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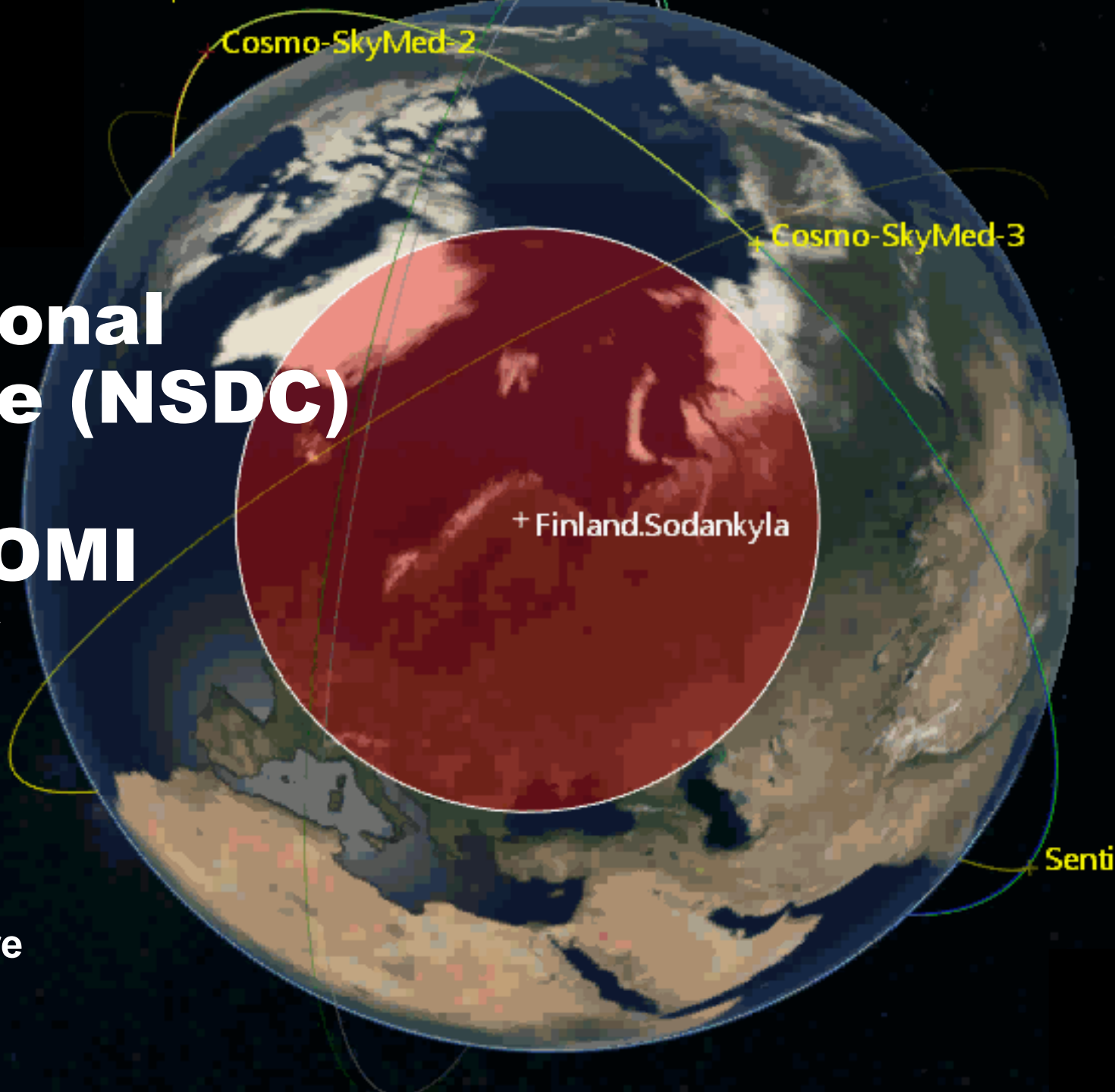
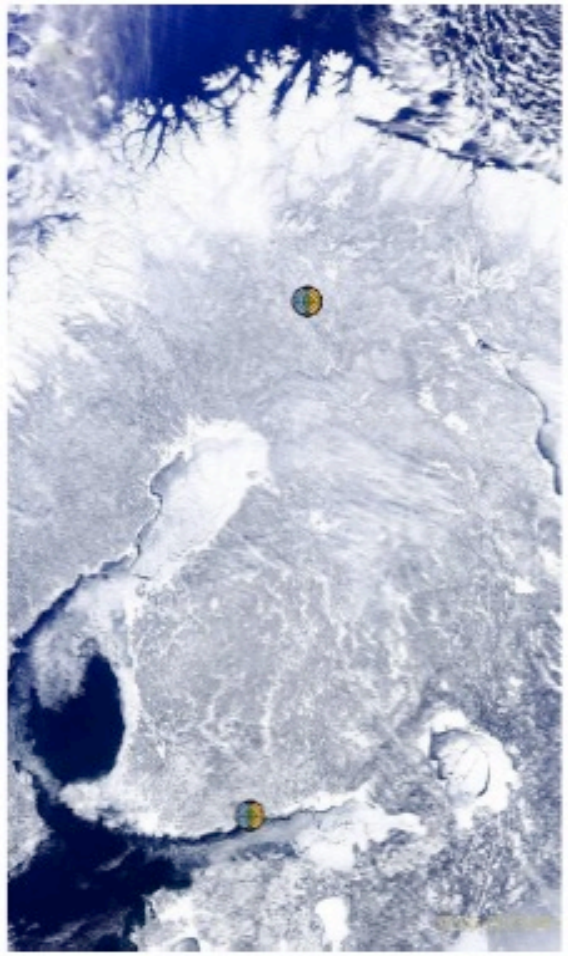
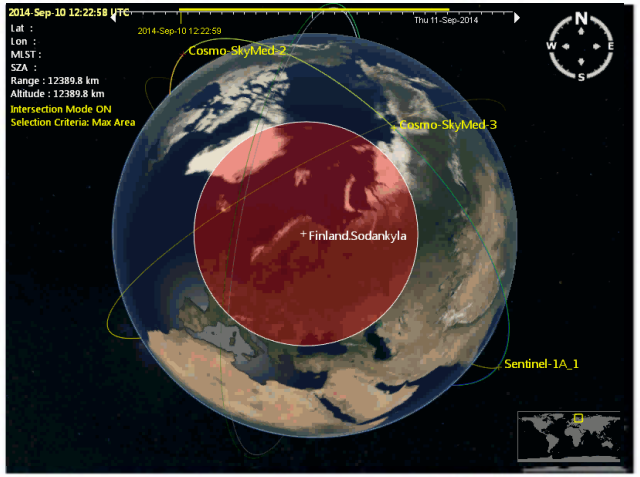
Sodankylä National Satellite Data Centre (NSDC) and its support to OMI community

