

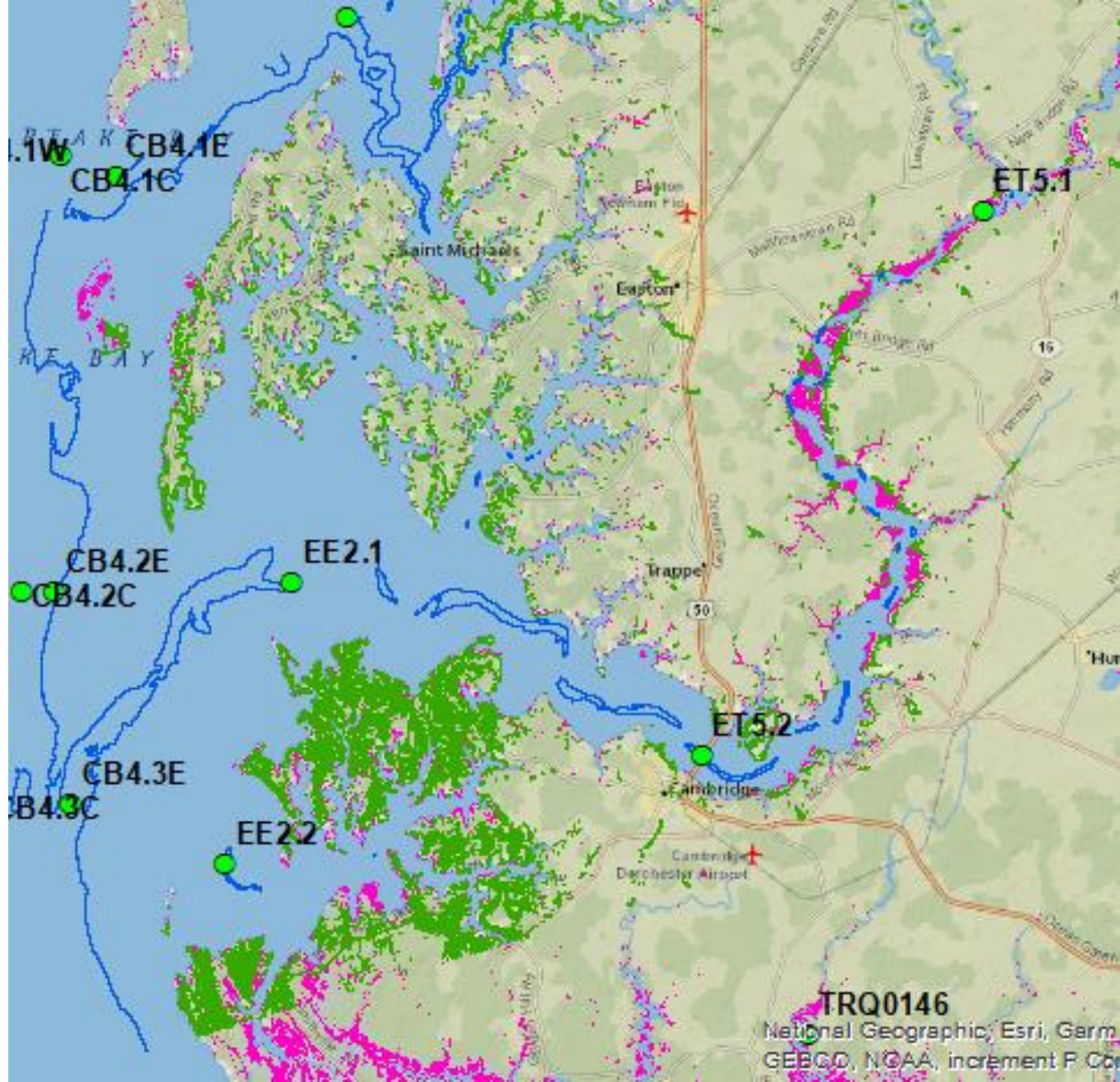
# **Choptank simulation grid and preliminary result**

**Richard Tian  
And modeling team**

**Modeling Quarterly Review  
04/05/2023  
Annapolis**

# Define model domain

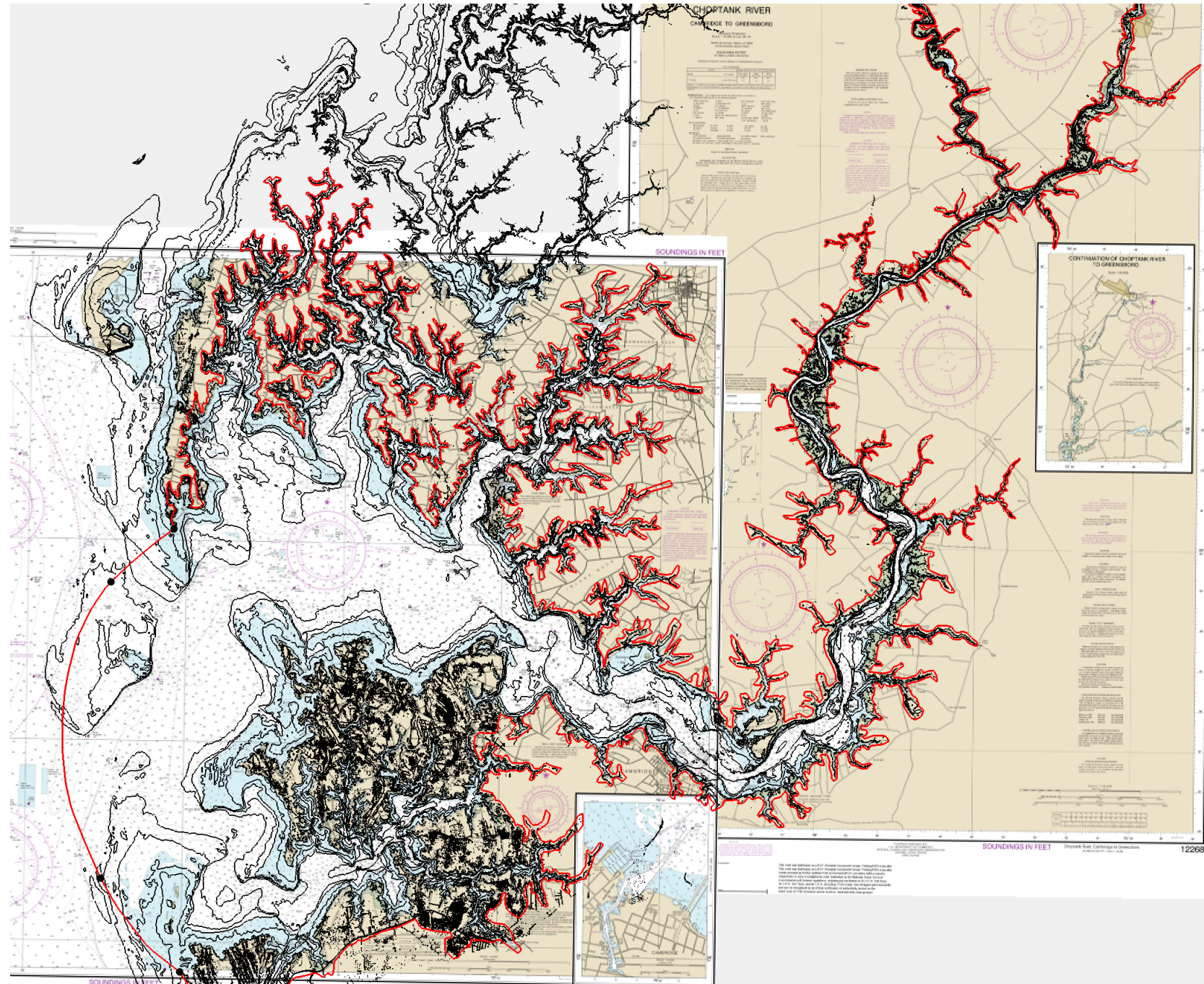
- Choptank + Little Choptank
- 1m DEM (green)
- Tidal wetland (pink)
- Monitoring stations
- USGS CoNED bathymetry (blue)



