

CRUISE REPORT

Cruise Number: MF08-02, leg 2

Vessel: NOAA Ship MILLER FREEMAN

Area of Operations: Shelikof Strait, Bering Sea

Itinerary: Depart Dutch Harbor, Alaska: 29 February 2008
Arrive Kodiak, Alaska: 9 March 2008

Participating Organizations: NOAA/PMEL/FOCI

Chief Scientist: Carol DeWitt
NOAA/PMEL/OERD2/FOCI
206-526-6808
Carol.DeWitt@noaa.gov

Other Participating Scientists:

William Floering M USA NOAA/PMEL

Cruise Objectives: The dual objectives of the cruise were the recovery and deployment of moorings in the Bering Sea and the observation and sampling at and near the eastern Bering Sea ice edge.

Summary of Operations and Samples Collected:

CTD Casts	41
Moorings Recovered	4
Moorings Deployed	5
Salinity Samples	38
Nutrient Samples	10

Cruise Summary:

On February 29th the NOAA Ship MILLER FREEMAN departed Dutch Harbor, Alaska for Amukta Pass. The departure time of the ship had been delayed approximately 20 hours at the discretion of the captain who decided that crew concerns and fueling conflicts overrode the scheduled departure date. A line of six CTDs was completed southeast of Amukta Pass. During the CTD at the third site, the CTD system failed at approximately 306 m (of a 1500 m cast). The CTD was brought back aboard and winch wire leads were swapped in an effort to delay re-terminating the CTD until the transit to Amukta Pass. During the next CTD cast, the CTD data started spiking at approximately 440 m and at approximately 468 m the cast was aborted and the CTD was brought back aboard. The CTD was reterminated. During the next CTD, the CTD

deck unit started flashing error lights as we approached 1500 m. At 1482 m the deck unit froze but sufficient data had been collected to consider the cast complete. After the CTD was brought aboard, the winch wire was again reterminated. Subsequent CTDs were completed successfully.

During the previous CTD line, weather conditions were marginal. At Amukta Pass there was a break in the weather and we initiated mooring operations. The pre-recovery CTDs were omitted so that we had the greatest opportunity of finishing the mooring work before the weather deteriorated. The first mooring, 07AMP-1A, did not respond. Since the weather window for mooring ops appeared limited, it was decided to delay further recovery attempts for 07AMP-1A and proceed with the rest of the mooring operations. Mooring 08AMP-1A was deployed approximately 0.7 miles from the deployment site of 07AMP-1A. The remaining three deployment sites were successfully recovered and deployed. Weather conditions deteriorated while deploying the final Amukta Pass mooring. At this point there was a ship equipment failure, and the ship sought shelter and anchored to accomplish the required repairs.

The next morning while the ship was changing harbors and passing by Amukta Pass, it was decided that conditions were acceptable to start CTD operations. The six CTDs across Amukta Pass were completed. We continued mooring operations at 07AMP-1A and located the mooring. It was decided to wait until morning to pursue recovery attempts. A watch was maintained to ensure that communications would not be lost if the mooring broke free. At approximately midnight the mooring's release ceased communications. The mooring was located on the sounder and visuals were maintained throughout the night. The next morning it was determined that further recovery efforts on this cruise were futile.

We then proceeded to the northeast CTD line and completed the six CTDs. Next we completed nineteen CTDs along the Bering Sea "L" line.

We proceeded to Pavlof Bay and completed a CTD, mooring recovery, mooring deployment and CTD.

Next we proceeded to line 8 and completed six of the CTD stations across Shelikof Strait (station 55 – on the Kodiak side - was not completed).

Unexpectedly the weather deteriorated drastically resulting in the cancellation of the Chiniak Bay mooring operations on this cruise. The command decided that the estimated two hours to complete Chiniak Bay mooring operations was not acceptable since the ship's import arrival time was already delayed to between 2:30 and 3 pm. The captain offered to reschedule Chiniak Bay mooring operations after the next cruise prior to the ship's transit south. This was gratefully accepted. Unfortunately, it turned out that the re-scheduled Chiniak Bay mooring operations were also canceled due to equipment breakdowns. The cancellation of mooring operations on the FREEMAN will require contracting a fishing vessel and a special trip to Kodiak by mooring personnel at a cost of approximately \$5,000.

Summary of Cruise:

Days lost to weather – 0.75 days
Days lost to equipment failure – 0.7 days
Delayed departure – 0.8 days

Acknowledgments:

The autosal – which was report out of service last February – was still out of service during this cruise.

The willingness of the captain to continue working during marginal conditions is appreciated. Bosun Erick Long and his deck force were outstanding for their hard work in extreme conditions.

The weather conditions in the Bering Sea this February were challenging - resulting in additional hardships on the ship and people aboard. Perhaps exacerbated by these adverse conditions - communications between the command and the scientific party – which in the past have been inclusive, considerate and effective - were often lacking altogether. Efforts to improve two-way communications by the command and by the scientists would reduce misunderstandings and optimize the overall cruise results.