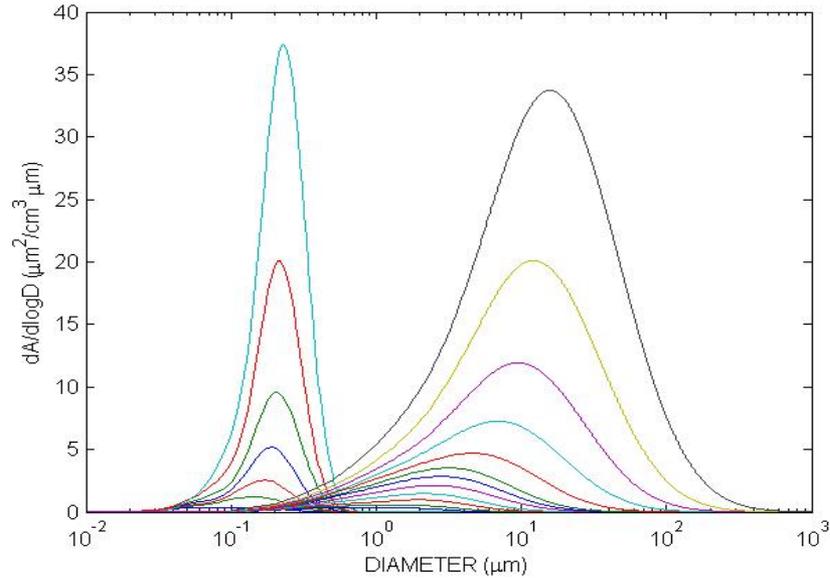


Satellite and InSitu Aerosol Measurements

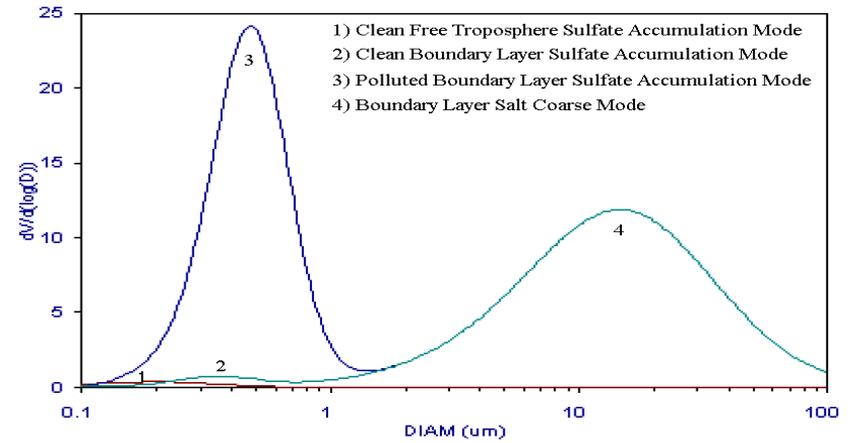
John Porter

HIGP, University of Hawaii

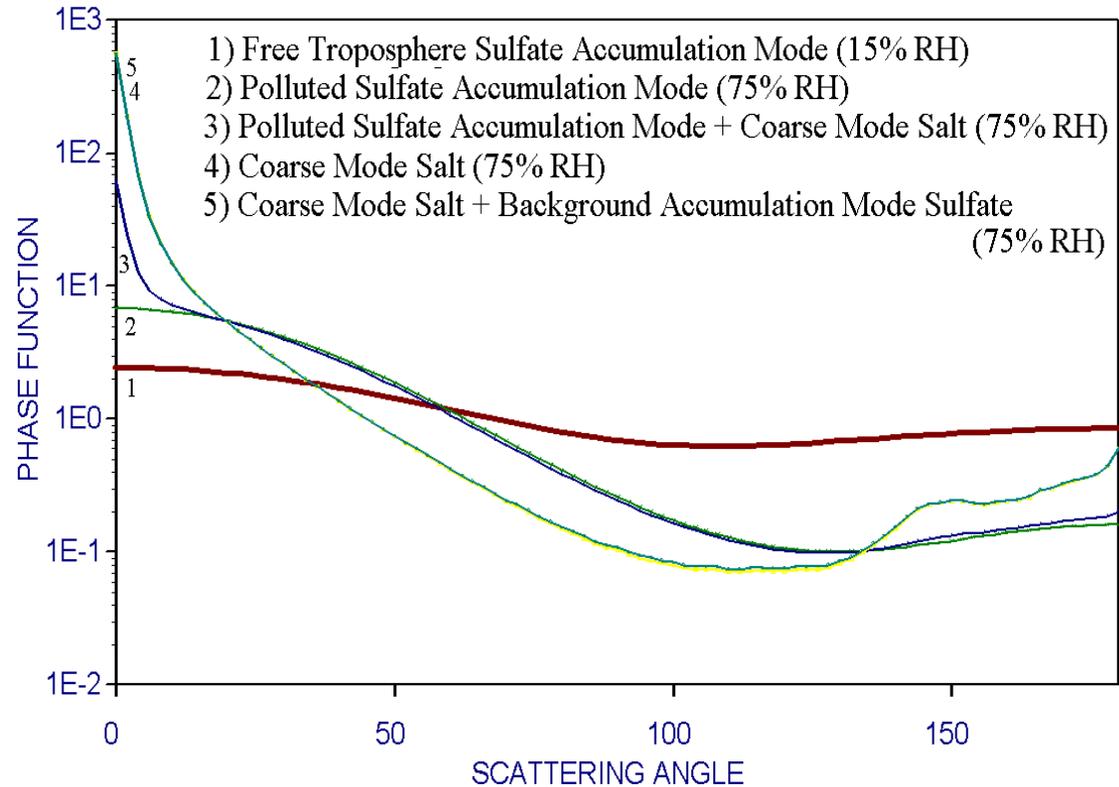
Aerosol Models (Porter + Clarke, 1997)



