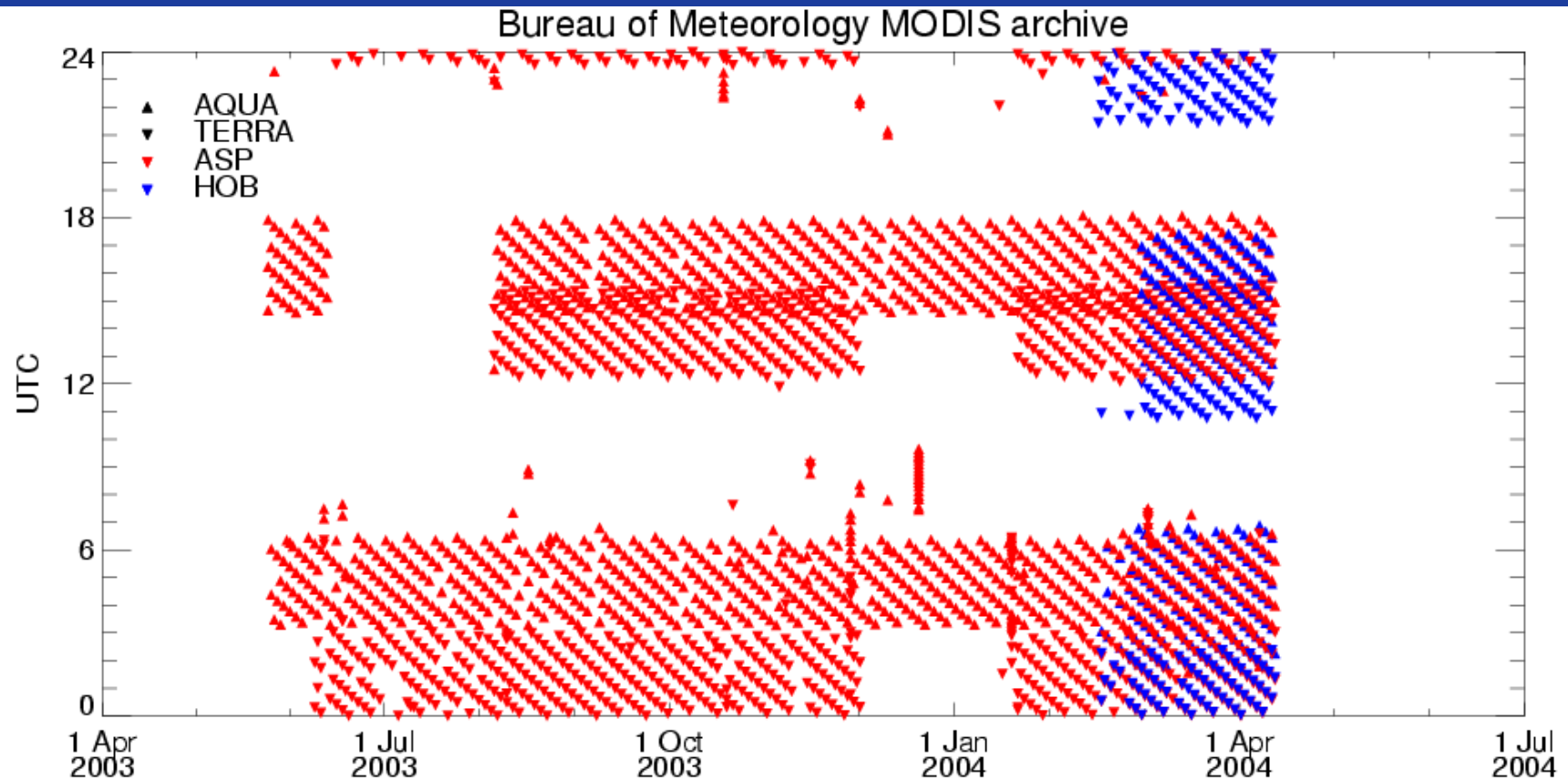


MODIS Activity in the Bureau of Meteorology

Reported by Ian Grant
Bureau of Meteorology

Data from ACRES

- Level 0 data sent to Bureau on DLTs since June 2003
- Copied into Bureau mass store
 - Alice Springs and Hobart passes, includes AIRS



