



“SPURS” in the North Atlantic Salinity Maximum

Raymond Schmitt
(rschmitt@who.edu)

The North Atlantic Salinity Maximum is the world’s saltiest open ocean salinity maximum and was the focus of the recent Salinity Processes Upper-ocean Regional Study (SPURS) program. SPURS was a joint venture between US, French, Irish, and Spanish investigators. Three US and two EU cruises were involved from August, 1012 – October, 2013 as well as surface moorings, glider, drifter and float deployments. Shipboard operations included underway meteorological and oceanic data, hydrographic surveys and turbulence profiling. The goal is to improve our understanding of how the salinity maximum is maintained and how it may be changing. It is formed by an excess of evaporation over precipitation and the wind-driven convergence of the subtropical gyre. Such salty areas are getting saltier with global warming (a record high SSS was observed in SPURS) and it is imperative to determine the relative roles of surface water fluxes and oceanic processes in such trends. The combination of accurate surface flux estimates with new assessments of vertical and horizontal mixing in the ocean will help elucidate the utility of ocean salinity in quantifying the changing global water cycle.