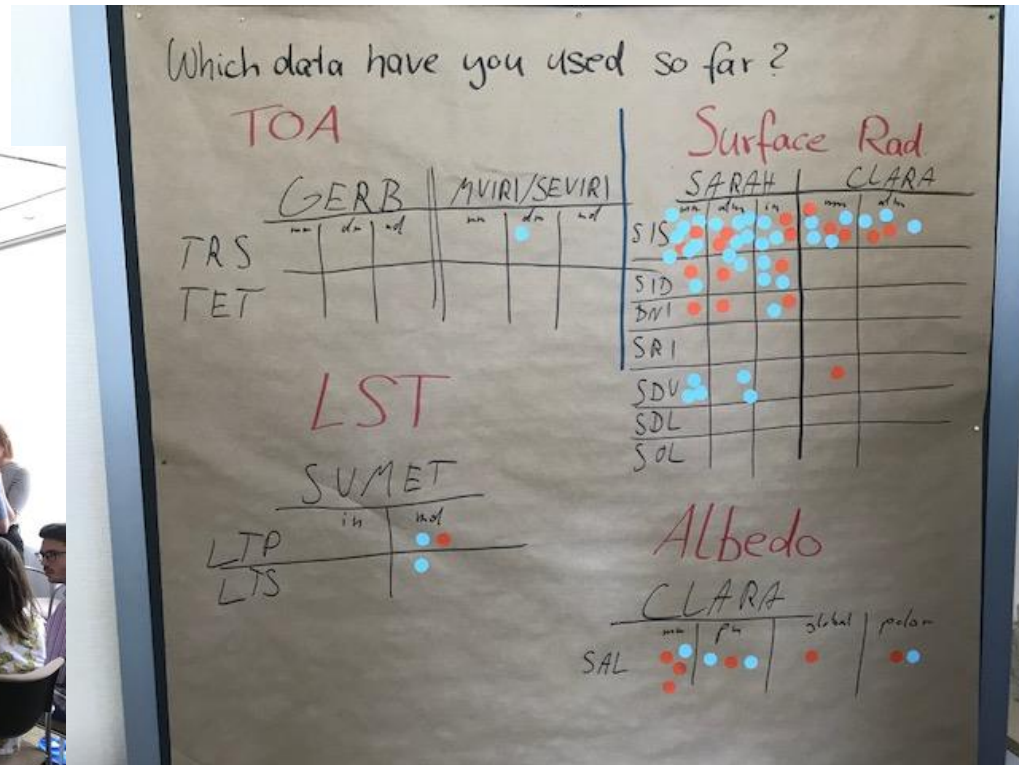


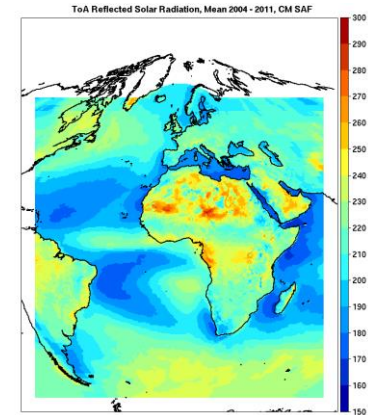
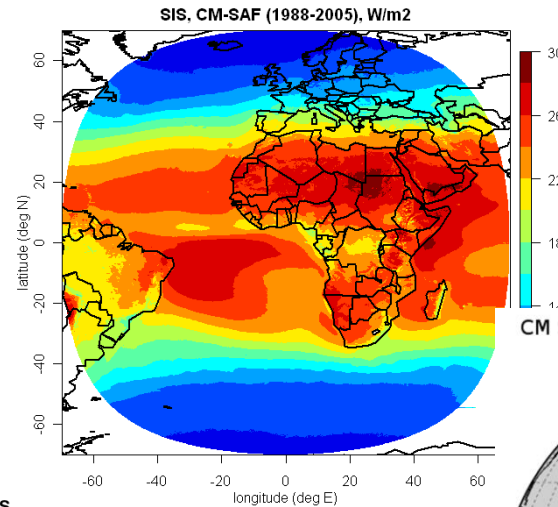
From the Top to the Bottom: Radiation- and Surface-related data records