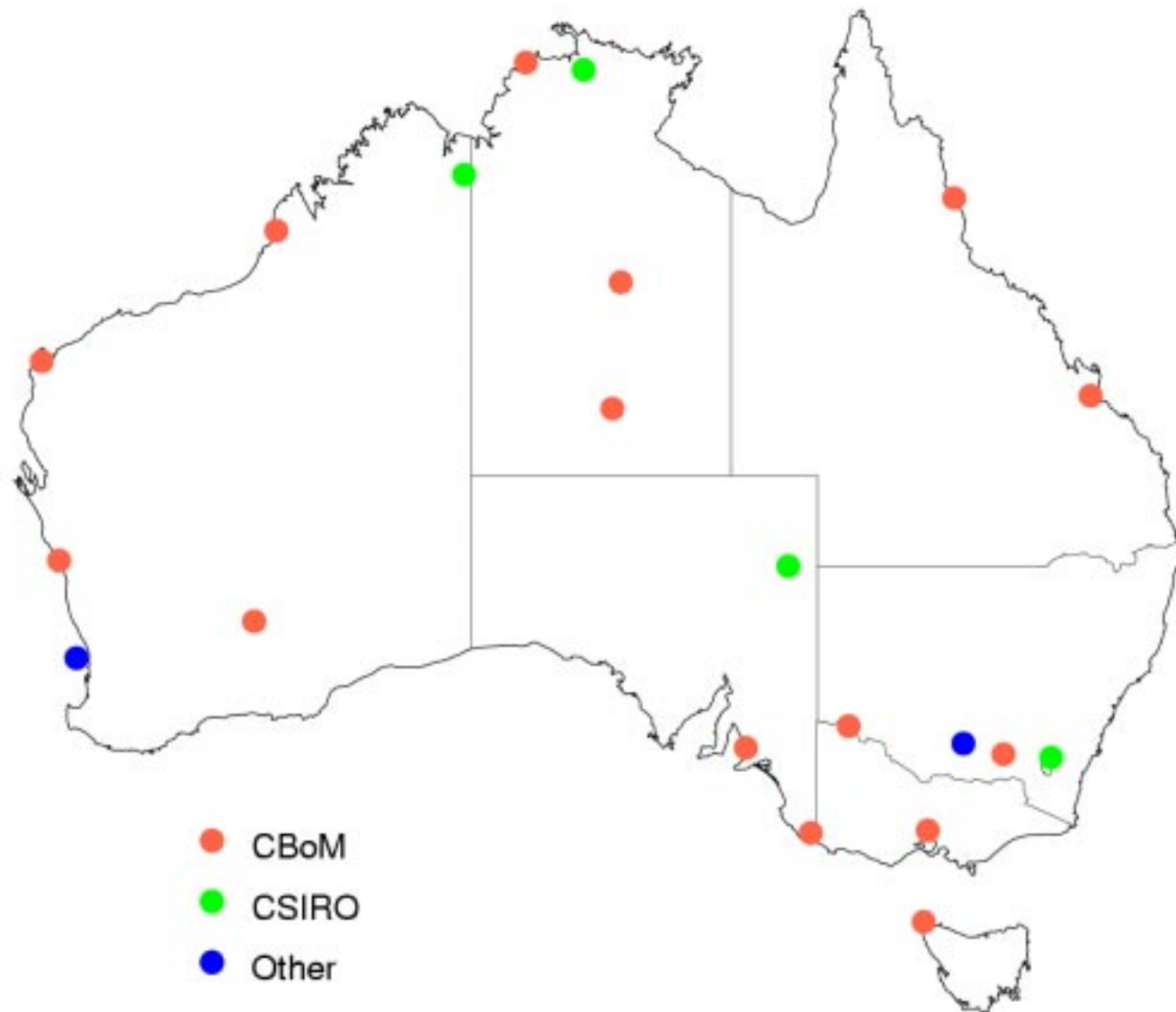
L1B Software from ACRES

- IMAPP software + ancillary files for processing to Level 1B
- Read, not yet run

Validation of MODIS aerosol

- Validation of AOT by sunphotometers
 - CSIRO (~4 sites)
 - Bureau (15 sites)