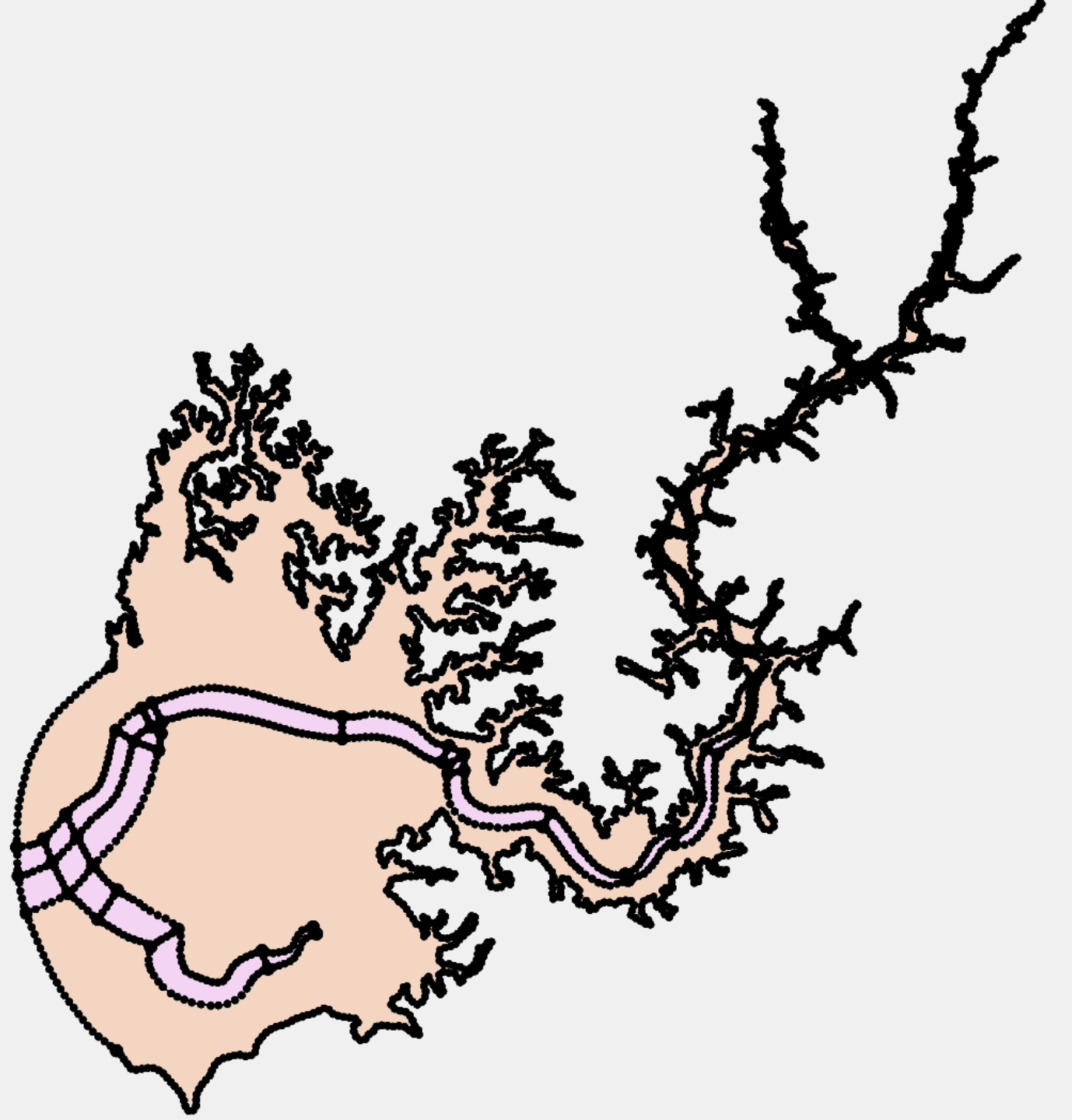


# Nautical chart

Define shipping channel and  
bathymetry

