



The Micro Pulse Lidar Network (MPLNET): 2000 - current



- Objective: Long term, global lidar network to profile aerosol and cloud vertical distribution and properties
 - Provide both NRT and Quality Assured data in support of various NASA missions, programs, and modeling
 - Support other domestic and international aerosol & cloud research activities
 - **Develop capability to support aerosol modeling (Aerocom) and operational forecasting (ICAP, WMO SDS-WAS)**
- MPLNET is a federated network built on the AERONET model: utilize standard instruments, calibrations, operations, and processing
- **MPLNET is a member of the WMO Global Atmospheric Watch (GAW) Aerosol Lidar Observation Network (GALION): Welton co-chair**

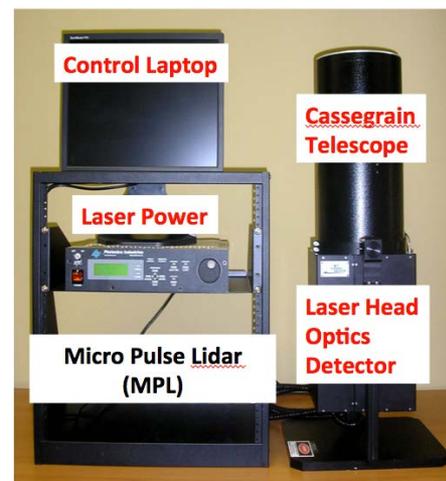
MPLNET Stats: 2000 – current

- Staff: 612: Welton, Stewart and Belcher (SSAI), Lewis (JCET). Offsite: Campbell (NRL), Lolli (CNR), and numerous site PIs worldwide
- 50+ sites, some no longer active
- Currently: 18 long term sites (17 upgraded with polarized lidars)
- **Nearing completion of our new Version 3 system with polarized MPL, and enhanced data products.**
 - **NRT data available on website (<1.5 hrs) including some with QA. Interactive data browsing.**
 - **NETCDF 4, CF compliant formats. Subsets available (including custom as requested, Aerocom?).**
 - **Automated, hourly FTP product staging for ICAP/SDS-WAS applications**
- <http://mplnet.gsfc.nasa.gov>



