

# DLR AVHRR LAC DATA CURATION AND REPROCESSING

## THE TIMELINE PROJECT



Katrin Molch  
German Aerospace Center DLR  
CEOS-WGISS #57, Sydney, Australia & online  
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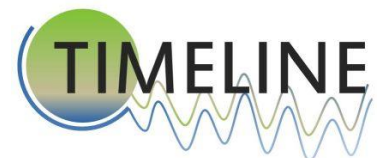
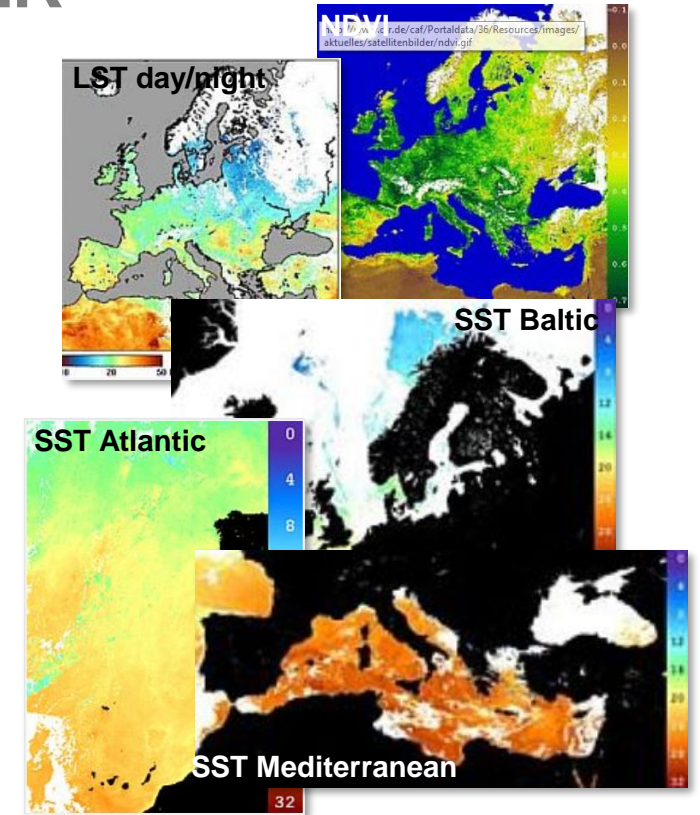
# Towards AVHRR LAC data consolidation at DLR

## Back in 2013

- Over 30 years worth of AVHRR LAC (1 km) HRPT data in DLR LTA – new data added daily
- Processing chain for daily AVHRR products since early 1990s – old code and hardware
- ? Dismantle or modernize ?

## The result

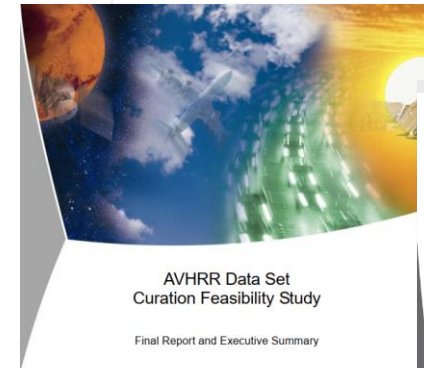
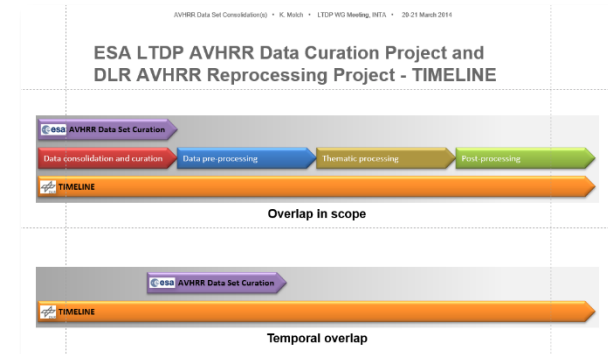
- **TIMELINE** project initiated 2013, funded internally, for AVHRR LAC data consolidation, harmonization, and geospatial product generation



