

Overview

This is a post-processed dataset of select measurements from the [Jeff Dozier Snow Study Site](#) [formerly the CRREL/UCSB Energy Site (CUES)] on Mammoth Mountain, CA, USA over the 1 January 2015 – 30 June 2025 period.

- **Coordinates:** 37.6431°N, 119.0291°W [[map](#)]
- **Elevation:** 2936 m (9633 ft)

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DoD Distribution Statement A. Approved for public release: distribution is unlimited.

This dataset is also published on [Zenodo](#). If using this data, please cite:

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File Descriptions

[CUES_1min_data_atmos_radiation_soiltemp_precip_2015to2025.nc](#): netCDF file containing 1-min observations of atmospheric variables, upwelling and downwelling radiation, soil temperature, and disdrometer precipitation measurements.

[ncdump_CUES_1min_data_atmos_radiation_soiltemp_precip_2015to2025.txt](#): text file summarizing the file contents via the output from `ncdump -h`

[CUES_1min_data_atmos_radiation_soiltemp_precip_2015to2025.nc](#)

1-min variables:

Atmosphere:

- **air_temperature:**
 - long_name: air temperature
 - instrument: Campbell Scientific HMP45C
 - instrument_description: temperature and humidity probe with radiation shield
 - instrument_location: on platform

- **air_temperature_data_flag:**
 - long_name: air temperature data point source flags
 - flag_values: 0, 1
 - flag_meaning_0: data value unchanged from raw dataset

- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **relative_humidity:**

- long_name: relative humidity on platform
- instrument: Campbell Scientific HMP45C
- instrument_description: temperature and humidity probe with radiation shield
- instrument_location: on platform

- **relative_humidity_data_flag:**

- long_name: relative humidity data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **station_pressure:**

- long_name: atmospheric pressure
- instrument: Met One 092 Barometer
- instrument_description: barometric pressure sensor
- instrument_location: inside bunker beneath platform

- **station_pressure_data_flag:**

- long_name: station pressure data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **wind_speed:**

- long_name: horizontal wind speed
- instrument: RM Young Wind Monitor
- instrument_description: propeller vane anemometer
- instrument_location: wind mast - southwest corner of platform

- **wind_direction:**

- long_name: horizontal wind direction
- instrument: RM Young Wind Monitor
- instrument_description: propeller vane anemometer
- instrument_location: wind mast - southwest corner of platform

Radiation:

- **surface_skin_temperature:**

- long_name: surface (snow) skin temperature
- instrument: Apogee SI-111 thermal radiometer
- instrument_description: downward-pointing precision thermal infrared radiometer
- instrument_location: fixed boom – south side of platform

- **surface_skin_temperature_data_flag:**

- long_name: surface skin temperature data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **downwelling_longwave_platform:**

- long_name: downwelling longwave infrared radiation
- instrument: Eppley PIR
- instrument_description: uplooking precision infrared radiometer (pyrgeometer)
- instrument_location: radiometer mast - northeast corner of platform

- **downwelling_longwave_platform_data_flag:**

- long_name: downwelling longwave platform data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **downwelling_shortwave_platform:**

- long_name: downwelling broadband solar radiation
- instrument: Delta-T SPN1 pyranometer & Eppley PSP
- instrument_description: SPN1: uplooking sunshine pyranometer with clear glass hemisphere; PSP: uplooking precision spectral pyranometer with clear glass hemisphere
- instrument_location: radiometer mast - northeast corner of platform

- **downwelling_shortwave_platform_data_flag:**

- long_name: downwelling shortwave platform data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **downwelling_shortwave_platform_instrument_flag:**

- long_name: instrument for downwelling shortwave radiation measurement on platform
- flag_values: 0, 1, 2
- flag_meaning_0: measurement not present
- flag_meaning_1: Delta-T SPN1 sunshine pyranometer
- flag_meaning_2: Eppley precision spectral pyranometer (PSP)

- **downwelling_shortwave_adj_boom:**

- long_name: downwelling broadband solar radiation
- instrument: Eppley PSP
- instrument_description: uplooking precision spectral pyranometer with clear glass hemisphere
- instrument_location: adjustable boom – south side of platform

- **downwelling_shortwave_adj_boom_data_flag:**

- long_name: downwelling shortwave adj boom data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **upwelling_shortwave_fixed_boom:**

- long_name: upwelling (reflected) broadband solar radiation
- instrument: Eppley PSP
- instrument_description: downlooking precision spectral pyranometer with clear glass hemisphere
- instrument_location: fixed boom – south side of platform