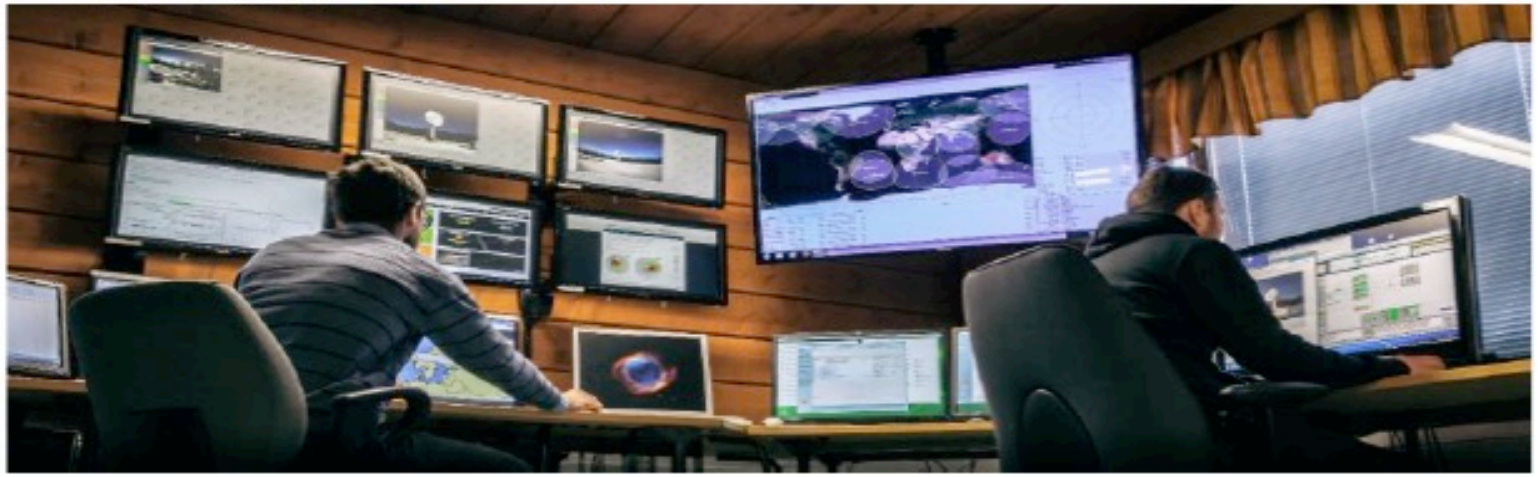


FMI - Arctic Space Centre
Sodankylä National Satellite Data Centre
Timo Ryyppö

Sodankylä National Satellite Data Centre







National satellite data center (NSDC) provides satellite data reception and data processing services to Finnish and international partners supported by extensive in-situ measurement network for calibration and validation.

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Real-time satellite data availability from NSDC

Current operational (free access)

- EOS-Terra and Aqua (MODIS)
- EOS-Aura (OMI)
- Suomi-NPP (VIIRS & OMPS)
- NOAA-20 (VIIRS)
- FY-3B & FY-3C (MERSI)
- Sentinel-1A/B (SAR)

Current operational (commercial)

- COSMO-SkyMed (SAR)

Operational ground station service

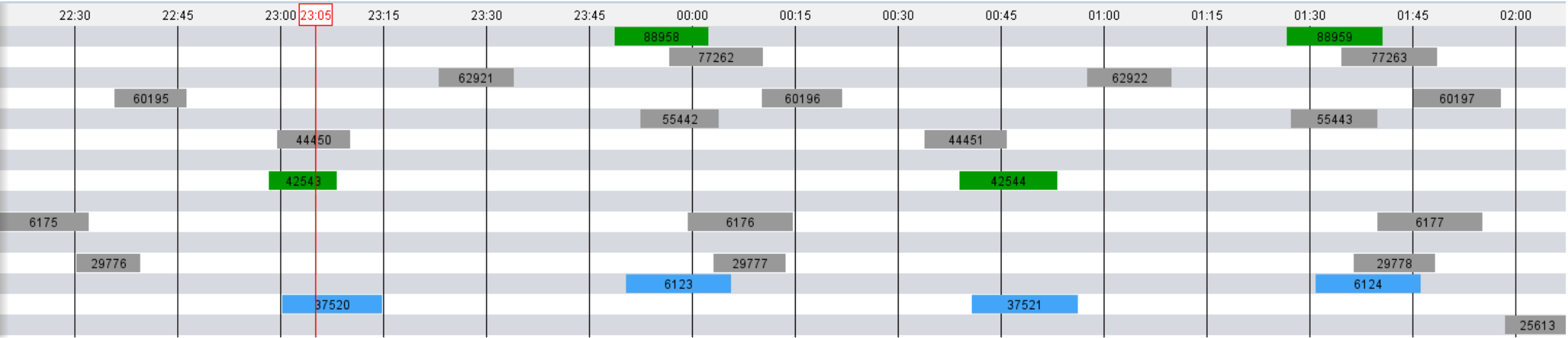
- KOMPSAT-5
- HY-2A

Future/in discussion

- NOAA-20 (OMPS)
- FY-3D (MERSI-2)
- HY-2B
- MetOp-C

Ground station as a Service (GaaS)

