

USA National Report DBCP-30

Rick Lumpkin (AOML) and Shannon McArthur (NDBC)

National Oceanic and Atmospheric Administration

Additional input from Jennifer Lewis (NDBC), Linda Stratton
(PMEL) and Kyle Rushing (NAVOCEANO)

30th Data Buoy Cooperation Panel session

27-31 October 2014

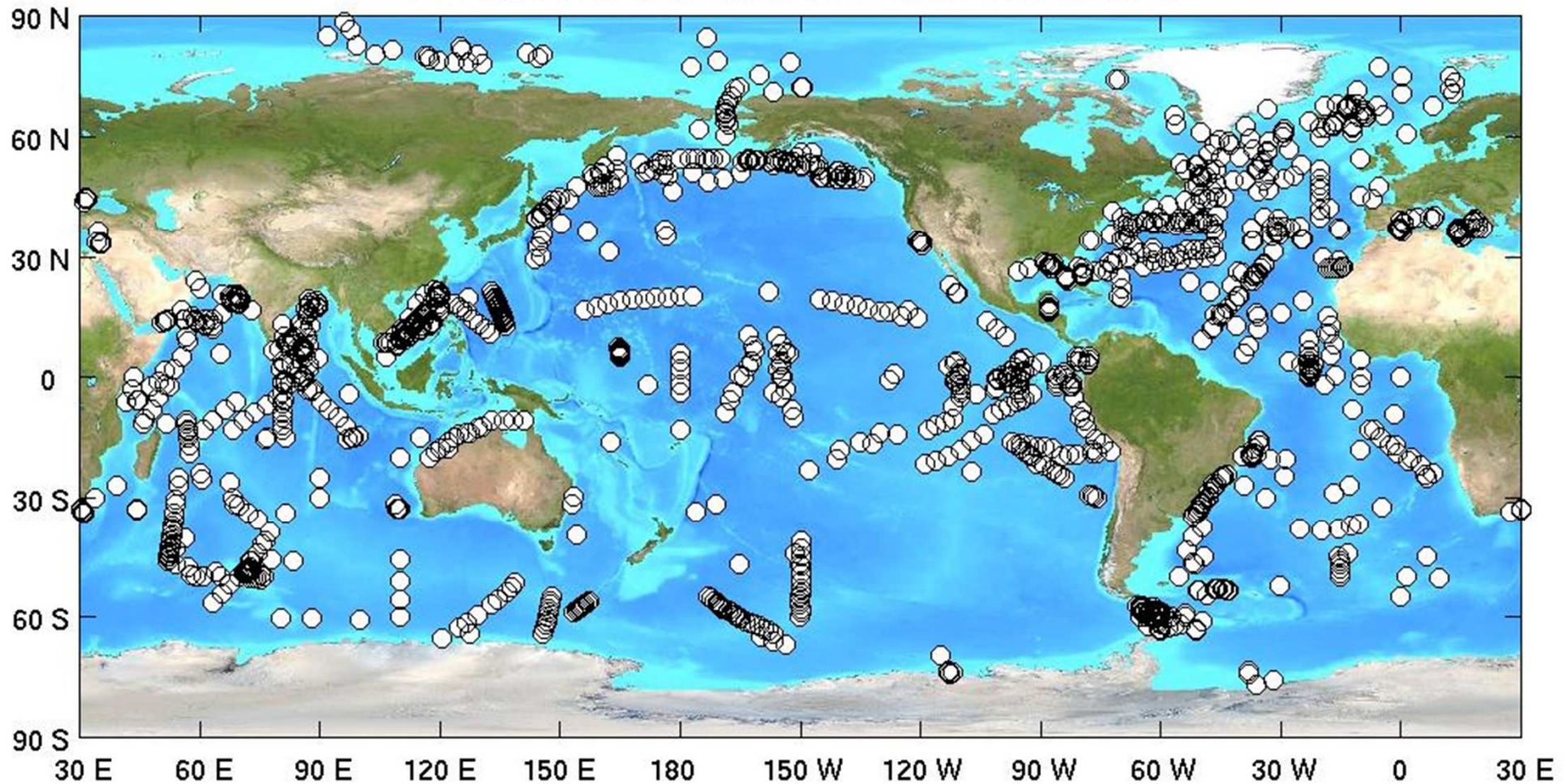
Weihai, China

Outline

- ▣ 2014 Deployments and 2015 Plans
 - Atlantic Oceanographic and Meteorological Laboratory
 - National Data Buoy Center
 - Pacific Marine Environmental Laboratory
 - Naval Oceanographic Office
- ▣ Technical Developments

