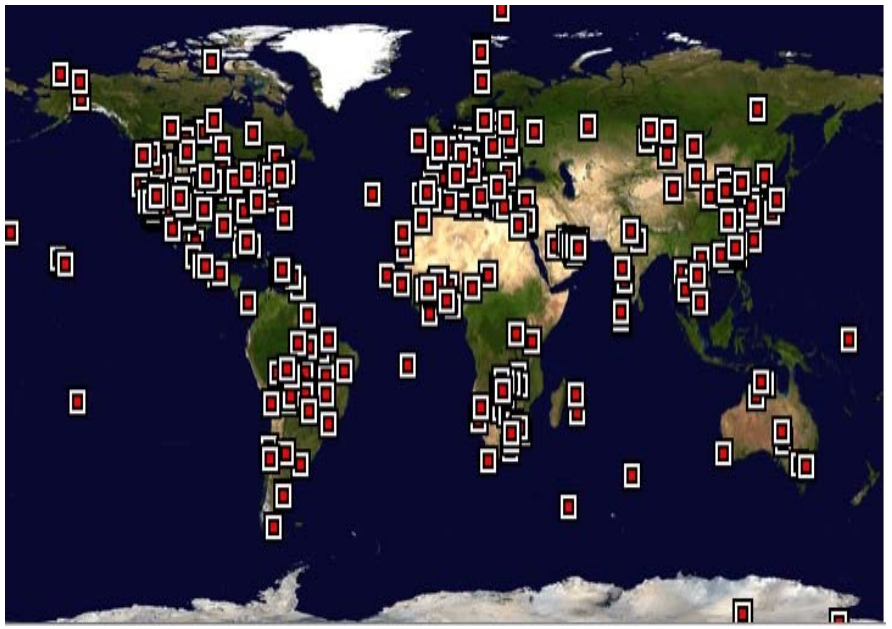
AERONET-Internationally Federated Network

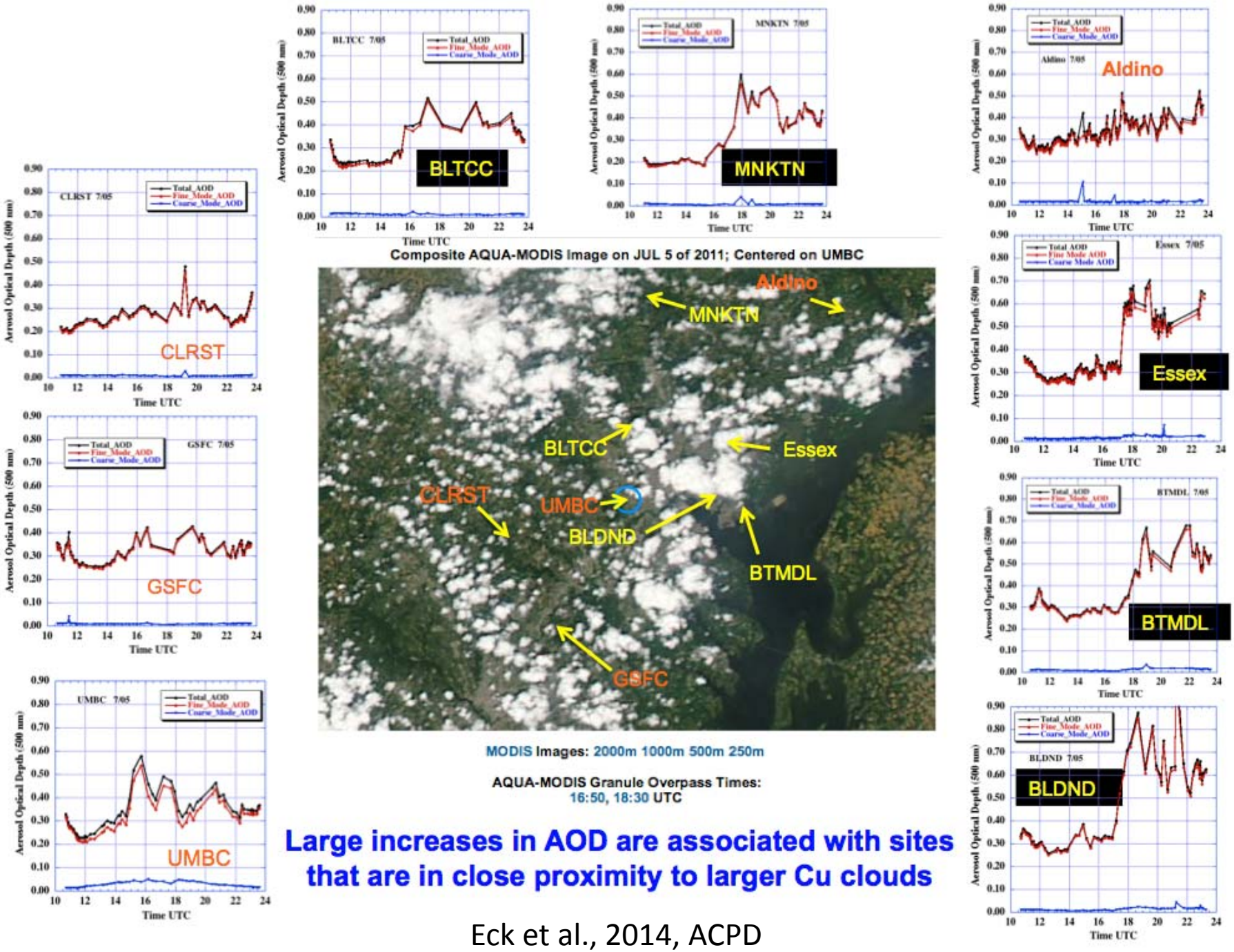
Provide a long term data set to:
•Characterize aerosol optical properties
• Validate Satellite & model aerosol retrievals
• Synergism with Satellite obs., climate change