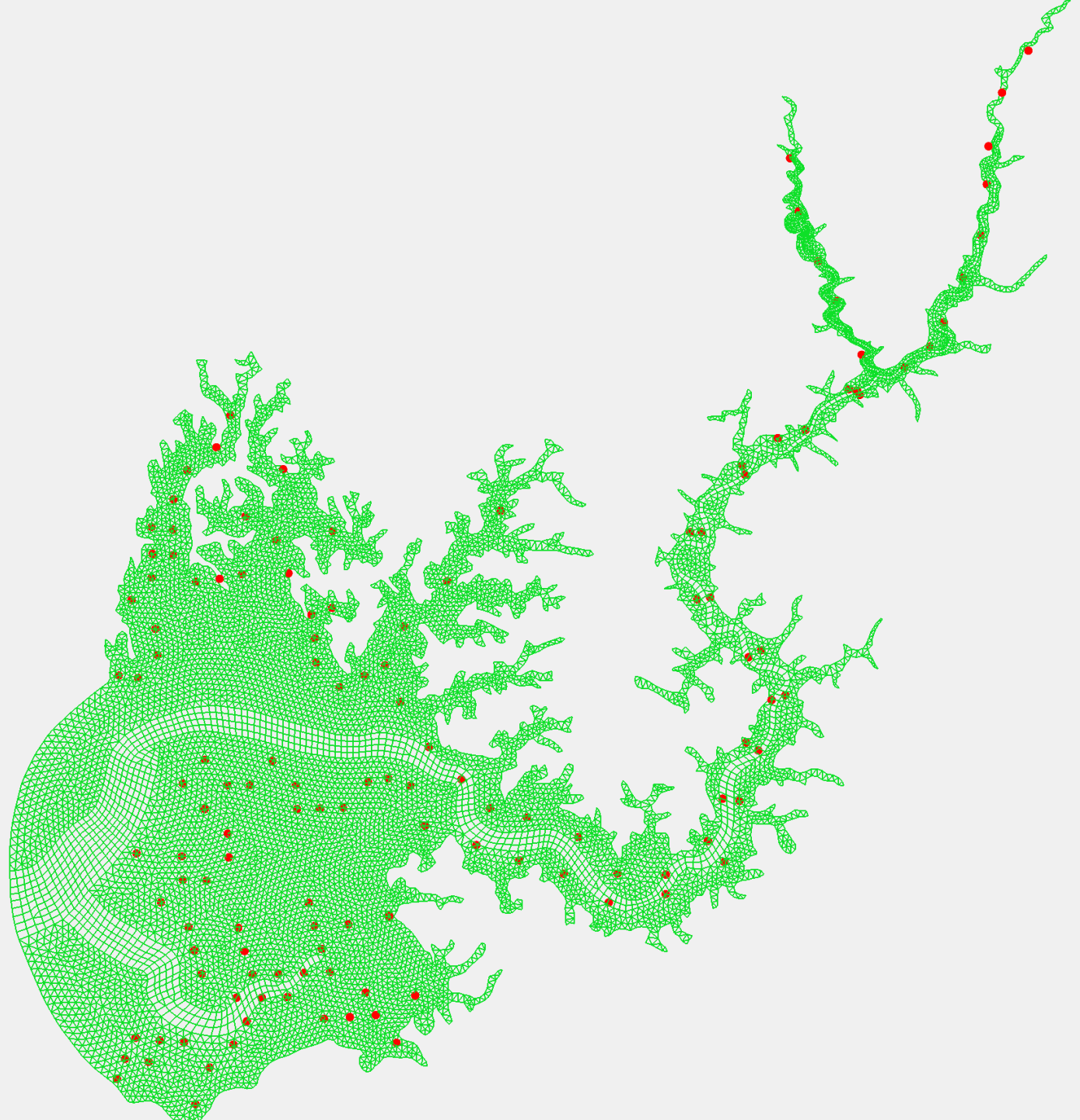


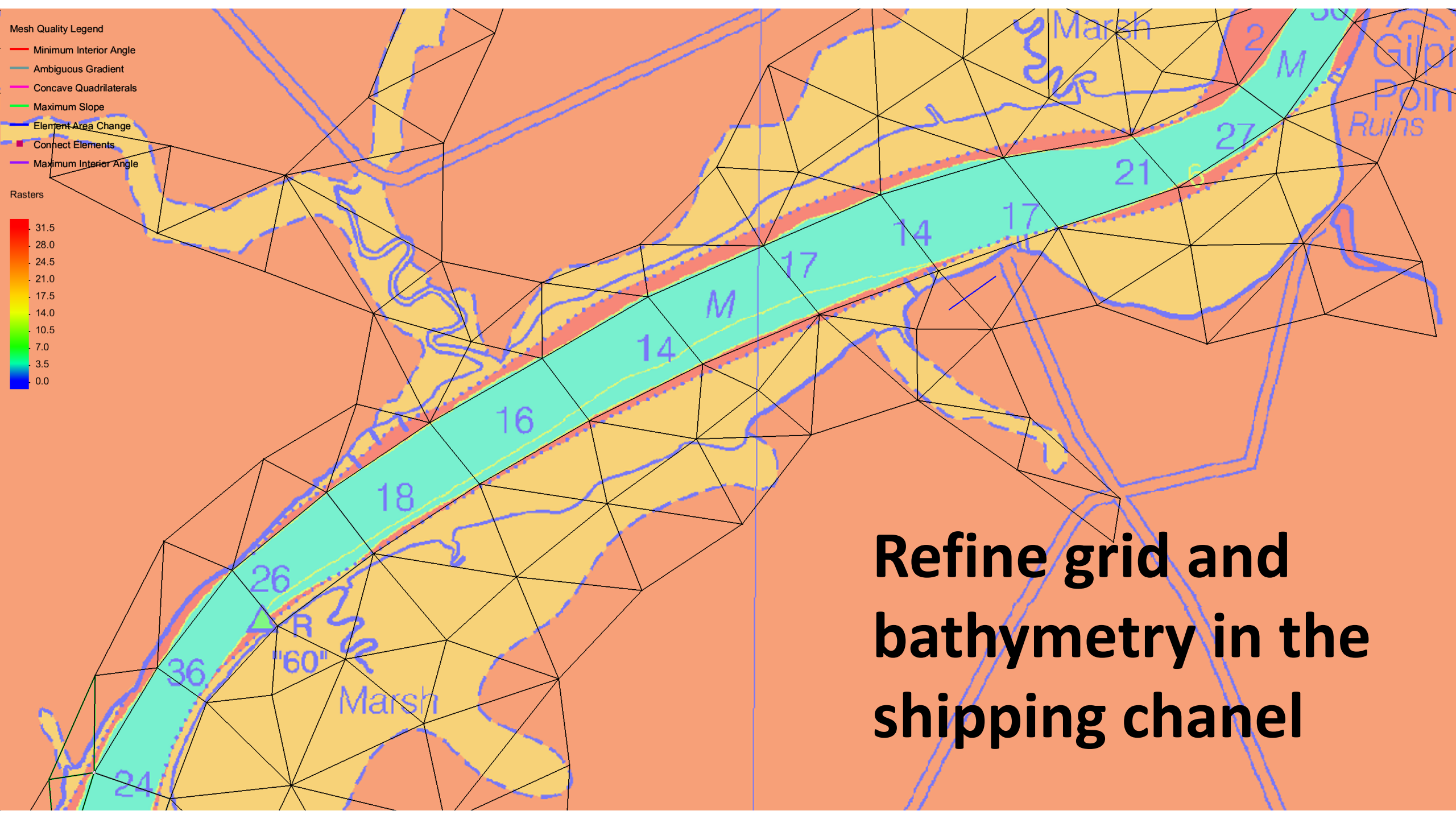
# Simulation domain and shipping channel