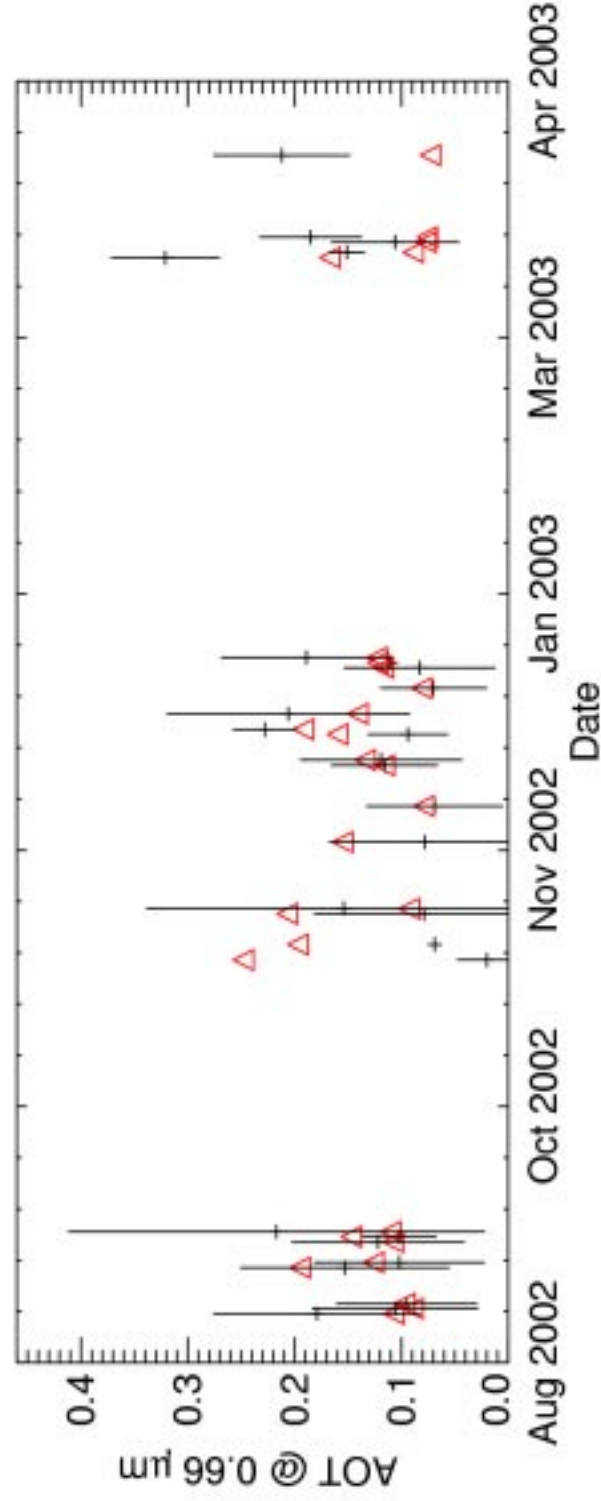
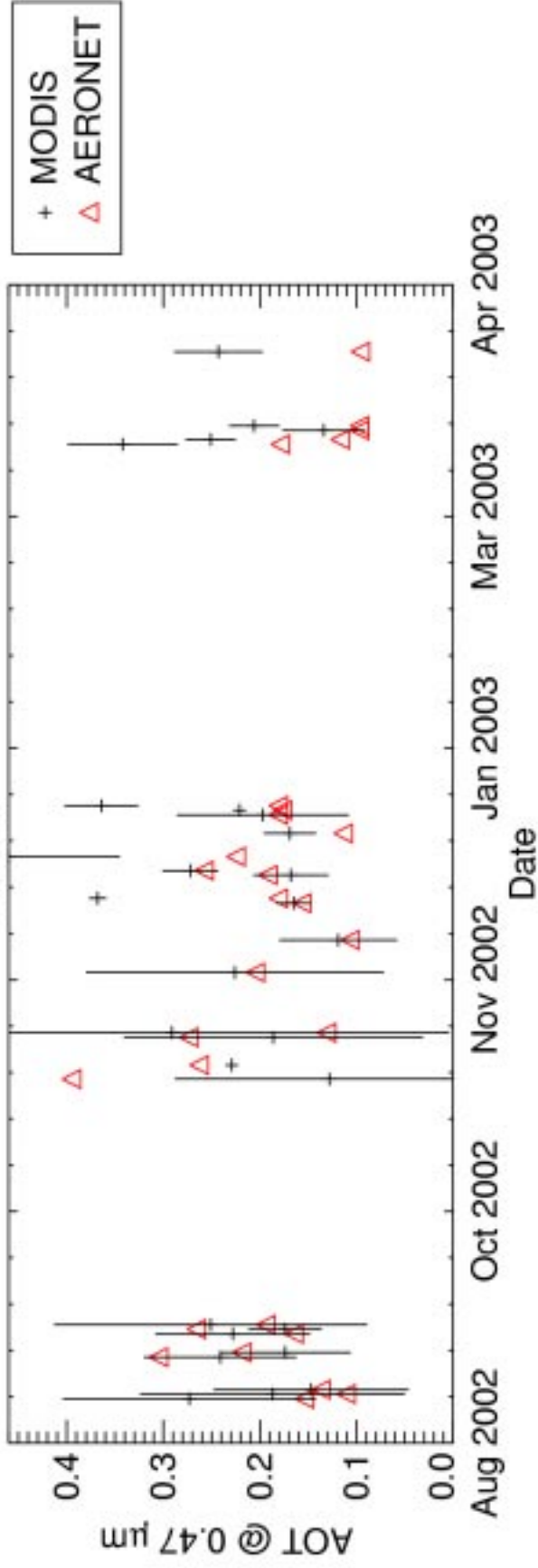
Australian sunphotometer sites

