cloudy, calm winds.

The UNAVCO GPS was setup throughout the visit.

UNAVCO GPS coordinates from this visit at SWT: -79.794 / 170.452

Program running on SWT: 15368_Argos.CR1

SWT instrument heights before (after):

Enclosure: Bottom buried (71")

Lower temperature: 19" (54")

Boom: 37" (99")

Relative humidity: 64" (124")

Upper temperature: 124" (124")

Wind: 155" (155")

Due to SWT's height being about the same as the NIWC AWS, and the soon-to-be-installed SKM, we did not add a tower section to SWT. The first thing we did was install SKM's new tower. We dug the holes for the tower section, then the three deadmen, put all in place, and refilled the holes to let the tower freeze in. Then we dug up SWT's power system and enclosure and raised those to the surface, also raising the lower temperature, boom, and installing RH at the top of the tower. We swapped data cards at SWT and confirmed Argos transmissions with the Telonics.

While Lee raised the lower instrumentation on SWT, Dave installed the instrumentation on SKM. The SKM instrumentation consists of a wind monitor, HMP 155 relative humidity, 3 upper temperatures (1 PRT and 2 thermistors), lower temperature (thermistor), and pressure (Paroscientific, SN 144088). The Iridium modem IMEI is 300234064501580.

SKM instrument heights:

Lower temperature: 53"

Enclosure: 64"

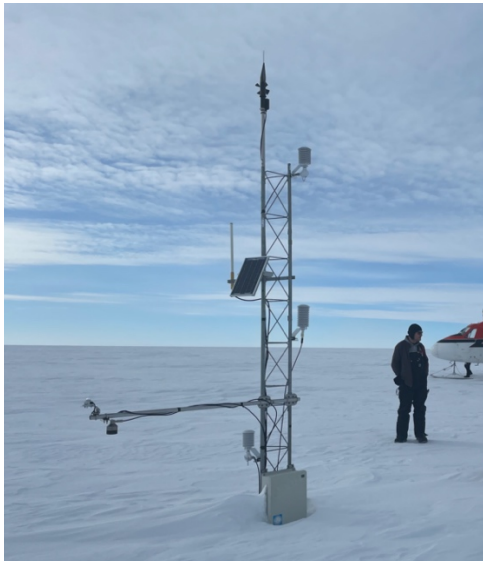
Upper temperature and relative humidity: 122"

Wind: 150"

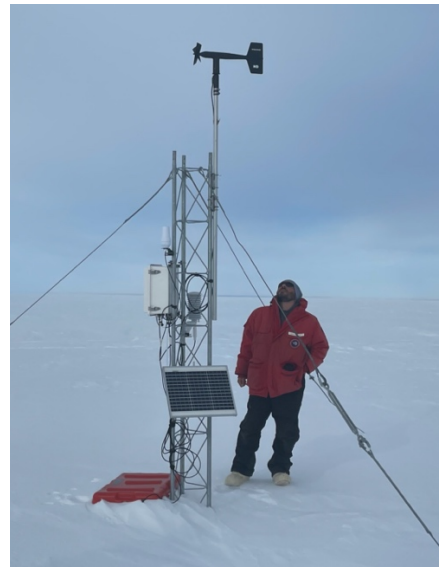
When that was completed, we uploaded the program to SKM, firmware version 2.1.3. However, after one successful transmission, the cable inside the enclosure connecting the Iridium antenna to the Iridium modem broke at the modem connection. We also noticed that the wind data and one of the upper thermistors seemed wrong. In troubleshooting the thermistor, one of them was damaged. We tried fixing the transmission issue but couldn't. We would try to come back to upload a new program and swap out the Iridium antenna and modem cable.

