Observation Facilities from Taiwan Ocean Research Institute

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Taiwan Ocean Research Institute

Workshop on Years of the Maritime Continent, Singapore
Jan. 29, 2015

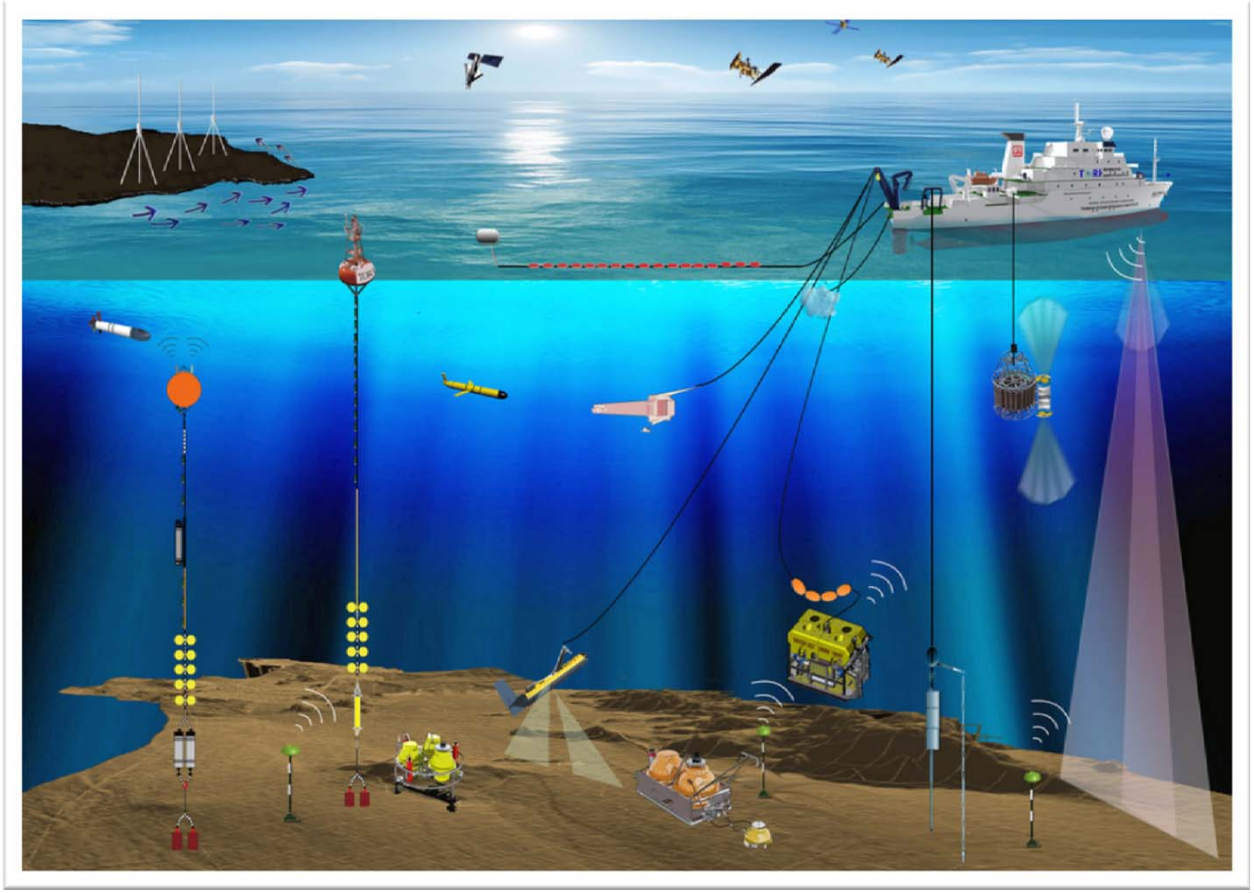
Taiwan Ocean Research Institute

- Founded：2008.07
- Employees：ca. 80
- The only government-funded ocean research institute in Taiwan.

R/V Ocean Researcher V

Built: 2012.08
ship time
2013: 198 days
2014: 213/273 days (as of 10 Oct/planned)

Moorings:
Data buoy, ADCP/CM, Sediment Trap, pCO2 …



Sparking, Once

Taiwan's *Ocean Researcher V* was in service for less than 2 years when it sank on 10 October.