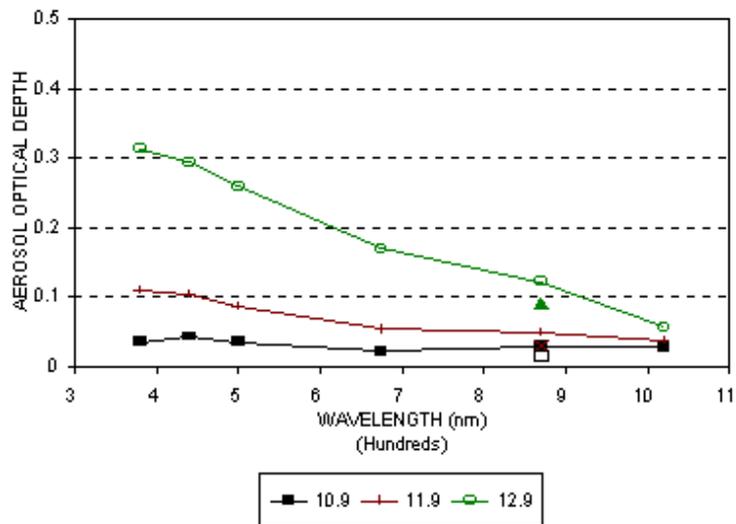
Typical Hawaii Size Distributions



Typical Aerosol Phase Functions

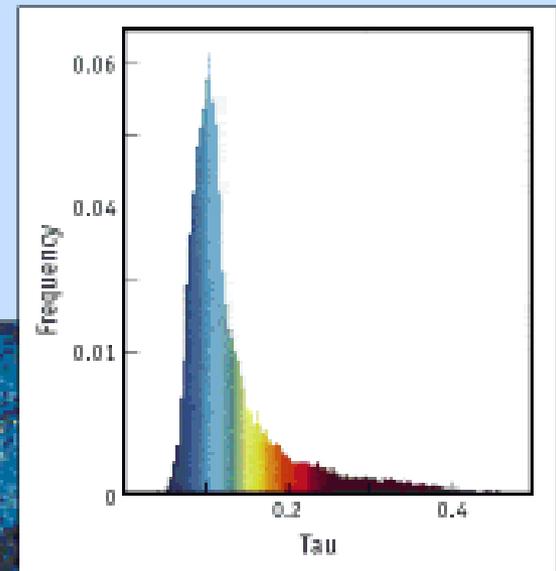
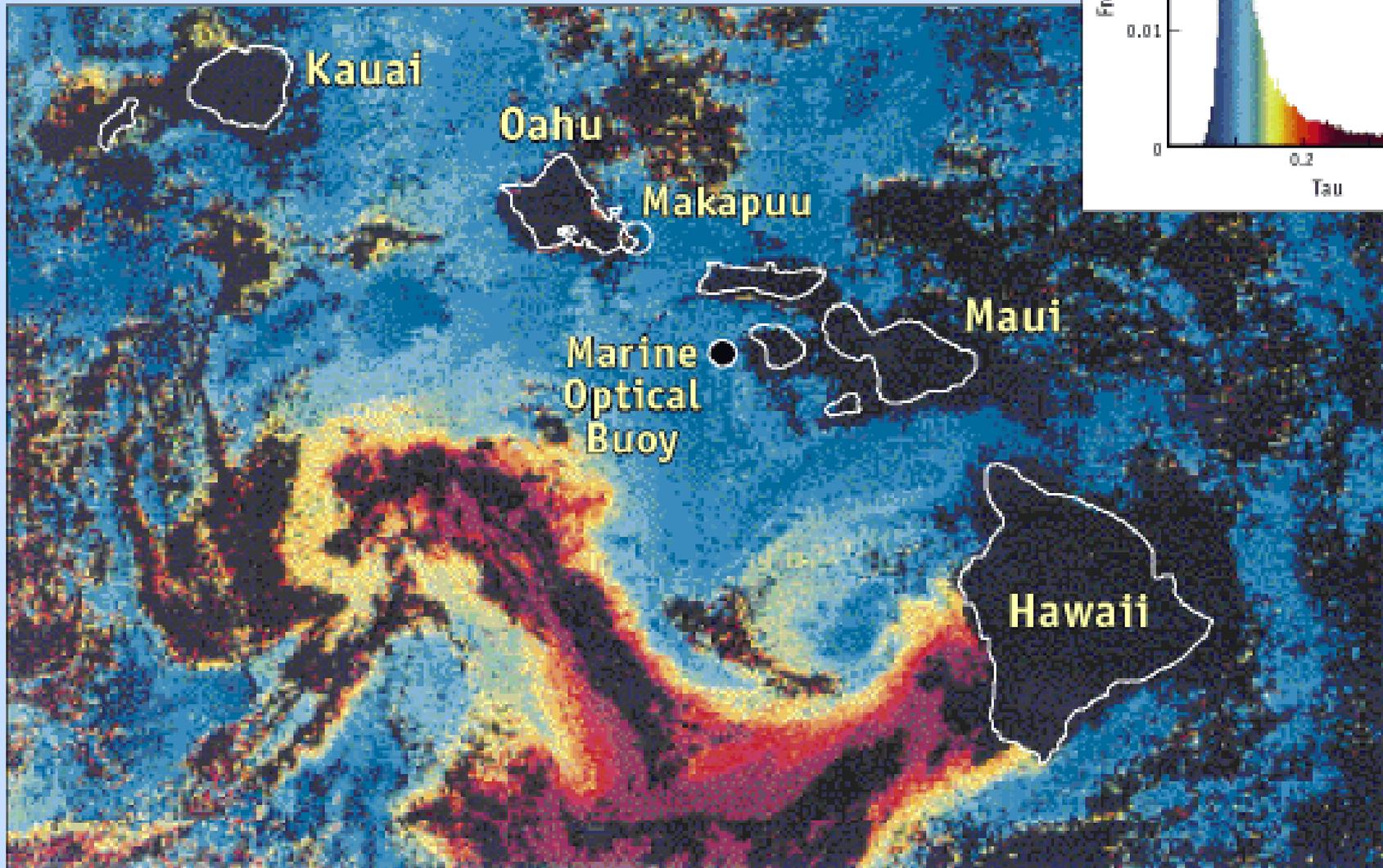


