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TIMELINE – Processing of AVHRR time series for Europe: Snow cover

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TIMELINE is a new project conducted at the German Remote Sensing Data Center (DFD) of the German Aerospace Center (DLR) with the aim to (re-)process the full time series of AVHRR data over Europe. The existing in-house archive of AVHRR HRPT data (resolution: 1km) is consolidated with third-party data sources in order to complete an entire archive of all AVHRR observations ever recorded since the early 1980s. Preprocessing of the raw data includes calibration, atmospheric correction, and navigation relying on up-to-date routines and coefficients. The processing chain leading to Level2 and, finally, Level3 products will conform to current requirements of the scientific community.

Not only L1b products will be provided to the public free of charge: Within TIMELINE, a set of eighteen additional products will be derived (LST, SST, Snow cover, Sea Ice, NDVI, LAI, FAPAR, FVC, Burnt Area, Hot spots, Water masks, Albedo, Cloud fraction, Cloud phase, Cloud top temperature, Cloud optical thickness, Cloud effective radius, Cloud liquid/ice water path). This presentation will focus on the planned snow/sea ice parameters, their preliminary status and design of the algorithms used to produce these parameters, and the prospective benefits these products will offer: A complete time series of daily snow/sea ice cover data since the early 1980s for whole Europe, based on the latest algorithms and provided at 1km resolution per pixel.