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|  | **SOOP Report for 2015** | **USA** |
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|  | **a.** | **Programme description:** |
| **Line** | **Agency** | **Sampling programme and mode (if applicable)** | **No. of ships** |
| AX01 | AOML1 / IRD2 | High Density (HD) | 1 |
| AX02 | AOML / IRD | HD | 1 |
|  | AX07 | AOML | HD | 2 |
|  | AX08 | AOML | HD | 2 |
|  | AX10 | AOML | HD | 2 |
|  | AX18 | AOML | HD | 2 |
|  | AX20 | AOML / IRD | HD | 1 |
|  | AX22 | SIO3  | HD | 1 |
| AX25 | AOML / UCT4 | HD | 1 |
| AX32 | WHOI5 / NMFS6 | HD | 1 |
|  | AX90 | URI7 / SBU8 | HD | 1 |
|  | AX97 | AOML / FURG9 | HD | 3 |
|  | IX01 | AOML / BOM10 | Frequently Repeated (FR) | 1 |
|  | IX12 | AOML / BOM | FR | 4 |
|  | IX21 | SIO | HD | 1 |
|  | IX28 | CSIRO11 / SIO / AOML | HD | 1 |
|  | MX04 | ENEA12 / AOML | HD | 2 |
|  | PX05 | SIO | HD | 2 |
|  | PX06 | SIO | HD | 1 |
|  | PX09 | SIO | HD | 1 |
|  | PX30 | SIO / CSIRO | HD | 2 |
|  | PX34 | SIO / CSIRO | HD | 3 |
|  | PX37 | SIO | HD | 2 |
|  | PX39 | SIO | HD | 1 |
|  | PX40 | SIO | HD | 1 |
|  | PX44 | SIO | HD | 1 |
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|  | **b.** | **Data management** |
|  | **Agency** | **No. of JJVV messages on the GTS in 2015** | **Location of delayed-mode data** |
|  | NOAA / AOML and Partners | 6271 | NCEI / AOML / SIO / CSIRO |
|  | SIO / AOML | 4305 | NCEI / AOML / SIO / CSIRO |

**Agency:**

 1. AOML: Atlantic Oceanographic and Meteorological Laboratory – AOML

 2. IRD: Institute of Research for Development, France

 3. SIO: Scripps Institution of Oceanography

 4. UCT: University of Cape Town, South Africa

 5. WHOI: Woods Hole Oceanographic Institution

 6. NMFS: National Marine Fisheries Service – NOAA

 7. URI: University of Rhode Island

 8. SBU: Stony Brook University

 9. FURG: Federal University of Rio Grande, Brazil

10. BOM: Bureau of Meteorology, Australia

11. CSIRO: Commonwealth Scientific and Industrial Research Organisation, Australia

12. ENEA: National Agency for new Technologies, Energy and Sustainable Economic Development, Italy

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|  | **c.** | **Major challenges and difficulties:** |
|  | * Decreasing funding for ocean-spanning routes, and high scientific value in sustained boundary current observations, lead to challenges in adapting the design of existing networks to meet the new constraints and requirements.
* Limited budget available to contribute with probes and equipment to international collaborators.
* It is difficult to find and recruit ships along AX10 (Newark to Puerto Rico), AX07 (Gibraltar to Miami), and AX18 (Buenos Aires to Cape Town) due to changes in shipping industry.
* Coast Guard or tanker opportunities along PX38 have been limited in 2015, but sampling along this transect is to resume in 2016.
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|  | **d.** | **Research / development / testing:** |
| * All SEAS XBT data continue being transmitted from SOO to NOAA in full resolution profiles and all data are placed into the GTS by NOAA.
* AOML/SOOP continues to develop and upgrade AMVERSEAS for the recording of XBT and Thermosalinograph (TSG) observations.
* AOML has developed a new Iridium-based transmission system which reduces transmission cost in 95%. All data transmissions from AOML and SIO have been transitioned during 2015 to this new system.
* XBT data transmissions to the GTS using BUFR format are performed regularly, along with ASCII BATHY bulletins.
* SOOP continues to support the deployment of other observational platforms such as drifters and Argo floats.
* AOML/SOOP continues to work in other XBT related projects including experiments for the study of the XBT fall rate equation issue.
* AOML/SOOP worked in collaboration with international partners in the maintenance of XBT high density transects in the Atlantic Ocean (AX01, AX02, and AX20), and in the Mediterranean Sea (MX04).
* SIO worked in collaboration with international partners in the maintenance of the XBT high density transects in Pacific Ocean (PX30 and PX34), the Southern Ocean (IX28), and the Indian Ocean (IX21).
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|  | **e.** | **Other comments:** |
| * NOAA / AOML continue to participate in collaborative programs with other institutions involved with XBT deployments. In particular, during 2015 AOML continued its collaboration in support of AX97 (Brazil), IX01, IX12, IX28 (BOM/Australia), and AX01, AX02, AX20 (IRD/France).
* SIO continue to participate in collaborative programs with other institutions involved with XBT deployments. In particular, during 2015 SIO continued its collaboration in support of PX30, PX34, IX21, IX28 (CSIRO, Australia).
* Real time transmission and quality control procedures for the TSG data continue in operation. The TSG data set, including quality control flags, is being distributed through NOAA/NCEI and GOSUD.
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