1613: Depart SWT

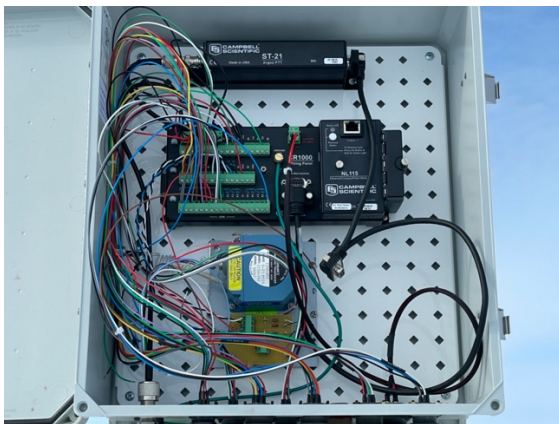
1705: Arrive Willie Field



SWT upon arrival



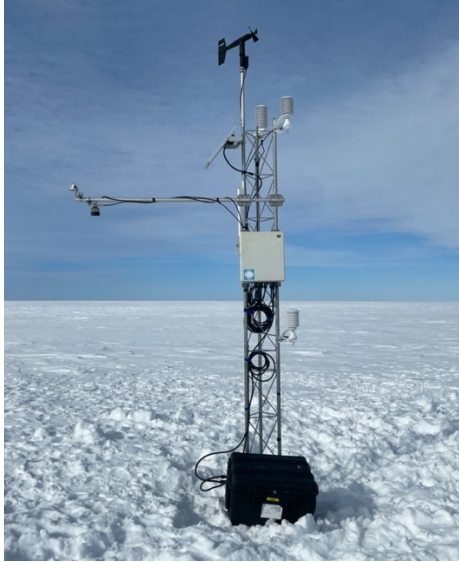
NIWC AWS upon arrival



SWT enclosure



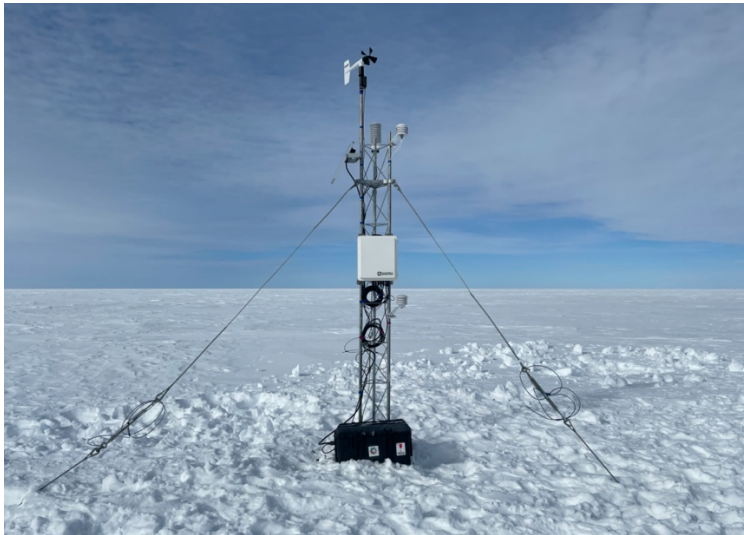
NIWC enclosure



SWT after



SKM enclosure



SKM after

01/28/22: Otter to Skomik (SKM) and Emilia (EML)

Purpose: At SKM, upload new firmware and swap wind and upper temperature; Raise EML and replace nose cone and propeller

KBG: Jeff Amantea and Kelsey

Pax: Dave and Lee

0829: Depart Willie Field

0933: Land to taxi to SKM

1003: Arrive SKM

Conditions: Mostly cloudy, light winds

At SKM, we swapped the wind monitor and upper temperature assembly. We uploaded new board firmware, version 2.1.4. We confirmed transmissions were coming through by calling Andy Kurth in Wisconsin, and we verified that wind and temperature data were reporting good data.

At the NIWC AWS, Lee swapped out their wind monitor (provided by NIWC) and secured their solar panel mounting.

1142: Depart SKM

1236: Arrive EML

Conditions: Sunny, calm winds, cool

Instrument heights before (after):

Enclosure: Buried (74")

Boom and relative humidity: 64" (182")

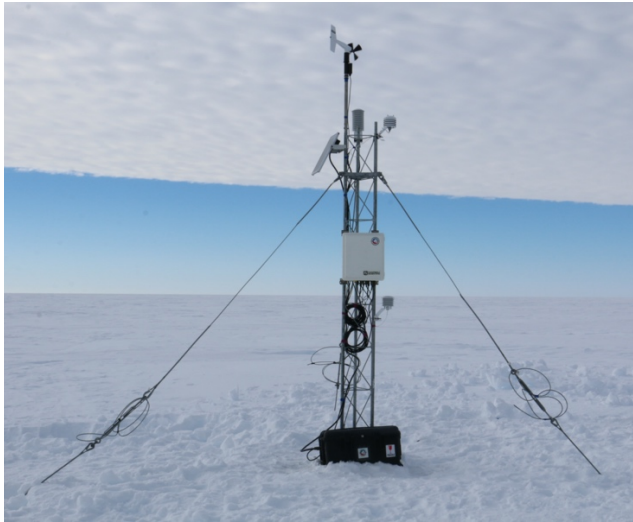
Wind: 82" (200")

Upper temperature: 55" (173")