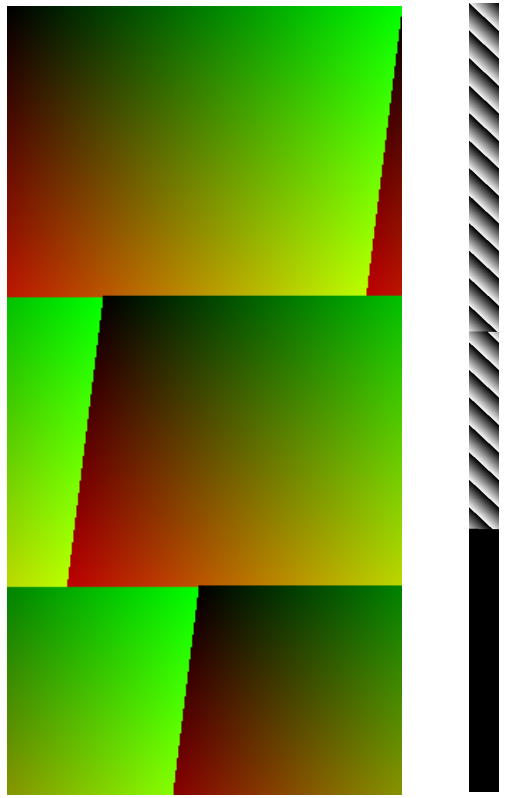
- Targets to decrease the layout down time of antennas
- Enables ground station services to partners/customers
  - Cost effective -> no need for own infrastructure
- Good location to receive polar orbiting satellites
  - ~10 contacts per day per satellite
- Can help start-ups and SMEs to access to space