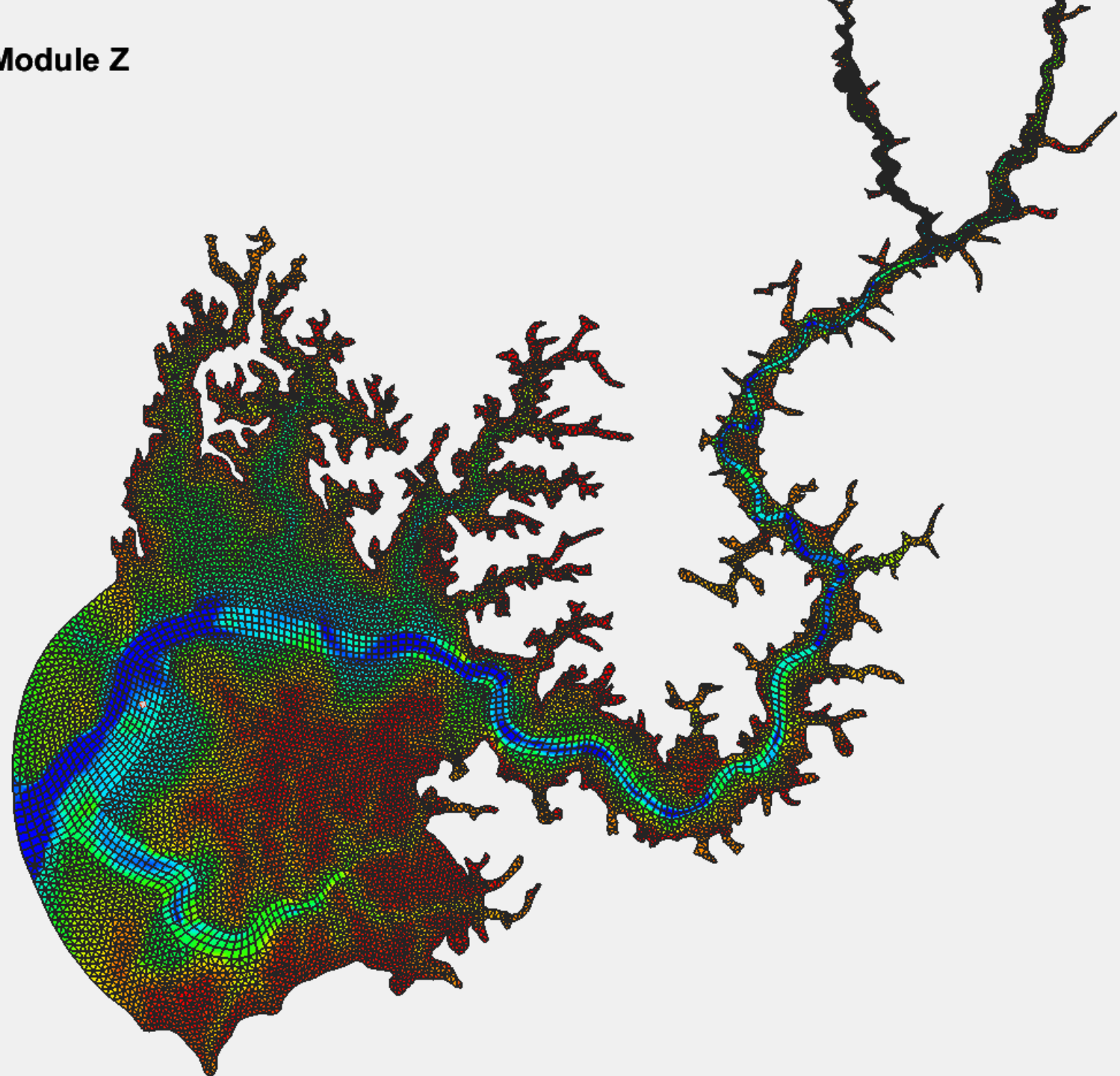
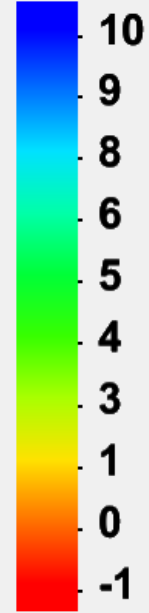
# Preliminary grid





