## Northern Gulf of Alaska (NGA) Long-Term Ecological Research (LTER) and Gulf Watch Alaska (GWA)

# Seward Line Cruise Report for SR2608

## 3 to 19 May 2026

### Funding Sources: NSF, NPRB, AOOS, EVOSTC/GWA

**Chief Scientist:** Seth Danielson, UAF/Physics, (907) 388 7088 (cell), sldanielson@alaska.edu

**Co-Chief Scientist:** Alex Poje, UAF/Zooplankton



## Scientific Purpose

This cruise is a part of the NSF's Northern Gulf of Alaska Long-term Ecological Program (NGA-LTER). This cruise represents a continuation of sampling begun in fall 1997 under the NSF/NOAA NE Pacific GLOBEC program, and subsequently a consortium of the North Pacific Research Board (NPRB), the Alaska Ocean Observing System (AOOS), and the Exxon Valdez Oil Spill Trustee Council's (EVOSTC) Gulf Watch. The scientific purpose of the core Seward Line project is to develop an understanding of the response and resiliency of this marine ecosystem to climate variability. 2026 marks the 30th consecutive year with Seward Line oceanographic observations, and the 57th year with observations at oceanographic station GAK1, which was first sampled in December 1970. The GAK1 mooring has been deployed and annually serviced since 1998. The GEO mooring has been deployed and serviced since 2019.

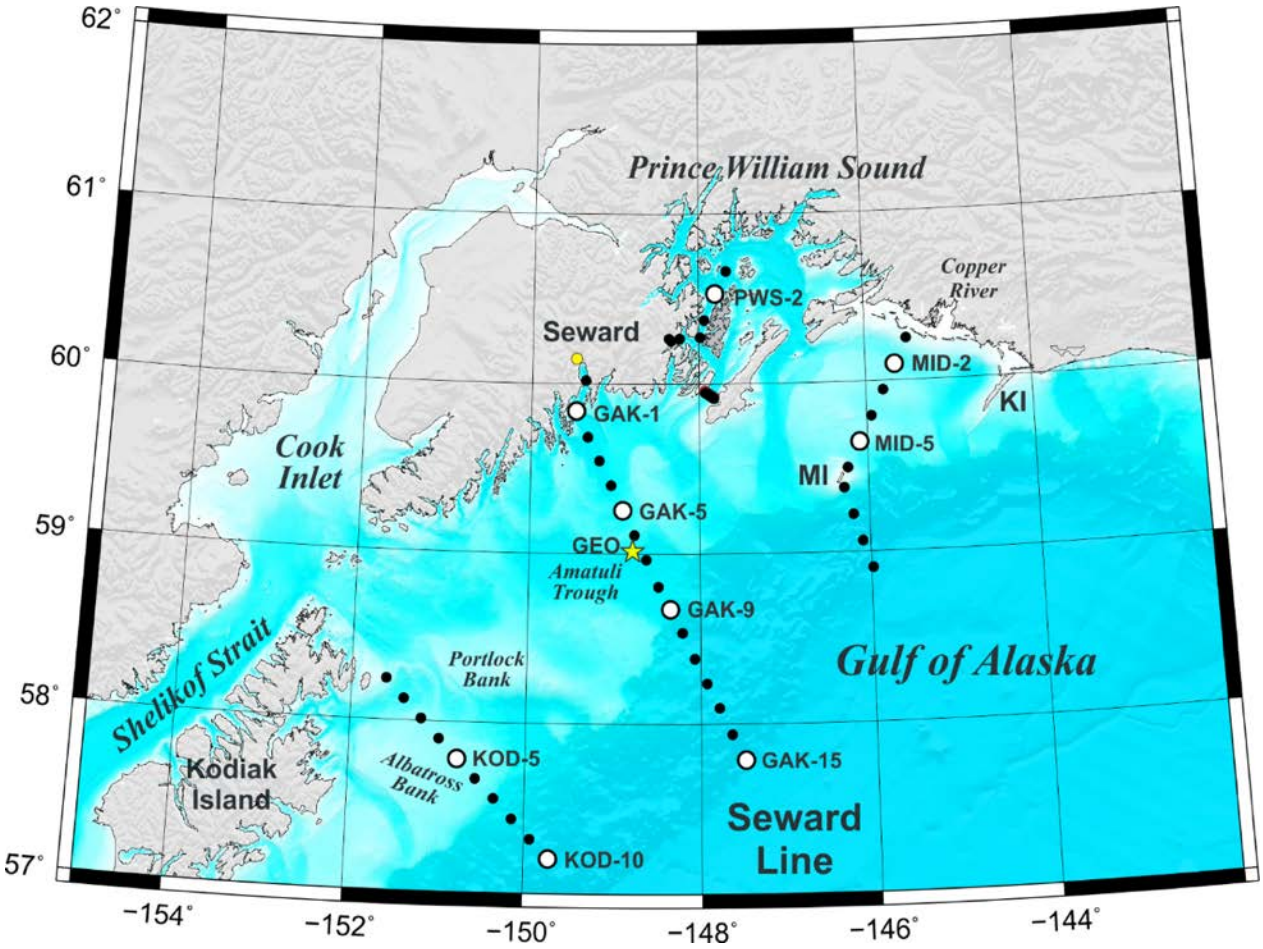



**Figure 1.** NGA-LTER sampling stations along the stations sets for the Seward Line (GAK), Middleton Island (MID), Kodiak (KOD) and Prince William Sound (PWS, MS, KIP, IB, CG). Oceanographic moorings are located at the Gulf of Alaska Ecosystem Observatory (GEO), which is located between stations GAK6 and GAK7, and near station GAK1.

Cruise SR2608 took place on UNOLS vessel R/V Sally Ride. This was the first time our project sailed on any ship other than R/V Sikuliaq for our spring cruise. Despite the challenges of working on a new an unknown platform, we and the ship were able to quickly come up to speed with each other's methodologies and we quickly found an efficient mode of operations. was the first of two proposed

process study cruises of the NGA LTER Phase II funding cycle. Our focus was on establishing a fuller understanding of the ecological dynamics associated with two prominent fronts that are found perennially in the Gulf of Alaska: the nearshore Alaska Coastal Current front system (ACF), and the offshore shelf-break front system (SBF). We began the effort by first conducting a high-resolution Seward Line (Figure 1) survey of the upper 100 m of the water column using the Deep Plankton Imaging (DPI) tow body. At the same time, an oceanographic glider was transiting along the Seward Line, collecting data from the surface to the seafloor over the shelf and down to 500m depth over deeper waters. The DPI tow allowed us to establish the water property boundary between shelf and basin waters. Satellite imagery of the NGA showed the location of mesoscale eddies in the study region vicinity (Figure 2). Based on the DPI cross-section and other information, we elected to establish the Shelf Break Front (SBF) study region slightly east of the Seward Line (Figure 3).



**Figure 2.** Stern recovery of the trace metal CTD.

## Cruise Activities Narrative

### 1-2 May: Mobilization

The mooring team staged the mooring conex container on the pier on the night of April 30 to prepare for a first pick at 08:00. The Trace Metal van was delivered at 09:00 and by 10:00 both containers were secured in place on deck. The bulk of the science party arrived during the container loads and after checking in began moving pallets from the warehouse to the ship. Loading and lab setup continued through the day and the next day in wet, rainy (and a bit of snowy) conditions. Ship's crew sought places to purchase warm clothing in Seward. Their office had a trailer-drawn sauna delivered to the SMC grounds for everyone to warm up in. It was determined that the new DPI winch had no "slop" allowance for deck bolt placement and that the winch mounting bolt holes would have to be drilled out. After finding an appropriate drill bit and talking through the many possible pitfalls, we found that the winch frame metal was made of aluminum so the drilling process was pretty easy in the end. This still required many hours of crew assistance that would have been better to avoid.

### 3 May: Departure

We got underway on schedule and proceeded into an on-board orientation followed by abandon ship drills. At station RES2.5 we ran through deployment of the ship's CTD and Calvet net. At station GAK1 we took a CTD profile without collecting water and then occupied GAK2 and GAK3 with Calvet nets and CTD with water collections. The night shift worked at GAK3, GAK2 and GAK1.

### 4 May

Day shift begins at 0800 with water collection for a productivity experiment at GAK1, followed by two Calvet nets and a Trace Metal CTD. Weather deteriorating, we head to shelter in Thumb Cove in order to conduct an EK80 acoustics calibration, because the last calibration on this ship was in 2025 and in water temperatures much warmer than those found here in the Alaska spring ocean. We begin the calibration process about 6 pm and wrap up close to midnight. Seeing the weather forecast, we make plans to do the GAK1 mooring on May 5, as we wait for seas to abate somewhat.



**Figure 3:** Scallops, clams, barnacles and slime on recovered GAK1 CTD datalogger.

**5 May**

With weather improving, we head out of Thumb Cove at mid-day and head for the GAK1 mooring site. The 2025 GAK1 mooring is recovered and the 2026 GAK1 mooring is deployed in anchor-last fashion. We then steam out to GAK4 where the night shift is able to take up Seward Line sampling once again.

**6 May**

The night shift collected MultiNet sampling at GAK4-GAK5-GAK6 overnight and the day shift began with a CTD/Calvet at GAK4 followed by Intensive Station at GAK5 then CTD/Calvet at GAK6 and GAK7.

**7 May**

We have settled into the routine of Seward Line sampling. The night shift began at station GAK7 and worked out to GAK9 (two tows at this Intensive Station), and the day crew began at GAK8, worked Intensive Station GAK9 and deep stations GAK10 and GAK11.

**8 May**

The night shift completed GAK10/11/12/13, although 13 was done more in dusk than in darkness and would be repeated in darkness the following day. The day crew sampled at GAK12/13/14, leaving only an Intensive Station at GAK15 for the following day.

**9 May**

Overnight, the MultiNet was towed at GAK13 (repeat), GAK14 and GAK15. The Seward Line station work was finished by the day crew at GAK15. Then, R. Hopcroft spent a bit of time getting the DPI instrument ready to tow along the Seward Line. A few hours of work on terminations and setup of the new Hawboldt OS30 winch got the system ready to go and it was in the water collecting data by about 6 pm.

**10 May**

The DPI was towed through the night and from GAK15 all the way into Resurrection Bay. The science crew spent the day monitoring winch tension and getting a bit of a break from station work following the completion of the Seward Line.

**11 May**

The DPI was recovered shortly after midnight just south of Cain's Head. An oncoming storm pushed us into Resurrection Bay to pick up the pilots at 06:00, after which we head for Montague Strait in Prince William Sound. After MS4/3/1/2 stations (with water, nets and TMCTD at MS2), we head to our Icy Bay stations. Given our cold winter, we expect to find a lot of ice and that did turn out to be the case. We were unable to get to even station IB1 and from there

**12 May**

We work our main stations in Prince William Sound, with the night shift finishing all 5 tows at KIP2/PWS1/PWS2/PWS3. The day shift begins a bit early to get the deep cast on board at 08:00 and then off to an Intensive Station PWS2 in mid-morning. The day crew finishes work at PWS1 and KIP2 at about 8 pm, after which we head through the narrow and scenic Prince of Wales Passage between Bainbridge Island and Evans Island back into Port Bainbridge as we head toward Resurrection Bay to drop off the pilots.

**13 May**

We awoke in the morning to glider 191 aborting due to too-high of vacuum pressure, a problem that can be caused by a leak in an air bladder. Luckily, we are planning on visiting the GEO mooring site for

recovery of glider 1152 this morning so we add 191 to the list of tasks. We drop the pilots off in Resurrection Bay at 03:00 and then head out to the GEO site. On recovery, 191 suffered a broken wing but 1152 was brough aboard very cleanly. This was nice, because it had very sensitive shear probes mounted on the front and we wanted to make sure that we recovered this without bumping them. After the glider recoveries we then went to the GEO mooring site, recoverd the GEO mooring and then redeployed the mooring. Mooring operations began at about noon and we dropped the anchor-first GEO26 mooring at about 5:40 pm. Between the recovery and redeployment we took a CTD for water samples.

**14 May**

The night shift got a bongo net tow at station KOD10. Day shift did an intensive station at KOD10 and then worked at KOD9, KOD8, KOD7. Seabird observer Dan Cushing notes a distinct lack of albatross on both the Seward and Kodiak lines this year.

**15 May**

Working across Albatross Bank, the night shift did bongo net tows at KOD6/7/8/9 and the day shift began at 06:30 with a CTD/Calvet at KOD6. Intensive station KOD5 was then occupied, followed by short casts with sampling at KOD4/3/2/1, trying to finish up before an oncoming storm brings seas to 15-20' and winds gusting to 50 kts in our operating area. We eventually depart the KOD line at 7 pm, following sampling at station KOD1. We head for the Middleton Line, station MID8 at the leading edge of the incoming storm. Question arises about whether sampling just 2 stations prior to a major storm that will rework the water column will be scientifically useful. Possibly we should just head for Port Etches in Hinchinbrook Entrance. Our captain and crew are taking great advantage of the rich Alaskan fishing grounds, with lines in the water every time we the bottom depths are within reach. They pretty quickly catch enough cod and halibut to feed the entire ship; we get fresh baked fish for supper on Saturday night.

**16 May**

We spend most of the day running east, just ahead of the incoming storm. King Cove, to our west, records winds above 50 kts. We arrive at station MID8 with sufficient time to occupy MID8 and MID7 before having to run for shelter. Blue skies, deep blue ocean and white caps make contribute to a beautiful afternoon. Winds increase quickly past 20 then 25 but we have a good ride into shelter with a following sea.

**17 May**

A howling storm has arrived. We jog up and down Port Etches from midnight until about 1 pm. Max gust recorded on the bridge was 74 knots. Wind speed was often steady at 45-55 and we can see the gusts sweep by us as the wind rips water off the waves and carries it along. Out at Middleton Island, where we left at 7 pm last night, the maximum recorded wind speed was 90.1 knots. Seal Rocks, just outside Hinchinbrook Entrance and less than 10 miles from us, recorded waves up to 21 feet. We let the wind and seas settle, which they do relatively quickly, and at about midnight steam out to the Middleton Island Line. Our plan is to occupy MID1 through MID6 (about 14 hours worth of work) and then head to Resurrection Bay for a morning arrival on May 19.

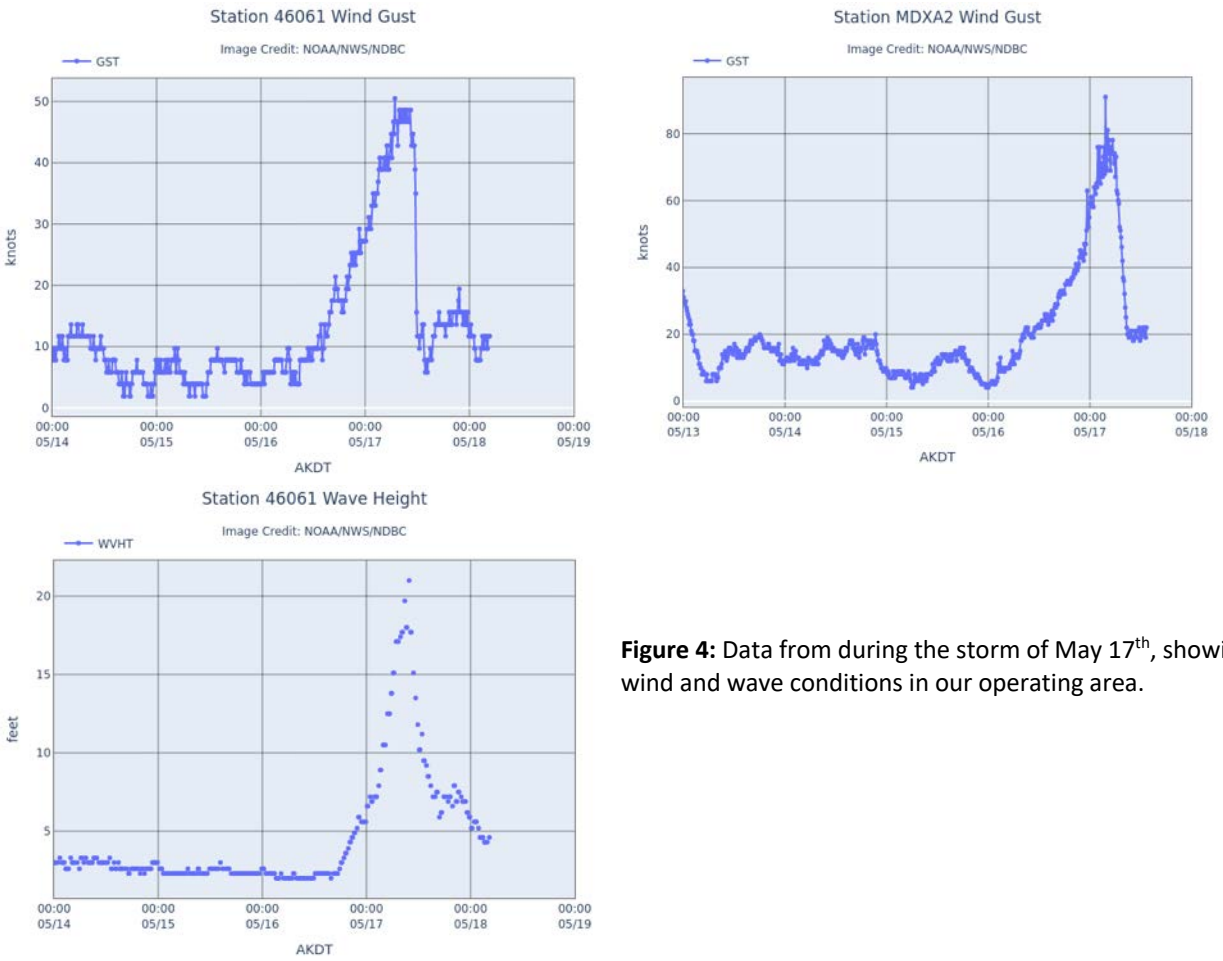



**Figure 4:** Data from during the storm of May 17th, showing wind and wave conditions in our operating area.

**18 May**

Today we begin our final day of sampling at MID1, 6:30 AM. Seas and wind allow for an enjoyable ride over to the station, under the influence of a gentle roll. The highly turbid Copper River plume is visible just inshore of our transit path, though we are moving through the aquamarine waters of river-influenced shelf water. Glider #1151 (Blinky) was scheduled for recovery at GAK1 on 5/19 but during the day of 18 May this glider found itself stuck at depth and dropped its eject weight. This glider was recovered via R/V Nanuq a few hours after the mission abort so we did not need to recover this one on the 19th as planned.

**19 May**

We enter Resurrection Bay early in the day and bring the coastal pilot on board near Cain's Head.

**20 May**

We complete demobilization by mid-day

**21 May**

Science party drives from UAA to UAF to complete the cruise.

**22 May**

U-Haul van is unloaded at 10:00 at 103 O'Neill.

## Physics, Moorings, Gliders and Remote Sensing

**PI:** Seth Danielson
**Cruise Particpants:** Seth Danielson, Lydia Sgouros, Kylie Wells

### CTD Station Hydrography

On SR2608 we conducted 59 CTD casts for water column hydrography using a 24-place Rosette with 10 liter Niskin bottles. Niskin bottles were tripped for water samples on 50 of these 59 casts. For normal operations, bottles were made at standard levels: 0, 10, 20, 30, 40, 50, 75, 100, 125, 150, 200, 250, 500, 750, 1000, 1250 and 1500 m depths and within 5 m of the bottom when the bottom depth was less than 1500 m. The SBE9-11 CTD was outfitted with pressure, dual temperature, dual conductivity, and dual oxygen sensors. Ancillary sensors included a Seapoint fluorometer, a WetLabs C-Star transmissometer, a Biospherical PAR sensor, and a Tritech altimeter. One channel was assigned to a self-logging Sequoia LISST particle size spectra instrument; one channel provided power and communication to a self-logging SUNA nitrate sensor.

### Underway Data

Ocean velocity data was collected using a hull-mounted Teledyne RDI 150 kHz Ocean Surveyor instrument and Teledyne RDI 300 KHz Workhorse instrument. The 150 kHz instrument collected data using 8 m bin thickness and the 300 kHz instrument collected data in 2 meter bins. EK80 Fisheries sonar data was collected at 18, 38, 70, 120, 200khz frequencies.

We ran the ADCPs triggered from the K-sync system so as to provide an interference-free time interval for the EK-60 fisheries acoustics pings. Over shallow waters (< 1000 m depth) all acoustic instruments could be run simultaneously. In deep water (>1000 m depth) the time for the return acoustic pings become exceedingly long so we ran in one of two modes in deeper water. In “night operations mode” we secured the EM712 mulitbeam and operated only the ADCP and EK-80 instruments so as to have concurrent acoustics data alongside the nighttime trawl operations. In the “day operations mode” we would run the EM712 so as to map the seafloor along our trackline.

Regions previously unmapped by multibeam acoustics were preferentially selected for ship routes in order to map uncharted areas of the seafloor. Many portions of the cruise transits from one sampling line to the next occurred in previously unmapped regions.

Other underway data collected include the ship’s operational data, meteorological data and ocean surface data. Operational data of ships equipment (e.g., navigation and winch payout and tensions) were also logged. Navigation data parameters include GMT date time, latitude, longitude and water depth. Atmospheric data parameters measured by the ship’s underway system included atmospheric pressure, wind speed/direction, air temperature, humidity, shortwave downwelling irradiance, longwave downwelling irradiance, and PAR. Surface seawater underway data samples included temperature, salinity, chlorophyll a fluorescence, and nitrate.