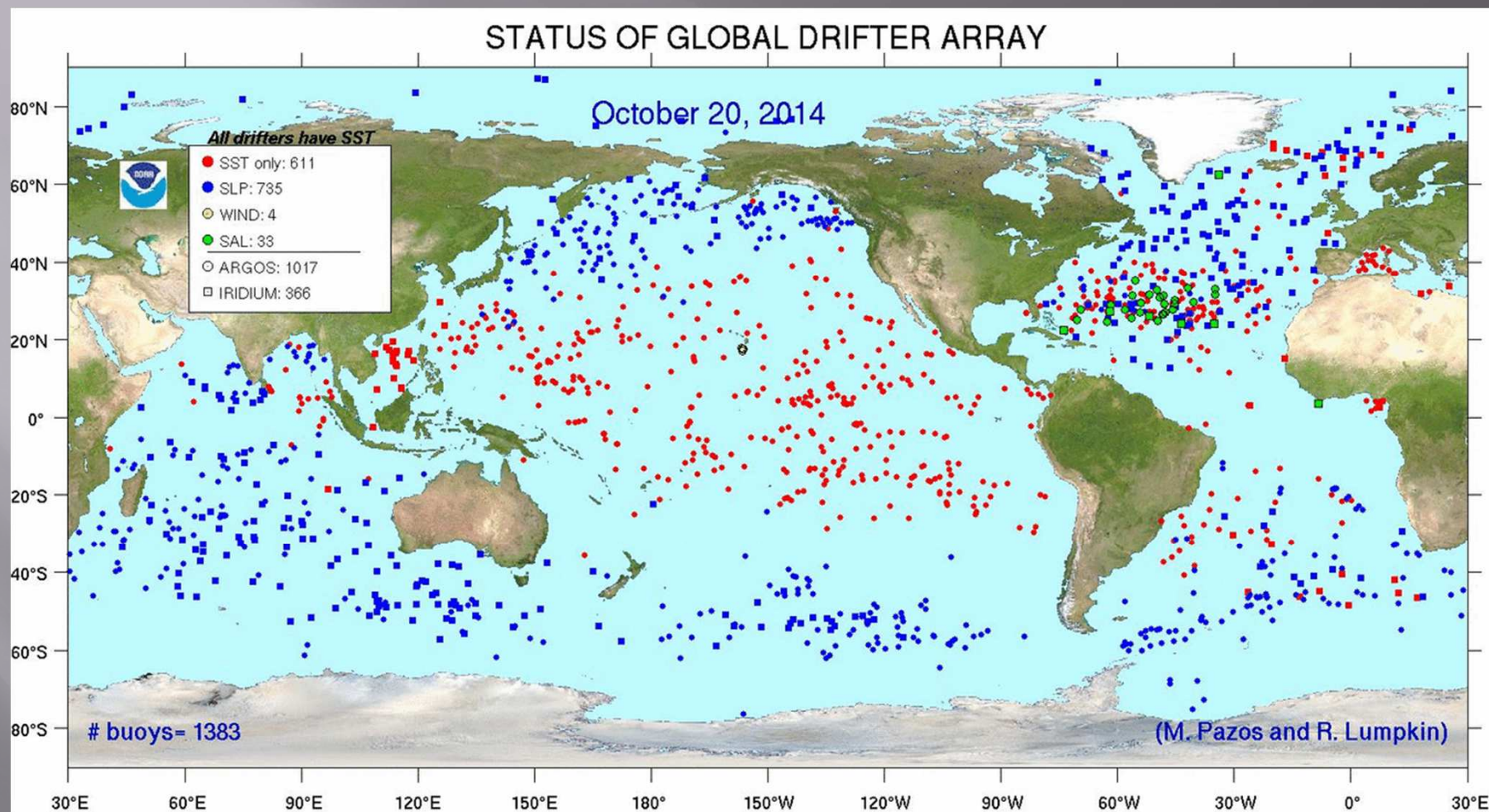
Global Drifter Program

01-Aug-2013 to 31-Jul-2014: 1660 deployments



1660 drifters deployed in the period 1 Aug 2013 to 1 Aug 2014.

