AFSC BERING SEA RESEARCH IN 2000

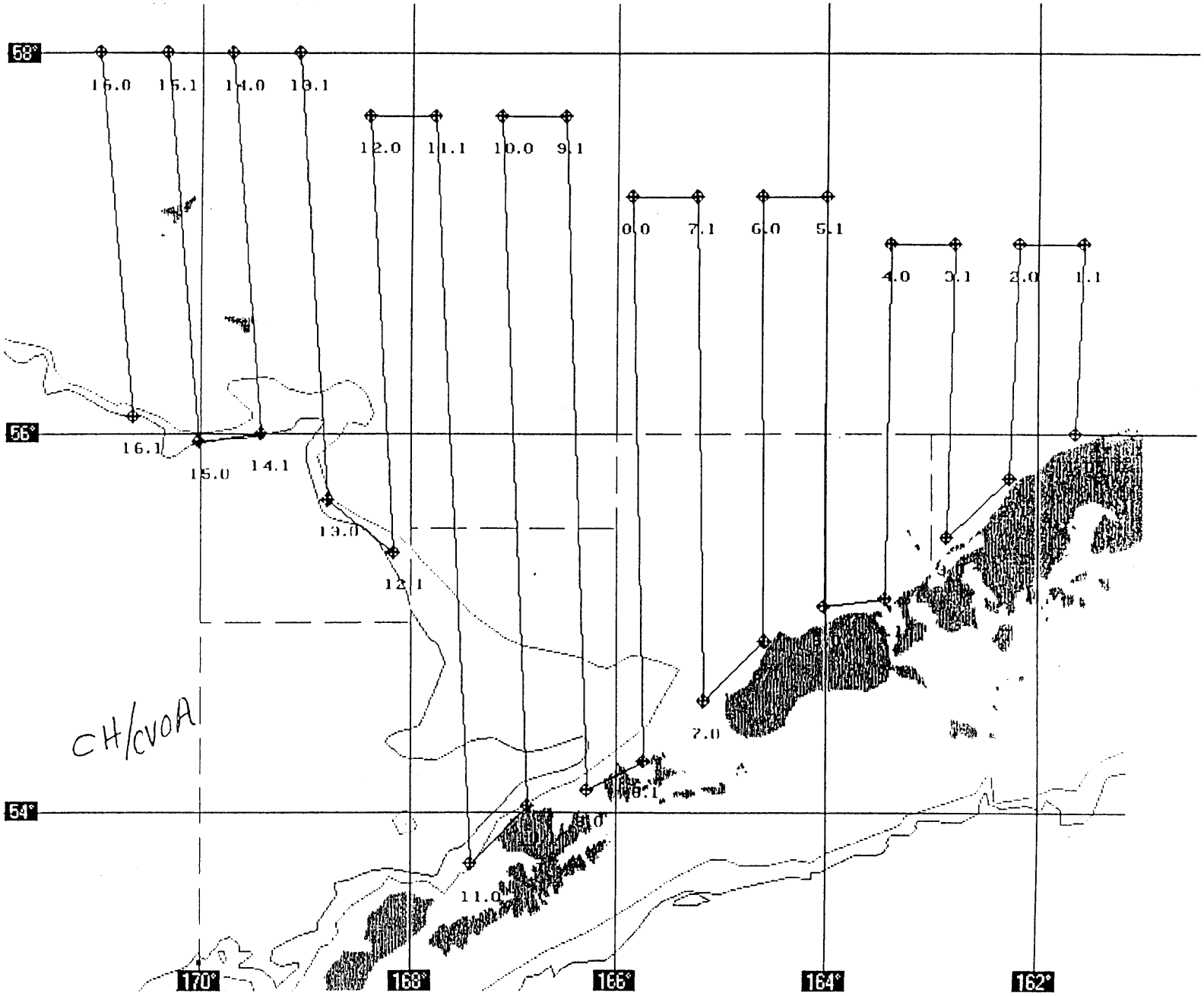
Project	Dates	Region	Email contact
Mooring deployment	Jan 31 – Feb 9	EBS	willliam.parker@noaa.gov
Acoustic-trawl survey	Feb 11-27	EBS shelf	neal.williamson@noaa.gov
Acoustic-trawl survey	Feb 29 – Mar 13	Bogoslof	neal.williamson@noaa.gov
Oceanographic sampling	Apr 18 – May 12	EBS	carol.dewitt@noaa.gov (leg 1) Jeff.napp@noaa.gov (leg 2)
Bottom trawl survey	May-Jul	EBS shelf	gary.walters@noaa.gov
Bottom trawl survey	May-Jul	Aleutian I.	eric.brown@noaa.gov
Acoustic-trawl survey	Jun 9 – Aug 4	EBS shelf	neal.williamson@noaa.gov
Steller sea lion project	Aug 11-31	Kodiak Island	chris.wilson@noaa.gov
Juvenile pollock project	Sep 2-16	EBS or GOA	matt.wilson@noaa.gov

