# Impacts on Water Quality after Hurricane Sandy

***NOAA - Cooperative Remote Sensing Science and Technology Center***

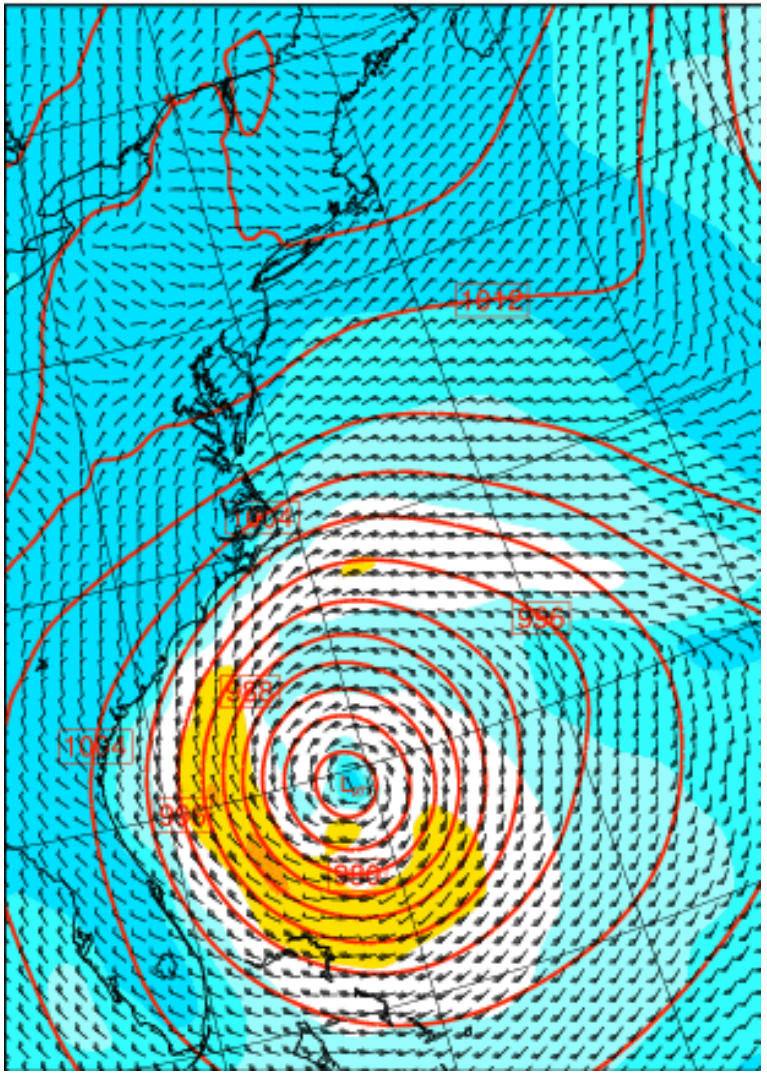
***Center Director: Dr. Reza Khanbilvardi***