About 30 participants / users

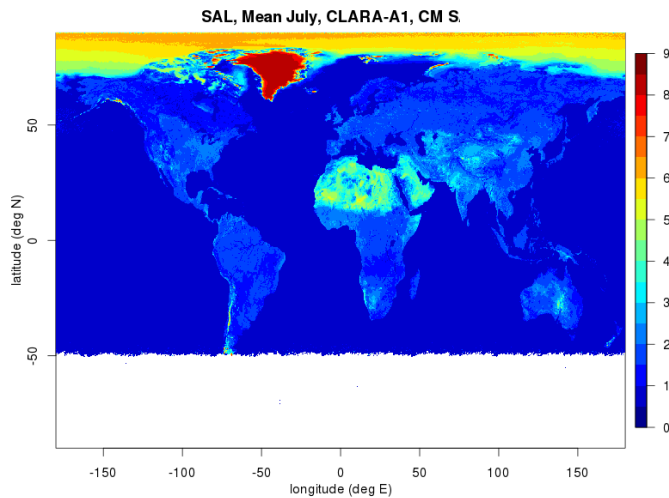
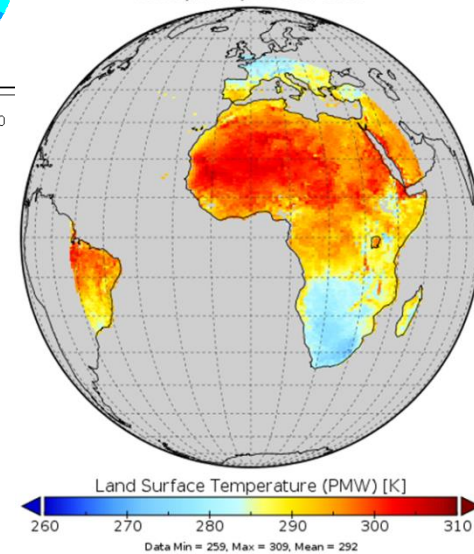