- >600 instruments
- ~400 Operational sites
- Network Partners
  - GSFC
  - PHOTONS(France)
  - RIMA (Spain)
  - Individuals
  - Institutiions
- Expansion to Asia, Africa high latitudes and over water sites



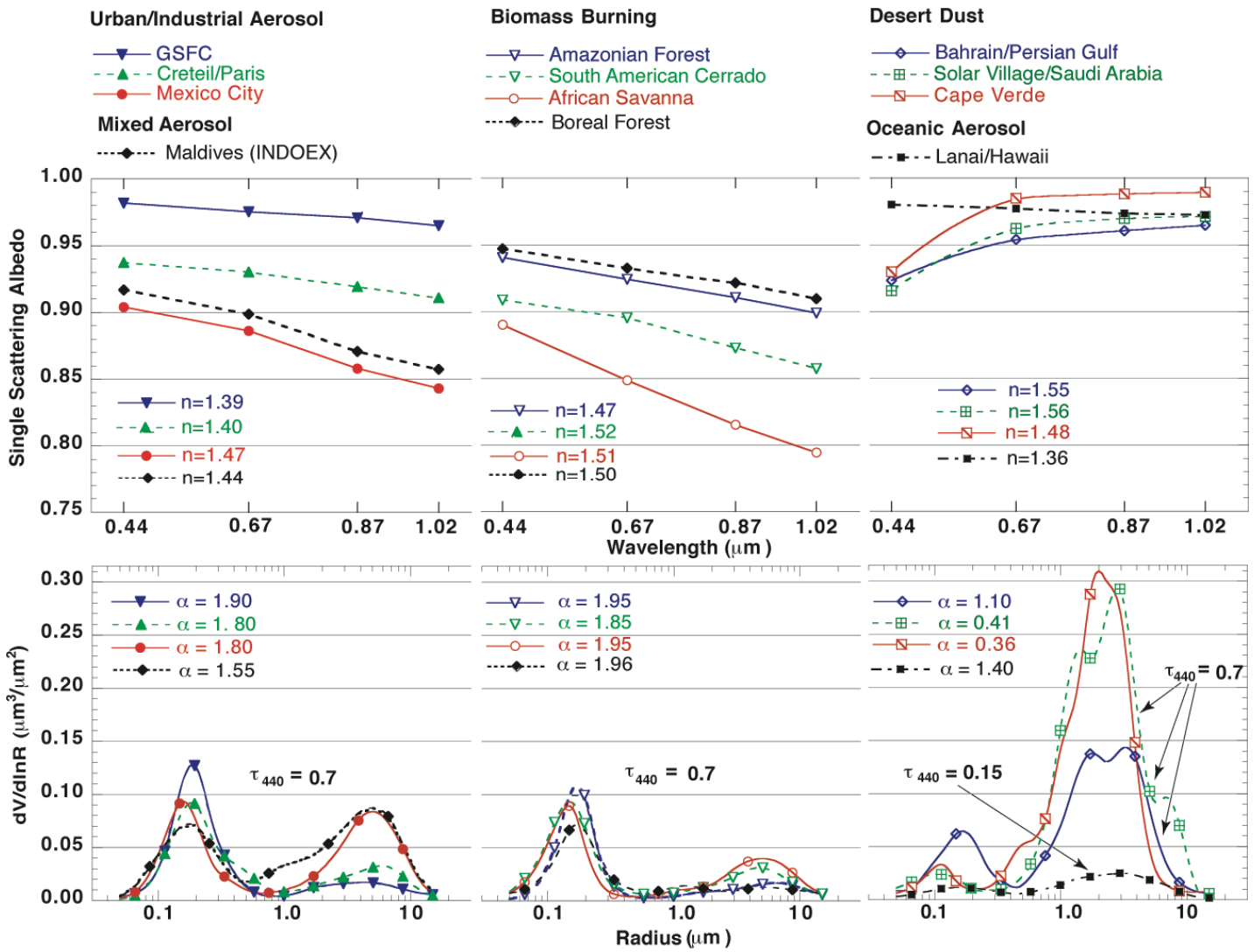
Open data access via website: http://aeronet.gsfc.nasa.gov/