### Optics

Two optical nitrate dataloggers were used on the cruise. A SUNA V2 instrument was plumbed into the underway uncontaminated seawater throughflow system that feeds the thermosalinograph sensors, however this instrument did not have a real-time data feed and at the end of the cruise it was discovered that the instrument stopped collecting data early in the cruise. A second nitrate sensor was a deep SUNA V2 instrument strapped to the CTD frame. The SUNA was powered by a stand-alone battery pack that was energized when the CTD sent power to the bulkhead connectors. This dataset was stored internally to the SUNA and its full data will require a matching of dataset time stamps to align the nitrate

profile with the rest of the CTD profile, however a simple analog signal provides preliminary estimates for real-time assessments. The underway SUNA recorded data internally and this data will be aligned with GPS positions and time stamps from the vessel underway data record.

### Autonomous Underwater Vehicles

Three Slocum gilders were used during this cruise. All gliders were deployed near station GAK1 before the start of the cruise. One (#191) surveyed the inner shelf and then kept station near the GEO mooring until recovery on May 13th. A second glider (#1151) was deployed on April 20th, and carried a payload of a Simrad EK80 200kHz tranducer and a WASSOC shadowgraph (plus CTD, Eco-Triplett optics and dissolved oxygen sensors). Glider 1151 flew from GAK1 to GAK9 and back to GAK1, getting water column profiles of acoustic backscatter and images of plankton and turbulence. A third glider (#1152) was deployed on April 29th, carrying a Rockland Scientific Microrider turbulence sensor. This glider flew from GAK1 to the GEO mooring and then spent a week flying near the mooring and at the edge of the Amatuli Trough. Both 191 and 1152 were recovered on May 13th, just prior to the GEO mooring recovery.




**Figure 5.** Recovery of glider #1152 (Turbo), with the Rockland Microrider instrument, showing the microstructure shear and temperature probes extending over the glider nose cone.

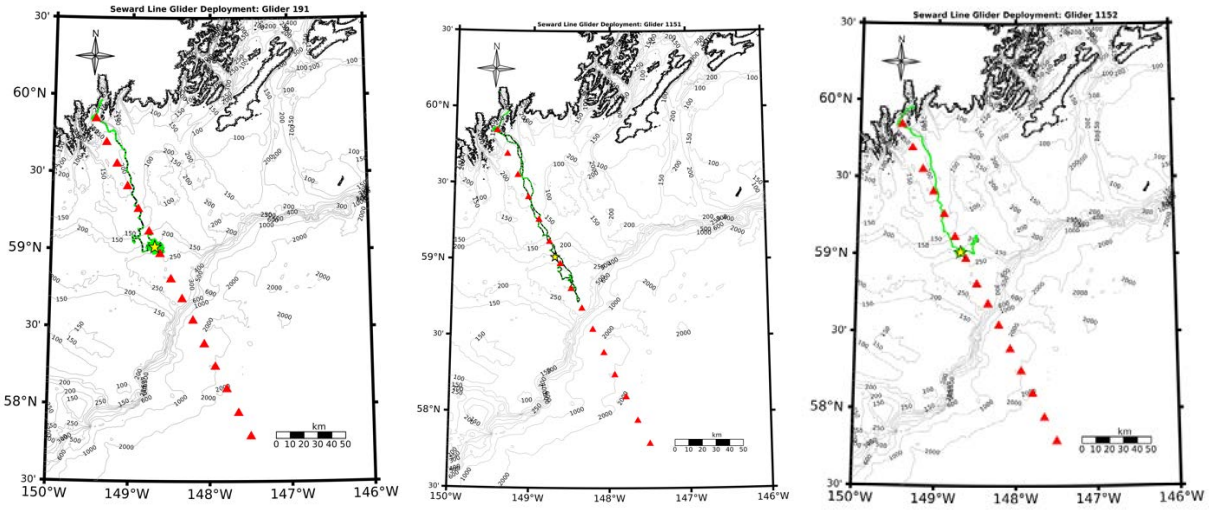



**Figure 6.** Tracklines (Green) from gliders #191 (left), #1151 (middle) and #1152 (right) relative to the main Seward Line stations (red triangles).

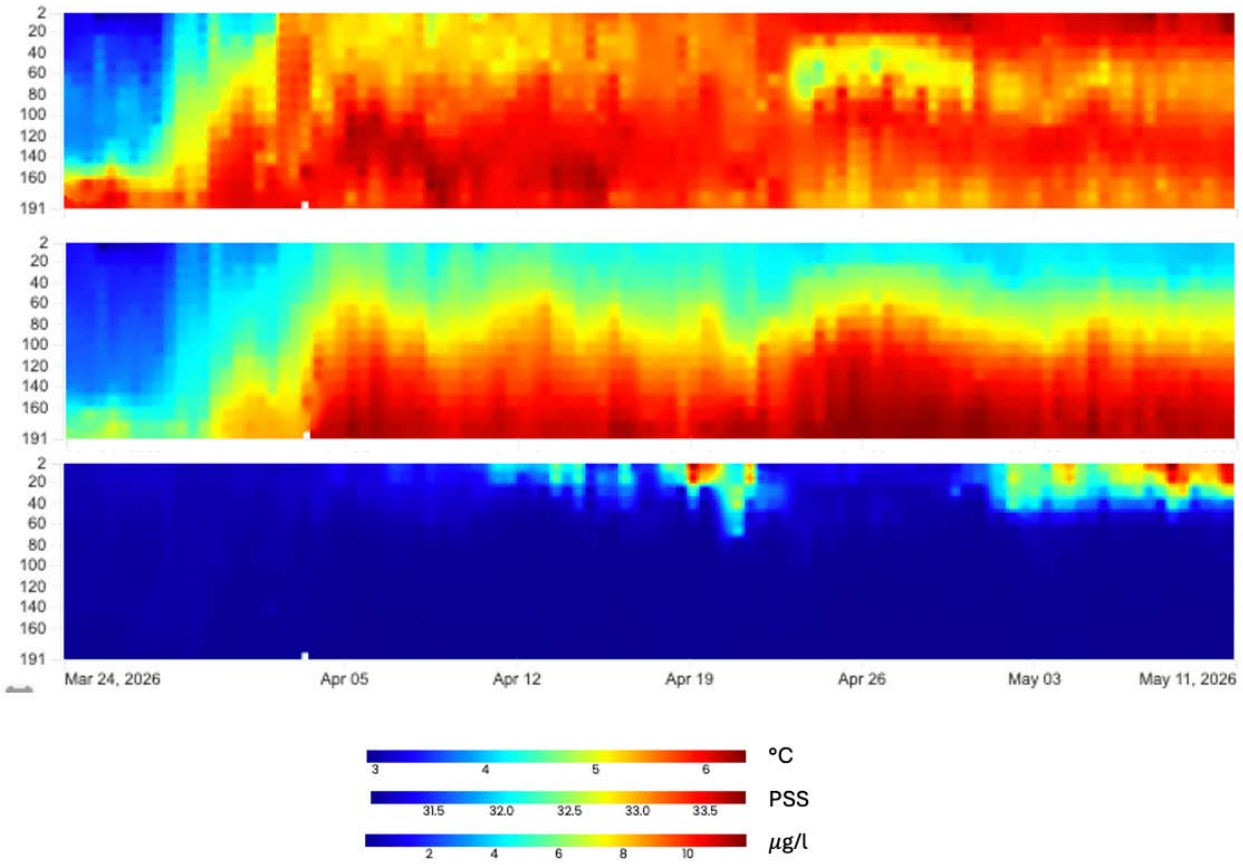



**Figure 7.** Data from glider #191, showing the seasonal evolution Temperature, Salinity and Chlorophyll a fluorescence (top to bottom).

## Oceanographic Moorings

We serviced oceanographic moorings at the GAK1 and GEO mooring sites. These moorings continue time series that were initiated at GAK1 in 1998 and at GEO in 2019.

### *GAK1 Mooring Turnaround*

We used the shipboard universal deck box, UTS-9400E, with the vessel-mounted 12kHz transducer for communications. The release was enabled and triggered from a couple hundred meters away. The ship then approached GAK1-25 to the starboard side. We paid out the A frame winch and brought it around to the starboard side with tagline hook and pole for first pick of the buoy. With the buoy onboard, we stoppered off at the pear link directly below the optics bar, disconnected and removed buoy and optics bar, and then connected up to our working line on the Hawboldt spooler through ship's tommy moore block on the A-frame hoist winch. From there, we hauled in to take off each microcat with additional stoppering points to remove the two inline Viny buoy sections.

In deployment, we set up 2 miles from the drop point expecting about an hour of deck prep, but the vessel slowed down a bit due to high line tensions and deployment also went very quickly, resulting in a tow of nearly an hour. We have the mooring set up with a final pick considering Sikuliaq's A-frame height (Seacat and SAMI frame, 3.5m spectra, releases, 2m chain, and anchor) and this is too high for the Sally Ride A frame. Instead, we put the instrument frame over first and picked from the top of the releases. The two concerns with this are that 3.5m put the frame right at the water surface while towing from the release pick point. Second, this pickpoint and close line and chain lengths could put the instrument frame and anchor very close together. There was enough tension at deployment that this did not cause an issue. GAK1-26 was dropped at 1810 local (0210 on 6 May 2026 UTC) at coordinates 59° 51.0301'N 149° 30.094'W. Immediately after the anchor drop, we triangulated mooring location as detailed below.

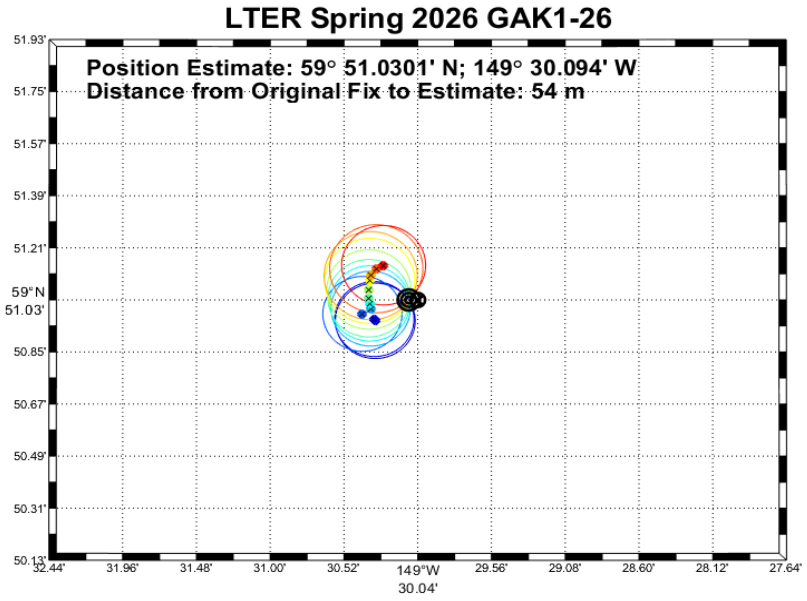



**Figure 8.** Geolocation of the GAK1 mooring following deployment.

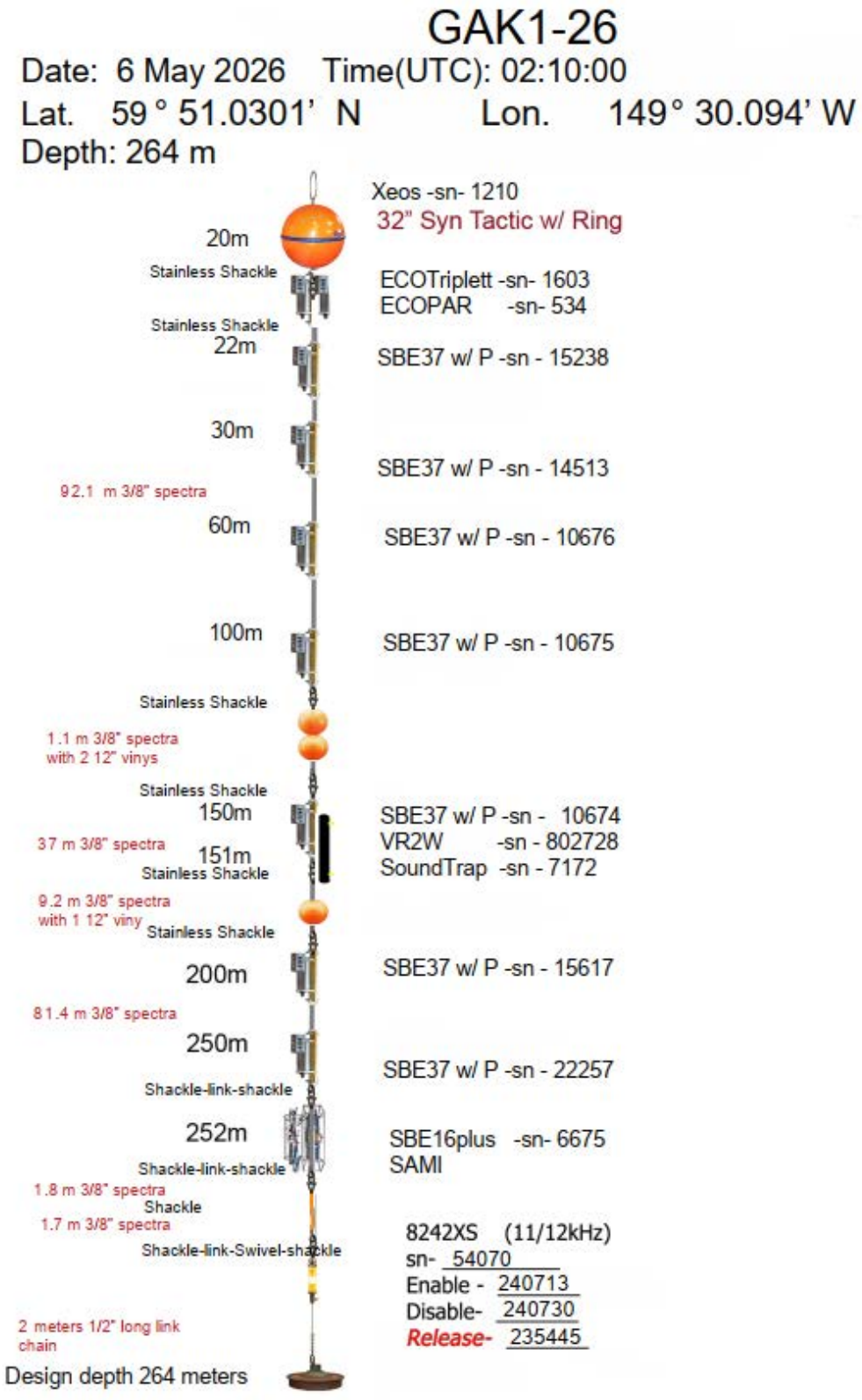



**Figure 9.** Details of the GAK1-26 mooring.

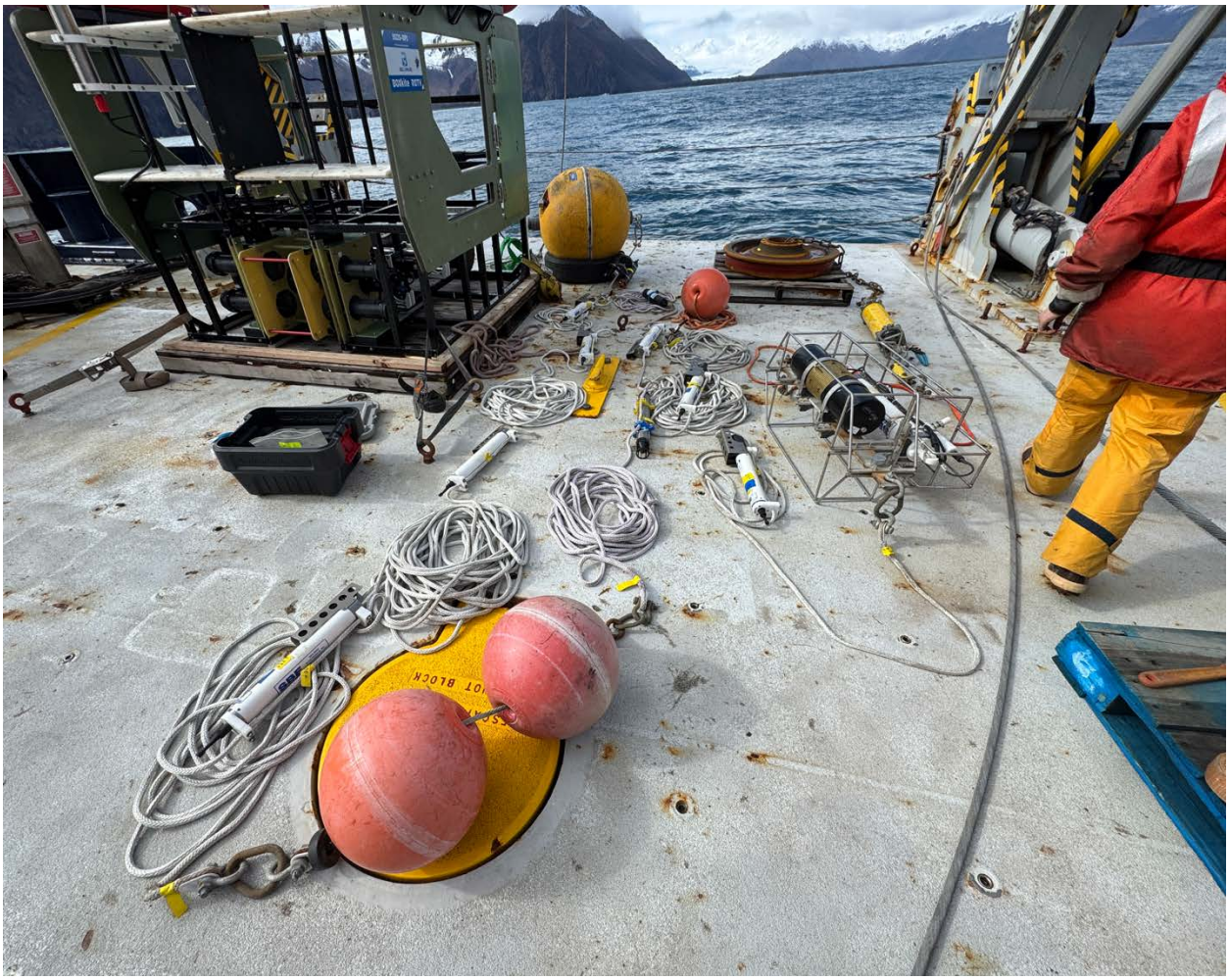




**Figure 10.** GAK1-26 mooring laid out on deck just prior to deployment (above). K. Nicols cleaning sensors from the recovered GAK1-25 mooring (left).

***GEO Mooring Turnaround***

We again used the shipboard Universal Deck box to enable and trigger the release from a couple hundred meters. The 25m and 70m buoy initially came to the surface and once we had a little tension on the line, the 110m ADCP buoy came up as well. We picked up the top float with hook on A-frame hoist pulled around to starboard side as with GAK1. Initial pick brought the top float and instrument frame onto deck. We stoppered off below, got these out of the way, and then transferred load onto the Hawboldt spooler through snatch block on the A-frame hoist winch for the remainder of the recovery, using a deck stopper to remove the four additional inline packages.

A CTD was done between recovery and deployment while we reset the deck.

We originally planned for anchor-first deployment using a deck stopper. However, at the first inline attachment point, we noticed that rust on the stern was abrading the Spectra. We initially tried to get chafing gear onto the line or held against the stern while bringing the A-frame in but we had a lot of trouble getting the chafing gear in the right spot with the high tension on the line and motion, though minimal, across the stern.

To protect the line, we swapped over to a vertical stopper deployment using the trawl wire to transfer load; the A-frame hoist winch held the block with the main mooring line and .680 was used for load transfers and lifts. Because the mooring is not designed for a vertical stopper arrangement, we encountered a couple hurdles. The mooring design only uses a single shackle-link-shackle assembly below each of the inline packages, providing very little slack for connecting buoys with radii up to 16”. To help with this, we added an extra shackle and link below the AZFP frame and the 32” steel float.

A vertical stopper setup forces a significant side load onto the inline packages during the load transfer from below to above. While manageable for the buoys, AZFP, and sediment trap frame, the top instrument frame is not well designed to withstand this type of loading with instruments sticking beyond the cage on three sides. The threaded rods forming the corners of the frame also flexed during the transfer, putting load on the plastic shelves.

Final load transfer was onto the frame, 2m spectra, and 37” steel top buoy hung from a pelican hook. This was lowered to the water surface and mooring was dropped at a time of 1733 local, 0133 14 May 2026 UTC and location of 59° 00.9064’N 148° 41.5970’W.

Most data offloads were successfully completed on board. The upward-looking ADCP (S/N 24451) appears to have had water ingress at some point during the deployment. We will attempt a direct data recovery from its flashcard back at the shop.