Top-to-Bottom Climate Data Sets

- TOA Radiation
- SARAH
- CLARA
- SUMET

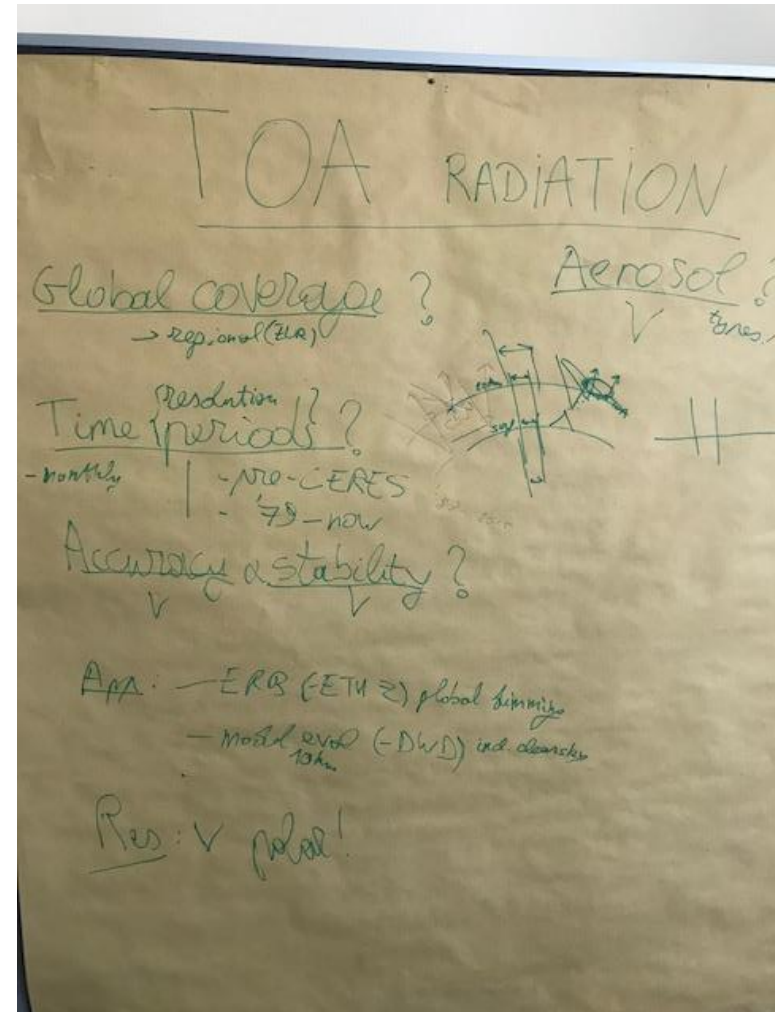


CM SAF SUMET Land Surface Temperature
Monthly Mean June 1991 00:00



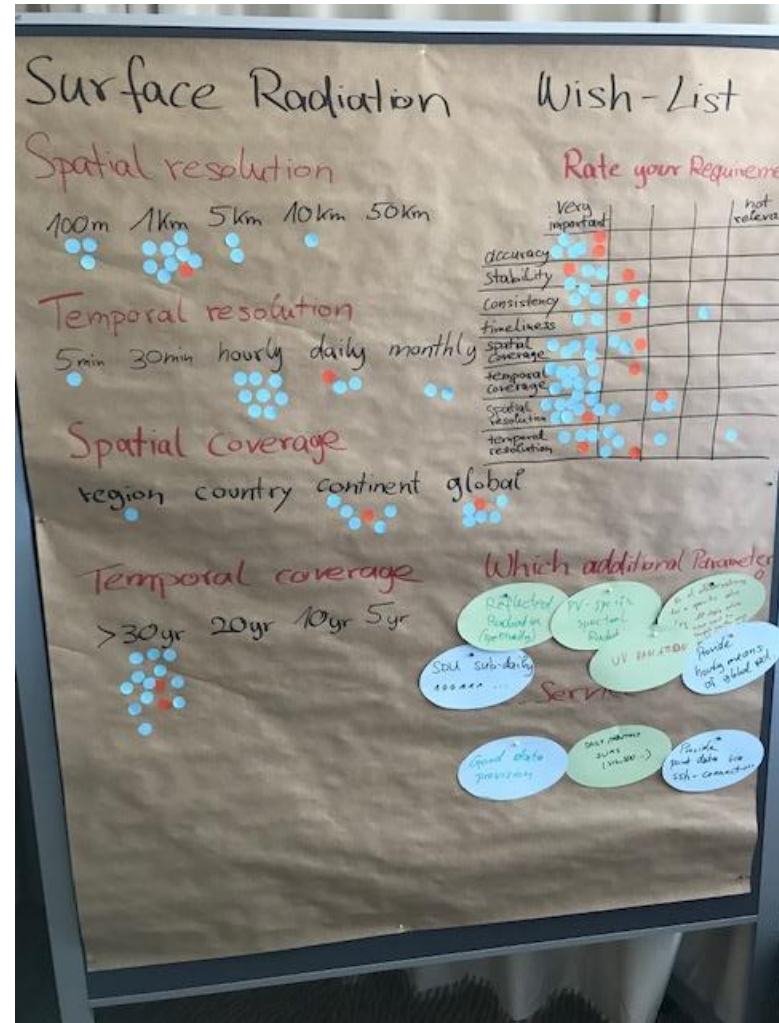
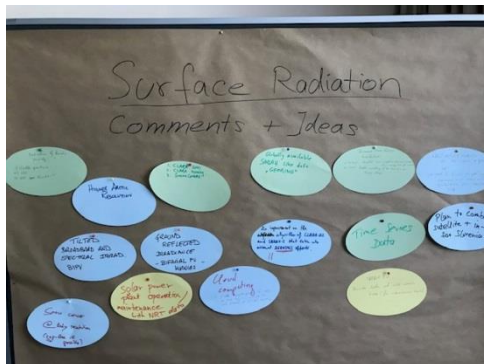
TOA Radiation

- pre-CERES (< 2000) very relevant
- Applications: Earth Radiation Budget / Model evaluation
- Clear-sky radiation (OLR / RSF) requested
- Provide data on polar grid




