TAMDAR Status
FPAW Forum

November 11, 2005
The patented TAMDAR sensor

Measures and derives:
- Ice presence
- Median and peak turbulence
- Winds aloft
- Indicated and true airspeed
- Static pressure and pressure altitude
- Air temperature (Mach corrected)
- Relative humidity
- GPS lat/long/alt/time
Who is AirDat?

AirDat’s IP and capabilities:

• Developed patented TAMDAR sensor with NASA
• Implemented an integrated global (near) real-time data link
• Deployment and manufacturing of TAMDAR sensors
• Dedicated 24/7 data center
• Real-time data quality control
• Near real-time data collection, processing, QA, and distribution
• Creation and distribution of enhanced weather and communications products and services
GLFE status

• Field evaluation over Great Lakes and south
• All 63 Mesaba Saab 340 equipped
• All 63 aircraft delivering quality data
• Significant improvements in forecasts seen
• GLFE has been extended to Jan. 15, 2006
Current coverage (red lines)
Deployment status and plans

- Deployment on 63 Mesaba aircraft complete
- Contractual agreements close with four additional regional carriers
  - Approx. 550-600 aircraft (including Mesaba)
  - Approx. 350 airports served
- Coverage over most of North America
- Many small airports without alternative sounding data
- Deployments will occur in 2006
- Radiosonde soundings (daily): 138
  - 69 sites
  - 2 launches per day
- Mesaba (GLFE) soundings: 820
  - 79 sites (airports)
- CONUS deployment (500+ aircraft) soundings: 5000+
  - 300+ sites (airports)
- Simulation—illustrates potential impact
TAMDAR airborne components

Iridium/GPS/Wx Antenna

GPS (Coax)

TAMDAR

(RS-232)

Heading and Aircraft Systems Inputs

Iridium (Coax)

Transceiver/Router

Optional EFBs

Wx coax for optional weather cockpit display

Voice Com Option

Text Messaging Option

Note: Integrated antenna includes satellite weather reception
TAMDAR® observation
Icing map display
Turbulence map display
TAMDAR based aviation products and services

- Aircraft tracking
- Real time icing and turbulence data
- In-situ winds aloft
- Improved icing and turbulence models
- Improved convective models and forecasting
- Improved precipitation forecasts
- Improved TAFs
- Improved, high density atmospheric sounds
- Equipage with antenna for cockpit weather service
I would starve if more pilots viewed TAMDAR icing & turbulence data!