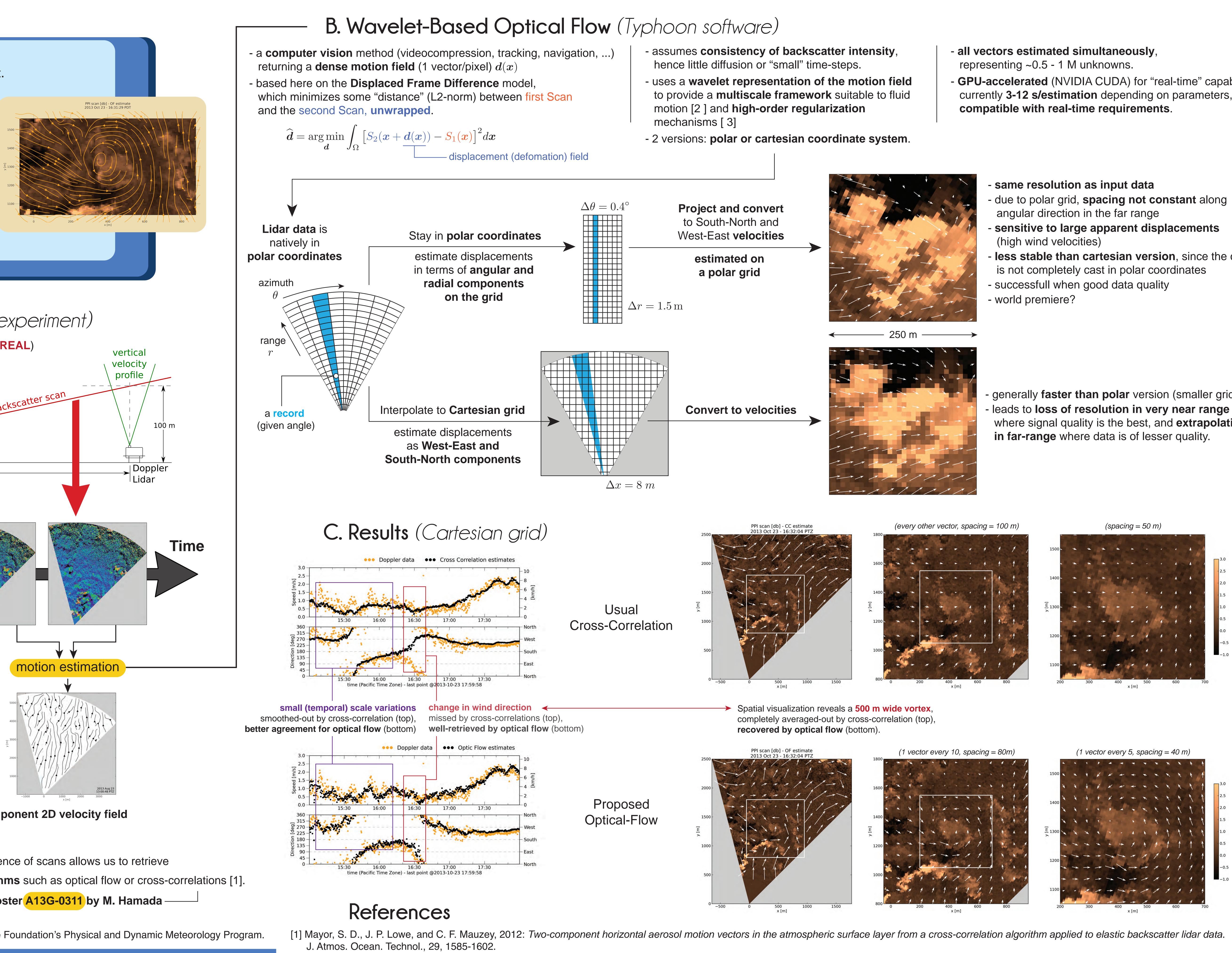


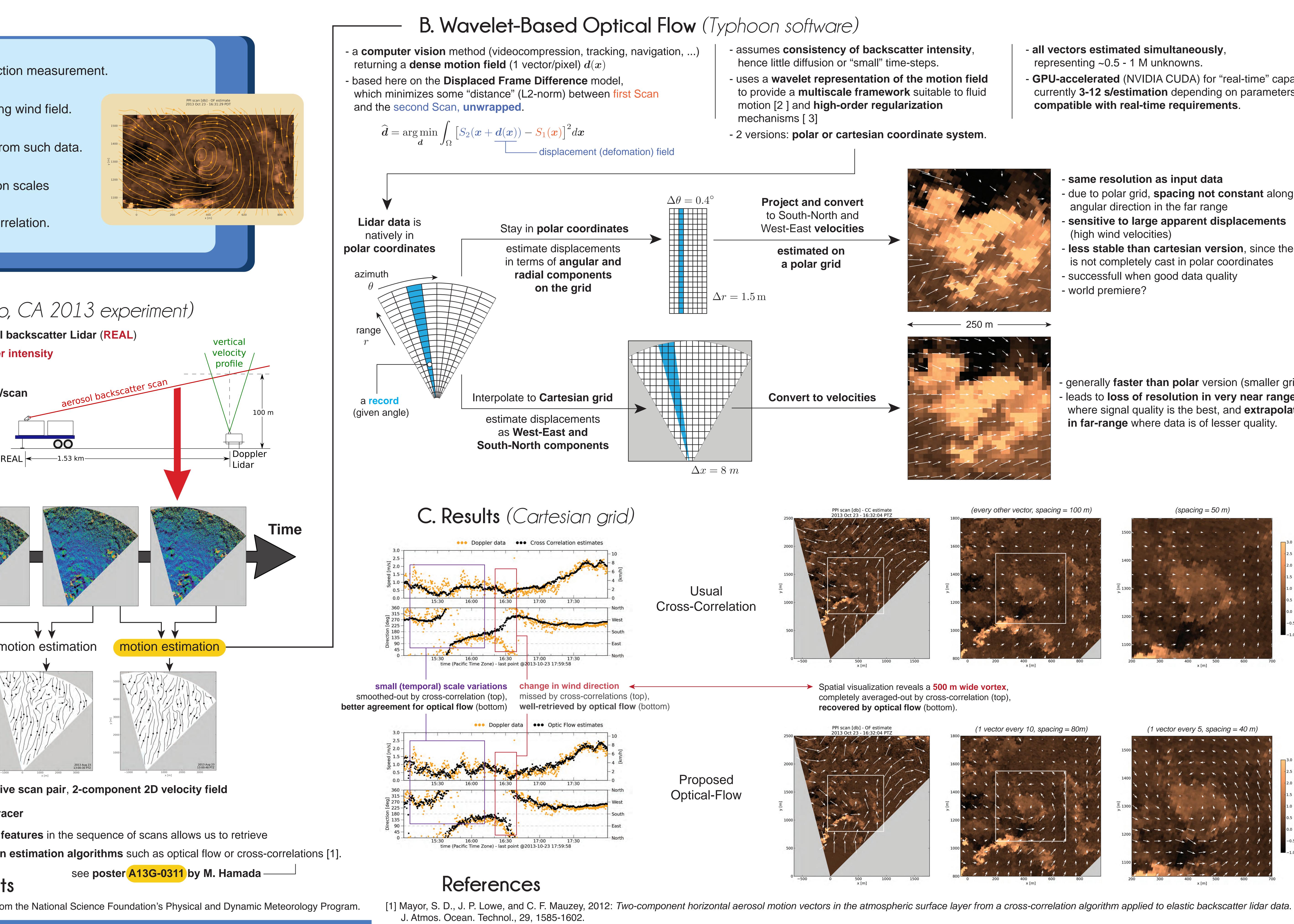


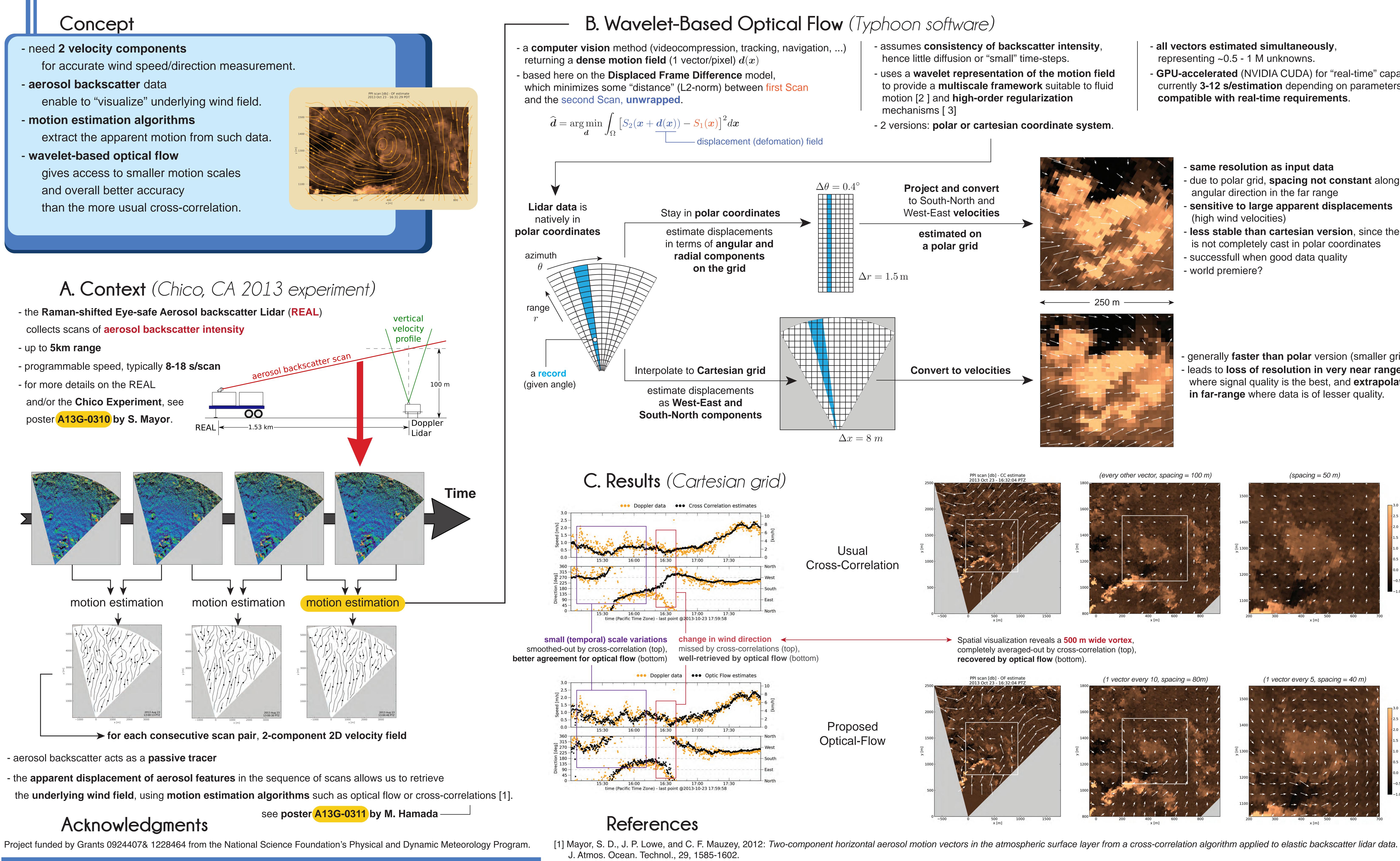
- for accurate wind speed/direction measurement.
- gives access to smaller motion scales and overall better accuracy than the more usual cross-correlation.



- collects scans of aerosol backscatter intensity

- poster A13G-0310 by S. Mayor.





- aerosol backscatter acts as a passive tracer

# Wavelet Optical Flow for 2-Component Wind Field from Horizontally Scanning Lidar Data

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- [2] Dérian, P., Héas, P., Herzet, C., and Mémin, E. 2013: Wavelets and optical flow motion estimation. Numerical Mathematics: Methods, Theories and Applications, Vol 6, pp. 116-137. [3] Kadri Harouna, S., P. Dérian, P., Héas, and E. Mémin, 2013: Divergence-free Wavelets and High Order Regularization. International Journal of Computer Vision, Vol. 103, pp. 80-99.



- GPU-accelerated (NVIDIA CUDA) for "real-time" capabilities, currently **3-12** s/estimation depending on parameters,

- less stable than cartesian version, since the code

- generally faster than polar version (smaller grid) - leads to loss of resolution in very near range where signal quality is the best, and extrapolation