Parameters measured: τ, ω_o, Θ, size, n, κ and WV, clds, L_n



Eck et al., 2014, ACPD

Aerosol Climatology from AERONET

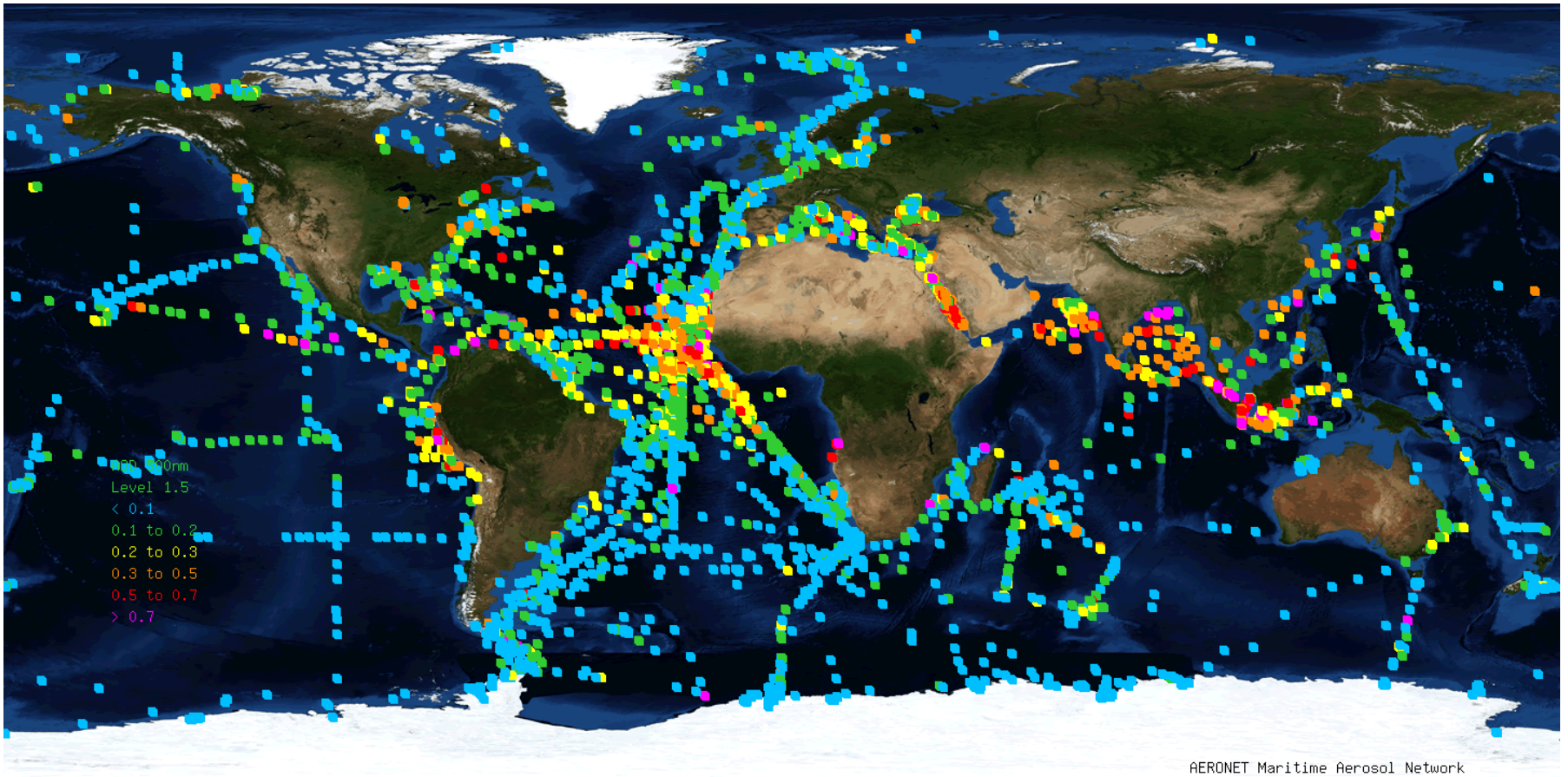


Dubovik et al. (2002)

