

## Geostationary Imaging Fourier Transform Spectrometer (GIFTS)

### PROGRAM/PROJECT:

**LEAD AGENCY/COLLABORATING AGENCIES:** National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA)

**LEAD AGENCY POINT OF CONTACT:** Lou Schuster, NASA HQ, 202-358-0772, lschuste@mail.hq.nasa.gov

**PROGRAM POINT OF CONTACT:** Jim Miller, LaRC, 757-864-7101, j.miller@larc.nasa.gov

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

- *National Aviation Weather Initiatives:*  
3: 6

### FUNDING

- *Programmed/Planned (\$'s/FY):*        \$16.3M/ FY 03            \$9.9M/ FY04

### TYPE OF PROGRAM/APPLICATION

New Millennium Demonstration

### SCOPE OF PROGRAM/PROJECT

- *What's being developed, procured, etc.:* new technologies for measuring altitude-resolved winds and temperatures from geostationary orbit. Technologies include a Michelson interferometer, large area detector arrays, high speed analog-to-digital conversion systems, radiation hardened vector processors for on-board real-time signal processing and data compression, and light weight optics and structures.
- *How will operations be changed/improved:* High- resolution wind and temperature measurements will enhance numerical weather prediction and improve flight safety and efficiency.

### PROGRAM/PROJECT MANAGEMENT

- *Basic guidance document for this program:* NA
- *Program/Project verification process:* Normal series of reviews (PDR, MCR, CDR) in accordance with NASA 7120.4A.
- *Method used for end product validation:* Compare measurements with aircraft and radiosonde observations.
- *Operational training for the user:* Not applicable.

### SCHEDULE/IMPLEMENTATION

- *Next major program milestone:* NA
- *Program becomes operational:* This program is not intended to become operational. It's a demonstration of a new measurement concept for water vapor winds. The first operational system scheduled to be flown on GOES R in the 2010-2012 timeframe.
- *Plans for further improvements:* Technology to be infused into the NOAA Advanced Baseline Sounder Program.