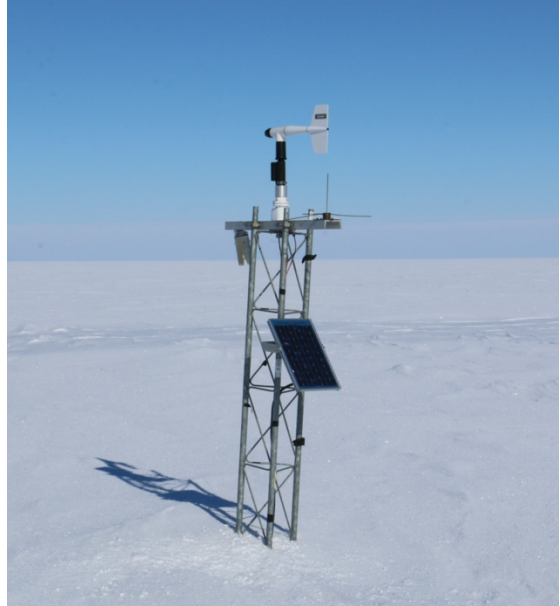
We knew the wind speed wasn't working, and we found the nose cone was damaged and the propeller was propelled about 30 feet. We replaced the nose cone and prop. We needed to dig down 7 feet 5 inches to recover the power system. Both of the old 100-Ahr batteries were starting to report low voltages, so we swapped them out with two new 100-Ahr batteries. We added a 10-foot tower section, reinstalled the instrumentation, and confirmed Argos transmissions with the Telonics. We found that the tower is tilted ~12.5 degrees off plumb.

1646: Depart EML

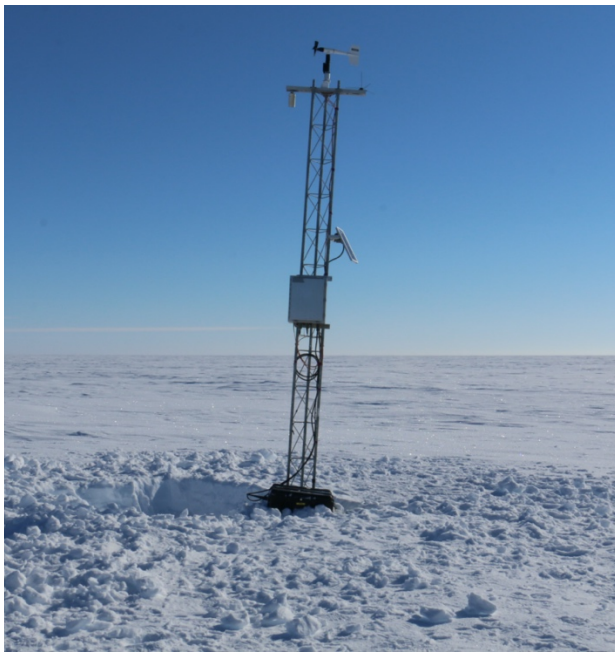
1722: Arrive Willie Field



SKM after



EML upon arrival



EML after

02/03/22: Snowmobile to Sarah (SRH) PCWS, Willie Field (WFD) AWS, Phoenix (PHX) AWS
Purpose: Install new power system and upload new firmware on SRH; reinstall lower temperature sensor on WFD; reinstall enclosure at PHX

Pax: Dave and Lee

1334: Depart snowmo depot

1347: Arrive SRH and WFD

SRH: We installed a new 3-battery 100Ahr power system and reinstalled the SRH enclosure. The lower temperature sensor cable has purple tape on it near the plug connecting to the enclosure. We uploaded PCWS firmware version 2.1.4, but after returning we noticed it wasn't transmitting. We would need to revisit to fix the issue.

Instrument heights:

Lower temperature: 28"

Enclosure: 36"

Upper temperature and RH: 101"

Wind: 120"

WFD: We reinstalled the lower temperature sensor and confirmed it was working properly.

Lower temperature: 60"

1450: Depart SRH and WFD

1508: Arrive PHX

We reinstalled the PHX enclosure, but it still wasn't transmitting, so we brought it back to the lab to troubleshoot, with the goal of reinstalling it later this season.

