



Report on Norwegian Cal/Val Activities

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Norwegian Space Centre

Agenda Item #

WGCV Plenary # 41

Tokyo

September 5 - 7, 2016

Working Group on Calibration and Validation



SIOS – Svalbard Integrated Arctic Earth Observing System

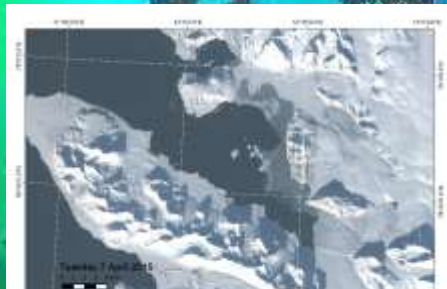
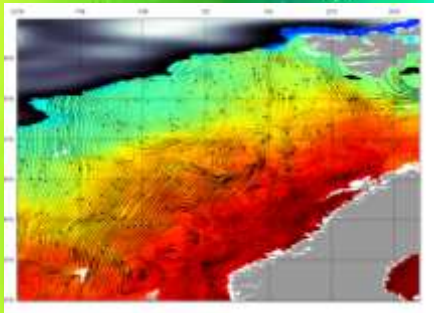
SIOS will improve the integration of remotely sensed data from different platforms into Svalbard research

The SIOS Remote Sensing service include:

- Data Access
- Specific datasets
- Dedicated processing
- Visualisation
- Support to Cal/Val activities
- Education/outreach

Timeline:

- Preparatory phase: 2010 – 2014
- Implementation phase: 2015 – 2017
- Upgrade phase: 2018 – 2019
- Operational phase: 2020 →



The CEOS Cal/Val Portal runs harvesting jobs on EVDC on a daily basis, controlled by a cron job. A dedicated software is being employed.

Status:

Working in close cooperation with the CINDI-2 campaign consortium during the campaign phase Aug-Sep. 2016.

Implemented as a backup/mirror site of the RD (Rapid Delivery) data in NDACC (Network for the Detection of Atmospheric Composition Change)

Implemented to be primary source of data to the ESA S5P Mission Performance Centre.

VALIDATION CINDI-2



INTRODUCTION

As a follow-up to the successful CINDI project, CINDI-2 (Cabauw Intercomparison of Nitrogen Dioxide Measuring Instruments 2) will be held at the KNMI Cabauw / CESAR site in September 2016. The goals of this project will be two-fold: to prepare for S5-P/TROPOMI validation (currently scheduled to launch the last quarter of 2016) and to initialize the suite of instruments that will be used to create the European Fiducial Reference Measurements for Ground-Based DOAS Air-Quality Observations (FRM4DOAS) network of MAX-DOAS instruments.

The CINDI-2 schedule is as follows:

25 Aug: Start of set-up and instrument testing

12 Sep: CINDI-2 campaign opening event

12 Sep: Start of the semi-blind intercomparison (2 weeks)

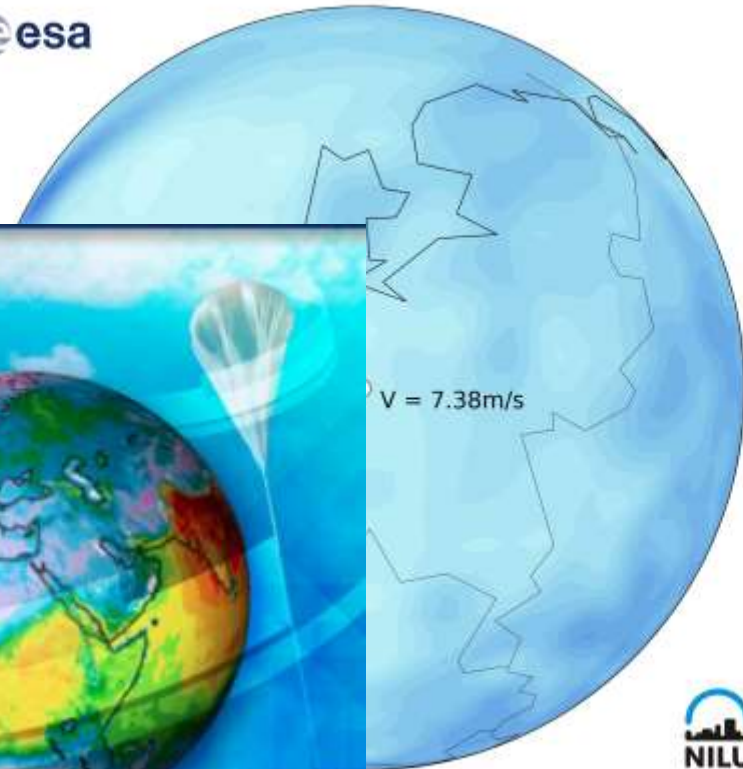
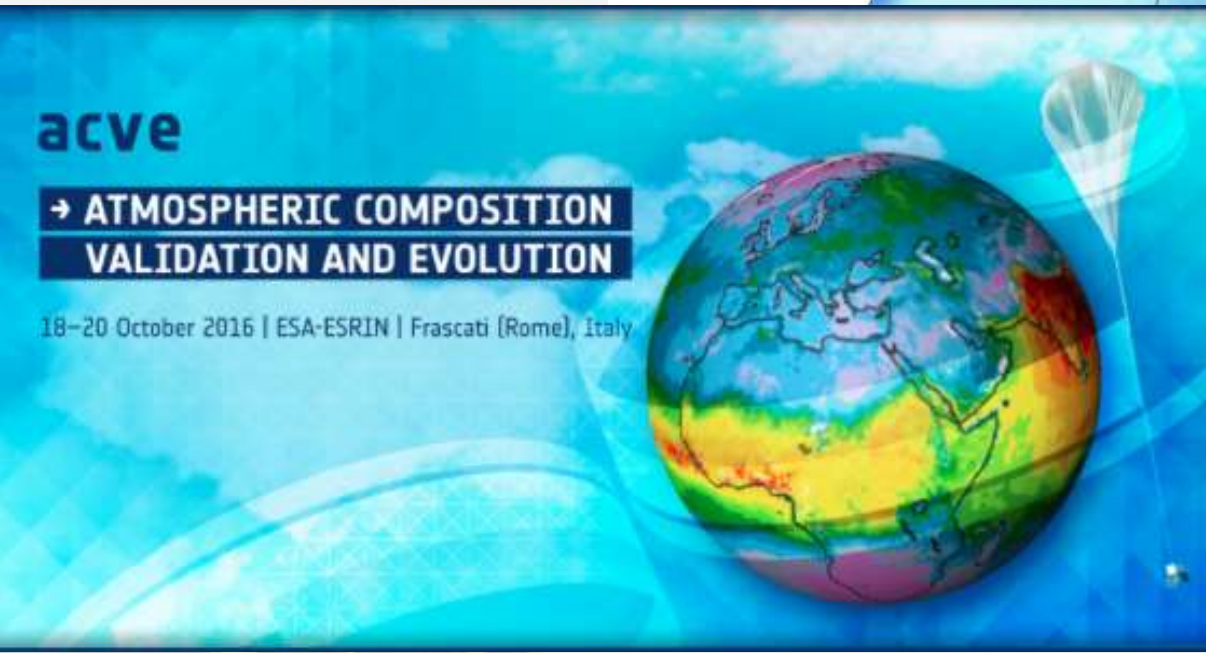
26 Sep: Optional 1-week extension of the semi-blind intercomparison

3-7 Oct: Cabauw site kept open for additional experiments and campaign break down.



- Providing access to daily updated ECMWF analyse and forecasts on regular and campaign basis. New tools in Python are under development

