



Integrating Wind Profiling Radars and Radiosonde Observations with Model Point Data to Develop a Decision Support Tool to Assess Upper-level Winds For Space Launch

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Outline



- Problem
- Data
 - Observations
 - Model Point Data
- Graphical User
 Interface (GUI)
 - Model Initialization
 - Model Forecasts
 - Profilers
 - Rawinsonde
- Conclusions







Problem



Launch Directors

- Want to know upper-level wind forecasts during launch countdown
- Steering, aerodynamic loads and trajectory

Launch Weather Officers

- Should be able to provide the forecasts
- Limited capability
- Solution
 - Develop GUI
 - Overlay vertical profiles of observations and model data

Keep these folks informed













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- Launch Weather Officers requested Excel GUI
 - Windows PC workstation located in Range Weather Operations
- All code written in Visual Basic for Applications



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Model Forecasts – Profiler











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Applied Meteorology Unit Model Forecasts – Rawinsonde





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Model Forecasts – Rawinsonde KUU



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Conclusions



- Launch directors need to know upper-level wind forecasts
- Developed an Excelbased GUI to display upper-level winds
 - Rawinsonde at CCAFS
 - Wind profilers at KSC
 - Model point data at CCAFS











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