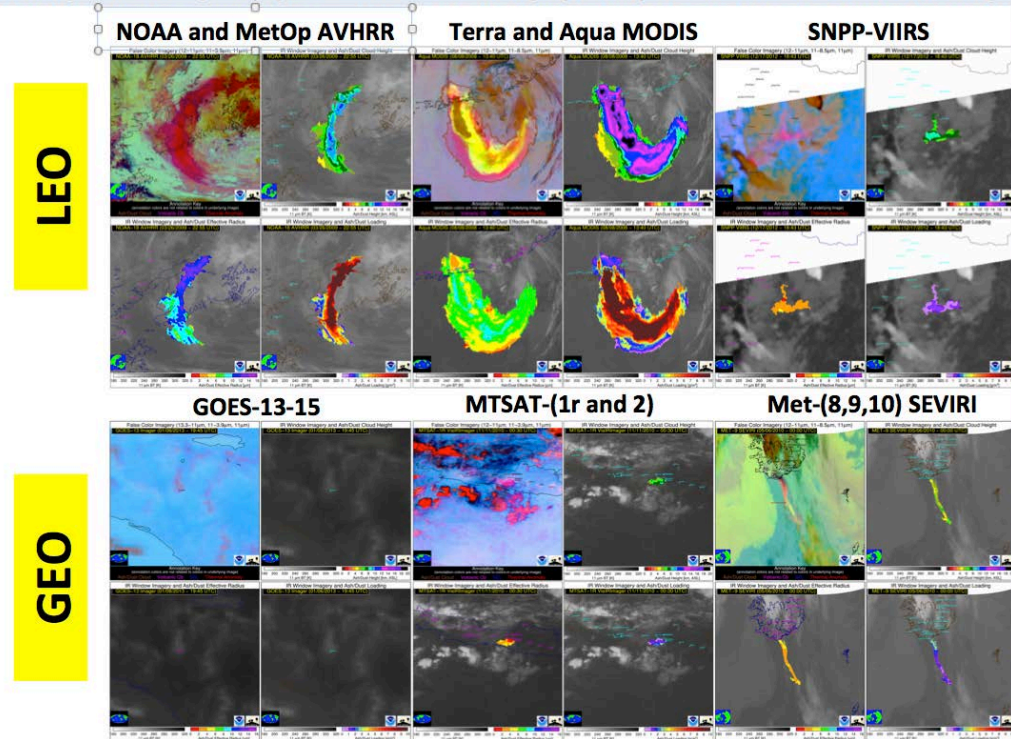# Using Multi-Sensor Observations for Volcanic Cloud Detection, Characterization, and Improved Dispersion Modeling

- 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 SO_2 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

Making Full Use of the Space-based Observing System for Volcanic Cloud Monitoring

NOAA and MetOp AVHRR — Terra and Aqua MODIS — SNPP-VIIRS

LEO

GOES-13-15 — MTSAT-(1r and 2) — Met-(8,9,10) SEVIRI

GEO

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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