SPURS-1 Follow-up

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Graphic by
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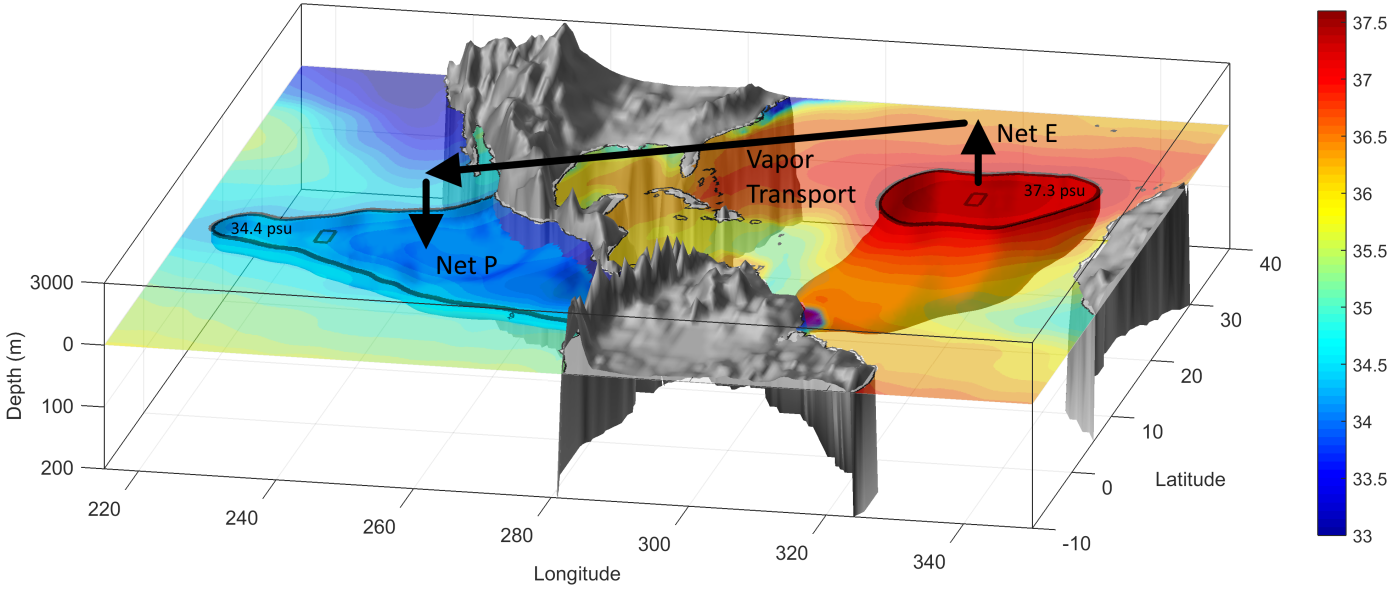


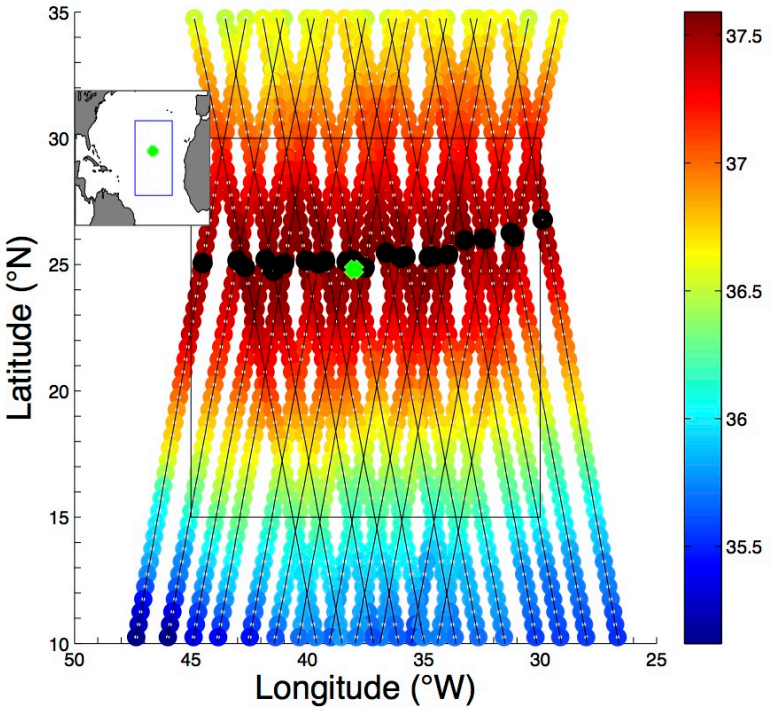
US CLIVAR Meeting, Aug. 2015, PSMI Panel. With contributions from E. Lindstrom

