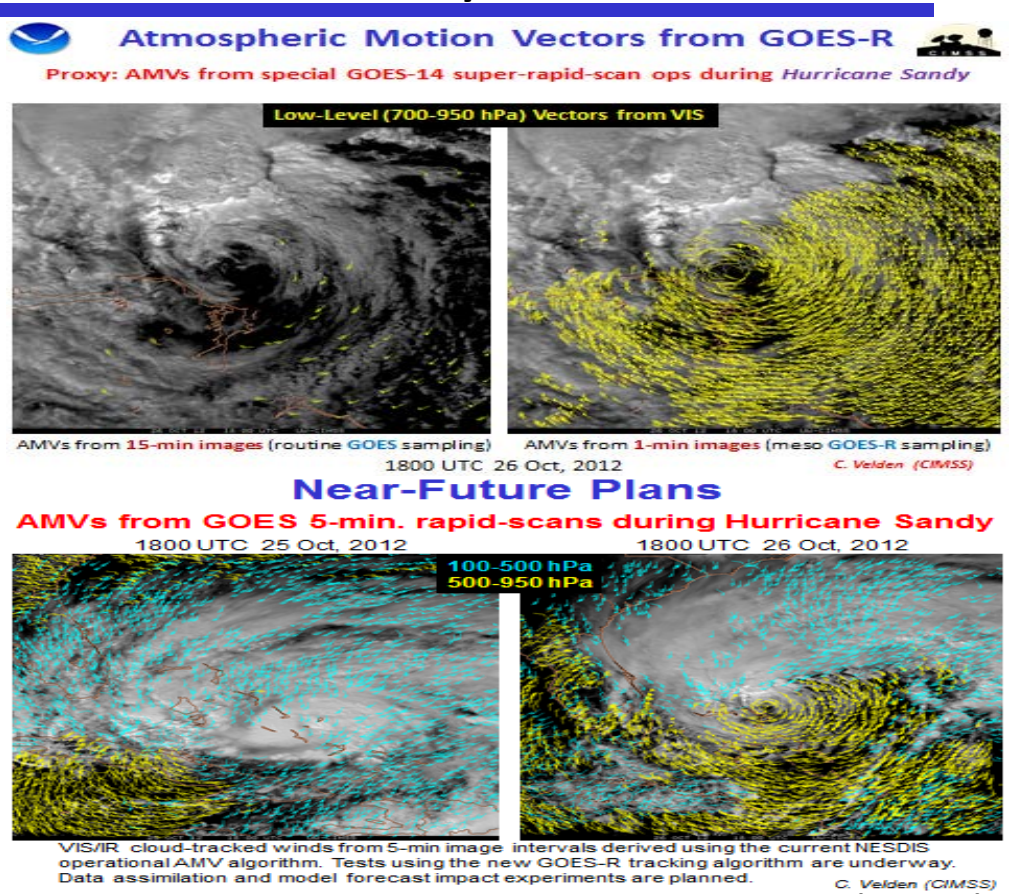
Development and Optimization of Mesoscale Atmospheric Motion Vectors (AMVs) using Novel GOES-R Processing Algorithms on 1-5 min. SRSO Proxy Data, and Demonstration of Readiness for GOES-R Applications via Impact Studies in Mesoscale NWP Systems

- Super-rapid-scan operations (SRSO) imagery (available at 1-5 min. frequency) provided during special GOES tests can be used as proxy data for GOES-R readiness.
- We can exploit this temporal upgrade towards the development and optimization of AMV production, particularly in situations where super-dense datasets are needed such as in hurricanes or mesoscale applications.
- Case study AMV datasets will be processed and optimized, then provided to our mesoscale and hurricane NWP partners for data assimilation and model forecast impact testing.



Example of AMVs achievable from GOES-14 rapid scan imagery (1-5 min.) available during Hurricane Sandy. The coverage and flow definition is greatly enhanced vs. that from current operational AMVs.

Optimization of AMVs from GOES-R for hurricane and mesoscale applications

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