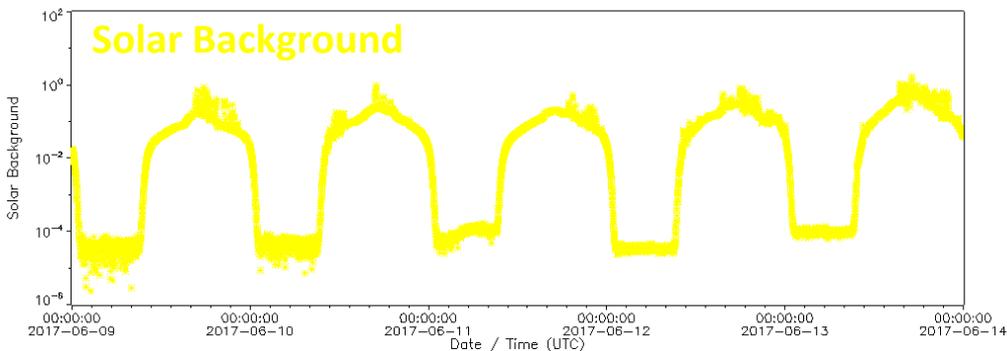
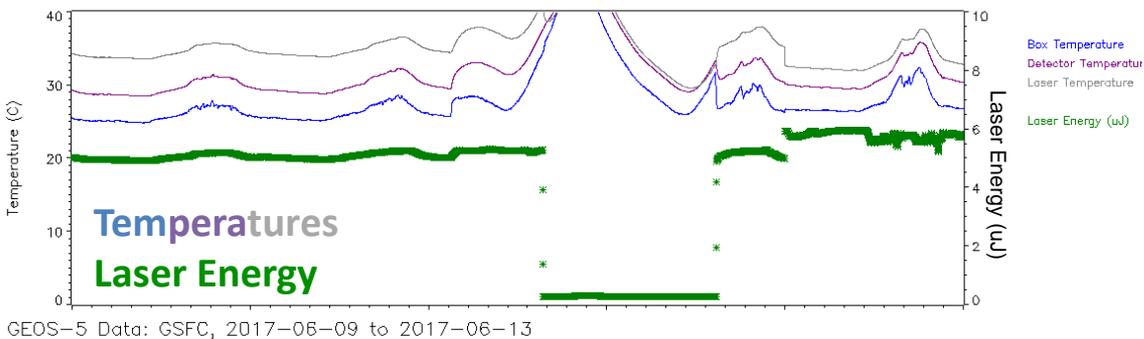
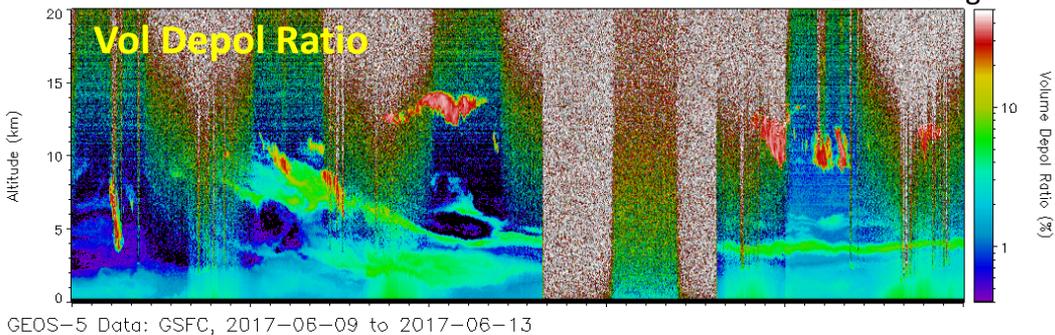
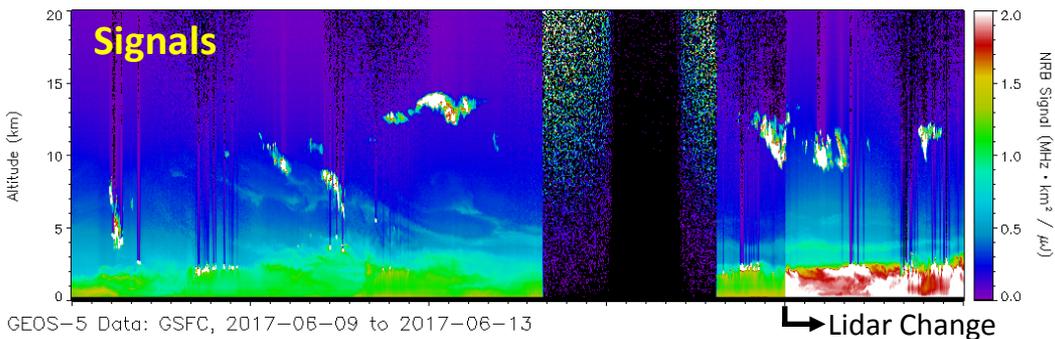
Windpoort, Namibia (borders Etosha Nat Park)
Photo: Seb Stewart

Polarized Micro Pulse Lidar



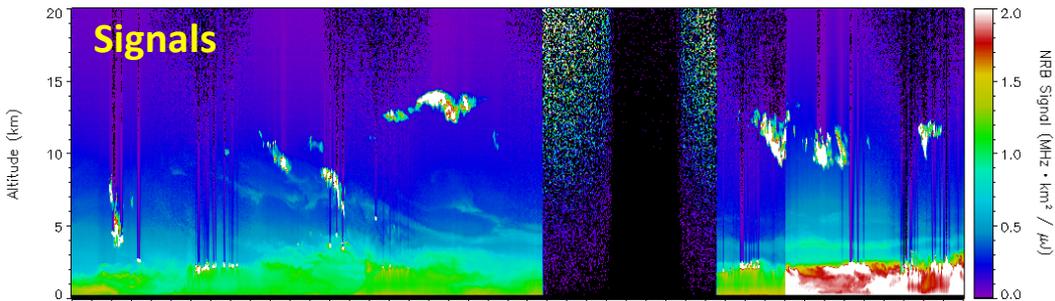


MPLNET V3 Data Samples: Level 1 Signal Product (L1_NRB)