SPURS-1 Organization

- Organizing committee: R. Schmitt/T. Farrar (lead), E. Lindstrom (agency rep), Y. Chao/G. Li (modeling), F. Bingham (data management), A. Gordon, S. Riser
- Stage: analysis and synthesis phase. The field campaign concluded in 2013
- Sponsoring agencies: NASA, with significant contributions from NSF, NOAA and ESA

Program Highlights 2014-2015

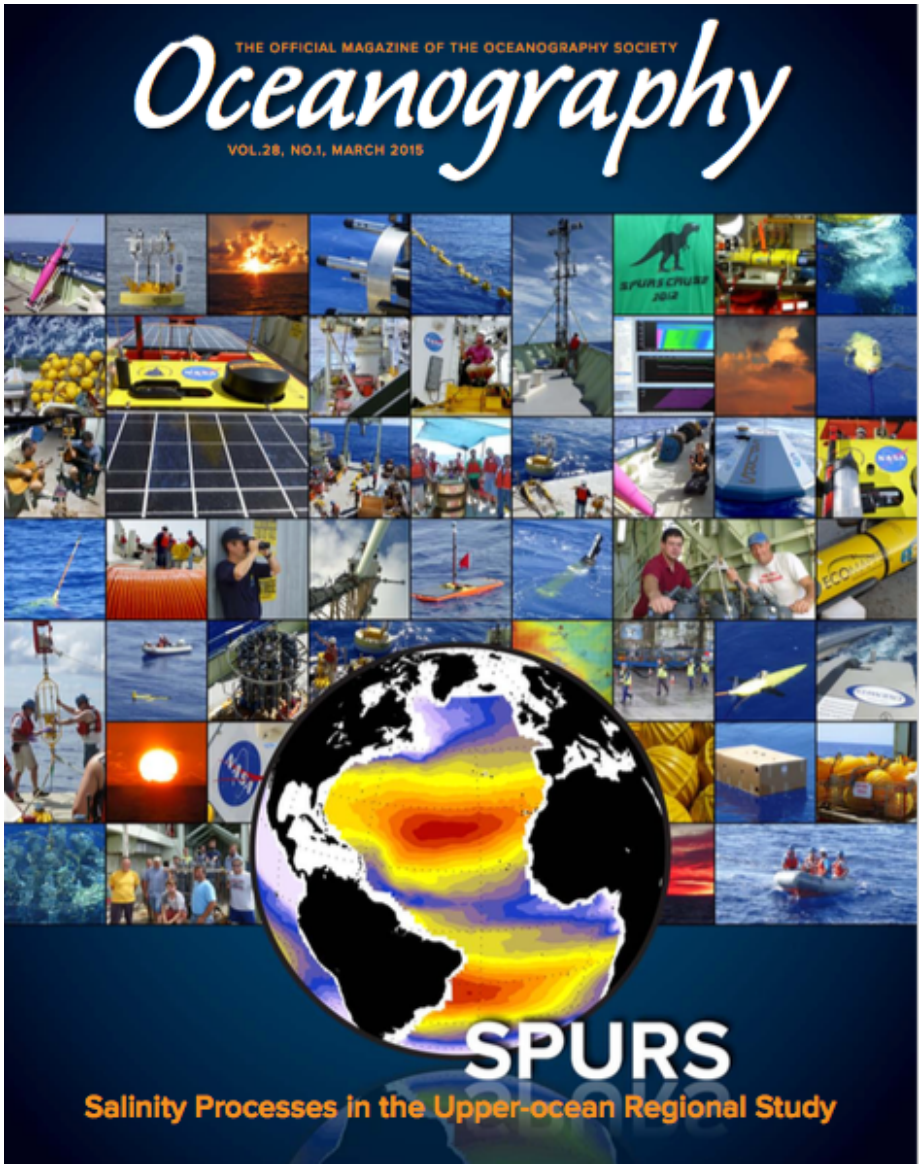
- JGR Special Issue on SSS - 6 papers related to SPURS-1 (Asher et al., Hernandez et al., Busecke et al., etc.). ~25 papers total.



