

SOOP Report for 2011

USA

a. Programme description:			
Line	Agency	Sampling programme and mode (if applicable)	No. of ships
AX01	SOOP SEAS/IRD	HD	1
AX02	SOOP SEAS/IRD	HD	1
AX07	SOOP SEAS/AOML	HD	4
AX08	SOOP SEAS/AOML	HD	1
AX10	SOOP SEAS/AOML	HD	1
AX18	SOOP SEAS/AOML	HD	2
AX20	SOOP SEAS/IRD	HD	1
AX22	SOOP SEAS/SIO	HD	2
AX25	SOOP SEAS/AOML	HD	1
AX32	SOOP SEAS/AOML	HD	1
AX97	SOOP SEAS/AOML	HD	4
IX01	SOOP SEAS/CSIRO	FR	1
IX02	SOOP SEAS/SIO	HD	1
IX12	SOOP SEAS/SCIRO	FR	4
IX15	SOOP SEAS/SIO	HD	1
IX21	SOOP SEAS/SIO	HD	1
IX28	SOOP SEAS/CSIRO	HD	1
MX01	SOOP SEAS/ENEA	HD	1
MX04	SOOP SEAS/ENEA	HD	1
PX05	SOOP SEAS/SIO	HD	1
PX06	SOOP SEAS/SIO	HD	1
PX10	SOOP SEAS/SIO	HD	1
PX13	SOOP SEAS/SEAS	FR	1
PX31	SOOP SEAS/SIO	HD	1
PX37	SOOP SEAS/SIO	HD	2
PX38	SOOP SEAS/SIO	HD	1

PX44	SOOP SEAS/SIO	HD	1
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b. Data management

Agency	No. of JJVV messages on the GTS in 2011	Location of delayed-mode data
NOAA / AOML - SEAS	4128	NODC / AOML / SIO / CSIRO
SIO - SEAS	5639	NODC / AOML / SIO / CSIRO

c. Major challenges and difficulties:

- Real time transmission and quality control procedures for the thermosalinograph (TSG) data continue in operation. The whole TSG data set, including quality control flags, is being distributed through NOAA/NODC and GOSUD.
- Transect AX18 (Buenos Aires to Cape Town) continues to be a 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.
- The AX07 transect (Gibraltar to Miami, FL) is being done using ships departing from Miami. The route followed by these ships is slightly different than those recorded for this transect historically.
- XBT operations were continued in Reykjavoss (AX02) with the execution of four high density cruises during 2011. The implementation of atmospheric and oceanic carbon dioxide and thermosalinograph observations from this ship, with real-time data transmission, was completed.
- During 2011 four high density cruises were carried out along AX01 in collaboration with IRD/Brest. Data transmission was performed in real-time using resources from the ship.
- During 2011 one high density cruise was performed along AX20 in collaboration with IRD/Brest. We have plans to maintain high density XBT regular sampling on these transects (AX01, AX02, and AX20) during 2012 as part of this collaboration, with real-time data transmission and submission to the GTS.
- Due to changes in the scientific community goals, 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.

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, MV Barcelona Express, and MV Reykjafoss, and for HD XBT data transmissions on AX10.
- Several tests of XBT and TSG data transmissions to the GTS using BUFR format were performed during 2011.
- SOOP continues to support other programs including Argo and Drifters.
- AOML organized the US SOOP workshop in March 2011 with the participation of 2 PMO's from the VOS program and a member of SIO SOOP.
- AOML/SOOP continues to work in other XBT related projects including experiments for the study of the XBT fall rate equation issue.
- AOML/SOOP is working in collaboration with international partners in the maintenance of new XBT high density transects in the Atlantic Ocean (AX01, AX02, and AX20) and in the Mediterranean Sea (MX01 and MX04).
- AOML/SOOP and CSIRO organized the First XBT Science Workshop, held during July 2011 in Melbourne, Australia, and hosted by BOM/Australia.
- The status of implementation of the XBT global network as well as the issues of the SOOP were presented and discussed during the JCOMM SOT-VI meeting, held in April 2011 in Hobart, Australia.

e. Other comments:

- We continue to participate in collaborative programs with other institutions involved with XBT programs. Our contribution to the collaboration comes in the form of donating probes and supporting equipment when needed in exchange for management and ship greeting services. In particular, during 2011 we provided 324 probes to Brazil (AX97), 648 probes to BOM/Australia (IX01, IX12, IX28), 972 probes to IRD/France (AX01, AX20), and 324 probes to ENEA/Italy (MX01, MX04).