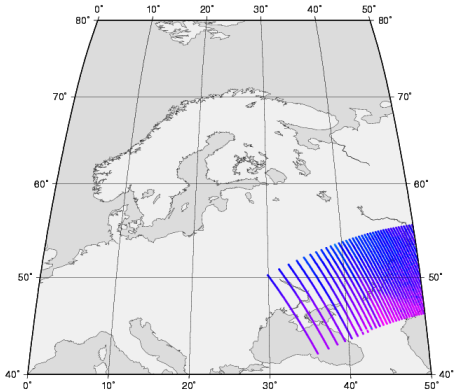
Short history of OMI at NSDC

2003

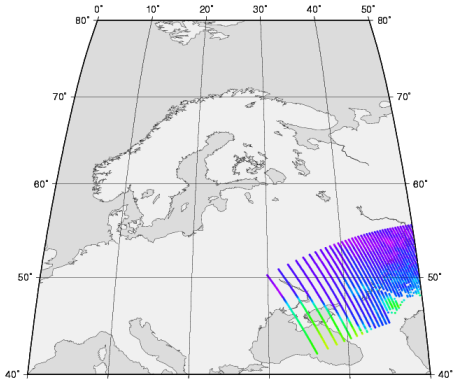
Jul 30, 2004



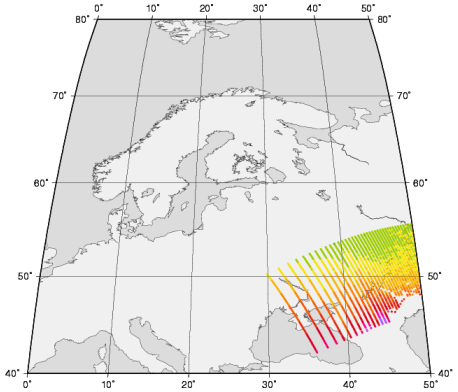
Coud fraction