# Joint ESA-DLR activities related to AVHRR consolidation



- Discussion of AVHRR activities (ESA, DLR) in ESA Long-Term Data Preservation Working group since 2012
- AVHRR curation feasibility study 2013-2015
- Joint publication @ Big Data in Space conference (BiDS) in 2013
- Two-day expert consultation workshop @ DLR 04/2015



AVHRR Data Set Curation Feasibility Study  
Final Report and Executive Summary

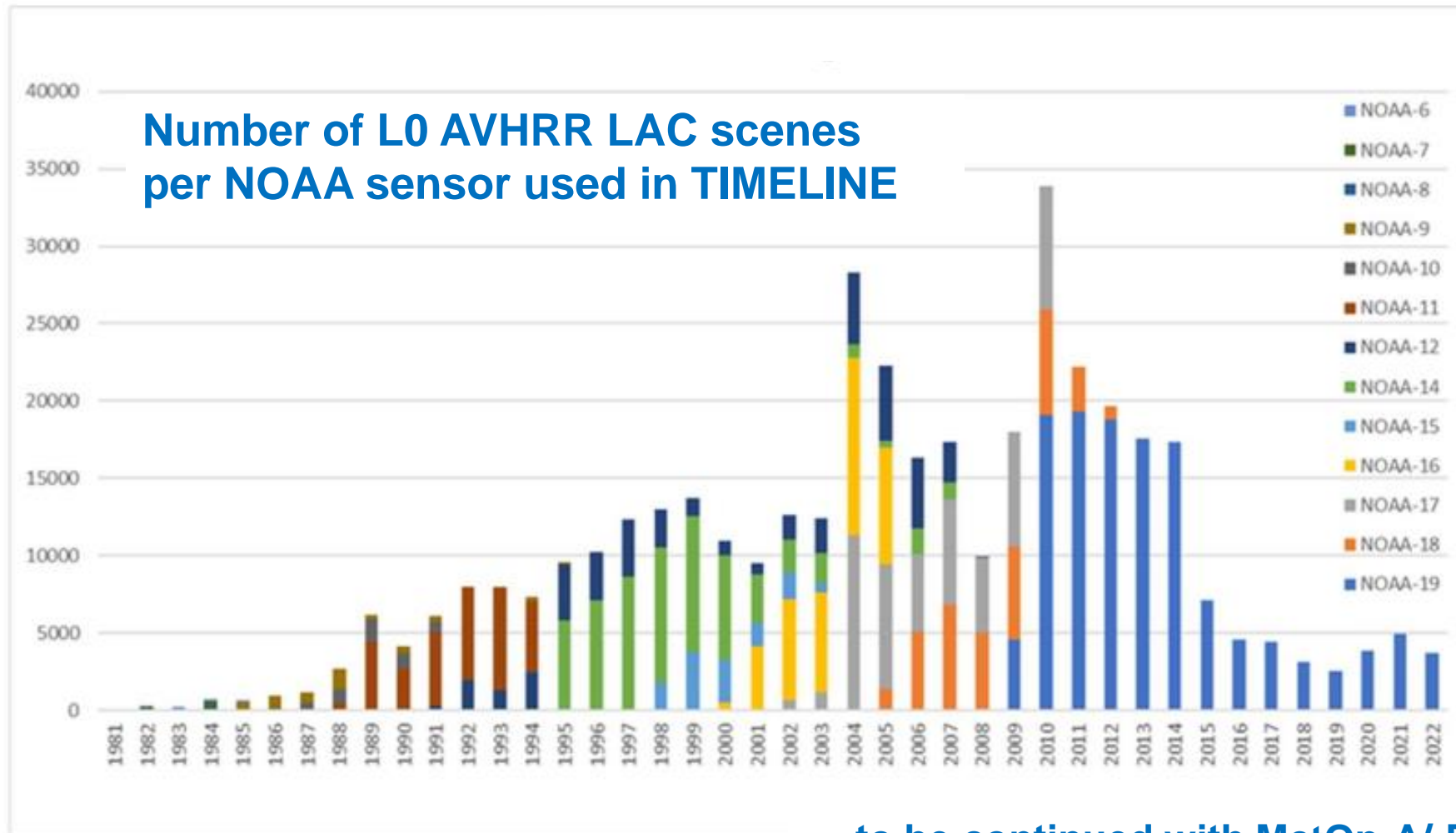
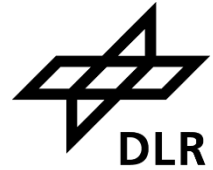
## MEETING