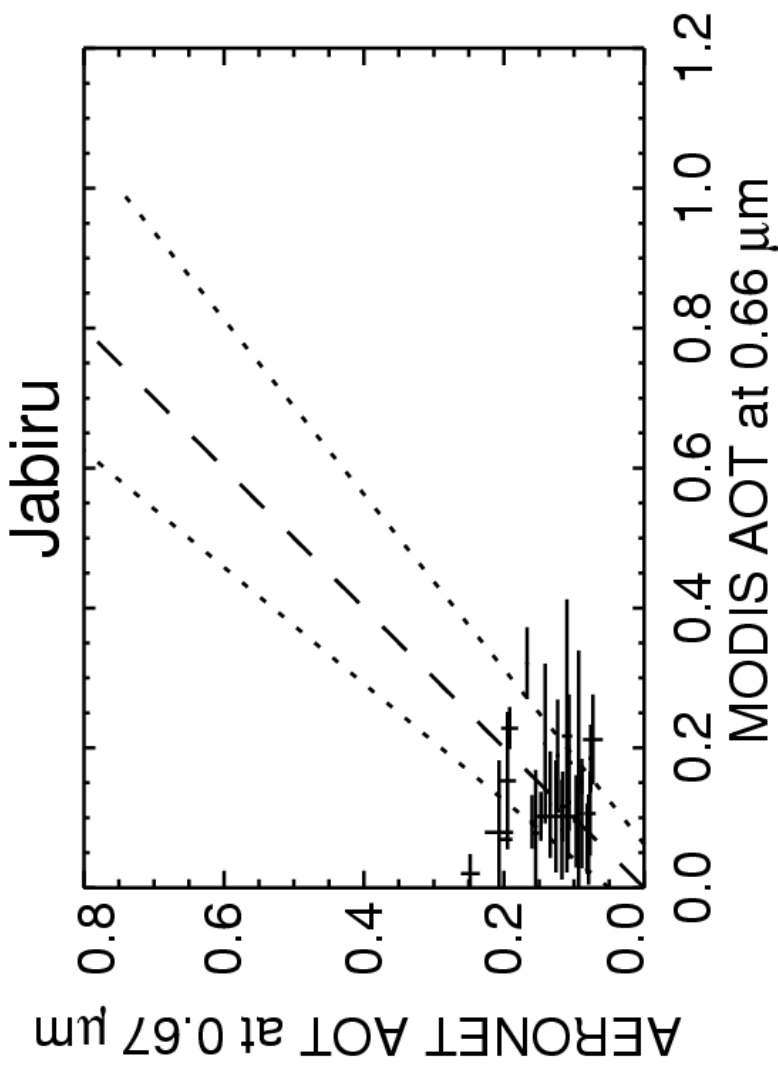
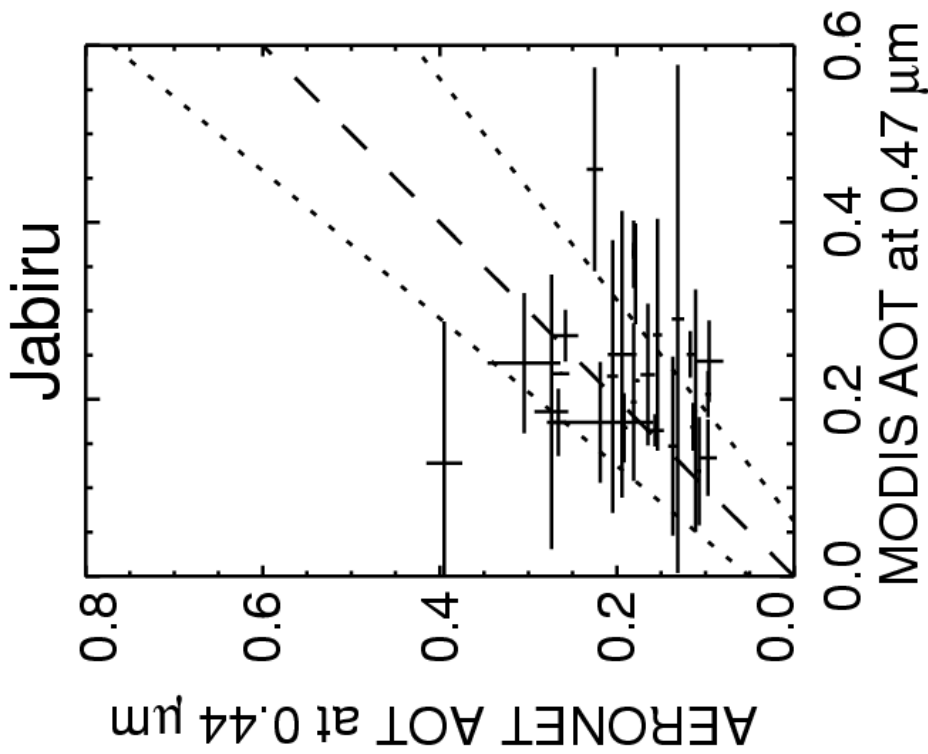