Bingham et al., 2015

Program Highlights 2014-2015

- March 2015 Oceanography special issue – 16 papers
- Background & Overview
- SPURS-1 Descriptions
- Upper-ocean salinity budgets
- Data Management
- Education / outreach



Program Highlights 2014-2015

- Results presented at March 2015 meeting in La Jolla
- See spurs1.jpl.nasa.gov (Meetings -> San Diego 2015)

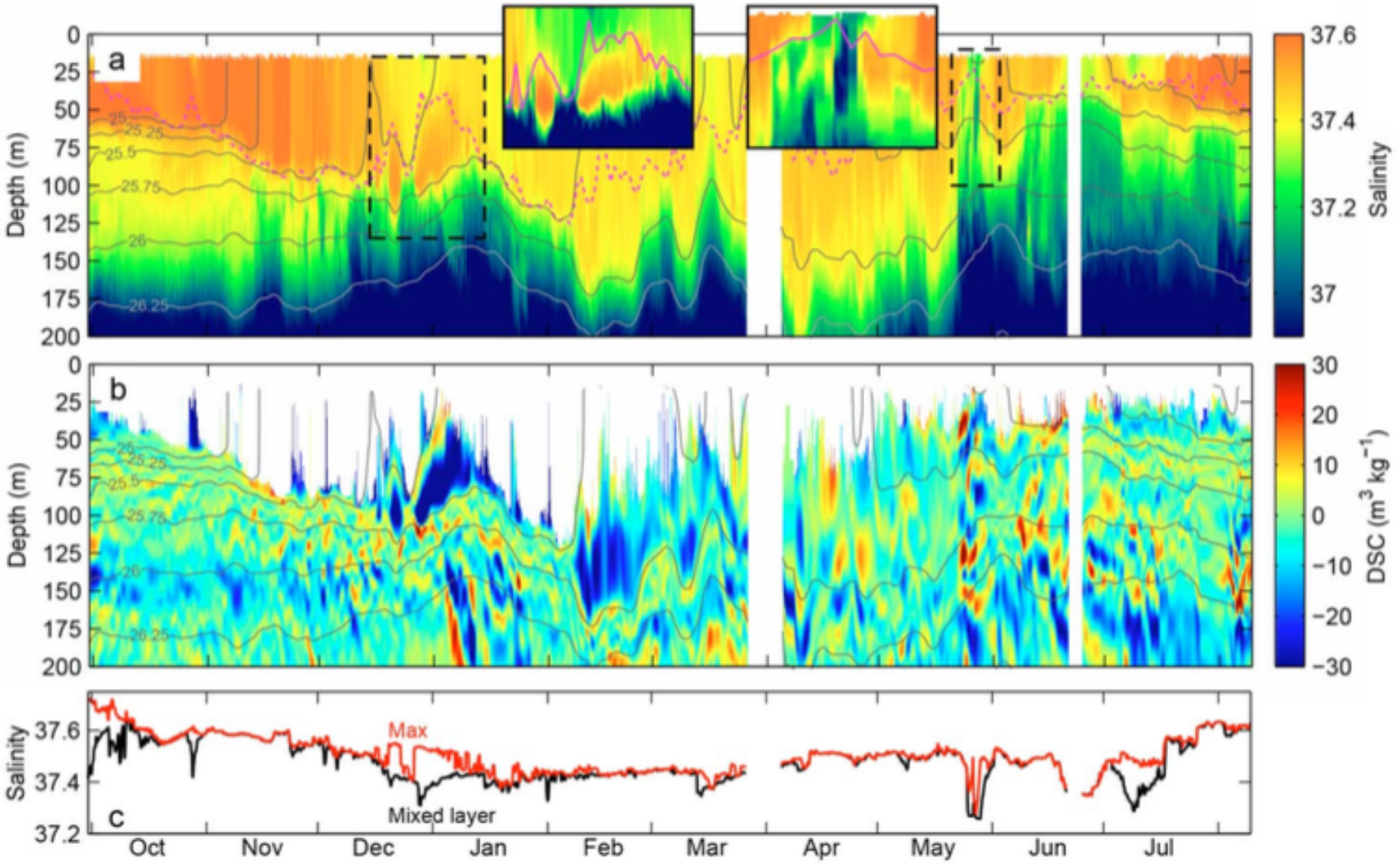
SPURS Meeting
March 11-13, 2015
Ted Scripps Room, Scripps Seaside Forum,
Scripps Institution of Oceanography
La Jolla, CA

