

NPS Remote Sensing Research (PH)

2010

Passive Detection Of Gases In The Atmosphere, Case Study: Remote Sensing Of SO₂ In The UV Using LINUS

A Halvatzis

December 2002

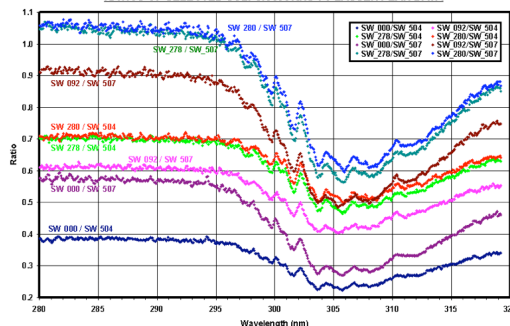
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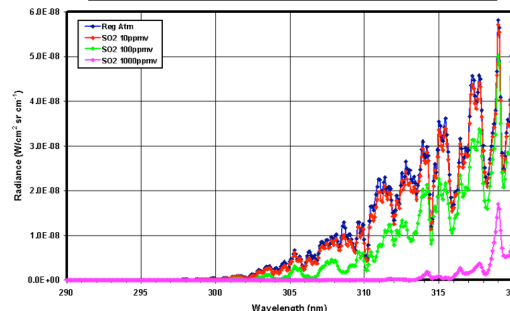
An imaging UV spectrometer was used to study sulfuric plumes at Lassen Volcanic National Park, in an effort to identify and quantify SO₂ presence. The NPS instrument, LINUS (Lineate Imaging Near - Ultraviolet Spectrometer), was taken to Lassen on September 13 and 14, 2002. Data taken there are compared to laboratory measurements of SO₂ subsequently run at NPS.



RATIOS OF SELECTED SULFUR WORKS TO LASSEN PEAK DATA



VARIOUS SO₂ CONCENTRATIONS WITHOUT FILTER EFFECT - RESOL. 0.08nm



These data, along with additional measurements of platinum discharges for wavelength calibration, allow for comparison with atmospheric modeling calculations. Observations were modeled with the standard MODTRAN code. Comparisons between simulated and measured data showed minor indications of SO₂ in the Lassen data. The gas concentration was estimated to be less than 10ppmv.

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