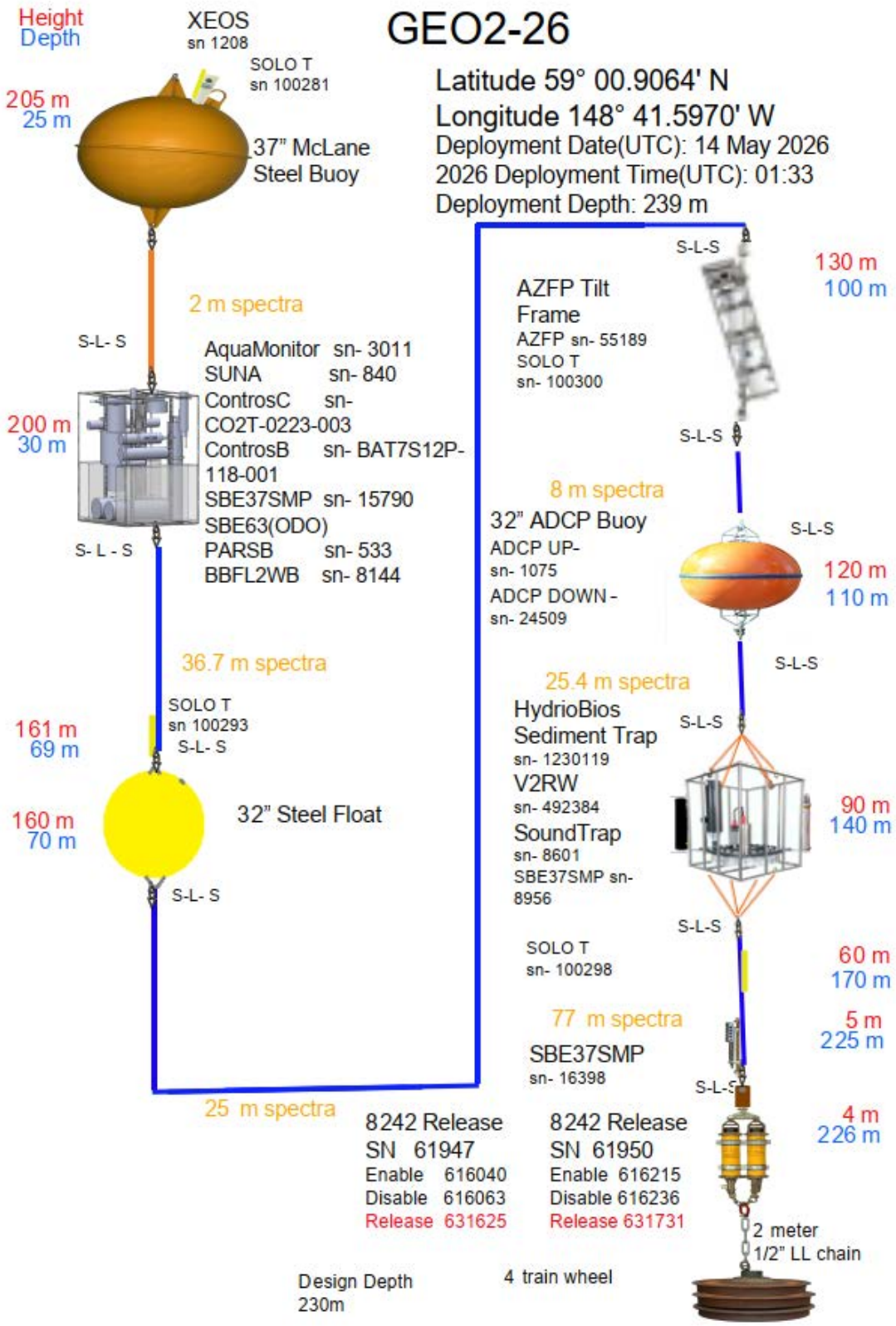



**Figure 11.** Details of the GEO-26 mooring

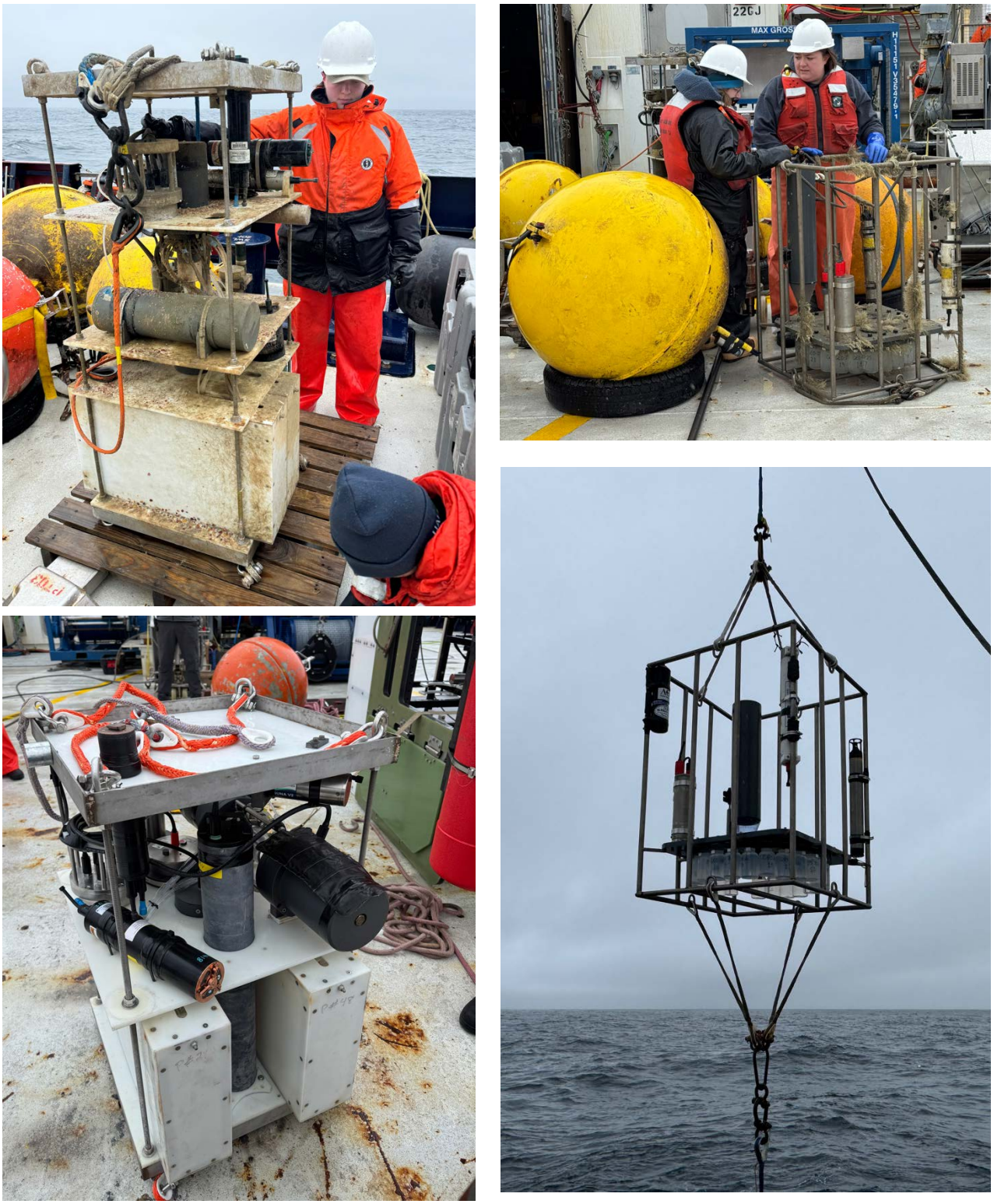


**Figure 12.** Photos from the GEO mooring deployments and recoveries, showing the biogeochemical sensor frame as recovered (top left), for deployment (bottom left) and the sediment trap as recovered (top right) and being deployed (bottom right).

## Remote Sensing

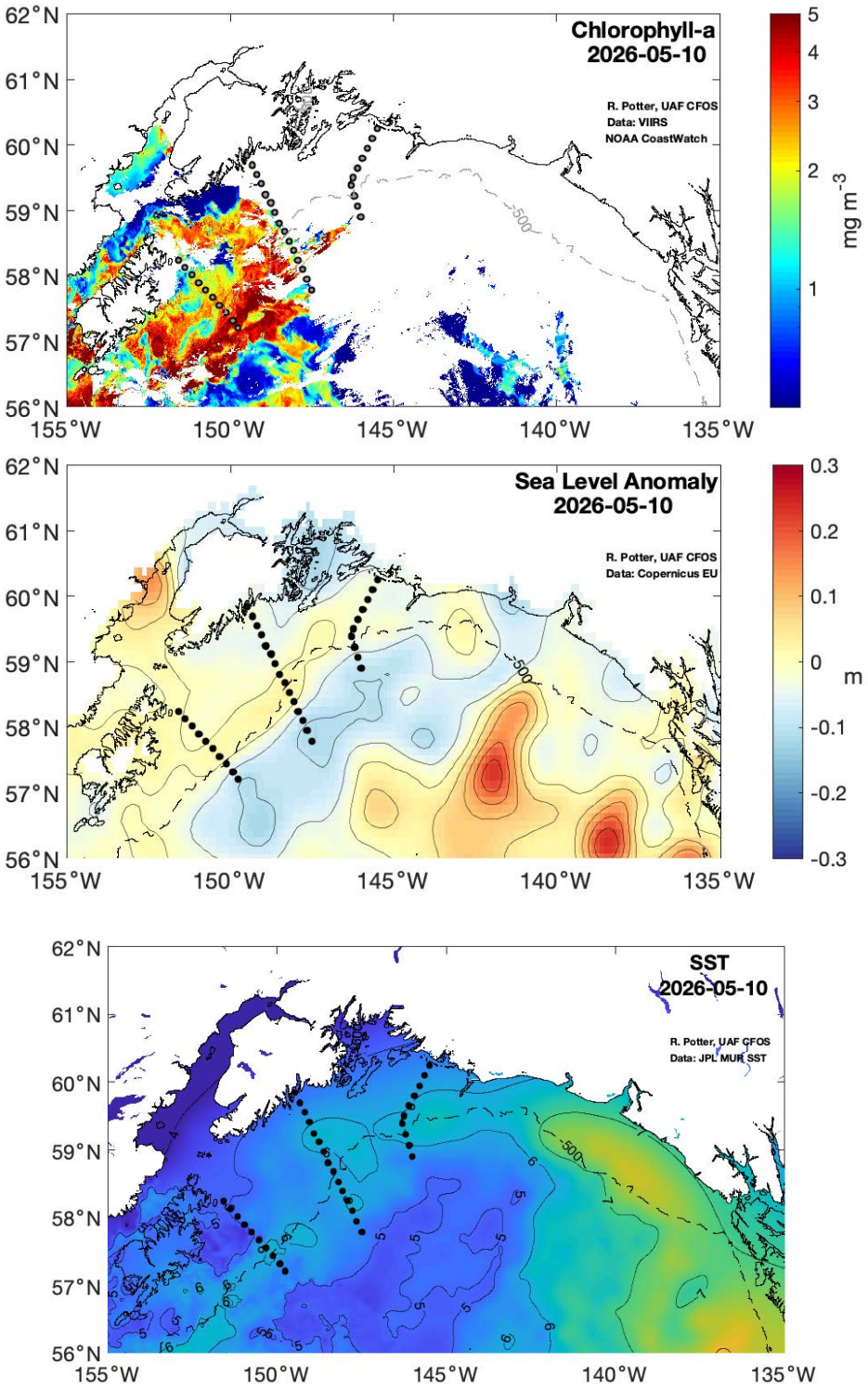



**Figure 13.** Chlorophyll a (top), sea level anomaly (middle) and sea surface temperature (bottom) on May 10th, just after the end of the Seward Line station work.