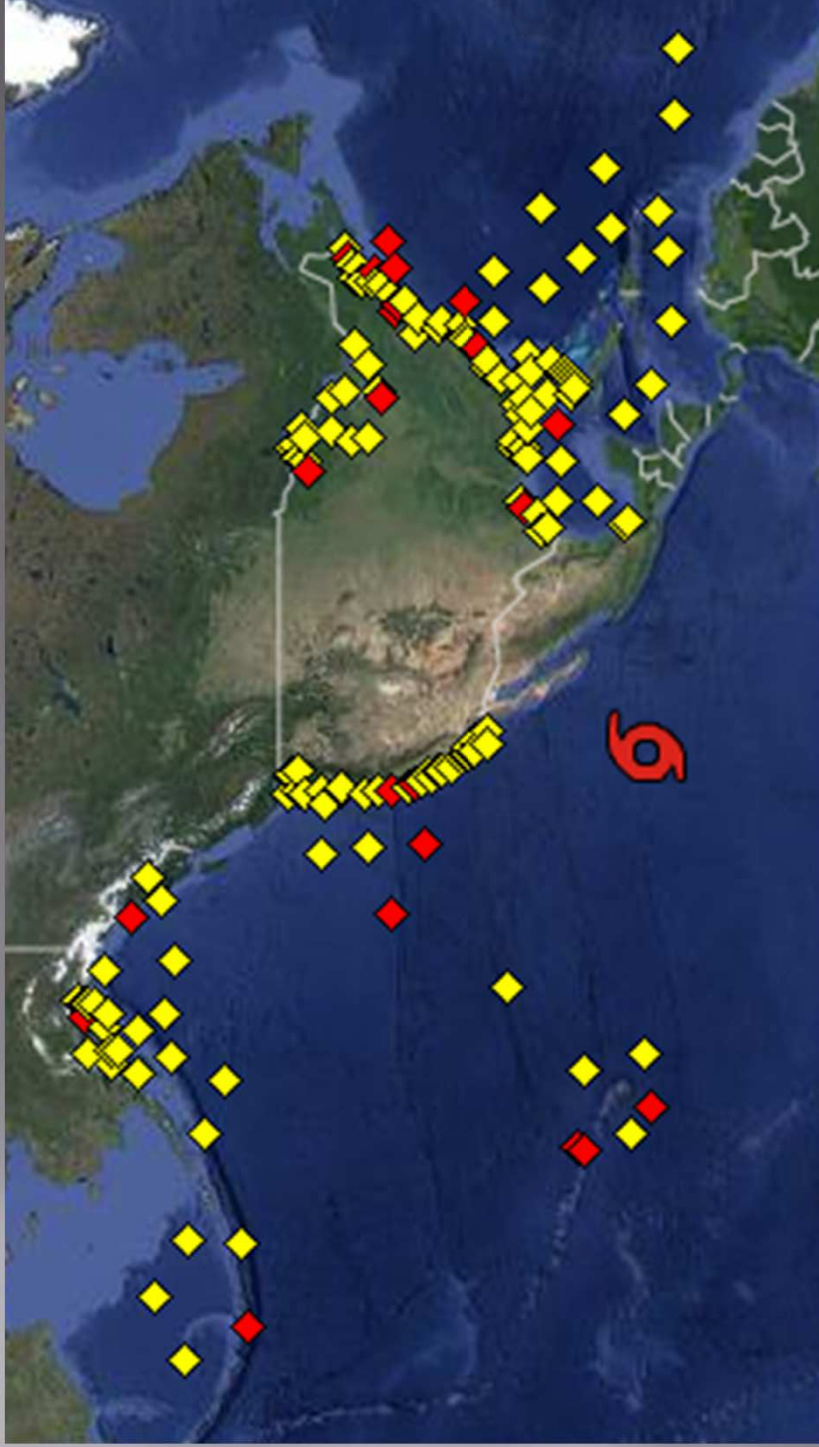
Global Drifter Program, cont.



