

Volcanic Ash Dispersion Model (PUFF)

PROGRAM/PROJECT:

LEAD AGENCY: Headquarters United States Air Force, Directorate of Weather (HQ USAF/XOW)

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SERVICE AREA(S)/INITIATIVE(S)

- *National Aviation Weather Initiatives:*
8: 5, 6

FUNDING

- *Programmed/Planned (\$'s/FY):* /FY03 /FY04

TYPE OF PROGRAM/APPLICATION

Product Development

SCOPE OF PROGRAM/PROJECT

- *What's being developed, procured, etc.:* volcanic ash dispersion modeling for the DoD, coupled with man-in-the-loop satellite interpretation; also provides backup services for the Washington, D.C. regional Volcanic Ash Advisory Centers (VAAC). Developed under the University Partnering for Operational Support (UPOS), this numerical model was developed jointly by University of Alaska and Johns Hopkins University. Presently, only the Washington, D.C. VAAC will receive back-up support.
- *How operations will be changed/improved:* provides up-to-date, three-dimensional, ash plume and propagation information with enhanced forecast accuracy and an intuitive graphical user interface. This will provide aircrews three dimensional ash cloud information allowing them to avoid hazardous areas during times of volcanic activity.

PROGRAM/PROJECT MANAGEMENT

- *Basic guidance document for this program:* Cooperative Plan for Operational Support and agreement among FAA, NOAA, USGS, and USAF.
- *Program's verification process:* Model output verified against satellite imagery. Systems and development testing accomplished by the UPOS team. AFWA conducted integration and security testing.
- *Method used for end product validation:* See above.
- *Operational training for the user:* Both hands on and text training manuals (user's manual, etc) are provided by the contractor.

SCHEDULE/IMPLEMENTATION

- *Next major program milestone:* N/A
- *Program becomes operational:* PUFF is an operational model.
- *Plans for further improvements:* Improve source model resolutions.