Norwegian Space Activities

Agency report

CEOS WGCV-38, NOAA CWCP

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AISSat-1
NSC small sat activity

› AISSat-1 in full operation for 4 years, carrying an AIS receiver

› AISSat-2 launched from Baikonur July 8th 2014, in operation, the satellite is a copy of AISSat-1

› AISSat-3 built and currently undergoing tests at manufacturer, planned launch Q3/2015, carrying an enhanced AIS receiver, four RF channels

› NORSAT-1 under construction, planned launch Q1/2016, carrying three payloads:
  – CLARA, Compact Lightweight Absolute RAdiometer
  – Langmuir Probe, electron plasma
  – Extended AIS receiver with two VHF antennas each with four RF channels
NORSAT-1
Calibration and validation of satellite instruments and -products are identified as an important area the remote sensing service shall address.
The Remote Sensing Services

- Dedicated processing
- Visualization
- Specific datasets
- Support to Cal/Val activities
- Data Access
- Education/outreach
Implementation of service

- Development phase (2018 - 2020)
- Operational phase (2021 -)

- 3 years (2015 – 2017)
- Main actors and potential data providers
- Detailed needs and cost estimation

SIOS Knowledge Centre
Administrative functions

Remote Sensing Service
Project leader
2 remote sensing experts
Status end September 2014

• SIOS Preparatory Phase ends 30 September 2014;

• Interim phase until SIOS Knowledge Centre is established;

• Some countries have already signed Letters of Commitment;

• SIOS expected to receive funding from a large infrastructure call in Norway, where some groups are planning cal/val related infrastructure
CryoVex 2014

➢ UiO and NPI
➢ Campaign on Austfonna
➢ Providing Cal/Val data for Cryosat-2 and ASIRAS
➢ Maintaining existing network of mass balance stakes and meteorological sensors for future Cal/Val activities
The CryoClim project

- **Goal:** Develop an operational and permanent service for cryospheric climate monitoring
- **Contribution to:** GEOSS and GCW following GCOS monitoring principles
- **Monitoring of:**
  - Sea ice (global)
  - Seasonal snow (global)
  - Glaciers (Norway)
- **Time series:** Longest possible time series based on earth observation data
- **Access:** Free of charge web portal and web service for searching, browsing and downloading
- **Development:** By NR, MET Norway, NVE and NPI funded by Norwegian Space Centre (NSC) and run by ESA’s PRODEX programme
- **Operation:** Run by mandated, operational organisations (MET Norway, NVE, NPI) as a network of automated nodes
Norway and Copernicus

- KSAT will operate the northern core ground segment for A-versions of Sentinel 1, 2 and 3
- Norway makes significant investment in a national ground segment
  - which will be a key supporter of remote sensing services in SIOS

- Ensuring faster data downlink and national tailored processing of Sentinel data
- In 2014: Demonstrate pilot services on
  - oil spill detection
  - ship detection
  - deliver basic data for landslide mapping
- Norway has already signed agreement on a National Mirror Site for Sentinel data with ESA