**Underway Data**

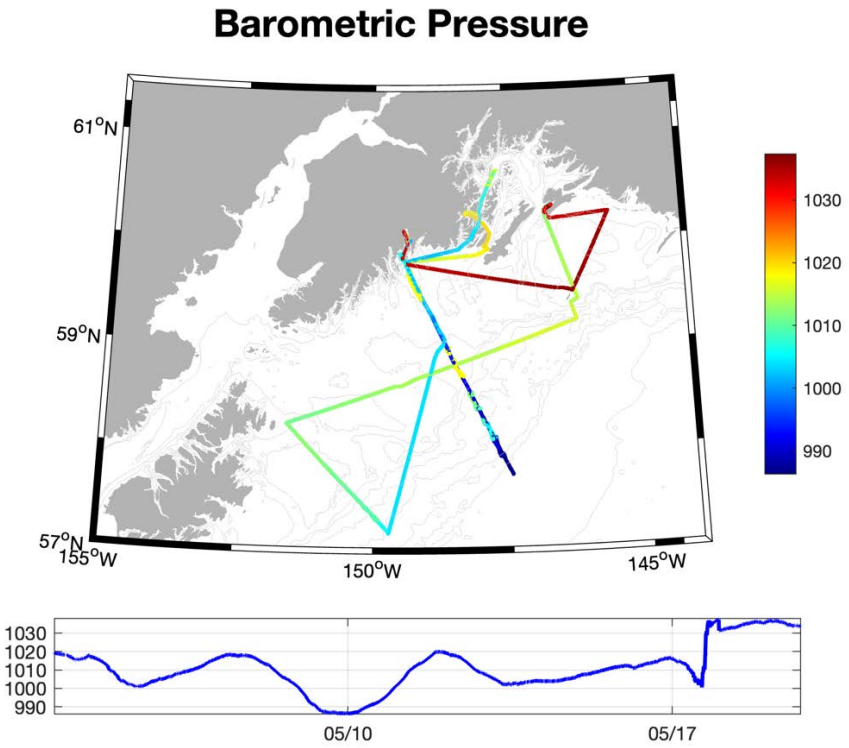



**Figure 14.** Sea level atmospheric pressure trackline map and time series for SR2608.

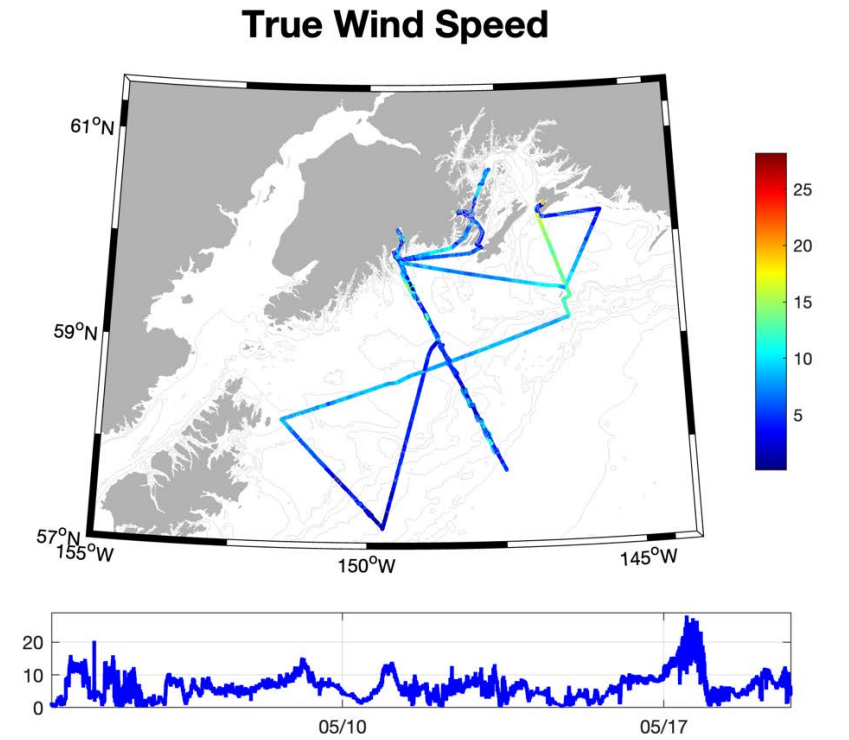



**Figure 15.** Wind speed trackline map and time series for SR2608.

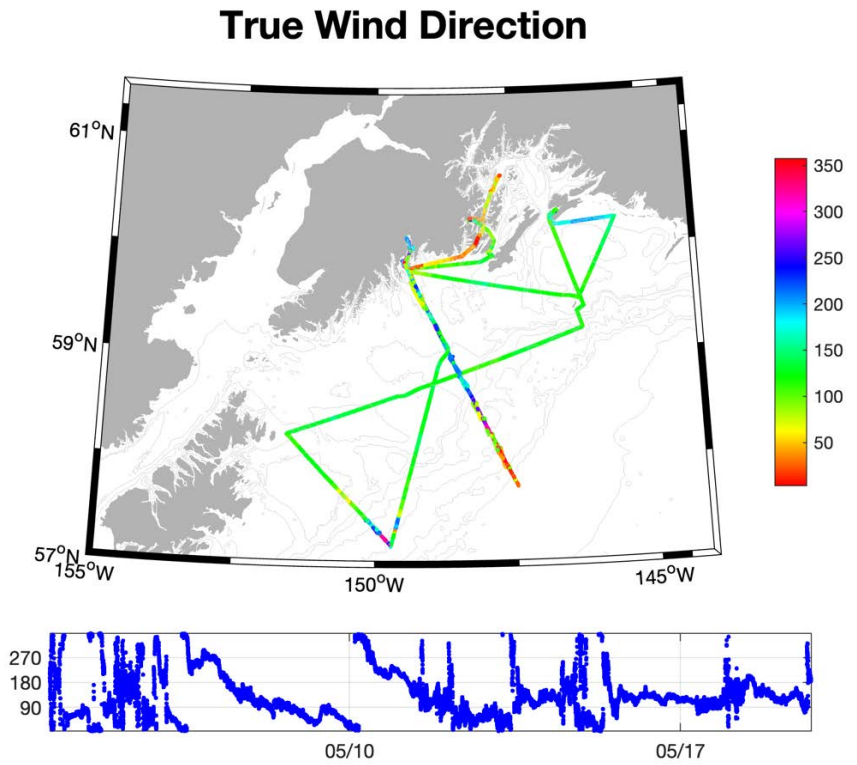



**Figure 16.** Wind direction map and trackline for SR2608.

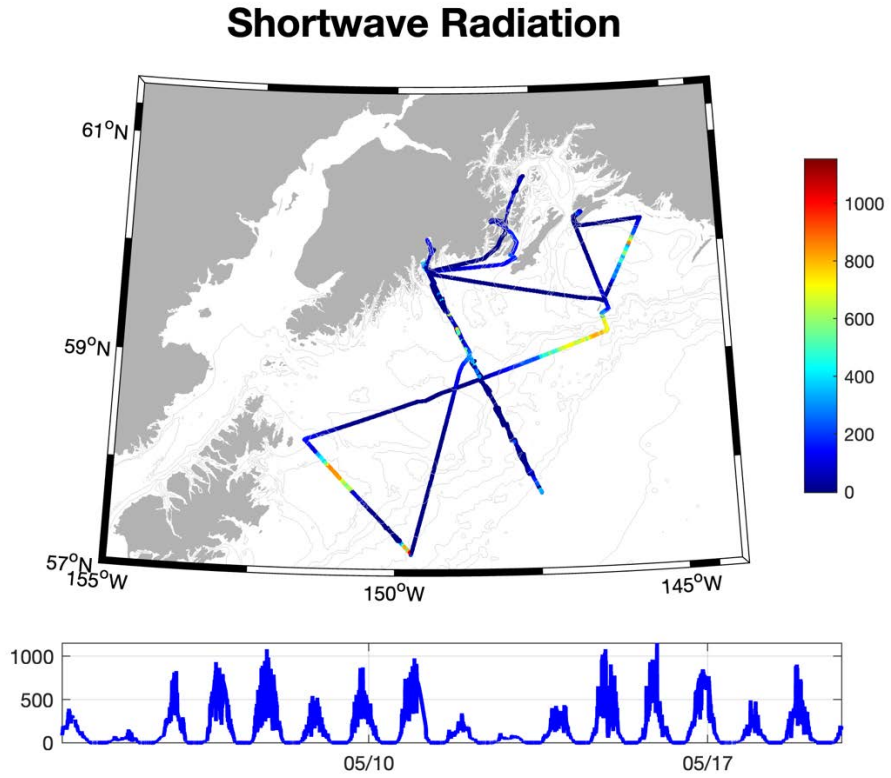



**Figure 17.** Shortwave radiation map and trackline for SR2608.

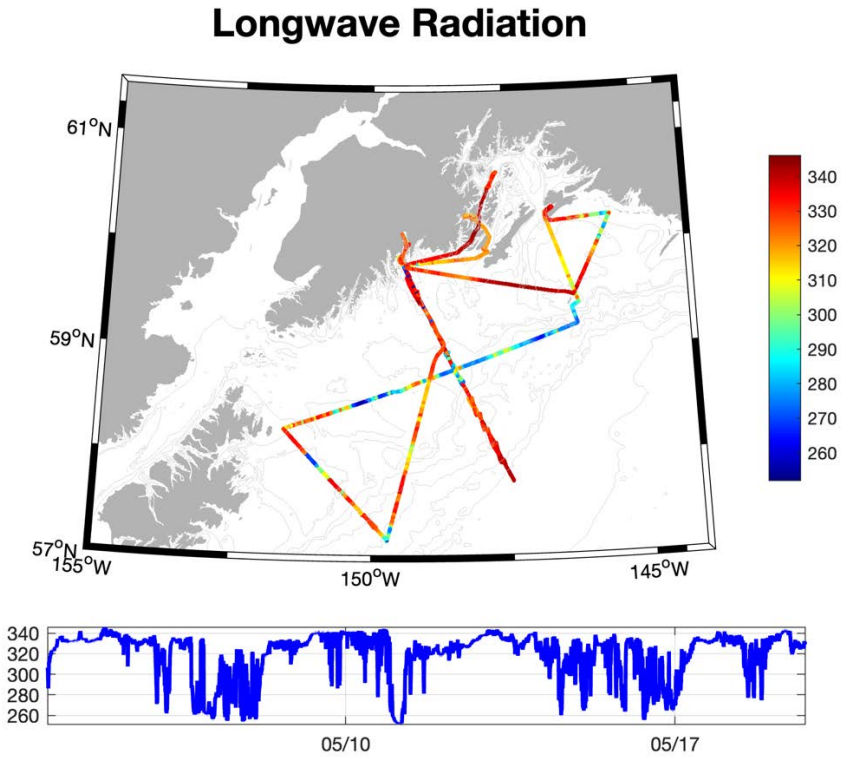



**Figure 18.** Longwave radiation map and trackline for SR2608.

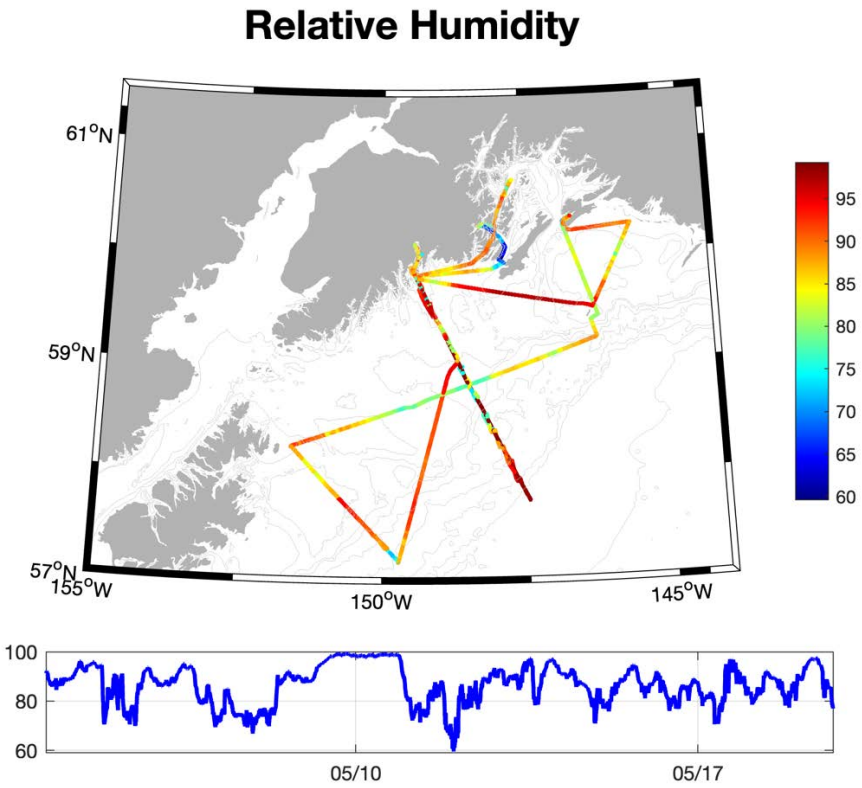



**Figure 19.** Relative humidity map and trackline for SR2608.

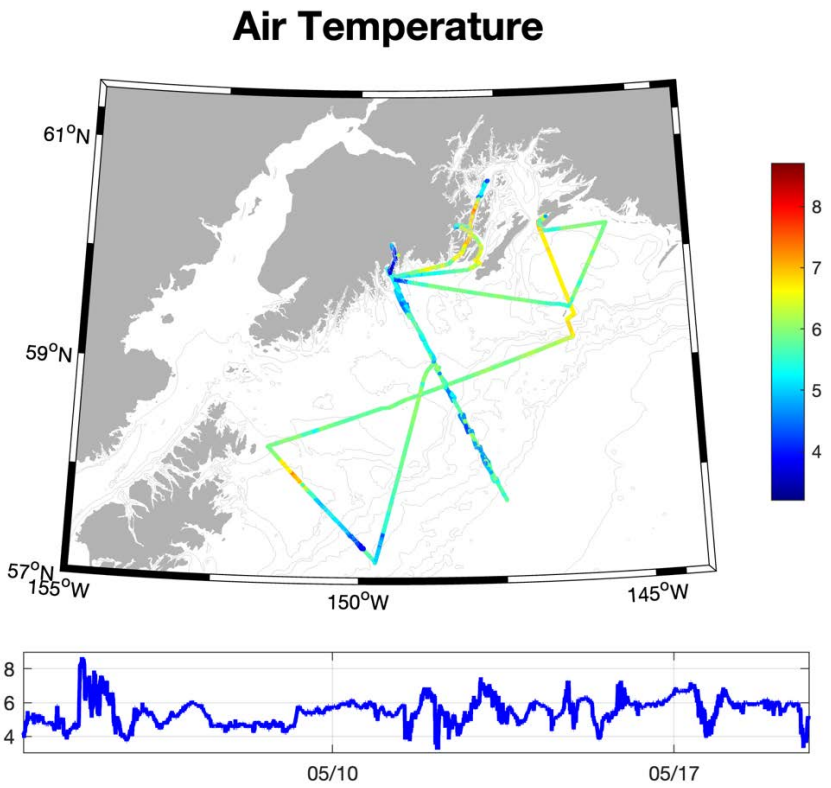



**Figure 20.** Air temperature map and trackline for SR2608.

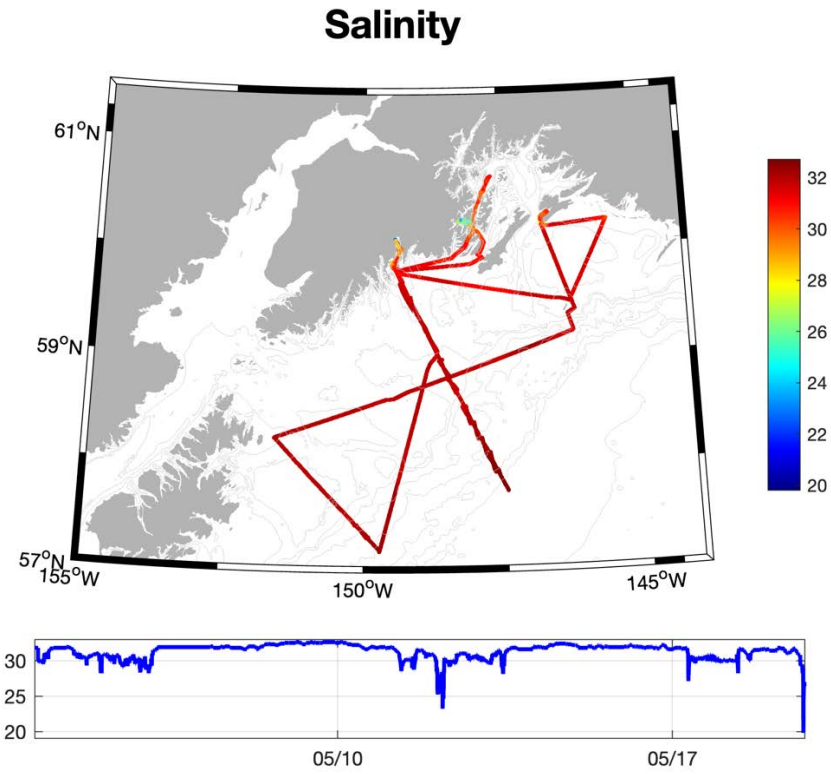



**Figure 21.** Sea surface salinity map and trackline for SR2608.

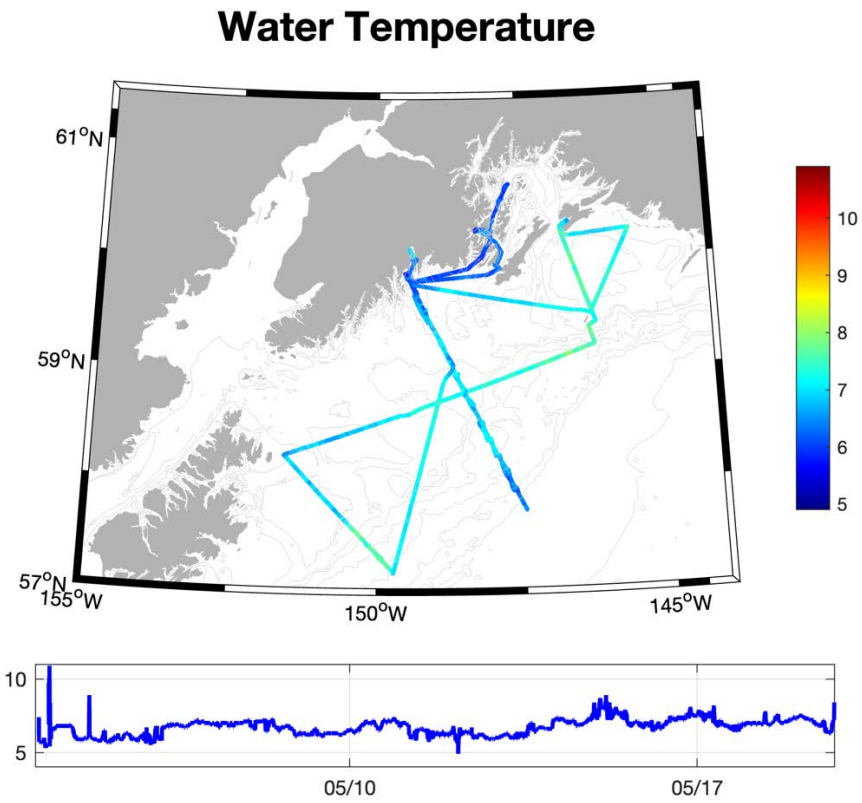



**Figure 22.** Sea surface temperature map and trackline for SR2608.

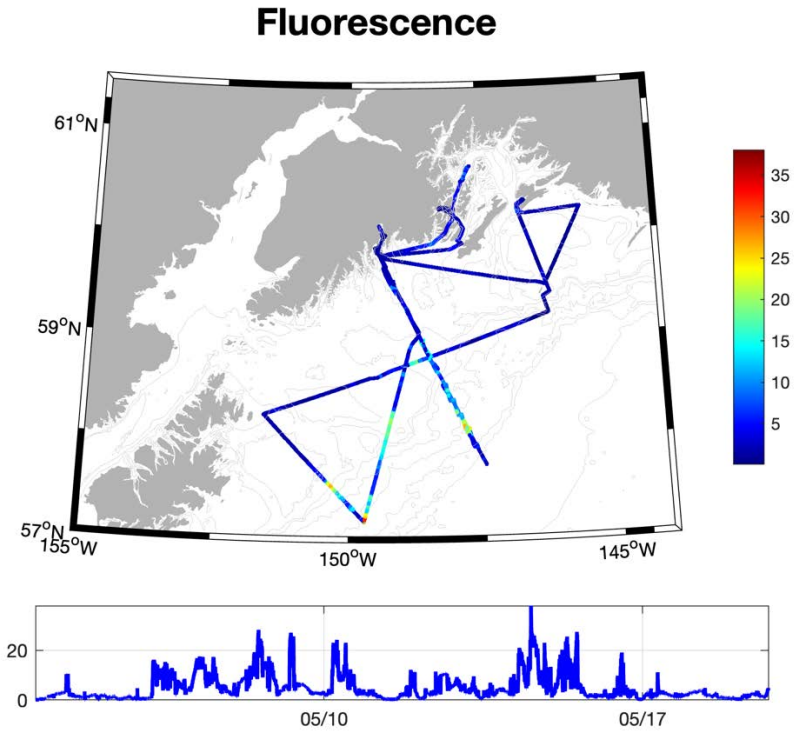



**Figure 23.** Chlorophyll a concentration map and trackline for SR2608.

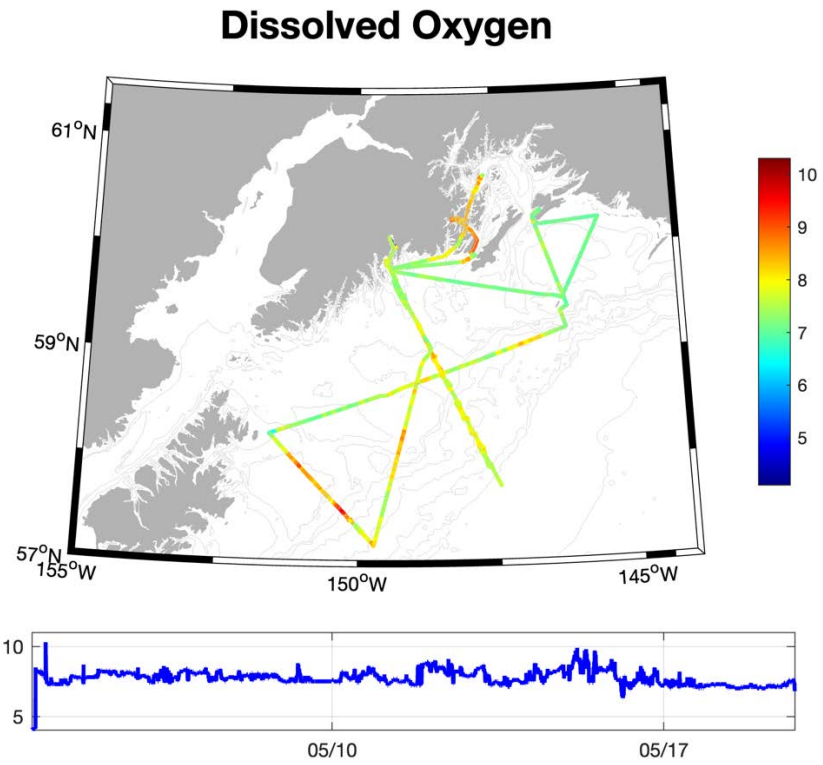



**Figure 24.** Dissolved oxygen map and trackline for SR2608.

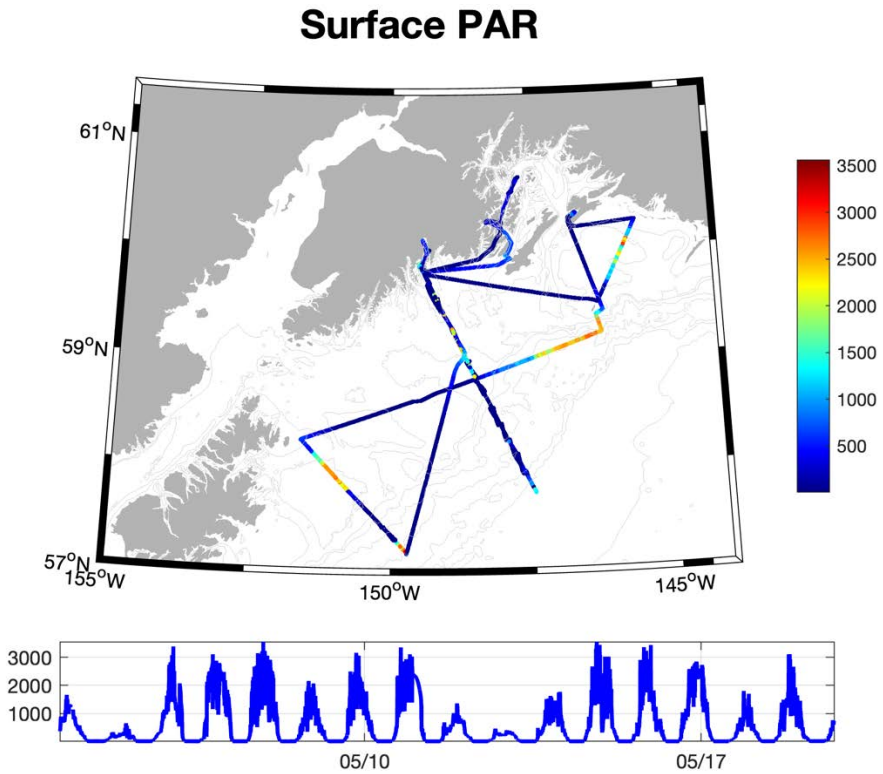



**Figure 25.** Surface Photosynthetic Available Radiation (PAR) map and trackline for SR2608.

## Macro- and Micronutrient Chemistry

**PI:** Ana M. Aguilar-Islas
**Cruise Participants:** Ana Aguilar-Islas, Mette Kaufman, Mariko Hatta (JAMSTEC)

The spring 2026 effort contributed to our goal to better understand processes that affect the cycling of macro- and micronutrients in the Gulf of Alaska. Sampling at standard stations (macronutrients and dissolved trace elements) and surface transects (underway silicic acid and selected total phosphorous and phosphate) was carried out to determine the distribution of macronutrients, micronutrients and dissolved aluminum. Selected samples were also collected for total phosphorus and total dissolvable aluminum.

**Station sample collection and processing for macronutrient analysis:**

Filtered seawater samples were collected from 41 station vertical profiles (see Table 1) from surface to 1500 m using the ship's CTD rosette bottles. Samples were filtered through 0.45 um cellulose acetate filter disks using a syringe and were frozen (-80 $^{o}$C or -40 $^{o}$C) following collection. Samples (48) were also obtained from primary production casts from the Hennon group, and 3 samples from the ship's underway system. Kauman was responsible for CTD macronutrient sampling with some help from other cruise participants. In total 528 samples were collected for macronutrient analysis.

**Table 1. Samples collected for Macronutrient Analysis**

| STATION | # samples | STATION | # samples | STATION | # samples |
|---|---|---|---|---|---|
| RES 2.5 | 13 | MS2 | 11 | KOD1 | 7 |
| **GAK1** | 13 | IB1.5 | 10 | MID8 | 14 |
| GAK2 | 12 | PWS3 | 14 | MID7 | 6 |
| GAK3 | 12 | **PWS2** | 14 | MID6 | 4 |
| GAK4 | 11 | PWS1 | 13 | MID5 | 8 |
| **GAK5** | 11 | KIP2 | 14 | MID4 | 8 |
| GAK6 | 11 | GEO | 12 | MID3 | 8 |
| GAK7 | 12 | **KOD10** | 15 | **MID2** | 9 |
| GAK8 | 13 | KOD9 | 15 | MID1 | 3 |
| **GAK9** | 13 | KOD8 | 14 | | |
| GAK10 | 16 | KOD7 | 12 | | |
| GAK11 | 16 | KOD6 | 8 | | |
| GAK12 | 16 | **KOD5** | 8 | Primary Prod. | 48 |
| GAK13 | 16 | KOD4 | 7 | Underway | 3 |
| GAK14 | 16 | KOD3 | 7 | | |
| **GAK15** | 16 | **KOD2** | 9 | | |
| **TOTAL** | **217** | **TOTAL** | **183** | **GRAND TOTAL** | **528** |

**Station sample collection for total phosphorus analysis:**
Unfiltered seawater samples were collected from 11 stations at selected depths (see Table 2) using the ship's CTD rosette bottles, and from the underway system in the vicinity of the Copper River outflow area. Unfiltered samples were frozen (-80 °C or -40 °C) following collection. Aguilar-Islas oversaw sampling. Suspended particulate phosphorous will be calculated from the difference between total phosphorous and phosphate. In total 52 samples were collected for total phosphate analysis

**Table 2. Samples collected for Total Phosphorus Analysis**

| STATION | # samples | STATION | # samples | Underway | # samples |
|---|---|---|---|---|---|
| GAK1 | 4 | MID1 | 4 | MID Line | 3 |
| GAK4 | 3 | MID2 | 9 | | |
| GAK9 | 4 | MID3 | 8 | | |
| MS2 | 3 | MID 4 | 8 | | |
| KOD5 | 4 | | | | |
| KOD2 | 2 | | | | |
| **TOTAL** | **20** | **TOTAL** | **29** | **GRAND TOTAL** | **52** |

**Sample collection and analysis for underway silicic acid:**
Unfiltered underway seawater, collected from approximately 1.0 m depth, was directly aspirated every 10 minutes into an analytical platform consisting of microfluidic instrumentation (miniSIA-2) (Figure 26) where silicic acid concentrations were determined using the programmable flow injection silicate analysis method (Hatta et al., 2021).



**Figure 26** Microfluidic instrumentation and sampling system for the analysis of silicic acid from the ship's clean underway system.

**Sample collection for iron and aluminum analysis:**
*Profiles:* Seawater samples were collected from 16 vertical casts (see Table 3) from 30 -1000 m using a trace metal clean rosette (powder coated aluminum frame and loaded with Teflon-coated sampling bottles with external springs) (Figure 27, right). The surface most sample was from 30 m to avoid ship contamination when deploying from the stern. A dedicated winch with 5/16" Amsteel line and a TMC block mounted on the A-frame were used to deploy/recover the TMC rosette. The winch and block came from the UNOLS East Coast winch pool. Aguilar-Islas, Kaufman and Hatta were involved in deck operations, with assistance from the resident techs (Figure Y). The A-frame was mostly operated by Kylie Wells with help from Medea Christiansen and Will Kleiner. Samples were processed inside a trace-metal-clean van borrowed from the UNOLS East Coast van pool.

**Table 3. Trace Metal Casts**
DFe = dissolved iron (< 0.2 um), dAl = dissolved Al (< 0.02 um), TAl = total dissolvable Al.

| STATION | DFe | dAl | TAl | Cast # |
|---|---|---|---|---|
| GAK1 | 12 | 12 | | TM01 |
| GAK5 | 9 | 9 | | TM02 |
| GAK7 | 10 | 10 | | TM03 |
| GAK9 | 12 | 12 | | TM04 |
| GAK11 | 12 | 12 | | TM05 |
| GAK13 | 12 | 12 | | TM06 |
| GAK15 | 12 | 12 | | TM07 |
| MS2 | 6 | 6 | 1 | TM08 |
| PWS2 | 12 | 12 | 3 | TM09 |
| KOD10 | 12 | 12 | 1 | TM10 |
| KOD08 | 12 | 12 | | TM11 |
| KOD05 | 6 | 6 | | TM12 |
| KOD02 | 6 | 6 | | TM13 |
| MID7 | 4 | 4 | | TM14 |
| MID5 | 4 | 4 | | TM15 |
| MID2 | 5 | 5 | | TM16 |
| **GRAND TOTAL** | **144** | **144** | **5** | |



**Figure 27.** Deployments of the trace metal CTD off the A-frame. Left: Kaufman operating the MASH 2K with the trace metal van in the background. Right: The trace metal CTD being deployed.

*Surface Samples:* Surface seawater samples were not collected during the SR2608 cruise for two reasons. 1) the side arm on the starboard side of Sally Ride is stationary, and needs to be shared with zooplankton net operations, this meant that the FeFish set up (pump, tubing, and sampler) would have had to be moved before deployment and after recovery. In addition to requiring considerable extra time, moving the FeFish would have necessitated for the water tubing and the air hose to be disconnected, relocated and stored after each recovery, and then re-layed out and reconnected prior to deployment, increasing the likelihood for sample contamination and damaging the tubing. 2) The borrowed TM van did not allow seawater to be brought into the clean area of the van; thus a sampling station would have had to be rigged on deck, also increasing the likelihood of sample contamination.

**Sample processing for iron and Aluminum analysis:**
The trace metal van was outfitted with HEPA filtered air to maintain a positive pressure in working areas. The van was also outfitted with a laminar flow hood. During this cruise, the van housed the instrumentation for dissolved aluminum analysis, the TM bottles in between casts, and provided the adequate environment for subsampling (Figure 28). Sampling bottles were transferred to the TM van immediately after recovery of the TM CTD. Subsampling through 0.2 um Acropak capsules was carried from all TM casts at all depths for the analysis of dFe and dAl. A subset of unfiltered subsamples was taken for total dissolvable Al analysis (unfiltered acidified samples). Filtered and unfiltered samples collected for Al analysis were acidified and analyzed onboard (see below). Aguilar-Islas was responsible for subsampling and Hatta was responsible for Al analysis. In total there were 144 dFe samples, and 144 dAl samples collected and processed during the cruise. Samples for dFe will be analyzed back on land.



