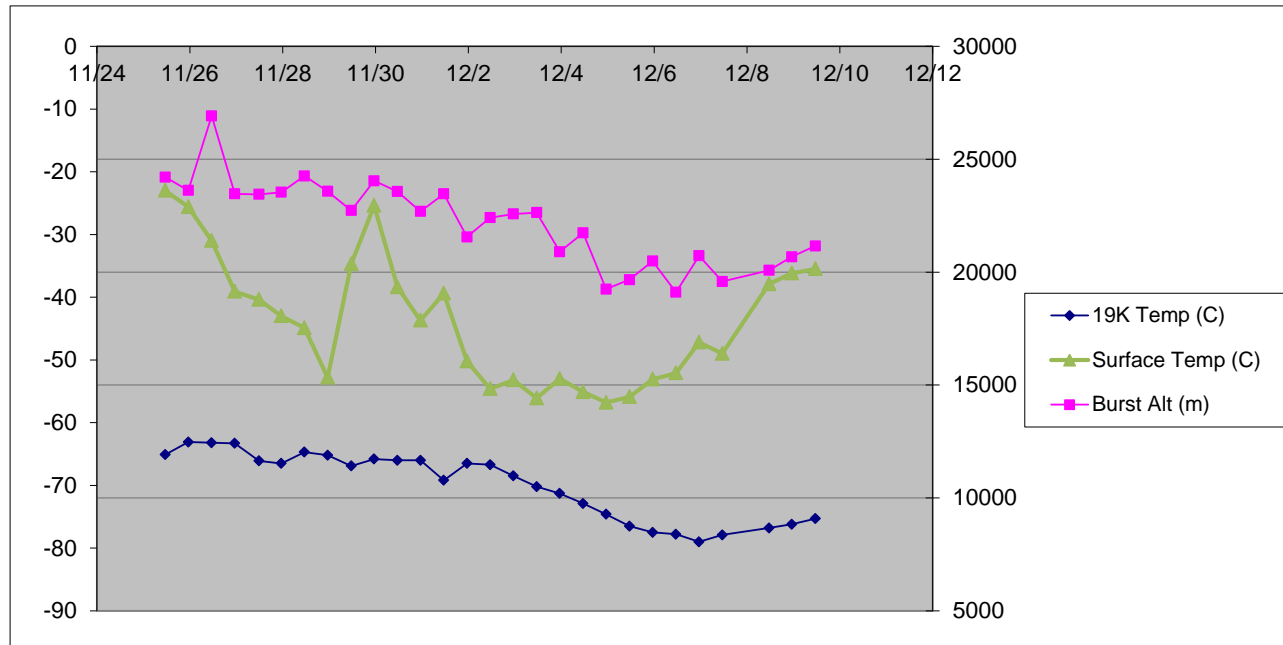


ICECAPS Weekly Report

December 2 – December 8, 2013

John Lyons



Burst altitudes have dropped abruptly to 20km and below this week, with no change in method or equipment (inflated balloons are still given 15-25 mins to equilibrate in SOB). Burst altitude does not seem as responsive to surface temp at launch, but perhaps more closely correlated to temperature at altitude, which dropped in the last week?

General:

- MSF facility operating normally.

Significant Weather Observations:

- 12/02: Winds 288 at 10 kn, -55C, 54%, FEW
- 12/03: Winds 034 at 14kn, -53C, 58%, FEW, surface hoar + sparse yukimarimo around station, 0.5 – 2.5 cm, balls gathering preferentially in wakes of drifts and buildings
- 12/04: Winds 348 at 9kn, -55C, 57%, SKC, surface hoar and yukimarimo still present, no noted increase in yukimarimo population
- 12/05: Winds 355 at 10kn, -55C, 57%, SKC, surface hoar and yukimarimo still present, no noted increase in yukimarimo population
- 12/06: Winds 147 at 13kn, -48C, 61%, SCT, surface hoar still present, partially destroyed by afternoon wind increase. Plumes of DRSN originating from “nucleation points” wiped surface hoar selectively away.
- 12/07: Winds 182 at 9kn, -48C, 62%, FEW, surface hoar re-established in areas where blown away on 12/6, also roughly 1cm thick on south side of all bamboo, buildings, etc.. 0.5 – 1cm yukimarimo seen moving at 1115Z around BH/GH, 1 – 2.5cm cylinders around MSF, roughly 3-4/m².

- 12/08: Winds 152 at 13kn, -39C, 70%, SCT-BKN, DRSN, surface hoar destroyed

Dataman Account:

- 12/08: 12/07 data not completely transferred to Boulder overnight; Icecam images and sodar file remain.
- Operating normally

MWR:

- 12/02 13:15Z: Assessed 90/150 GPS antenna for compatibility with time server; it has a molded 4-pin connector pigtail hardwired to the antenna, not a coax connector. Would require cutting and splicing to work with the time server.
- Operating normally

SODAR:

- Operating normally

POSS:

- Operating normally

MMCR:

- Operating normally

CAPABL:

- No longer operating

MPL:

- Operating normally

VCEIL:

- 12/04: Window had hoar on it, blower NOT running. Checked status message, blower and outheater both set to OFF, all temps (CPU, laser, window, blower) are anomalously low, and the outside air temp is out of range for the instrument (manual spec min = -50C)
- 12/05: Ambient NOAA temp rose to 48.5C, ceilometer now registers ambient temperature as -48C and blower and heaters are all ON.
- 12/06: Ambient NOAA temp is -48C, ambient CT25K temp is -43C, blower and heaters are all ON

IceCAM:

- Operating normally

PAERI:

- 12/03: Scene mirror malfunction starting at 0Z; unable to obtain proper mirror position upon reboot. Shut down and removed fan, allowed motor to warm, then rebooted PAERI at roughly 20:30Z. Re-installed fan at 0010Z.
- 12/04: Scene mirror malfunctioning again – valid measurements stop at 0655Z, probably due to cold motor and/or encoder. Removed fan at 1243Z to allow motor to warm, then rebooted PC.

Added insulation to motor.

- 12/05: Re-installed fan at 0010Z after reboot. Von found motor/encoder malfunction again by 0800Z, rebooted. Removed fan again at 1305, motor temp OK at 1347, rebooted.
- 12/08: Re-installed fan at 1345Z; ambient temperature is warmer

ASIA-A:

- Operating normally

TSI:

- Offline for winter

IcePIC:

- 12/02: Bullet rosettes, needles
- 12/03: Yukimarimo sample from 2.5cm ball – needles and bullet rosettes
- 12/04: Surface hoar sample – needles and bullet rosettes
- 12/07: Yukimarimo sample from 2.0cm ball – needles, columns and bullet rosettes

Radiosonde:

- Twice daily sondes
- 12/03: 12Z sonde RH sensor reading became unstable at higher altitudes. Noted that sonde is potentially from an older stock as it has an F serial number as opposed to the current G serial numbers.
- 12/08: 12Z sonde had either faulty battery connection or faulty transmitter – intermittent readings after launch