Validation of MODIS aerosol

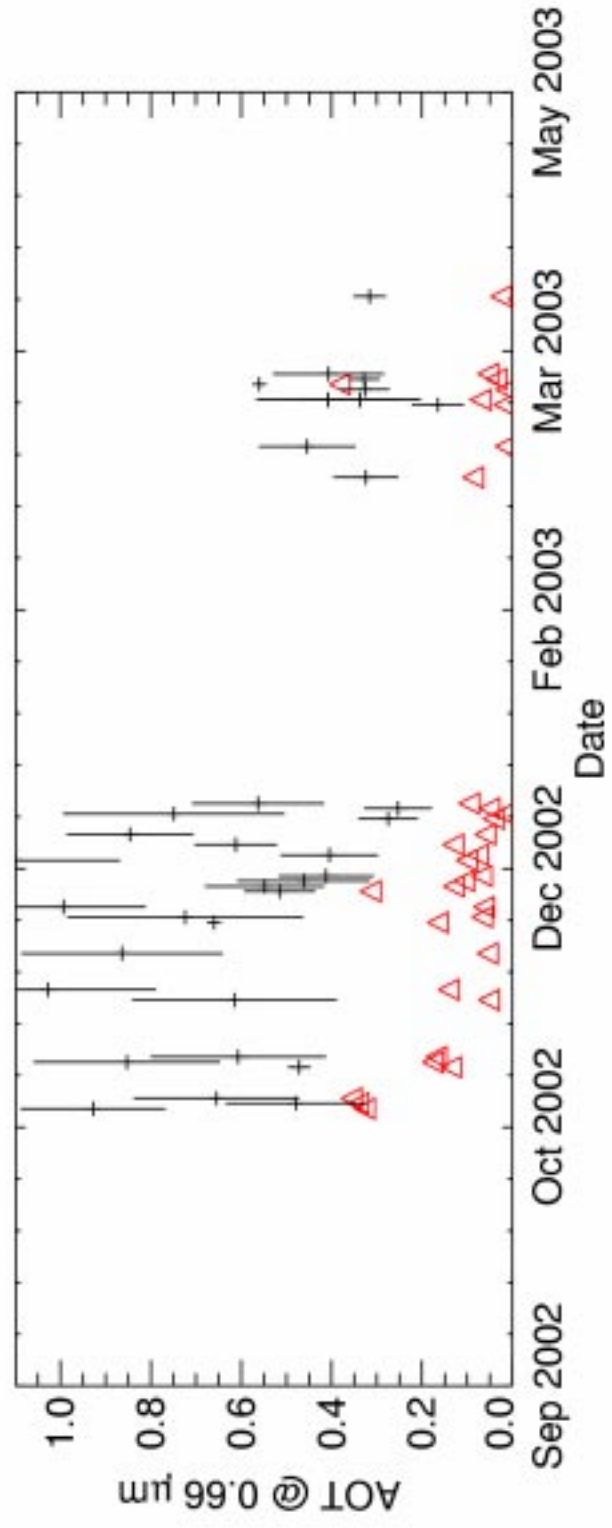
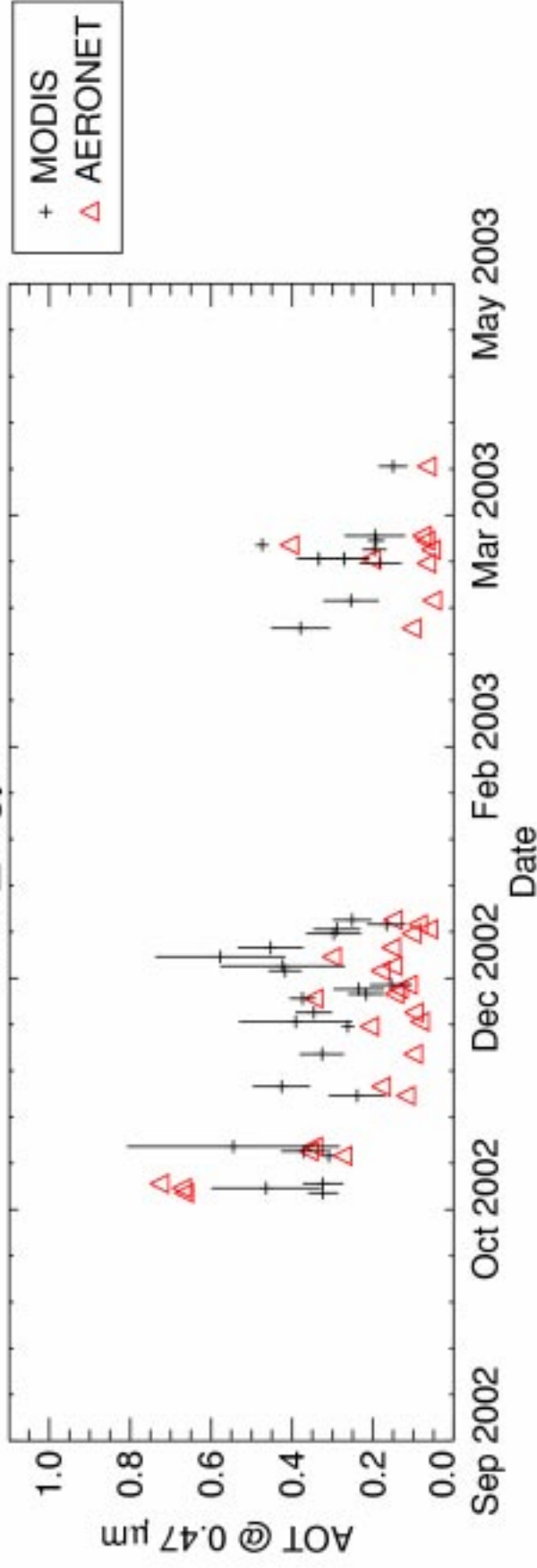
- Database established by MODIS aerosol team (MAPSS) of statistics over sunphotometer sites:
 - MOD04 50 km x 50 km
 - Sunphotometer 30 minutes
 - 470 nm, 660 nm
- Initial comparisons done by Agnes Apostolou, Bureau
- 15 Bureau sites were added to MAPSS in June 2003