**Figure 28.** Tace metal sampling (left), racked TM bottles (middle), and dissolved aluminum system inside the TM van.

**Aluminum analysis:**
Dissolved aluminum (dAl) determinations were carried out using a commercially available benchtop pFI analyzer (miniSIA-2, GlobalFIA, WA, USA) coupled with the lumogallion fluorescence assay. The overall system included a light source, photon counter, and a 24-position autosampler (Figure 28, right). During each analysis, the sample solution was merged with buffered lumogallion reagent, and the sample-lumogallion mixture was reacted for 45 s at 50 °C. The Al-lumogallion complex was then combined with a Brij surfactant solution and delivered to the flow cell for fluorescence detection (Grand and Hatta, 2026). FloZF software was used to keep track of samples and generate standard curves (Figure 29). Over 300 samples (from the TM and regular CTD rosette) were analyzed during this cruise.

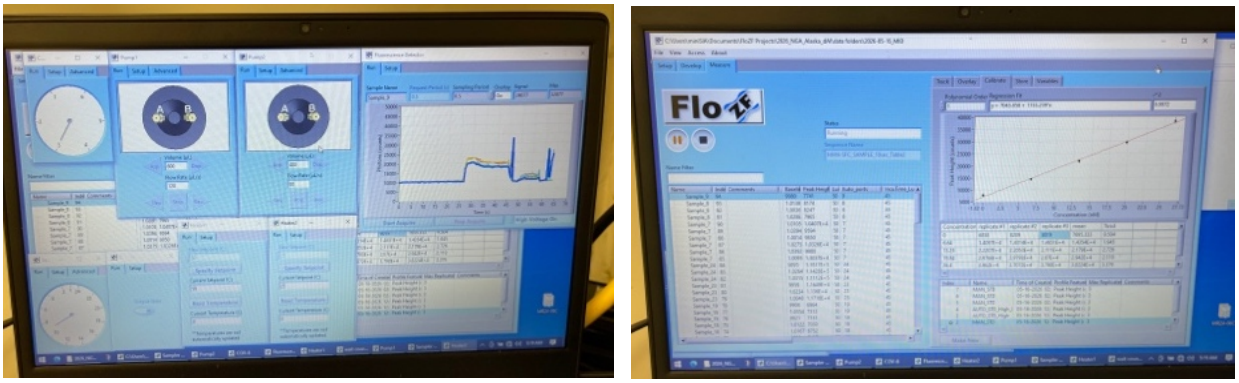


**Figure 29.** FlowZF screen showing sample scans and generated standard curve.

*General Notes*

We had a successful cruise and were able to accomplish most of the programmed sampling for macronutrients and micronutrients after adjusting to the Sally Ride operating procedures (e.g., no Fe towfish sampling).

As in previous cruises, the Seward Marine Center (SMC) warehouse was a valued infrastructure to be able to access before and after the cruise, and the SMC personnel were helpful during loading and offloading. The resident technicians on board the Sally Ride provided good support throughout the cruise. The crew responded promptly to requests and were generally pleasant. We experienced some issues with ship's facilities needed for macro- and micronutrient work. Several of the ship's CTD bottles needed to be replaced due to leakage issues, but after a few casts the issues were solved. The TM van was powered before I arrived. Unfortunately, the HVAC system and vestibule venting system were turned on before the covering plates were taken off and salt water was provided. Adequate saltwater flow for the different operations that needed it (zooplankton nets, inside labs, phytoplankton incubator, and TM van) was an issue at the beginning of the cruise. Auxiliary pumps were installed by the ship, and reduced flow for each of the operations made the situation workable. With the flow of seawater provided, the TM van was only able to run one of the two HVAC systems. Laboratory spaces were adequate, the ship's deck gear, -80 $^{o}$C freezer were in good working condition. Internet access was good. The quality of the food was excellent. Living quarters and gym facilities were excellent.



**Figure 30.** M. Haufman and M. Hatta in the wet lab.

## Water Column Organic Matter

**PI:** Shannon Doherty
**Cruise Participants:** Shannon Doherty, Lily Braun

Samples for organic carbon and nitrogen analysis were collected from CTD Niskin bottles. Water for dissolved organic carbon (DOC) and total dissolved nitrogen (TDN) was collected in glass vials at every station and every bottle depth. Dissolved organic matter is operationally defined as organic matter that passes through a sub-micron filter; DOC/TDN samples were collected by filtering ~30 mL of seawater through a GF/F filter (pore size: 0.7 □m). Most samples were treated with hydrochloric acid (60 □L, 4M, to bring pH to ~2) to halt biological activity and stored at room temperature. Samples at GEO and MS 2 were frozen at -20 □C for CDOM quantification.

Particulate organic carbon (POC) and particulate nitrogen (PN) samples were collected in the upper 100 m at a subset of stations. POC/PN samples were also collected at the bottom depth at a subset of stations to complement total phosphorus samples. Particulate organic matter is operationally defined as organic matter that collects on a submicron filter; POC/PN samples were processed by filtering 1L of seawater through a GF/F filter. At MID 1, KOD 10, and GAK 15 high fluorescence/particle concentrations necessitated filtering <1 L of seawater. Filters were frozen at -80 □C after processing.

At GAK15 and KOD 10, total organic carbon (TOC) samples were also collected in the upper 100 m for comparison to DOC and POC analyses. For these samples, whole seawater was collected in glass vials and treated with hydrochloric acid. Samples will be analyzed via elemental analysis (POC/PN) and TOC analyzer (DOC/TDN/TOC) to quantify carbon and nitrogen.

**POC/PN** (Total: 151 samples)

- In the upper 100 m (surface, 10, 20, 30, 40, 50, 75, 100 m): Res 2.5, GAK 1, 3, 5, 7, 9, 11, 13, 15, IB 1.5, PWS 2, GEO 2026, KOD 10, 5, 2, MID 7, 1, 2
- At bottom: GAK 1, 5, 7, 9, 11, MS 2, IB 1.5, PWS 2, KOD 5, 2, MID 7, 1, 2

**DOC/TDN** (Total: 469 samples)

- All stations, all depths

**TOC/TN** (Total: 16 samples)

- In the upper 100 m (surface, 10, 20, 30, 40, 50, 75, 100 m): GAK 15 and KOD 10

**GEO sediment trap recovery**

All 24 bottles were recovered from the GEO sediment trap. Samples had a pH of 6.25-6.5. Swimmers were present in all samples, primarily copepods and chaetognaths. Biofouling organisms from inside the sediment trap funnel were also collected for comparison with organic matter. Samples will be analyzed via elemental analysis for OC and N fluxes.

## Inorganic Carbonate Chemistry

**PI:** Claudine Hauri and Brita Irving (on shore)
**Cruise Participants:** Wil Kleiner & Cosima Schmiedel

Filtered dissolved inorganic carbon, total alkalinity, and pH samples were collected at 33 stations along the Seward and Kodiak Lines, and in and around Prince William Sound. Samples were filtered through a 0.45 µm cartridge filter using a peristaltic pump to remove particulate material. In total, 407 samples were collected and triplicates were taken at the surface and full depth at multiple stations.

Triplicates:
Station: GAK1 Cast: 6 | replicates (3) at 262 meter
Station: GAK1 Cast: 6 | replicates (3) at 0 meter
Station: GAK5 Cast: 10 | replicates (3) at 0 meter
Station: GAK9 Cast: 15 | replicates (3) at 273 meter
Station: GEO Cast: 33 | replicates (3) at 30 meter
Station: GEO Cast: 33 | replicates (3) at 20 meter
Station: KIP2 Cast: 32 | replicates (3) at 581 meter
Station: KOD5 Cast: 41 | replicates (3) at 0 meter
Station: KOD8 Cast: 37 | replicates (3) at 714 meter
Station: KOD10 Cast: 35 | replicates (3) at 1000 meter
Station: PWS2 Cast: 30 | replicates (3) at 728 meter

**Table 4.** Samples collected for inorganic carbonate chemistry.

| Station | # of samples | Station | # of samples |
|---|---|---|---|
| RES2.5 | 13 | IB1.5 | 10 |
| GAK1 | 17 | KIP2 | 16 |
| GAK2 | 11 | MID1 | 3 |
| GAK3 | 11 | MS2 | 11 |
| GAK4 | 11 | PWS1 | 13 |
| GAK5 | 13 | PWS2 | 16 |
| GAK6 | 10 | KOD1 | 7 |
| GAK7 | 12 | KOD2 | 9 |
| GAK8 | 13 | KOD3 | 7 |
| GAK9 | 15 | KOD4 | 7 |
| GAK10 | 16 | KOD5 | 10 |
| GAK11 | 16 | KOD6 | 8 |
| GAK12 | 16 | KOD7 | 11 |
| GAK13 | 16 | KOD8 | 16 |
| GAK14 | 16 | KOD9 | 15 |
| GAK15 | 16 | KOD10 | 17 |
| GEO | 9 | **TOTAL** | **407** |

## Phytoplankton and marine microbes

**PI:** Gwenn Hennon
Cruise Particpants: Gwenn Hennon, Ruth Varner, Khrista Nicolas

We performed our regular sampling matrix summarized below (Table 5). We collected chlorophyll samples at all regular stations with the exception of MID9 and MID10 which we were unable to sample due to adverse weather and time constraints. We processed all size-fractionated and total chlorophyll samples at sea after 24 hours. We also collected preserved samples for diatom and microzooplankton analyses in formalin and acid lugols, additionally we collected flow cytometry samples to analyze picoplankton abundance which were preserved in glutaraldehyde and flash frozen in liquid nitrogen. We performed 13C incubations to measure depth integrated net primary productivity at nearly all intensive stations with the exception of MID10, 5 which we could not sample due to a storm and time constraints. We collected DNA samples for community composition analysis at four depths 0, 10, DCM, and bottom at each intensive station. We also hosted an imaging flow cytobot (IFCB) owned by AOOS and operated by Dr. Thomas Farrugia. Dr. Farrugia completed the install on the ship's underway seawater system and remotely monitored the instrument. We were able to get near-real time data for most of the cruise with samples collected approximately every 20 minutes (https://habon-ifcb.whoi.edu/timeline?dataset=sallyride0526) (Figure 30).

**Table 5:** Phytoplankton and microbes discrete sample collection matrix

| Station | Chlorophyll a | Preserved (L=Lugols, F=Formalin) | Primary productivity | DNA | FCM |
|---|---|---|---|---|---|
| RES2.5 | X | | | | |
| GAK1 | X | L,F | x | x | x |
| GAK2 | X | | | | |
| GAK3 | x | L | | | |
| GAK4 | x | | | | |
| GAK5 | x | L,F | x | x | x |
| GAK6 | x | | | | |
| GAK7 | x | L | | | |
| GAK8 | x | | | | |
| GAK9 | x | L,F | x | x | x |
| GAK10 | x | | | | |
| GAK11 | x | L | | | |
| GAK12 | x | | | | |
| GAK13 | x | L | | | |
| GAK14 | x | | | | |
| GAK15 | x | L,F | x | x | x |
| PWS1 | x | | | | |
| PWS2 | x | L,F | x | x | x |
| PWS3 | x | | | | |
| KIP2 | x | L | | | |
| IB0 | x | | | | |
| IB1 | x | | | | |
| IB2 | x | | | | |

| | | | | | |
|---|---|---|---|---|---|
| MS2 | x | | | | |
| GEO | x | | | | |
| MID1 | X | | | | |
| MID2 | X | L,F | X | X | x |
| MID3 | X | | | | |
| MID4 | X | L | | | |
| MID5 | X | L,F | | x | x |
| MID6 | X | | | | |
| MID7 | x | L | | | |
| MID8 | x | | | | |
| MID9 | | | | | |
| MID10 | | | | | |
| KOD1 | x | L | | | |
| KOD2 | x | | | | |
| KOD3 | x | L | | | |
| KOD4 | x | | | | |
| KOD5 | x | L,F | x | x | x |
| KOD6 | x | | | | |
| KOD7 | x | L | | | |
| KOD8 | x | | | | |
| KOD9 | x | | | | |
| KOD10 | x | L,F | X | X | x |

The spring bloom in 2026 was characterized by a 'classic' large chain-forming diatom bloom dominated by Chaetoceros spp. (Figure 30). We also observed a large Phaeocystis spp. bloom offshore on the Western side of the study area at KOD10 (Figure Z). The majority of stations had most of the chlorophyll in the large size fraction (> 20 microns), particularly on the Seward and Kodiak lines (Figure 31). This was consistent with our prior observations of the correspondence between cold winter conditions, cool SST in the spring and large blooms dominated by diatoms (Figure 32). The Middleton Island line had much lower concentrations of chlorophyll *a*, with a greater proportion in the smaller size fraction particularly in the inner part of the line. However, the Middleton line was the last set of stations that we measured on the cruise and we were there unusually late in May compared with past years, which will make direct interannual comparisons difficult as we may have been past the peak of the spring bloom.

