



WG2 Instrument and method evaluation

Tasks during Grant Agreement Period 3



Task 1: A review of existing space-borne and ground-based sensors/instrumentation applied for measurement of different snow characteristic, estimation of their uncertainties.

	Grant period 3
Done	Questionnaire
On-going	Analyze output from the questionnaire
Undone	Publish a paper in review journal about results of questionnaire

	Grant period 4
Undone	Review of ground-based instrumentation based on results of questionnaire
Undone	Review of space-borne instrumentation
Undone	Estimation of the uncertainties



Task 2: Guidelines for in-situ snow observations and related training:

- Accuracy of various methods and instruments;
- Error sources for different variables under various weather and snow conditions;
- Representativeness of point measurements of the different variables;
- Need for measurement lines with recommended length and sampling resolution.

Grant period 3	
In progress	Guidelines for HS and SWE measurements based on 1st field campaign
Undone	Testing guidelines in 2 nd field campaign in Reykjavik
In progress	Report of the results from 2 nd field campaign
Undone	Harmonized definition of snow variables
Undone	Report on spatial and temporal representativeness errors of snow measurements
Undone	Need for measurement lines

Grant period 4	
Undone	Training school in 2018



Task 3: Spectroradiometry for snow studies: How to make consistent field spectrometer measurements of snow pack (environmental parameters including viewing and illumination geometry, snow cover characterization including grain size characteristics of the top-snow-layer). How to process the data in a harmonized way (e.g. spectral sampling, geo-rectification in case of airborne measurements, filtering techniques for continuous spectra).

	Grant period 3
Done	Albedo workshop in August 2016
Undone	Report of the workshop results
Optional	Measurement campaign

Task 4: Methods to measure snow grain size: The methods for snow grain size detection are under development worldwide, and currently the definition of grain size varies greatly depending on the method used. The increasing number of grain size measurement techniques has reached a stage where their thorough assessment and inter comparison is mandatory.

	Grant period 4?
Not needed	Inter-comparison
Undone	Report of the results

- This task is very similar to aim of Snow Grain Size Workshops in 2013-2014.



Task 5: Methods to measure mechanical properties of snow: Mechanical properties are of relevance to snow stability, and consequently to snow avalanche formation. Field tests of snow stability should be harmonized within the European avalanche services, as well as the testing of snow properties using modern snow penetrometry (SnowMicroPen).

	Grant period 4?
Undone	

Other tasks

	Grant period 4
Undone	Each of the three working groups will produce a review paper by the end of the Action.