Wednesday, March 11 2015

08:30	**Breakfast**
09:00	Welcome, T. Farrar
09:15	Programmatic considerations, E. Lindstrom
09:30	**SPURS-1 results**
	SPURS-1 special issue of Oceanography, Eric Lindstrom and Ray Schmitt Data Management Support for SPURS-1 and SPURS-2, Frederick Bingham Status of SPURS-I data archival efforts at the PO.DAAC, Vardis Tsontos
10:30	**Coffee break**
11:00	**Resume SPURS-1 results**
	Ocean Salinity and Terrestrial Rainfall: SPURS and the Sahel, Ray Schmitt Correlation scales from SPURS-1 data, Luc Rainville Salinity and temperature balances at the SPURS central mooring, Tom Farrar
12:00-13:00	**Lunch**
13:15	**Resume SPURS-1 results**
	Diurnal cycle of turbulence during SPURS, Brian Ward Observations of rainfall events on upper ocean salinity with ASIP, Brian Ward Observations and Model Estimates of Surface Evaporation during SPURS-1, Jim Edson Intermittent subduction and interleaving in the S-max region, Andrey Shcherbina SSS-max variability and beyond - What governs the properties of the subsurface salinity maximum?, Julius Busecke Wave Glider Observations of Near-Surface Stratification, Ben Hodges
14:45	**Coffee break**

Science Results from Oceanography Issue

Shcherbina et al., Variability and Interleaving of Upper-ocean Water Masses in the NA SSS-max