Meeting Date	20-21 April 2015	Reference	
Meeting Place	German Remote Sensing Data Center (DLR-DFD)	Chairperson(s)	B. Bojkov (ESA), T. Christensen (DLR-DFD)
Minute's Date	4 June 2015	Participants	See appendix A
Subject	AVHRR 1-km (LAC) Expert Meeting	Copy	

## Minutes of the AVHRR 1-km (LAC) Expert Meeting

The AVHRR 1-km (LAC) Expert Meeting was hosted by the German Remote Sensing Data Center (DLR-DFD) at DLR-Oberpfaffenhofen, Germany on 20-21 September 2015. Twenty-two experts from Europe and the United States representing the AVHRR, the calibration, the remote sensing, and user communities participated in the meeting organized by ESA/ESRIN and DLR-DFD. The list of participants is given in Annex A and the final agenda in Appendix B.

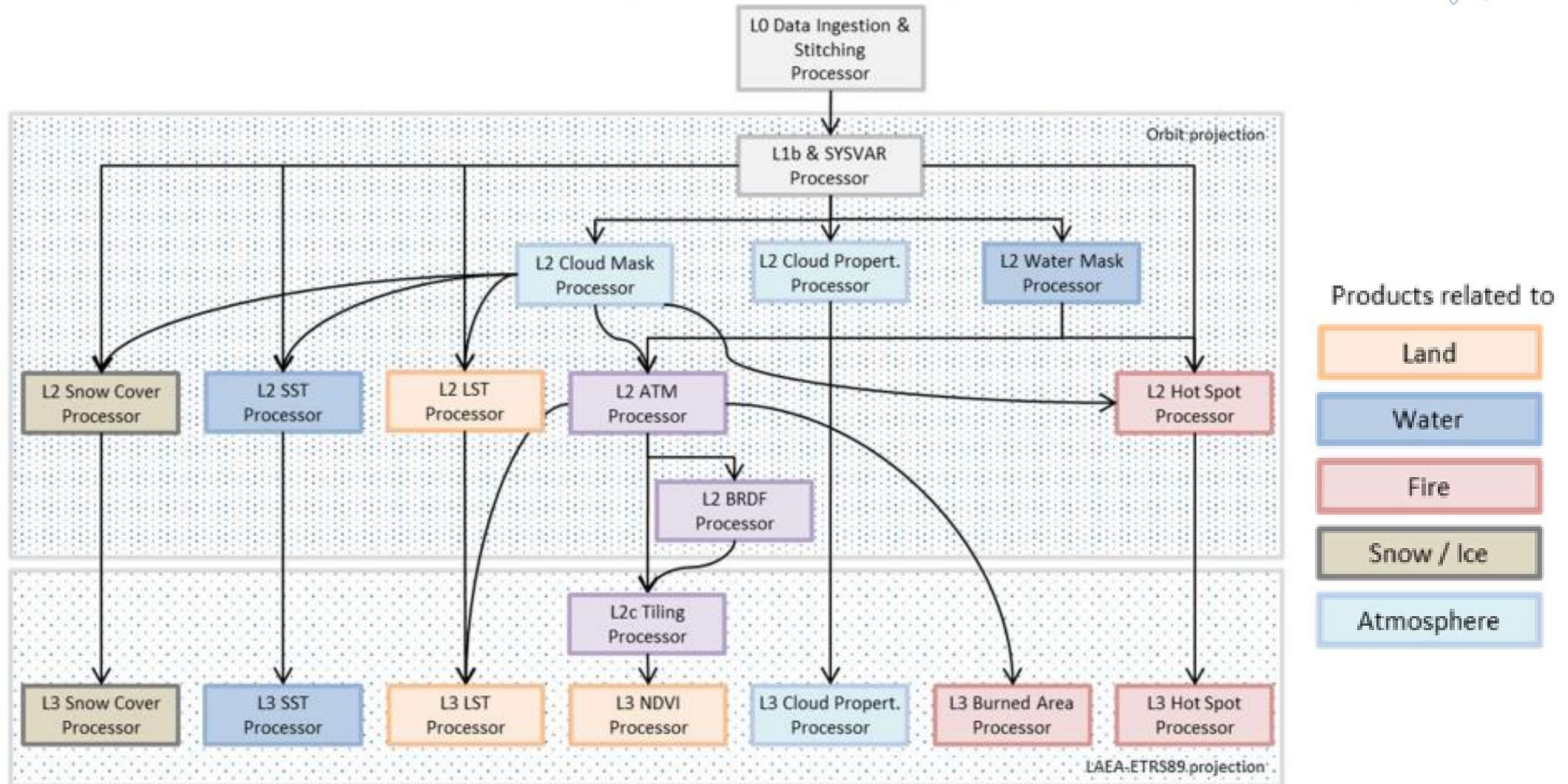
# AVHRR input data



... to be continued with MetOp-A/B/C AVHRR data

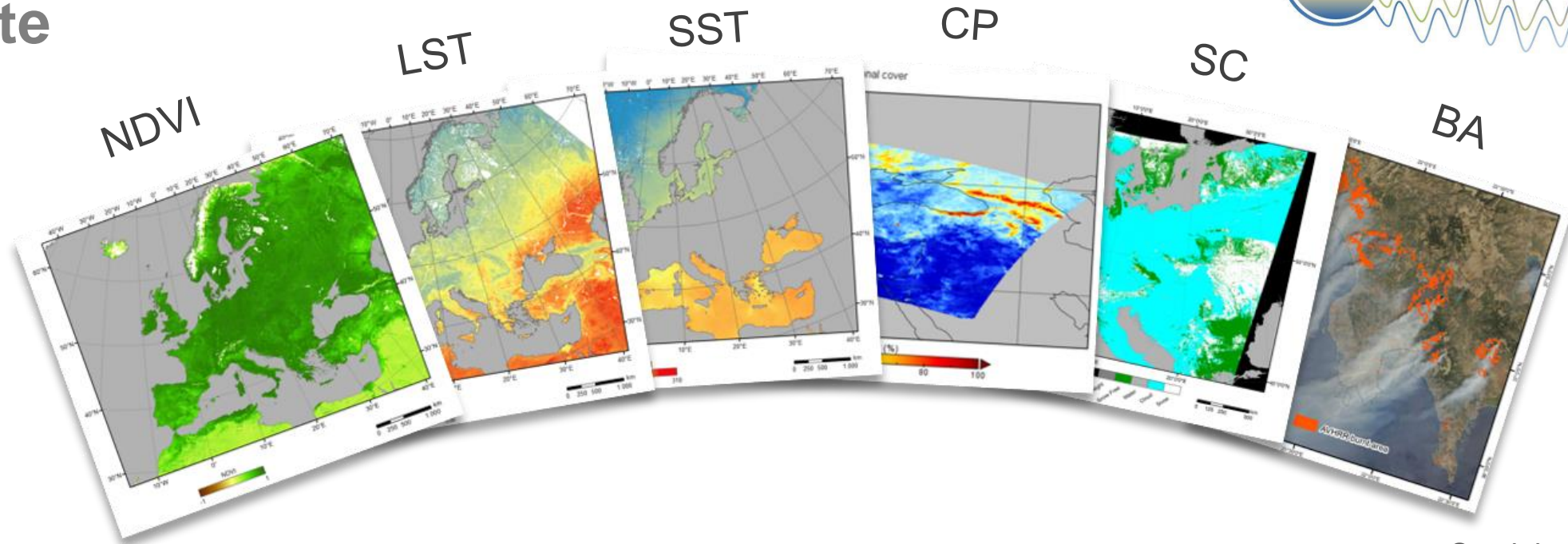
Source: Wolfmüller EtAl, Optimized Data Access from and to a Long-term Archive for the Processing of Time Series, Proceedings Preservation and Value Adding Conference (PV2023), Geneva, 2-4 May 2023. ([link](#)).

# Workflow and products



Source: Wolfmüller EtAl, Optimized Data Access from and to a Long-term Archive for the Processing of Time Series, Proceedings Preservation and Value Adding Conference (PV2023), Geneva, 2-4 May 2023. ([link](#)).

