

PMAp: synergistic aerosol products from Metop

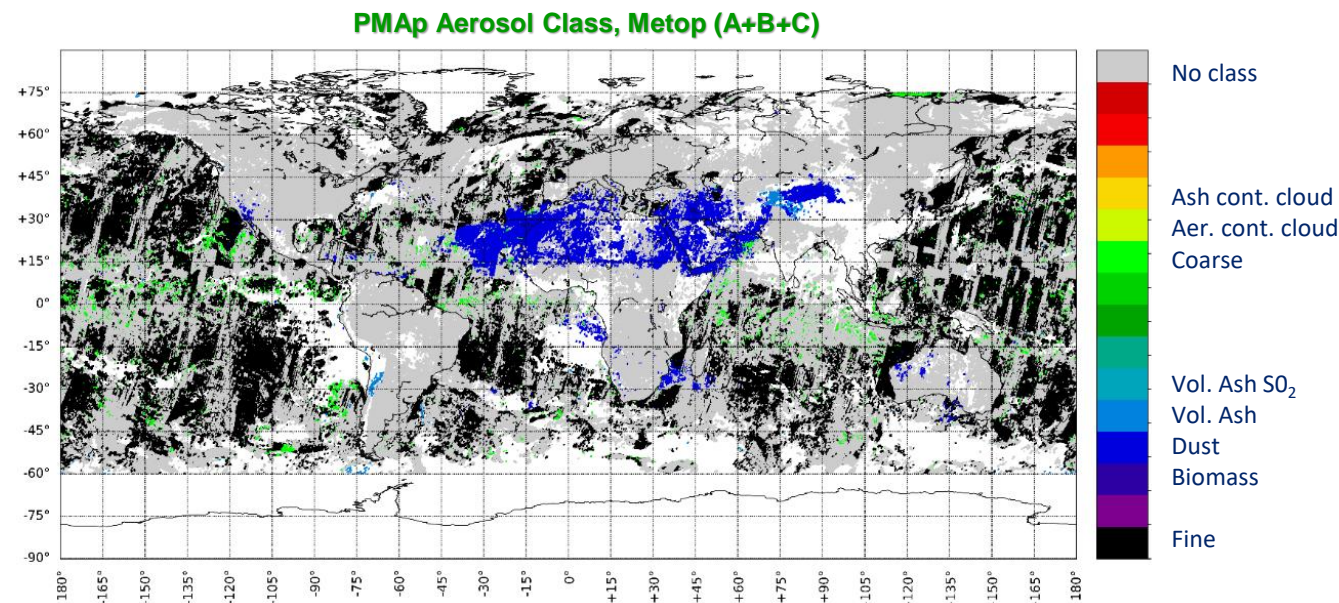
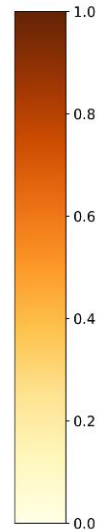
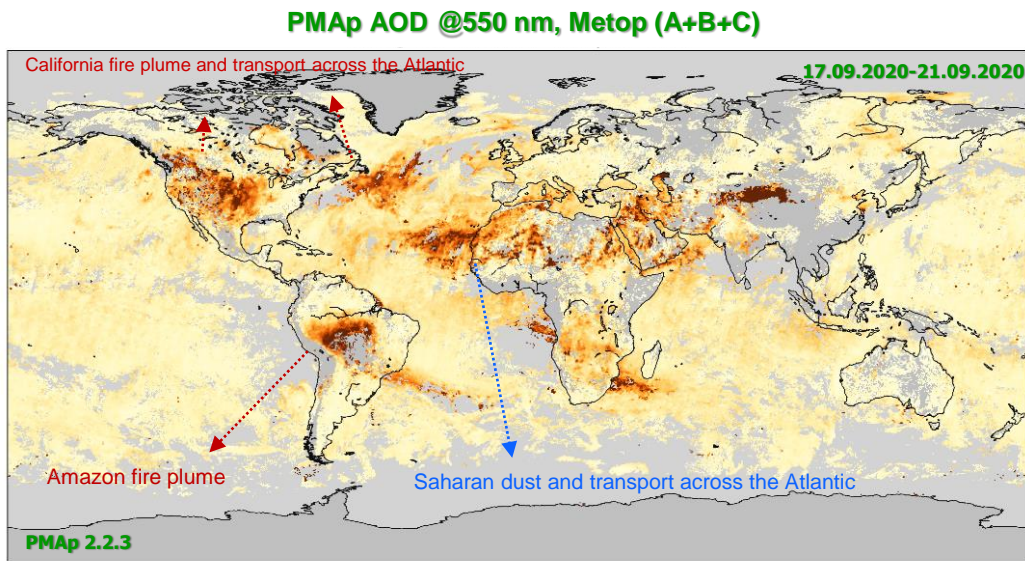
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PMAp

The **Polar Multi-sensor Aerosol product (PMAp)**
is an operational aerosol product retrieved from **Metop A, B and C**.



