

## Action Items from AST-6

1. *With effect from IAST-6 the International Argo Science Team will become the International Argo **Steering** Team to reflect the IAST's wide responsibilities. All Argo participants should take steps to reflect this change in their web sites and literature.*

*APO and contributing countries*

2. *AD and ATC to collect information on float deployment practice so that new groups will be able to be advised on how to reduce deployment failures.*

*Action AD/ATC*

3. *Float deployers are requested to program new floats to collect pressure, temperature and salinity data during their drift phase.*

*Action. All float deploying groups.*

4. *Argo recommends that unless there are overriding scientific reasons to choose another level, 1000db should be chosen as the drift level for all floats.*

*Action. All float deploying groups.*

5. *ATC to correct errors in the EEZ concurrence map and to ensure that all correspondence associated with concurrences is held by AIC.*

*Action. ATC*

6. *All Argo contributing countries to take steps to implement EEZ concurrence before IAST-7*

*Action. APO to approach Argo national contacts.*

7. *ATC and AD to identify a full set of metadata relating to float shipping and deployment conditions so that potential causes of early failures of float performance may be identified. These should then be incorporated in a standard deployment form.*

*Action. AD and ATC.*

8. *Atlantic, Pacific and Indian Ocean deployment co-ordination to include the Southern Ocean region with boundaries set at 20°E, 145°E, 70°W.*

*Action. Pacific, Atlantic and Indian Ocean co-ordinators*

9. *APO to send reminders to countries in January and July to update their deployment plans. Float providers are encouraged to submit plans more frequently if appropriate.*

*Action. APO*

10. *ATC/JCOMMOPS co-ordinator to take steps to integrate information on float and drifter deployment opportunities.*

*Action. ATC*

11. *APO to contact countries and ask how many floats they were committing to regions south of 20°S.*

*Action. AD*

12. APO to design a certificate to be presented to ships and aircraft that have made exceptional contributions in deployment of Argo floats.

Action. AD

13. Argo float deployment groups to give APO the details of ships whose deployment contributions merit special recognition. (Ship name, call sign, number of floats deployed, dates, contact details).

Action. All float deploying groups

14. Letter to be sent to CLIVAR SSG reiterating ARGO's priority to complete the global array with "standard" 10 day cycling floats and to stress that more frequent sampling if needed in the short term must come from additional Argo-equivalent floats.

Action. AD

15. AST members are asked to identify who will represent their country at ABELOS-IV and explain to that person present and potential new benefits to your country by helping expedite the collection and timely sharing of Argo and other oceanographic data from within your EEZ .

Action. IAST members.

16. It is recommended that the salinity sensors on all Argo floats should be subjected to a laboratory check of the CTD sensor calibration.

Action. All float deploying groups.

17. It is recommended that floats should be programmable to execute a CTD profile within 24 hrs of deployment. APO to consult with manufacturers to see if this can be easily implemented

Action. All float deploying groups.

18. The basic criterion for delayed-mode qc of float salinities is to not adjust float salinity data that are within max [2 x statistical uncertainty,  $\_x$  instrument resolution and precision/reproducibility].

Action. All groups doing DM QC.

19. For drift correction, the parameter PSAL\_ADJUSTED\_ERROR shall contain the value of max statistical uncertainty,  $\_x$  instrument resolution].

Action. All groups doing DM QC.

20. Where float salinity data have been subjected to multiple corrections, e.g. drift correction + spike correction, that the PI shall attempt to propagate errors from all steps, and record the final value in PSAL\_ADJUSTED\_ERROR.

Action. All groups doing DM QC.

21. Agreed that in the absence of expert intervention, delayed-mode drift correction shall involve the estimation of an offset and slope over a window of twelve months (that is 6 months before and 6 months after the profile, i.e. a new linear fit over 12months is estimated for each profile, which assures the corrections vary smoothly from profile to profile). This means that in general, the timeframe of availability of drift-corrected delayed-mode salinity data is 6

months after a profile is sampled.  
Action. All groups doing DM QC.

22. In order to gain experience in delayed-mode processing and to begin reducing the backlog of profiles, it was agreed to process data in order starting with non-controversial data (no drift or drift adjustment accepted), followed by data requiring subjective decisions.  
Action. All groups doing DM QC.

23. Argo shall begin to issue drift-corrected salinity delayed-mode data that have PSAL\_ADJUSTED\_QC = '1' and '4'. The flags '2' and '3' shall be used to flag features such as spikes and upper ocean anomalies in the adjusted profile.  
Action. All groups doing DM QC.