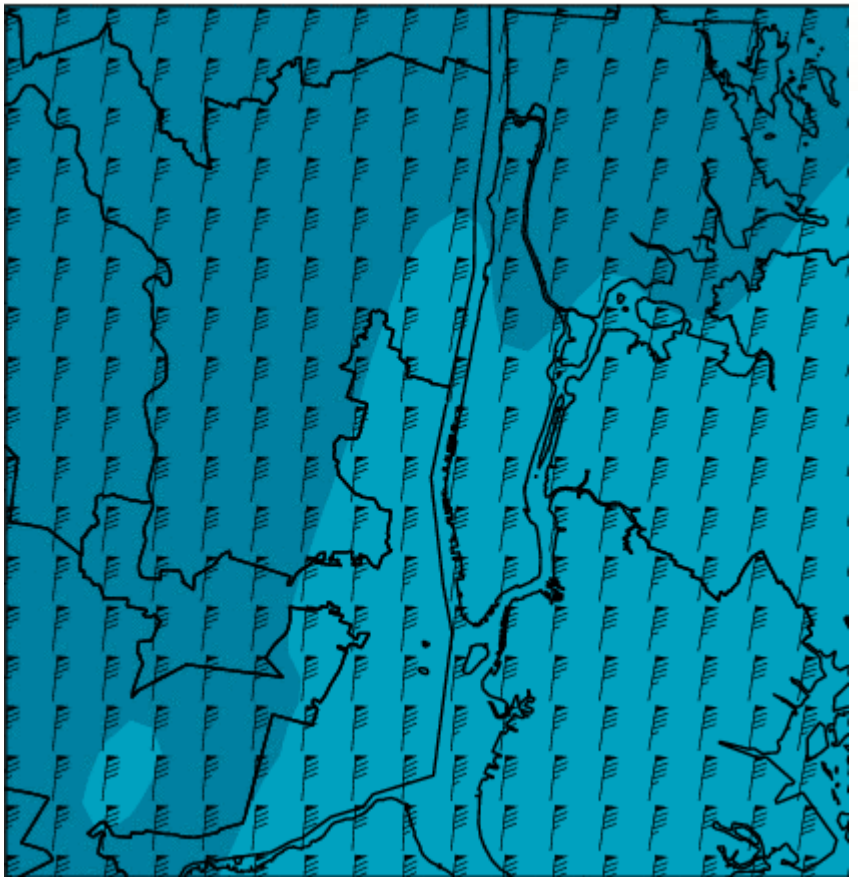
The City College of New York

June 12, 2013

NOAA CREST

# Sandy Simulated Path over NYC

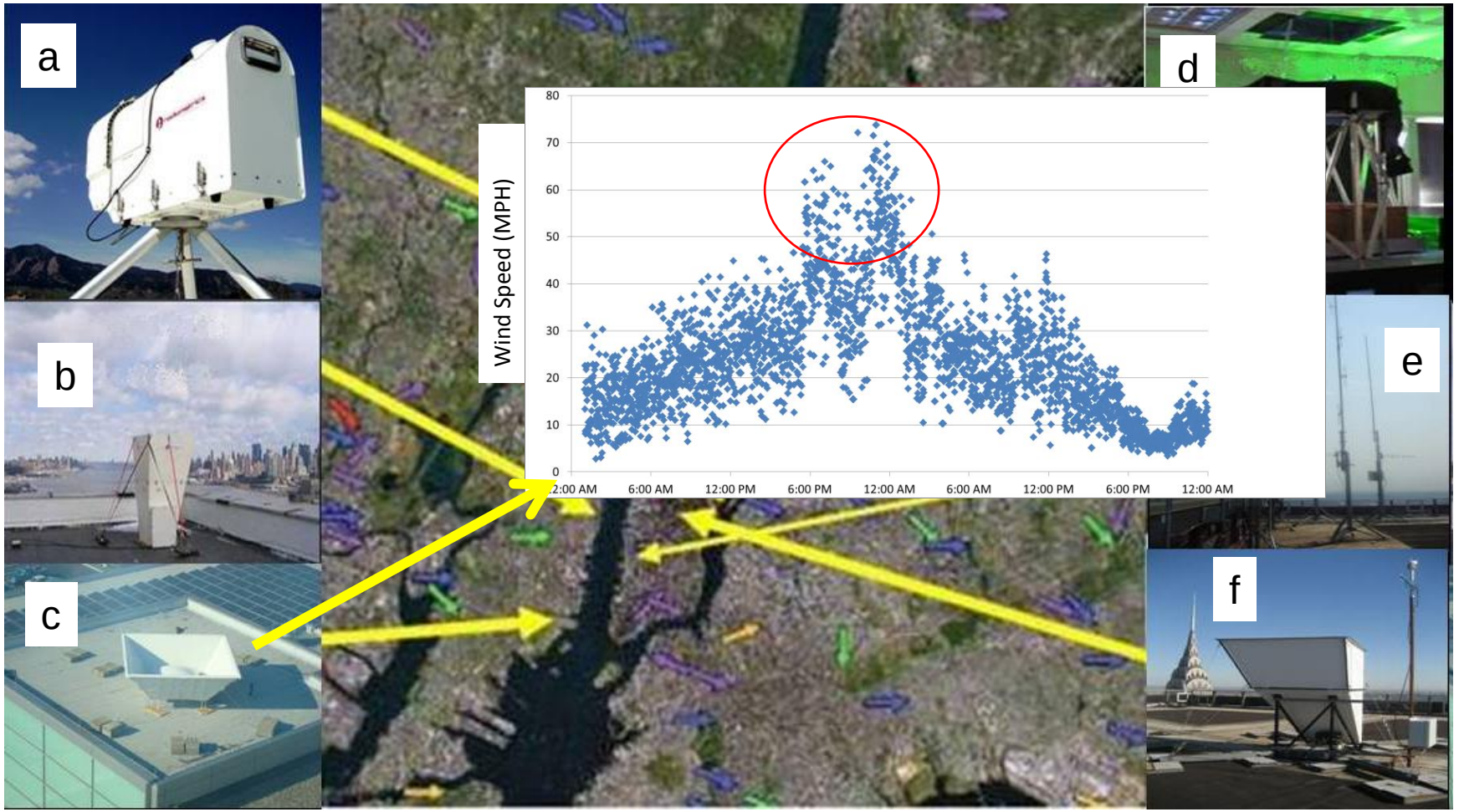



**Prof. Jorge Gonzalez & Graduate student: Estatio Gutierrez**
**Mechanical Engineering**

the City College of New York