Near Real Time **Aerosol Optical Depth** and **Aerosol Type**

maximum 3 hours after sensing time, 24 hours a day

Assimilation start date: Ocean April 2014, Land: April, 2016.

Spatial coverage: Global, land and ocean

Spatial resolution: at GOME-2 PMD: Metop B and C: 10×40 km²; Metop A: 5×40 km²

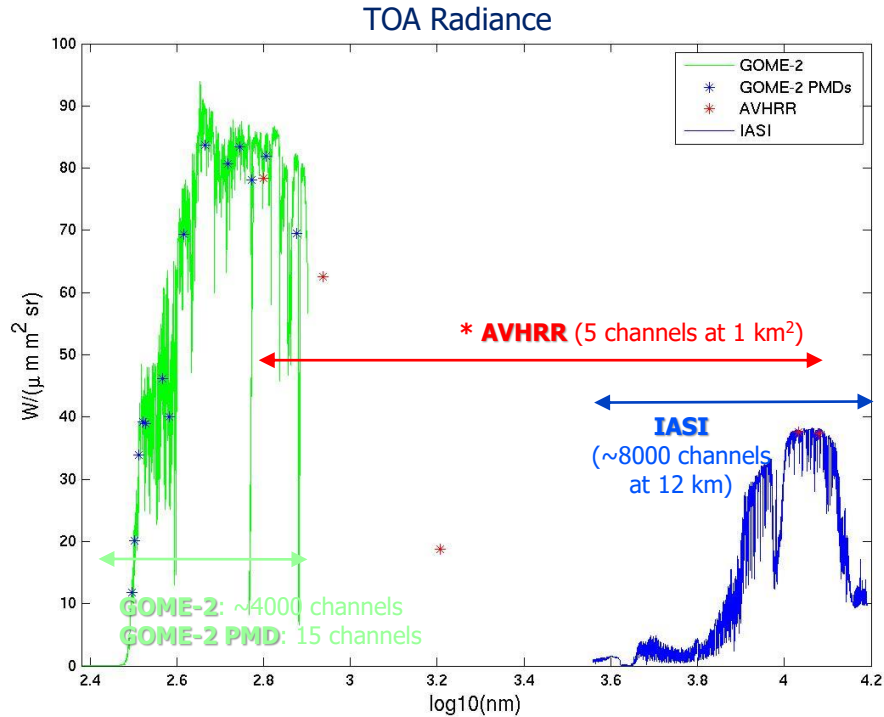
Data availability:

- NRT product:
Available via EUMETCast in [netcdf4](#).
- Full orbit offline data.
Available from the EUMETSAT archive
<http://archive.eumetsat.int> [EPS native](#) and [netcdf4](#).