O3 column



Oct 15, 2004



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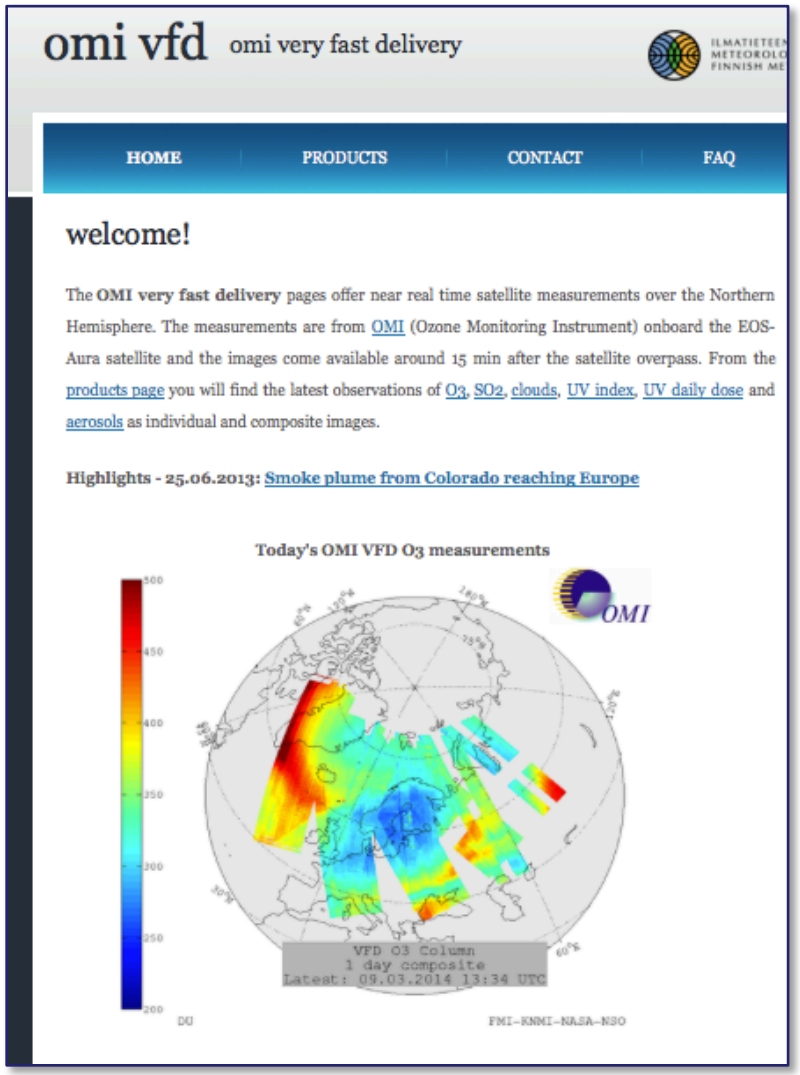
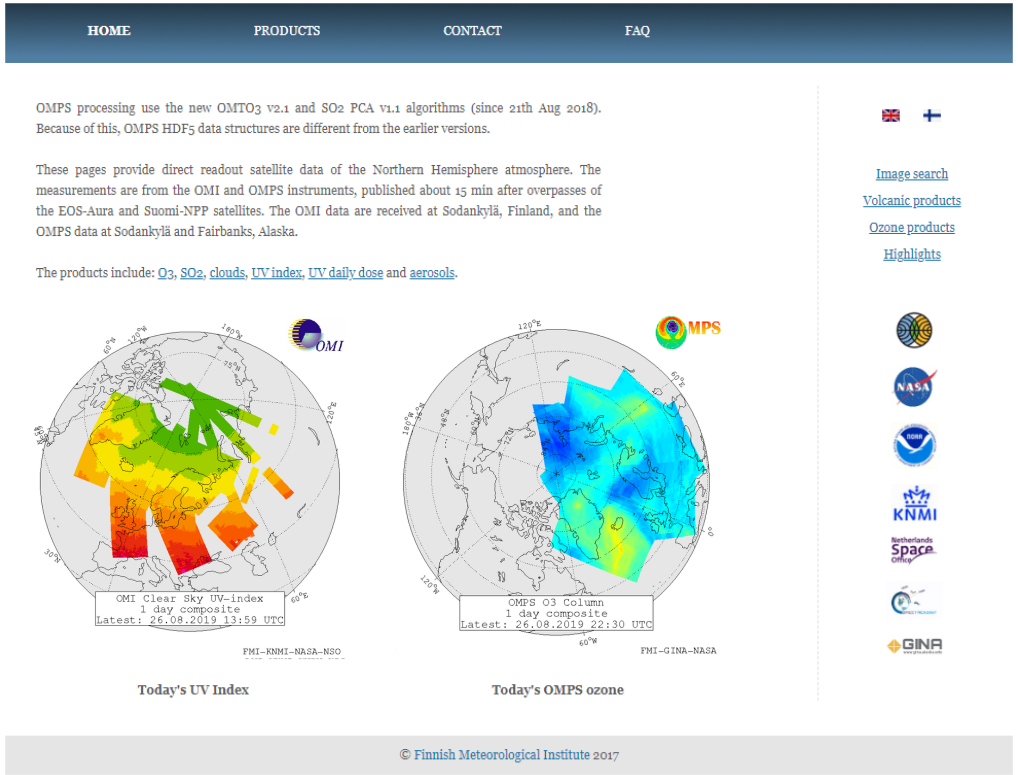
Short history of OMI at NSDC



