

The Snow ALbedo eVolution (SALVO) Campaign
Metadata Document Date: April 10, 2023
Instrument: HOBO U23 Pro v2 External Temperature/ Relative Humidity Data Logger

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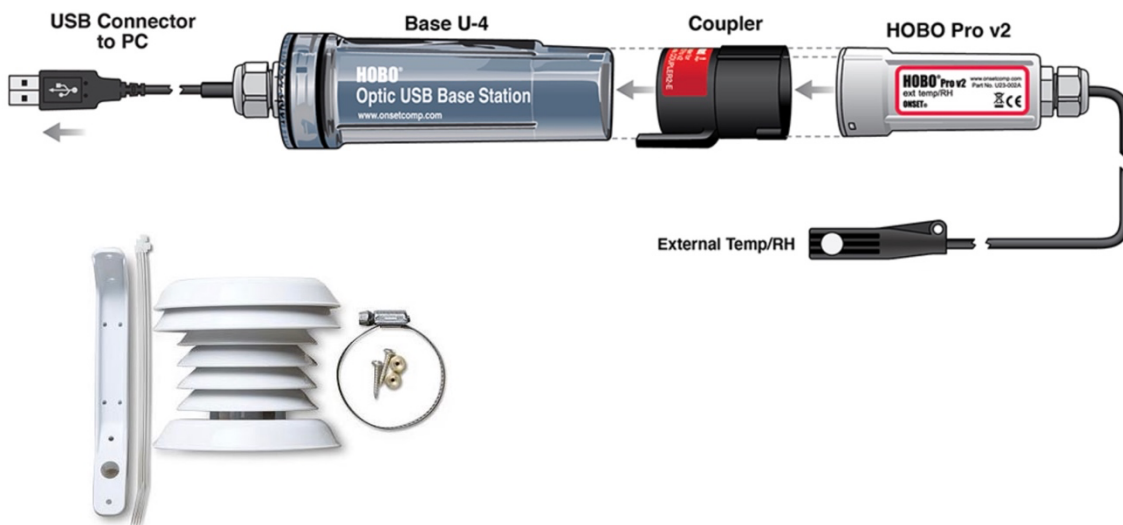
Instruments

Manufacturer: Onset

Data logger & sensor: <https://www.onsetcomp.com/products/data-loggers/u23-002a>

Temperature shield: <https://www.onsetcomp.com/products/mounting/rs3-b>

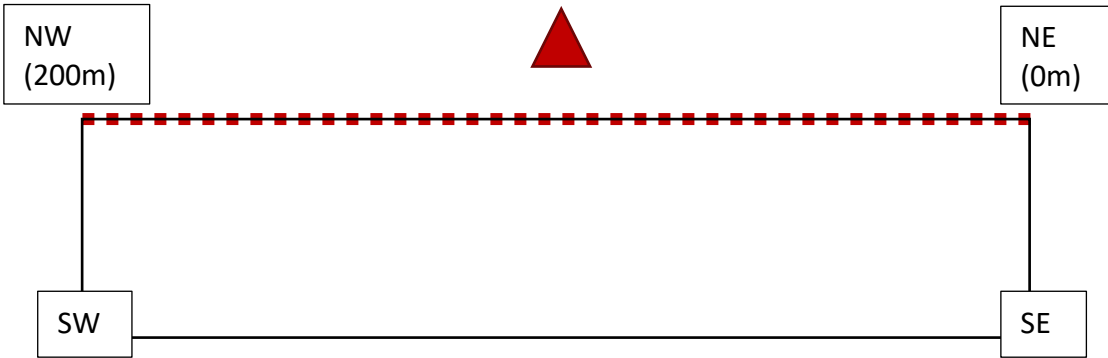
Description: A weatherproof data logger with an external temperature and relative humidity sensor on a 6-foot cable for fast sensor response and deployment in tight spaces. Deployed in a RS3-B Solar Radiation Shield for improved temperature measurement accuracy in locations exposed to sunlight.



Placement and Usage

In addition to the weather data provided by the NSA-ARM site station, we installed air temperature and relative humidity (T/RH) sensors connected to data loggers (Onset Computers model U23-002a) at each of the four sites in 2022. These local air temperature and humidity sensors provide a means of site-to-site comparison of differences in ambient conditions. The T/RH sensors, connected to the U23 data logger, were placed in a small, white temperature shield (see figure above). These shields were mounted to small towers at two meter height (see photos below). These towers were placed at the center (~100-meter point) north of each line (see position marked with red triangle in figure below). Both sensors recorded temperature and

relative humidity measurements at a fifteen-minute interval between mid-May 17th and mid-June 2022 (site dependent). The sensors at ARM recorded erroneous measurements before May 28th and were deleted from the final data file.



Data Processing Levels

- 00: raw, directly from instrument
- a1: data reformatted from raw file to .csv files