# Simulation grid

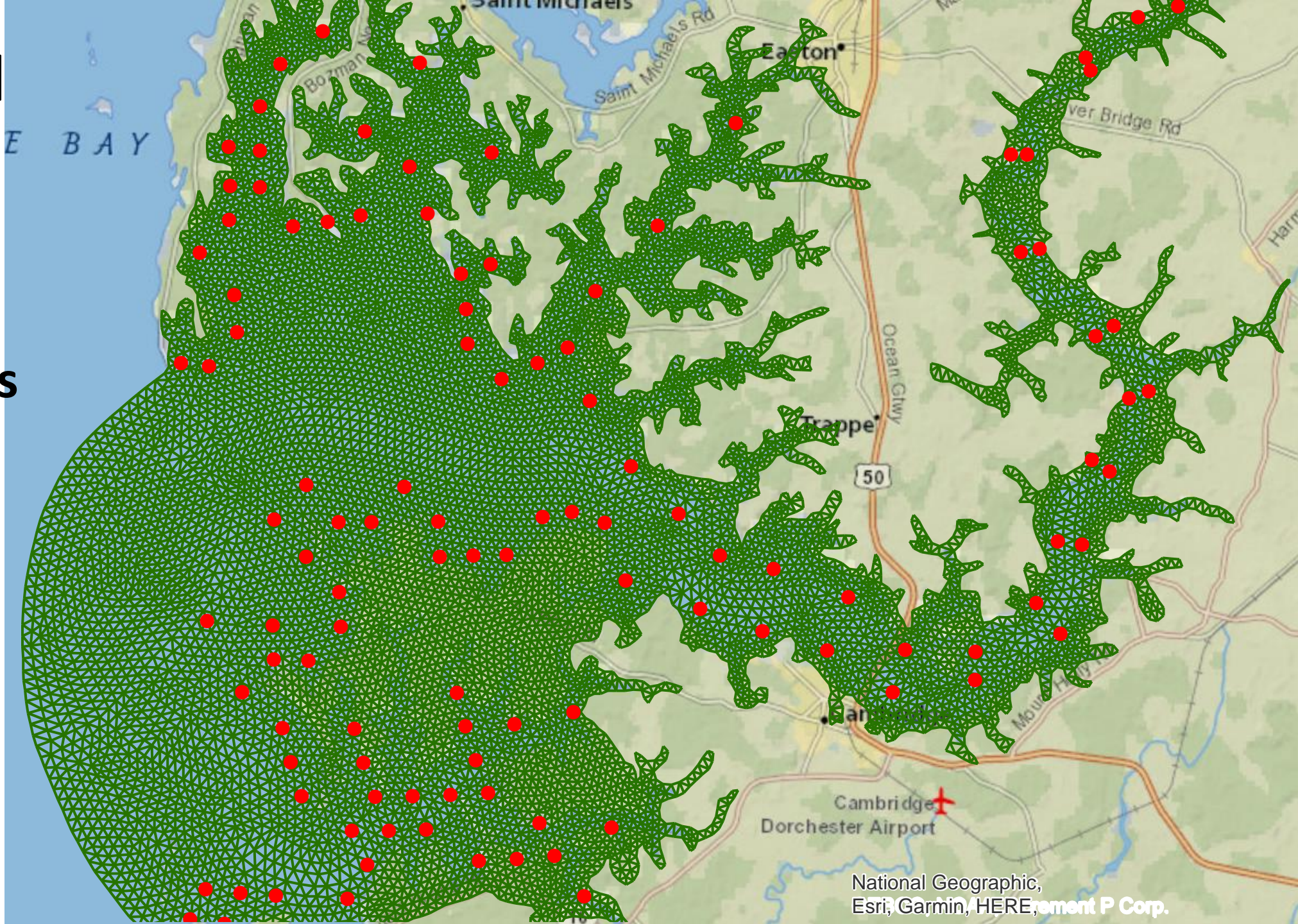
Mesh Module Z





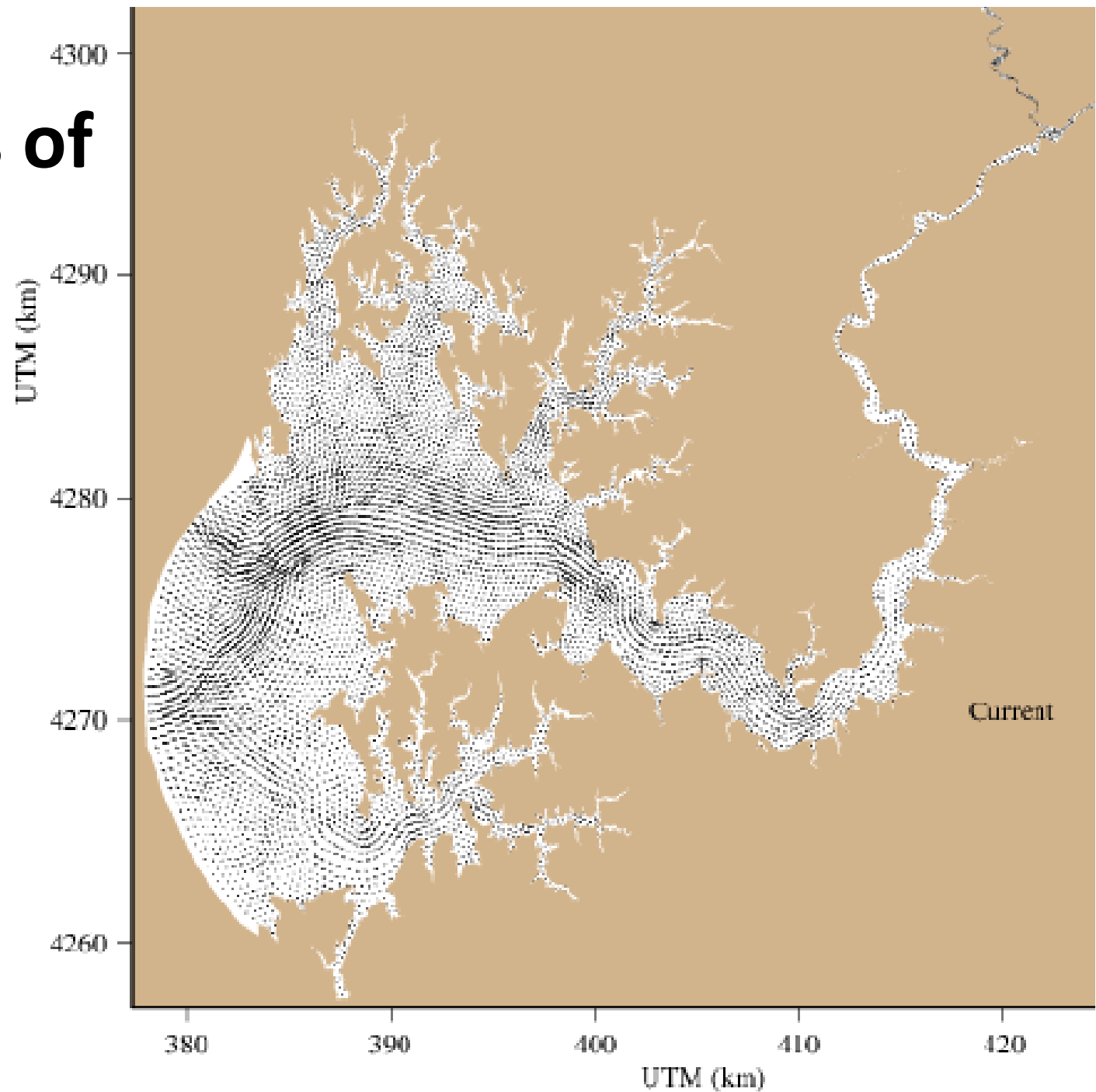