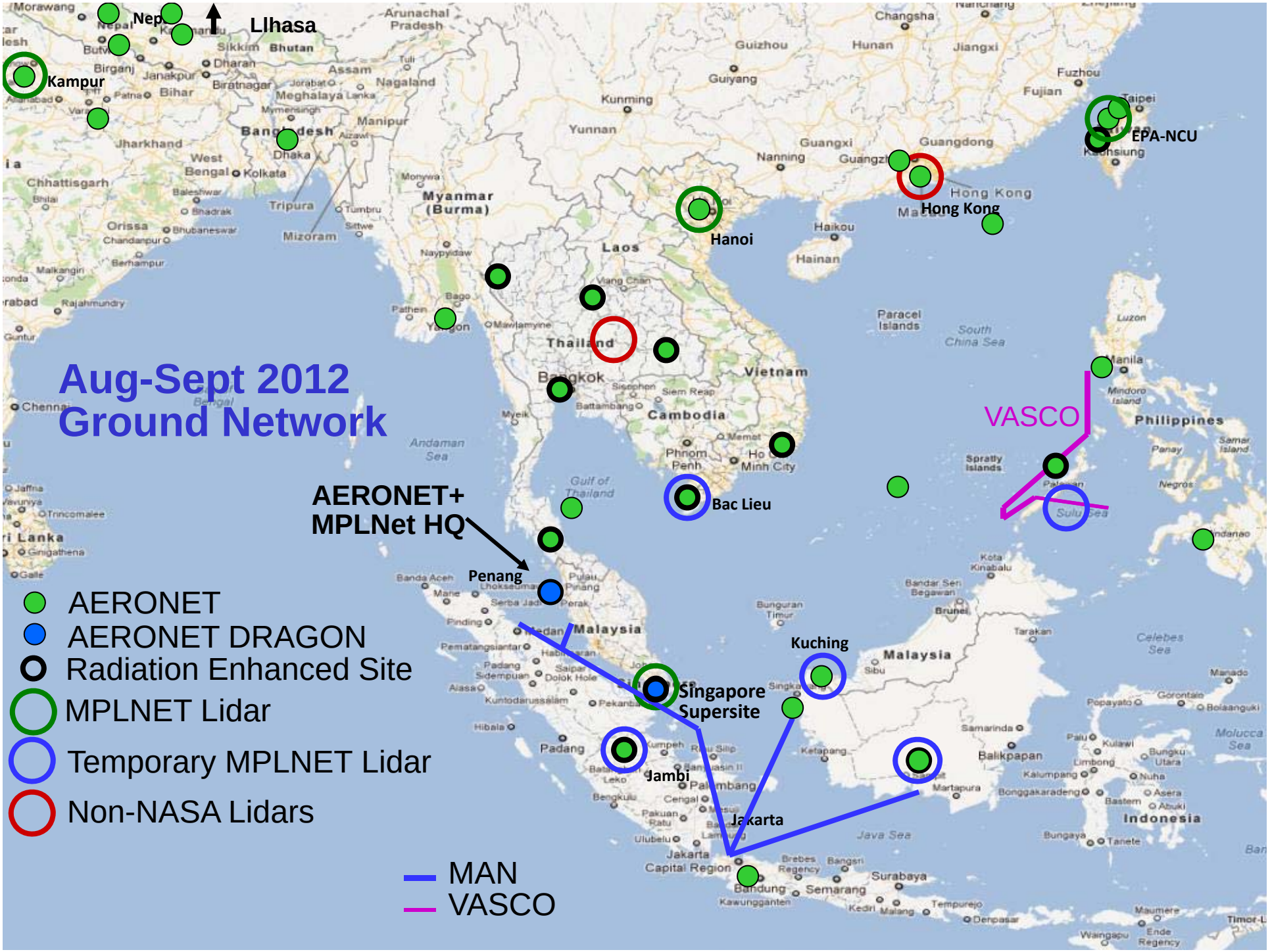
Maritime Aerosol Network as a Component of AERONET

MAN represents an important strategic sampling initiative and ship-borne data acquisition complements island-based AERONET measurements

