See forecast velocity shear and Temp. gradient, with surface mixing signature, all along Hudson Valley.

OOI-OSSE09: Hudson Valley Adaptive Sampling Plan
Pierre Lermusiaux et al, 2009
SST map Nov 05, overlaid with glider paths (up to Nov06) and ship lanes (Ojanen and Schofield, pers. com.)
Approximate Lat, lon

~ 73 15’, 40 09’
~ 73 22’, 39 55’
~ 73 18’, 40 11’
MIT-MSEAS Forecast, with Rutger’s data assimilation

You can see some tidal resonance. The forecast plots shows the strong/weak flow conditions, with some internal tides. Six hours later, the “resonance” leads to no tidal flow right above the valley, but strong flow on either side.