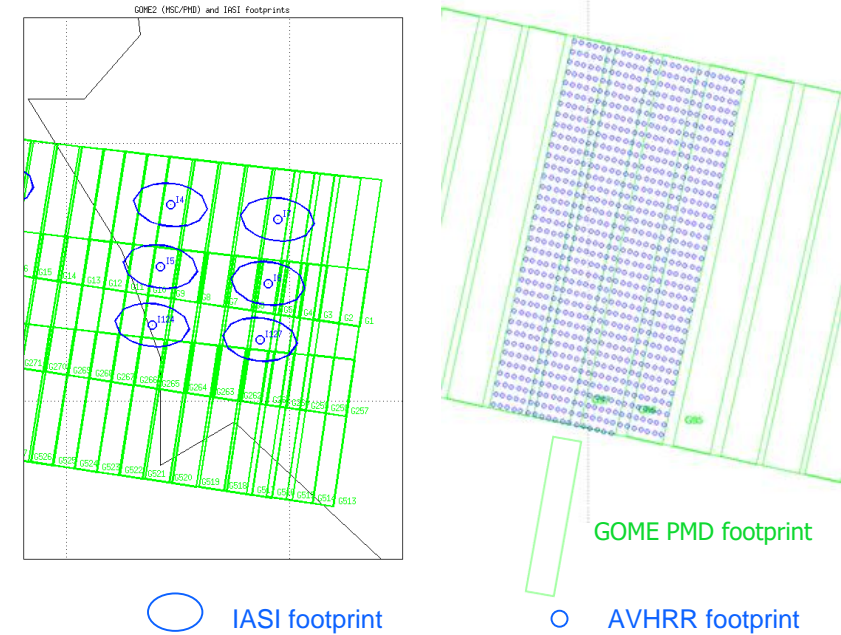
PMAp: creating a hyper-instrument

Merging hyper-spectral and hyper-spatial information from GOME-2, AVHRR and IASI

Multi sensor spectral information



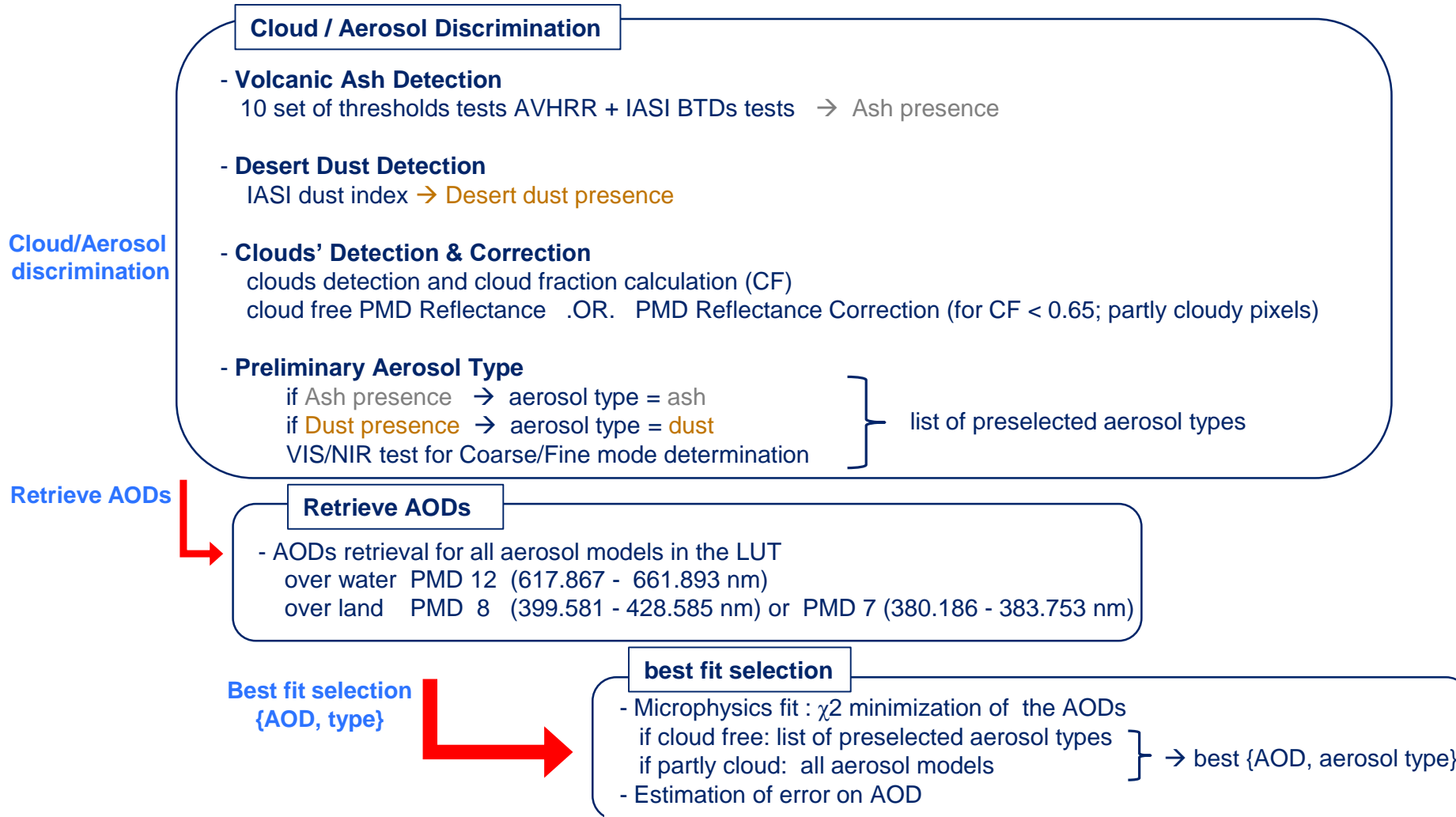
Multi sensor co-location



Instruments for L1 data	Spatial resolution	Spectral range	Purpose
GOME PMD	Metop B and C: 10×40 km ² Metop A: 5×40 km ²	311 nm – 803 nm (15 band)	AOD, Aerosol Type, AAI, stokes fraction, polarization
AVHRR	1.08 × 1.08 km ²	580 nm – 12500 nm (5 band)	Clouds, scene heterogeneity, dust/ash