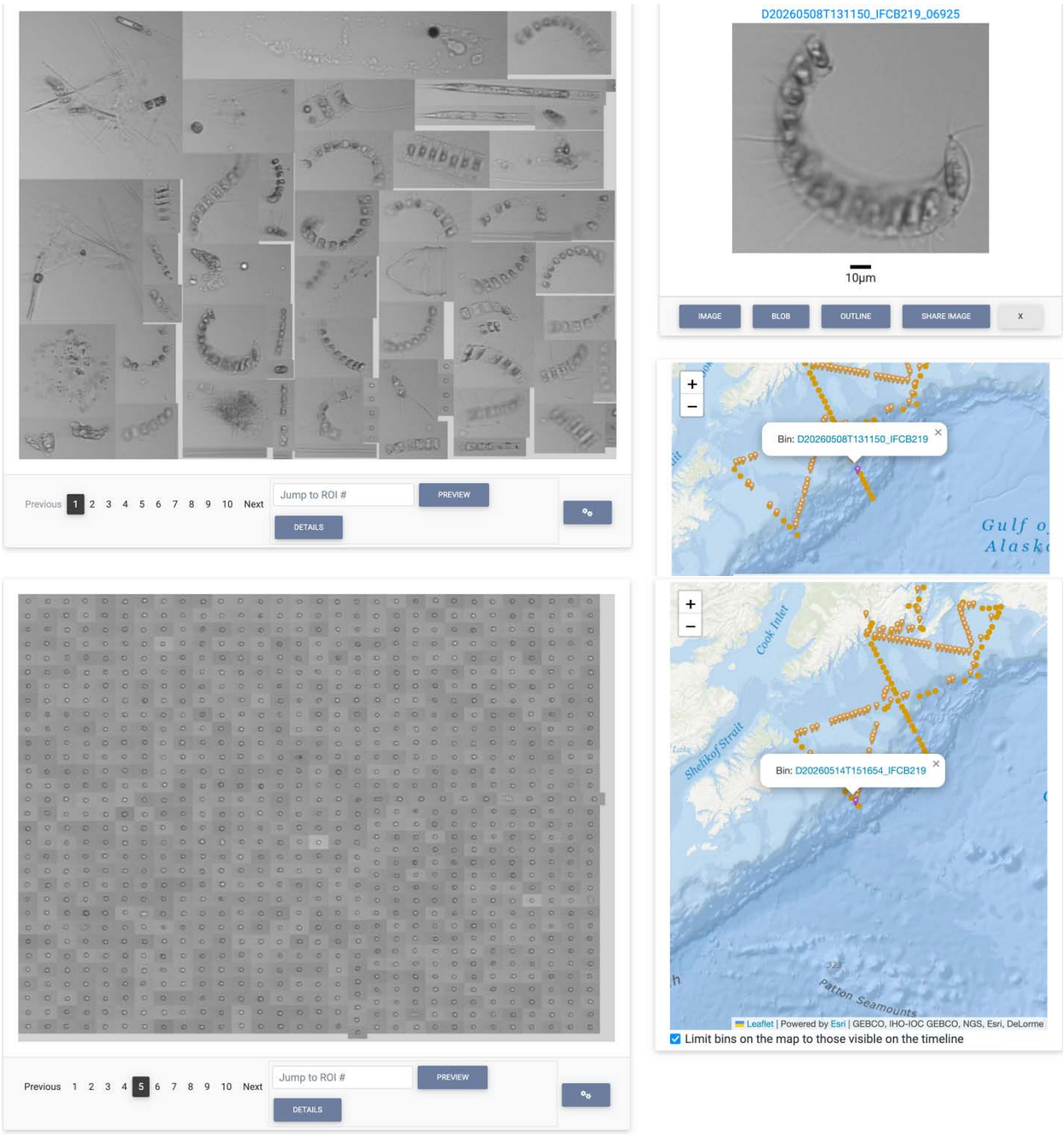



**Figure 30:** Example IFCB images and mosaics, from the online dashboard showing changes in phytoplankton morphology.

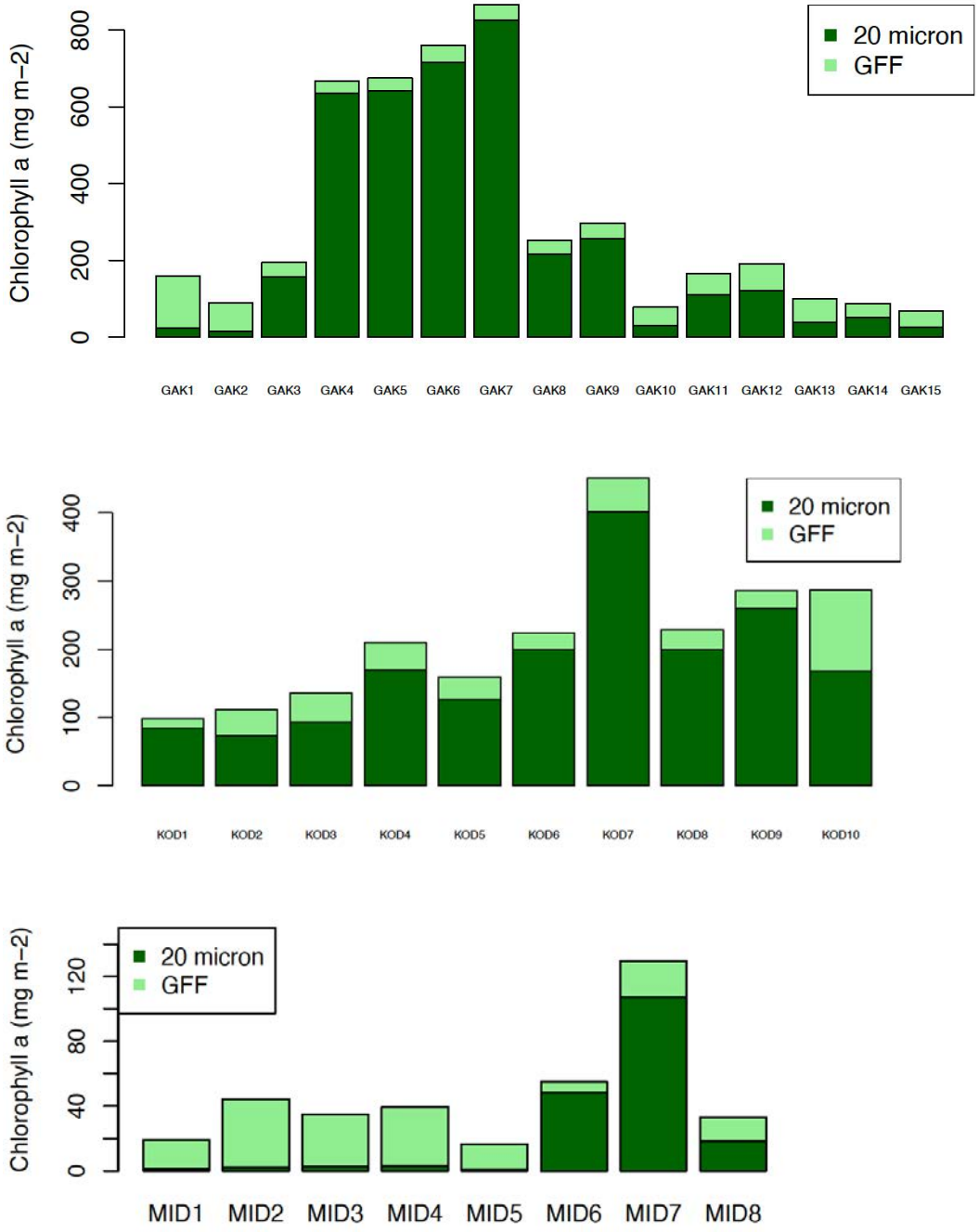



**Figure 31:** Size-fractionated Chlorophyll integrated to 75m or the bottom of the cast

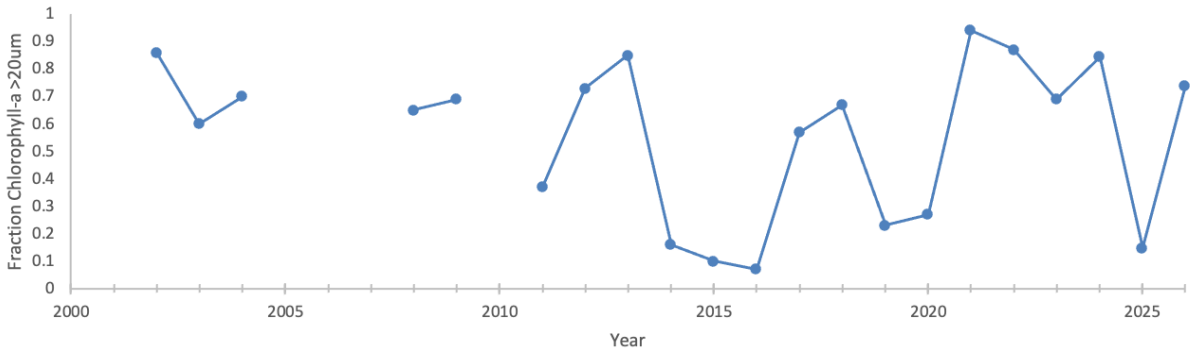



**Figure 32:** The Seward Line May Phytoplankton Size Index

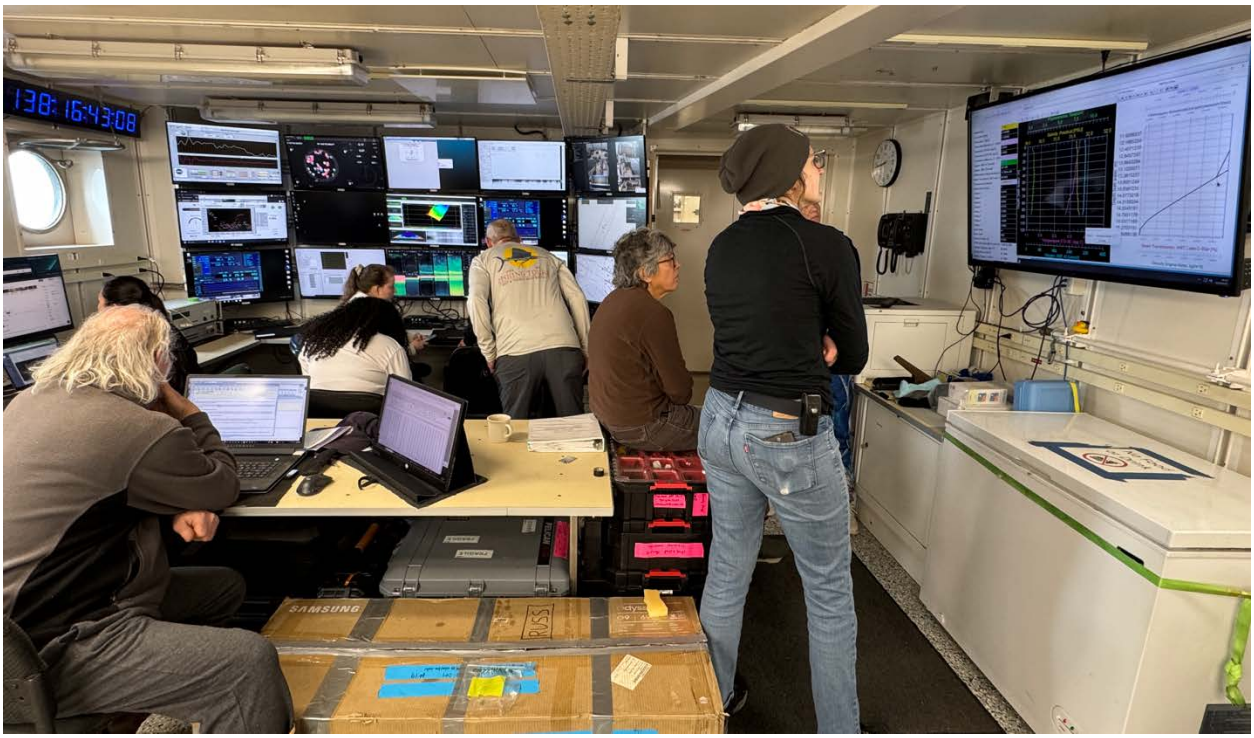



**Figure 33.** Science team members watching the collection of CTD data for a primary productivity experiment.

## Meso/Macro Zooplankton

**PI:** Russ Hopcroft
**Cruise Participants:** Russ Hopcroft, Alex Poje, Kim Crory, Medea Christiansen, Kendall Scott, Megan Smith

Zooplankton sampling operations were divided into distinct day and night activities. During daytime, Quadnets/Calvets (Quad frame has 4 nets, 2 of 150 µm mesh and 2 of 53 µm mesh) were deployed at all stations with the starboard crane to 100 m depth, or within 5 m of the bottom when shallower. At intensive stations, an additional Quadnet cast was taken, with the 150 µm net preserved in ethanol for molecular studies and the 53µm nets used for live sorting. Semi-quantitative counts of *Neocalanus* species and stages were made at Seward Line and PWS intensive stations from either one or both of the 53µm sorting nets. At PWS2, a Multinet equipped with 150 µm mesh nets was deployed vertically to 200 m with a second cast to 750 m dividing strata at 600, 400, 300, 200,100, 60, 40, and 20 m. Deep Multinets were not deployed at other intensive station due to concerns of using the stiff 0.680" wire in moderate sea-states. At alternate stations 15-20L of water from the Niskin's in the upper 50m were filters onto a 5 µm mesh for determining composition of the tintinnid ciliate community.

During night-time, a Multinet equipped with 505 µm-mesh nets was towed obliquely to 200 m depth (or 5 m above the bottom) dividing strata at 100, 60, 40, and 20 m. A second collection was made at Intensive stations and preserved in Ethanol for molecular analysis. Bongo nets (60cm) were employed instead of the multinet along the Kodiak and Middleton Lines. An SBE 49 "Fastcat" CTD sampling at 16 Hz was attached to the Bongo Nets (deployed off the stern) and used to collected pressure data to gauge the depth. One net from each Bongo deployment, and the drogue net from the Multinet, were sent to NOAA Eco-FOCI for larval fish analysis.

The ISIIS-DPI operated well this cruise undulating over the upper 150 m with 3-3.5 cycles per hour. Most instrumentation appeared to function, although one FDOM sensor and the SUNA appear to have calibration issues. Onboard acoustics were not available for this cruise, but the ship's EK80 system was recording throughout the cruise. The cameras proved to be more stable than in the past after replacing their Ethernet cables with an MC-style connector. We confirmed operation of a new bottom tracking feature in the DPI flight control system. There were some initial learning curves associated with operation and termination of the new Hawboldt winch, that were largely resolved by DPI deployment on May 10$^{th}$. We were unable to get the UNOLS winch log working until after deployment was completed, so we monitored wire tension via a video feed. The auto-render feature on the winch did not engage when static and a software update was applied post-cruise to rectify this issue.

Abundance of *Neocalanus* copepods at intensive stations appeared to be somewhat below normal, as did stage composition. Many animals were particularly lipid-rich. The ratio of *N. plumchrus* to *N. flemingeri* was variable but the assemblage appeared to be more dominated by the former. The abundance of smaller copepods species appeared to be below normal. Our constant dancing between storms resulted in the loss of all Bongo net sampling on the Middleton Line and half of them on the Kodiak line.

**Project:** *Neocalanus* life cycles (NSF project - UHM & UAF; PIs: Lenz, Hopcroft, and Hartline)

Research Activities: Live Quad nets samples at PWS2 and Seward Line intensive Stations were sorted for *Neocalanu*s CV (up to 60 individuals for each species), and then imaged for determination of lipid sac volume, and use in assessing carotenoids.

**Table 6.** Sampling effort for Zooplankton. Intensive stations highlighted. *samples taken for bulk genetics, sorting or imaging.

| Station | Calvet-Quad | Multi Vert. | Multi Tow | Bongo | Tintinnids |
|---|---|---|---|---|---|
| RES2.5 | x | | | | |
| GAK1 | X* | | x | | x |
| GAK2 | x | | x | | |
| GAK3 | x | | x | | x |
| GAK4 | x | | x | | |
| GAK5 | X* | | x | | x |
| GAK6 | x | | x | | |
| GAK7 | x | | x | | x |
| GAK8 | x | | x | | |
| GAK9 | X* | | x | | x |
| GAK10 | x | | x | | |
| GAK11 | x | | x | | x |
| GAK12 | x | | x | | |
| GAK13 | x | | x | | x |
| GAK14 | x | | x | | |
| GAK15 | X* | | x | | x |
| MS2 | x | | | | |
| KIP2 | x | | x | | x |
| PWS1 | x | | x | | |
| PWS2 | X* | X* | X | | x |
| PWS3 | x | | x | | |
| IB0 | | | | | |
| IB1.5 | x | | | | |
| IB2 | | | | | |
| KOD1 | x | | | | |
| KOD2 | x | | | | |
| KOD3 | x | | | | |
| KOD4 | x | | | | |
| KOD5 | X* | | | | x |
| KOD6 | x | | | X | |
| KOD7 | x | | | X | |
| KOD8 | x | | | X | |
| KOD9 | x | | | X | |
| KOD10 | x | | | | x |
| MID1 | x | | | | |
| MID2 | X* | | | | x |
| MID3 | x | | | | |
| MID4 | x | | | | |
| MID5 | X* | | | | x |
| MID6 | x | | | | |
| MID7 | x | | | | |
| MID8 | X* | | | | x |
| MID9 | | | | | |
| MID10 | | | | | |
| TOTAL | 45 | 7 | 19 | 19 | 19 |

## Marine bird and marine mammal surveys

**PIs (on shore):** Elizabeth Labunski[2], Robert Kaler[2]
**Cruise Participant:** Dan Cushing[1]

[1]University of Alaska Fairbanks
[2]U.S. Fish and Wildlife Service

### Background

We conducted marine bird and marine mammal surveys in the Northern Gulf of Alaska (NGA), May 3 – 19 2026, aboard the 73-m R/V *Sally Ride*, as a component of the NGA Long-term Ecological Research (NGA-LTER) cruise lead by chief scientist Seth Danielson of the University of Alaska Fairbanks. The seabird component is primarily funded by the North Pacific Research Board and the *Exxon Valdez* Oil Spill Trustee Council. Station-based sampling was conducted along the Seward, Middleton, and Kodiak Lines, and in Prince William Sound (PWS). Seabird and marine mammal surveys were conducted when the vessel was underway, including transits between sampling stations and sampling lines.

### Methods

Observer D. Cushing conducted visual surveys during daylight hours while the vessel was underway. Surveys were conducted from the bridge, using a modified line-transect protocol. The observer searched an area within a 300m, 90° arc from the bow to the beam, using hand-held 10x binoculars when necessary. Observations were recorded using four distance bins: 0–50m, 51–100m, 101–200m, and 201–300m. Observations of rare birds or large flocks, or marine mammals observed outside of the sampling window were recorded as "off-transect". Observations were recorded directly into a laptop computer using software Dlogv3 (R.G. Ford Consulting, Portland, OR) which logged the geographic coordinates of each sighting, as well as the track line and environmental conditions (Beaufort Sea state, weather, glare, ice coverage) at 20 sec intervals. Data were processed by subdividing survey transects into 3-km segments to calculate density (birds $km^{-2}$) for each taxon in each transect segment.

### Preliminary Results

We conducted a total of 1325 linear km of surveys during the May 2026 cruise (Figure 1). On-transect, we observed a total of 4895 individuals of 34 species of birds, with an additional 15 species observed off-transect (Table 1). Averaged across all 3-km transect segments, the mean density of total birds (all bird species combined) was 13.8 birds $km^{-2}$. The highest densities generally occurred on the inner shelf, near Middleton Island, and near the edges of Portlock and Albatross Banks, east of Kodiak Island, while many mid-shelf locations had low densities. (Figure 2). The average density of total birds was 3.9 birds $km^{-2}$, which is the 2$^{nd}$ lowest value since observations began in 1998, and 60% below the long-term mean of 9.8 birds $km^{-2}$.

Short-tailed shearwaters were the most abundant avian species observed on transect, making up 37.2% of total birds, while sooty shearwaters accounted for 3.9% (Table 7). The largest shearwater flock was at the trough north of Albatross Bank, and densities were also high near Middleton Island (Figure 3). The common murre was the second most abundant avian species, making up 9.0% of the total, and highest densities were over Albatross and Portlock Banks, plus the inner shelf near Resurrection Bay, Blying Sound, and the Copper River plume (Figure 4). The third most abundant avian species was the red-necked phalarope, composing 8.5% of total birds, while red phalaropes composed an additional 5.6%. Red-necked phalaropes were commonly seen at fronts near Resurrection Bay and in Prince William Sound, while red phalaropes were most common near the shelf-break and at the edges of Albatross Bank (Figure 5). Mixed flocks with both species of phalaropes occurred near Middleton Island, often in

conjunction with other foraging seabirds. Fork-tailed storm-petrels composed 7.4% of total birds and were most abundant near the shelf break and along the offshore edge of Albatross Banks (Figure 6). Glaucous-winged gulls composed 7.2% of total birds and were widely distributed, with the highest densities near Middleton Island, and secondarily near Resurrection Bay and the Copper River plume (Figure 7). Black-legged kittiwakes composed 6.9% of total birds and were also widely distributed, with their highest abundance near Middleton Island (Figure 8). Tufted puffins composed 5.2% of total sightings, with the highest abundance on the shelf east of Kodiak, and secondarily near Resurrection Bay (Figure 9). Northern fulmars are often one of the dominant avian species, but their abundance was notably low (1.5% of total birds) during this cruise. Black-footed albatross also had low abundance (0.6% of total). An unusual observation was a Murphy's petrel that was photographed near the 1000m isobath along the Kodiak line.

We observed a total of 8 species of marine mammal (Table 8), with 25 individuals on-transect and 144 off-transect. A total of 8 humpback whales were observed near Resurrection Bay and in PWS, while 6 fin whales were identified on the shelf (Figure 10). The most abundant toothed whale (odontocete) was the Dall's porpoise (30 individuals), which were observed from PWS to the outermost end of the Seward Line (Figure 11). A total of 15 killer whales were observed in PWS and on the shelf (Figure 11). Harbor Seals were the most abundant pinniped; most were hauled out on glacial ice in PWS (Figure 12). Steller sea lions were observed in PWS. One northern fur seal was observed on the shelf. Sea otters were observed in PWS and Resurrection Bay.

**Table 7.** Birds observed during the May 2026 NGA-LTER cruise. Numbers include on-transect observations only. Species only observed off-transect during surveys or while on station are indicated by an asterisk.

| English name | Scientific name | Number on-transect | Percent of total |
|---|---|---|---|
| Greater white-fronted goose | *Anser albifrons* | 1 | < 0.1 |
| Canada goose | *Branta canadensis* | * | < 0.1 |
| Northern shoveler | *Spatula clypeata* | 24 | 0.5 |
| Mallard | *Anas platyrhynchos* | * | < 0.1 |
| Unid. scaup | *Aythia* spp. | * | < 0.1 |
| Harlequin duck | *Histrionicus histrionicus* | 3 | 0.1 |
| Surf scoter | *Melanitta perspicillata* | 18 | 0.4 |
| White-winged scoter | *Melanitta deglandi* | * | < 0.1 |
| Long-tailed duck | *Clangula hyemalis* | * | < 0.1 |
| Barrow's goldeneye | *Bucephala islandica* | * | < 0.1 |
| Common merganser | *Mergus merganser* | * | < 0.1 |
| Red-breasted merganser | *Mergus serrator* | * | < 0.1 |
| Black oystercatcher | *Haematopus bachmani* | * | < 0.1 |
| Black turnstone | *Arenaria melanocephala* | * | < 0.1 |
| Surfbird | *Calidris virgata* | 1 | < 0.1 |
| Red-necked phalarope | *Phalaropus lobatus* | 418 | 8.5 |
| Red phalarope | *Phalaropus fulicarius* | 274 | 5.6 |
| Pomarine jaeger | *Stercorarius pomarinus* | 3 | 0.1 |

| | | | |
|---|---|---|---|
| Common murre | *Uria aalge* | 442 | 9 |
| Pigeon guillemot | *Cepphus columba* | 16 | 0.3 |
| Marbled murrelet | *Brachyramphus marmoratus* | 77 | 1.6 |
| Kittlitz's murrelet | *Brachyramphus brevirostris* | 1 | < 0.1 |
| Unid. Brachyramphus murrelet | *Brachyramphus* spp. | 15 | 0.3 |
| Ancient murrelet | *Synthliboramphus antiquus* | 28 | 0.6 |
| Cassin's auklet | *Ptychoramphus aleuticus* | 2 | < 0.1 |
| Parakeet auklet | *Aethia psittacula* | 2 | < 0.1 |
| Rhinoceros auklet | *Cerorhinca monocerata* | 10 | 0.2 |
| Horned puffin | *Fratercula corniculata* | 21 | 0.4 |
| Tufted puffin | *Fratercula cirrhata* | 256 | 5.2 |
| Black-legged kittiwake | *Rissa tridactyla* | 337 | 6.9 |
| Sabine's gull | *Xema sabini* | 14 | 0.3 |
| Herring gull | *Larus argentatus* | 28 | 0.6 |
| Glaucous-winged gull | *Larus glaucescens* | 353 | 7.2 |
| Arctic tern | *Sterna paradisaea* | 12 | 0.2 |
| Pacific loon | *Gavia pacifica* | 19 | 0.4 |
| Laysan albatross | *Phoebastria immutabilis* | 21 | 0.4 |
| Black-footed albatross | *Phoebastria nigripes* | 33 | 0.7 |
| Short-tailed albatross | *Phoebastria albatrus* | * | < 0.1 |
| Fork-tailed storm-petrel | *Hydrobates furcatus* | 363 | 7.4 |
| Leach's storm-petrel | *Hydrobates leucorhous* | 4 | 0.1 |
| Northern fulmar | *Fulmarus glacialis* | 71 | 1.5 |
| Mottled petrel | *Pterodroma inexpectata* | * | < 0.1 |
| Murphy's petrel | *Pterodroma ultima* | 1 | < 0.1 |
| Short-tailed shearwater | *Ardenna tenuirostris* | 1819 | 37.2 |
| Sooty shearwater | *Ardenna grisea* | 191 | 3.9 |
| Unid. dark shearwater | *Ardenna tenuirostris* or *grisea* | 10 | 0.2 |
| Red-faced cormorant | *Urile urile* | 2 | < 0.1 |
| Pelagic cormorant | *Urile pelagicus* | 5 | 0.1 |
| Double-crested cormorant | *Nannopterum auritum* | * | < 0.1 |
| Bald eagle | *Haliaeetus leucephalus* | * | < 0.1 |
| Unid. passerine | *Passerine* spp. | * | < 0.1 |
| **Total** | | **4895** | **100** |

**Table 8.** Marine mammals observed during the May 2026 NGA-LTER cruise.

| English name | Scientific name | Number on-transect | Number off-transect |
|---|---|---|---|
| Fin whale | Balaenoptera physalus | 3 | 3 |
| Humpback whale | Megaptera novaeangliae | 0 | 8 |
| Killer whale | Orcinus orca | 0 | 15 |
| Dall's porpoise | Phocoenoides dalli | 18 | 12 |
| Unid. whale | Cetacia spp. | 0 | 16 |
| Northern fur seal | Callorhinus ursinus | 1 | 0 |
| Steller sea lion | Eumetopias jubatus | 0 | 33 |
| Harbor seal | Phoca vitulina | 0 | 42 |
| Unid. pinniped | Pinnipedia spp. | 0 | 12 |
| **Total** | | **25** | **144** |