2014



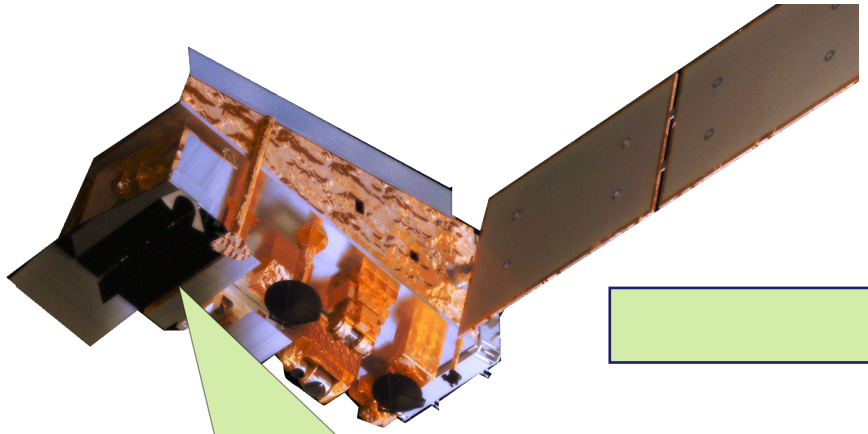
http://sampo.fmi.fi/

- **Instantly delivered Direct Readout products**
- **Includes both OMI and OMPS**
- **FMI/Sodankylä and GINA/Alaska**
  - **Can be upscaled for additional stations**

Future plans to use OMI like data

- Add NOAA-20/OMPS to SAMPO service
  - Waiting for new software release
- Use and disseminate the Sentinel-5(P) TROPOMI data
  - As a part of ESA Copernicus Collaborative Ground Segment activity
- Disseminate data using Web Map Services (WMS)

Use case: Automatic satellite based forest fire monitoring and alert system



Morning news on Finnish major TV broadcast

Contact information:

Timo Ryyppö

Head of Sodankylä Satellite Data Centre

Finnish Meteorological Institute
Arctic Space Centre
Tähteläntie 62
FIN-99600 Sodankylä
Finland
Tel: +358 50 5737 009
Email: timo.ryyppo@fmi.fi

Photo: Matias Takala