

IcePod Instruments

ACTIVE DEVICES

Deep Ice Radar [DICE] - Built in-house.

- Center Frequency: 188MHz; Bandwidth: 60MHz.
- Pulsed system with Pulse Lengths of up to 10uS and a Pulse Repetition Rate of up to 10KHz.
- Peak power in the pulse = 800W per channel, 2 channels with average power over the pulse repetition interval < 70W.
- Survey elevation above ground: >500m.

Shallow Ice Radar [SIR] - Built in-house.

- Centre Frequency: 2GHz. Bandwidth: 600MHz.
- This is a continuous wave system with an output Power: <20W.
- Survey elevation above ground: >500m

Scanning laser - Riegl VQ580

- Wavelength: 1064nm [Infra-red].
- This is a class 3b laser and is eye safe at 100ft. There is a safety interlock, and is only turned on after the aircraft is airborne and well above 100ft.

PASSIVE DEVICES

Visible Wave Color Camera - Imperx Bobcat camera [29Mpixels 6600 x 4400]

- Records images of the surface for photogrammetric purposes.

Infrared Camera - Sofradir IRE640 [640 x 480 pixels]

- Measures fine-scale changes in surface temperature.

Pyrometer - Heitronics KT15

- Measures the sky temperature for use with the Infra-Red camera.

GNSS Receiver - Novatel SPAN SE

- Records the spatial position of the pod and sensors.

Inertial measurement unit [IMU]- Litton LN200 [IMU]

- Records the pitch, roll and yaw of the pod and sensors.