# Operational grid

- 20429 cells
- 11690 nodes
- 27 layers



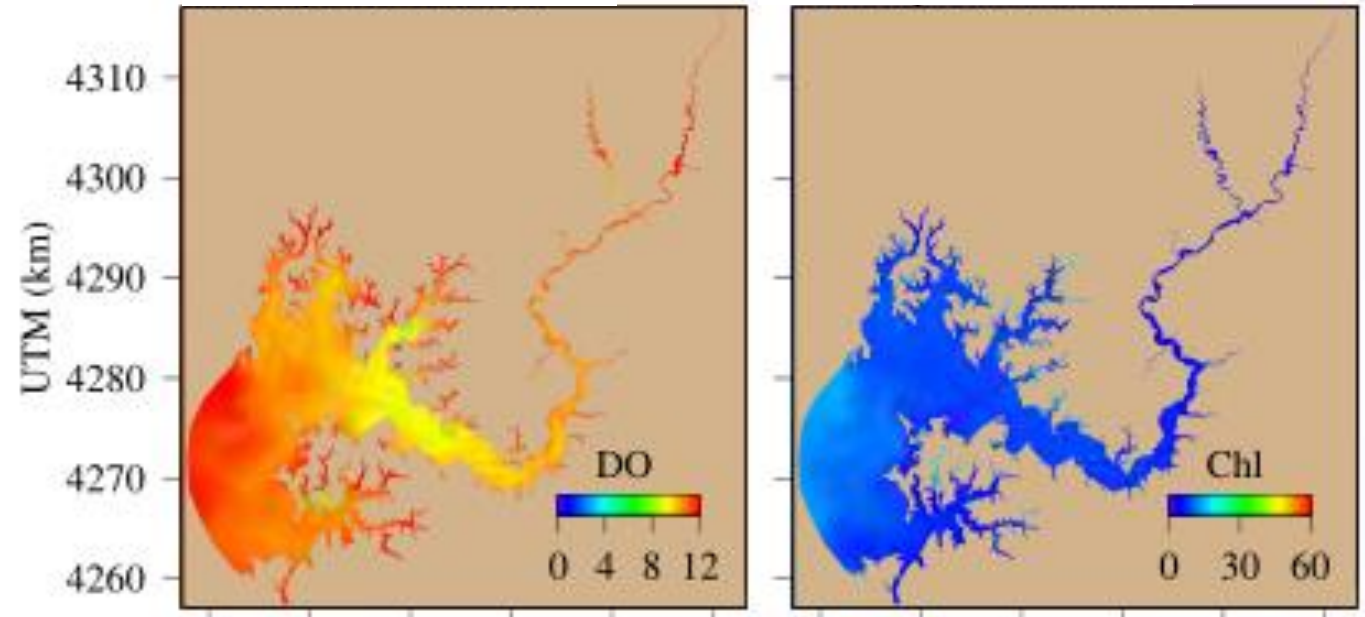
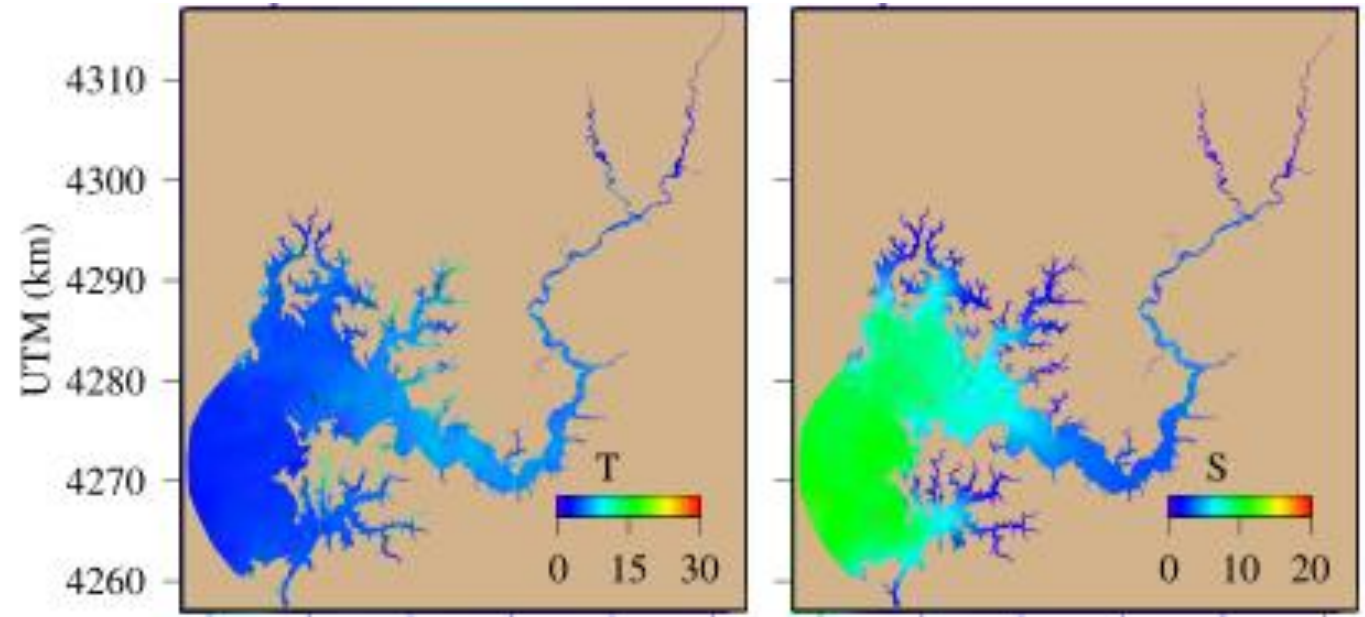


