Norwegian
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Status IOMASA at met.no May 2004 – WP 2.1, 2.2

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Background – NWP assimilation activities

- Goal: Improve utilization of sounding data over the Arctic
- Arctic is a data sparse area – higher potential for impact of satellite observations
- SMHI: AMSU-B moisture data,
  met.no: AMSU-A temperature data
- Improve use of lower tropospheric channels in RT forward model by ice surface emissivity modelling using prior ice information
- Set up HIRLAM 3D-VAR with a system for this. Perform impact studies.

Approach – surface emissivity

- Start with simple approach: use FY, MY ice and OW fractions as predictors for background departure
- Later in project more advanced emissivity models for the temperature sounding channels (outcome of other work package)

Quality control, cloud contaminaton

- Temperature and moisture data may be contaminated by the precense of clouds
- A strategy for handling this must be developed – a good strategy depends on a good surface emissivity

WP 2.1 "Prepare NWP activities" (cont.)

Delivery of NWP fields for use by project partners (2.1.1):

- Data format etc documented in deliverable report
- Full files of HIRLAM output fields being collected – relevant data will be extracted with program/script
- Remains to extract the data and do the actual production

Completion of data delivery chain will now get priority.

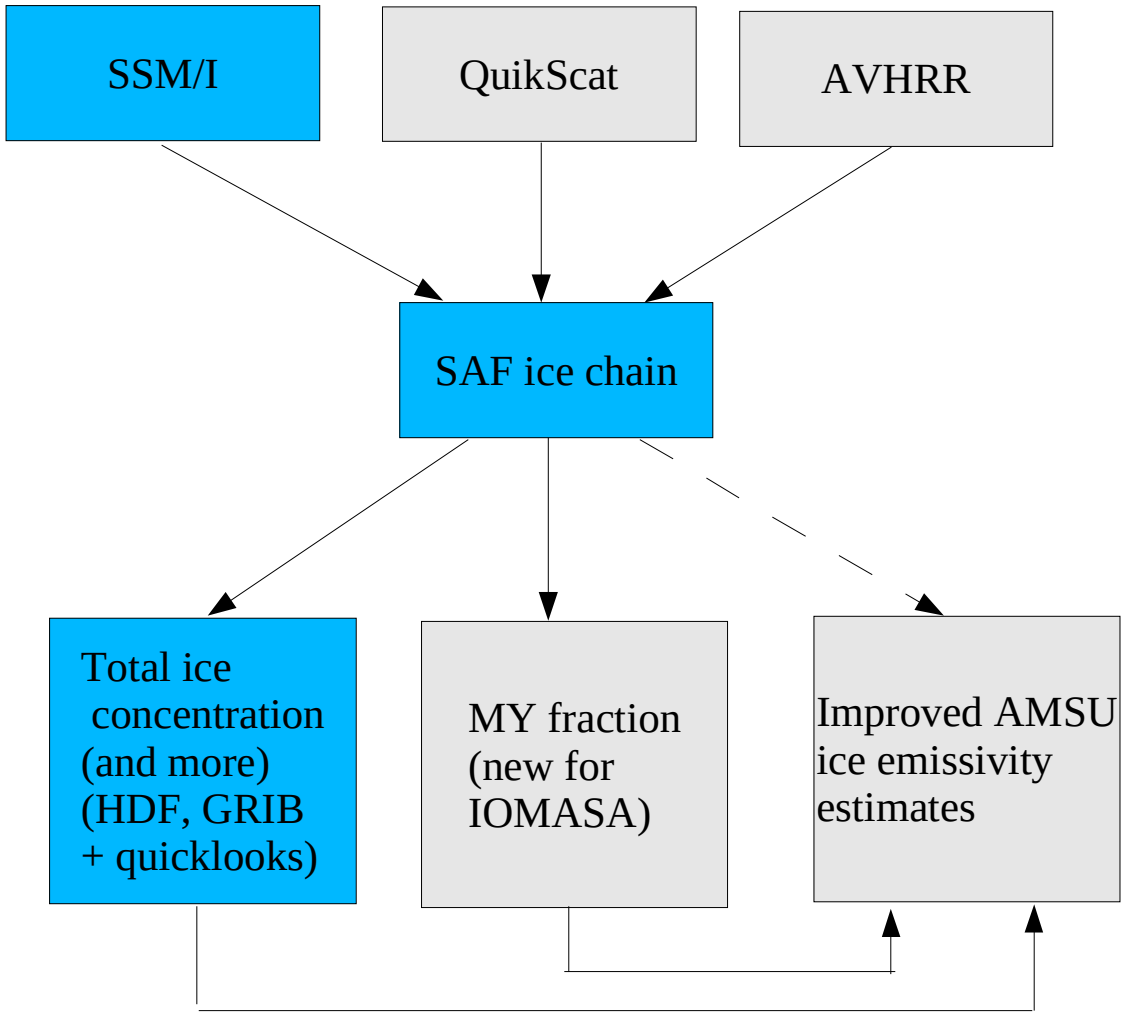
Setup of operational data stream for assimilation (AMSU-A in NWP)

