

## **IMOS Bulletin**

**Issue #53 April 2016**

Please feel free to distribute this email bulletin to others. The Bulletin is also available for download from the website at <http://imos.org.au/bulletin.html>.

If you have any comments or questions regarding the IMOS Bulletin please contact IMOS Communications, [communication@imos.org.au](mailto:communication@imos.org.au).

### **IMOS Data**

Since 2012 IMOS data and services have been located on the NeCTAR National Server Program (NSP). In 2012 this was considered the best option and in line with the use of NCRIS-supported e-Research infrastructure. Despite best endeavours of the University of Melbourne staff hosting the NSP the reliability of the provided service has proved less than satisfactory and has resulted in significant effort being expended to shore up the service.

As 2014 progressed it became obvious that the expectations for IMOS data availability were becoming more 'operational' than 'research oriented' and that a more reliable infrastructure was required. At the end of 2014 a due diligence survey of available service providers was conducted and a pilot service initiated on Amazon Web Services (AWS). This AWS experience, and the outcome of the survey, convinced us that AWS could provide the reliability IMOS aims to provide at a cost comparable to, or less than, that offered by other service providers.

The IMOS Director approved the recommendation, and between September 2015 and March 2016 all IMOS data and services were migrated to AWS and this is now the main IMOS delivery platform. The move to AWS provides IMOS with a number of benefits including reliability, durability, freedom to innovate, and, for the foreseeable future, cost effectiveness. IMOS will continue to support use of NCRIS-funded e-Research infrastructure by keeping an 'archive' copy of IMOS data (synchronised with AWS) as part of the Tasmanian Partnership for Advanced Computing (TPAC) 'Marine and Climate' data collections supported through the Research Data Services.

Please note: Due to this recent data migration between infrastructures a few of the historical data reports had some inaccuracies. The reports affected by this were only for a few Facilities, and between November 2015-February 2016. This issue has now been resolved and the data reports are now accurate. All IMOS data can be found on the Ocean Portal <https://imos.aodn.org.au>.

The IMOS data holdings are detailed in a suite of reports generated by the AODN on a monthly basis. The summary reports for March 2016 can be downloaded directly via the IMOS website <http://imos.org.au/datareports.html>.

### **IMOS Activity Planning**

The IMOS Satellite Altimetry calibration site in Australia is the only in situ calibration/validation site in the southern hemisphere contributing to the Ocean Surface Topography Science Team (OSTST), and includes two comparison points where in situ data is compared against the altimeter – Bass Strait and Storm Bay. These two locations both lie on

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descending (N -> S) pass 088 of the satellite altimeter, and thus share similar satellite orbit characteristics. The use of these two sites allows detailed investigation into the accuracy of the altimeter over two regions with distinctly different oceanographic conditions.

Every three months the IMOS Satellite Altimetry Calibration and Validation Sub-Facility deploys GPS buoys at two sites in Tasmania for a short period of time. These GPS buoys are deployed over the Bass Strait and Storm Bay moored oceanographic sensors in order to derive an absolute datum for the derived sea level time series. A deployment of the GPS buoys is planned for May.

Future activity planning for the IMOS Facilities is provided via the IMOS website (<http://imos.org.au/imosactivityplanning.html>). The plans contain details for all the planned deployment/recovery/servicing/sampling etc. activities for the NCRIS 2015 funding period.

## Paper of the month

**This month we'd like to highlight the following paper that references IMOS data:**

Bernadette M Sloyan, Ken R Ridgway, and Rebecca Cowley. 2016 The East Australian Current and Property Transport at 27°S from 2012 to 2013. *Journal of Physical Oceanography*, **46**, pp. 993-1008.

Data from an IMOS East Australian Current (AEC) array of moorings provide a significant advance in our understanding of the system and begin to expose its complexity. Data from the first deployment, April 2012–August 2013, reveal the complexity and dynamic nature of the EAC, including the offshore return flow and the episodic nature of the deep northward undercurrent. The EAC array was designed to capture the entire breadth and depth of the flow. For this reason it was placed off Brisbane where the current is almost at full strength and still in jet form rather than as a complex eddy field found further south. Even so, there are a few days in June 2012 when a rarely occurring eddy pushes the main stream of the EAC further offshore than the 150km extent of the array.

The paper is available to download at: <http://dx.doi.org/10.1175/JPO-D-15-0052.1>

## Did you know?

This section features various ways in which you can discover, access and use IMOS data.

The IMOS Bio-Acoustic sub-facility is part of an international effort to observe how mid-water prey species such as small fish, squid, krill and jellyfish are distributed. Working closely with data processing software developers, Australian marine scientists are boosting their contribution to the global project. Bio-acoustic data provide an indicator of abundance, distribution and behaviour of mid-trophic level organisms needed for ecosystem-based fisheries management, marine planning and monitoring impacts of climate change and variability. The IMOS Bio-Acoustic sub-facility uses [Echoview](#) software to process all acoustic data gathered. Processed data is then made publicly available through the [Australian Ocean Data Network \(AODN\) portal](#). Read more about the collaboration between IMOS and the data processing software developers at Echoview [here](#).

## Recent & Upcoming Events

- **3–6 May 2016** 4th International Symposium on the Ocean in a High-CO<sub>2</sub> World, Hobart Tasmania. <http://www.highco2-iv.org/>.

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- **4 May 2016 Free public forum – The Oceans in a High CO2 World: How will the oceans change with rising carbon dioxide?** WHEN: 7:30-9:00pm, Wednesday 4 May WHERE: Hotel Grand Chancellor, 1 Davey St, Hobart REGISTER: [www.events.utas.edu.au](http://www.events.utas.edu.au)
- **5 May 2016 Call for Supplementary applications for Marine National Facility Granted Voyages.** Supplementary applications for MNF Granted Voyages to utilise unused capacity on Research and Transit voyages on *Investigator* during 2017-18 are now being requested, as well as unused capacity remaining in the recently revised 2016-17 voyage schedule. A Supplementary application must be submitted by 12 midnight Australian Eastern Standard Time, Thursday, 5 May 2016. Further details on applying for use of *Investigator* and application forms are available through the **MNF website**.
- **3–7 July 2016** New Zealand Marine Science Society and Australian Marine Sciences Association: Sharing Ocean Resources – Now and in the future, Wellington, New Zealand  
<https://innovators.eventsair.com/QuickEventWebsitePortal/nzmss-amsa-2016/home>
- **5–7 July 2016** Climate Adaptation 2016: Change, Challenge, Opportunity, Adelaide, South Australia  
<http://climate-adaptation.org.au/>
- **31 July –5 August 2016** 13<sup>th</sup> Annual Meeting of the Asia Oceania Geosciences Society, Beijing, China  
<http://www.asiaoceania.org/aogs2016/public.asp?page=sessionProposal.htm>

For a full list of upcoming conferences please visit the Calendar page at <http://imos.org.au/calendar.html>. If you would like an event or conference featured on our website calendar please contact [communication@imos.org.au](mailto:communication@imos.org.au).