

CEDAR Workshop 2012
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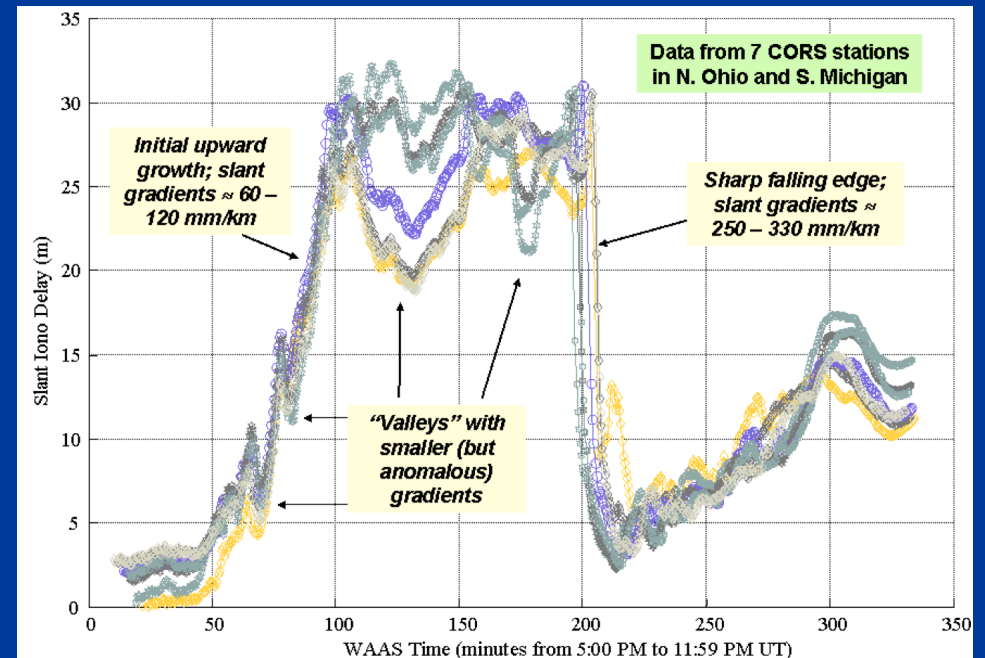
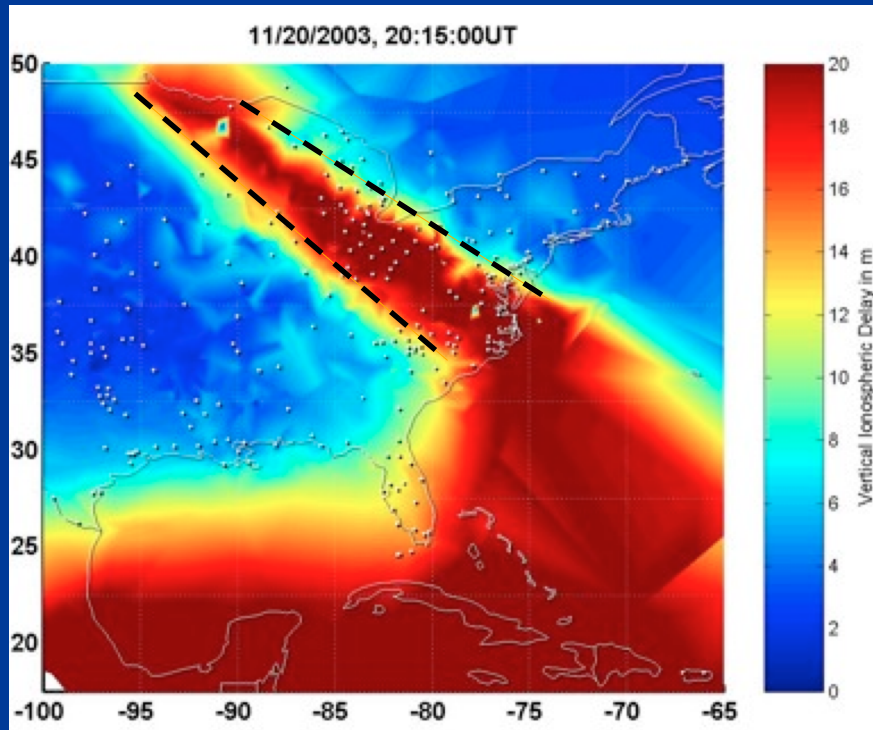
ExB Dynamics of Ionospheric Storm Transition Regions