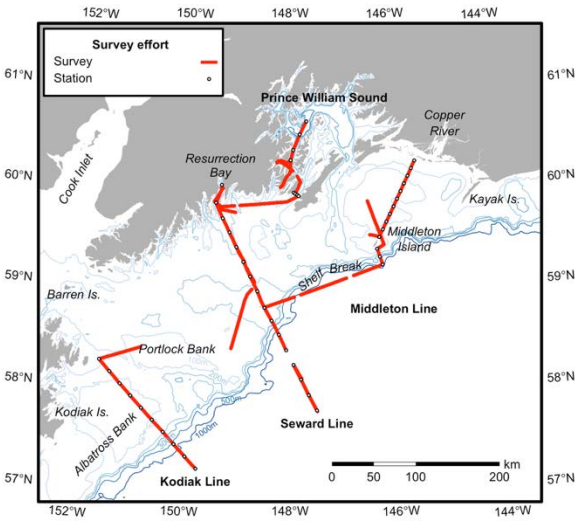



**Figure 34.** Location of seabird and marine mammal (all species combined).

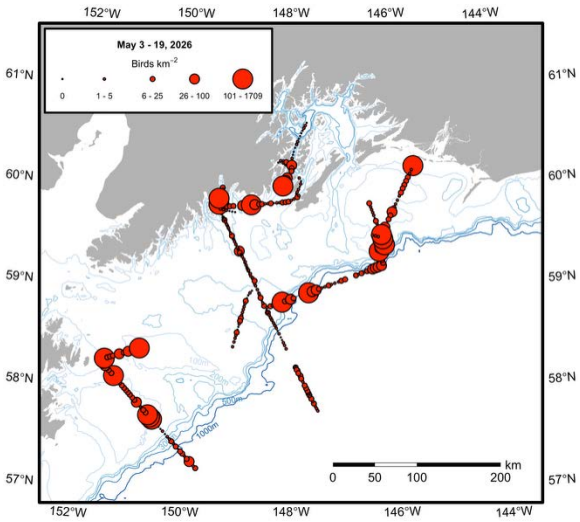



**Figure 35.** Densities (birds km$^{-2}$) of total seabirds surveys (red).

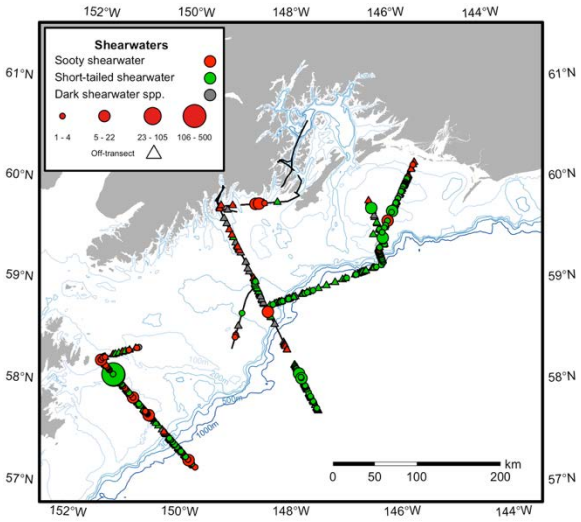



**Figure 36.** Shearwaters.

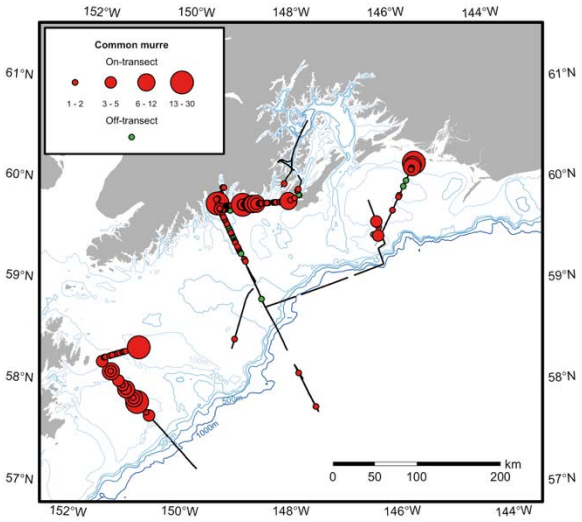



**Figure 37.** Common murre.

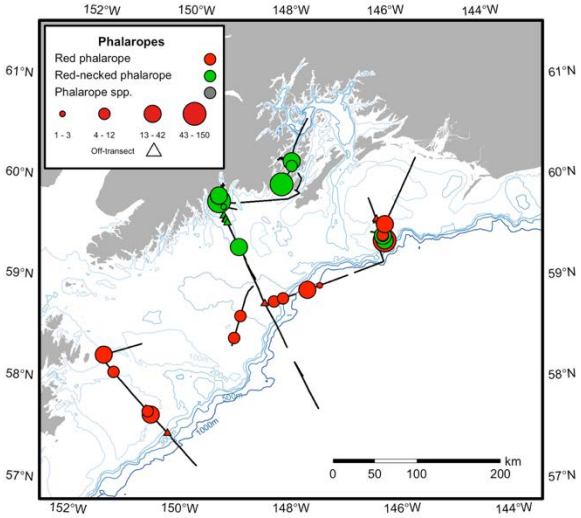



**Figure 38.** Phalaropes.

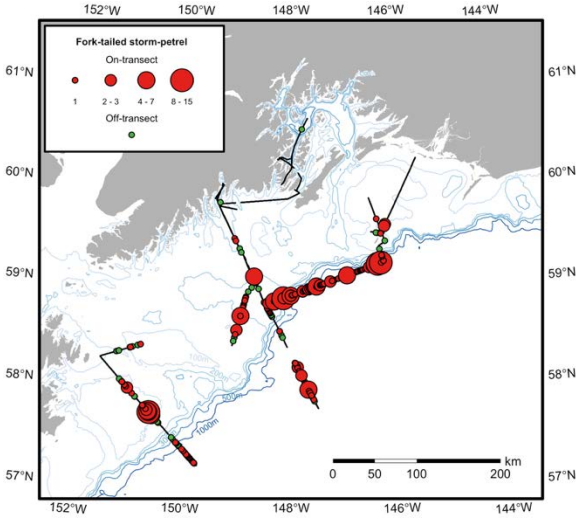



**Figure 39.** Fork-tailed storm-petrel.

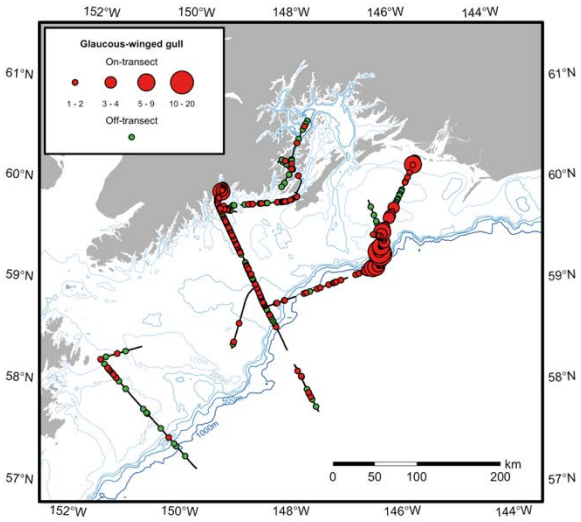



**Figure 40.** Glaucous-winged gull.

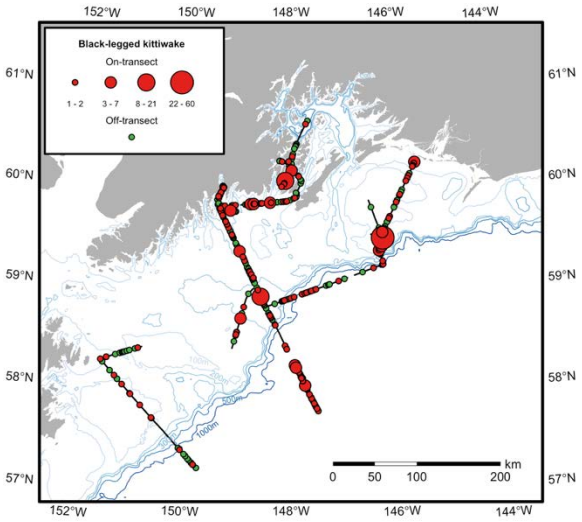



**Figure 41.** Black-legged kittiwake.

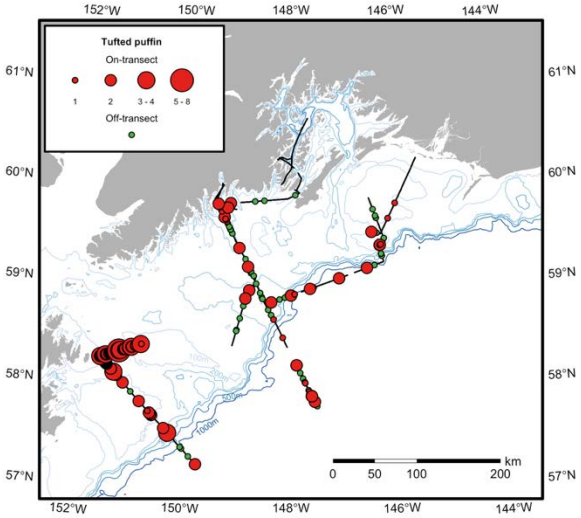



**Figure 42.** Tufted puffin.

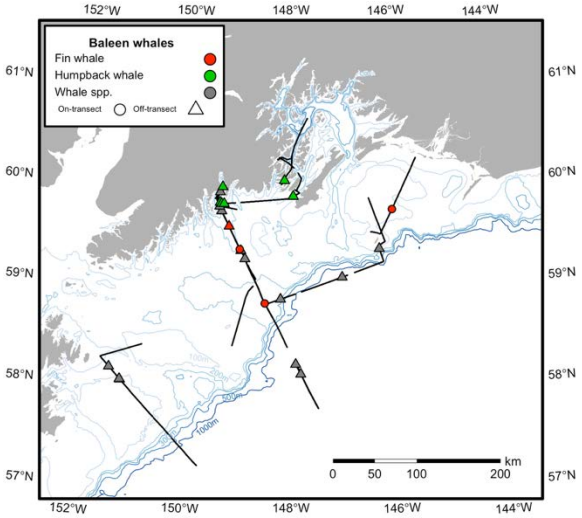



**Figure 43.** Baleen whales.

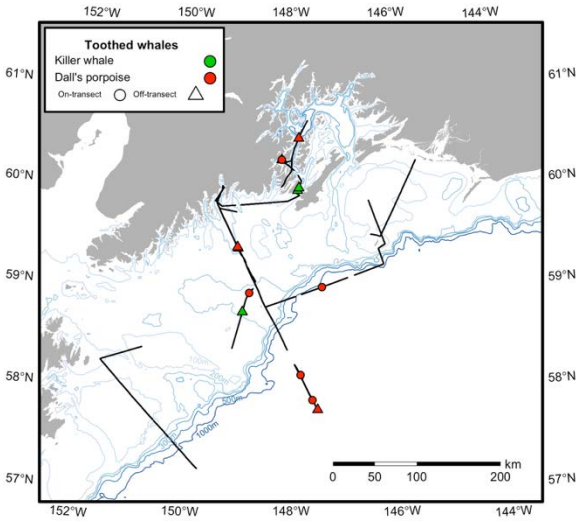



**Figure 44.** Toothed whales.

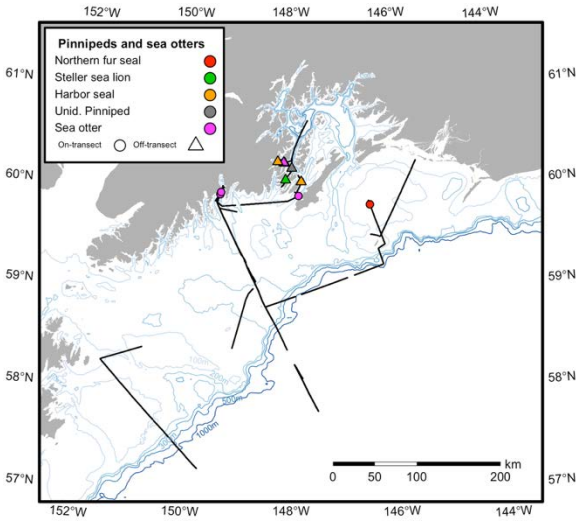



**Figure 45.** Pinnipeds and sea otters.

**Table 9.** Cruise Event Log from Sally Ride Bridge:

| Station Number | Date | Time | N. Latitude | W. Longitude | Remarks | Initials |
|---|---|---|---|---|---|---|
| RES2.5 | 5/3/26 | 10:25 | 60-01.114 | 149-21.470 | CTD Deployed | MJP |
| | | 10:40 | 60-01.114 | 149-21.470 | CTD Max Depth 284m | MJP |
| | | 11:15 | 60-01.114 | 149-21.470 | CTD Recovered | MJP |
| | 5/3/26 | 11:28 | 60-01.114 | 149-21.470 | Vertical Net Deployed | MJP |
| | | 11:40 | 60-01.114 | 149-21.470 | Vertical Net Recovered | MJP |
| GAK1 | 5/3/26 | 13:34 | 59-50.697 | 149-27.985 | CTD Deployed | KAP |
| | | 14:47 | 59-50.697 | 149-27.985 | CTD Max Depth 262m | KAP |
| | | 13:58 | 59-50.697 | 149-27.985 | CTD Recovered | KAP |
| GAK2 | 5/3/26 | 15:40 | 59-41.507 | 149-19.601 | CTD Deployed | KAP |
| | | 15:52 | 59-41.507 | 149-19.601 | CTD Max Depth | SG |
| | | 16:22 | 59-41.507 | 149-19.601 | CTD Recovered | SG |
| | 5/3/26 | 16:32 | 59-41.507 | 149-19.601 | Vertical Net Deployed | SG |
| | | 16:40 | 59-41.507 | 149-19.601 | Vertical Net Recovered | SG |
| GAK3 | 5/3/26 | 18:09 | 59-33.150 | 149-11.373 | CTD Deployed | SG |
| | | 18:22 | 59-33.150 | 149-11.373 | CTD Max Depth 202m | SG |
| | | 18:54 | 59-33.150 | 149-11.373 | CTD Recovered | SG |
| | 5/3/26 | 19:00 | 59-33.150 | 149-11.373 | Vertical Net Deployed | SG |
| | | 19:12 | 59-33.150 | 149-11.373 | Vertical Net Recovered | SG |
| | 5/3/26 | 22:22 | 59-32.770 | 149-12.700 | Multinet Deployed | MJP |
| | | 23:12 | 59-33.591 | 149-09.911 | Multinet Recovered | MJP |
| GAK2 | 5/4/26 | 2:22 | 59-41.155 | 149-21.377 | Multinet Deployed | KAP |
| | | 3:00 | 59-41.557 | 149-19.243 | Multinet Recovered | KAP |
| GAK1 | 5/4/26 | 4:30 | 59-49.897 | 149-27.255 | Multinet Deployed | IL |
| | | 5:12 | 59-51.123` | 149-28.434 | Multinet Recovered | IL |
| | 5/4/26 | 5:35 | 59-49.867 | 149-27.320 | Multinet Deployed | IL |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 6:22 | 59-51.187 | 149-28.486 | Multinet Recovered | IL |
| | 5/4/26 | 8:12 | 59-50.695 | 149-27.996 | CTD Deployed | MJP |
| | | 8:15 | 59-50.695 | 149-27.996 | CTD Max Depth 100m | MJP |
| | | 8:51 | 59-50.695 | 149-27.996 | CTD Recovered | MJP |
| | 5/4/26 | 9:12 | 59-50.695 | 149-27.996 | Vertical Net Deployed | MJP |
| | | 9:24 | 59-50.695 | 149-27.996 | Vertical Net Recovered | MJP |
| | 5/4/26 | 9:38 | 59-50.695 | 149-27.996 | Vertical Net Deployed | MJP |
| | | 9:50 | 59-50.695 | 149-27.996 | Vertical Net Recovered | MJP |
| | 5/4/26 | 10:15 | 59-50.695 | 149-27.996 | CTD Deployed | MJP |
| | | 10:32 | 59-50.695 | 149-27.996 | CTD Max Depth 259m | MJP |
| | | 11:06 | 59-50.695 | 149-27.996 | CTD Recovered | MJP |
| | 5/4/26 | 15:00 | 59-50.695 | 149-27.996 | Trace Metals CTD Deployed | KAP |
| | | 15:37 | 59-50.695 | 149-27.996 | Trace Metals CTD Recovered | KAP |
| Thumb Cove | 5/4/26 | 17:45 | 60-00.255 | 149-19.196 | CTD Deployed | SG |
| | | 17:48 | 60-00.255 | 149-19.196 | CTD @ Max Depth 46m | SG |
| | | 17:52 | 60-00.255 | 149-19.196 | CTD Recovered | SG |
| GAK 1-25 | 5/5/26 | 14:04 | 59-51.018 | 149-29.997 | GAK 1-25 Start Recovery | KAP |
| | | 15:00 | 59-49.977 | 149-29.442 | GAK 1-25 End Recovered | KAP |
| GAK 1-26 | 5/5/26 | 17:00 | 59-52.821 | 149-31.191 | GAK 1-26 Start Deployment | KAP |
| | | 18:10 | 59-51.029 | 149-30.038 | GAK 1-26 End Deployment | SG |
| GAK 4 | 5/5/26 | 22:22 | 59-25.327 | 149-03.735 | Multinet Deployed | MJP |
| | | 23:12 | 59-23.756 | 149-02.250 | Multinet Recovered | MJP |
| GAK 5 | 5/6/26 | 0:24 | 59-17.554 | 148-55.331 | Multinet Deployed | KAP |
| | | 1:07 | 59-16.302 | 148-54-197 | Multinet Recovered | KAP |
| | 5/6/26 | 1:48 | 59-17.619 | 148-55.364 | Multinet Deployed | KAP |
| | | 2:34 | 59-16.283 | 148-54.169 | Multinet Recovered | KAP |
| GAK 6 | 5/6/26 | 3:50 | 59-07.901 | 148-46.906 | Multinet Deployed | SG |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 4:36 | 59-06.500 | 148-45.576 | Multinet Recovered | SG |
| GAK 4 | 5/6/26 | 8:06 | 59-24.500 | 149-02.900 | CTD Deployed | MJP |
| | | 8:21 | 59-24.500 | 149-02.900 | CTD Max Depth 191m | MJP |
| | | 8:52 | 59-24.500 | 149-02.900 | CTD Recovered | MJP |
| | 5/6/26 | 9:06 | 59-24.500 | 149-02.900 | Vertical Net Deployed | MJP |
| | | 9:20 | 59-24.500 | 149-02.900 | Vertical Net Recovered | MJP |
| GAK 5 | 5/6/26 | 10:48 | 59-16.700 | 148-54.506 | CTD Deployed | MJP |
| | | 10:56 | 59-16.700 | 148-54.506 | CTD Max Depth 100m | MJP |
| | | 11:26 | 59-16.700 | 148-54.506 | CTD Recovered | MJP |
| | 5/6/26 | 11:44 | 59-16.700 | 148-54.506 | Vertical Net Deployed | KAP |
| | | 11:52 | 59-16.700 | 148-54.506 | Vertical Net Recovered | KAP |
| | 5/6/26 | 12:13 | 59-16.700 | 148-54.506 | Vertical Net Deployed | KAP |
| | | 12:22 | 59-16.700 | 148-54.506 | Vertical Net Recovered | KAP |
| | 5/6/26 | 12:39 | 59-16.700 | 148-54.506 | CTD Deployed | KAP |
| | | 13:15 | 59-16.700 | 148-54.506 | CTD Recovered | KAP |
| | 5/6/26 | 14:01 | 59-16.700 | 148-54.506 | Trace Metals CTD Deployed | KAP |
| | | 14:26 | 59-16.700 | 148-54.506 | Trace Metals CTD Recovered | KAP |
| GAK 6 | 5/6/26 | 16:00 | 59-07.009 | 148-46.211 | Vertical Net Deployed | SG |
| | | 16:11 | 59-07.009 | 148-46.211 | Vertical Net Recovered | SG |
| | 5/6/26 | 16:30 | 59-07.009 | 148-46.211 | CTD Deployed | SG |
| | | 16:38 | 59-07.009 | 148-46.211 | CTD Max Depth 145m | SG |
| | | 17:03 | 59-07.009 | 148-46.211 | CTD Recovered | SG |
| GAK 7 | 5/6/26 | 18:23 | 58-58.308 | 148-37.781 | CTD Deployed | SG |
| | | 19:05 | 58-58.308 | 148-37.781 | CTD Recovered | SG |
| | 5/6/26 | 19:14 | 58-58.308 | 148-37.781 | Vertical Net Deployed | SG |
| | | 19:23 | 58-58.308 | 148-37.781 | Vertical Net Recovered | SG |
| | 5/6/26 | 19:48 | 58-58.308 | 148-37.781 | Trace Metals CTD Deployed | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 20:16 | 58-58.308 | 148-37.781 | Trace Metals CTD Recovered | MJP |
| | 5/6/26 | 20:30 | 58-58.308 | 148-37.781 | Trace Metals CTD Deployed | MJP |
| | | 20:58 | 58-58.308 | 148-37.781 | Trace Metals CTD Recovered | MJP |
| | 5/6/26 | 22:09 | 58-58.676 | 148-36.237 | Multinet Deployed | MJP |
| | | 22:58 | 58-57.973 | 148-39.145 | Multinet Recovered | MJP |
| GAK 8 | 5/7/26 | 0:17 | 58-49.436 | 148-28.426 | Multinet Deployed | KAP |
| | | 1:02 | 58-48.178 | 148-29.749 | Multinet Recovered | KAP |
| GAK 9 | 5/7/26 | 2:06 | 58-41-8.74 | 148-20.177 | Multinet Deployed | KAP |
| | | 2:47 | 58-40.640 | 148-21.121 | Multinet Recovered | KAP |
| | 5/7/26 | 3:21 | 58-41.768 | 148-20.218 | Multinet Deployed | KAP |
| | | 4:00 | 58-40.556 | 148-21.242 | Multinet Recovered | IL |
| GAK 8 | 5/7/26 | 8:08 | 58-48.505 | 148-29.396 | Vertical Net Deployed | MJP |
| | | 8:20 | 58-48.505 | 148-29.396 | Vertical Net Recovered | MJP |
| | 5/7/26 | 8:39 | 58-48.505 | 148-29.396 | CTD Deployed | MJP |
| | | 8:53 | 58-48.505 | 148-29.396 | CTD Max Depth 282m | MJP |
| | | 9:25 | 58-48.505 | 148-29.396 | CTD Recovered | MJP |
| GAK 9 | 5/7/26 | 10:38 | 58-40.806 | 148-20.996 | CTD Deployed | MJP |
| | | 10:46 | 58-40.806 | 148-20.996 | CTD Max Depth 100m | MJP |
| | | 11:14 | 58-40.806 | 148-20.996 | CTD Recovered | MJP |
| | 5/7/26 | 11:28 | 58-40.806 | 148-20.996 | Vertical Net Deployed | MJP |
| | | 11:40 | 58-40.806 | 148-20.996 | Vertical Net Recovered | MJP |
| | 5/7/26 | 11:57 | 58-40.806 | 148-20.996 | Vertical Net Deployed | KAP |
| | | 12:07 | 58-40.806 | 148-20.996 | Vertical Net Recovered | KAP |
| | 5/7/26 | 12:36 | 58-40.806 | 148-20.996 | CTD Deployed | KAP |
| | | 12:46 | 58-40.806 | 148-20.996 | CTD Max Depth 268m | KAP |
| | | 13:16 | 58-40.806 | 148-20.996 | CTD Recovered | KAP |
| | 5/7/26 | 14:03 | 58-40.806 | 148-20.996 | Trace Metals CTD Deployed | KAP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 14:35 | 58-40.806 | 148-20.996 | Trace Metals CTD Recovered | KAP |
| GAK 10 | 5/7/26 | 15:57 | 58-32.463 | 148-12.830 | Vertical Net Deployed | SG |
| | | 16:05 | 58-32.463 | 148-12.830 | Vertical Net Recovered | SG |
| | 5/7/26 | 16:23 | 58-32.463 | 148-12.830 | CTD Deployed | SG |
| | | 16:54 | 58-32.463 | 148-12.830 | CTD Max Depth 1433m | SG |
| | | 17:52 | 58-32.463 | 148-12.830 | CTD Recovered | SG |
| GAK 11 | 5/7/26 | 19:06 | 58-23.342 | 148-04.379 | CTD Deployed | SG |
| | | 19:38 | 58-23.342 | 148-04.379 | CTD Max Depth 1405m | SG |
| | | 20:31 | 58-23.342 | 148-04.379 | CTD Recovered | MJP |
| | 5/7/26 | 20:36 | 58-23.342 | 148-04.379 | Vertical Net Deployed | MJP |
| | | 20:48 | 58-23.342 | 148-04.379 | Vertical Net Recovered | MJP |
| | 5/7/26 | 21:12 | 58-23.342 | 148-04.379 | Trace Metals CTD Deployed | MJP |
| | | 22:05 | 58-23.342 | 148-04.379 | Trace Metals CTD Recovered | MJP |
| GAK 10 | 5/7/26 | 23:35 | 58-32.429 | 148-14.610 | Multinet Deployed | MJP |
| | | 0:17 | 58-32.519 | 148-12.043 | Multinet Recovered | KAP |
| GAK 11 | 5/8/26 | 1:30 | 58-22.857 | 148-06.145 | Multinet Deployed | KAP |
| | | 2:21 | 58-23.508 | 148-03.376 | Multinet Recovered | KAP |
| GAK 12 | 5/8/26 | 3:31 | 58-14.337 | 147-57.927 | Multinet Deployed | KAP |
| | | 4:24 | 58-14.786 | 147-54.981 | Multinet Recovered | IL |
| GAK 13 | 5/8/26 | 5:40 | 58-05.630 | 147-49.219 | Multinet Deployed | IL |
| | | 6:34 | 58-06.017 | 147-46.760 | Multinet Recovered | IL |
| GAK 12 | 5/8/26 | 8:01 | 58-14.594 | 147-56.043 | Vertical Net Deployed | MJP |
| | | 8:10 | 58-14.594 | 147-56.043 | Vertical Net Recovered | MJP |
| | 5/8/26 | 8:36 | 58-14.594 | 147-56.043 | CTD Deployed | MJP |
| | | 9:06 | 58-14.594 | 147-56.043 | CTD Max Depth 1500m | MJP |
| | | 10:04 | 58-14.594 | 147-56.043 | CTD Recovered | MJP |
| GAK 13 | 5/8/26 | 11:30 | 58-05.903 | 147-47.600 | CTD Deployed | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 11:59 | 58-05.904 | 147-47.600 | CTD Max Depth 1500m | KAP |
| | | 12:55 | 58-05.904 | 147-47.600 | CTD Recovered | KAP |
| | 5/8/26 | 13:00 | 58-05.904 | 147-47.600 | Vertical Net Deployed | KAP |
| | | 13:08 | 58-05.920 | 147-47.732 | Vertical Net Recovered | KAP |
| | 5/8/26 | 13:49 | 58-05.920 | 147-47.732 | Trace Metals CTD Deployed | KAP |
| | | 14:52 | 58-05.920 | 147-47.732 | Trace Metals CTD Recovered | KAP |
| GAK 13 | 5/8/26 | 16:28 | 57-56.634 | 147-39.210 | Vertical Net Deployed | SG |
| | | 16:38 | 57-56.634 | 147-39.210 | Vertical Net Recovered | SG |
| | 5/8/26 | 16:56 | 57-56.634 | 147-39.210 | CTD Deployed | SG |
| | | 17:30 | 57-56.634 | 147-39.210 | CTD Max Depth 1500m | SG |
| | | 18:29 | 57-56.634 | 147-39.210 | CTD Recovered | SG |
| | 5/8/26 | 22:37 | 58-05.141 | 147-48.885 | Multinet Deployed | MJP |
| | | 23:30 | 58-06.452 | 147-46.706 | Multinet Recovered | MJP |
| GAK 14 | 5/9/26 | 1:10 | 57-55.792 | 147-40.403 | Multinet Deployed | KAP |
| | | 1:54 | 57-56.964 | 147-38.668 | Multinet Recovered | KAP |
| GAK 15 | 5/9/26 | 3:18 | 57-48.372 | 147-31.202 | Multinet Deployed | KAP |
| | | 4:00 | 57-47.245 | 147-29.691 | Multinet Recovered | IL |
| | 5/9/26 | 4:30 | 57-48.527 | 147-31.178 | Multinet Deployed | IL |
| | | 5:09 | 57-47.459 | 147-30.002 | Multinet Recovered | IL |