Current status: 1383 buoys, all reporting on GTS

Number and type of buoys planned for deployment in the next 12 months: 1000 drifters, 800 funded by NOAA's Climate Program Office and 200 by Consortium Research partners.

NDBC moored buoys



deployed during 26 July 2013–1 August 2014:	33
operational as of 1 August 2014:	92
reporting on GTS as of 1 August 2014:	92

Number and type of buoys planned for deployment in next 12 months: 20

NDBC tsunami network



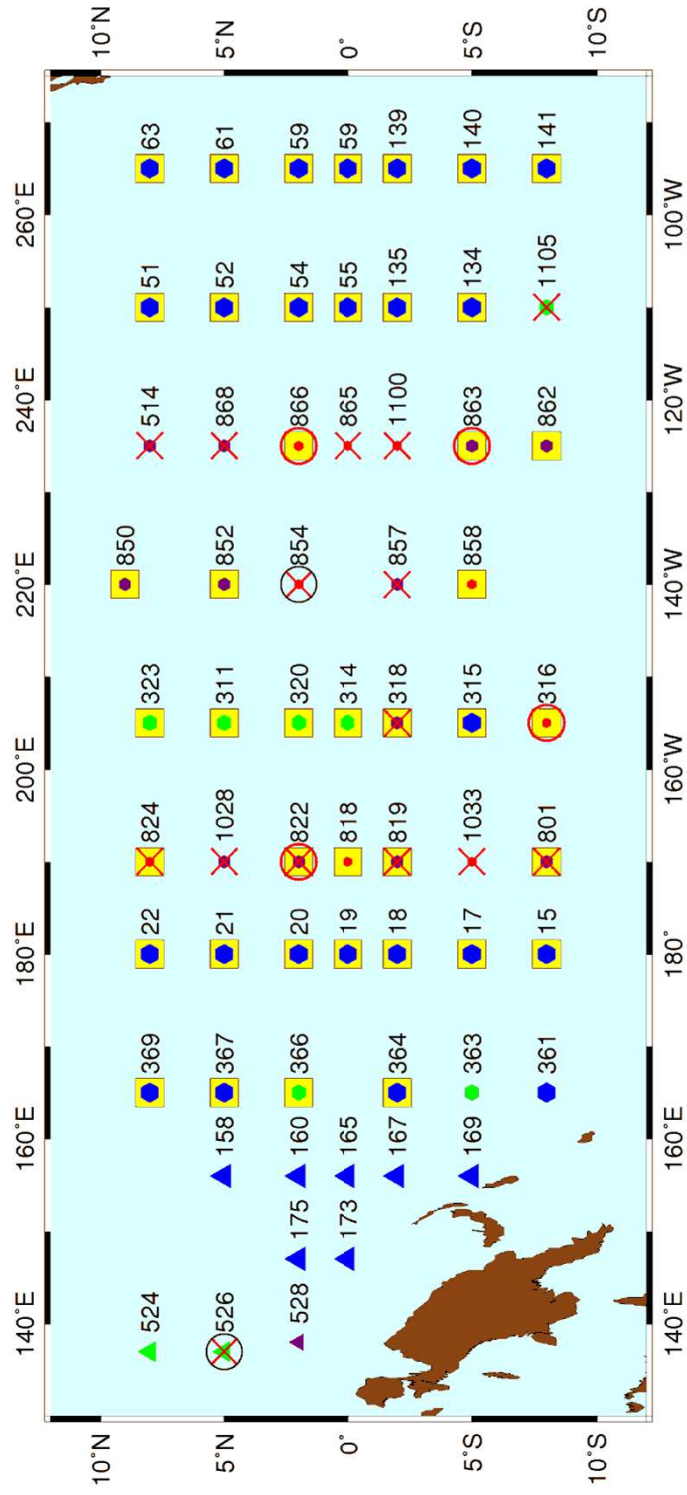
deployed during 26 July 2013–1 August 2014:	26
operational as of 1 August 2014:	29
reporting on GTS as of 1 August 2014:	29