# Preliminary results of surface current on May 1



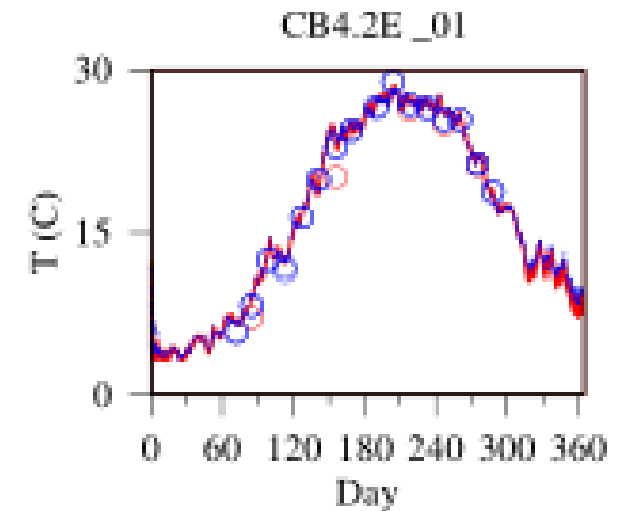
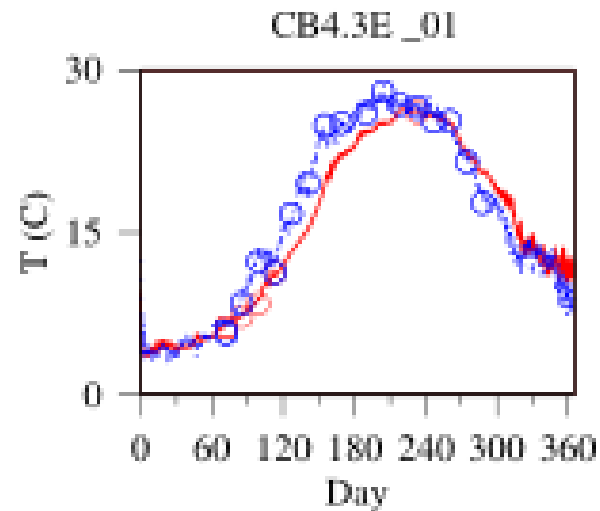
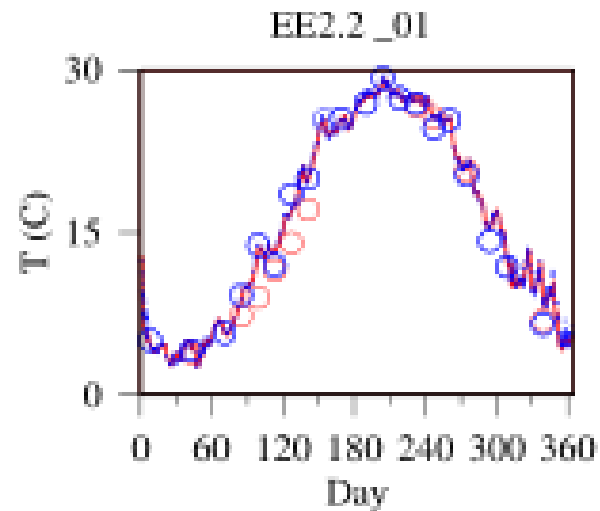
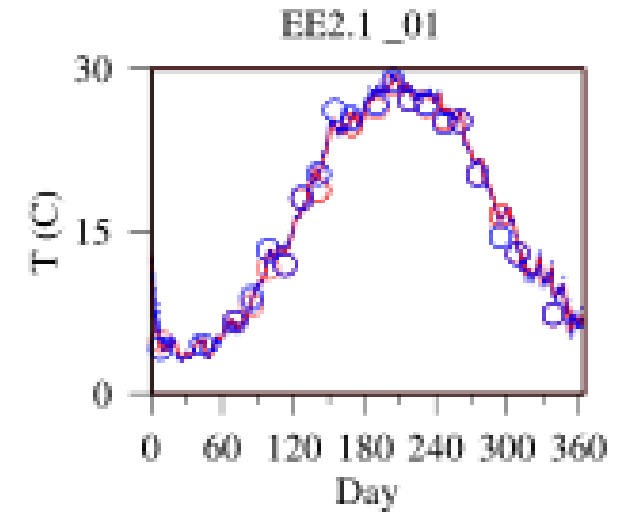
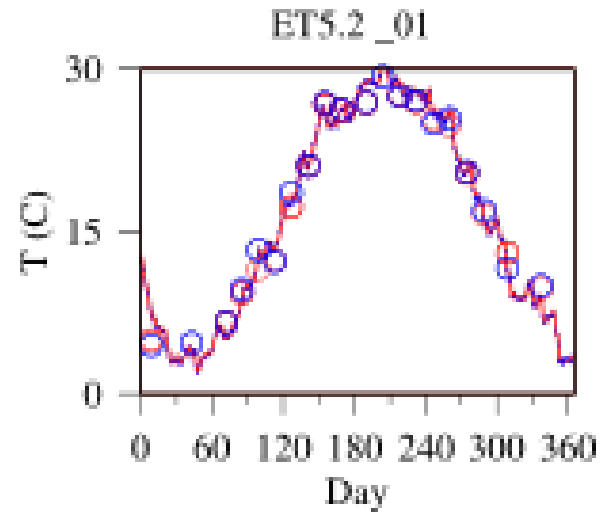
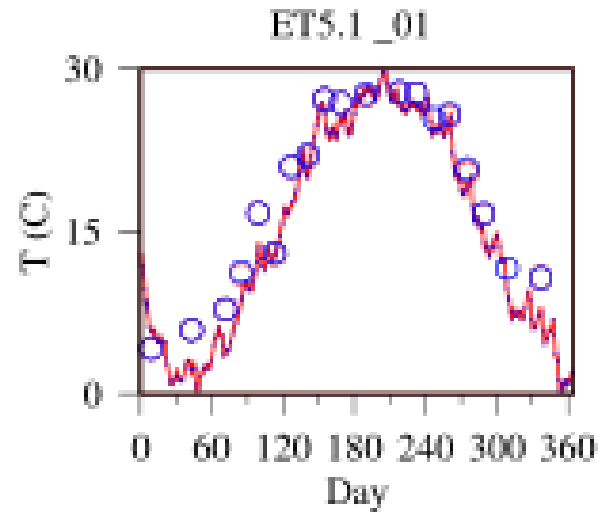
# Preliminary results of surface simulation on May 1:

- Temperature
- Salinity
- DO
- Chlorophyll

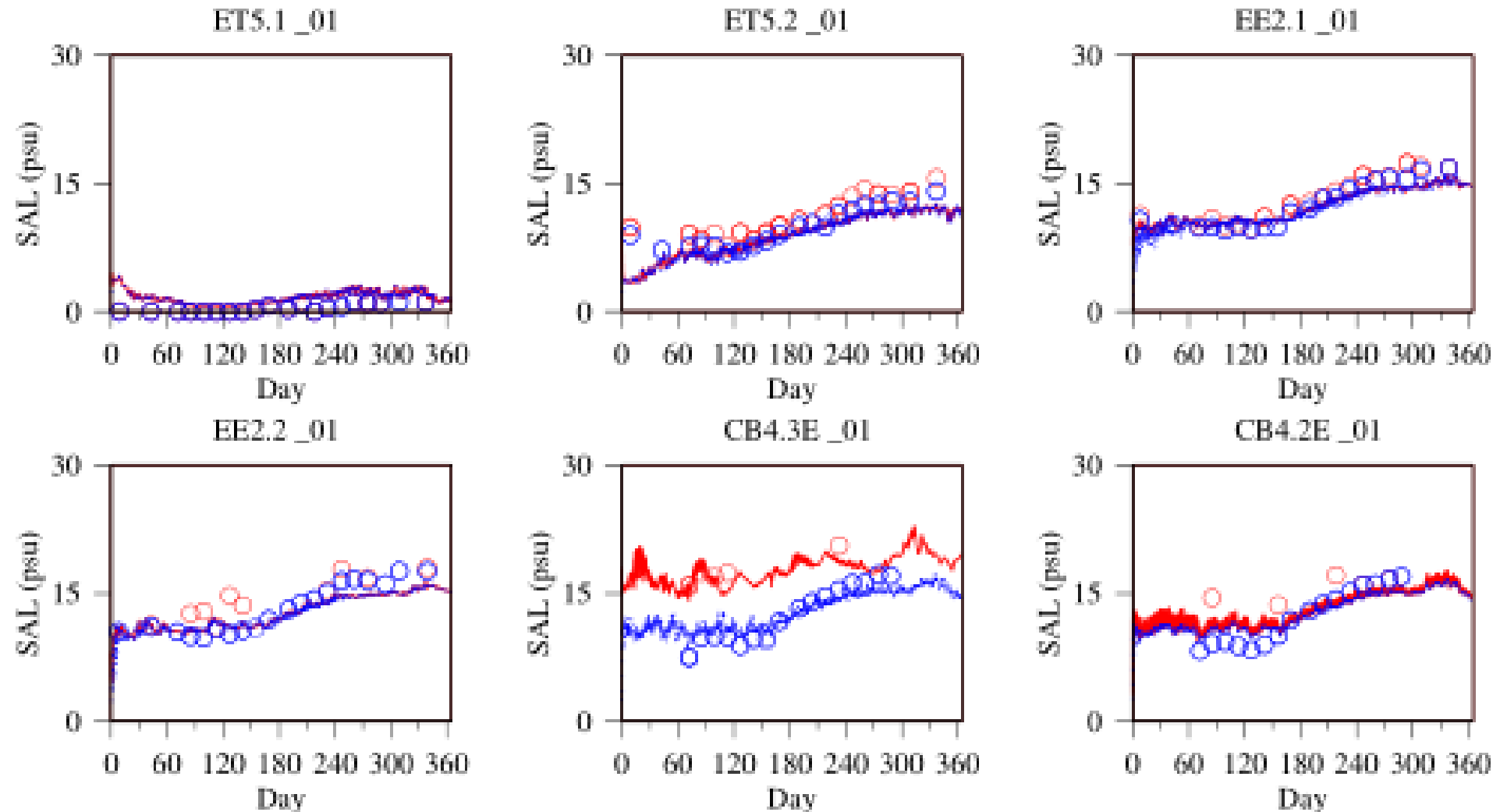




# Preliminary results of temperature simulation 1991

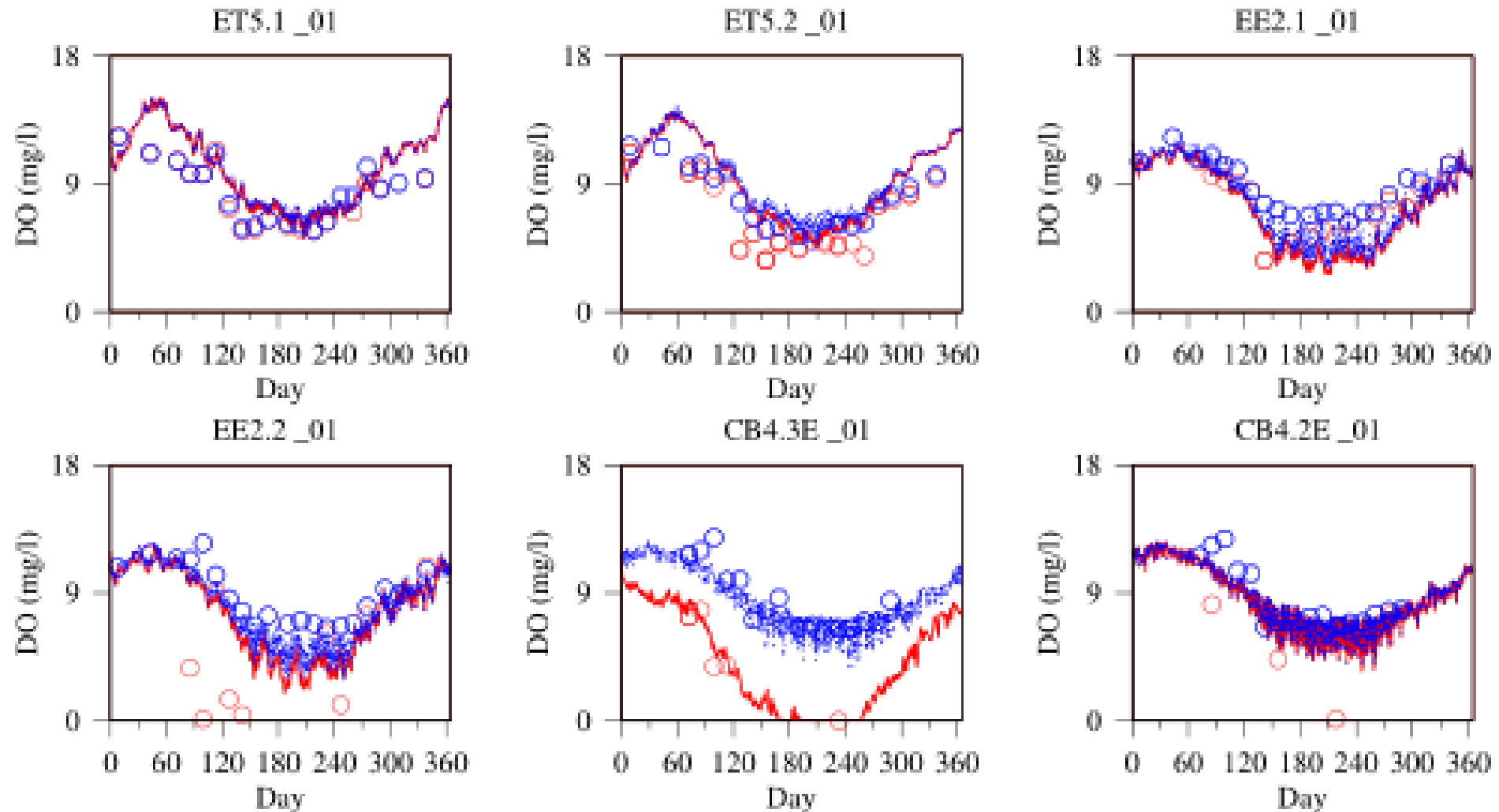


# Preliminary results of salinity simulation 1991





# Preliminary results of DO simulation 1991



# Preliminary results of chlorophyll simulation 1991