48 h forecast of V on 1000 hPa level at Cabauw valid on 14 August 2016

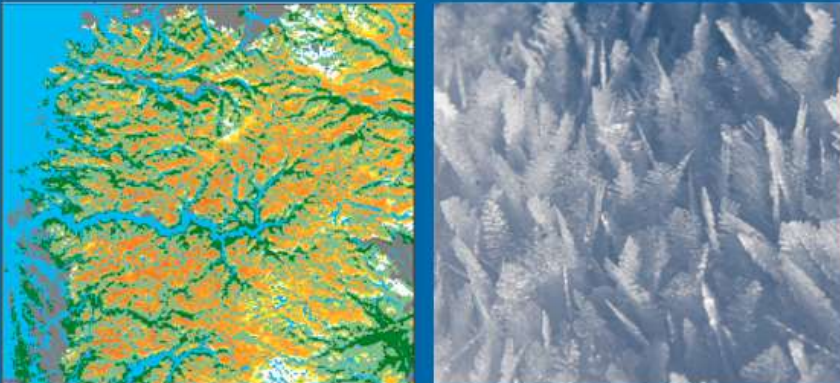


m/s

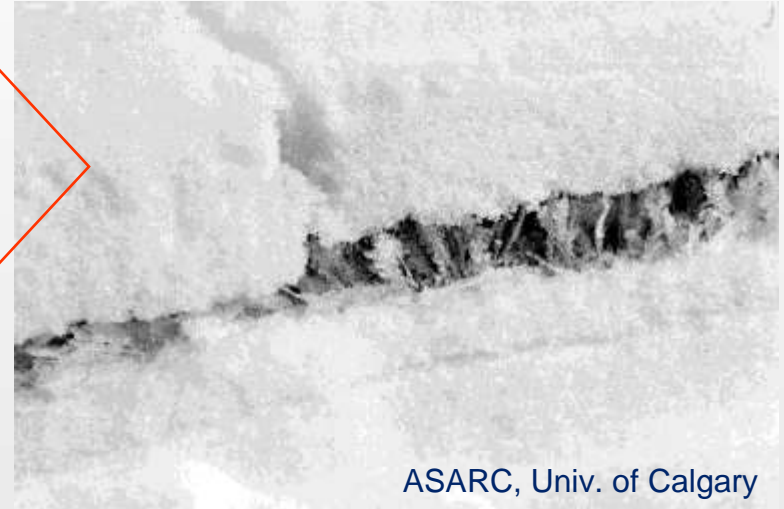


Discovering snow surface hoar from satellite, validation by crowdsourcing

Rune Solberg

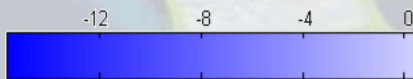
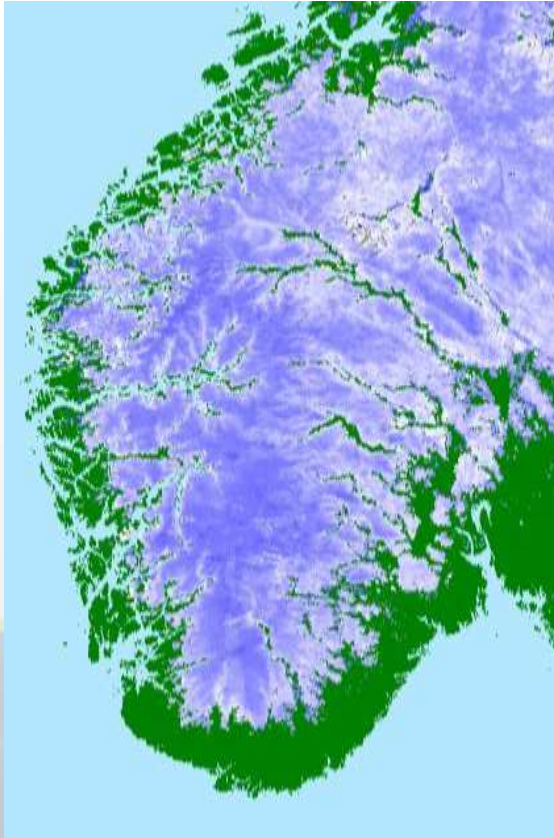


- Typical weak snow layer could be formed from buried surface hoar
- Mapping of the extent of surface hoar could be used to warn about avalanche danger

