Aero. and F.M. Summary

- Linear and nonlinear aero models available for SIS development research
- η_{ice} model useful for icing aero models
- FDC code a useful tool and has assisted in characterization methods development
- Microbursts should be easy to distinguish from ice but gravity waves more challenging
- Envelope protection scheme formulated
- Hinge-moment data promising for use in SIS

Work in Progress

- Develop nonlinear aerodynamics model for the lateral system
- Develop predictive lateral envelope (EP) protection and implement predictive EP in simulator
- Complete analysis of flight test data to include trim changes

Future Research

- Further develop the capability to model the effect of ice on an aircraft:
    - Need more high-quality aircraft data in icing
    - Need to develop CFD capability to predict S and C derivatives in icing
    - η_{ice} model qualitatively correct, but needs validation and improvement
    - Significant research is needed on iced aircraft flight envelope limits
    - More C_h and $C_{h,RMS}$ data needed to develop this ice effects sensor
- Further develop capability to detect gravity waves from icing effects