OCEAN RESEARCH

Taiwan's ocean program reels from loss of ship, scientists

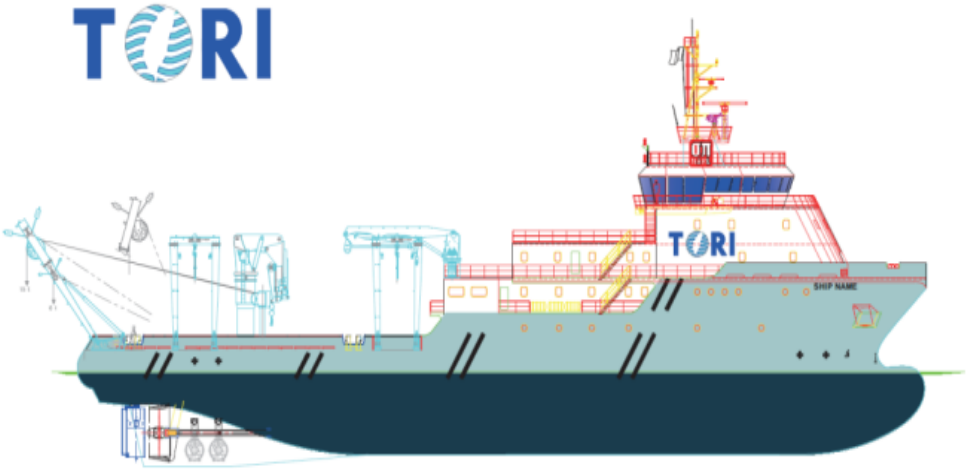
New vessel was sparking international collaborations

By **Dennis Normile**

government appropriated funds for a deep-sea vessel with state-of-the-art features: a computer-controlled dynamic positioning system for keeping the vessel in one place or on track despite winds, waves, and currents; the capacity to launch a remotely operated vehicle and tow a 6-kilometer-long seismic survey streamer to probe seafloor geology; and onboard labs for biology and chemistry analyses. Institutes across Taiwan ramped up programs in anticipation of the enhanced capabilities.

Despite its short life, *Ocean Researcher V* was racking up a solid record of accomplishments, says Shu-Kun Hsu, a marine geophysicist at National

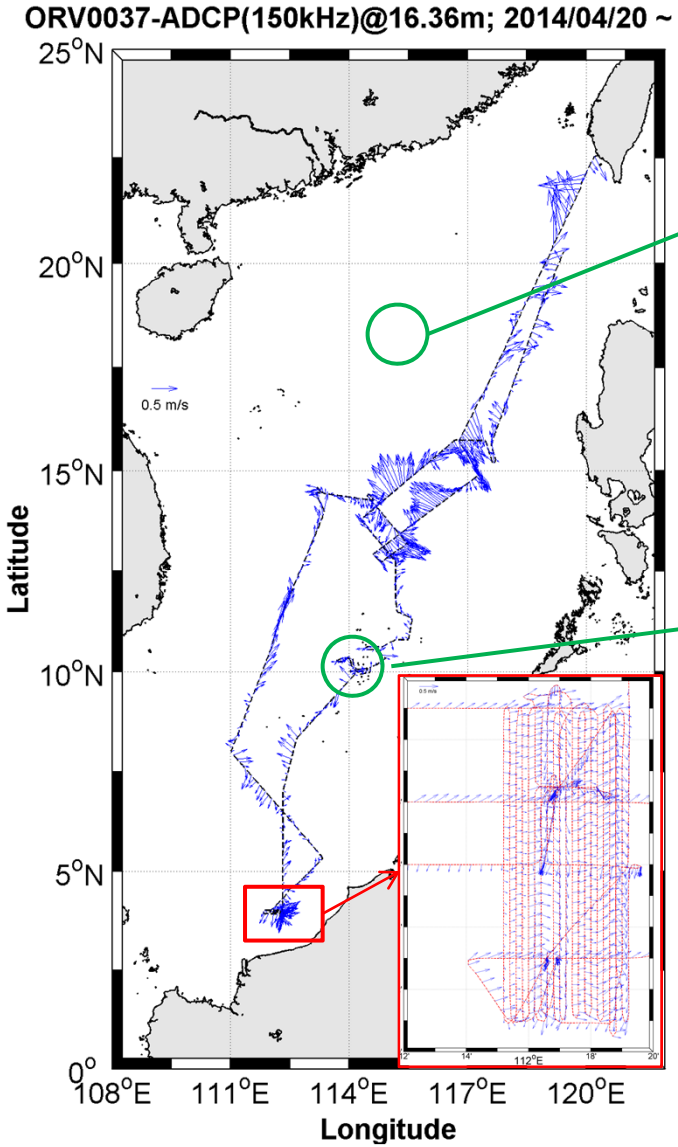
dents and an 18-member crew on a planned