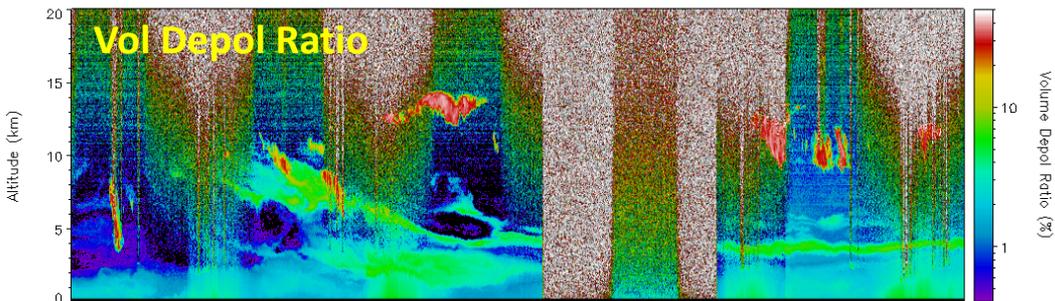




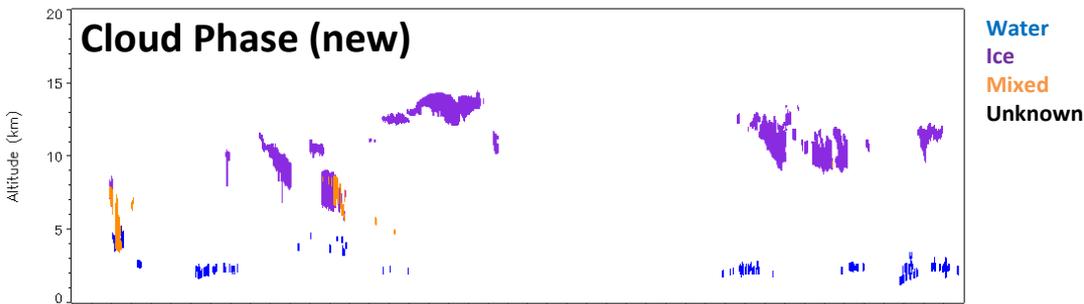
MPLNET V3 Data Samples: Level 1 Cloud Product (L1_CLD)



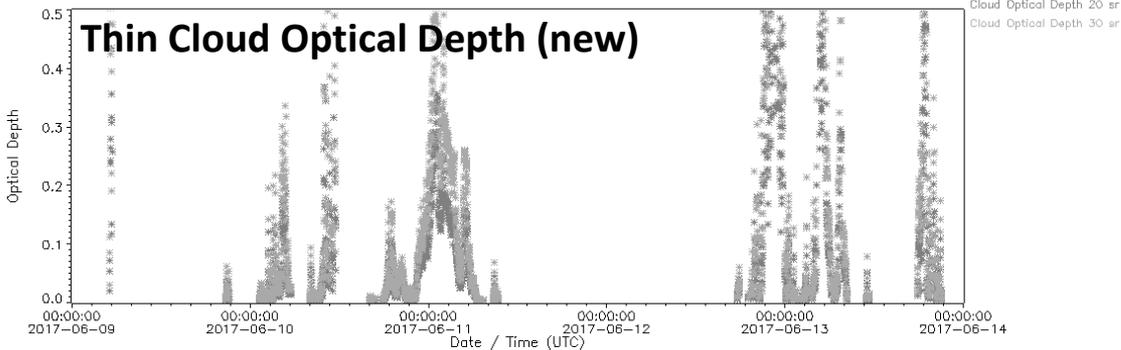
GEOS-5 Data: GSFC, 2017-06-09 to 2017-06-13

