Global ITFA - Strategies

• Leverage with other turbulence verification studies
• Collect special PIREPs at specific locations and times (i.e., systematically collected)
• Use data from automated collection systems
• Verify over sounding locations, islands with more data
Global ITFA - Observations

• PIREPs/AIREPs
• Special PIREPs/AIREPs***
• in situ edr observations (future)
• AMDAR – gust info
Global ITFA - Methods

Current approaches:

• Match Yes and No turbulence observations to four closest grid points

• Compute basic statistics such as PODy, PODn, % Area and Volume covered

• Use “Signal Detection Theory” approach to verification

• Implied Goal: Maximize PODy and PODn while minimizing % Area and % Volume
3-hr forecasts:
Winter 2002
Day-to-day variations: 3-h forecasts

PODy(MOG)  PODn

% Area  % Volume
Variations with altitude: 3-h forecasts
Long-term variations

AIRMETs

ITFA – 0.15

PODy

TSS
RTVS example – winter 2003
RTVS example – winter 2003

Turbulence Timeseries

Generated on 14 Jul 2003 by NOAA/FSL-RTVS

- Daily Explicit PODn for ITFA (pt15), pireps, natl, upper-level, RT=all, FH=06h, 2003-01-01 thru 2003-03-31
- Daily MOG PODy for ITFA (pt15), pireps, natl, upper-level, RT=all, FH=06h, 2003-01-01 thru 2003-03-31
AWTT Schedule for OW
Global ITFA
Clear Air Turbulence: D3

- Verification methods
devolved and tested 3/30/04
- Implement methods into RTVS and Post-Analysis 5/30/04
- Freeze algorithm 5/30/04
- Evaluation period 6/1/04-11/30/04
- Analyze results 1/30/05
- Complete report 2/30/05
- AWTT Tec Review meeting 3/30/05
- User Group Meeting 6/30/05