Note: For a more comprehensive list and detailed descriptions, refer to the following websites –

Alaska Fisheries Science Center http://www.afsc.noaa.gov/

NOAA Ship Miller Freeman http://www.pmc.noaa.gov/mf/

FOCI Program http://www.pmel.noaa.gov/foci/home.html



11-27 Feb 2000 EIT survey track

October 18, 1999

Cruise Announcement

Cruise MF2000-02 NOAA Ship *Miller Freeman*

Echo Integration-Trawl Survey of Walleye Pollock in the southeastern Aleutian Basin

Scientists from the Alaska Fisheries Science Center (AFSC) will conduct an echo integration-trawl (EIT) survey of walleye pollock (*Theragra chalcogramma*) in the southeastern Aleutian Basin near Bogoslof Island aboard the NOAA ship *Miller Freeman*. Dates have not yet been set, but the survey should start around late February and continue until mid-March. The cruise will begin and end in Dutch Harbor, Alaska.

TENTATIVE VESSEL ITINERARY

Feb 29	Sphere calibration
Mar 1-12	Echo integration-trawl survey of the Bogoslof Island region
Mar 13	Arrive Dutch Harbor; end of cruise

OBJECTIVES

The primary objectives of the cruise are to:

1. Collect echo integration data and midwater and demersal trawl data necessary to determine the distribution, biomass, and biological composition of walleye pollock in the southeastern Aleutian Basin.

2. Collect pollock target strength data for use in scaling echo integration data to estimates of absolute abundance.

3. Calibrate the 38-kHz and 120-kHz scientific acoustic systems using standard sphere techniques.

4. Collect physical oceanographic data including temperature and salinity profiles at selected sites, and conduct continuous monitoring of sea surface parameters (e.g., temperature and salinity) and water current profiles.

METHODS

Survey operations will be conducted 24 hours per day. Scientists will use the EK500 echo integration system, with two centerboard-mounted transducers at 38 & 120 kHz, to collect acoustic data continuously along a series of parallel transects. Transect spacing will be 10 nmi (Fig.1), except in areas of high fish density where it may be reduced to 5 nmi. Ship speed is expected to average 12 knots in favorable weather. Trawl hauls will be made at any time based on occurrence of echo sign to identify echo sign and provide biological data and pollock samples. An average of 2-3 trawl hauls per 24 hours is anticipated. On occasion, trawl sampling may occur more frequently. Haul duration will be kept to the minimum necessary to ensure an adequate sample. Biological data collected from each haul will include species composition, sex composition, length frequencies, whole fish and ovary weights, maturities, and otoliths. Pollock tissue samples will be taken from selected hauls for genetic studies. Temperature/depth data will be collected with a microBT attached to the headrope of all trawls. Conductivity-temperature-depth (CTD) data will be collected with the AFSC Seabird system at calibration sites and selected locations.

