Argo float coverage in Gulf of Mexico and Caribbean Sea

Pelle Robbins, Steven Jayne, and Breck Owens
AST 16, IFREMER
Locations of currently active floats with 6 month tail

2014

FLOAT TYPE

- WHOI S2A
- WHOI SOLO-1
- Other AOML
- Other DACS

WHOI Argo: 11-Mar-2014
# Past Deployments and currently planned for 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>SHIP</th>
<th>Location</th>
<th># of floats</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 September</td>
<td><em>RV Pelican</em> (LUMCON)</td>
<td>Gulf of Mexico</td>
<td>7</td>
</tr>
<tr>
<td>2014 March</td>
<td><em>SSV Corwith Cramer</em> (Sea Education Assoc.)</td>
<td>Caribbean</td>
<td>2</td>
</tr>
<tr>
<td>2014 April</td>
<td><em>RV Okeanos Explorer</em> (NOAA)</td>
<td>Gulf of Mexico</td>
<td>4</td>
</tr>
<tr>
<td>2014 November</td>
<td><em>MV Explorer</em> (Semester at Sea)</td>
<td>Caribbean</td>
<td>2</td>
</tr>
<tr>
<td>2015 May (planned)</td>
<td><em>RV Nancy Foster</em> (NOAA)</td>
<td>Caribbean</td>
<td>4-6</td>
</tr>
<tr>
<td>2015 May (planned)</td>
<td><em>RV Pelican</em> (LUMCON)</td>
<td>Gulf of Mexico</td>
<td>4</td>
</tr>
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</table>
Float Sparseness

Argo Float Sparseness: 2015-03-05, Fraction of nominal coverage based on distance to 4 nearest floats. DAC=GDAC

http://argo.whoi.edu/maps/sparse/index.html
Iridium Floats are good at following topography
Airborne ALAMO floats deployed for 2014 Hurricane Season
P-T sensor only, ~300m profiles, 8 cycles per day, longevity ~100 days
ALAMO

Smaller profiling float that will fit in the AXBT launcher and can be used operationally by the NOAA and USAF Hurricane Hunters planes.

Advantages over AXBT include: multiple profiles, more sensors (pressure, salinity, & accelerometer for surface waves), no VHF receiver equipment on planes.

A-sized case
Weight ~10 kg
1200-meter depth rating
1-2 dbar bin-averaged data
Iridium data communication
4901723 Upper Ocean Temperature
8 profiles per day for 111 days. Data on GTS but not GDAC
Summary

- Floats with Iridium telemetry appear capable of “dwelling” in the Gulf of Mexico.
- 2015 WHOI Argo deployment plans in Caribbean/GOM

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<tr>
<th>Gulf of Mexico</th>
<th>RV PELICAN</th>
<th>4</th>
</tr>
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<tr>
<td>Caribbean</td>
<td>RV NANCY FOSTER</td>
<td>4-6</td>
</tr>
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- 60 ALAMO floats available for deployment in 2015 hurricane season (5 with RBR CTDS)