

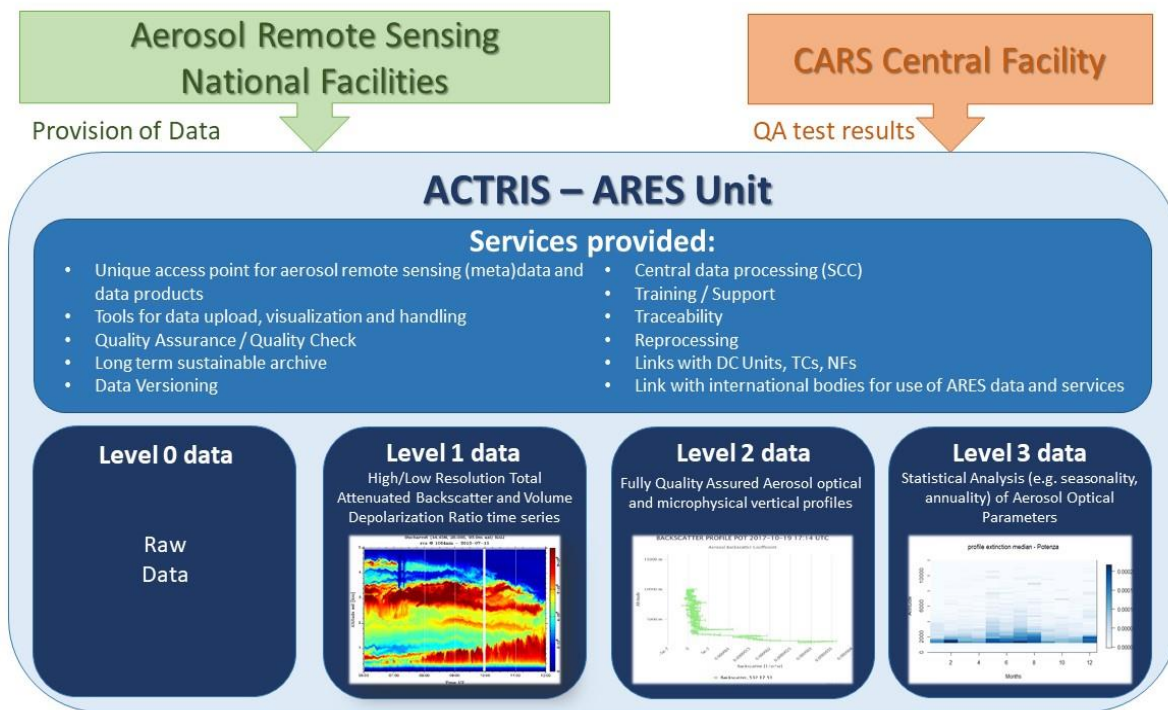
ACTRIS aerosol profiling database: NEW DESIGN AND NEW PRODUCTS FOR A WIDER USE OF AEROSOL LIDAR DATA

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**COND
VISIONI**
Conferenza GARR 2022
Palermo 18-20 maggio

ACTRIS Aerosol REmote Sensing (ARES) Data Centre unit

Data curation of ACTRIS aerosol lidar data collected at stations distributed over Europe (currently 35)

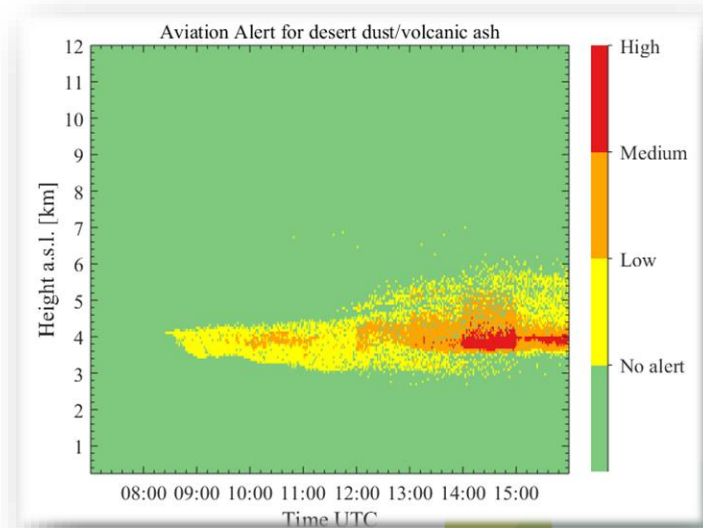
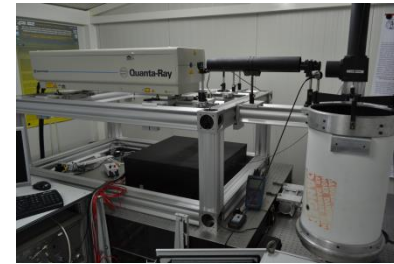
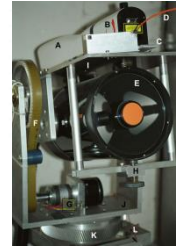


Goals

- Standardization
- Full traceability
- Quality controls
- Reprocessing capability
- Open and FAIR data
- NRT data provision

Challenges

- Inhomogeneity of lidar systems
 - Highly customized or fully home-made
- Growing and pressing demand for new tailored products



New design of ARES database and services

Database and services re-design

- Versioning
- Traceability (PIDs/DOIs and provenance)
- CF 1.7 compliance (new data format and names)
- On-fly QC documented procedures on data
- Interoperability and automation

Centralized automatic processing software

- Single Calculus Chain (SCC)

Implementation of new products

ARES infrastructure – Technical view

CNR IMAA (Potenza): 8 VM and 2 SAN in synchronous replication for high availability

- 1°: ARES PostgreSQL database
- 2°: Web interface for data originators
- 3°: Web interface for end-users
- 4°: THREDDS server
- 5°: SCC calculus
- 6°: SCC MySQL database
- 7°: SCC web interface
- 8°: Local Handle PID server and DataCite DOI client
- ARES data products are safely stored on a SAN H.A. Cluster. A full daily back up is made automatically and it is stored on a Network Attached Storage (NAS)

CNR Headquarters (Rome): Secondary asynchronous backup system

Grazie per l'attenzione!

ARES DC Unit: <https://www.actris.eu/topical-centre/data-centre/ares-aerosol-remote-sensing-data-centre-unit>

EARLINET: <https://www.earlinet.org>

Single Calculus Chain: <https://scc.imaa.cnr.it/>

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