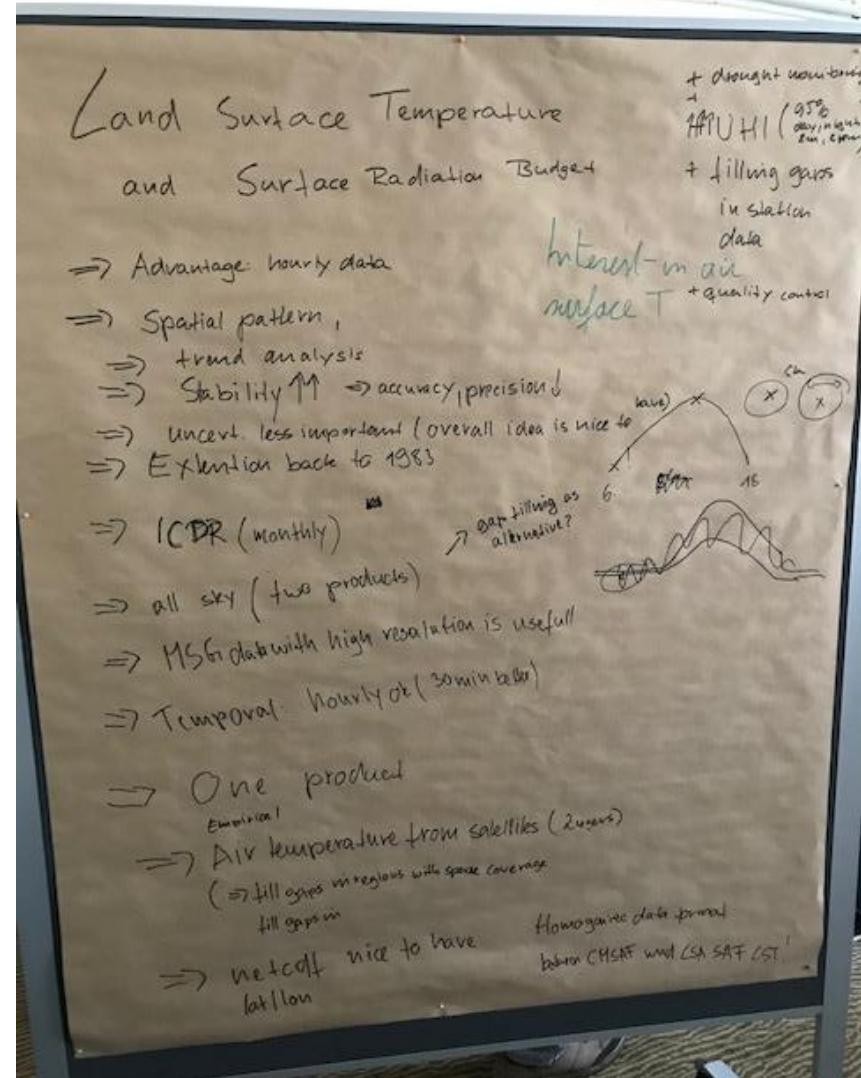
Surface Radiation

- ➔ UV / PV / spectral bands / snow
- ➔ include aerosol variability
- ➔ SARA-like georing
- ➔ Higher spatial resolution (global, polar), global direct radiation
- ➔ Hourly data, time series extraction, hosted processing
- ➔ Sub-daily sunshine duration



Land Surface Temperature

- ➔ Long-time series
 - ➔ Hourly data
 - ➔ Easy data format (netcdf)
- 
- ➔ Stability most relevant
 - ➔ Uncertainty nice, but no must
 - ➔ Provide only one LST product
 - ➔ New: all-sky LST, ICDR (on monthly basis sufficient)
 - ➔ 2m air temperature?



Surface Albedo

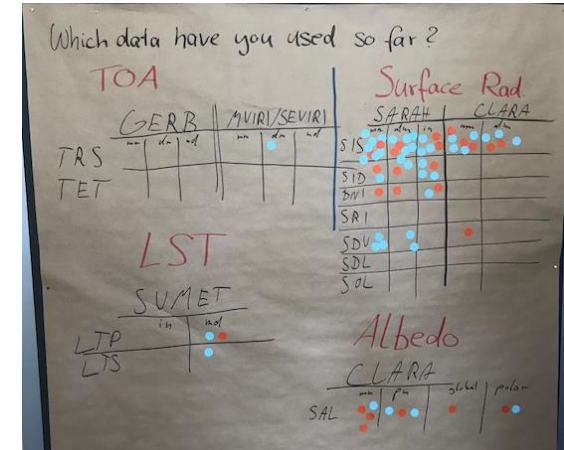
- ➔ Increase spatial resolution to 0.1° / 10 km
- ➔ Provide some uncertainty characterisation
- ➔ New products:
 - Snow coverage
 - NDVI

• monthly means sufficient for temporal resolution
 • daily snow cover desirable as well!
 - carpatholim
 • Carpathian mountains as focus area
 • daily means desirable → gap filling?
 - regional climatology studies
 • Czech Republic

e Albedo
Wish list:
 - Increase spatial resolution x 3
 to 0.1 degree / 10 km (EUM Pathfinder)
 - Uncertainty characterization
 • statistical measures/moments/distributions
 • error propagation process included?
 - Snow cover product x 3 (RHUB)
 • microwave data inclusion
 • gap filling very desirable
 • snow/no-snow ⇒ threshold characterisation?
 - NDVI as an auxiliary data field x 3 for the albedo

From the Top to the Bottom: Radiation- and Surface-related data records

- ➔ Continue to provide high-quality climate data
- ➔ Data access via API / Hosted processing ?
- ➔ Provide global data (CLARA) at higher spatial resolution / more data on polar grid
- ➔ SARAH-like georing data record
- ➔ Wishlist for new data records:
 - clear-sky TOA fluxes, surface UV
 - Snow coverage / NDVI
 - all-sky LST incl. ICDR



Thank you for the discussions and the valuable feedback!