Number and type of buoys planned for deployment in the next 12 months: 20

NDBC Tropical Atmosphere Ocean array

Status of Presently Deployed TAO/TRITON Moorings

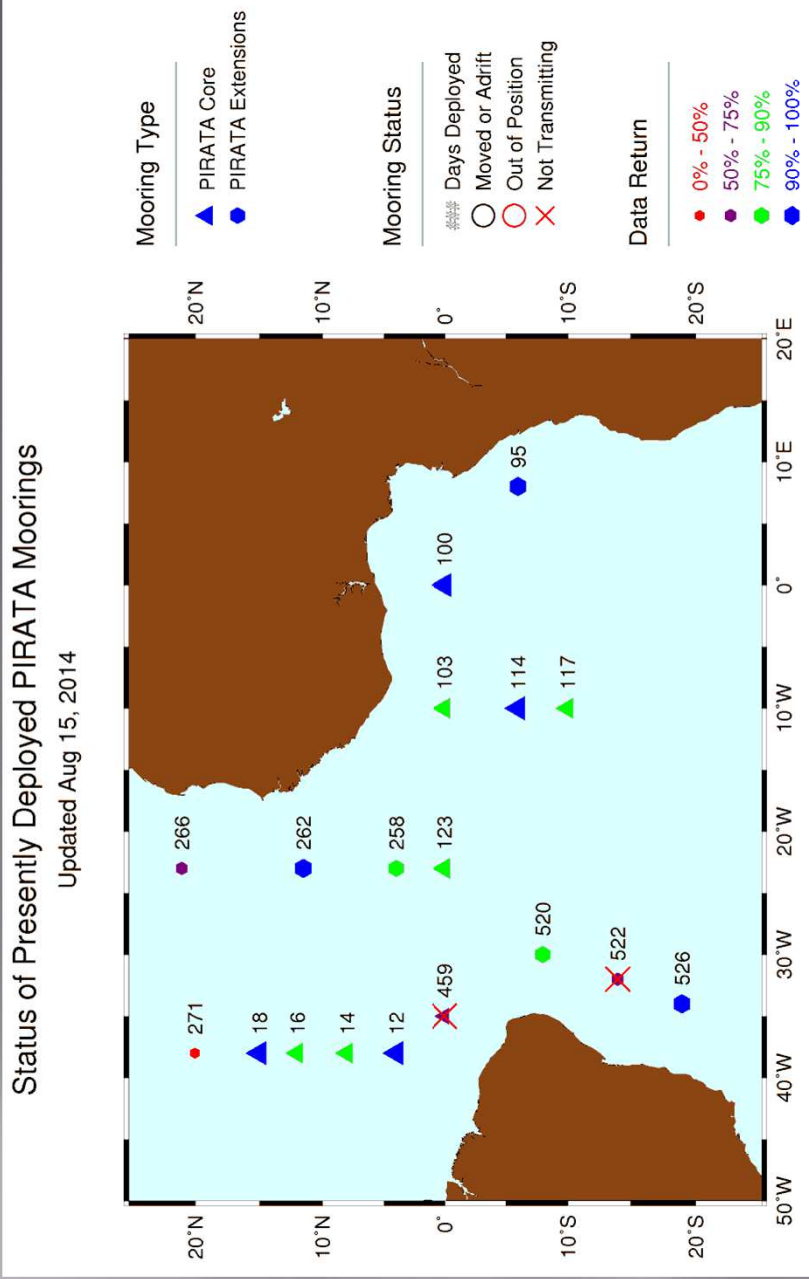
Updated Aug 15, 2014



deployed during 26 July 2013 - 1 August 2014: 44
 toroids and 3 subsurface
 operational as of 1 August 2014: 36
 reporting on GTS as of 1 August 2014: 36

Number and type of buoys planned for deployment in the next 12 months:
 34 toroids, 4 subsurface

