REQUIREMENTS FOR SNOW PRODUCTS TO PARTICIPATE IN

snowpex+

esa

Product requirements

- **Coverage:**
  - Period: 01.10.2014 – 30.09.2020, daily (!)
  - Spatial Extent: Northern Hemisphere / Global
- **Common Product Form:**
  - File Name: `[ProductID]_V[xx]_LAYER_[YYYYMMDD]_D[YY]_[zzz].[ext]`
  - File format: GeoTiff, incl. OGC WKT (GDAL compatible)
  - Map Projection: Lat/lon grid / WGS84 or EASEGRID-2
  - Data type:
    - Snow Cover Extent products: 8-bit unsigned integer (UINT08)
    - SWE products: 16-bit unsigned integer (uint16 ieee-le format)

→ *Details will be provided by SnowPEx+ team in a technical note*

Product coding (uncertainty coding – TBD)

Snow Cover Extent Products: UINT08

8-bit unsigned integer

Codes	FSCV / FSCG / SCEV / SCFG Class
0-100	Mapped snow cover fraction in per cent: *0 = snow free; 100 = fully snow covered* **NOTE**: code 0 / 100 used for **binary** SCEV/SCEG products
205	Clouds (incl. cloud shadow if applicable)
206	(Polar) Night - satellite data available, but (polar) night does not allow classification
252	ERROR Code: Retrieval / Classification failed
253	ERROR Code: Input data error
254	ERROR Code: No satellite data value
255	Any other code used in products (e.g. Water)
All other values	Not used

SWE Products: uint16 ieee-le format

16-bit unsigned integer

Codes	SWE Class
0	bare ground (SWE of 0 mm)
1-1000	SWE in mm
65500	Not mapped (no input data or retrieval failure)
65501	Wet snow (if applicable)
65502	Water (oceans, or for pixels with water fraction above 25%)
65503	Permanent ice
65504	Mountains (if applicable)

Static auxiliary layers

Please provide any static auxiliary layer(s) used in the product, e.g.:

- Water mask
- Permanent snow and ice mask
- Forest mask
- Mountain mask
- Urban area mask
- etc.

Auxiliary layers are required in the product resolution, including metadata information, description of coding etc.