- Processing chain for near-real-time production of colocation files with AMSU-A level 1c, HIRLAM data and SAF sea ice data (for statistics, experimentation and assimilation) set up with input from EUMETSAT ATOVS retransmission
- Ongoing work on software for colocation with ice info from experimental SAF chain
- Will allow experimentation with emissivity predictors and production of "obs – modelled obs" statistics

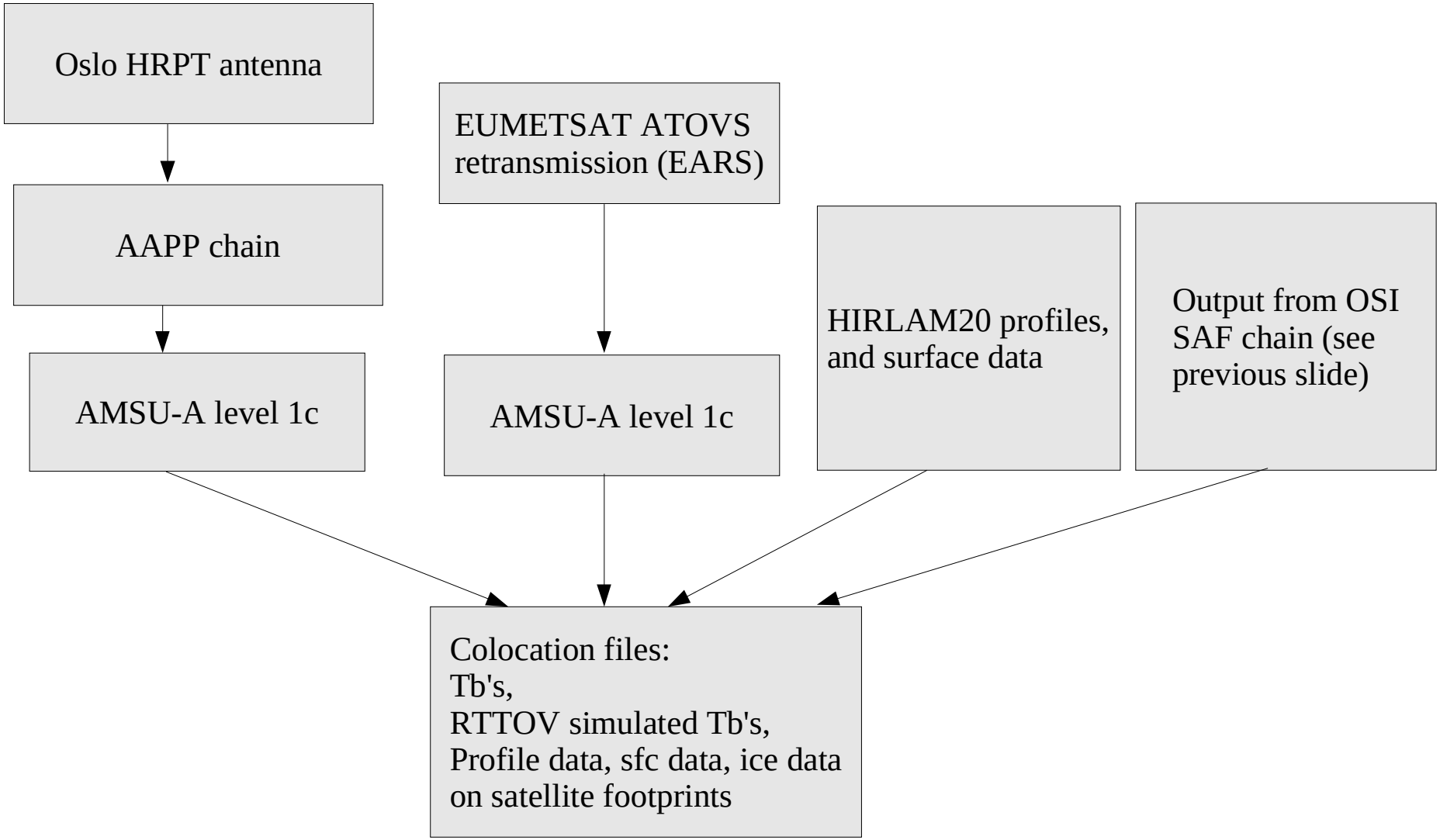
WP 2.2 Preparation for assimilation (NWP)

- Experimental OSI SAF chain for production of additional ice and emissivity products for IOMASA has now been set up
- Subroutine to import SAF ice data at AMSU footprints not yet ready
- Design of module for output emissivity fields for AMSU-A channels from additional module in SAF chain will be done
- Also experimentation with sea ice retrieval method in experimental SAF chain

SAF chain (additional experimental items)



AMSU-A colocation chain



Important present and near future activities

- Operational delivery chain for HIRLAM NWP data GRIB fields
- SAF experimental chain running, further development:
  - Set up AMSU colocation of ice from SAF experimental chain
  - Design colocation of AMSU emissivity fields from experimental SAF chain
  - Improved experimental ice analysis method: Correlated satellite passes
- Experimentation with emissivity predictors