IASI	12 km (circular)	3700 nm – 15500 nm (resolution 0.5 cm ⁻¹)	Volcanic ash, desert dust, aerosol height

PMAp: algorithm description

PMAp retrieval algorithm design. Version 2.2.3 (next release):



PMAp:

Version1 (water only)

Start of dissemination: 29th April 2014

Version 2.0 (water and land)

Start of dissemination: 17th April 2016

Version 2.1 (water and land)

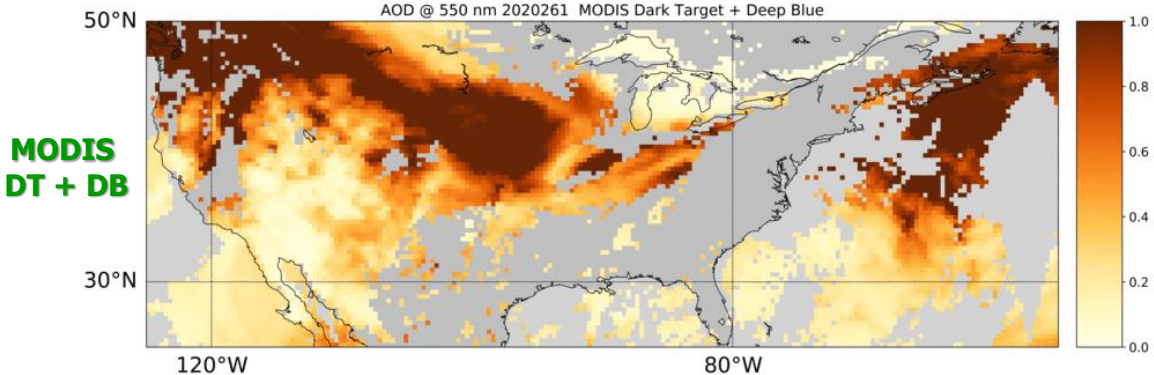
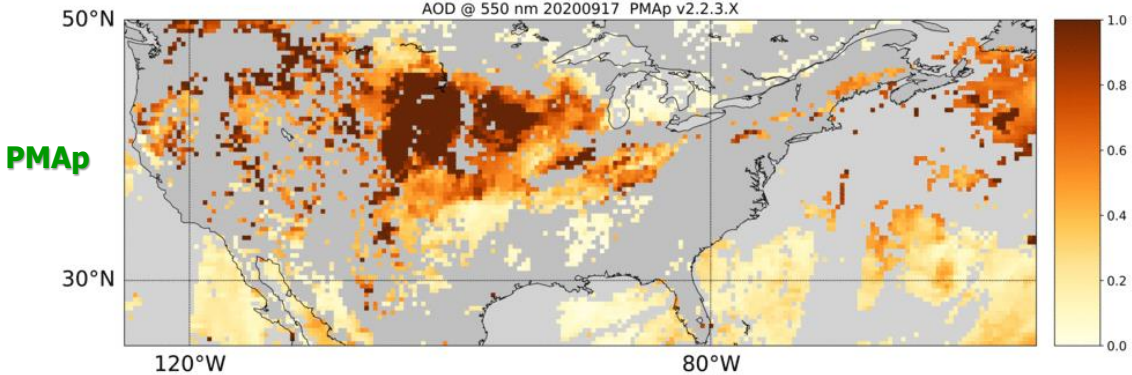
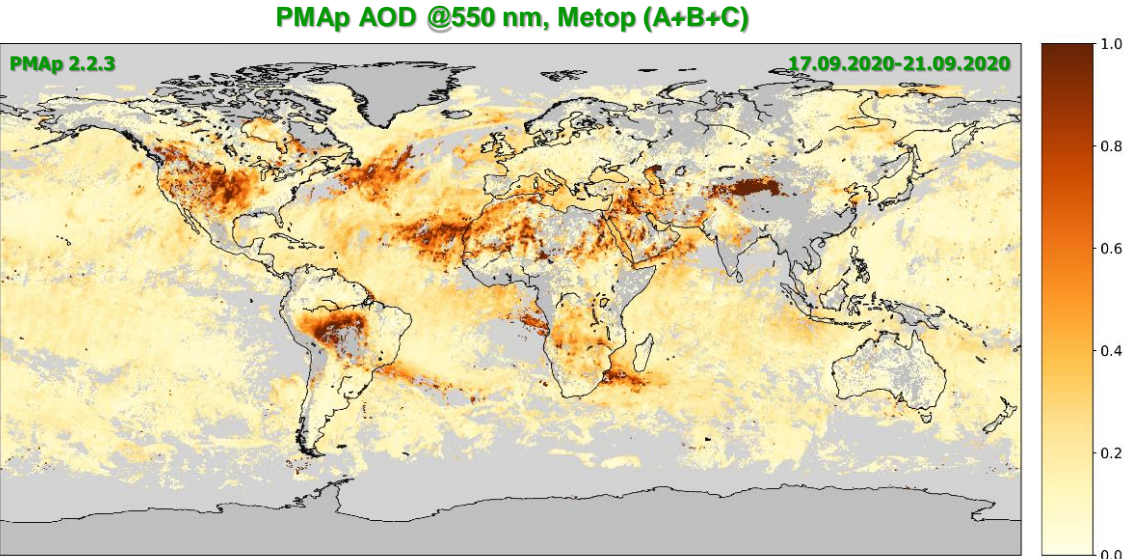
Start of dissemination: 23rd February 2017