Typical Optical Depths

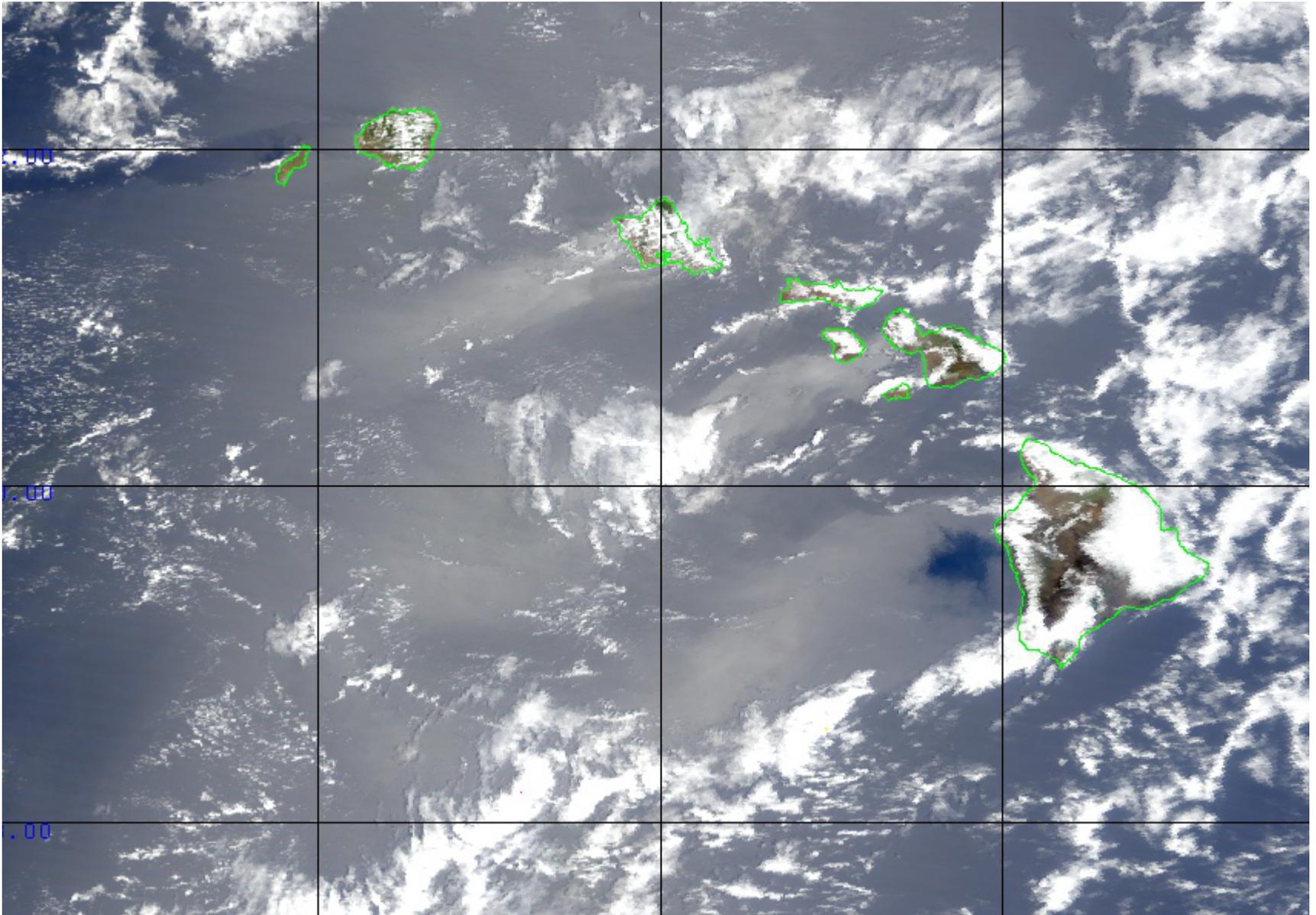


Aerosol Optical Depth From AVHRR Satellite (1993)