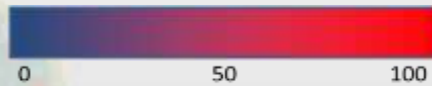
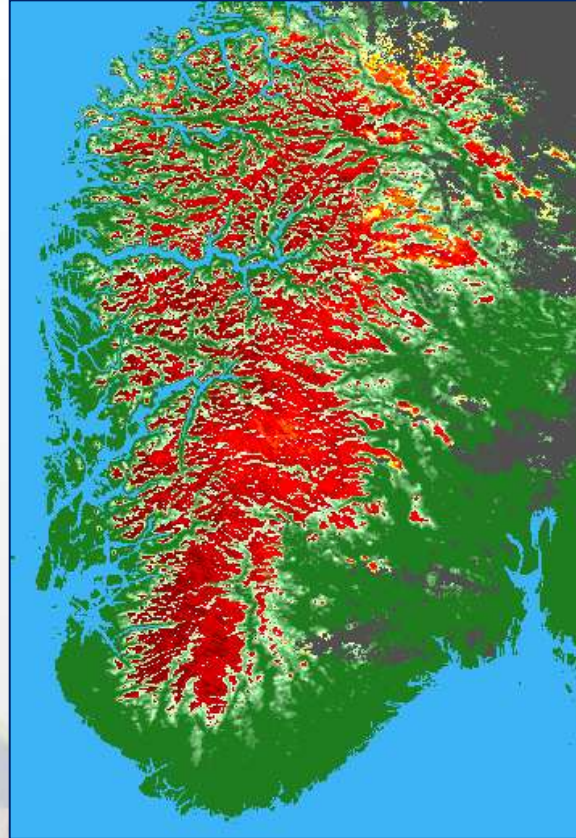


ASARC, Univ. of Calgary

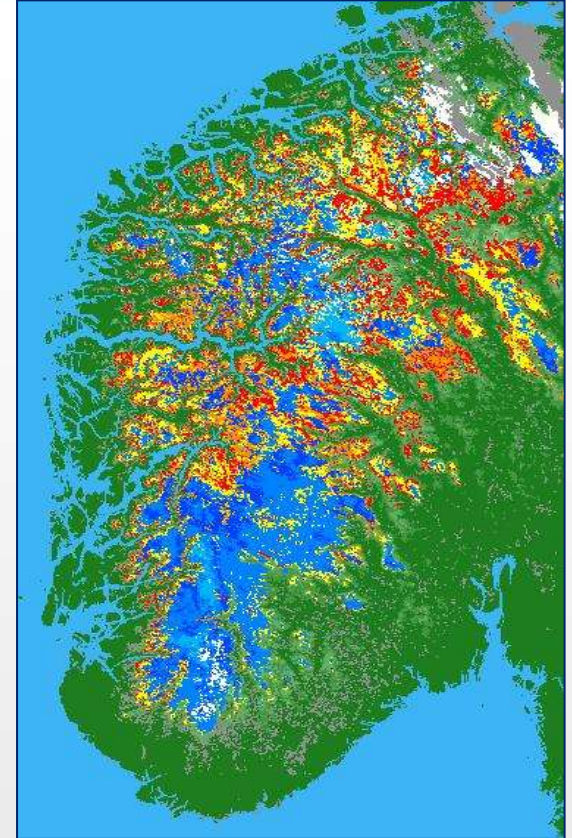
Snow surface temperature, grain size and wetness



