Surface currents offshore of North Carolina

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Objective and Approach

Objective
- Map surface currents off North Carolina
- Maximize uptime and coverage

Approach
- Operate high-frequency radar along NC coast
- Leverage collaborations to improve operations; work with:
  - Army Corps (DUCK)
  - National Park Service (HATY and CORE)
  - MARACOOS
  - NC Dept. of Transportation (PEACH installations at coastal airports)
  - John Hopkins University
  - PEACH team (SkIO/UGA, NCSU, WHOI, CSI)
Accomplishments

• QC’ed radials now being supplied to national network in near real-time
• Supported installation of 4 additional HFR systems along Outer Banks by NSF-funded PEACH project
• Developed totals product that utilizes all 7 NC HFR (+1 in southern VA)
• Coverage now includes much of Raleigh Bay shelf region
Impact

• Consistent coverage along NC coast since (before) SECOORA began

• Only sustained (year+) depiction of Gulf Stream and shelf surface currents in the area

• Scientists, USCG (SAROPS) and fisherman are presently primary uses

• Close to publishing technique for and analyses of Gulf Stream position variability

• Long-term record of Gulf Stream and shelf flows contributes to documenting baseline and anomalous conditions, key to detecting ocean changes