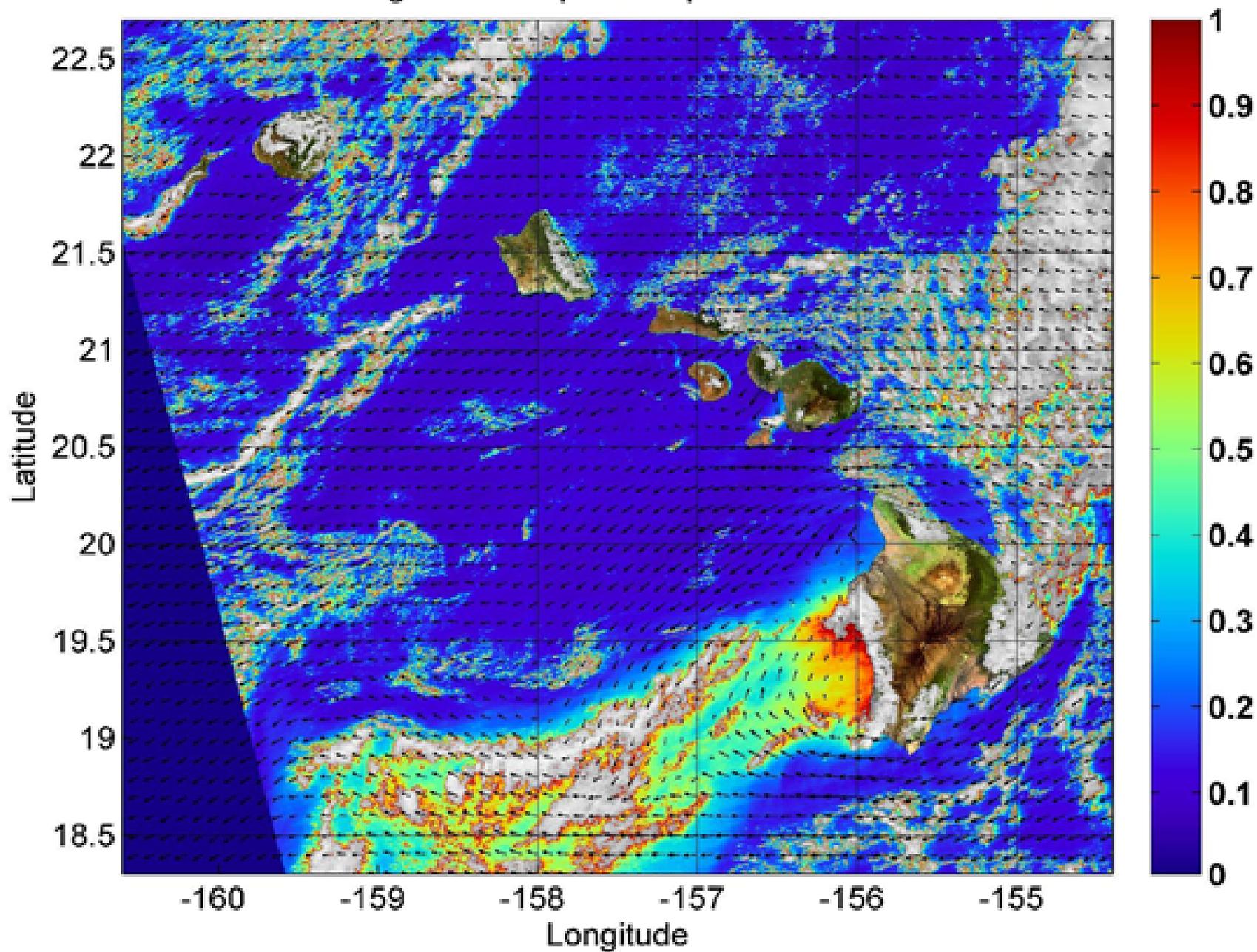
Station ALOHA ●



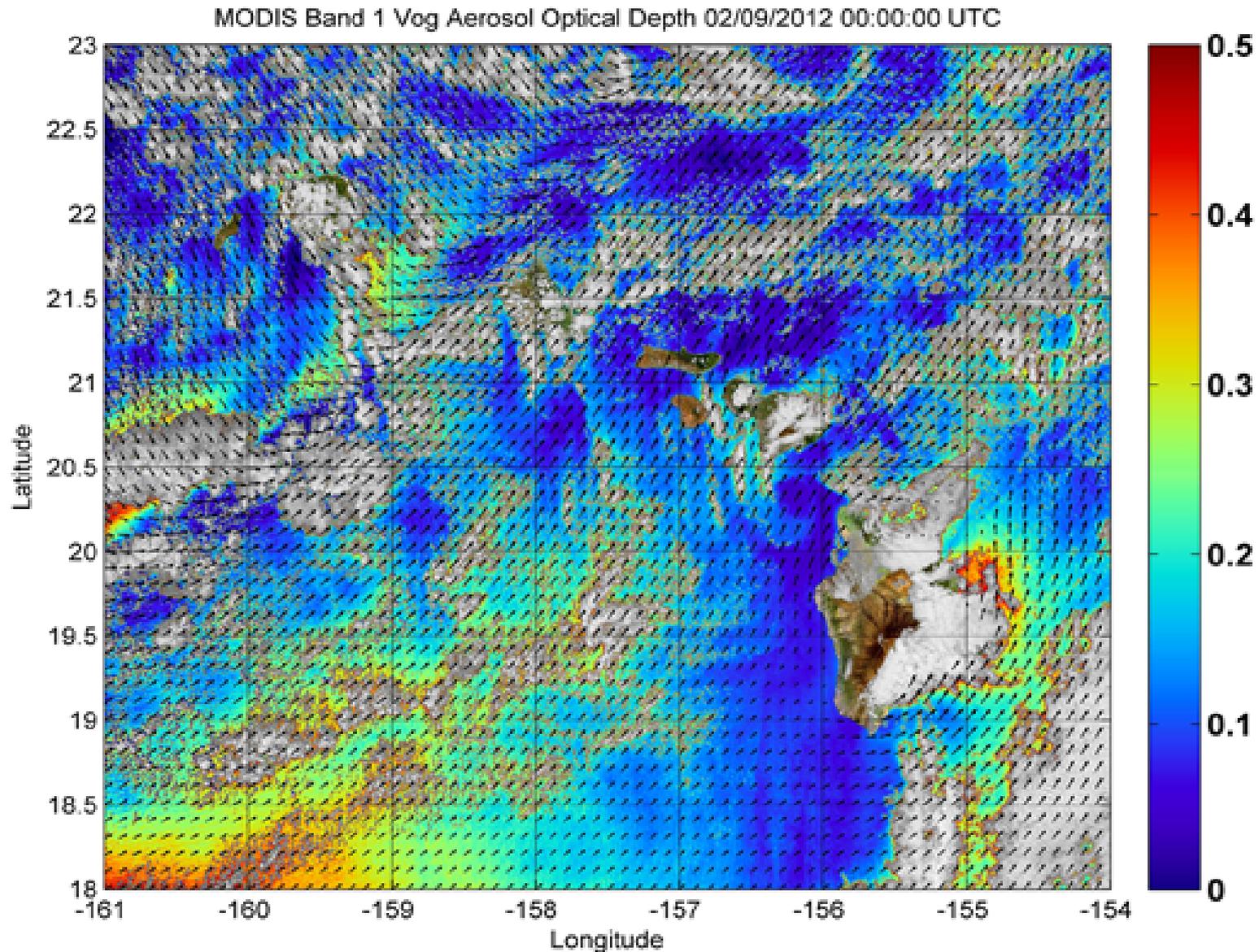
Sun glint affected by Hawaii Orography: Need Accurate Meso-Scale Wind Fields