24. A delayed-mode email list will be set up by Thierry Carval, with Breck Owens as moderator, for compiling a list of instrument failure modes that warrant using PSAL\_ADJUSTED\_QC = '2' and '3', and for designing proper codes for recording these failure modes in the HISTORY section of the Argo netcdf files. This email list is also to be used for general discussions related to delayed-mode processes. All PIs are encouraged to subscribe to this email list by contacting Thierry Carval.  
Action. Carval and Owens.

25. Annie Wong will finalise Version 1 of the Argo Delayed-Mode Manual based on all agreements from this workshop, and put it on the GDAC websites. This manual will be expanded to include additional sections (such as regional specifications, instrument failure mode list, difficult calibration examples, etc) as delayed-mode experience within the community grows.  
Action. Annie Wong.

26. Agreed to apply estimates of offset and slope to realtime data in cases where this is unambiguous and significant. This should come either from predeployment calibrations/deployment CTD casts, or from the most recent delayed-mode salinity corrections. Details remain to be agreed by Breck Owens, Annie Wong, Uwe Send and Yves Desaubies.  
Action. Wong, Send, Owens, Desaubies.

27. APO should compile as much information as is available on the shipping of instruments containing lithium batteries in order to engage in informed dialogue with WRC on the subject.  
Action. APO.

28. Recommend that float users block all but a single hole in the bottom cowling of Apex floats and that WRC be asked to change the design to eliminate sediment pickup by grounded floats.  
Action. All groups preparing APEX floats and WRC.

29. AD to prepare a document outlining the potential for making measurements other than T and S from profiling floats.  
Action. AD

30. AD to write to Nordeen Larsen (SBE) to thank him and his company for the speedy action to rectify last year's pressure sensor problem and for their close co-operation with float providers to minimize its impact.

Action. AD

31. AD to write to thank Bob Keeley for his work as ADMT chairman

Action. AD

32 AD to suggest statistical parameters (e.g. on float reliability) that can be adopted by all Argo participants to enable the array performance to be examined and publicised

Action. AD

33. AD to establish a set of criteria to be used in assessing whether a product is appropriate to be used to advertise the benefits of Argo

Action. AD

34. IAST members to take responsibility for establishing a dialogue with operational centres in their country and report to ADMT of any problems with Argo data and its delivery

Action. IAST members

35. IAST members to volunteer to test-drive Argo data CD-ROM

Action IAST members

36. AD to compile a list of recipients for the first Argo data CD-Rom and pass this to NODC by 1 May 2004

Action AD

37. AD will remind IAST members twice yearly to submit new entries for the Argo bibliography.

Action. AD.

38. Papers using Argo data should use the following words in the acknowledgement section. " These data were collected and made freely available by the International Argo Project and the national programmes that contribute to it. ([www.argo.ucsd.edu](http://www.argo.ucsd.edu), [argo.jcommops.org](http://argo.jcommops.org)). Argo is a pilot programme of the Global Ocean Observing System".

Action. AD and ATC to make these words prominent on the Argo web pages.

38 Researchers should contact PIs responsible for floats from which they are using data to inform them of the nature of the research being undertaken.

Action. AD and ATC to make this advice prominent on the Argo web pages.

39. Howard Freeland to work with APO to continue planning for an Argo S American workshop and to seek IAST members to make a contribution to the workshop.

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workshop.  
Action. APO and Freeland

40. *Argo Exec to agree TOR for the roles of the APO, AD and AIC and AD to make these available to interested parties (IOC, GOOS/GCOS, JCOMMOPS)*  
*Action. Argo Exec.*

41. *AD to seek finance and appropriate mechanisms to fund and establish an Argo Project Office.*  
*Action. AD.*

42. *AD and ATC to urgently improve the Argo web site(s) to meet both the needs of Argo and the general public.*  
*Action. AD and ATC.*

43. *AD to design a new Argo brochure and discuss with JAMSTEC concerning help with printing costs.*  
*Action. AD.*

44. *IAST to be polled for suitable dates for IAST-7 in Hyderabad, India in February 2005.*  
*Action. AD and Radhakrishnan.*

45. *AD to write to Andreas Sterl inviting him to join the IAST.*  
*Action. AD.*

46. *AD to write to Juergen Fischer inviting him to join the IAST as a replacement for Uwe Send.*  
*Action. AD.*