- **upwelling_shortwave_fixed_boom_data_flag:**

- long_name: upwelling shortwave fixed boom data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

- **upwelling_shortwave_adj_boom:**

- long_name: upwelling (reflected) broadband solar radiation
- instrument: Eppley PSP
- instrument_description: downlooking precision spectral pyranometer with clear glass hemisphere
- instrument_location: adjustable boom – south side of platform

- **upwelling_shortwave_adj_boom_data_flag:**

- long_name: upwelling shortwave adj boom data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by 3-h running median during Hampel filtering procedure

Soil temperature:

- **soil_temperature_0cm_north, soil_temperature_10cm_north, soil_temperature_20cm_north, soil_temperature_30cm_north, soil_temperature_40cm_north, soil_temperature_50cm_north, soil_temperature_70cm_north, soil_temperature_70cm_north, soil_temperature_80cm_north, soil_temperature_90cm_north:**

- long_name: soil temperature
- instrument: Delta-T ST1-05 Soil Temperature Probe
- instrument_description: string of soil temperature thermistor probes at fixed depths
- instrument_location: on ground north of platform

- **soil_temperature_0cm_south, soil_temperature_10cm_south, soil_temperature_20cm_south, soil_temperature_30cm_south, soil_temperature_40cm_south, soil_temperature_50cm_south, soil_temperature_70cm_south, soil_temperature_70cm_south, soil_temperature_80cm_south, soil_temperature_90cm_south:**
 - long_name: soil temperature
 - instrument: Delta-T ST1-05 Soil Temperature Probe
 - instrument_description: string of soil temperature thermistor probes at fixed depths
 - instrument_location: on ground south of platform
- **soil_temperature_0cm_center, soil_temperature_10cm_center, soil_temperature_20cm_center, soil_temperature_30cm_center, soil_temperature_40cm_center, soil_temperature_50cm_center, soil_temperature_70cm_center, soil_temperature_70cm_center, soil_temperature_80cm_center, soil_temperature_90cm_center:**
 - long_name: soil temperature
 - instrument: Delta-T ST1-05 Soil Temperature Probe
 - instrument_description: string of soil temperature thermistor probes at fixed depths
 - instrument_location: on ground east of platform

Precipitation:

- **rainfall_rate:**
 - long_name: instantaneous intensity of liquid precipitation
 - instrument: OTT HydroMet Parsivel2
 - instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
 - instrument_location: Parsivel mast – northwest corner of platform
- **snowfall_swe_rate:**
 - long_name: instantaneous intensity of frozen precipitation in liquid water equivalent
 - instrument: OTT HydroMet Parsivel2
 - instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
 - instrument_location: Parsivel mast – northwest corner of platform
- **accumulated_rain_1min:**
 - long_name: accumulated rainfall over 1-min sampling period
 - instrument: OTT HydroMet Parsivel2
 - instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
 - instrument_location: Parsivel mast – northwest corner of platform
- **precipitation_type:**
 - long_name: predominant precipitation type string from reported SYNOP precipitation code
 - instrument: OTT HydroMet Parsivel2

- instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
- instrument_location: Parsivel mast – northwest corner of platform

- **precipitation_phase:**

- long_name: indicator of precipitation phase from precipitation type classification
- instrument: OTT HydroMet Parsivel2
- instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
- instrument_location: Parsivel mast – northwest corner of platform

- **number_of_hydrometeors:**

- long_name: number of particles detected by sensor during sampling period
- instrument: OTT HydroMet Parsivel2
- instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
- instrument_location: Parsivel mast – northwest corner of platform

- **equivalent_radar_reflectivity:**

- long_name: equivalent radar reflectivity calculated by Parsivel
- instrument: OTT HydroMet Parsivel2
- instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
- instrument_location: Parsivel mast – northwest corner of platform

- **visibility:**

- long_name: meteorological optical range visibility in precipitation
- instrument: OTT HydroMet Parsivel2
- instrument_description: OTT HydroMet Parsivel2 laser disdrometer and present weather sensor
- instrument_location: Parsivel mast – northwest corner of platform

CUES_5min_data_snowdepth_swe_density_2015to2025.nc: netCDF file containing 5-min observations of snow depth, snow water equivalent (SWE), and derived snow density.

ncdump_CUES_5min_data_snowdepth_swe_density_2015to2025.txt: text file summarizing the file contents via the output from `ncdump -h`

CUES_5min_data_snowdepth_swe_density_2015to2025.nc

5-min variables:

Snow depth:

- **snow_depth_wind_mast:**

- long_name: snow depth below platform wind mast
- instrument: Campbell Scientific SR50A; Lufft SHM31

- instrument_description: Campbell Scientific SR50A ultrasonic depth pinger (removed 09/2022) & Lufft SHM31 laser snow depth sensor (installed 09/2022; removed 09/2023)
- instrument_location: wind mast - pointed downward toward ground on southwest corner of platform

- **snow_depth_wind_mast_data_flag:**

- long_name: wind mast snow depth data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: = data value was replaced by running median during Hampel and/or manual filtering procedure

- **snow_depth_wind_mast_instrument_flag:**

- long_name: instrument for wind mast snow depth measurement
- flag_values: 0, 1
- flag_meaning_0: measurement not present
- flag_meaning_1: Campbell Scientific SR50A ultrasonic depth pinger (removed 09/2022)
- flag_meaning_2: Lufft SHM31 laser snow depth sensor (installed 09/2022; removed 09/2023)

- **snow_depth_fixed_boom:**

- long_name: snow depth below fixed platform boom
- instrument: Judd Communications depth sensor
- instrument_description: Judd Communications ultrasonic depth pinger
- instrument_location: fixed boom – pointed downward toward ground on south side of platform

- **snow_depth_fixed_boom_data_flag:**

- long_name: fixed boom snow depth data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **snow_depth_fixed_boom_instrument_flag:**

- long_name: instrument for fixed boom snow depth measurement
- flag_values: 0, 1
- flag_meaning_0: measurement not present
- flag_meaning_1: Judd Communications ultrasonic depth pinger (removed 09/2019)

- **snow_depth_platform_south:**

- long_name: snow depth south of platform
- instrument: Lufft SHM31
- instrument_description: Lufft SHM31 laser snow depth sensor
- instrument_location: platform railing - pointed obliquely toward ground on south side of platform

- **snow_depth_platform_south_data_flag:**

- long_name: platform south snow depth data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **snow_depth_platform_south_instrument_flag:**

- long_name: instrument for platform south snow depth measurement
- flag_values: 0, 1
- flag_meaning_0: measurement not present
- flag_meaning_1: Lufft SHM31 laser snow depth sensor (installed 09/2019)

- **snow_depth_remote_boom:**

- long_name: snow depth below I-beam remote boom
- instrument: Judd Communications depth sensor; SensorLogic SNOdar
- instrument_description: Judd Communications ultrasonic depth pinger (removed 09/2024) & SensorLogic SNOdar snow depth lidar (installed 09/2024)
- instrument_location: remote boom off I-beam - pointed downward toward ground from remote boom south of CUES platform

- **snow_depth_remote_boom_data_flag:**

- long_name: remote boom snow depth data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **snow_depth_remote_boom_instrument_flag:**

- long_name: instrument for remote boom snow depth measurement
- flag_values: 0, 1
- flag_meaning_0: measurement not present
- flag_meaning_1: Judd Communications ultrasonic depth pinger (removed 09/2024)
- flag_meaning_2: SensorLogic SNOdar snow depth lidar (installed 09/2024)

- **snow_depth_remote_boom_density_calc:**

- long_name: snow depth below I-beam remote boom - filtered for snow density calculation
- instrument: Judd Communications depth sensor; SensorLogic SNOdar
- instrument_description: downward-pointing Judd Communications ultrasonic depth pinger (removed 09/2024) & SensorLogic SNOdar snow depth lidar (installed 09/2024)
- instrument_location: remote boom off I-beam - south of CUES platform

- **snow_depth_platform_north:**

- long_name: snow depth north of platform
- instrument: Lufft SHM31
- instrument_description: Lufft SHM31 laser snow depth sensor
- instrument_location: on platform - pointed obliquely toward ground on north side of platform

- **snow_depth_platform_north_data_flag:**
 - long_name: platform north snow depth data point source flags
 - flag_values: 0, 1
 - flag_meaning_0: data value unchanged from raw dataset
 - flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **snow_depth_platform_north_instrument_flag:**
 - long_name: instrument for platform north snow depth measurement
 - flag_values: 0, 1
 - flag_meaning_0: measurement not present
 - flag_meaning_1: Lufft SHM31 laser snow depth sensor (installed 10/2020)

- **snow_depth_platform_north_density_calc:**
 - long_name: snow depth north of platform - filtered for snow density calculation
 - instrument: Lufft SHM31
 - instrument_description: Lufft SHM31 laser snow depth sensor
 - instrument_location: on platform - pointed toward ground on north side

