

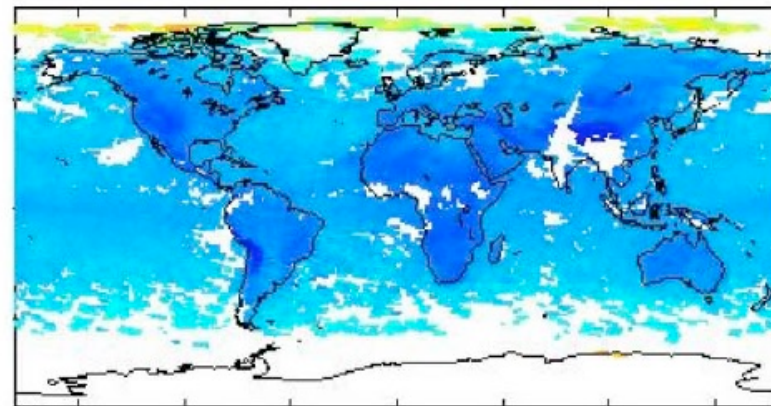
retrieve O_4 and O_2 vertical columns
make sure AMF inputs/
calculations are accurate at multiple
wavelengths.

**GLOBAL DISTRIBUTION OF ATMOSPHERIC PHOTON PATH
LENGTHS DERIVED FROM GOME AND SCIAMACHY**
Thomas Wagner⁽¹⁾, Steffen Beirle⁽¹⁾, Michael Grzegorski⁽²⁾, Tim Deutschmann⁽²⁾, and
Ulrich Platt⁽²⁾

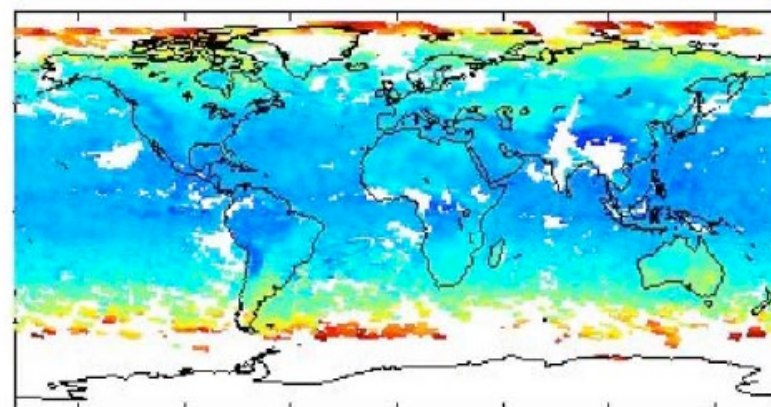
Poster, Envisat Symposium 2007

http://earth.esa.int/envisatsymposium/proceedings/posters/4P1_4P2/457804tw.pdf

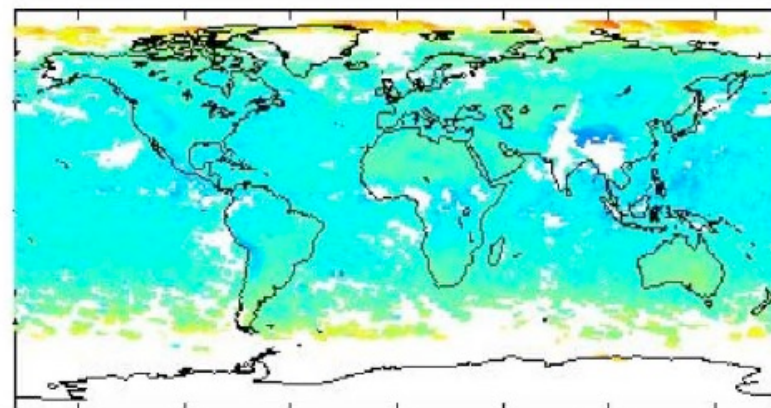
Clear sky (effective cloud fraction: 0-5%)



O_4
360 nm



O_4
630 nm



O_2
630 nm

O₂ vapor AMF requires knowledge of vertical profile (unlike O₄/O₂), and has robust validation network in place

Validation and update of OMI Total Column Water Vapor product

Jun Wang, Gonzalo Gonzalez Abad, Xiong Liu, and Kelly Chance
Harvard-Smithsonian Astrophysical Observatory, Cambridge, Massachusetts, 02421, USA
J. Geophys. Res., 121, 11379–11393, 2016