Pollock target strength data will be collected on an opportunistic basis when certain conditions (i.e., low fish densities, single species, unimodal size composition, appropriate depth range) are encountered. Target strength data collection typically involves repeated passes over an aggregation of fish at a vessel speed of approximately 3-5 knots. One or two trawl hauls are made to provide species composition and biological data. Whenever calm seas are encountered along with the above-mentioned conditions, a second approach to target strength data collection will be attempted. With the vessel stopped, a 38-kHz transducer will be lowered to a depth just above the fish sign for data collection.

At the survey's end, a full sphere calibration will be conducted at a location to be determined later. Calibration requires the vessel to be anchored at bow and stern, and involves lowering a calibration sphere assembly over the side. A CTD cast will be taken.

POTENTIAL SCIENTIFIC PERSONNEL

Name	Sex/ Nationality	Position	Organization
Taina Honkalehto	F/USA	Chief Scientist	MACE
Steve de Blois	M/USA	Fish. Biologist	MACE
Kevin Landgraf	M/USA	Fish. Biologist	MACE
Neal Williamson	M/USA	Fish. Biologist	MACE
Bill Patton	M/USA	Fish. Biologist	MACE
To be named	/USA	Fish. Biologist	MACE
To be named	/USA	Computer Specialist	MACE

MACE - Midwater Assessment and Conservation Engineering Program, Alaska Fisheries Science Center, Seattle, WA

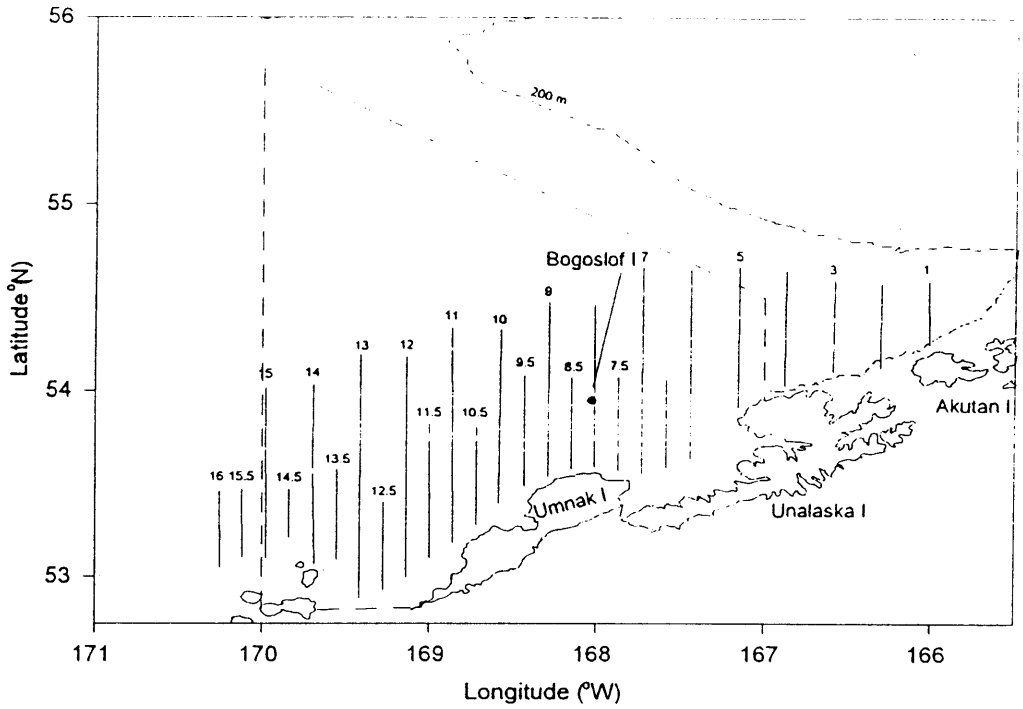


Figure 1. North-south transects proposed for the winter 2000 echo integration-trawl survey of the Bogoslof Island area. Transect numbers are indicated. Dash-dotted line is boundary of U.S. fisheries management area 518/CBS convention area.