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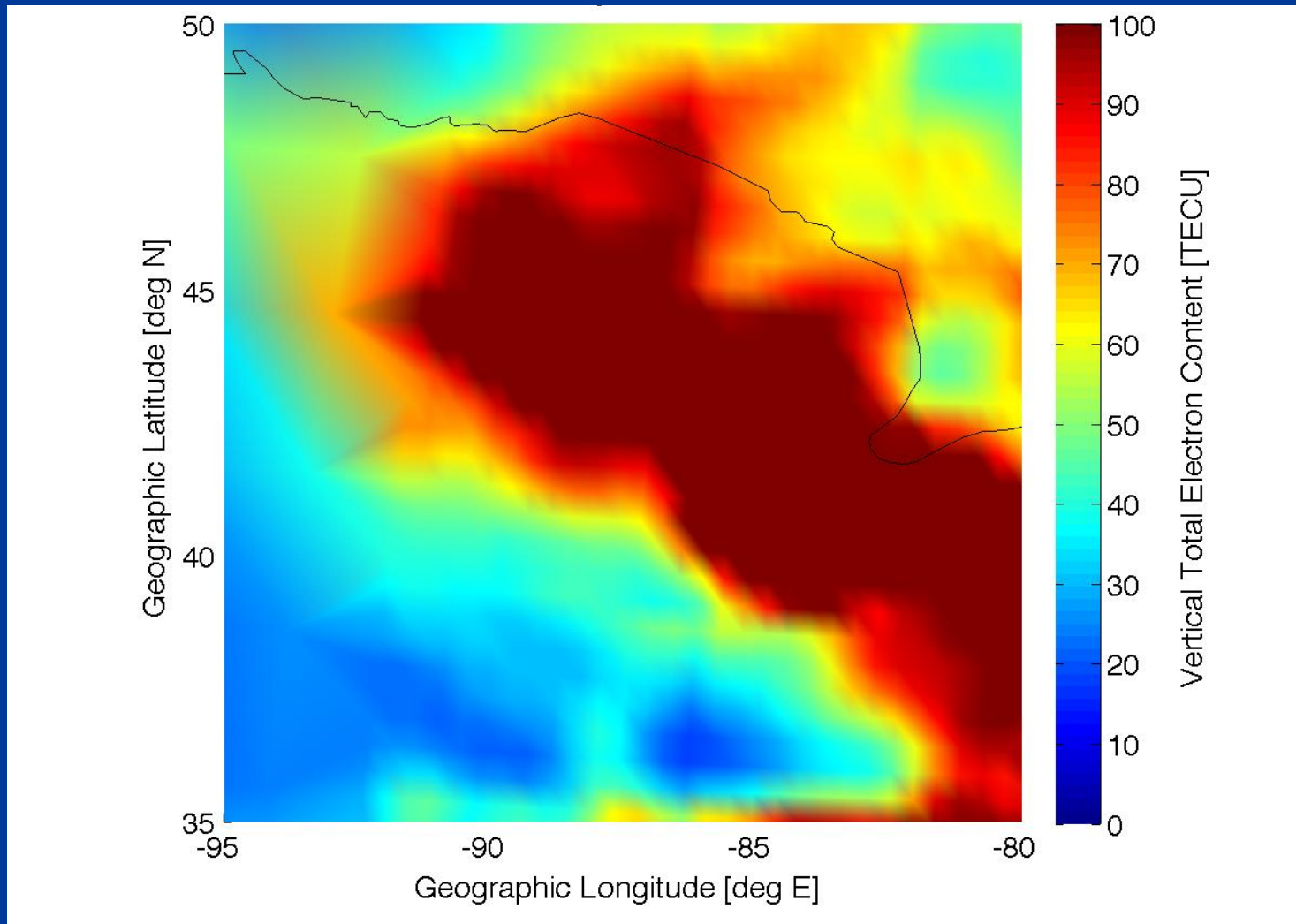
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Motivation