Instrument heights:

Enclosure: 37"

Lower temperature: 45"

Boom: 60"

RH: 114"

Upper temperature: 136"

Wind: 155"

1558: Depart PHX

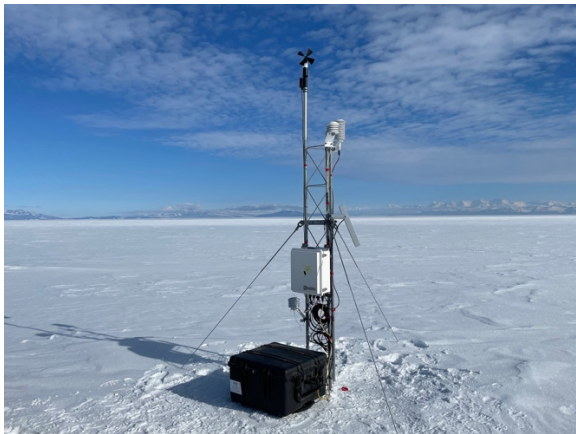
1627: Arrive snowmo depot



SRH upon arrival



SRH enclosure



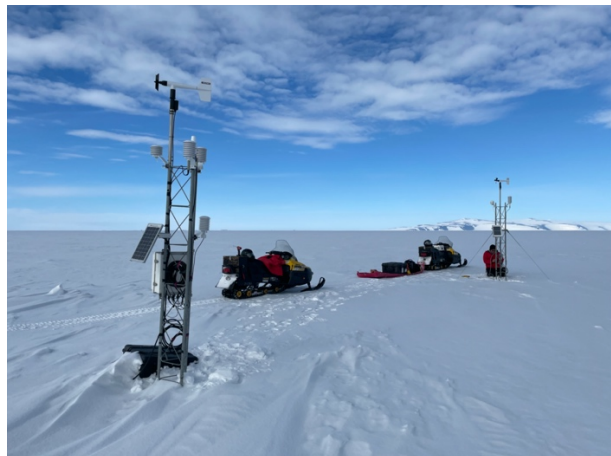
SRH after



Wire used to attach solar panel to mount on SRH



WFD after



WFD (left) and SRH (right)

02/03/22: Helo to Cape Bird (CBD) AWS

Purpose: Checkup

Pilot and tech: Ryan Skorechi and Katrina Jongenelen

Pax: Dave, Lee, Avi and Madeline (PASSCAL), Hailey Gruber (helo coordinator), Megan Dore (medical clinic)

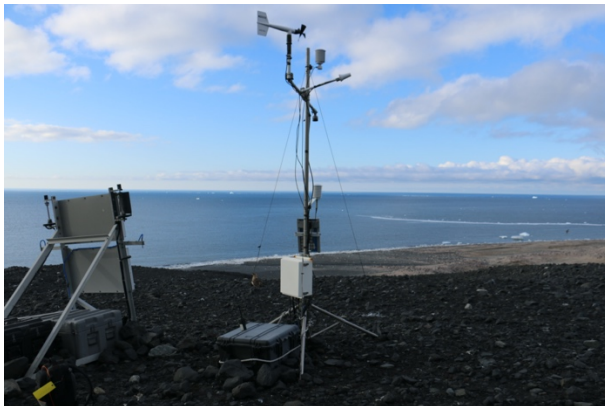
1929: Depart MCM

2012: Arrive CBD

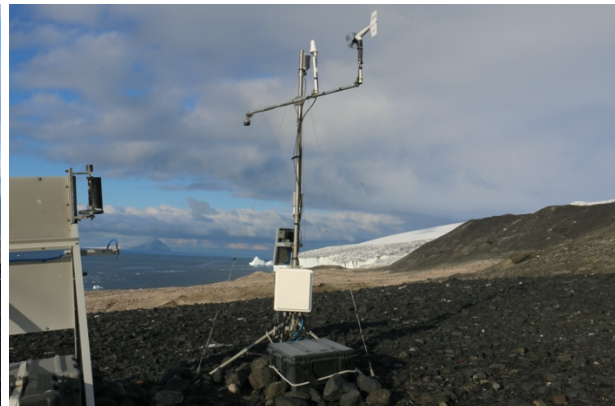
The antenna mount had shifted, and the antenna was pointing up the hill and putting pressure on the coax cable. The solar panel backing has stripped off so next year we should replace the solar panel. The tape used to hold the cables to the tripod had broken in two spots, we replaced it with lock wire. PASSCAL came along on the flight for a recce as they plan to put a station in close proximity next year.

2233: Depart CBD

2304: Arrive MCM



CBD upon arrival



CBD after

02/06/22: Truck to (PHX) Phoenix

Installed enclosure. The station is on and gathering data but not transmitting.

02/06/22: Snowmobile to Sarah (SRH) PCWS

Reuploaded firmware version 2.1.4 and confirmed the station was on and transmitting.