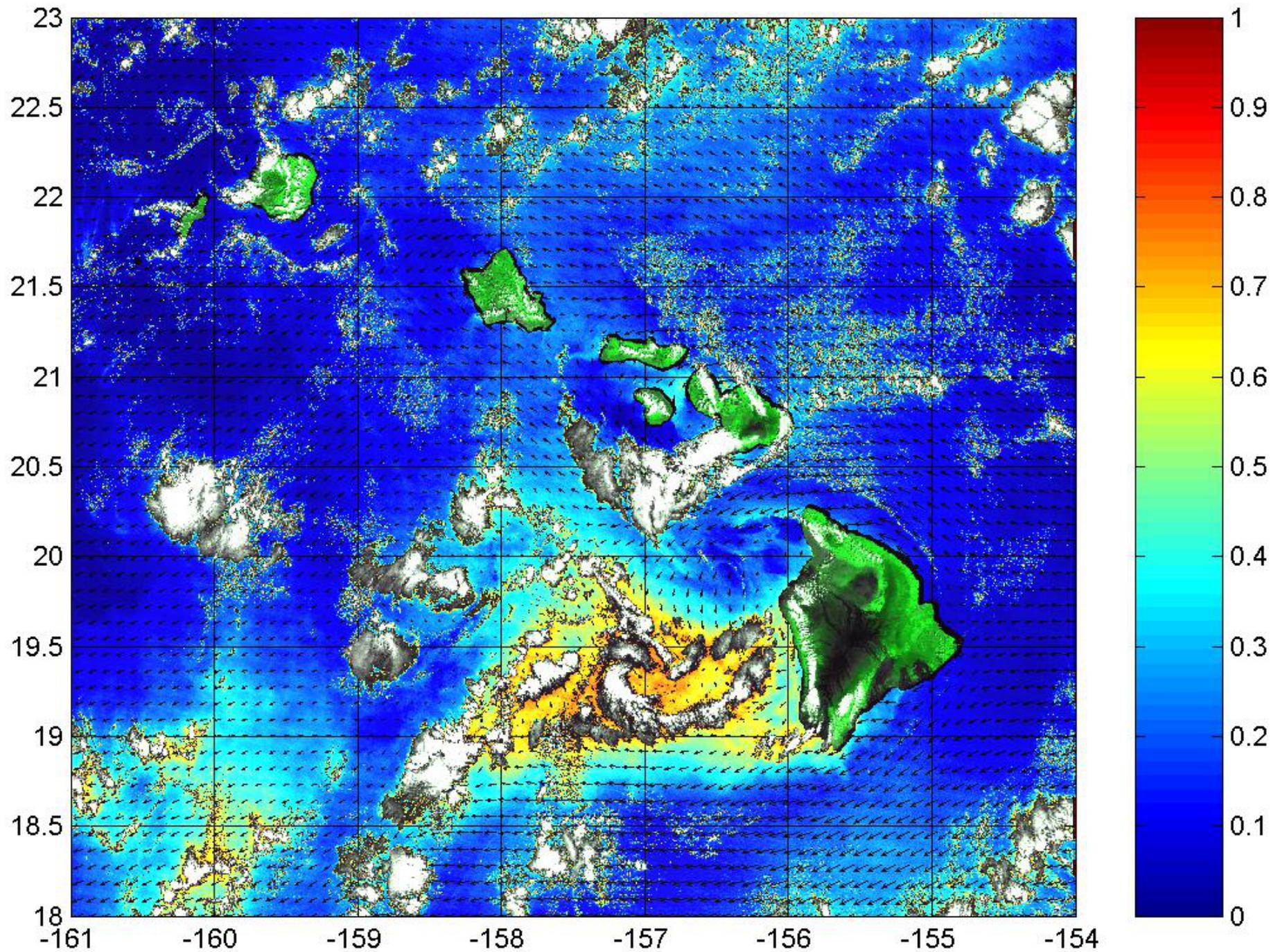


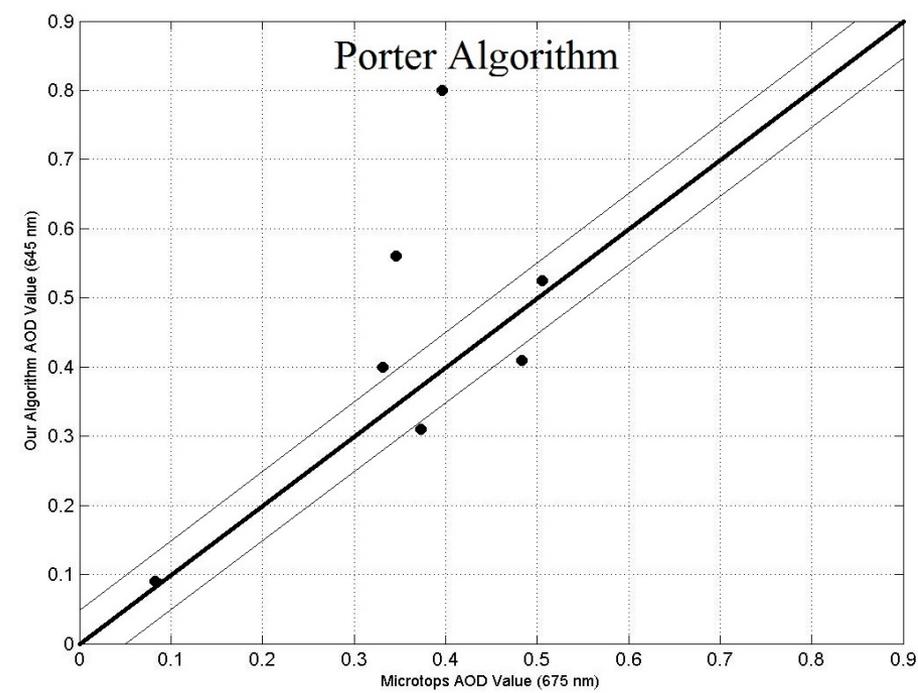
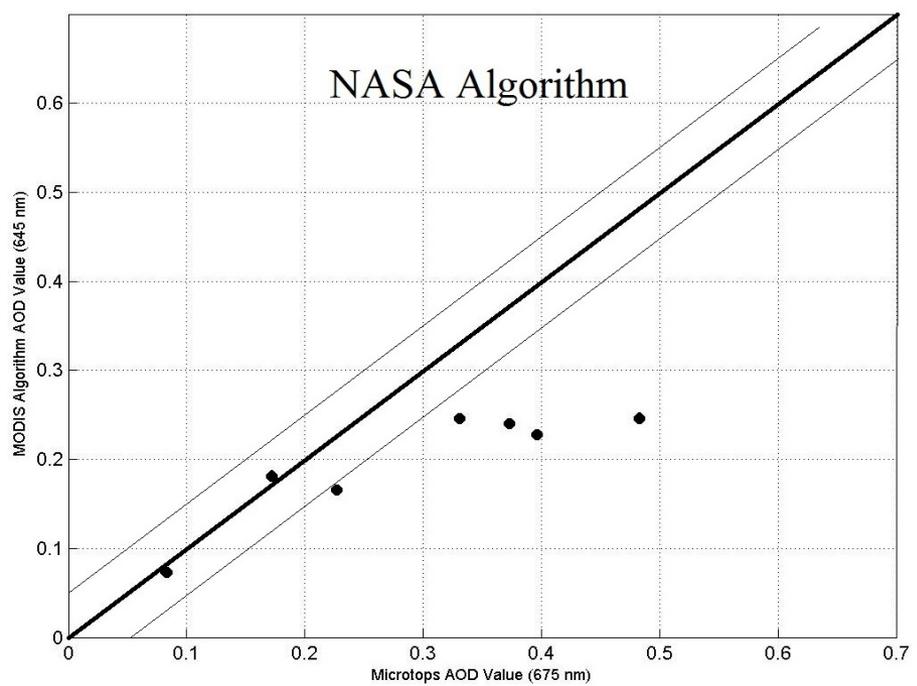
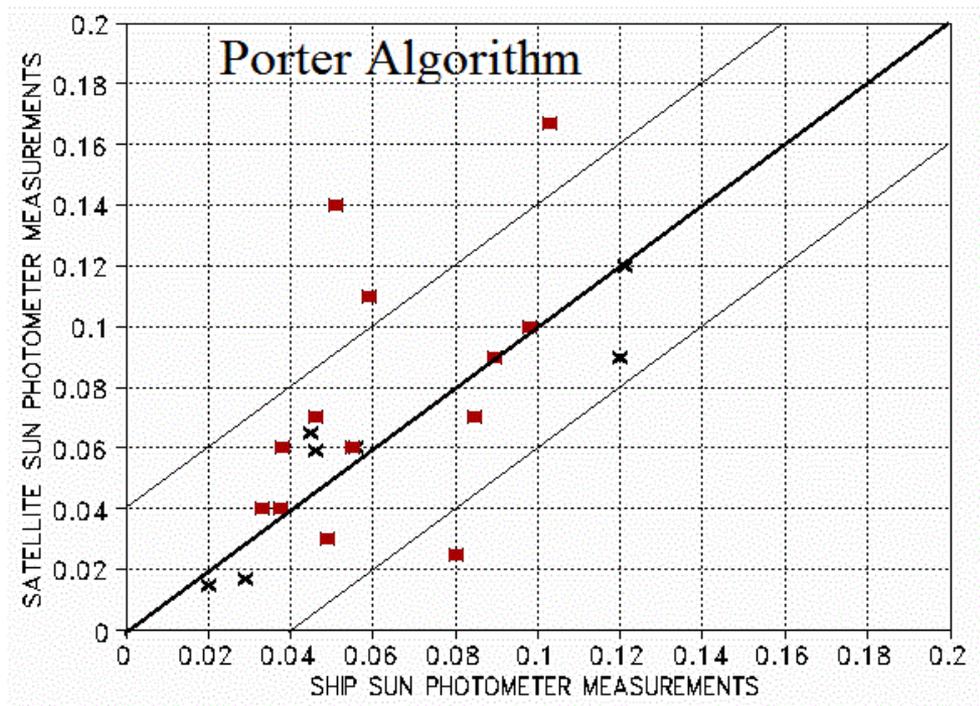
MODIS Band 1 Vog Aerosol Optical Depth 12/10/2013 23:14:00 UTC



As Cold Fronts Approach, Kona Winds Carry VOG Back Towards Hawaii (Patchy and Difficult To Forecast...)





