

## SOOP Report for 2010 United States of America

a. Programme description:			
Line	Agency	Sampling programme and mode (if applicable)	No. of ships
AX03	SOOP SEAS/AOML	FR	1
AX07	SOOP SEAS/AOML	HD	2
AX07	SOOP SEAS/AOML	FR	2
AX08	SOOP SEAS/AOML	HD	3
AX08	SOOP SEAS/AOML	FR	2
AX10	SOOP SEAS/AOML	HD	2
AX10	SOOP SEAS/AOML	FR	1
AX18	SOOP SEAS/AOML	HD	3
AX19	SOOP SEAS/AOML	HD	1
AX22	SOOP SEAS/SIO	HD	2
AX25	SOOP SEAS/AOML	HD	1
AX32	SOOP SEAS/AOML	HD	1
AX32	SOOP SEAS/AOML	FR	1
AX97	SOOP SEAS/AOML	HD	2
IX15	SOOP SEAS/SIO	HD	3
IX21	SOOP SEAS/SIO	HD	3
PX05	SOOP SEAS/SIO	HD	4
PX06	SOOP SEAS/SIO	HD	5
PX08	SOOP SEAS/AOML	FR	2
PX09	SOOP SEAS/SIO	HD	1
PX09	SOOP SEAS/AOML	FR	1
PX10	SOOP SEAS/SIO	HD	1
PX13	SOOP SEAS/SEAS	FR	2
PX31	SOOP SEAS/SIO	HD	5
PX37	SOOP SEAS/SIO	HD	2
PX38	SOOP SEAS/SIO	HD	1

PX44	SOOP SEAS/SIO	HD	1
PX83	SOOP SEAS/AOML	FR	1

**b. Data management**

Agency	No. of JJVV messages on the GTS in 2010	Location of delayed-mode data
NOAA / AOML - SEAS	5385	NODC / AOML / SIO / CSIRO
SIO - SEAS	5460	NODC / AOML / SIO / CSIRO

**c. Major challenges and difficulties:**

- Real time transmission and quality control procedures for the thermosalinograph (TSG) data continue in operation. Delayed time quality control procedures are under development.
- Transect AX18 (Buenos Aires to Cape Town) continues to be a serious challenge as it is very difficult to find ships doing this route. An alternate route between Cape Town and Santos (AX17) is being done when ships are available.
- Ships used for transect AX07 (Gibraltar to Miami, FL) changed their final port to Savannah, GA. This new transect is being done when ships are available.
- During 2010 the XBT operation in Reykjafoss (AX02) was continued. The implementation of atmospheric and oceanic carbon dioxide and thermosalinograph observations from this ship are under way.
- A high density transect started along AX01 in collaboration between NOAA/AOML, IRD/Brest and the University of Paris. Data transmission was performed in real-time using resources from the ship. There are plans to maintain high density XBT regular sampling on these transects (AX01 and AX02) during 2011 as part of this collaboration.
- AOML/SOOP is working in collaboration with French partners in the implementation of the XBT AX20 high density transect.
- Due to changes in the goals recommended by the scientific community, data needs, and funding priorities, resources are being directed towards the implementation of new high density transects. Therefore frequently repeated transects in the North Pacific, including PX26, and the Atlantic Ocean, including AX07, AX08, and AX10, have been discontinued in 2011.

**d. Research / development / testing:**

- AMVERSEAS data acquisition software: 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, TSG and MET observations. Main updates are focused on the implementation of a new version according to recent software and hardware requirements and data format.
- Iridium satellite transmission protocols continue being used for real-time transmission of TSG and XBT data collected with AMVERSEAS on the Oleander. Iridium transmissions are also being used for TSG data transmission from MV Explorer and MV Barcelona Express, and for HD XBT data transmissions on AX10.
- Several tests of XBT data transmissions to the GTS using BUFR format were performed during 2010. These tests will continue during 2011 including TSG data.
- SOOP continues to support other programs including Argo and Drifters. Additionally several resources were provided during the Gulf of Mexico oil spill for the deployment of XBT in the GOM region, as well as the GTS transmission in real-time of data from other instruments including AXBT, AXCP, CTD and ADCP.
- AOML organized the US SOOP workshop in April 2010 with the participation of 2 PMO's from the VOS program.
- SOOP actively participated in the recent "Fourth International Port Meteorological Officers (PMO) Workshop, and Support to Global Ocean Observations using Ship Logistics" on December 2010, in Orlando, FL. Effort continues to be dedicated to increase collaboration between both programs.
- AOML/SOOP continues to work in other XBT related projects including experiments for the study of the XBT fall rate equation issue.
- Together with Australia's SCIRO and BOM, AOML/SOOP is organizing the "First XBT Science Workshop", to be held during July, 2011 in Melbourne, Australia.

**e. Other comments:**

- AOML continues to participate in collaborative programs with other institutions involved with XBT programs. This contribution comes in the form of donating probes and supporting equipment when needed in exchange for management and ship greeting services. In particular, during 2010 AOML shipped 324 probes to Brazil and 216 probes to IRD/Brest. Additionally AOML provided a total of 230 probes for transects AX01 and AX02 in collaboration with IRD/Brest and the University of Paris.
- AOML/SOOP continues to recognize the shipping industry for their support to the program. During 2010 MV Oleander received the "NOAA Environmental Hero 2010" award, and the shipping company Hapag-Lloyd received a plaque in recognition to their continuous effort in support of frequently repeated and high density XBT transects.