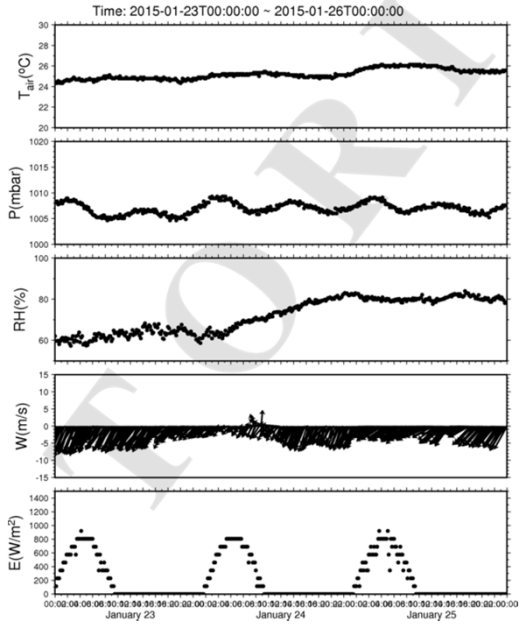
2000 GT: expected early 2016

3000 GT: planning

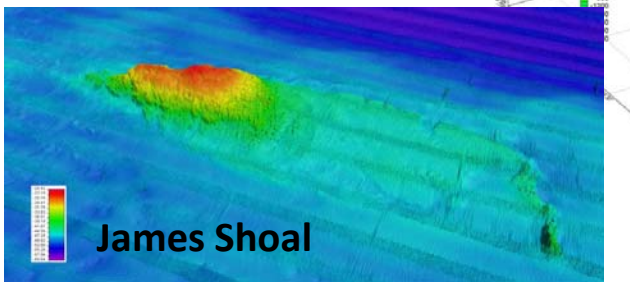
Exploration in SCS

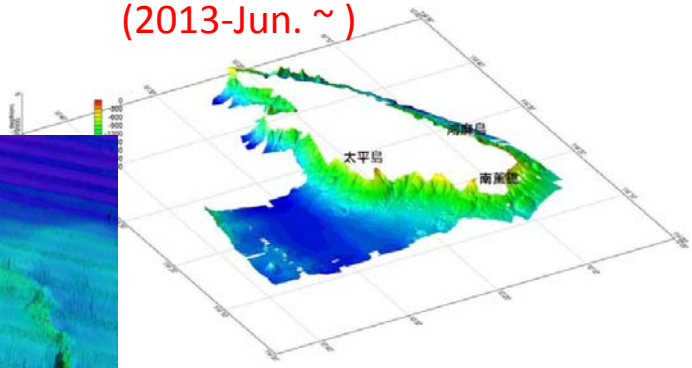


Sediment Trap @SEATS



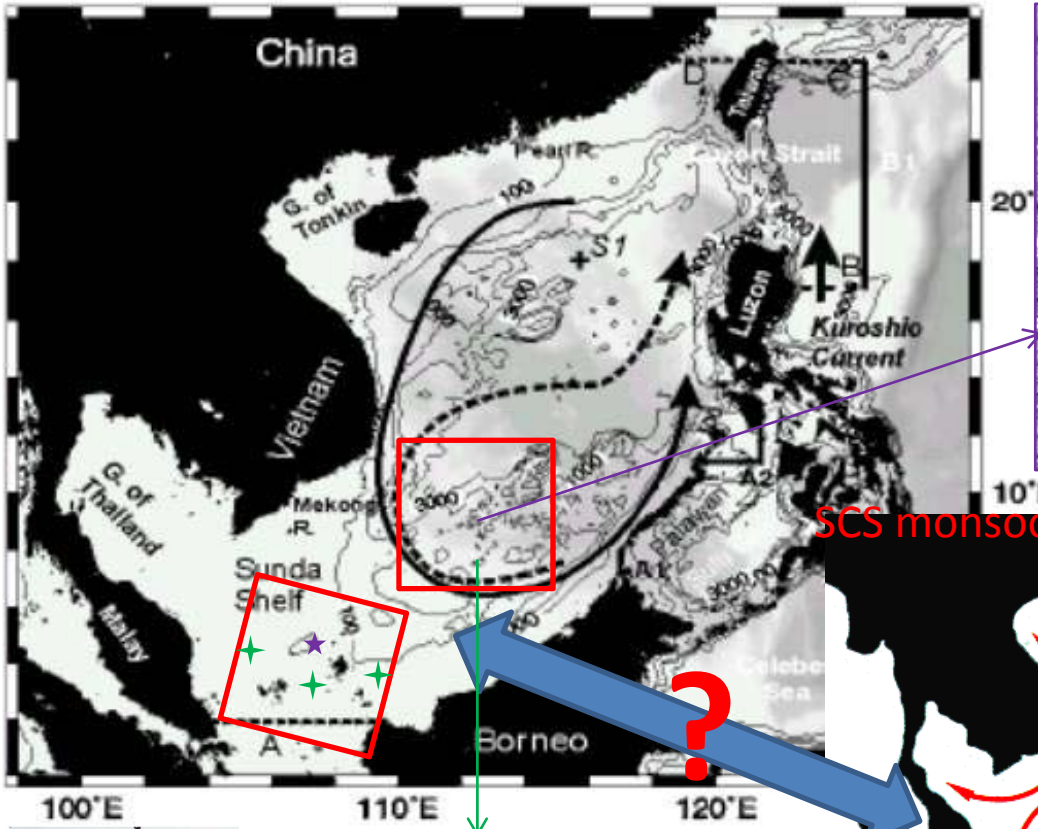
Data Buoy @Spratly Islands
(2013-Jun. ~)