Surface Temperature of Snow
STS

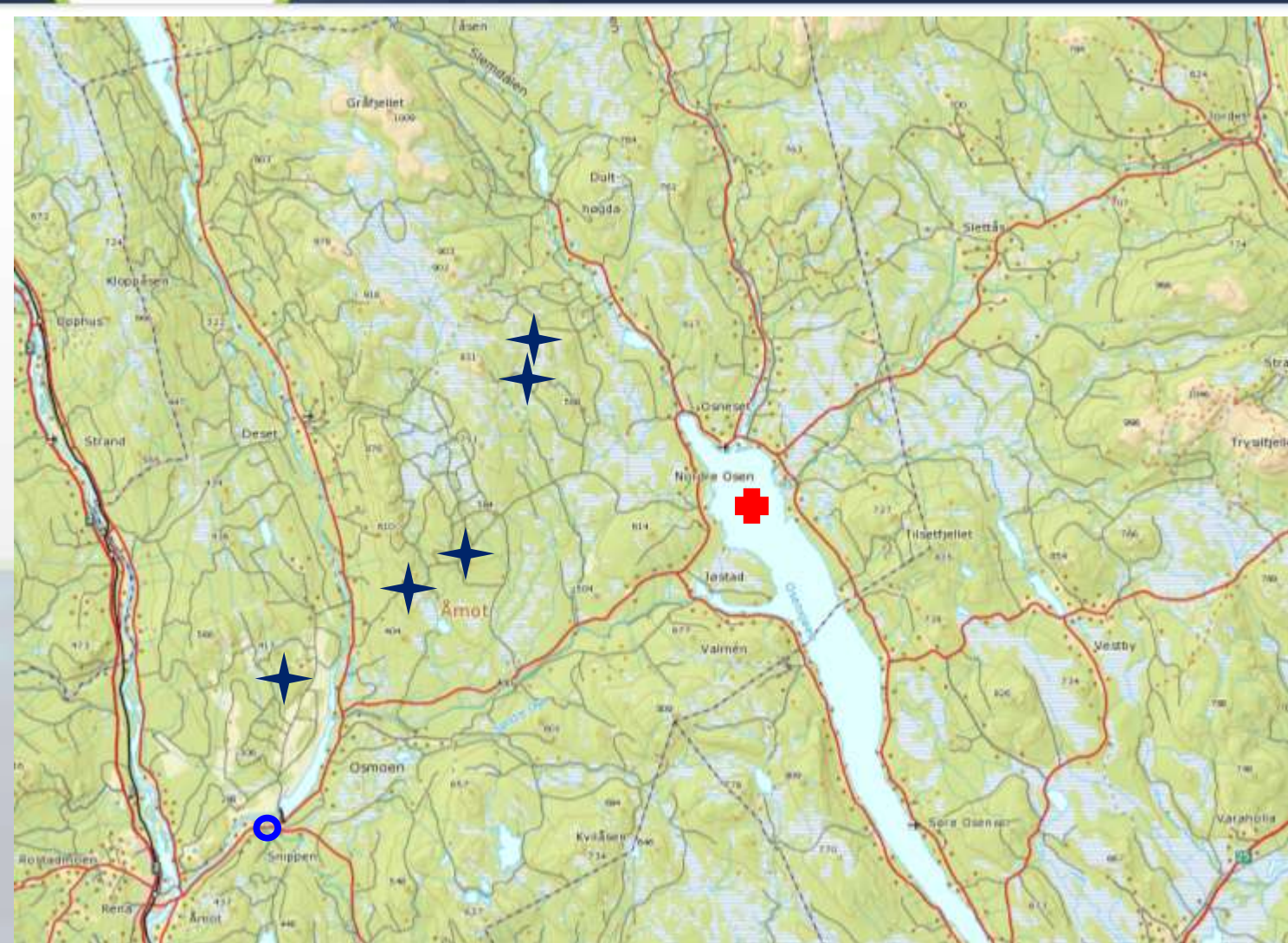


Snow Grain Size
SGS

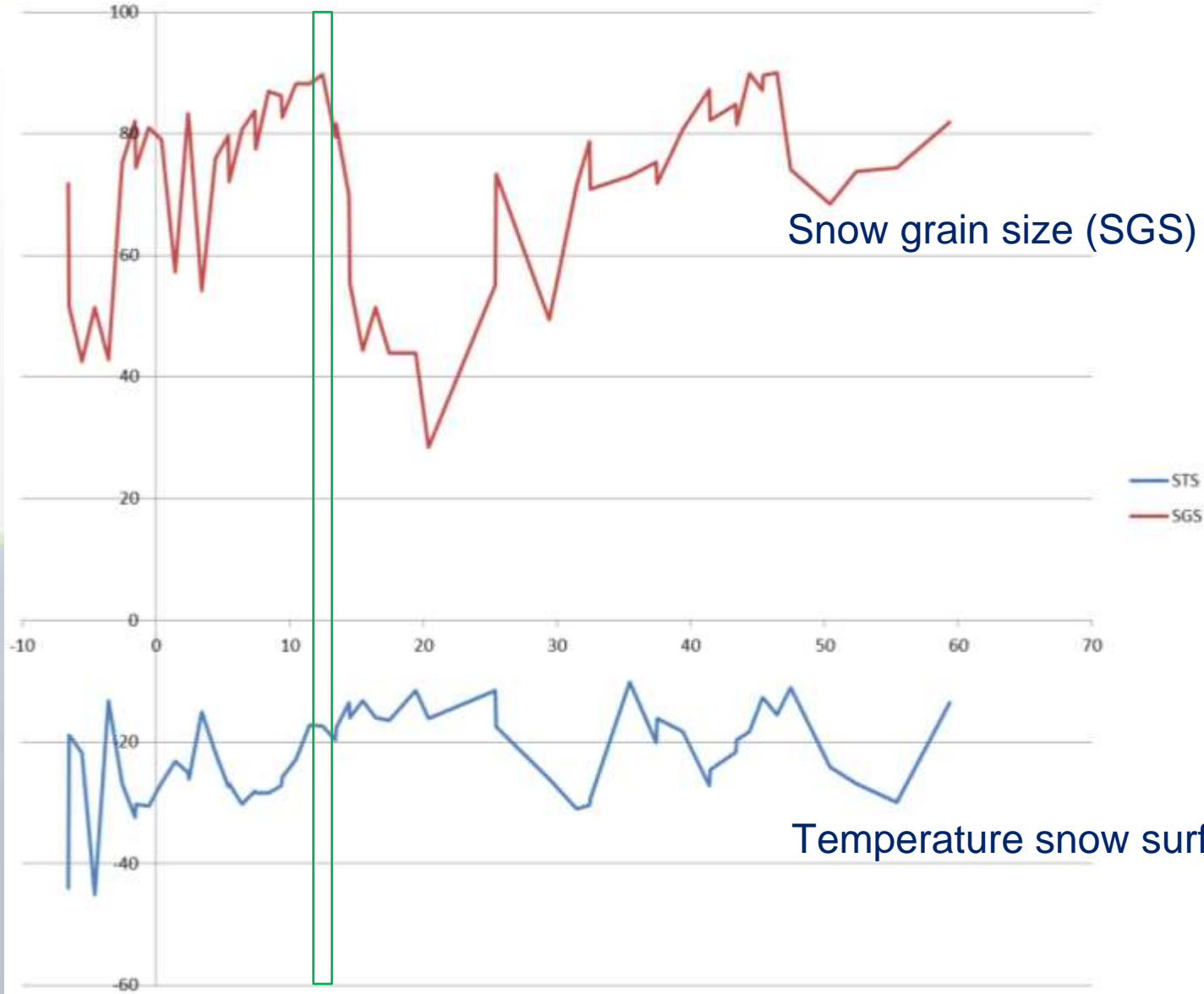


Snow Surface Wetness –
SSW

Crowdsourcing data Åmot region, 12-14 January 2010

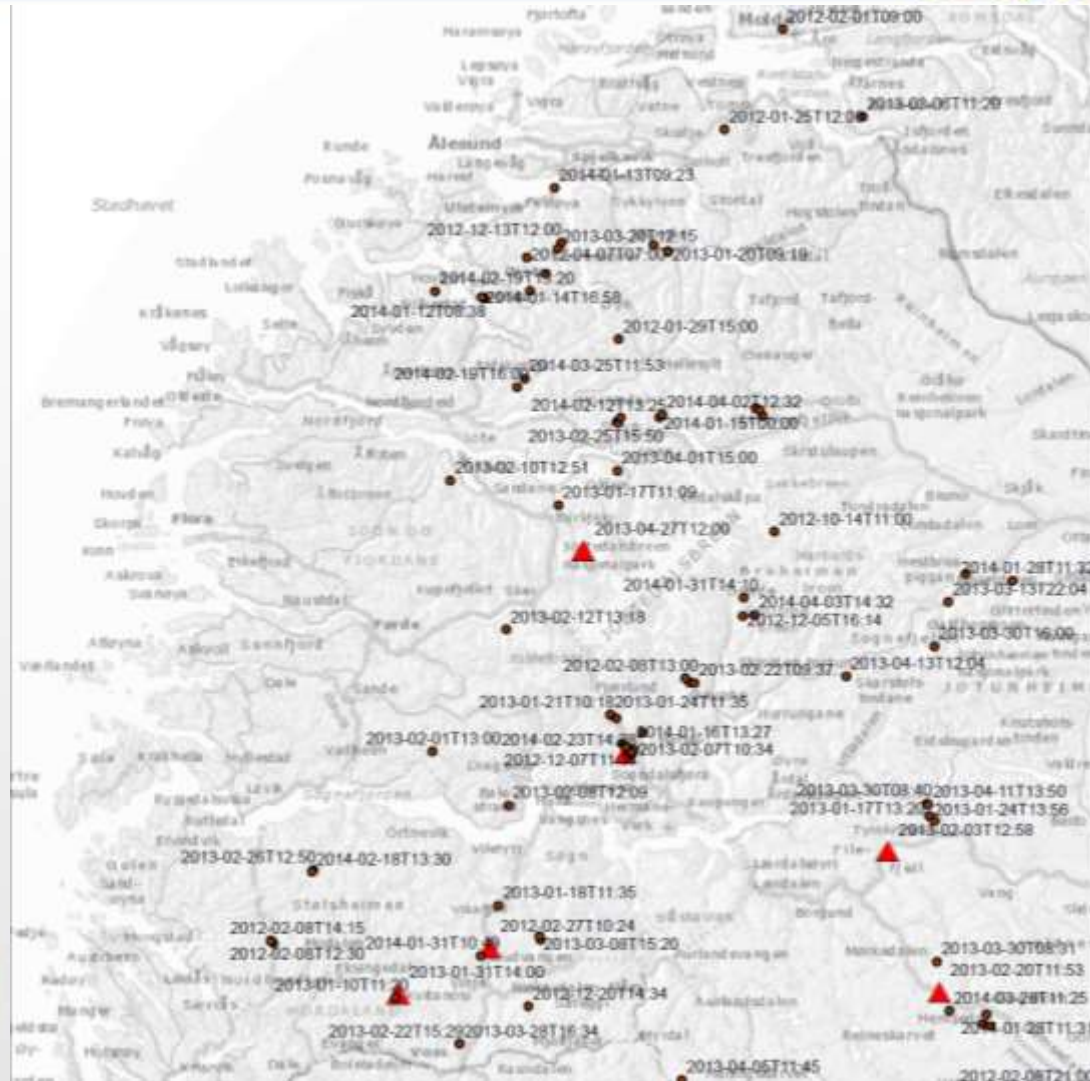


Satellite based snow parameters Åmot region, 12-14 January 2010: Osensjøen (ice and snow-covered lake)





- Database and web portal for natural emergency-related observations hosted by NVE
- Crowdsourcing observations include categories for surface observations of wet snow and surface hoar
- NVE screened October 2011 – July 2014 for observations of surface hoar (167 in total)
- NR selected a subset of 22 observations where photos were included and where an event was observed at least at two locations independently giving information on spatial extent





