

CHAPTER FIVE

SCIENCE

1. Meteorology

Synoptic weather observations were taken on a six hourly basis and recorded on NOAA Form 72-1. All observations were transmitted by radio to OBS METEO, Washington, DC. Hourly observations were utilized in the preparation of forecast which were presented to the Captain, Operations Officer, and Senior Aviator to aid in ship and helicopter operations.

Special observations were taken for all helicopter operations and upon request.

Ice observations were taken each time that the ship entered or left the ice, with each synoptic, or if the concentration varied significantly. Observations were recorded on NAVOCEANO 3167/54A Ship-Shore Log. All observations were transmitted to Fleet Weather Facility, Suitland, MD. No aerial ice reconnaissance was conducted.

Radio facsimile charts were received, radio reception permitting, on the average of four charts a day. Up until the Aleutians, FAX Charts were received from San Francisco on 8680 KHZ and 12728 KHZ, and from Honolulu on 9440 KHZ and 13862 KHZ. After passing through Unimak Pass we moved out of range of these two stations and our sole source of FAX Charts was Russia's on 7475 KHZ, 10220 KHZ, and 14738 KHZ. From San Francisco and Honolulu, we had been receiving 24 and 72 hour prognoses as well as surface analysis, and upper air. However, from Russia, due to the language barrier, we could decipher only surface analysis, and a few upper air charts. All FAX Charts received were analyzed, and applied to weather forecasts.

Special weather observations were also done in conjunction with the oceanographic project from Nome to Point Barrow, each time a CTD or NANSEN Cast was done.

Satellite ice messages were received from FWF Suitland, MD, and all information was plotted. Aerial ice reconnaissance messages were received and plotted, however the longer range flights were of dubious value.

2. Oceanography

Expendable Bathythermographs (WBT) were taken every six hours from San Francisco to the Aleutians whenever the water exceeded 100 meters in depth. After Unimak Pass XBT's were done whenever the water exceeded 400 feet.