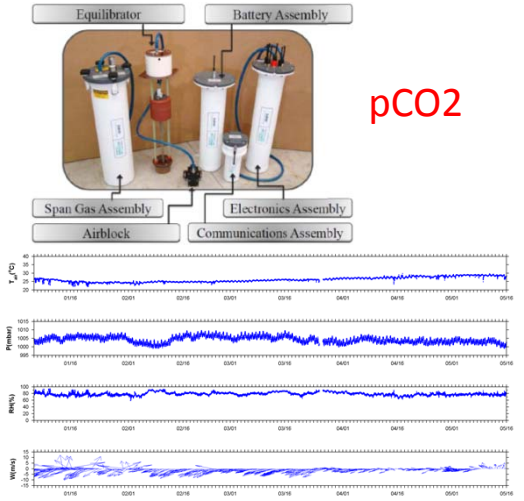




Field Work

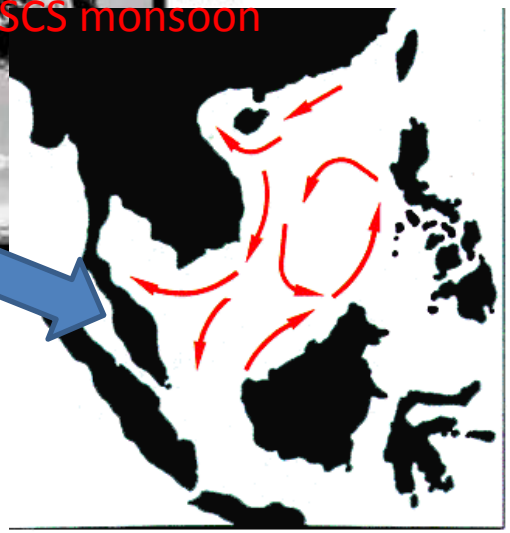
NARLabs TORI

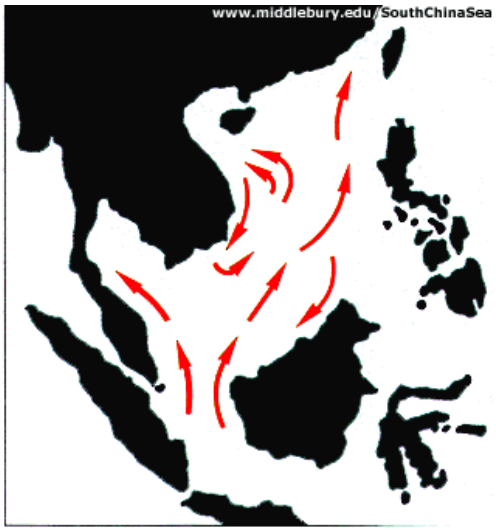




pCO2

SCS monsoon





Surface current patterns, Northeast monsoon (Dec-Feb)

Surface current patterns, Southwest monsoon (Jun-Aug)

Source: Mississippi State U., Integrated Data Systems Laboratory

0 750 1500 km

Field Campaign

- TORI is likely to have a new research vessel-like ship, ca. 2000 GT, around 2016
- Study Region: southern South China Sea
- Topics: The interaction between monsoon and surface circulation; deep-basin circulation, water masses
- Approaches: time-series moorings for both of current (ADCP/CM) and meteorology (data buoy), CTD surveys

Potential collaborators:

TORI: LIDAR wind profiler (Leosphere WindCube v2)

AS/NTU: balloon radiosound

APL/UW: EM-APEX, Seagliders (deploy and recovery)