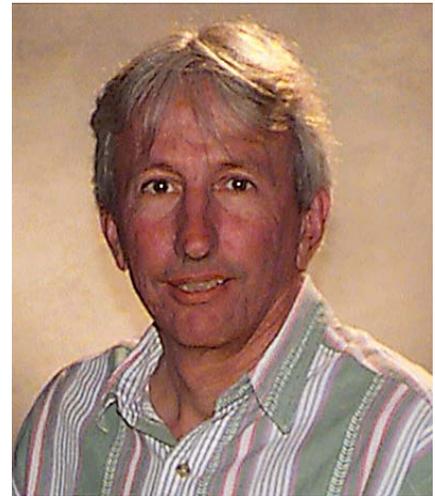

Argo Science Team 3rd Meeting (AST-3)

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At the Eighth Annual Meeting (October 1999), the PICES scientific community gave high priority to strengthening its interactions with the Climate Variability and Predictability Program (CLIVAR) and the Global Ocean Data Assimilation Experiment (GODAE). It was also recommended that every effort should be made by PICES to assist in the implementation of the Argo project, which is intended to deploy 3,000 robotic floats globally and will be a key part of CLIVAR and GODAE. The profiling ALACE (Autonomous Lagrangian Current Explorer) floats and project Argo have been described previously in PICES Press (e.g., 2000: Vol. 8, No. 2 and 2001: Vol. 9, No. 1).

The International Argo Science Team was created to review national plans and commitments in order to formulate a strategy for global coverage for the benefit of all nations, and to provide a forum for the exchange of technical information. The third meeting of the Argo Science Team (AST-3) was held March 20-22, 2001, in Sidney, British Columbia, Canada. It was hosted by Fisheries and Oceans Canada at the Institute of Ocean Sciences, and co-sponsored by PICES. The meeting attracted 39 scientists and managers from 13 countries and 2 international organizations, Intergovernmental Oceanographic Commission (IOC) and PICES.

The substantial progress in international commitments over the past year was considered (Table 1). Committed floats now total over 900, with proposals for an average of 750 per year in the next 3 years. The geographic distribution of targeted floats was also addressed (Fig. 1). Early Argo deployments seek to quickly demonstrate the value and success of the project, while leading to global implementation as the highest priority. Early deployments are very sparse in the southern subtropics and the Southern Ocean (Fig. 1), so this must be a strong focus of subsequent efforts. Basin Implementation Meetings have

been held for the Pacific Ocean (Tokyo, April 2000), and Atlantic Ocean (Paris, July 2000), with an Indian Ocean Implementation Meeting scheduled for Hyderabad, India, in late July 2001.

The Pacific Implementation Meeting focused on consensus building among the Pacific nations contributing to the Argo project, and initial plans for float deployment were discussed. There are strong commitments for float deployment in the tropical Pacific, the northern Pacific and the western subtropical North Pacific (Fig. 1). Additional attention is needed to see that adequate floats are provided for the eastern and southern portions of the Pacific basin. The total number of floats presently targeted for deployment in the Pacific is 280 by the end of 2001 and an additional 290 in 2002.

Progress in development of the Argo Data System was reported, following a meeting of Argo data managers in Brest, France, in October 2000. A standing subcommittee of the AST was formed to oversee the Data System. Immediate issues for this group are: to ensure that all Argo data are being released in near real-time via the GTS, to develop a common format to allow rapid exchange, and to disseminate Argo data, and to establish a timetable with milestones for implementation of the data system.

Technical issues relevant to the Argo array were reviewed. The most significant finding has been that of multi-year stable salinity records using Seabird CTDs, although there are not yet enough records of long duration to characterize the performance reliably. The most notable technical concern is for the viability of improved communications options that could provide fast, reliable two-way communications. While improvements are required for transmission of high quality data, the improved commercial systems presently lack financial stability. An

online Argo technical forum will facilitate technical exchanges and information transfer.