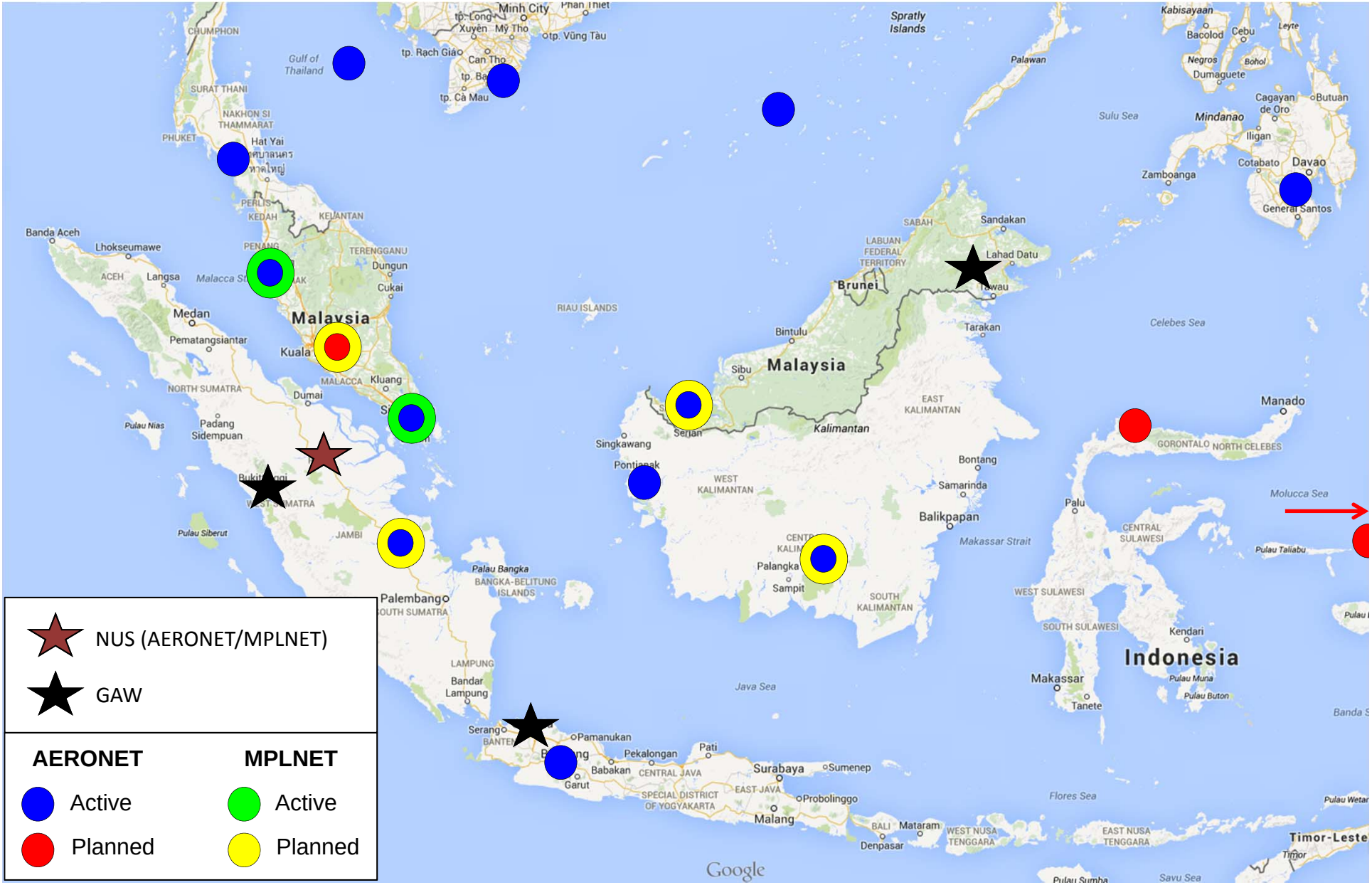
Maritime Aerosol Network global coverage from October 2006 to May 2014



Smirnov, A., et al., Maritime Aerosol Network as a component of Aerosol Robotic Network, J. Geophys. Res., 114, D06204, doi:10.1029/2008JD011257, 2009.