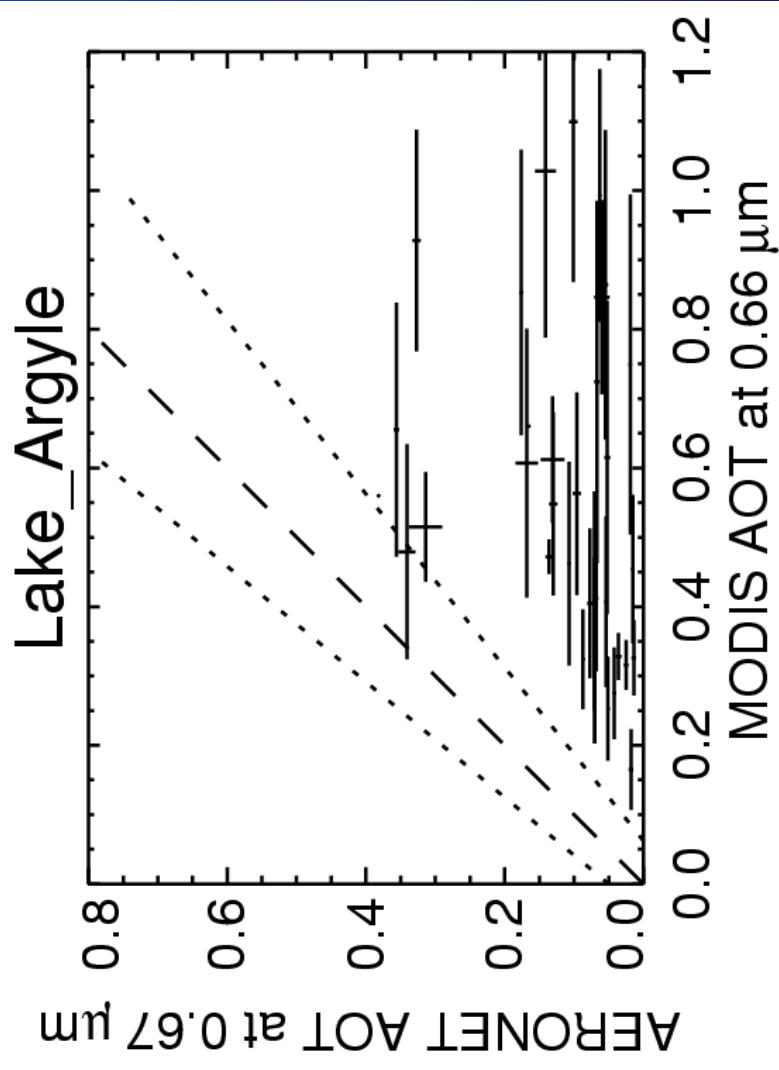
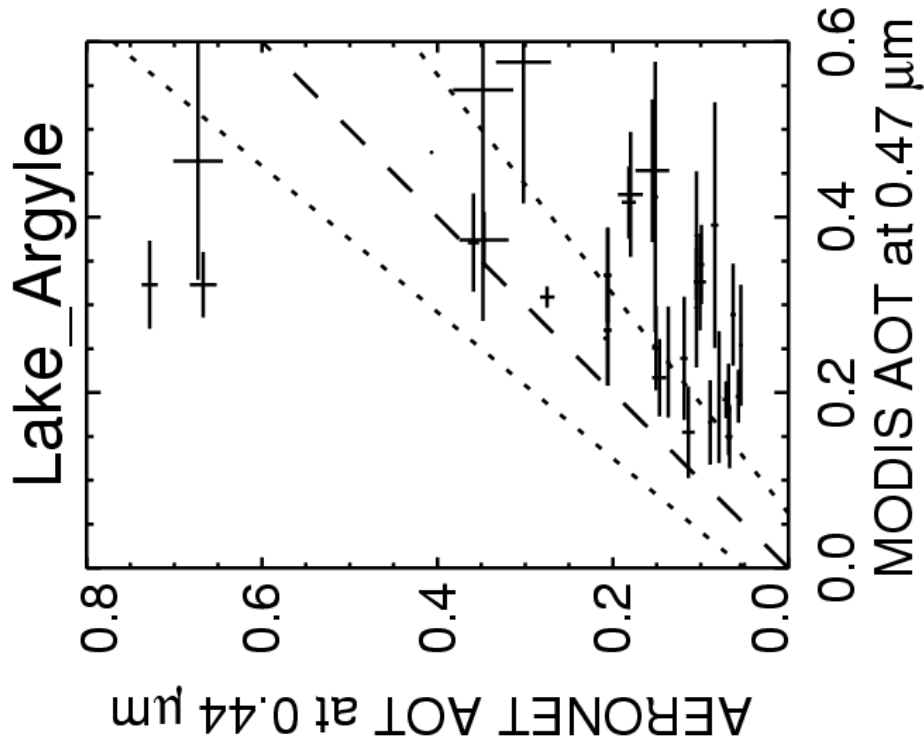
Jabiru