PIRATA array including PMEL/AOML Northeast Extension



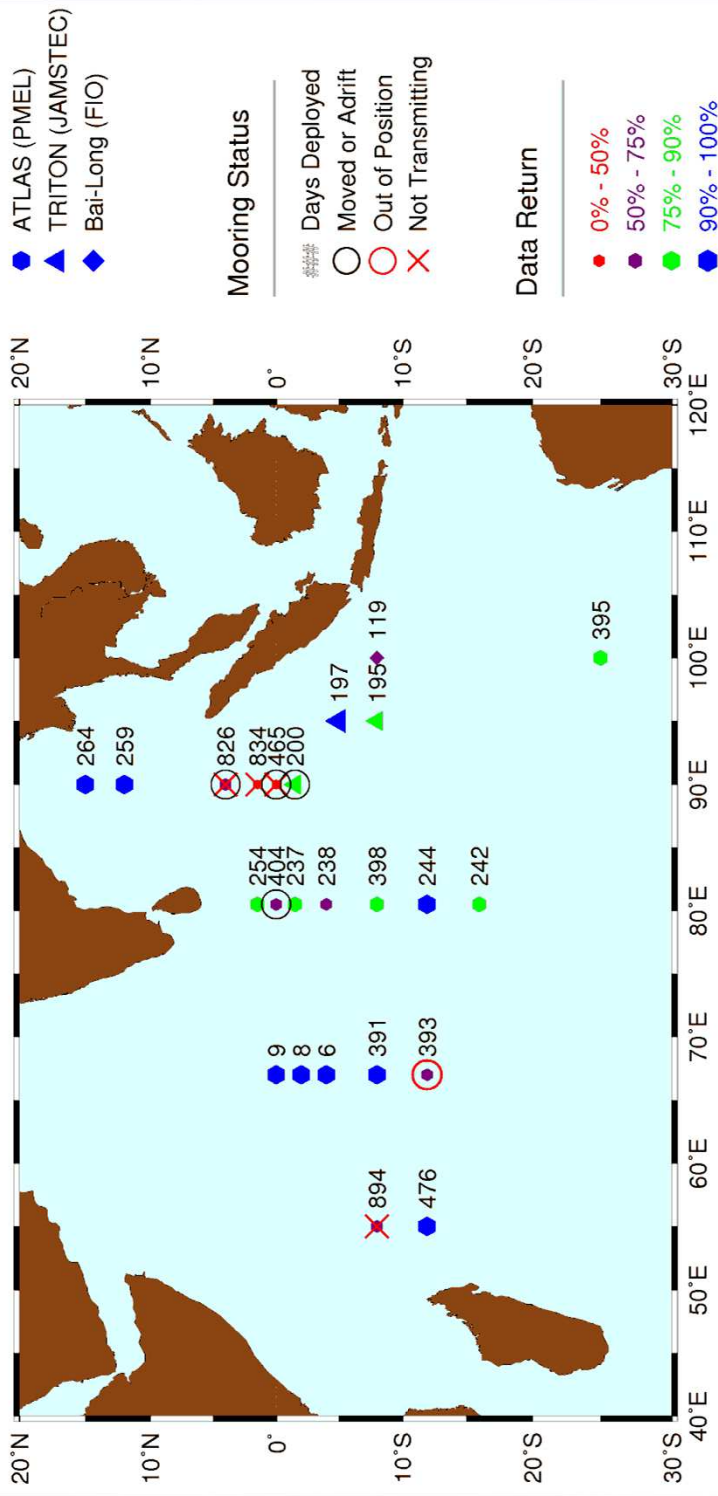
deployed during 1 Aug 1 2013 – 31 Jul 2014:
 12 surface toroids, 1 developmental surface toroid
 operational as of 1 August 2012: 15 surface toroids
 reporting on GTS as of 1 August 2012: 13 sfc toroids

Number and type of buoys planned for deployment in the next 12 months:
 18 + 1 developmental

