



# Airline Meteorologist Perspective on Volcanic Ash

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# First Hours Critical to Aviation

- Aircraft radar does not detect volcanic ash.
- Rapid dissemination of new eruption the first 5-10 minutes to enroute aircraft, airlines, and ATC is critical.
- NWSChat Live could be used for collaboration & information sharing.



# Flight Planning & Route Selection Authority

- Once Hazard has been identified:
  - Individual operators are responsible for route to be flown, not ATC.
  - ATC or Gov'ts should not close airspace.
- Airline experience shows VA 36-48 hours removed from a source rarely if ever are a significant hazard to aircraft.



# More Research/Observations of Ash Concentrations needed

Int'l Volcanic Ash Task Force (IVATF) unfinished work.

- Formed after Spring 2010 Icelandic Eruption shut down European Air Space.
- IVATF sunsetted in Summer 2012
- Progress made, but more is needed. For example:
  - What ash concentrations/particle size distributions are aircraft hazards?
  - Monitoring of ash concentrations needed (remote sensing or UAV sampling).
  - Are some volcano types more likely to produce larger VA particle sizes that cause aircraft damage?





## VAAC Standardization

- VAAC models, assumptions and procedures are not standardized.
- Some VAACs can't use advanced satellite imagery or don't have access to the right tools.
- Some VAACs rarely have VA events. VAAC consolidation or realignment would help.
- Products from some VAAC's are non-standard & not ICAO specified. (e.g. Ash Concentration Charts in Europe)



# VAAC/SIGMET/TAF Coordination

- Once a SIGMET has been issued it is primary VA forecast product for operators.
- VAAC advisory is primary source for planning beyond SIGMET timeframe (4-6 hours).
- SIGMET for VA aloft should not lead to an automatic use of VA in the TAF.
- VA should only show up on METAR/TAF when VA is reaching the ground at the airport.



# Quito, Ecuador Nov 3-10, 2002 Ash Fall

Volcanic Ash at an airport is very costly.

- 1 UPS Aircraft stranded for 6 days.
- Economic cost to UPS Airline \$400,000



Thank You

