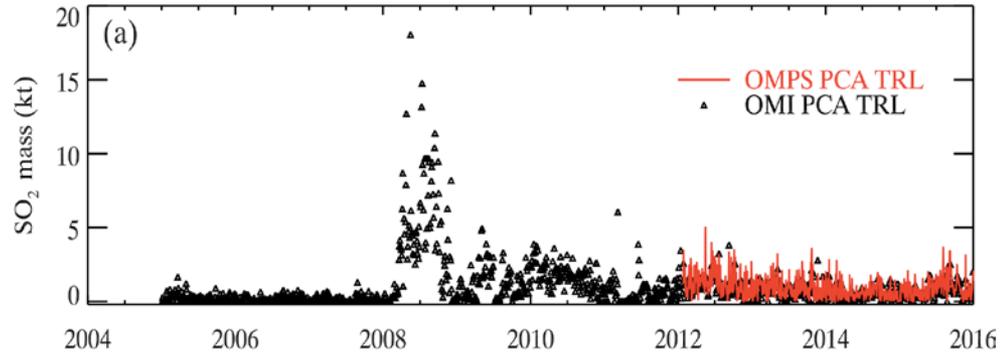
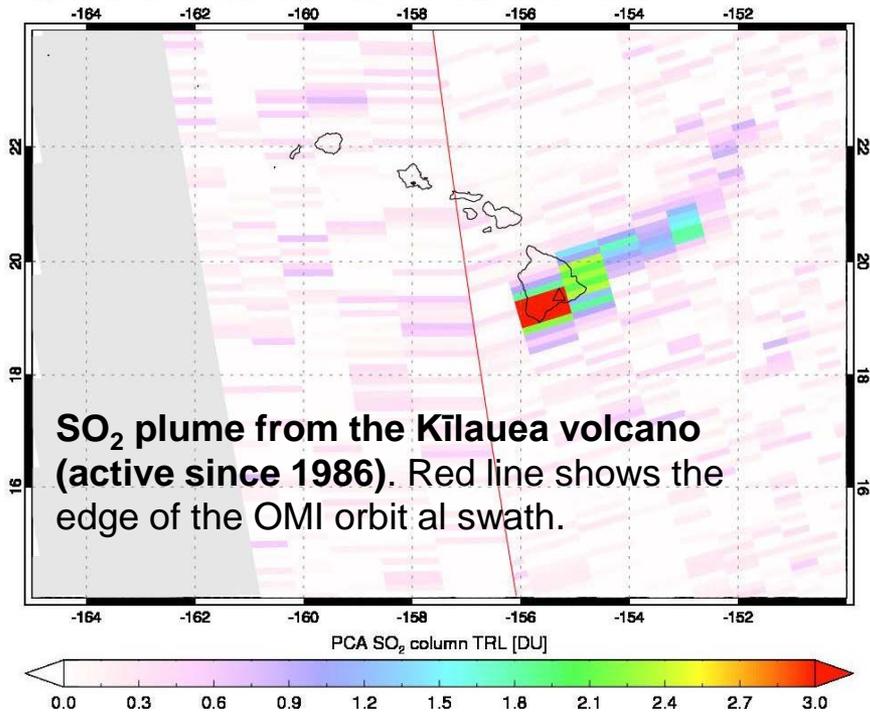
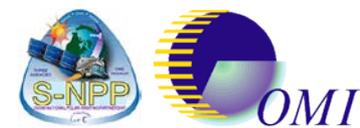




New-generation NASA Aura Ozone Monitoring Instrument (OMI) volcanic SO₂ dataset and continuation with SNPP OMPS

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Overlapping daily SO₂ time series over the isolated Kilauea source help to determine the consistency between OMI and operational Ozone Mapping and Profiling Suite (OMPS) instrument on board NASA-NOAA Suoimi-NPP satellite.

We introduce the new Aura Ozone Monitoring Instrument (OMI) volcanic SO₂ dataset, produced with an advanced principal component analysis (PCA) algorithm with iterative spectral fitting. As compared with the previous OMI data product, this new version significantly reduces retrieval bias for large volcanic eruptions and improves data quality for small degassing volcanoes. The new algorithm is also capable of producing highly consistent retrievals between OMI and SNPP OMPS (SO₂ timeseries timeseries above right), and continuing the long-term satellite volcanic SO₂ data record.