# NYCMetNet
# Vertical Profilers and Surface Stations

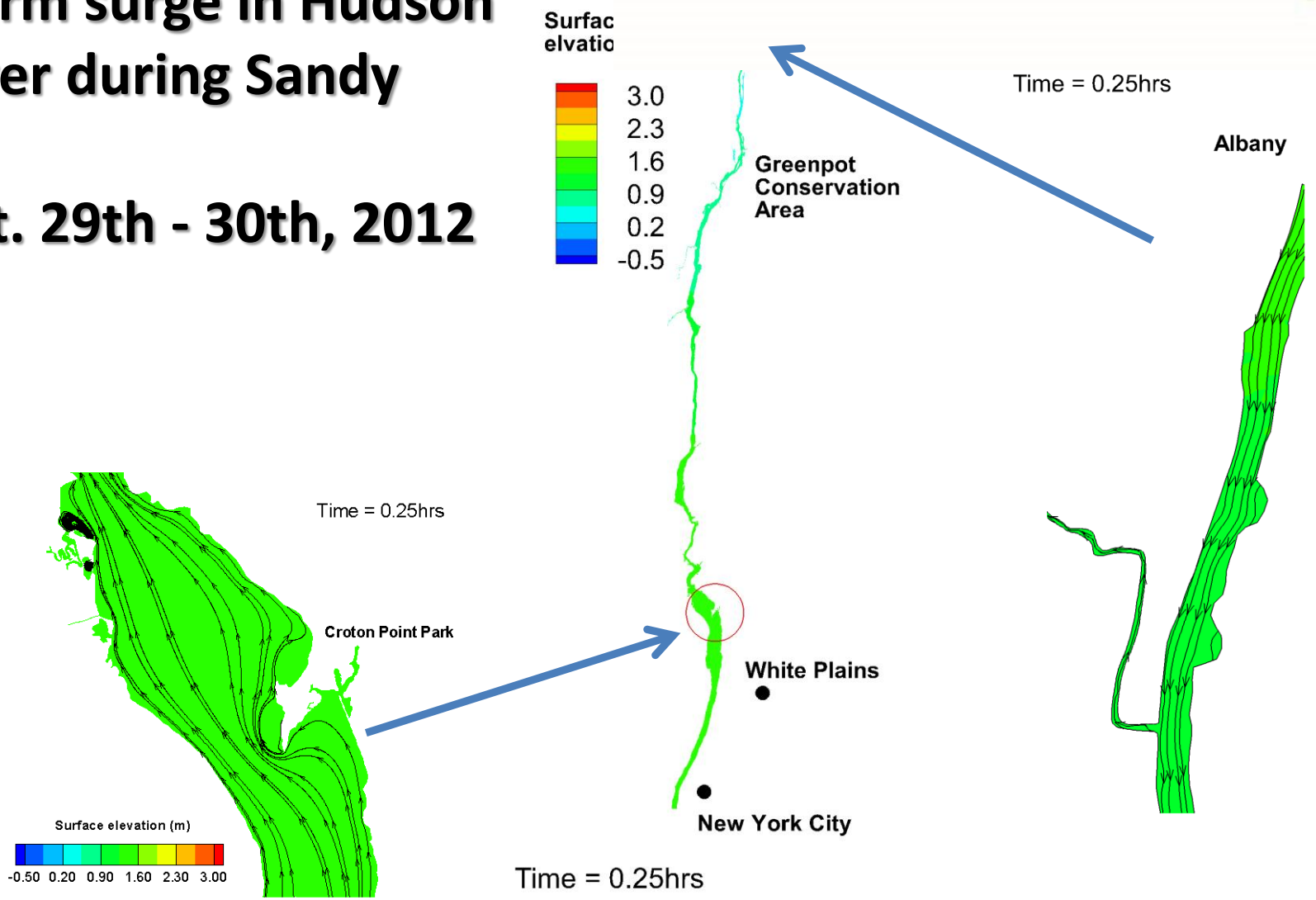



a) Hyper spectral radiometer
b) Sodar to 300 m
c) Radar Wind Proifiler to 2 km

d) Backscatter aerosol Lidar
e) Building top Met Tower
f) Sodar to 400 m

