Using Multi-Sensor Observations for Volcanic Cloud Detection, Characterization, and Improved Dispersion Modeling

- GOES-R Volcanic Cloud Alerting system detects volcanic clouds with skill comparable to a human expert.
- Detection and characterization will be further improved with datasets from USGS and further utilization of increased satellite spectral information (e.g., seismic information and SO₂ detection).
- Develop ability to run NOAA dispersion model (HYSPLIT) initialized with GOES-R Volcanic Cloud Alert output.
- Integrate output into Anchorage and Washington D.C. Volcanic Ash Advisory Centers for increased aviation safety and timeliness.

Examples of volcanic cloud detection and property retrievals from the global constellation of satellites.

Advancing global detection, retrieval, and modeling of volcanic clouds

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