SWE:

- **swe_dri_pillow:**
 - long_name: snow water equivalent (SWE) south of platform
 - instrument: DRI snow pillow
 - instrument_description: DRI/Hydrologic Sensors perforated fluidless snow pillow
 - instrument_location: on ground south of platform among lysimeters

- **swe_dri_pillow_data_flag:**
 - long_name: DRI snow pillow SWE data point source flags
 - flag_values: 0, 1
 - flag_meaning_0: data value unchanged from raw dataset
 - flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **swe_dwr_pillow:**
 - long_name: snow water equivalent (SWE) near I-beam
 - instrument: DWR snow pillow
 - instrument_description: California Department of Water Resources snow pillow
 - instrument_location: on ground south of platform near I-beam

- **swe_dwr_pillow_data_flag:**
 - long_name: DWR snow pillow SWE data point source flags
 - flag_values: 0, 1
 - flag_meaning_0: data value unchanged from raw dataset
 - flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **snowless_periods_dwr_pillow_flag:**

- long_name: manually identified periods without snow on DWR snow pillow
- flag_values: 0, 1
- flag_meaning_0: snow pillow is either confirmed to be snow covered, snow is actively falling, or snow presence on pillow cannot be determined from webcam
- flag_meaning_1: snow pillow confirmed to be clear of snow cover from webcam

- **swe_dwr_pillow_density_calc:**

- long_name: snow water equivalent (SWE) near I-beam - filtered for snow density calculation
- instrument: DWR snow pillow
- instrument_description: California Department of Water Resources snow pillow
- instrument_location: on ground south of platform near I-beam

- **swe_ssg_pillow:**

- long_name: snow water equivalent (SWE) north of platform
- instrument: Sommer SSG-2 snow pillow
- instrument_description: perforated fluidless snow pillow
- instrument_location: on ground north of platform near lysimeters

- **swe_ssg_pillow_data_flag:**

- long_name: SSG snow pillow SWE data point source flags
- flag_values: 0, 1
- flag_meaning_0: data value unchanged from raw dataset
- flag_meaning_1: data value was replaced by running median during Hampel and/or manual filtering procedure

- **snowless_periods_ssg_pillow_flag:**

- long_name: manually identified periods without snow on SSG snow pillow
- flag_values: 0, 1
- flag_meaning_0: snow pillow is either confirmed to be snow covered, snow is actively falling, or snow presence on pillow cannot be determined from webcam
- flag_meaning_1: snow pillow confirmed to be clear of snow cover from webcam

- **swe_ssg_pillow_density_calc:**

- long_name: snow water equivalent (SWE) north of platform - filtered for snow density calculation
- instrument: Sommer SSG-2 snow pillow
- instrument_description: perforated fluidless snow pillow
- instrument_location: on ground north of platform near lysimeters

Derived snow density:

- **snow_density_dwr_pillow:**

- long_name: snow bulk density
- instrument_swe: DWR snow pillow
- instrument_depth: Judd Communications depth sensor; SensorLogic SNOdar
- location: on ground south of platform near I-beam

- **snow_density_ssg_pillow:**

- long_name: snow bulk density
- instrument_swe: Sommer SSG-2 snow pillow
- instrument_depth: Lufft SHM31 laser snow depth sensor
- location: on ground north of platform near lysimeters

CUES_15min_data_meltwater_soilmoisture_2015to2025.nc: netCDF file containing 15-min observations of snow meltwater and soil moisture.

ncdump_CUES_15min_data_meltwater_soilmoisture_2015to2025.txt: text file summarizing the file contents via the output from `ncdump -h`

CUES_15min_data_meltwater_soilmoisture_2015to2025.nc

15-min variables:

Snow meltwater:

- **meltwater_south_1:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #1 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground south of platform

- **meltwater_south_2:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #2 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground south of platform

- **meltwater_south_3:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #3 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground south of platform

- **meltwater_south_4:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #4 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground south of platform

- **meltwater_north_5:**

- long_name: snow meltwater discharge

- instrument: snowmelt lysimeter #5 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground north of platform

- **meltwater_north_6:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #6 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground north of platform

- **meltwater_north_7:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #7 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground north of platform

- **meltwater_north_8:**

- long_name: snow meltwater discharge
- instrument: snowmelt lysimeter #8 with tipping bucket gauge
- instrument_description: 1 m² lysimeter with connected tipping bucket measurement gauge
- instrument_location: on ground north of platform