# Computer modeling of storm surge in Hudson River during Sandy

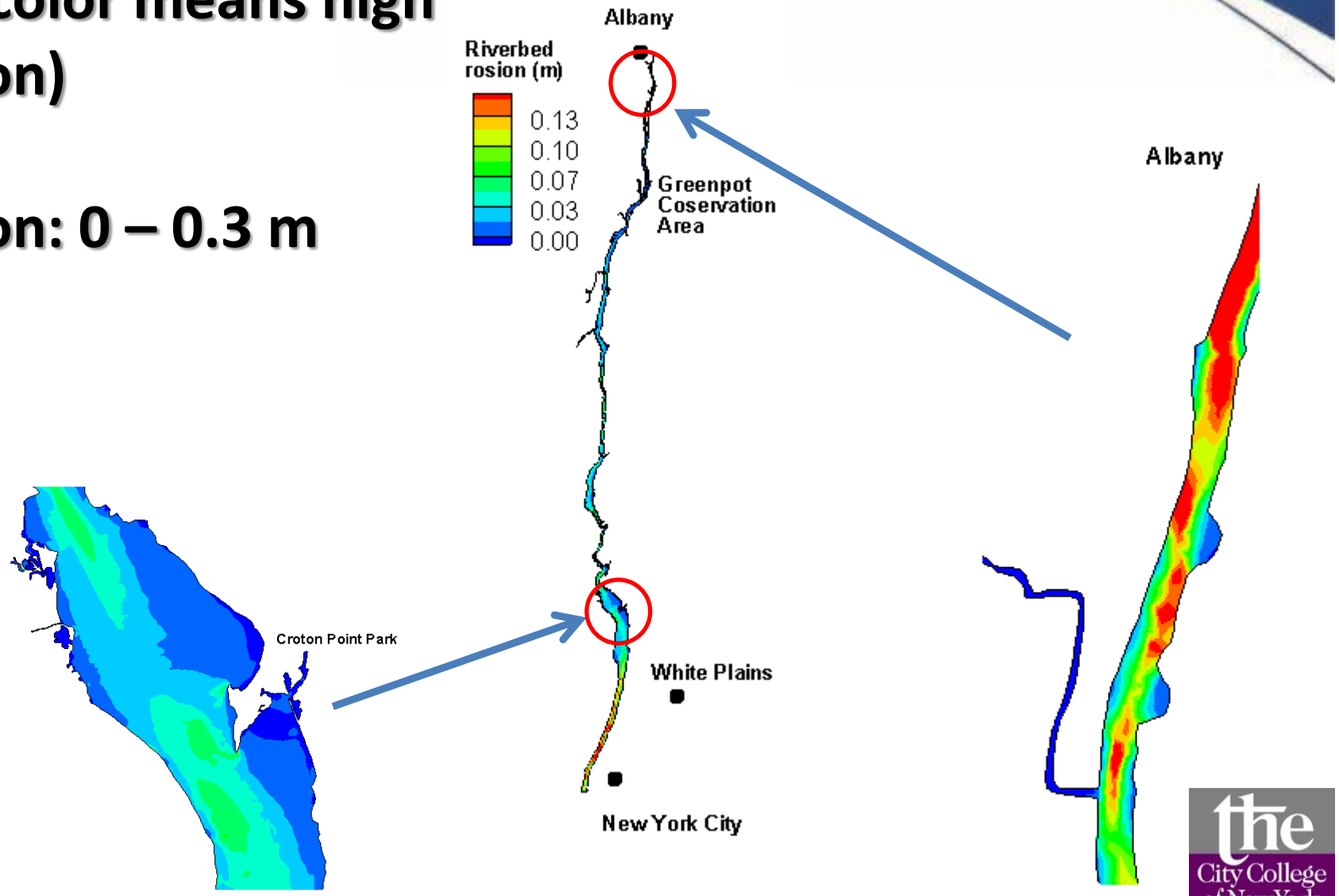
## Oct. 29th - 30th, 2012



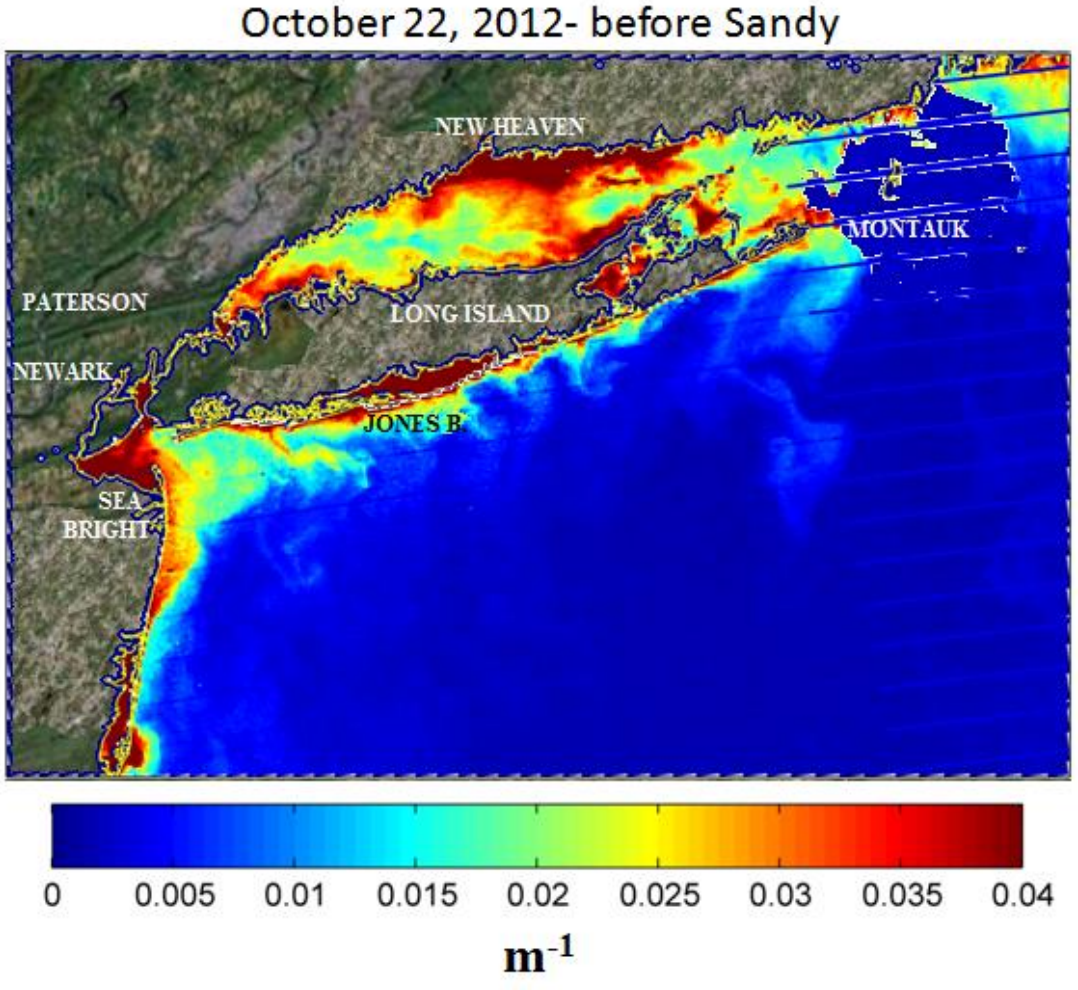

**Prof. Hansong Tang & Graduate students: Isabel Perez and Ke Qu**
**Civil Engineering**

# Riverbed