PMEL (and partners) RAMA array

Status of Presently Deployed RAMA Moorings

Updated Aug 15, 2014



deployed during 1 Aug 2013 – 31 Jul 2014:
7 surface toroids, 2 subsurface moorings

operational as of 1 August: 12 surface toroids, 10
subsurface

reporting on GTS as of 1 August: 13

Number and type of buoys planned for deployment in the next 12 months: 23 surface toroids and 11 subsurface + 2 developmental

Naval Oceanographic Office (NAVOCEANO)

- Number and type of buoys:
- (a) deployed 1 August 2013 – 31 July 2014:
61 Argo floats, 2 Iridium floats, 18 MetOcean Argos SLDMB drifters, 6 MetOcean Iridium iSphere drifters, 6 MetOcean Iridium iSVP drifters, 9 MetOcean Iridium iSLDMB drifters
 - (b) operational as of 31 July 2014: 102 Argo floats, 2 Iridium floats, 3 Iridium iSVP drifters
 - (c) reporting on GTS as of 31 July 2014: 102 Argo floats, 2 Iridium floats, 3 Iridium iSVP drifters

Purpose of programme: (a) operational: [x]

(b) met / ocean research:

(c) developmental:

Main deployment areas: Global.

The purpose of NAVOCEANO deployments is to support US Navy operations globally. Deployment plans are dictated by operational needs.

Number and type of buoys planned for deployment in the next 12 months: ~50 buoys world wide and 100 floats worldwide.

Technical Developments

▣ Buoy Deployments

- ▣ PMEL continues to test the Tropical-Flex (T-flex) buoy alongside PMEL legacy moorings. T-Flex moorings communicate via Iridium modem and Seabird electronics replace legacy PMEL temperature thermistors.
- ▣ NDBC has deployed 35 TAO Refresh buoys in the TAO array and will continue deploying them until the array is completely refreshed.

Tropical Pacific Observing System (TPOS) meeting

The TPOS 2020 meeting was held on 27-30 January 2014 in La Jolla, California USA. As noted on the meeting web site (http://www.ioc-goos.org/index.php?option=com_oe&task=viewEventRecord&eventID=1383)

The workshop was attended by 65 invitees from 13 countries and 35 institutes. There were various invited talks based on 14 whitepapers and 9 agency presentations and extensive time for discussion. The review committee was made up of the Scientific Organizing Committee plus three independent experts. The Terms of Reference for the review can be found within the list of supporting documents, whitepapers can be found in 'Report of the Tropical Pacific Observing System 2020 Workshop - Volume II' within the same list.

Organizationally, it was recommended to establish a TPOS 2020 project. This would oversee the transition to a more resilient and integrated observing system to meet the identified gaps as well as future needs as they are identified. It was considered essential that the organizations interested in tropical Pacific observations maintain proper dialogue. The goals of the proposed TPOS 2020 project are:

- To refine and adjust the TPOS to monitor, observe and predict the state of ENSO and advance scientific understanding of its causes.
- To determine the most efficient and effective method for sustained observations to support prediction systems for ocean, weather and climate services of high societal and economic utility, including underpinning research.
- To advance and refine the knowledge of the predictability horizon of the tropical Pacific variability (physical and biogeochemical), as well as its impacts in global climate.
- To determine how interannual to multidecadal variability and human activities impact the relation between marine biogeochemistry and biology to carbon budgets, food security and biodiversity.

Changes made in TAO mooring array position information

- ▣ The TAO moorings are run by the NOAA National Data Buoy Center (NDBC), and are part of the TAO/TRITON mooring array which spans the Tropical Pacific. The NDBC has been informed that vandalism continues to plague the TAO array, especially in the eastern sector, which drastically reduces the data available for assimilation into models and for climate research. Therefore, the NDBC has decided to reduce the publically available position information on its website, as one of several counter-vandalism measures. The mooring positions are available to the nearest 0.1 degree when transmitted through the Global Telecommunications System (GTS), and to nominal mooring position on the TAO website.
- ▣ NDBC will provide the high resolution position of each TAO Mooring to stakeholders and members of the climate and research community who request this information. Questions or queries should be directed to shannon.mcarthur@noaa.gov.

Thank You!

Questions:

Rick.Lumpkin@noaa.gov

Shannon.McArthur@noaa.gov