Polarization Algorithm (PA)

PROGRAM/PROJECT: Aviation Weather Research Program/Advanced Weather Radar Techniques Product Development Team [http://www.faa.gov/aua/awr/]
LEAD AGENCY/COLLABORATING AGENCIES: Federal Aviation Administration (FAA), the National Oceanic and Atmospheric Administration (NOAA)
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SERVICE AREA(S)/INITIATIVE (S)

- ***National Aviation Weather Initiatives*:**
  2: 5 **5:** 6

FUNDING

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

TYPE OF PROGRAM/APPLICATION

R&D/Product Development

SCOPE OF PROGRAM/PROJECT

- ***What's being developed, procured, etc:*** *algorithms based on polarimetry which will provide information about the volumetric extent of hail, freezing rain, snow, and icing conditions, as well as non-hydrometeor scatterers.*
- ***How will operations be changed/improved:*** *the biggest potential payoff is enhanced data quality. Polarimetric techniques will eliminate problems associated with sea-clutter, ground clutter, AP, and biological scatterers.*

PROGRAM/PROJECT MANAGEMENT

- ***Basic guidance document for this program:*** AWRP Technical Direction for the NEXRAD Enhancements Product Development Team.
- ***Program/Project verification process:*** Monthly and quarterly reporting, program reviews, and RE&D Advisory Committee Project Assessments.
- ***Method used for product validation:*** N/A
- ***Operational training for the user:*** N/A

SCHEDULE/IMPLEMENTATION

- ***Next major program milestone:*** Development of an algorithm specifically for discrimination between non-meteorological scatterers, including the ability to discriminate non-meteorological scatterers into chaff, avian, and insect categories.
- ***Program becomes operational:*** FY07
- ***Plans for further improvements:*** Investigate icing events and compare Polarimetric retrievals with model predictions and pilot reports.