erosion due to storm surge during Sandy (Red color means high Erosion)

## Erosion: 0 – 0.3 m



# Water turbidity in Long Island Sound and NY Bight from satellite imagery Suomi – VIIRS sensor




*$b_{bp}$ is a good indicator of total particulate concentration.*

Slightly increased water turbidity even before the storm (red and green colors)

**Prof. Alex Gilerson**
**Graduate students: Carlos Carrizo and Soe Haling**
**Electrical Engineering**

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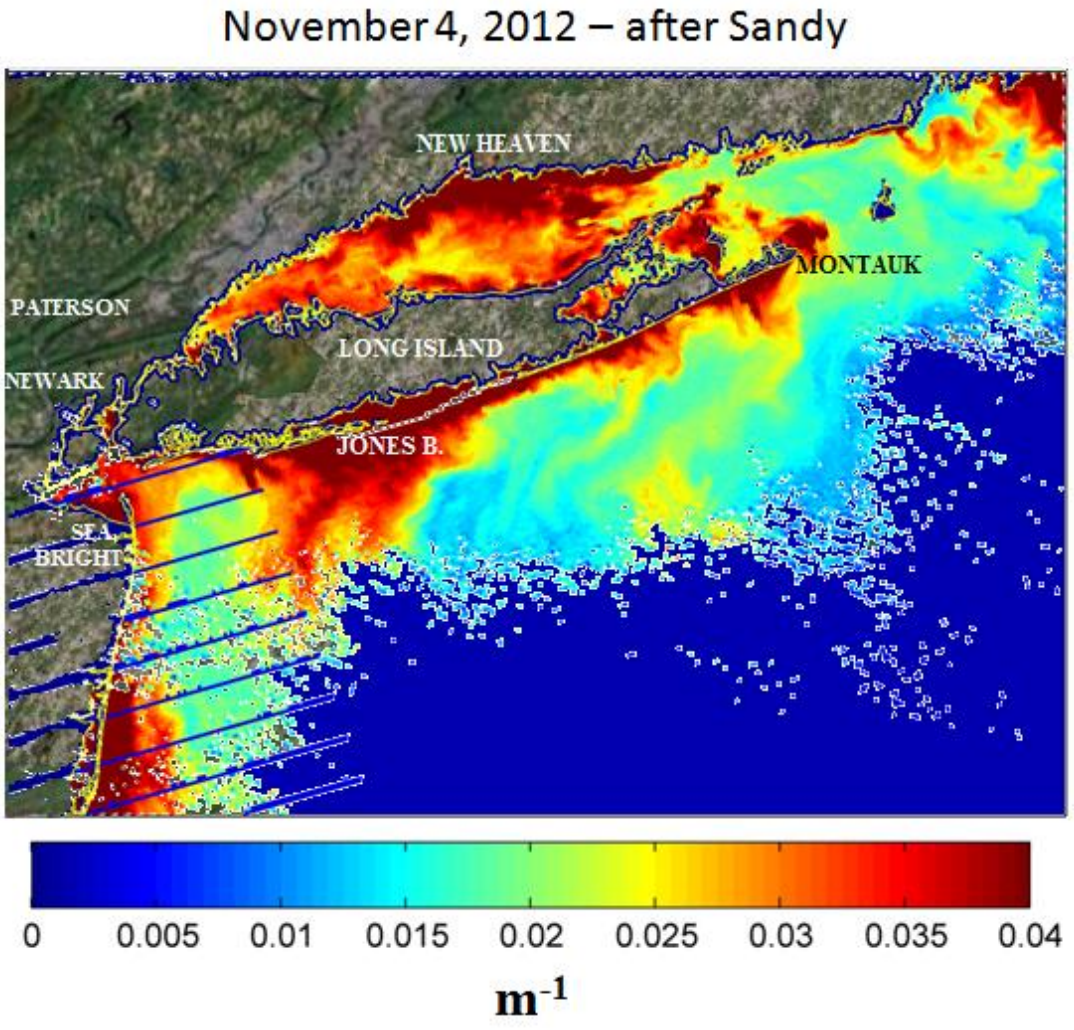