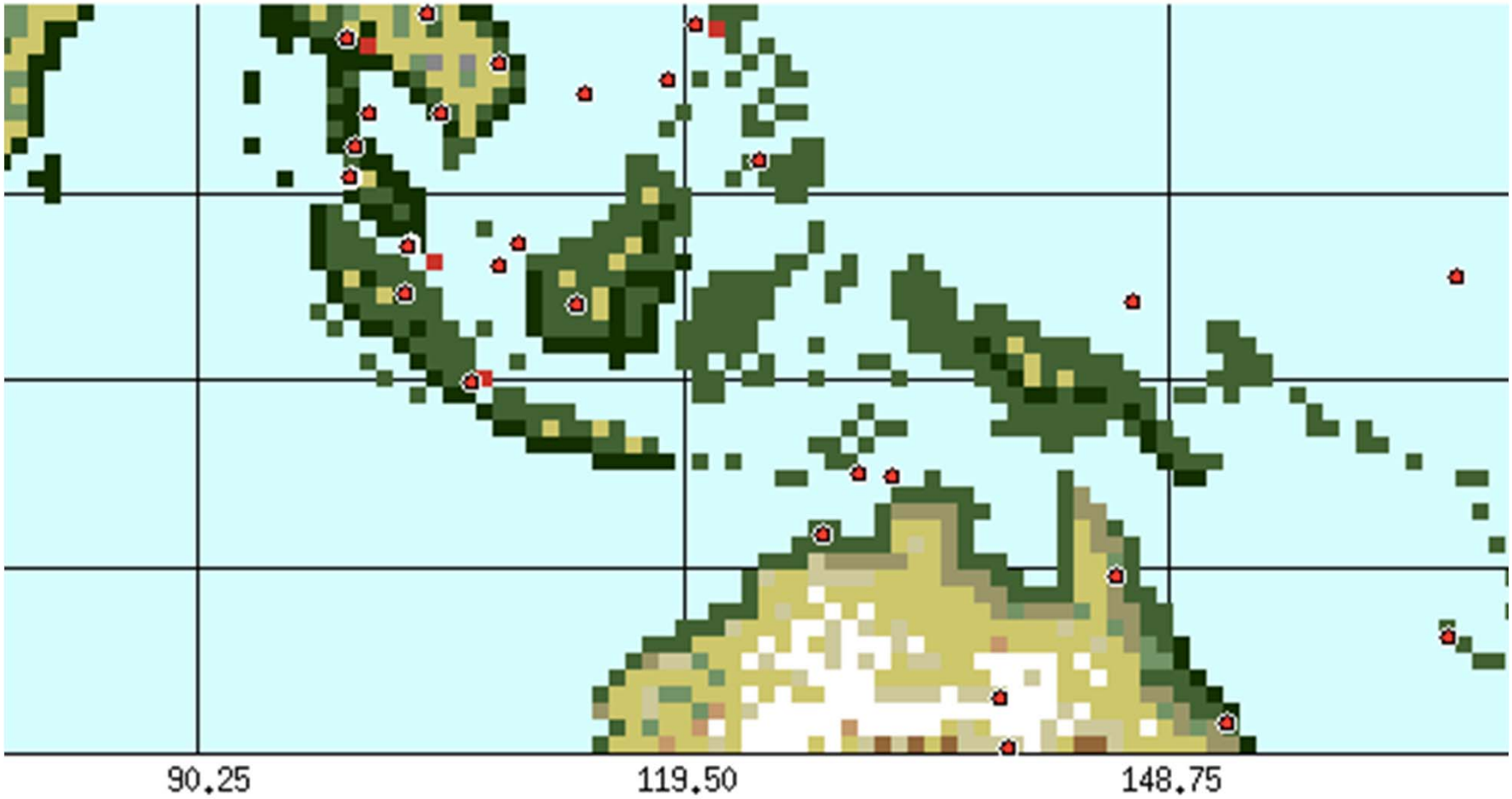

Aug-Sept 2012
Ground Network
AERONET+
MPLNet HQ
Penang
Llhasa
Kampur
Hanoi
Hong Kong
EPA-NCU
Bac Lieu
VASCO
Singapore
Supersite
Kuching
Jambi
Jakarta
AERONET
AERONET DRAGON
Radiation Enhanced Site
MPLNET Lidar
Temporary MPLNET Lidar
Non-NASA Lidars
MAN
VASCO