Farrar et al., S&T Balances at the SPURS Central Mooring

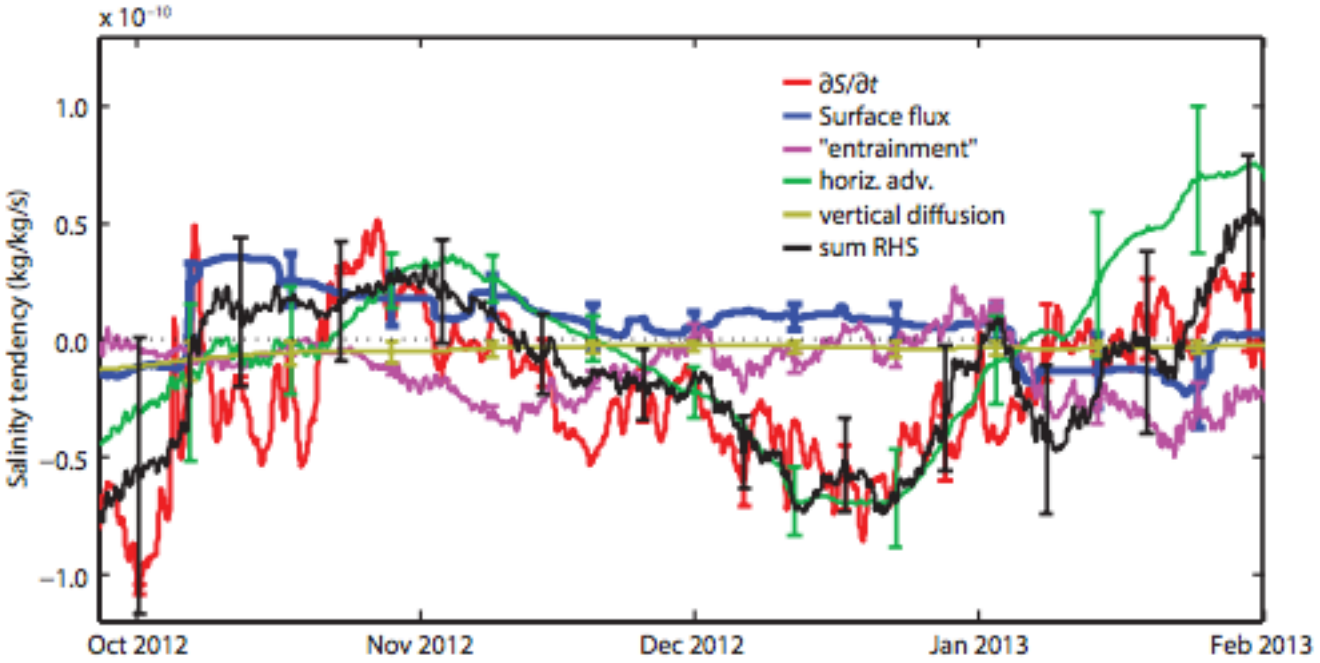
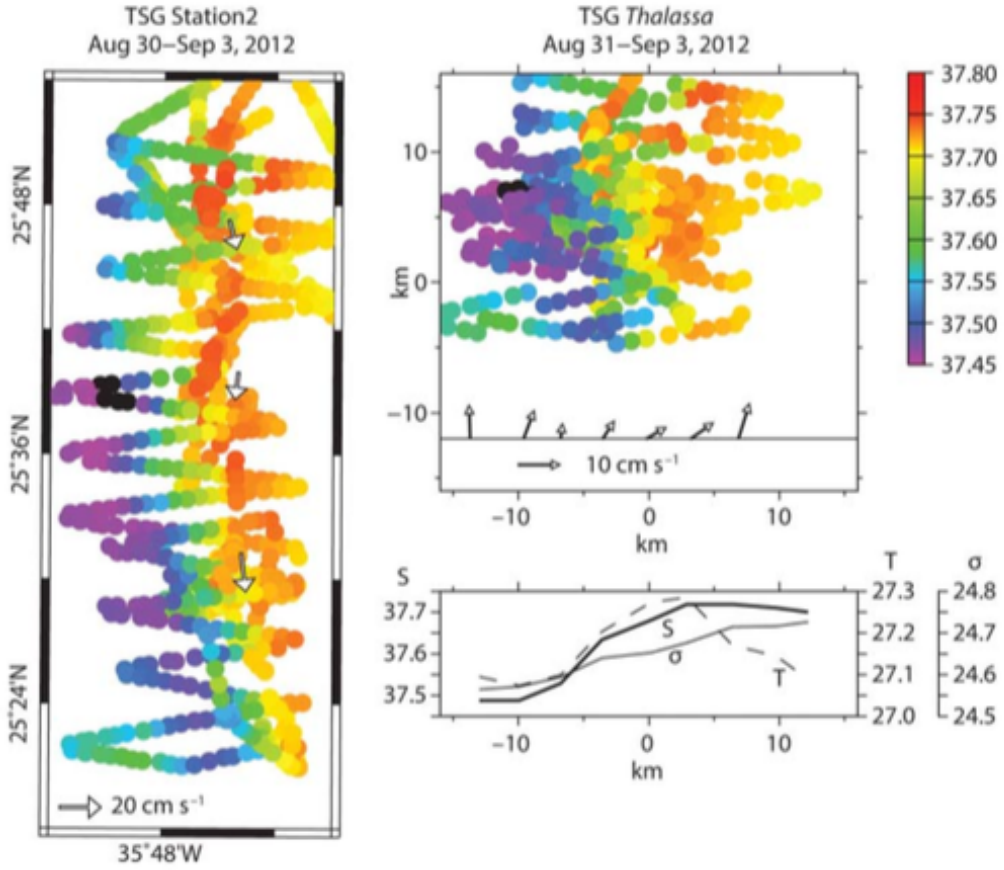


FIGURE 5. Terms in the mixed-layer salinity balance (Equation 2a) during the fall and winter months when the mixed layer was becoming fresher, cooler, and deeper. Positive values of (red line) indicate times when the measured mixed-layer salinity was increasing. Positive values of the other

Mixed-layer salinity budget closed during the cooling season, main balance between tendency and horizontal advection

Reverdin et al., SSS in the NA Subtropical Gyre during the STRASSE/SPURS Summer 2012 Cruise