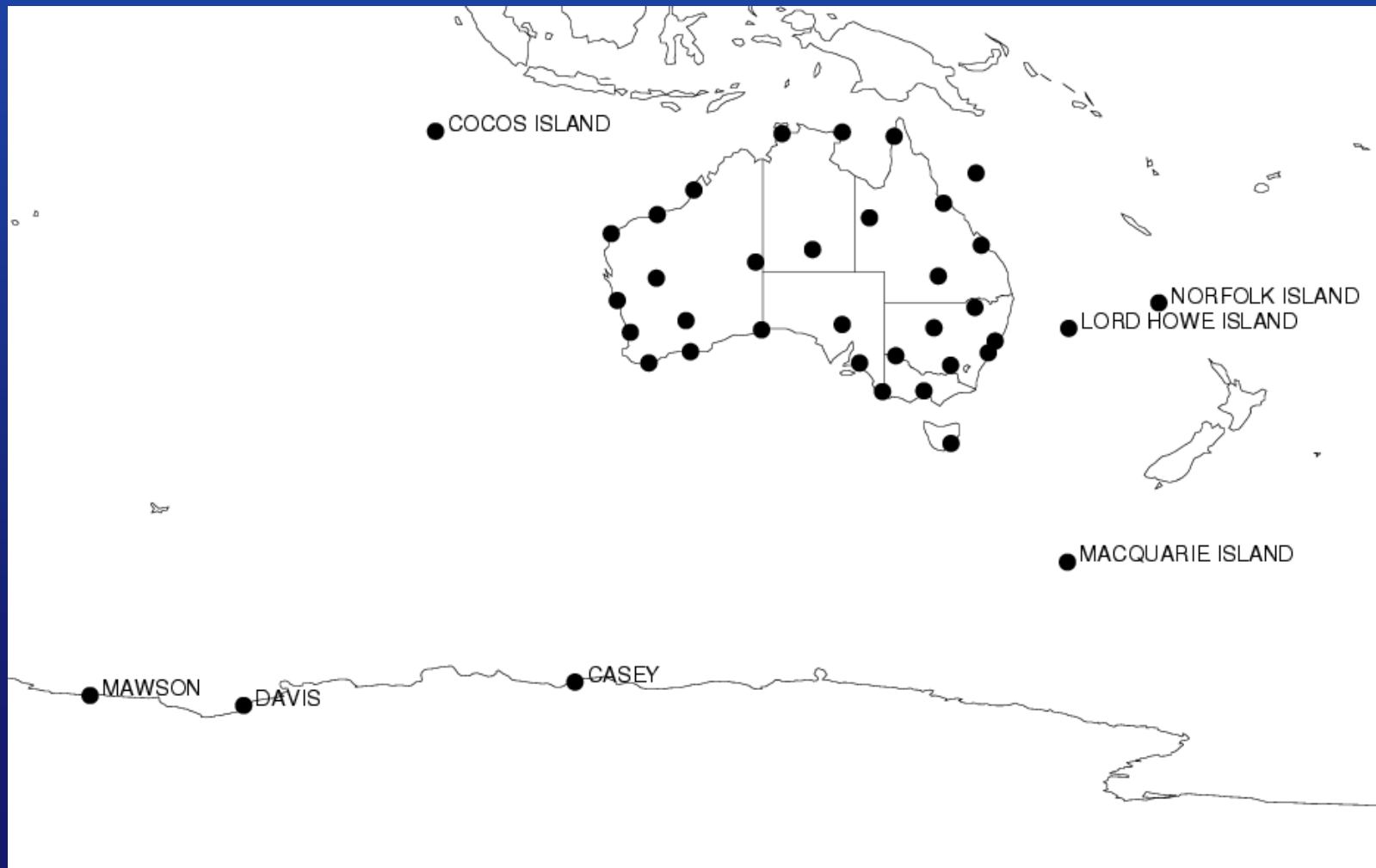
Lake_Argyle





Validation - Total Water Vapour

- Bureau of Meteorology
- Radiosonde sites



Other MODIS Activity

MODIS Direct Broadcast BRDF Proposal

- Coordinated by MODIS BRDF Team at Boston University
- Daily BRDF modelling
 - Detect rapid land change: burns, snow
 - Track changing BRDF better: vegetation growth cycle
 - Reject cloud contamination
- Participants: US, Australia, China, South Africa
- Proposal resubmitted to NASA

MODIS Burned Area Mapping

- MODIS Burned Area team are concentrating their algorithm development and validation effort on Australia
- Australian Burned Area Mapping and Validation Workshop, Oct 2003
- NASA/GSFC, State land management and fire agencies, SE Asia
- Build on existing State burned area mapping efforts
- Validation with Landsat over a variety of land cover types

Grassland Curing Project in Bushfire CRC

- Conduct an extensive and systematic field measurement program
- Compare MODIS and AVHRR indices with field data
- Develop techniques of satellite based curing assessment that are robust, reliable, validated and applicable across Australia and New Zealand
- Plan is being finalised for consideration by CRC board for July 2004 start