- **meltwater_south_1_NaN_flag, meltwater_south_2_NaN_flag, meltwater_south_3_NaN_flag, meltwater_south_4_NaN_flag, meltwater_north_5_NaN_flag, meltwater_north_6_NaN_flag, meltwater_north_7_NaN_flag, meltwater_north_8_NaN_flag:**

- long_name: raw NaN (missing data) presence flags
- flag_values: 0, 1, 2, 3
- flag_meaning_0: value in raw data file is not missing at valid time or at closest 2 time levels
- flag_meaning_1: value is missing in raw data file at valid time
- flag_meaning_2: unfiltered data value is not missing at valid time but is missing at time step before; number of tips leading to reported discharge volume at valid time may have been summed over multiple 15-min intervals, leading to inflated values
- flag_meaning_3: unfiltered data value is not missing at valid time but is missing at time step after

- **meltwater_south_1_large_flag, meltwater_south_2_large_flag, meltwater_south_3_large_flag, meltwater_south_4_large_flag, meltwater_north_5_large_flag, meltwater_north_6_large_flag, meltwater_north_7_large_flag, meltwater_north_8_large_flag:**

- long_name: erroneously large and suspect observation flags
- flag_values: 0, 1, 2, 3, 4

- flag_meaning_0: observation that does not meet magnitude thresholds for flagging or removal
- flag_meaning_1: removed erroneous observation that had 15-min discharge values ≥ 20 L or ≥ 200 -250 tips per 15 min
- flag_meaning_2: of remaining filtered observations (flag $\neq 1$), single time step peak that was at least 0.8 L above or below the values at the two adjacent time step
- flag_meaning_3: of remaining filtered observations (flag $\neq 1$), point that itself did not meet the erroneous value threshold but coincides in time with at least one filtered erroneous value from another lysimeter
- flag_meaning_4: identified single time-step peaks that meet criteria of both flag = 2 and flag = 3

- **meltwater_south_1_scaling_flag, meltwater_south_2_scaling_flag, meltwater_south_3_scaling_flag, meltwater_south_4_scaling_flag, meltwater_north_5_scaling_flag, meltwater_north_6_scaling_flag, meltwater_north_7_scaling_flag, meltwater_north_8_scaling_flag:**

- long_name: observation scaling history flags
- flag_values: 0, 1, 2
- flag_meaning_0: unscaled observation from 0.08 L tipping buckets
- flag_meaning_1: observation assigned to NaN due to ambiguity about when during period of 09/2024 the tipping buckets were swapped out
- flag_meaning_2: observation scaled by 0.1/0.08 (1.25) to correct for tipping bucket volume differences that were not changed in datalogger program

Soil moisture:

- **soil_moisture_10cm_south, soil_moisture_20cm_south, soil_moisture_30cm_south, soil_moisture_40cm_south, soil_moisture_60cm_south, soil_moisture_100cm_south:**

- long_name: soil volumetric water content
- instrument: Delta-T PR2/6 Soil Moisture Probe
- instrument_description: soil moisture profile probe with measurements at 6 depths down to 1 m
- instrument_location: in ground south of platform

- **soil_moisture_10cm_north, soil_moisture_20cm_north, soil_moisture_30cm_north, soil_moisture_40cm_north, soil_moisture_60cm_north, soil_moisture_100cm_north:**

- long_name: soil volumetric water content
- instrument: Delta-T PR2/6 Soil Moisture Probe
- instrument_description: soil moisture profile probe with measurements at 6 depths down to 1 m
- instrument_location: in ground north of platform

CUES_grouped_data_2015to2025.nc: consolidated netCDF file containing all prior observations, split into groups: **data_1_min**, **data_5_min**, **data_15_min**.

The groups must be loaded individually as datasets if reading this file with xarray. For example:

```
import xarray as xr

dataset_1min = xr.open_dataset('CUES_grouped_data_2015to2025.nc',
group='data_1_min')
```

ncdump_CUES_grouped_data_2015to2025.txt: text file summarizing the file contents via the output from **ncdump -h CUES_grouped_data_2015to2025.nc**

Processing

Data associated with each measurement variable was individually QCed / cleaned with the goal of preserving as much of the time series as possible. Steps involved in this procedure included manually removing erroneous observations and filtering out significant outliers with potential replacement. The specific procedures applied to each observation varied and are detailed as variable attributes in the netCDF files. These can be found in the **ncdump_*** files for convenience.

Additional data cleaning may be necessary or desired depending on the intended use of this dataset.