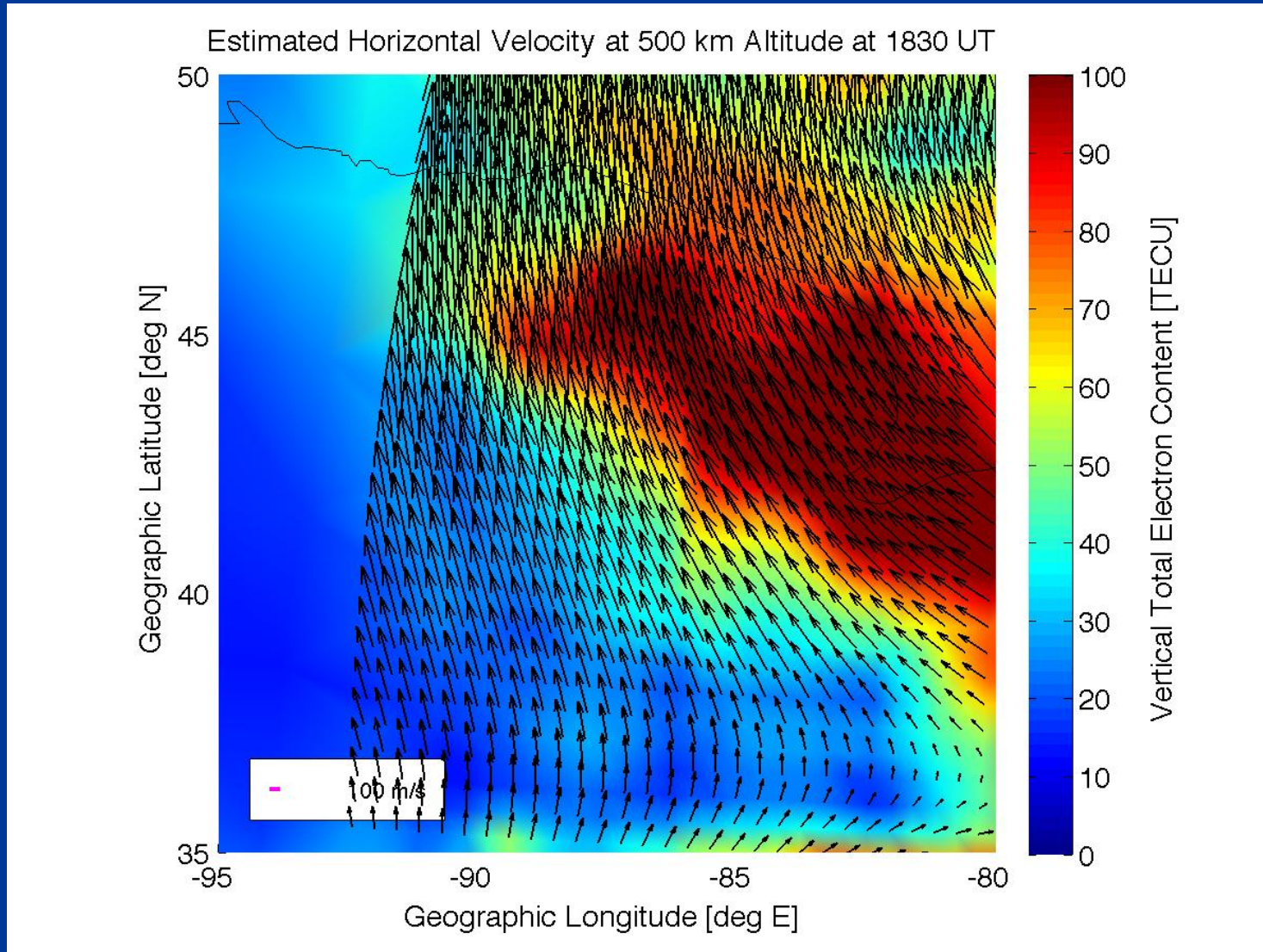
What is the relationship between intermediate scale spatial gradients along the boundaries of storm enhanced density (SED) and plumes and the important physical processes, particularly field-aligned and ExB drifts, responsible for the growth and evolution of SEDs?



IDA4D integrated TEC at $\frac{1}{2}$ deg resolution



EMPIRE ExB Drifts at $\frac{1}{2}$ deg resolution



Conclusions

- Prior information (model or, better yet, data) can improve estimation of dynamics.
 - We used Weimer Model for a priori electric potential, and estimated corrections to it.
- Next steps:
 - Implement Kalman filter in EMPIRE.