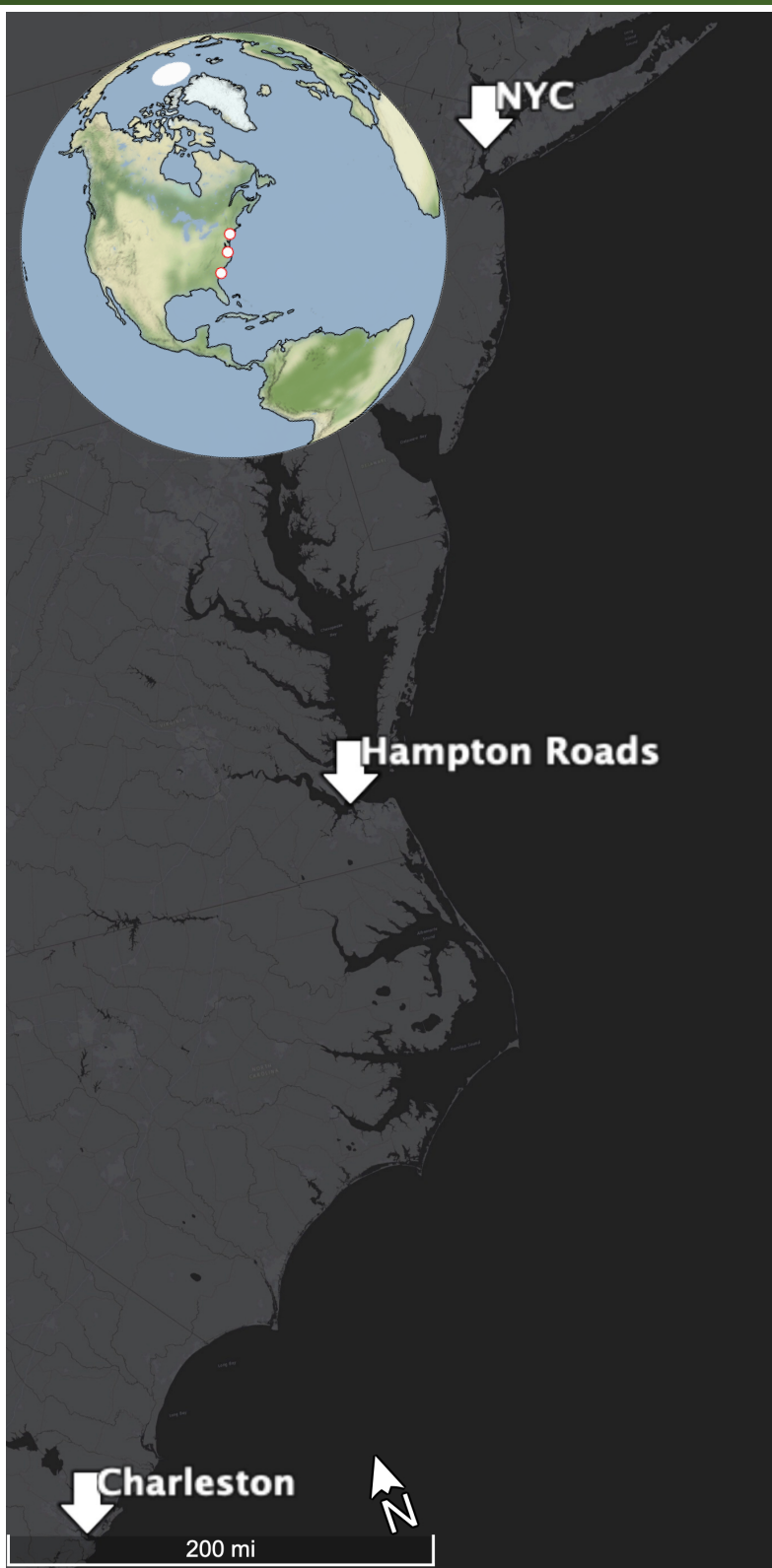


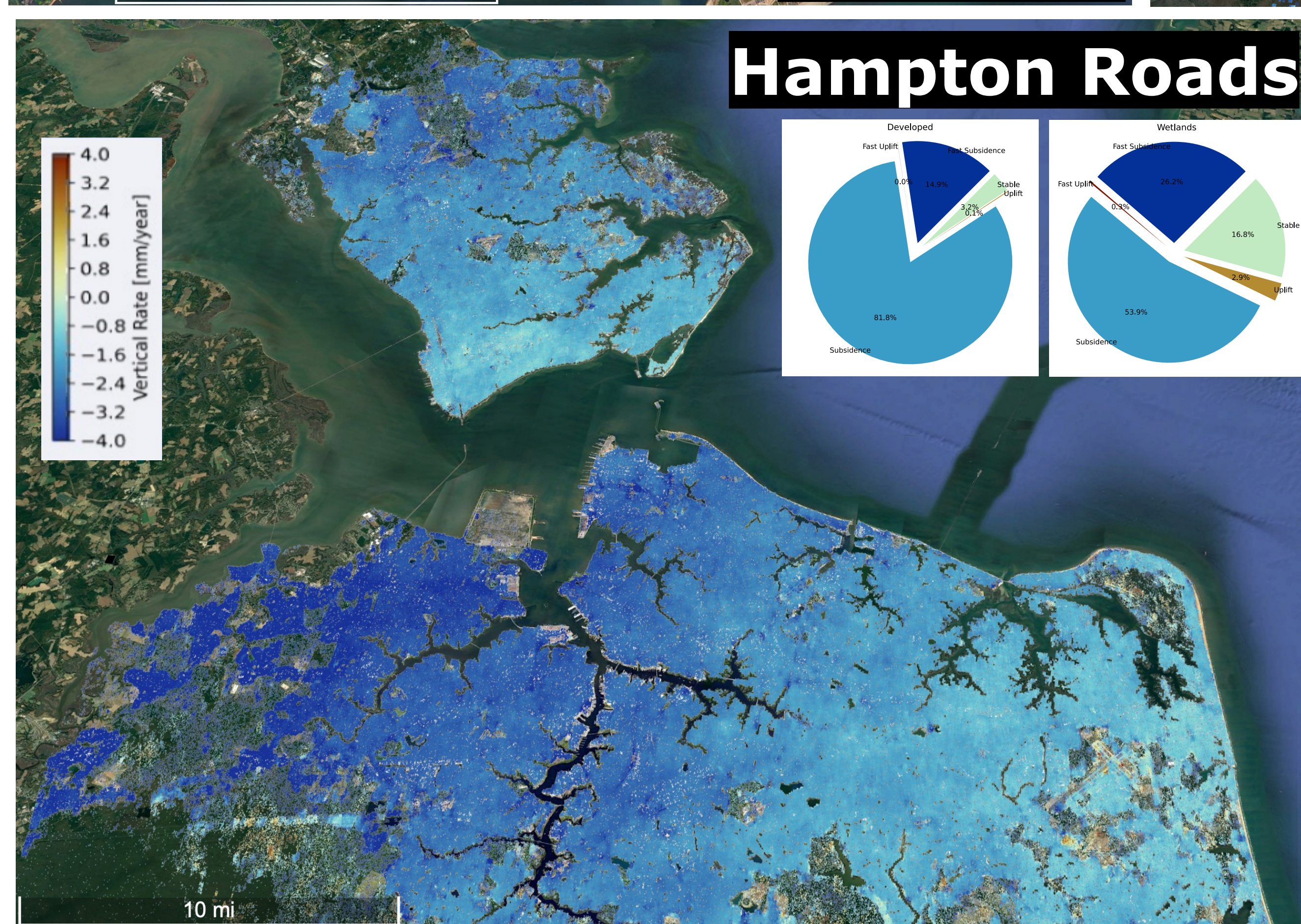
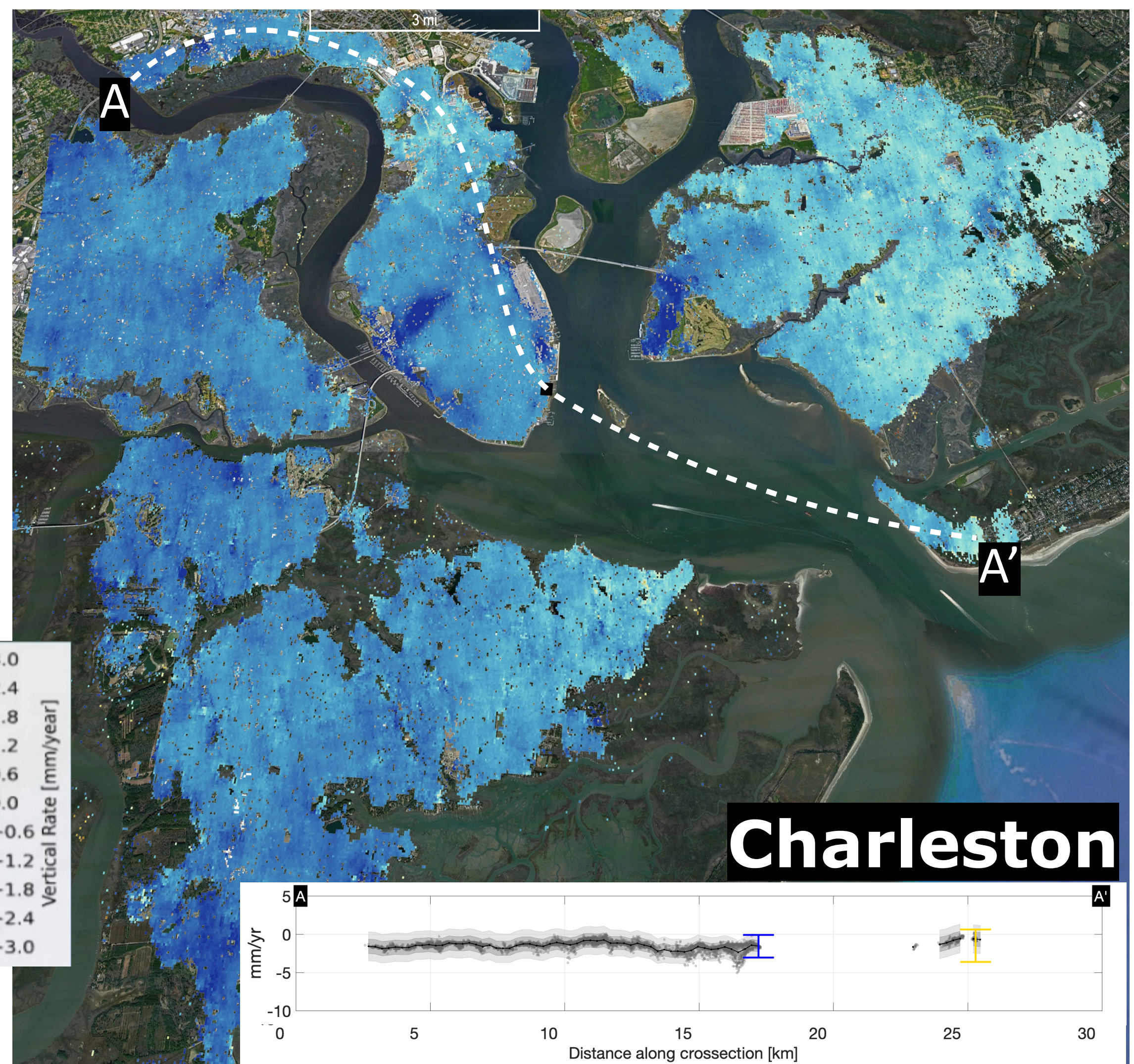
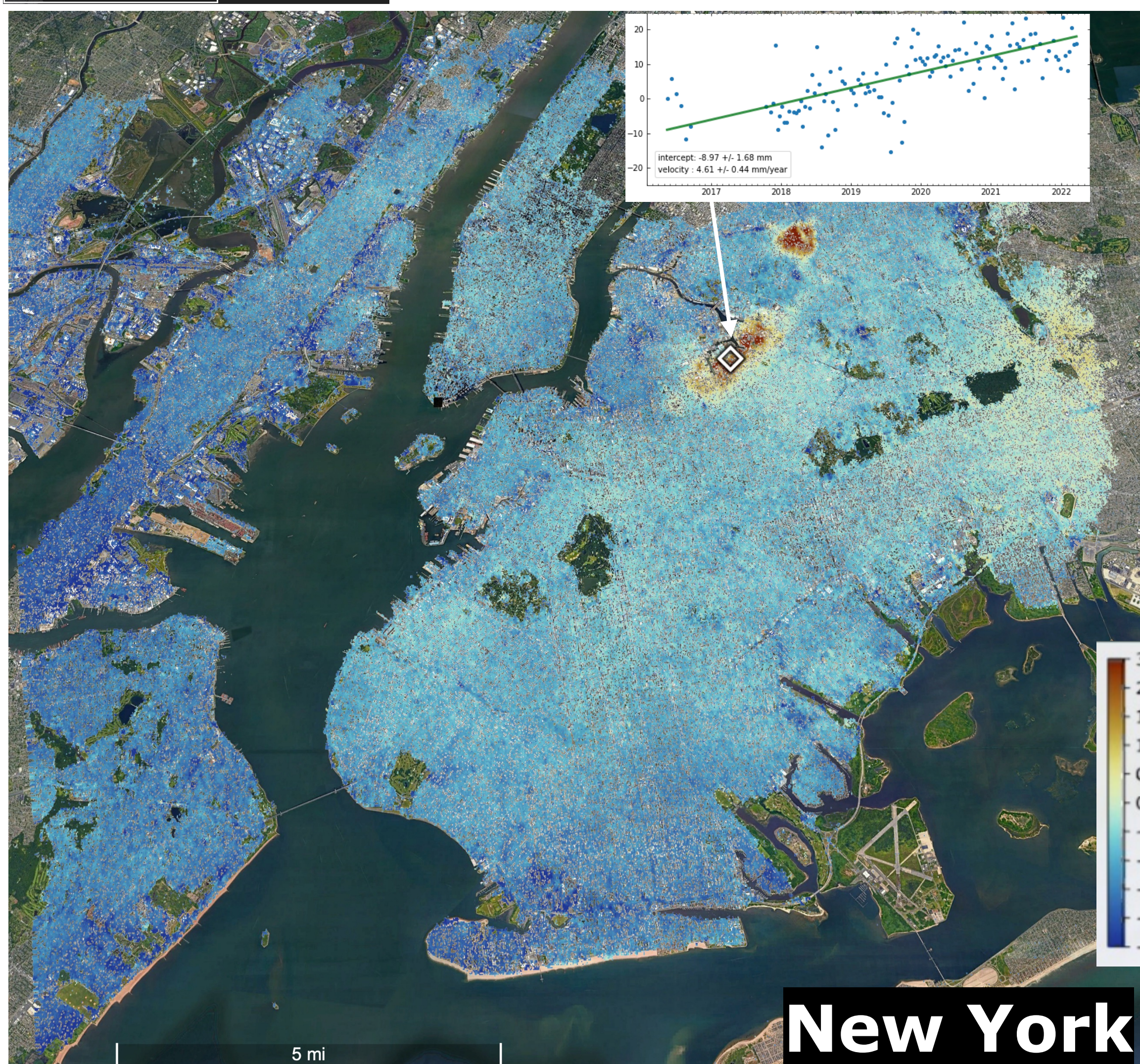
# High Resolution Vertical Land Motion along the U.S. East Coast

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State-of-the-art InSAR techniques enable unprecedented observations of coastal vertical land motion (VLM)

- Large swaths of cities along the U.S. East coast are sinking at rates of -1 to -5 mm/yr
- There is considerable spatial variability in VLM, with hotspots of both **subsidence** and **uplift**
- Urban centers and coastal wetlands are particularly vulnerable to subsidence



## Discussion

- Subsidence along the coast increases vulnerability to flooding from storms and tides
- Wetlands may be lost if subsidence prevents them from keeping pace with sea level rise

## Methods

- Interferograms of Sentinel-1 SAR images are created using the ISCE stack processor
- The FRInGE library is used to form a time-series spanning 2015 - 2022
- Time-series analysis conducted mainly with MintPy
- GPS rates are provided by the Nevada Geodetic Lab

**All method and materials are open source**

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