



ESA-JAXA Pre-Launch EarthCARE Science and Validation Workshop

13 – 17 November 2023 | ESA-ESRIN, Frascati (Rome), Italy

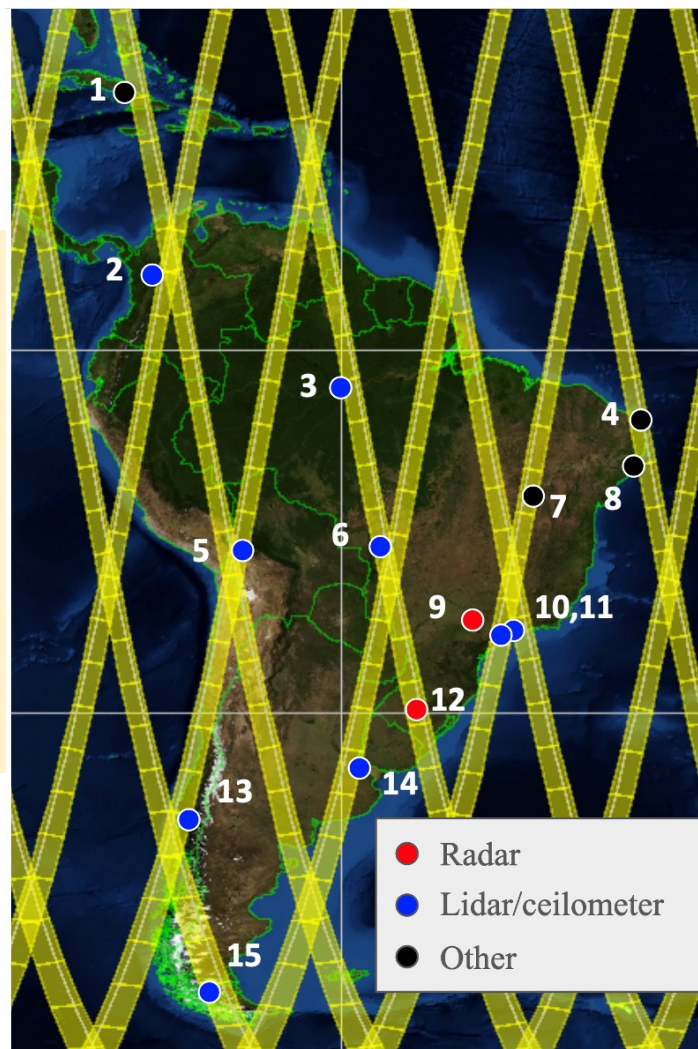
EVID07: LALINET EarthCARE CAL/VAL

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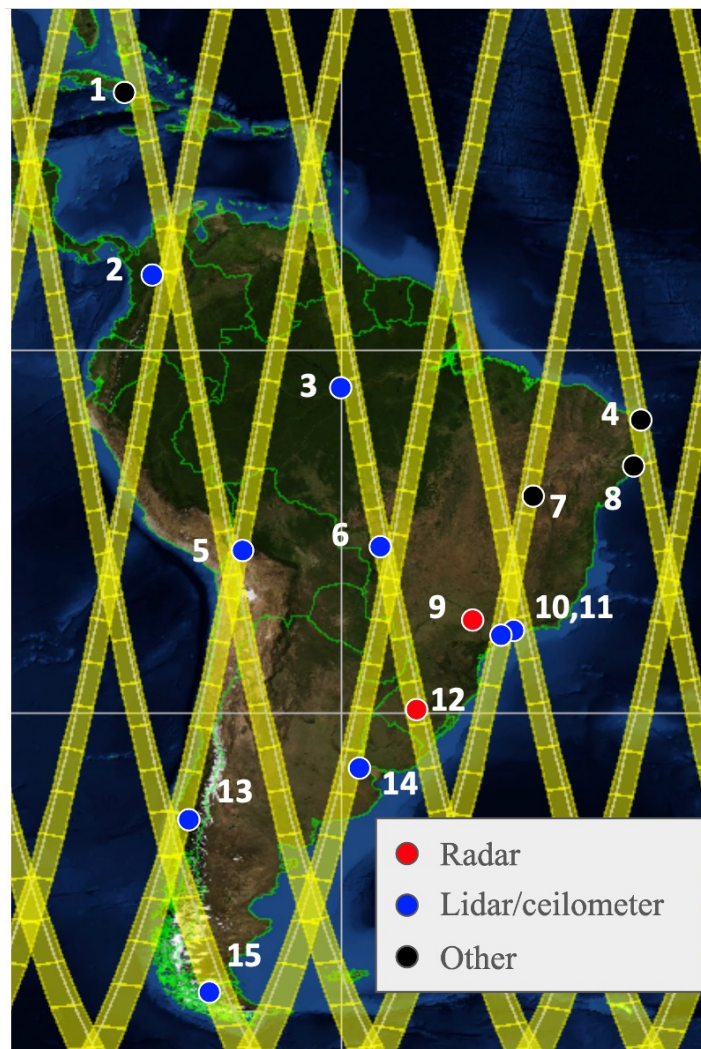
LALINET is a leading network in quantitative aerosol profiling performing a schedule of routine measurements and presently consists of 09 stations distributed over South America.



Map number	Site name	Latitude (deg N)	Longitude (deg E)	Altitude (m asl)	Type of Instrument
1	Camaguey	21.400	-77.900	122	
2	Medellin	6.260	-75.580	1200	Lidar, sunphotometer
3	Manaus	-3.070	-60.010	30	Micropulse lidar
4	Natal	-5.813	-35.255	31	Brewer and Dobson, Ozone-sonde, Meteorological Station, GUV
5	La Paz	-38.740	-72.620	3420	Lidar, sunphotometer
6	Pantanal	-16.254	-56.670	188	Lidar-t Sunphotometer Nephelometer, GHG, wind
7	Barreiras	-12.148	-44.019	450	
8	Maceio	-9.665	-35.735	8	
9	Bauru	-22.340	-49.064	617	Radar
10	São Paulo	-23.560	-46.740	760	Lidar 3, Pyranometer, Skycamera, sun-photometer
11	São José dos Campos	-23.179	-45.887	600	Lidar for Na/K, Brewer
12	Santa Maria	-29.728	-53.755	81	Cloud Radar X/Ka Band, Brewer
13	Temuco	-16.538	-68.070	1500	Lidar
14	Buenos Aires	-34.564	-58.417	10	Lidar, Sunphotometer
15	Punta Arenas	-53.134	-70.880	10	Lidar, pyranometers Brewer



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The main objectives of this proposal are:

- 1) Validation of EARTH-CARE products of aerosol and cloud profiles of backscatter, extinction and lidar-ratio (L2)
- 2) Assessment of spatio-temporal representativeness of EarthCare aerosol and cloud products.



Past Works:

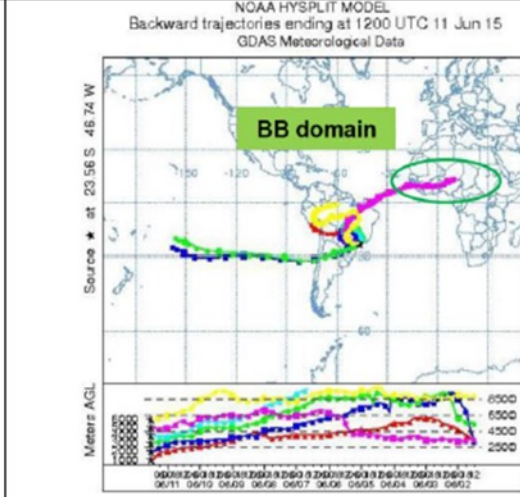
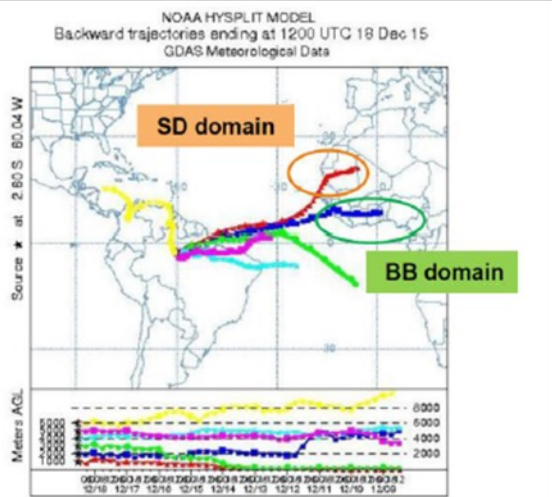
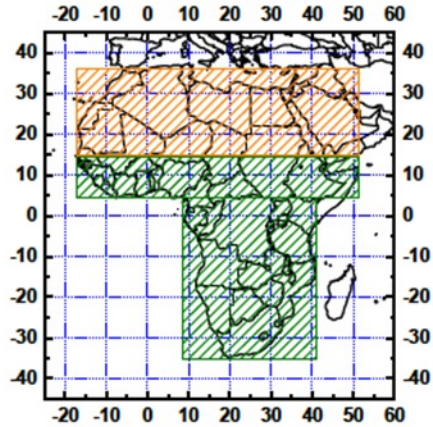