AERONET & MPLNET Site Plan: Open to Modifications for YMC

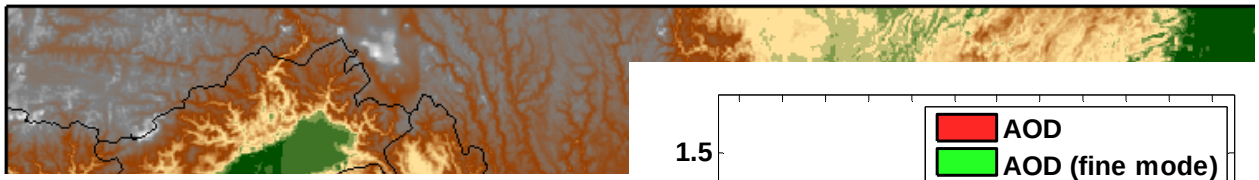


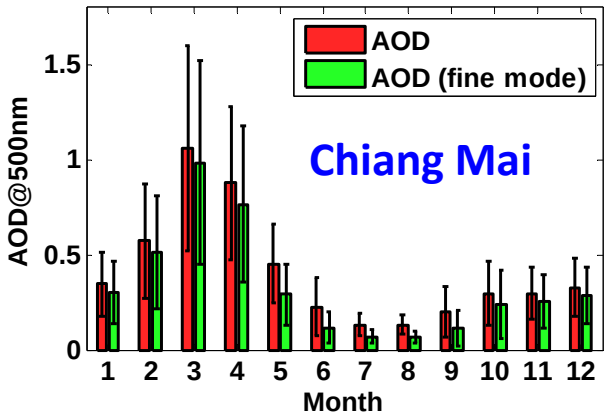
Key Points

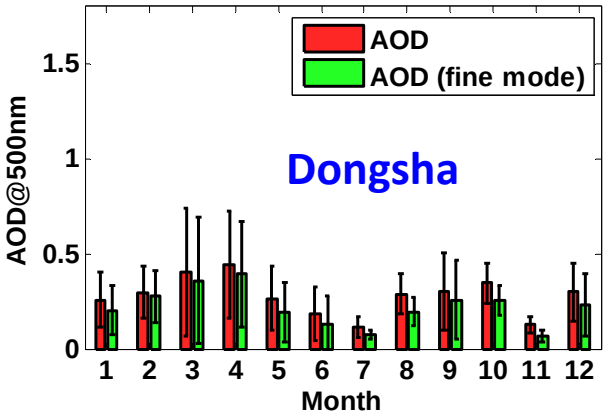
- Public domain database **http://aeronet.gsfc.nasa.gov**
- Near Real time AOD database will for satellite, forecast model, and data assimilation applications
- BMKG collaboration for several new sites in Indonesia in support of YMC
- New lunar measurement capability provides potential for nighttime AOD (in development)

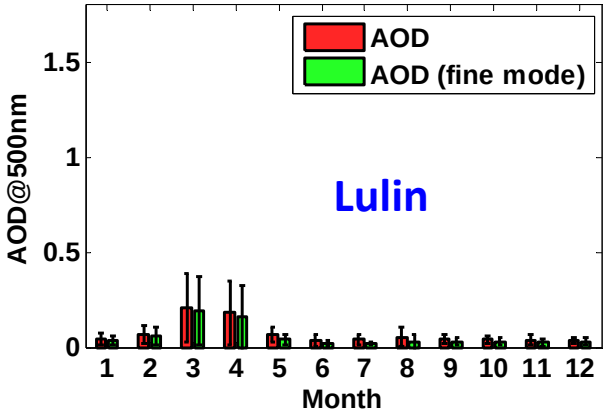

90.25
119.50
148.75

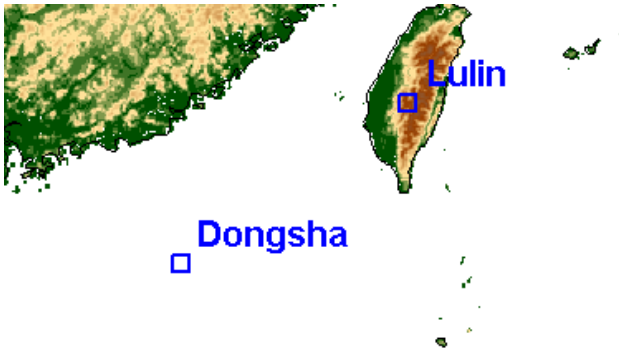
Seasonal variation of AOD from 5 selected A

