

Detailed AMSR-E Snow Water Equivalent L2B Data Description

This document is a modified version of the documentation created by the National Snow and Ice Data Center (NSIDC) Distributed Active Archive Center (DAAC). The original document can be found at:

(http://nsidc.org/data/docs/daac/ae_swe_ease-grids.gd.html#format)

Format

Data are stored in Hierarchical Data Format - Earth Observing System (HDF-EOS) format. Snow Water Equivalent (SWE) data are scaled; users must multiply by a factor of 2.

Files contain core metadata, product-specific attributes, and the following 721 x 721 pixel data grids in 1-byte unsigned integer format:

Data Grids

Granule
SWE_NorthernGranule
Flags_NorthernGranule
SWE_SouthernGranule
Flags_SouthernGranule

Pixel values for the SWE fields are as follows:

0-240: SWE (mm)
248: off-earth
252: land or snow impossible
253: ice sheet
254: water
255: missing

Pixel values for the flag (quality assessment, QA) fields are as follows:

241: non-validated
248: off-earth
252: land or snow impossible
253: ice sheet
254: water
255: missing

Actual SWE values are scaled down by a factor of 2 for storing in the HDF-EOS file,

resulting in a stored data range of 0-240. Users must multiply the SWE values in the file by a factor of 2 to scale the data up to the correct range of 0-480 mm:

$$SWE_a = SWE_s * 2$$

where SWE_a is the actual estimated SWE value the user needs, and SWE_s is the value stored in the HDF-EOS data file. For example, if the value in the file (SWE_s) for a pixel is 23 , that must be multiplied by 2 to obtain the actual estimated SWE value (SWE_a) of 46 for that pixel:

$$46 = 23 * 2$$