*$b_{bp}$ is a good indicator of total particulate concentration.*

Significant increase of water turbidity and concentration of mineral particles in the whole region – no blue color, red and green only

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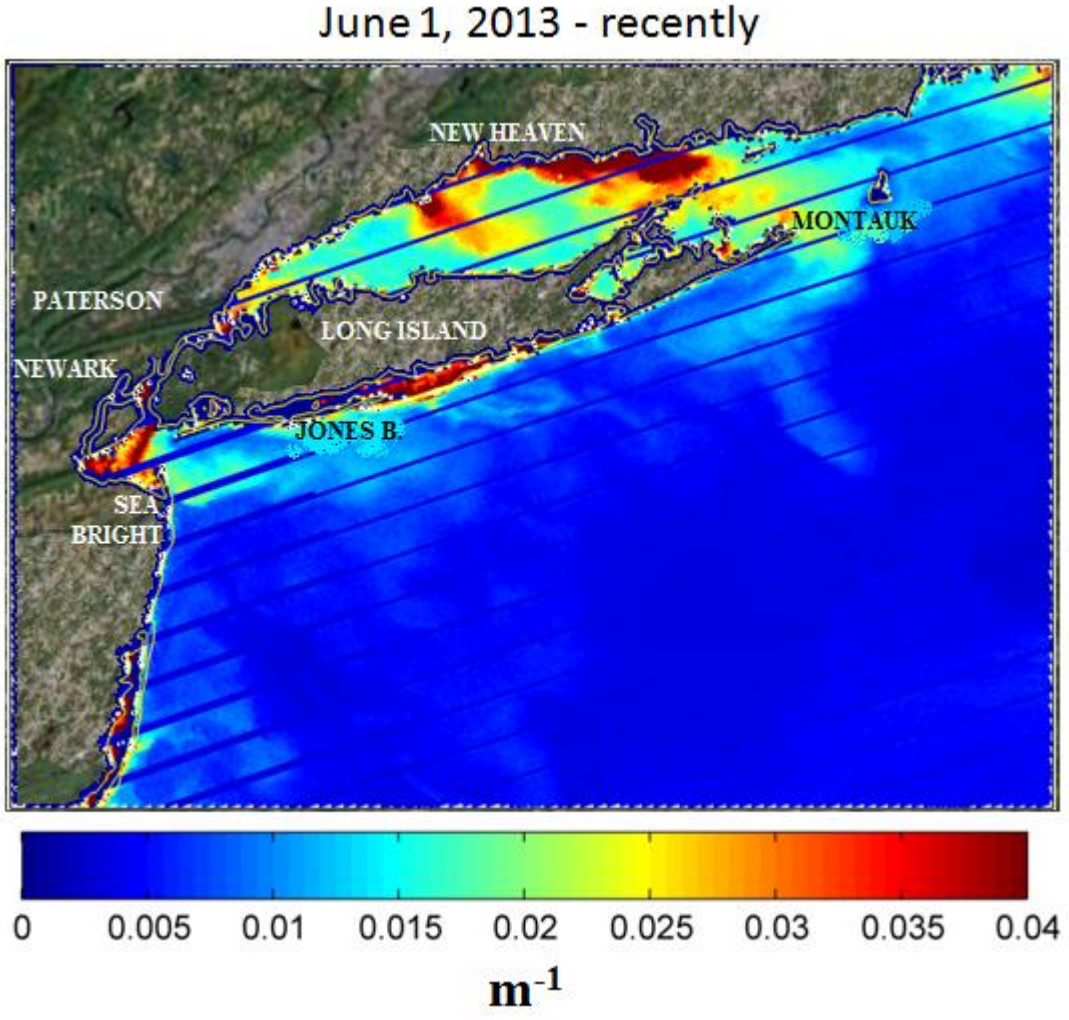


Water turbidity is back to normal (mostly blue)

*$b_{bp}$ is a good indicator of total particulate concentration.*