IWMMM-4

Fourth International Workshop on Multiangular Measurements and Models

- Hosted by Australia in early 2005
- An opportunity
 - Brings key sensor scientists to Australia
 - Australian and international EO communities interact
 - Australian users can describe requirements to EO community

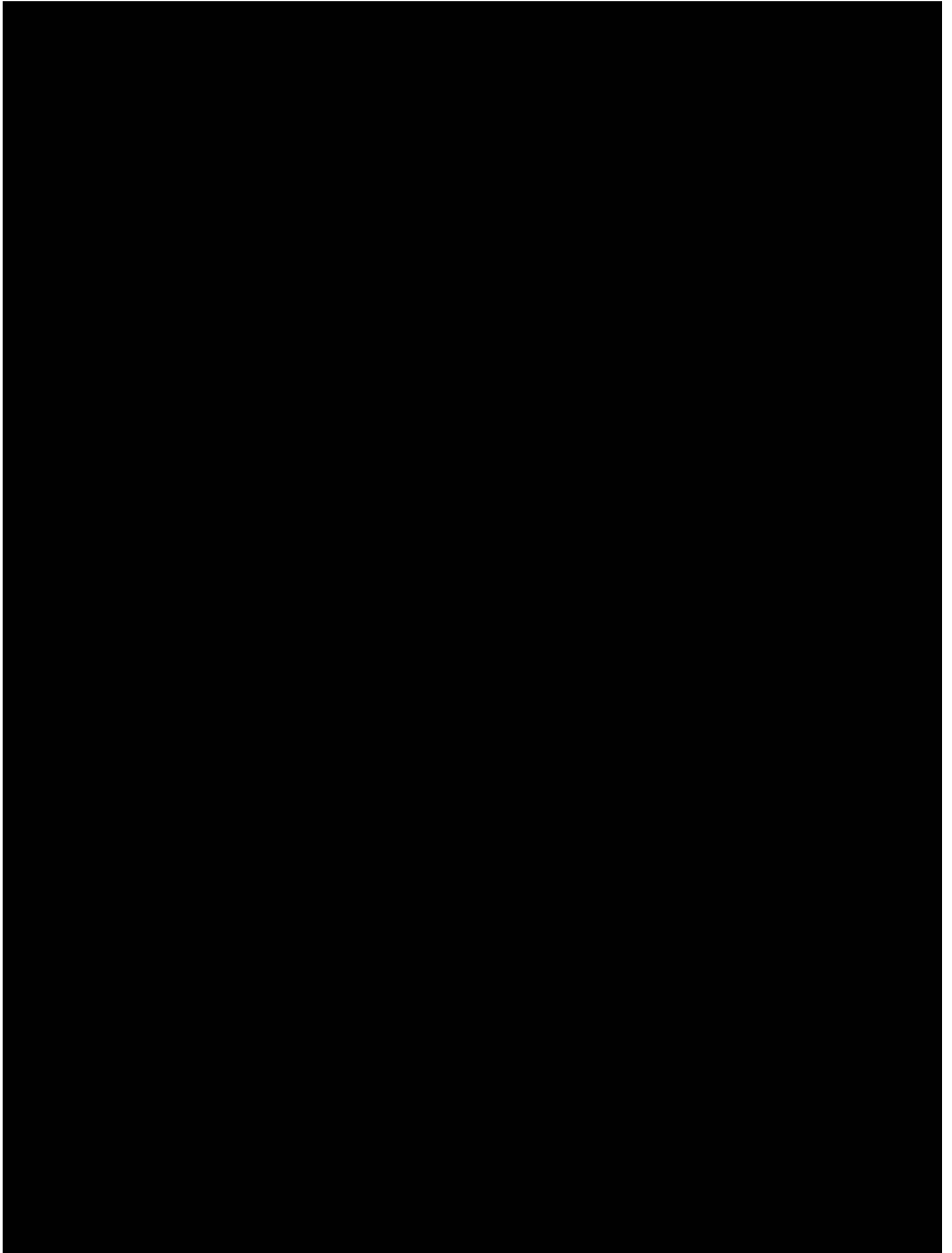
Level 2+ Land Processing Issues

Aerosol Processing

- MODIS products have different aerosol algorithms!
 - MOD04 Aerosol product
 - MOD09 Surface Reflectance
 - MOD18 Water-leaving Radiance

Atmospheric Correction and BRDF processing

- Atmospheric correction (MOD09) - Options
 - Massage institutional code into IMAPP form?
- BRDF data management - Discussion needed?



Other MODIS Activity

- DB BRDF proposal with Boston Uni - second bid awaiting decision
- MODIS Burned Area team are concentrating their algorithm development and validation effort on Australia
 - Australian Burnt Area Mapping and Validation Workshop, Oct 2003
- Grassland Curing Project within Bushfire CRC
- Fourth International Workshop on Multiangular Measurements and Models (IWMMM-4)
 - Australia to host early 2005
 - Land cover (BRDF normalisation, albedo, vegetation structure)
 - Atmosphere (aerosol, cloud height, 3D structure)