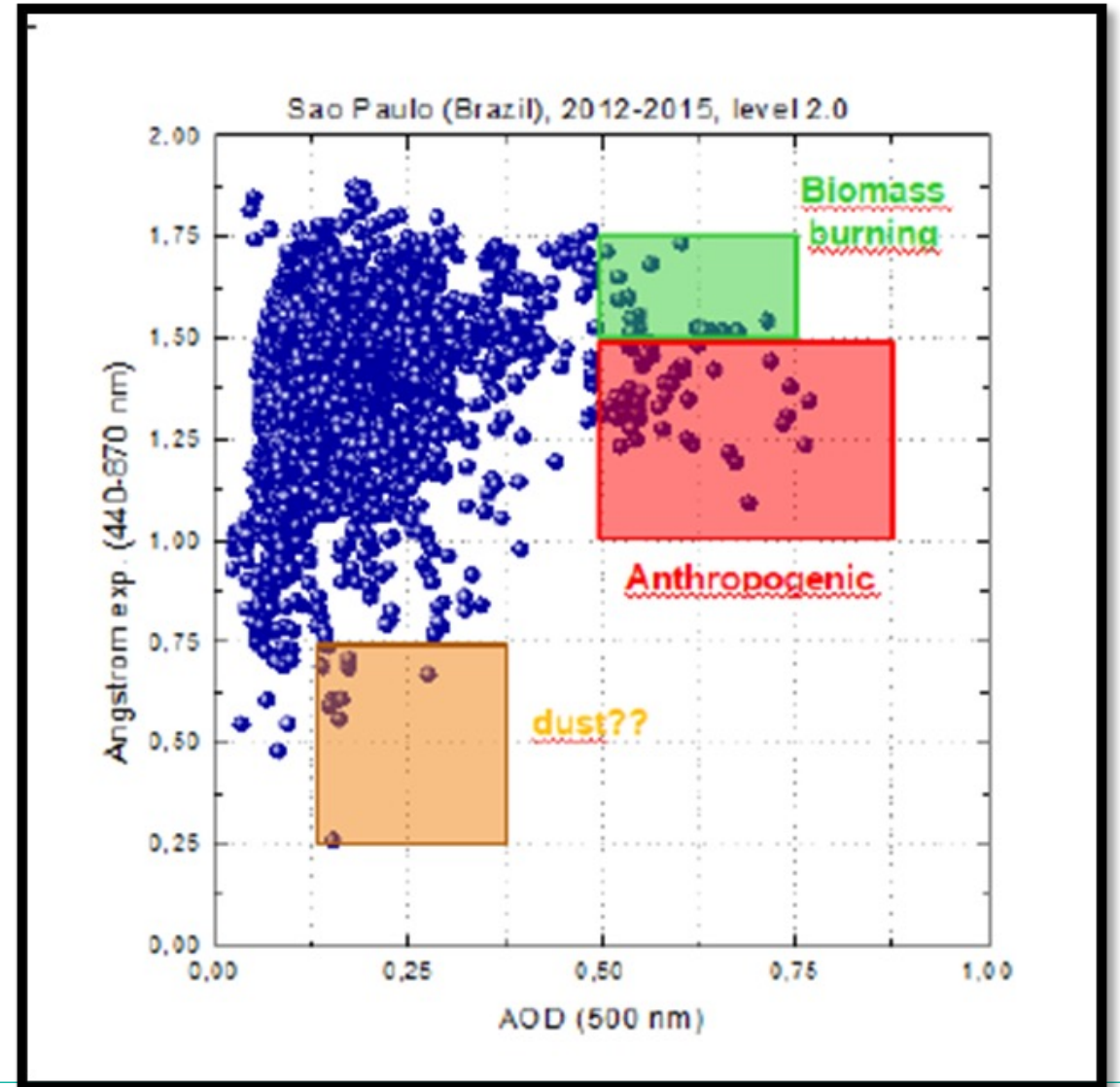
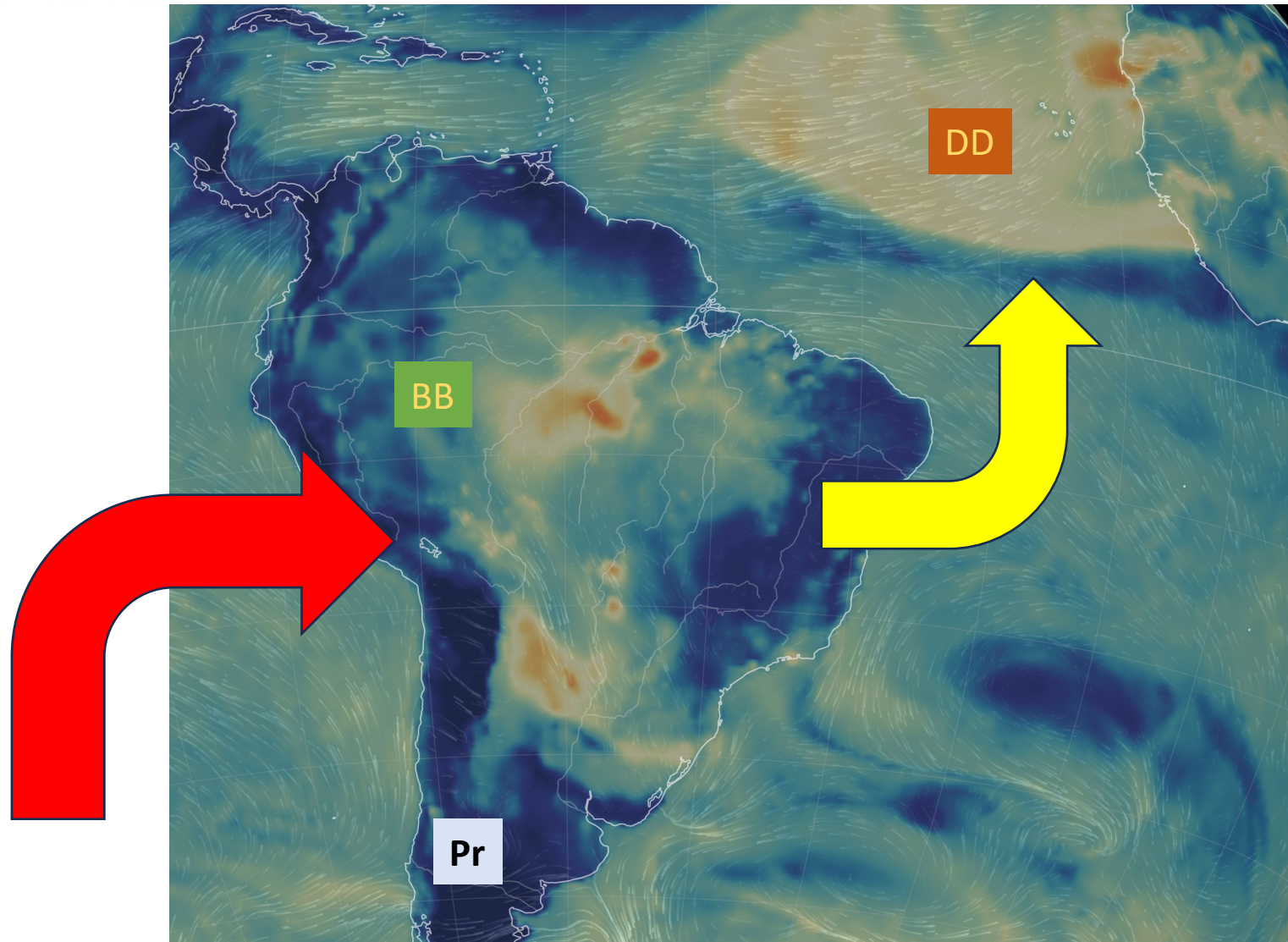


