MW FCDRs from CM SAF // Status

➔ SSM/I

- Covered time period July 1987 – December 2008 (F08,F10,F11,F13,F14,F15).
- FCDR was released 2013 and is available from ***http://dx.doi.org/10.5676/EUM_SAF_CM/FCDR_SSMI/V001*** together with ATBD, PUM, and validation report

➔ SSMIS

- Covered time period November 2005 – December 2013 (F16,F17,F18).
- Delivery Readiness Review held December 2014, Release planned for March 2015

➔ SMMR

- Covered time period October 1978 – August 1987 (Nimbus 7)
- Requirements Review held December 2014, Release planned for 2nd Quarter 2016

SMMR instrument

- Covered time period October 1978 – August 1987 (Nimbus 7).
- Conical scanning instrument with 780 km swath width.
- Channels at 6.6, 10.7, 18, 21, and 37 GHz.
- Normal mode was alternate-day operation → 6 calendar days for complete coverage.

Data records

- Nimbus-7 SMMR Pathfinder Brightness Temperature Data Set (Njoku et al., 1998).
  - Available from NSIDC as HDF4 (with complete ATBD).
  - All corrections are applied to TBs.
  - FOVs resampled to provide coincident observations.
- Nimbus-7 SMMR Antenna Temperature l1a data.
  - Should be archived at NSIDC regarding to Njoku et al. (1998) but actual data in NSIDC-0037 do not contain swath oriented records.
  - We contacted several people, but could not locate this data set.

SMMR status

- EUMETSAT review process: Requirements Review (RR) → Product Consolidation Review (PCR) → Delivery Readiness Review (DRR)
- Our schedule: RR close out in March 2015, PCR in Q2 2015, DRR in Q2 2016
- Current status
  - Use L1B Pathfinder data set.
  - Data files reformatted to format similar to our new SSMIS format as NetCDF4.
  - Original scan time reconstructed (archived as rounded value).
  - Recomputed Spacecraft position with fitted TLE + TLE from CelesTrak.
  - Spacecraft position predicted for every scan line; used also to filter erroneous scans.
  - Fractional revolution and azimuth angles added.
  - Scan angles, reflected sun-footprint angles, and incidence angles are interpolated from 30 fixed positions per scanline to each of the available 94 FOV positions.
  - QC flags for scan line, channel, and FOV added.
- Planned way forward
  - Inter-calibration to SSM/I using ERA-20C as transfer target.
  - Validation (stability monitoring, etc.) against ERA-20C and ERA-interim.