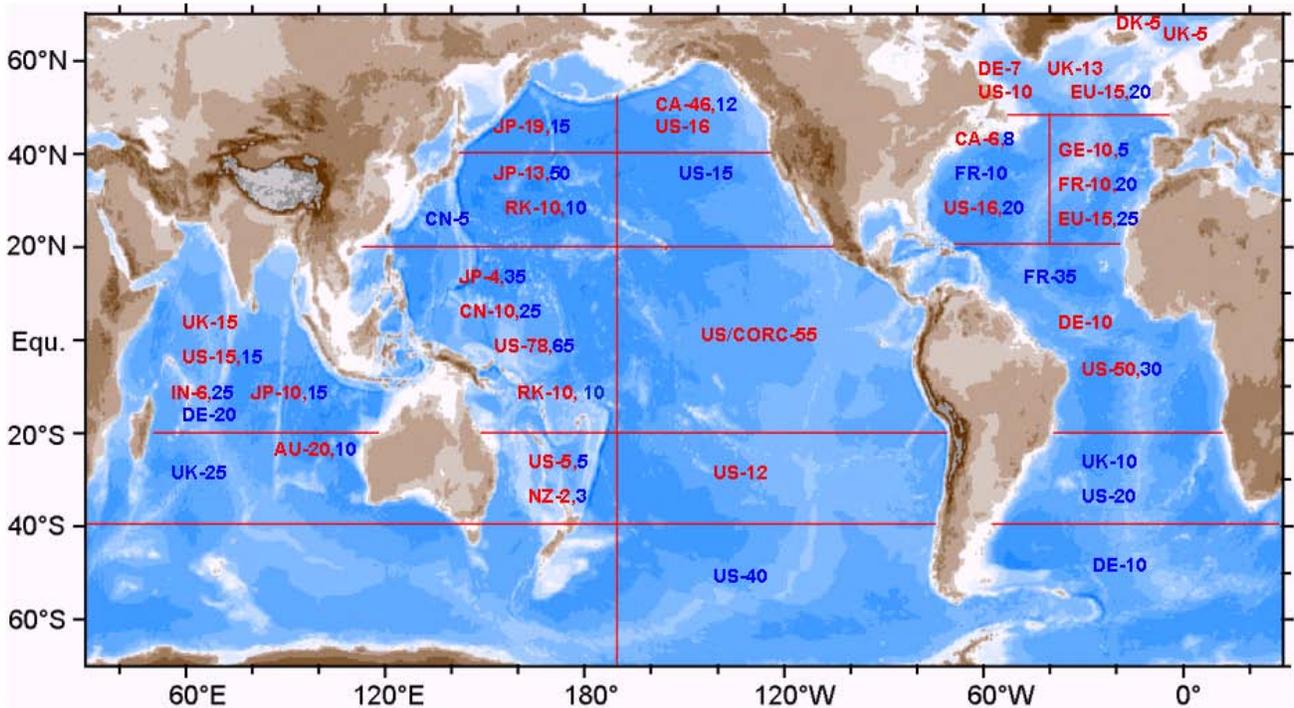
Table 1. International Commitments for Argo floats. This table reflects the year in which funds are provided for floats, and takes on the order of a year until such floats are available for deployment. To achieve the global array of 3,000 Argo floats, it is necessary to provide floats at a sustained rate of 750 per year, given an average float lifetime of 4 years. A “Float Equivalent” is defined as a float—while not funded under the Argo Program— whose data are available consistent with the Argo Data Policy and provides the information equivalent to one Argo float. Additional details on this table are provided in Appendix 2.

Number of Floats by Country	Argo	Float	Argo	Float	Argo	Float	Proposed	Prop
	Funded	Equiv's	Funded	Equiv's	Funded	Equiv's	over next	Float
	FY99	FY99	FY00	FY00	FY01	FY01	3 years	over 3 yrs
Australia			10		10		90	
Canada			10		42		90	
China					10		80	
Denmark						5		
European Commission					80			
France		8	70		65		200	
Germany				18		22	100	35
India					6		150	
Japan			20		90		300	
New Zealand					2		10	
Republic of Korea					20		90	
Spain							24	
United Kingdom			13		50	5	150	40
<u>U.S.A.</u>	<u>55</u>		<u>132</u>	<u>51</u>	<u>150</u>	<u>40</u>	<u>825</u>	<u>60</u>
TOTALS	55	8	255	69	525	72	2109	135

TOTALS BY YEAR	FY99 = 63	FY00 = 324	FY01 = 597	Ave/Yr = 748
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Fig. 1 Target regions for funded floats planned for deployment by the end of calendar years 2001 (red) and additional floats for 2002 (blue). National plans shown are Australia (AU), Canada (CA), China (CN), Denmark (DK), France (FR), Germany (DE), India (IN), Japan (JP), Korea (RK), United Kingdom (UK), United States (US), and European Union (EU). Some additional floats are funded but not yet targeted and some deployment plans are tentative.



(cont. on page 28)