# TIMELINE product suite

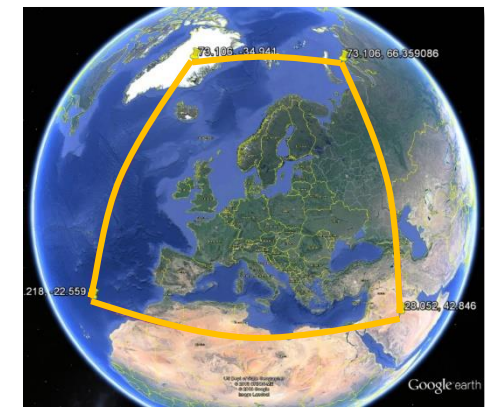


NDVI	Normalized Difference Vegetation Index
LST	Land Surface Temperature
SST	Sea Surface Temperature
CP	Cloud Properties
SC	Snow Cover
BA	Burnt Area

- Daily, 10-day, monthly composites
- Including quality and uncertainty layers
- Available in orbit geometry (L2) and projected to LAEA, ETRS89, EPSG 3035 (L3)
- 18 output product types, 1.5M products, >500TB
- Product format: netCDF
- Temporal coverage 1981 – 2022
- In general 1 km spatial resolution



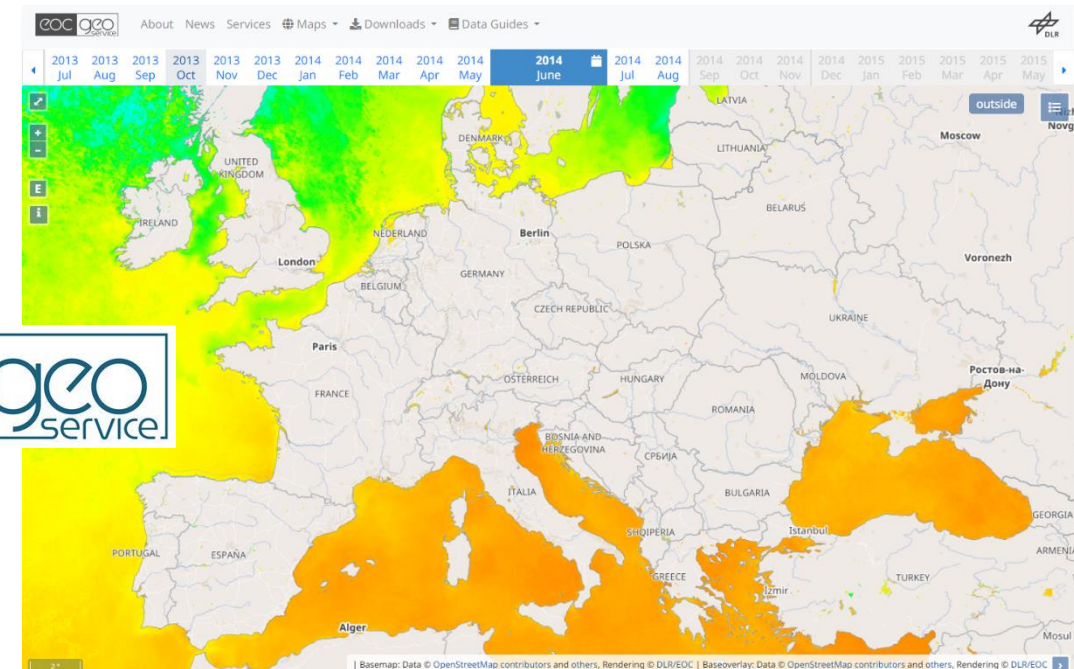
Spatial coverage of TIMELINE products



# Data policy and access



- L0, L1b, L2 data for internal use
- L3 projected composites will become free & open
- Currently used for internal studies / theses → to be released step-by-step
- STAC metadata being generated for L3 products
- CEOS CARD-4L self assessment ongoing for selected data (LST L3, others tbd.)
- Future access to TIMELINE L3 products via EOC-Geoservice (<https://geoservice.dlr.de>) for visualization & download





Thank you!  
Questions?

Katrin Molch  
German Aerospace Center DLR  
Earth Observation Center  
Katrin.molch@dlr.de