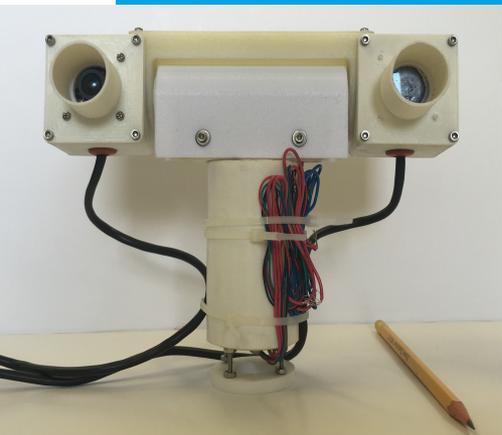


Drone Measurements Flying Under The Volcano Plume



Spectrometer with
Pan-Tilt Capability

Spectrometer with
Fixed View



Aerosol Size and Optical Depth Info.

SO₂ Column Concentration

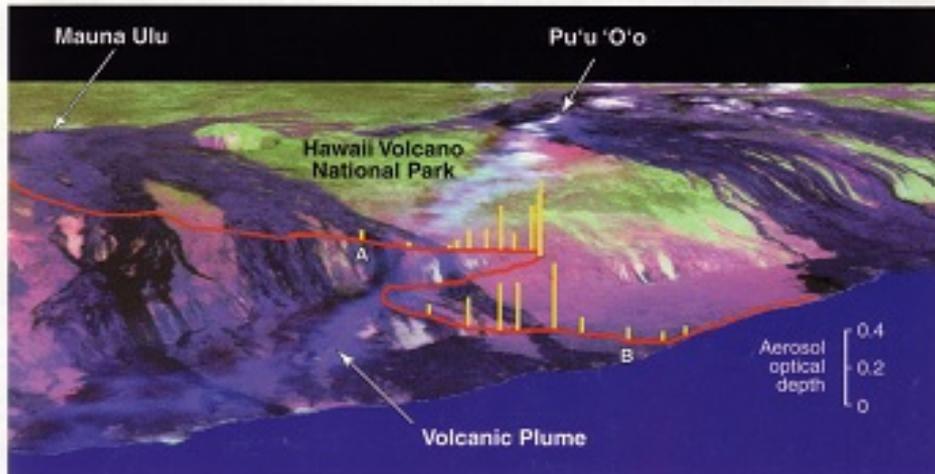
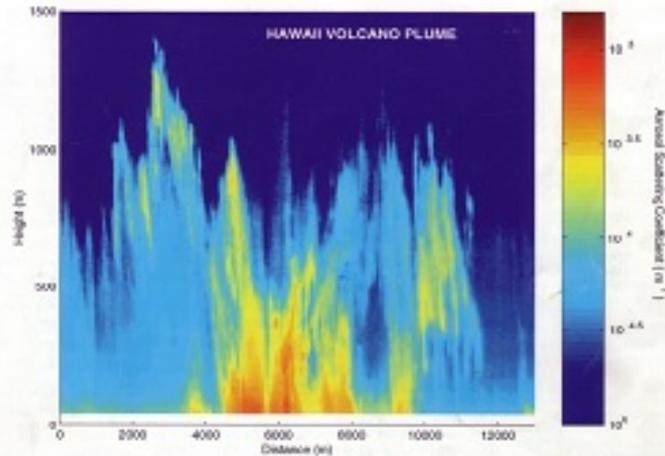


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Geophysical Research Letters

15 AUGUST 2002
VOLUME 29 NUMBER 16
AMERICAN GEOPHYSICAL UNION



Impact of "volcanic smog" on ecosystems • Gulf Stream's influence on tropical cyclones • Possible explanation for plasmopause shapes

Hawaii Volcano Plume Flux Measurements.

SO₂ Half Life In Hawaii Volcano Plume 6 Hours (+-4 Hours)

Porter, et al., 2002, Lidar and Sun Photometer Measurements of The Hawaii Pu'u O'o Volcano Plume: Estimates of SO₂ and Aerosol Flux Rates and SO₂ Lifetimes, Geo. Res. Let., 29, 2002GL014744, 2002

