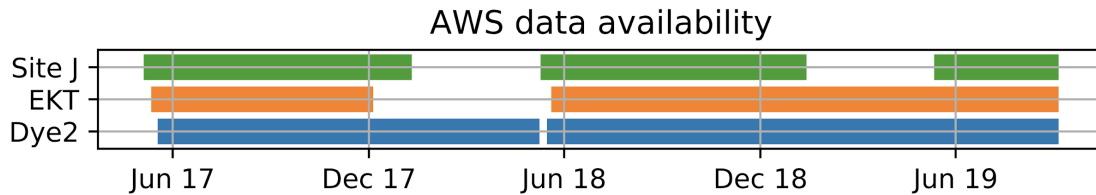


AWS README

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Project: Firn Greenland

Data Availability



The figure above shows the time periods for which each of the stations was operational and collecting data. **Meteorological** variables are recorded every **5 minutes**. Firn variables (**surface height** and **firn temperature**) are recorded every **hour**. All data are reported in West Greenland Time WGT (UTC-3).

The following table shows for each station which variable was measured and its associated time resolution:

- 5m: 5 minutes
- H: hourly average (e.g. 21 = average between 21:00 and 21:55)
- D: daily average

Measured Variables at Each Site	Site J			EKT			Dye-2		
	5m	H	D	5m	H	D	5m	H	D
Air Temperature	✓	✓	✓	✓	✓	✓			
Relative Humidity	✓	✓	✓	✓	✓	✓			
Shortwave Radiation incoming and outgoing	✓	✓	✓	✓	✓	✓			
Longwave Radiation incoming and outgoing	✓	✓	✓	✓	✓	✓			
Station Tilt	✓	✓	✓	✓	✓	✓			
Wind Speed and Direction	✓	✓	✓	✓	✓	✓			
Surface Height		✓	✓						
Firn Temperature			✓		✓	✓			✓

Exceptions:

- **Site J**: due to power limitations data during **summer 2018** were recorded every 10 minutes (instead of every 5 minutes) and every 2 hours (instead of every hour)
- **Site J** and **Dye-2**: **firn temperature** data are made available only as daily averages (despite being measured at every hour). This is because of the low pass filter correction applied to the raw data. (SEE DataCorrection.pdf for more information)

Files Structure

The dataset includes the following files:

- README.pdf : general metadata of this dataset. It contains information on data availability as well as variables measured at each site.
- DataCorrection.pdf : metadata regarding the data corrections applied to the AWS data.
- AWS_SITE_startDATE_endDATE_5min.txt : 5 minutes data.
- AWS_SITE_startDATE_endDATE_hourly.txt : hourly data.
- AWS_SITE_startDATE_endDATE_daily.txt : daily data.
- AWS_SITE_Metadata.pdf : site specific weather station metadata. It contains all the information such as station history, instruments, calibrations, site visits, etc.
- AWS_SITE_QuickLook.html : interactive html file displaying hourly meteorological data for a quick look (only Site J and EKT).

Note that missing files correspond to specific data types which are not available at that site (e.g. at Dye-2 only the daily averages file is available).

Notes on Firn Thermistors

Firn thermistors are labeled with an ascending number from 1 to 28 (e.g. Tfirn1(C) to Tfirn28(C)) with 1 being the deepest thermistor and 28 the thermistor closer to the surface.

Tfirn28 was installed at 1 below the surface on installation date.

Tfirn28 - Tfirn6 are distanced 0.5 m apart while Tfirn6 - Tfirn1 are distance 1.0 m apart.

Tfirn1 was installed at 17 m below the surface on installation date.

On installation date the location of each thermistor below the surface was the following:

[17.,16.,15.,14.,13.,12,11.5,11.,10.5,10.,9.5,9.,8.5,8,7.5,7.,6.5,6.,5.5,5.,4.5,4.,3.5,3.,2.5,2.,1.5,1.]

The additional thermistors added in May 2019 are labeled Tsnow1(C) and Tsnow2(C) with 1 being the deepest thermistor and 2 the thermistor closer to the surface. At Dye-2 three additional thermistors were added (e.g. also Tfirn3(C))

Thermistors depths at installation date and at each site were the following:

Site J | 12 May 2019 | Tfirn1(C) = 0.70 m, Tfirn2(C) = 0.45 m

EKT | 19 May 2019 | Tfirn1(C) = 1.15 m, Tfirn2(C) = 0.78 m

Dye-2 | 17 May 2019 | Tfirn1(C) = 0.99 m, Tfirn2(C) = 0.65 m, Tfirn3(C) = 0.50 m