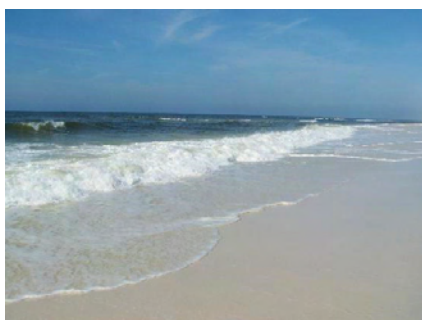


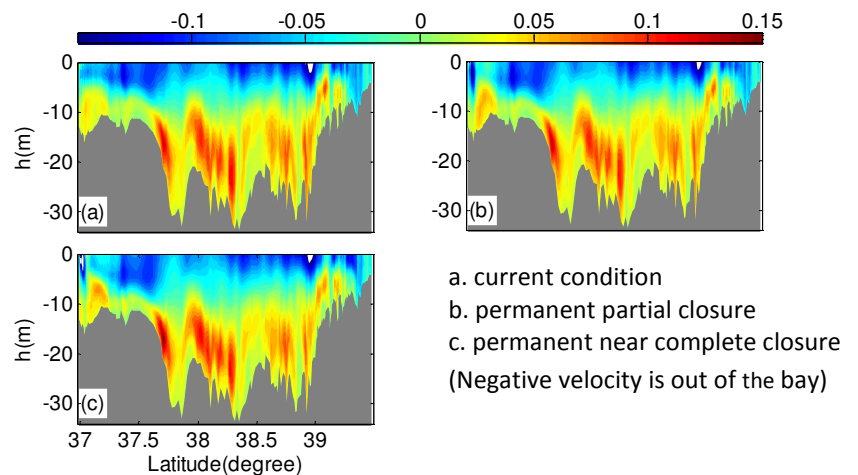
# Influence of Permanent Storm Surge Barrier on Salinity and Residual Current

The change in salinity due to the placement of a permanent storm surge barrier was investigated using numerical model.

- Permanent partial closure and near complete closure of the Bay mouth exert little change on the mean summer residual current.
- Permanent partial closure and near complete closure of the Bay mouth result in an increase of salinity intrusion.



Change of residual current during summer time was estimated, with respect to a simulated storm surge barrier that either **a)** permanently closed half of the Bay mouth, or **b)** almost all of the Bay mouth (with the exception of 2 open deep-water channels). The results were compared to the current conditions for 2003. The change of mean residual current is not very significant. The weak response of mean residual current to different scenarios is not well understood and requires more study.



The summer mean salinity distribution shows that salinity intrusion reaches farther into the Bay for a permanent near complete closure. The increase of salt intrusion is probably due to a decrease of tidal mixing.