SNØ



VANN



JORD



IS

- Registrer observasjoner
- Hent observasjoner
- Se snødata i kart

- Registrer observasjoner
- Hent observasjoner
- Se vanndata i kart

- Registrer observasjoner
- Hent observasjoner
- Se jorddata i kart

- Registrer observasjoner
- Hent observasjoner
- Se isdata i kart

Søk

FLOM ▾ JORDSKRED ▾ SNØSKRED ▾ IS ▾ ULYKKER ▾ KART OM VAR SOM.NO ▾ ENGLISH

Høyeste varsel i dag

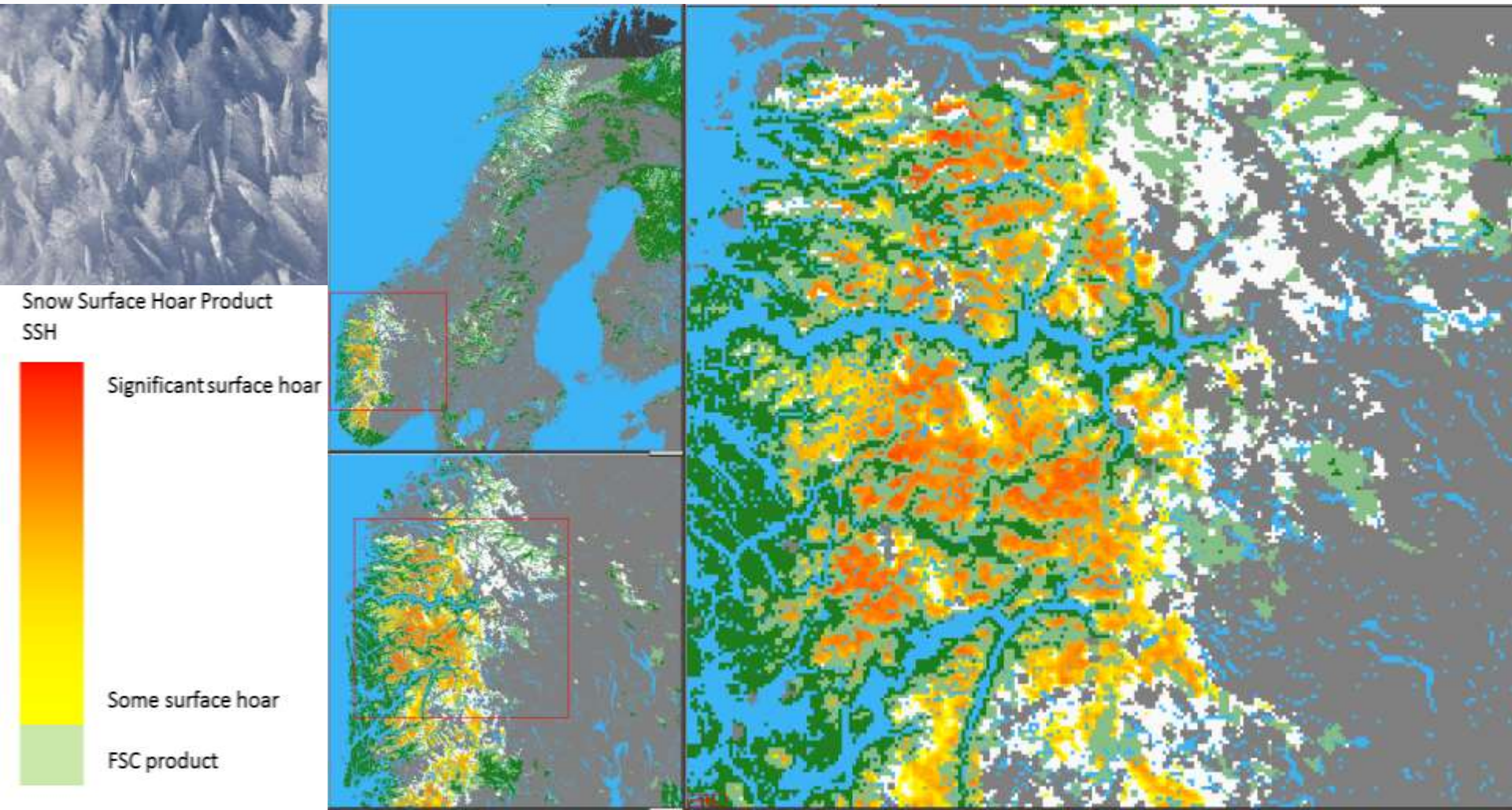
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▸ Snøskred	?	?	?
▸ Jordskred	1	1	1
▸ Flom	1	1	1

Nedbørradar fra yr.no, levert av NRK og Meteorologisk institutt.

▸ [Nedbørradar for hele Norge.](#)

Takk til alle som deltok på våre spørreundersøkelser!

NVE inviterte brukerne av Snøskredvarslingen og Isvarslingen på www.varsom.no til å gi sine tilbakemeldinger i spørreundersøkelser. Fem av de som svarte er trukket ut og får gavekort fra vpg.no, de heldig er Thomas Bech Pettersen, Kirsten Seielstad, Sigrun Rones, Jaspis Thøven og Merit





- AISSat-1/2/3 (2010, 2014, 2016)
- NorSat 1 (2016/2017)
 - AIS NG
 - Science
- NorSat 2 (2016/2017)
 - AIS NG
 - VDES
- NorSat 3
 - AIS NG
 - TBD

