

## NEXRAD Turbulence Detection Algorithm (NTDA)

**PROGRAM/PROJECT:** Aviation Weather Research Program/Turbulence Product Development Team  
[<http://www.faa.gov/aua/awr/>]

**LEAD AGENCY/COLLABORATING AGENCIES:** Federal Aviation Administration (FAA)/National Center for Atmospheric Research (NCAR)

**LEAD AGENCY POINT OF CONTACT:** Warren Fellner, 202-314-1490, warren.fellner@auatac.com

**PROGRAM POINT OF CONTACT:** Bob Sharman, NCAR, 303-497-8457, sharman@ucar.edu

### SERVICE AREA(S)/INITIATIVE (S)

- *National Aviation Weather Initiatives:*  
7: 12

### FUNDING

- *Programmed/Planned (\$'s/FY):*                      \$215K/FY03                      /FY04

### TYPE OF PROGRAM/APPLICATION

R&D/Product Development

### SCOPE OF PROGRAM/PROJECT

- *What's being developed, procured, etc:* capability to detect areas of primarily convectively induced turbulence from WSR-88D radar data.
- *How will operations be changed/improved:* allow aircraft to avoid areas of turbulence and therefore reduce injuries caused by unexpected encounters with turbulence.

### PROGRAM/PROJECT MANAGEMENT

- *Basic guidance document for this program:* Turbulence Product Development Team Technical Direction.
- *Program/Project verification process:* Monthly and quarterly reporting; semi-annual program reviews; science panel reviews; RE&D advisory committee project assessments; use of test beds for evaluations.
- *Method used for product validation:* Verification of product improvements via comparison of output data with PIREPS and field testing using research aircraft.
- *Operational training for the user:* hands-on training

### SCHEDULE/IMPLEMENTATION

- *Next major program milestone:* FY04: Submit WSR88D-based turbulence detection algorithm to NEXRAD Technical Advisory Committee (TAC).
- *Program becomes operational:* FY06-dependent upon NWS
- *Plans for further improvements:* N/A