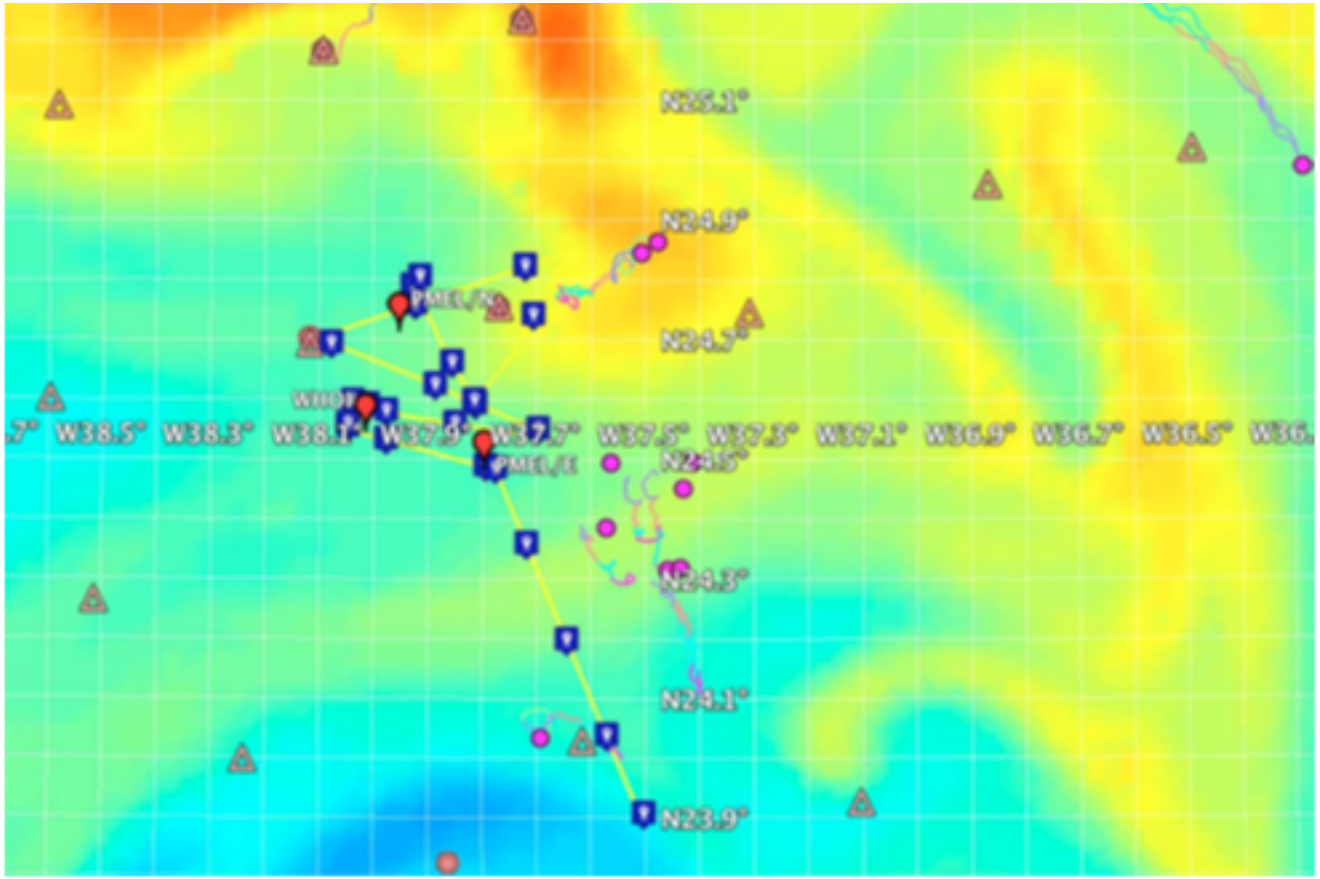


SSS from Thalassa TSG in space (left) and relative to the motion of a cluster of drifters (top right)

Data Management Accomplishments

- Developed a project website with all information relevant to the SPURS project (spurs.jpl.nasa.gov).
- Developed a Google Earth-based interactive visualization system to display observing asset deployment and SPURS in situ measurements real-time
- Displayed data assimilation analyses and model forecasts for use in cruise planning

Data Management



Shipboard Google Earth-based interactive visualization display

Bingham et al., 2015

Data Management

- Most SPURS in situ data are available on the SPURS Mission page at PO.DAAC (podaac.jpl.nasa.gov/spurs)
- Data also available at SPURS website (spurs1.jpl.nasa.gov)
- Processed and unprocessed data
- Website and mission page serve as repositories of SPURS-related publications, reports, meeting agendas, education/outreach products, etc.

Data Management Lessons Learned

- Data management about more than data
- Conversion to netCDF is crucial for data sharing and archival
- Modeling and data management are highly synergistic
- Need to better accommodate needs of Chief Scientist at sea, especially with regards to bandwidth and products provided

Summary

- SPURS-1 is nearing completion
- Data are archived and available to anyone
- Upper-ocean salinity budgets have been evaluated on a number of different time and space scales and by different types of instruments