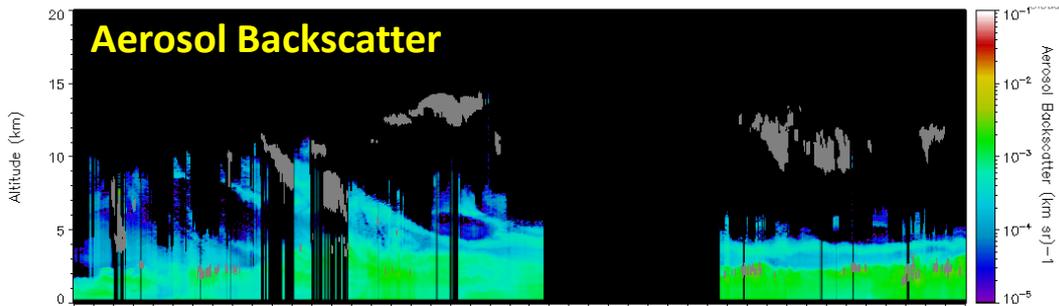


GEOS-5 Data: GSFC, 2017-06-09 to 2017-06-13

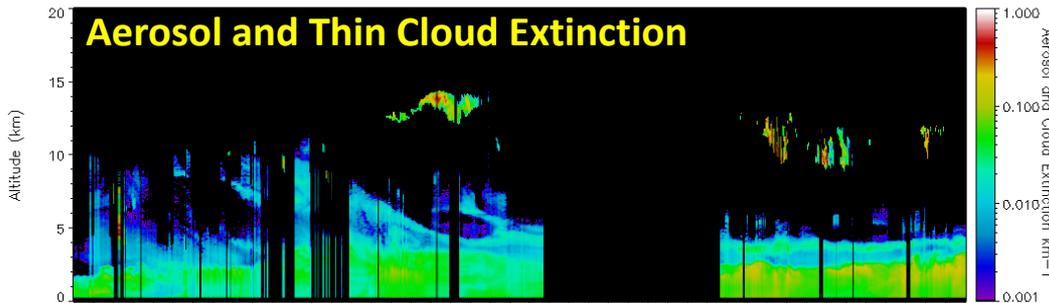


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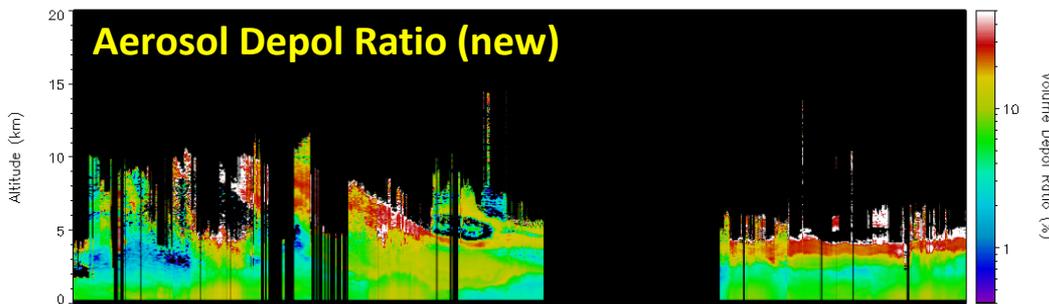




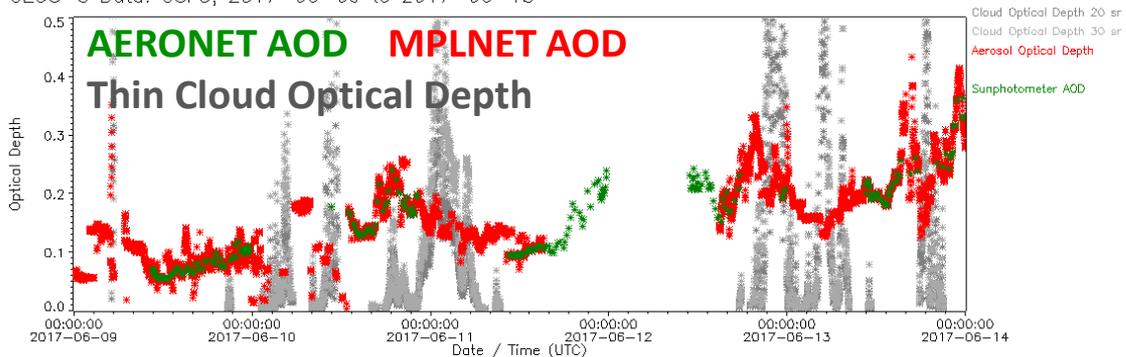
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Conclusion: V3 Status



New V3 Website active: August 2016

- Metadata, Data discovery, Data images/browsing
 - including enhanced interactive/dynamic plotting
- New online data ordering tool: V3 data not available yet
 - V2 data will be available through tool, repackaged into V3 formats

L1 Data

- NRB: signal product finished, forward processing since Jan 2016
 - Will soon apply new calibration protocol to all polarized data (then downloadable)
- CLD: Cloud product in final stages of beta test
- AER: Aerosol product in beta test
- PBL: Boundary layer product in alpha test, beta version of algorithm in dev

L15 Data

- Testing to begin shortly
- QA Algorithm Status: NRB and CLD done, AER and PBL in development
- L15 will be much faster than L1 to implement, test, and convert to ops

L2 Data: ? (after retirement perhaps)