Version 2.2. (water and land)

Start of dissemination: Beginning 2021.

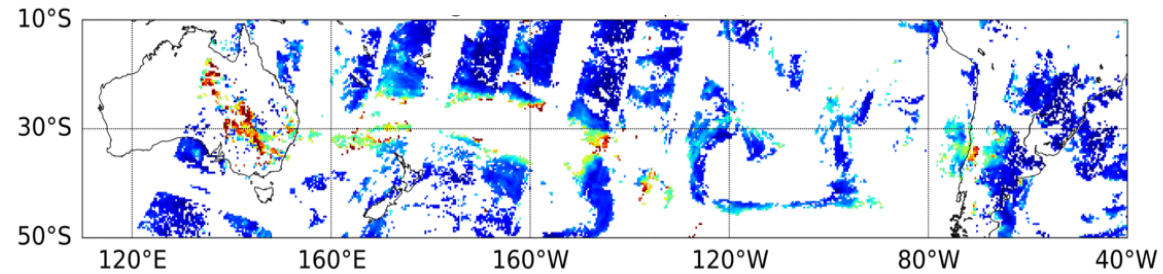
PMAp: comparison to MODIS

California fires, September 2020



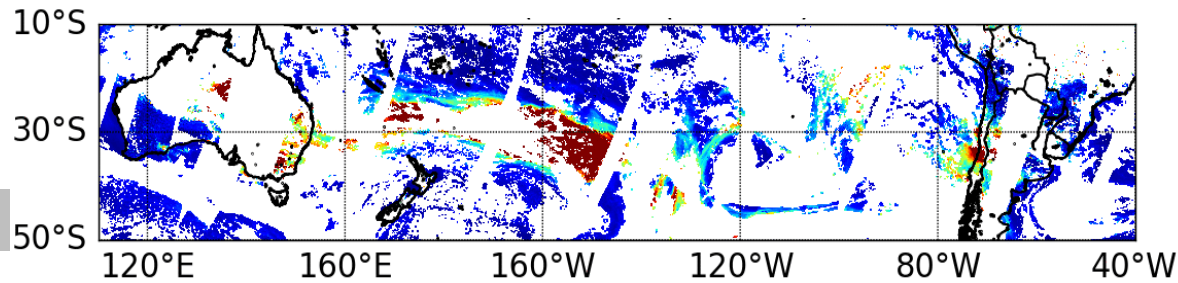
PMAp: comparison to SLSTR

PMAp- Metop-A/B/C



Australia Bush fires – Smoke over South-Pacific

SLSTR-A/B



AOD @ 550nm