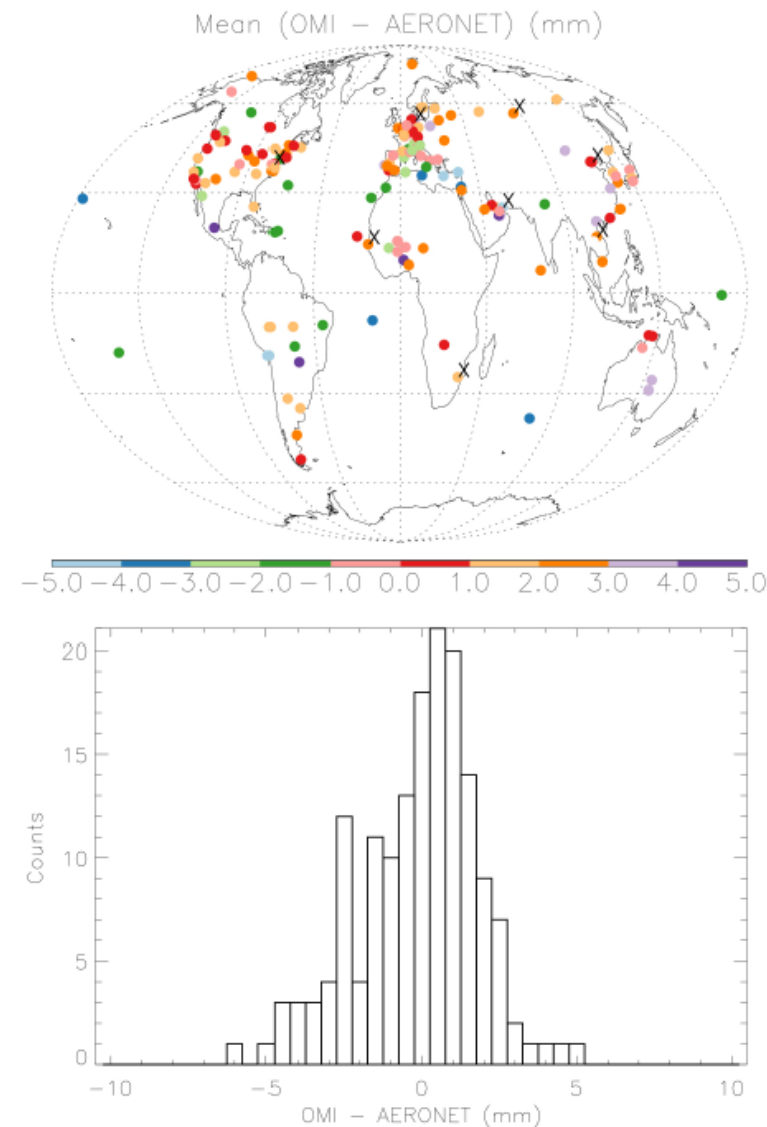
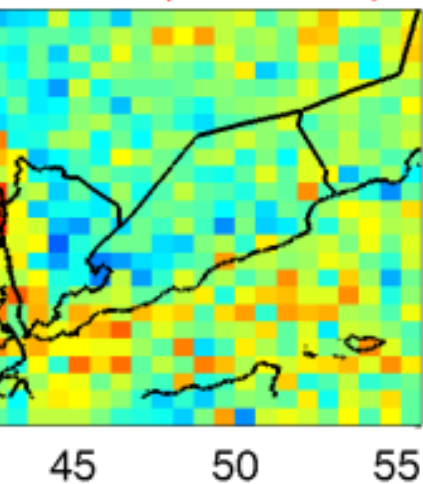


Figure 6. Top: spatial distribution of the time mean of version 2.0 OMI–AERONET from 2005 to 2009 at AERONET stations. Bottom: histogram (with 0.5 mm bins) for the values in the top panel.

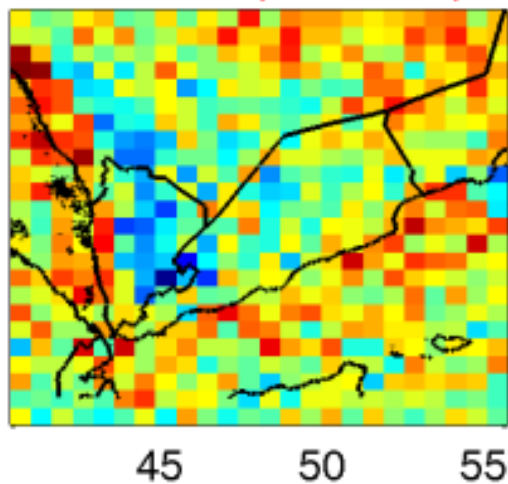
Use detector/retrieval symmetries to test
for consistency: e.g., HCHO over Sarawat Mountains in Yemen,
backscatter vs forward scatter

SCIAMACHY

0:20AM (W of nadir)

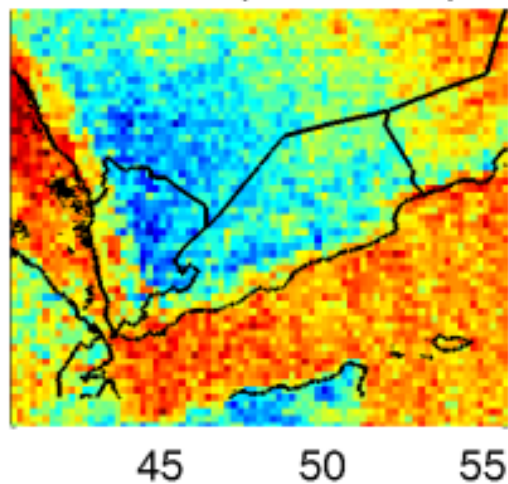


~10:40AM (E of nadir)

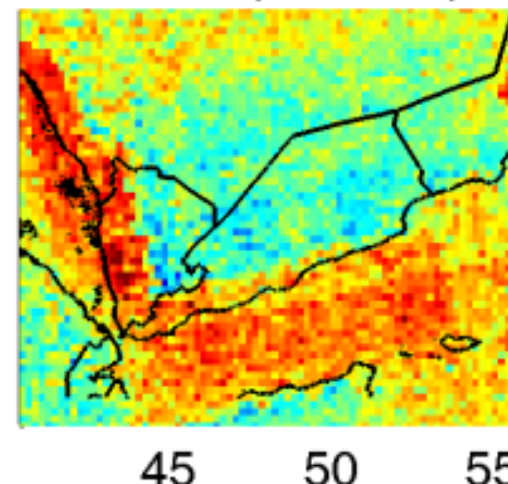


OMI

~1:05PM (W of nadir)



~1:25PM (E of nadir)



Use detector/retrieval symmetries to test for consistency: e.g., NO₂ over Los Angeles Basin, MJJ, 2005-08