Figure 59: Domains used for the backtrajectories analysis of historical data in the period 2012-2015: Saharan dust domain (orange) and biomass burning domain (green). Back trajectory example – BB and SD domains.





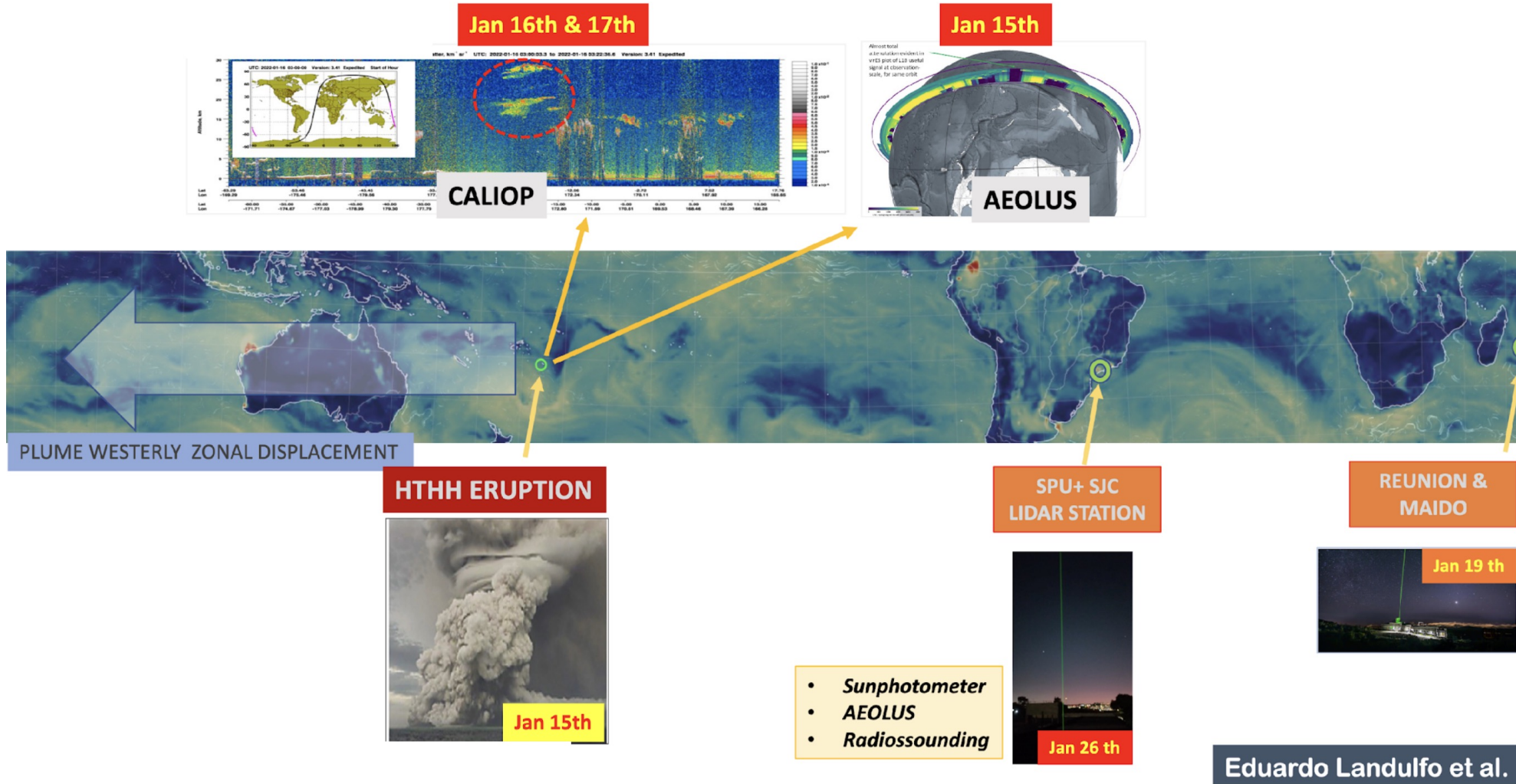
Past Works:





Early Observations of the Hunga-Tonga Plume from Brazil

STUDIES IN THE STRATOSPHERE





Knowledge exchange

Assessments

Data Center Infrastructure

Commitment

Protocol Implementation

Mobility



Umbrella Projects

Funding from Brazilian Government
11/23

Approach Copernicus and AEB
Discussion 09/23

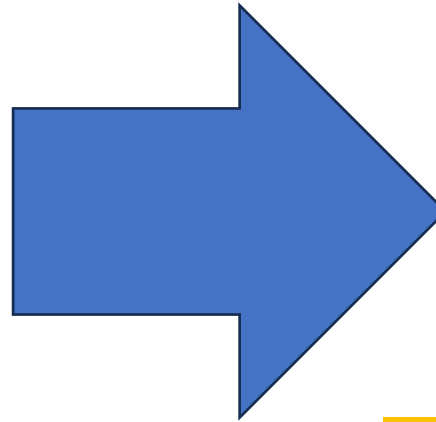
Waiting for an additional Proposal
Results 01/24



Present Approved Proposal

Working Packages

1. Student Training – ACTRIS-ERIC
2. QC/QA @ LALINET sites
3. Coordinated Campaigns*
4. SCC x LALINET Algorithms
5. 2025 An Harmonization Campaign with EU partnership



Biomass Burning Aerosols + ACI

SAA + EC

TROPOSPHERE + STRATOSPHERE+MESOSPHERE

The poster features a central image of a modern cable-stayed bridge with yellow and white cables, set against a cityscape and a blue sky. The text is overlaid on the image. At the top left, it reads 'XII WORKSHOP ON LIDAR MEASUREMENTS IN LATIN AMERICA'. At the top right, there is a circular logo with the same text and 'São Paulo - Brazil 2023'. At the bottom, a yellow banner contains the dates '07 thru 12 April 2024, São Paulo'. Below the banner, it lists 'School of Lidars', 'Scientific Sessions', and 'Bridge Meeting between Lalinnet and LifeWatch and ACTRIS'.

XII WORKSHOP
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THANK YOU

