

**SACROSS****M133**

(15.12.2016 – 13.01.2017)

2. weekly report 24. Dec. 2016



Christmas at sea: For most of us it was a very special to experience the Holiday Season far away from our close friends and family together with the METEOR crew. All around the vessel people were busy in their spare time preparing. The mess was seasonally decorated. Two Christmas trees were put up. The daily menu was decorated and printed on nice paper. Der



*Christmas season is noticeable in the Southern hemisphere on METEOR*

METEOR choir met several time to practice Christmas carols, a theater play was written and directed by Elisabeth Thölken and a team of 13 performer practiced and refined the script over the last few days. Costumes were selected from existing stock or newly created. Small letter were written for the personal Christmas Post Boxes (spend XBT canisters), small presents needed to be wrapped and poems and short stories selected. Finally Christmas Eve arrived. Following the festive dinner the long awaited METEOR Christmas Party began featuring German – English – French – Spanish contributions. A memorable event that made this Christmas a special one for all of us.



*Christmas Party in the Messe of METEOR (Photos: Christian Rohleder)*

**DFG****marum****CAU**  
Christian-Albrechts-Universität zu Kiel**GEOMAR**  
Helmholtz-Zentrum für Ozeanforschung Kiel

We felt honored to receive so many greeting from all over: The German science minister Mrs. Prof. Dr. Wanka send us a letter, colleagues from other vessels and from land based institutions transmitted their greetings. We had recorded a radio message for the German radio station NDR Sendung „Weihnachtsgrüße an Board“ earlier the week that was broadcasted on New Years Eve.



*METEOR plowing through waves (Foto: Christian Rohleder)*

Our science continued through out the week as planned. Our cruise track takes us due west along the 34.5°S latitude circle. Time and again we need to plow into the waves associated with a time strong westerly winds.

Every hour a 400 m deep temperature und salinity profile is recorded by the underway-CTD system. Every other hour an 800m deep XBT profile is complimenting the U-CTD data. These data allow us to quantify the upper ocean warming of the



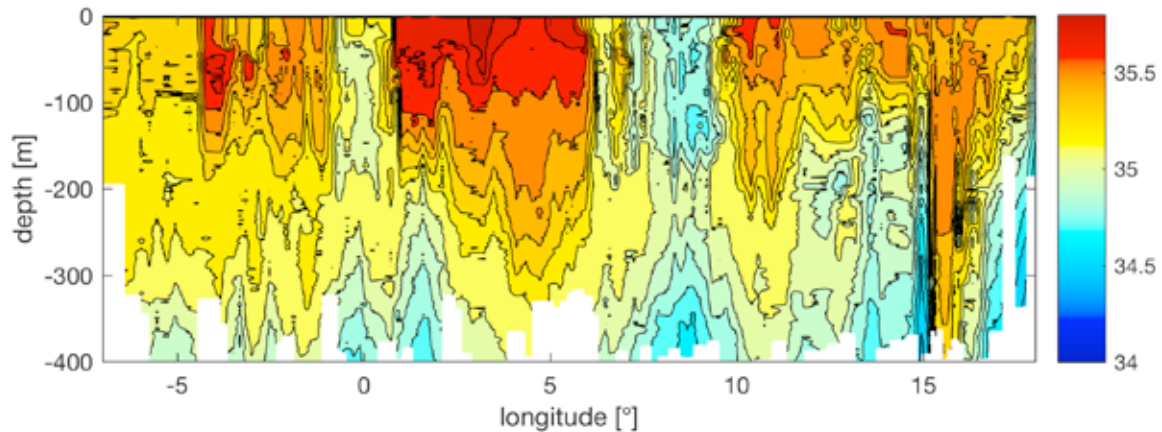
*Winch of U-CTD at the stern of METEOR.*



*XBT Launcher on METEOR.*

South Atlantic with better precision. In addition we are interested to quantify the northward transport of salty surface waters.

Meanwhile we have obtained more than 200 U-CTD profiles and launched more than 60 XBTs. A first analysis of the physical data reveals interesting structures in particular for the salinity within the upper 400m depths. Thus we expect a significant exchange across our survey latitude.



*Salinity of the upper 400 m depths along a section of 34.5°S. The rich salinity structure is obvious and its role in the meridional flux very interesting to us.*

Every other day we have deployed the plankton nets. The data show very clear differences in the foraminifera abundance within water masses. The station within the Agulhas-Eddy at the beginning of the expedition exhibited a 5-10 time higher abundance when compared to normal trawls in the central South Atlantic.



*Picking forams for later analysis*

The southern summer had its moments during the week. Several days carried the signatures of strong winds to the south. We did not hope for a White Christmas and many of us enjoy the warm sun.

The companionship on board is splendid, the food very tasty and the collaboration with the captain and his crew remain outstanding.

With best wishes from 34° South and 10° West,

Martin Visbeck and the Crew of the M133 expedition.

More information can be found in the blog:

<http://www.oceanblogs.org/mysciencescruise>