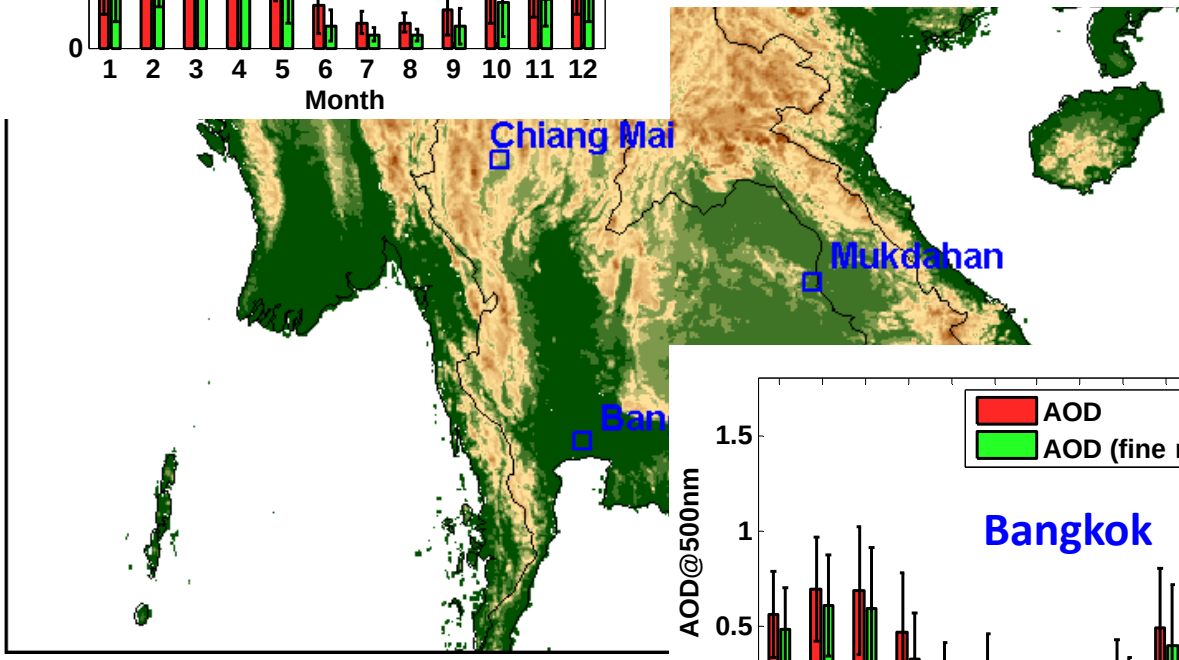


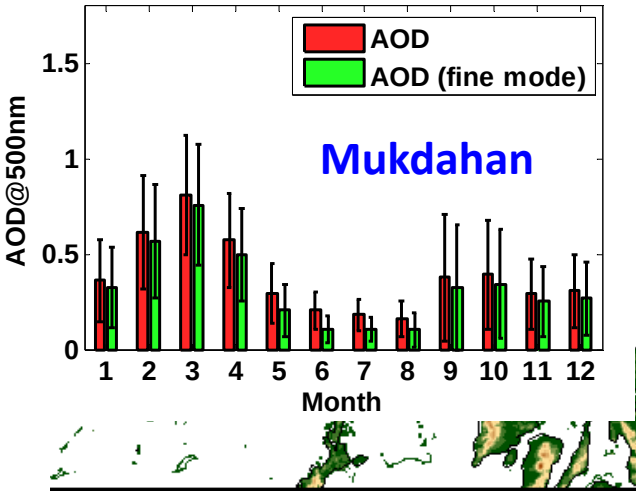








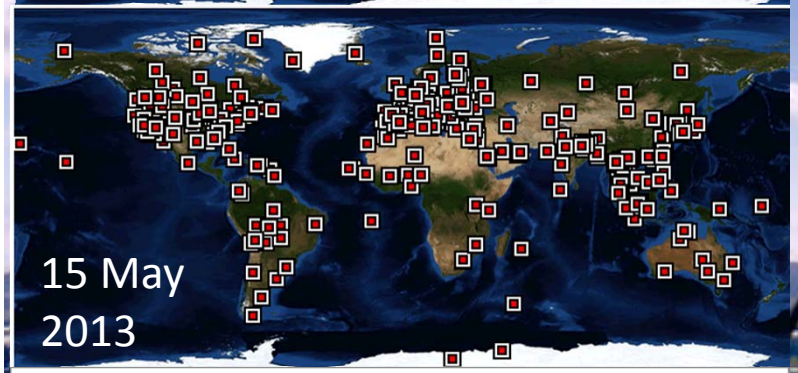


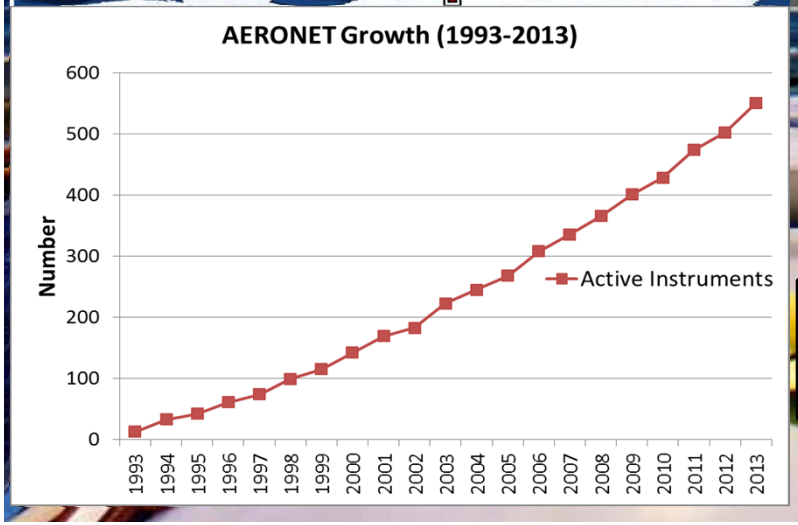


MPLNET Sites: SE Asia

Permanent
Field Campaign
Planned Permanent

AERONET Aerosol Robotic Network- Over 20 Years of Observations and Research





The AERONET program is a federation of ground-based remote sensing aerosol networks established by NASA and LOA-PHOTONS (CNRS) and has been expanded by collaborators from international agencies, institutes, universities, individual scientists and partners.

AERONET provides a long-term, continuous public database of aerosol optical, microphysical, and radiative properties for aerosol research and characterization, validation of satellite measurements, and synergism with other databases.

- >7000 citations
- >400 sites
- Over 80 countries
- http://aeronet.gsfc.nasa.gov

AERONET Federated Calibration Center Coordination:
NASA GSFC (U.S.), PHOTONS (France), RIMA (Spain)