| | 5/11/26 | 8:02 | 57-47.495 | 147-30.024 | CTD Deployed | MJP |
| | | 8:09 | 57-47.495 | 147-30.024 | CTD Max Depth 100m | MJP |
| | | 8:36 | 57-47.495 | 147-30.024 | CTD Recovered | MJP |
| | 5/11/26 | 8:54 | 57-47.495 | 147-30.024 | Vertical Net Deployed | MJP |
| | | 9:04 | 57-47.495 | 147-30.024 | Vertical Net Recovered | MJP |
| | 5/11/26 | 9:36 | 57-47.495 | 147-30.024 | CTD Deployed | MJP |
| | | 10:06 | 57-47.495 | 147-30.024 | CTD Max Depth 1500m | MJP |
| | | 11:09 | 57-47.495 | 147-30.024 | CTD Recovered | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5/11/26 | 11:18 | 57-47.495 | 147-30.024 | Vertical Net Deployed | MJP |
| | | 11:28 | 57-47.495 | 147-30.024 | Vertical Net Recovered | MJP |
| | 5/11/26 | 12:08 | 57-47.495 | 147-30.024 | Trace Metals CTD Deployed | KAP |
| | | 13:08 | 57-47.495 | 147-30.024 | Trace Metals CTD Recovered | KAP |
| | | 16:08 | 57-45.578 | 147-28.137 | DPI Deployed | SG |
| GAK 1 | 5/11/26 | 0:44 | 59-57.733 | 149-22.400 | DPI Recovered | KAP |
| MS4 | 5/11/26 | 12:18 | 59-55.181 | 147-49.680 | CTD Deployed | KAP |
| | | 12:29 | 59-55.181 | 147-49.680 | CTD Max Depth 125m | KAP |
| | | 12:38 | 59-55.181 | 147-49.680 | CTD Recovered | KAP |
| MS3 | 5/11/26 | 12:56 | 59-55-902 | 147-51.916 | CTD Deployed | KAP |
| | | 13:13 | 59-55-902 | 147-51.916 | CTD Recovered | KAP |
| MS1 | 5/11/26 | 13:37 | 59-57.257 | 147-55.581 | CTD Deployed | KAP |
| | | 13:46 | 59-57.257 | 147-55.581 | CTD Max Depth 162m | KAP |
| | | 13:53 | 59-57.257 | 147-55.581 | CTD Recovered | KAP |
| MS2 | 5/11/26 | 14:10 | 59-56.597 | 147-53.727 | CTD Deployed | KAP |
| | | 14:22 | 59-56.597 | 147-53.727 | CTD Max Depth 184m | KAP |
| | | 14:49 | 59-56.597 | 147-53.727 | CTD Recovered | KAP |
| | 5/11/26 | 14:54 | 59-56.597 | 147-53.727 | Vertical Net Deployed | KAP |
| | | 15:04 | 59-56.597 | 147-53.727 | Vertical Net Recovered | KAP |
| | 5/11/26 | 15:27 | 59-56.597 | 147-53.727 | Trace Metals CTD Deployed | KAP |
| | | 15:52 | 59-56.597 | 147-53.727 | Trace Metals CTD Recovered | SG |
| IB 1.5 | 5/11/26 | 19:18 | 60-15.442 | 148-16.005 | CTD Deployed | SG |
| | | 19:31 | 60-15.442 | 148-16.005 | CTD Max Depth 144m | SG |
| | | 19:56 | 60-15.442 | 148-16.005 | CTD Recovered | MJP |
| | 5/11/26 | 20:00 | 60-15.442 | 148-16.005 | Vertical Net Deployed | MJP |
| | | 20:12 | 60-15.442 | 148-16.005 | Vertical Net Recovered | MJP |
| KIP 2 | 5/11/26 | 22:06 | 60-16.035 | 147-59.655 | Multinet Deployed | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 22:50 | 60-17.488 | 147-158.777 | Multinet Recovered | MJP |
| PWS 1 | 5/11/26 | 23:35 | 60-21.962 | 147-56.613 | Multinet Deployed | MJP |
| | | 0:16 | 60-23.199 | 147-55.805 | Multinet Recovered | KAP |
| PWS2 | 5/12/26 | 1:22 | 60-31.661 | 147-49.266 | Multinet Deployed | KAP |
| | | 2:04 | 60-32.516 | 147-47.005 | Multinet Recovered | KAP |
| | 5/12/26 | 2:41 | 60-31.381 | 147-49.992 | Multinet Deployed | KAP |
| | | 3:27 | 60-32.442 | 147-47.381 | Multinet Recovered | KAP |
| PWS3 | 5/12/26 | 4:30 | 60-39.483 | 147-41.450 | Multinet Deployed | IL |
| | | 5:16 | 60-40.264 | 147-39.125 | Multinet Recovered | IL |
| | 5/12/26 | 7:15 | 60-39.404 | 147-37.339 | CTD Deployed | IL |
| | | 7:33 | 60-39.404 | 147-37.339 | CTD Max Depth 692m | IL |
| | | 8:20 | 60-39.404 | 147-37.339 | CTD Recovered | MJP |
| | 5/12/26 | 8:26 | 60-39.404 | 147-37.339 | Vertical Net Deployed | MJP |
| | | 8:36 | 60-39.404 | 147-37.339 | Vertical Net Recovered | MJP |
| PWS2 | 5/12/26 | 9:54 | 60-32.099 | 147-48.098 | CTD Deployed | MJP |
| | | 10:00 | 60-32.099 | 147-48.098 | CTD Max Depth 100m | MJP |
| | | 10:30 | 60-32.099 | 147-48.098 | CTD Recovered | MJP |
| | 5/12/26 | 10:45 | 60-32.099 | 147-48.098 | Vertical Net Deployed | MJP |
| | | 10:55 | 60-32.099 | 147-48.098 | Vertical Net Recovered | MJP |
| | 5/12/26 | 11:10 | 60-32.099 | 147-48.098 | Vertical Net Deployed | MJP |
| | | 11:20 | 60-32.099 | 147-48.098 | Vertical Net Recovered | MJP |
| | 5/12/26 | 11:36 | 60-32.099 | 147-48.098 | CTD Deployed | MJP |
| | | 12:54 | 60-32.099 | 147-48.098 | CTD Max Depth 721m | KAP |
| | | 12:36 | 60-32.099 | 147-48.098 | CTD Recovered | KAP |
| | 5/12/26 | 13:16 | 60-32.099 | 147-48.098 | Trace Metals CTD Deployed | KAP |
| | | 14:04 | 60-32.099 | 147-48.098 | Trace Metal CTD Recovered | KAP |
| | 5/12/26 | 14:30 | 60-32.099 | 147-48.098 | Vertical Multi Net Deployed | KAP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 15:17 | 60-32.099 | 147-48.098 | Vertical multi Net Recovered | KAP |
| | 5/18/26 | 15:42 | 60-32.099 | 147-48.098 | Vertical Multi Net Deployed | SG |
| | | 16:00 | 60-32.099 | 147-48.098 | Vertical multi Net Recovered | SG |
| PWS1 | 5/12/26 | 17:12 | 60-22.826 | 147-56.170 | CTD Deployed | SG |
| | | 17:25 | 60-22.826 | 147-56.170 | CTD Max Depth 339m | SG |
| | | 18:00 | 60-22.826 | 147-56.170 | CTD Recovered | SG |
| | 5/12/26 | 18:04 | 60-22.826 | 147-56.170 | Vertical Net Deployed | SG |
| | | 18:15 | 60-22.826 | 147-56.170 | Vertical Net Recovered | SG |
| KIP2 | 5/12/26 | 19:01 | 60-16.680 | 147-59.173 | CTD Deployed | SG |
| | | 19:19 | 60-16.680 | 147-59.173 | CTD Max Depth | SG |
| | | 19:56 | 60-16.680 | 147-59.173 | CTD Recovered | MJP |
| | 5/12/26 | 20:00 | 60-16.680 | 147-59.173 | Vertical Net Deployed | MJP |
| | | 20:10 | 60-16.680 | 147-59.173 | Vertical Net Recovered | MJP |
| Glider | 5/13/26 | 9:36 | 59-07.643 | 148-45.677 | Glider Recovered | MJP |
| | | 10:45 | 59-02.973 | 148-41.152 | Glider Recovered | MJP |
| GE02-25 | 5/13/26 | 12:21 | 59-00.974 | 148-41.710 | Mooring Recovery Started | KAP |
| | | 13:24 | 59-00.446 | 148-40.887 | Mooring Recovery Complete | KAP |
| | 5/13/26 | 13:56 | 59-00.889 | 148-41.560 | CTD Deployed | KAP |
| | | 14:42 | 59-00.889 | 148-41.560 | CTD Recovered | KAP |
| | 5/13/26 | 15:45 | 59-00.892 | 148-41.557 | Mooring Deployment Started | SG |
| | | 17:33 | 59-00.892 | 148-41.557 | Mooring Deployment Complete | SG |
| KOD10 | 5/14/26 | 5:54 | 57-12.780 | 149-42.887 | Bongo Deployed | IL |
| | | 6:18 | 57-12.015 | 149-43.223 | Bongo Recovered | IL |
| | 5/14/26 | 8:03 | 57-12.388 | 149-43.035 | CTD Deployed | MJP |
| | | 8:10 | 57-12.388 | 149-43.035 | CTD Max Depth 100m | MJP |
| | | 8:34 | 57-12.388 | 149-43.035 | CTD Recovered | MJP |
| | 5/14/26 | 8:40 | 57-12.388 | 149-43.035 | Vertical Net Deployed | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 8:48 | 57-12.388 | 149-43.035 | Vertical Net Recovered | MJP |
| | 5/14/26 | 9:28 | 57-12.388 | 149-43.035 | Vertical Net Deployed | MJP |
| | | 9:38 | 57-12.388 | 149-43.035 | Vertical Net Recovered | MJP |
| | 5/14/26 | 9:59 | 57-12.388 | 149-43.035 | CTD Deployed | MJP |
| | | 10:22 | 57-12.388 | 149-43.035 | CTD Max Depth 1000m | MJP |
| | | 11:12 | 57-12.388 | 149-43.035 | CTD Recovered | MJP |
| | 5/14/26 | 11:54 | 57-12.388 | 149-43.035 | Trace Metals CTD Deployed | KAP |
| | | 12:57 | 57-12.388 | 149-43.035 | Trace Metals CTD Recovered | KAP |
| KOD9 | 5/14/26 | 14:04 | 57-19.308 | 149-55.609 | CTD Deployed | KAP |
| | | 14:30 | 57-19.308 | 149-55.609 | CTD Max Depth 1000m | KAP |
| | | 15:20 | 57-19.308 | 149-55.609 | CTD Recovered | KAP |
| | 5/14/26 | 15:24 | 57-19.308 | 149-55.609 | Vertical Net Deployed | KAP |
| | | 15:32 | 57-19.308 | 149-55.609 | Vertical Net Recovered | KAP |
| KOD8 | 5/14/26 | 16:42 | 57-26.332 | 150-07.914 | CTD Deployed | SG |
| | | 17:01 | 57-26.332 | 150-07.914 | CTD Max Depth 710m | SG |
| | | 17:45 | 57-26.332 | 150-07.914 | CTD Recovered | SG |
| | 5/14/26 | 17:49 | 57-26.332 | 150-07.914 | Vertical Net Deployed | SG |
| | | 17:59 | 57-26.332 | 150-07.914 | Vertical Net Recovered | SG |
| | 5/14/26 | 18:26 | 57-26.332 | 150-07.914 | Trace Metals CTD Deployed | SG |
| | | 19:11 | 57-26.332 | 150-07.914 | Trace Metals CTD Recovered | SG |
| KOD7 | 5/14/26 | 20:20 | 57-33.425 | 150-20.332 | Vertical Net Deployed | MJP |
| | | 20:30 | 57-33.452 | 150-20.375 | Vertical Net Recovered | MJP |
| | 5/14/26 | 20:32 | 57-33.452 | 150-20.375 | CTD Deployed | MJP |
| | | 20:43 | 57-33.452 | 150-20.375 | CTD Max Depth 171m | MJP |
| | | 21:10 | 57-33.452 | 150-20.375 | CTD Recovered | MJP |
| KOD6 | 5/14/26 | 22:32 | 57-40.623 | 150-33.595 | Bongo Deployed | MJP |
| | | 22:48 | 57-40.273 | 150-32.976 | Bongo Recovered | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| KOD7 | 5/14/26 | 23:52 | 57-33.809 | 150-21.044 | Bongo Deployed | KAP |
| | | 0:11 | 57-33.381 | 150-20.268 | Bongo Recovered | KAP |
| KOD8 | 5/15/26 | 1:20 | 57-26.209 | 150-08.797 | Bongo Deployed | KAP |
| | | 1:45 | 57-26.431 | 150-07.681 | Bongo Recovered | KAP |
| KOD9 | 5/15/26 | 2:57 | 57-19.279 | 149-56.270 | Bongo Deployed | KAP |
| | | 3:22 | 57-19.400 | 149-55.116 | Bongo Recovered | KAP |
| KOD6 | 5/15/26 | 6:34 | 57-40.252 | 150-32.956 | CTD Deployed | IL |
| | | 6:40 | 57-40.252 | 150-32.956 | CTD Max Depth 92m | IL |
| | | 7:05 | 57-40.252 | 150-32.956 | CTD Recovered | IL |
| | 5/15/26 | 7:13 | 57-40.252 | 150-32.956 | Vertical Net Deployed | IL |
| | | 7:23 | 57-40.198 | 150-32.126 | Vertical Net Recovered | IL |
| KOD5 | 5/15/26 | 8:34 | 57-47.065 | 150-45.672 | CTD Deployed | MJP |
| | | 8:40 | 57-47.065 | 150-45.672 | CTD Max Depth 60m | MJP |
| | | 9:06 | 57-47.065 | 150-45.672 | CTD Recovered | MJP |
| | 5/15/26 | 9:09 | 57-47.078 | 150-45.695 | Vertical Net Deployed | MJP |
| | | 9:18 | 57-47.141 | 150-45.757 | Vertical Net Recovered | MJP |
| | 5/18/26 | 9:38 | 57-47.164 | 150-45.775 | Vertical Net Deployed | MJP |
| | | 9:46 | 57-47.238 | 150-45.828 | Vertical Net Recovered | MJP |
| | 5/15/26 | 10:08 | 57-47.246 | 150-45.832 | CTD Deployed | MJP |
| | | 10:16 | 57-47.246 | 150-45.832 | CTD Max Depth 79m | MJP |
| | | 10:38 | 57-47.246 | 150-45.832 | CTD Recovered | MJP |
| | 5/15/26 | 11:08 | 57-47.246 | 150-45.832 | Trace Metals CTD Deployed | MJP |
| | | 11:24 | 57-47.246 | 150-45.832 | Trace Metals CTD Recovered | MJP |
| KOD4 | 5/15/26 | 12:30 | 57-54.072 | 150-58.216 | CTD Deployed | KAP |
| | | 12:37 | 57-54.072 | 150-58.216 | CTD Max Depth 74m | KAP |
| | | 12:55 | 57-54.072 | 150-58.216 | CTD Recovered | KAP |
| | 5/15/26 | 12:57 | 57-54.072 | 150-58.216 | Vertical Net Deployed | KAP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 13:04 | 57-54.072 | 150-58.216 | Vertical Net Recovered | KAP |
| KOD3 | 5/15/26 | 14:11 | 58-00.890 | 151-10.681 | CTD Deployed | KAP |
| | | 14:18 | 58-00.890 | 151-10.681 | CTD Max Depth 74m | KAP |
| | | 14:37 | 58-00.890 | 151-10.681 | CTD Recovered | KAP |
| | 5/15/26 | 14:41 | 58-00.890 | 151-10.681 | Vertical Net Deployed | KAP |
| | | 14:48 | 58-00.892 | 151-10.695 | Vertical Net Recovered | KAP |
| KOD2 | 5/15/26 | 15:56 | 58-07.794 | 151-23.194 | CTD Deployed | SG |
| | | 16:04 | 58-07.794 | 151-23.194 | CTD Max Depth 119m | SG |
| | | 16:26 | 58-07.794 | 151-23.194 | CTD Recovered | SG |
| | 5/15/26 | 16:31 | 58-07.794 | 151-23.194 | Vertical Net Deployed | SG |
| | | 16:42 | 58-07.794 | 151-23.194 | Vertical Net Recovered | SG |
| | 5/15/26 | 16:55 | 58-07.794 | 151-23.194 | Vertical Net Deployed | SG |
| | | 17:03 | 58-07.794 | 151-23.194 | Vertical Net Recovered | KAP |
| | 5/15/26 | 17:07 | 58-07.794 | 151-23.194 | Trace Metals CTD Deployed | KAP |
| | | 17:28 | 58-07.794 | 151-23.194 | Trace Metals CTD Recovered | SG |
| KOD1 | 5/15/26 | 18:40 | 58-14.650 | 151-35.322 | CTD Deployed | SG |
| | | 18:46 | 58-14.650 | 151-35.322 | CTD Max Depth 65m | SG |
| | | 19:04 | 58-14.650 | 151-35.322 | CTD Recovered | SG |
| | 5/18/26 | 19:09 | 58-14.650 | 151-35.322 | Vertical Net Deployed | SG |
| | | 18:15 | 58-14.650 | 151-35.322 | Vertical Net Recovered | SG |
| MID8 | 5/16/26 | 14:38 | 59-13.522 | 146-12.027 | CTD Deployed | KAP |
| | | 14:57 | 59-13.522 | 146-12.027 | CTD Max Depth 633m | KAP |
| | | 15:42 | 59-13.522 | 146-12.027 | CTD Recovered | KAP |
| | 5/16/26 | 15:46 | 59-13.522 | 146-12.027 | Vertical Net Deployed | KAP |
| | | 15:54 | 59-13.522 | 146-12.027 | Vertical Net Recovered | KAP |
| MID7 | 5/16/26 | 17:08 | 59-22.983 | 146-17.684 | CTD Deployed | SG |
| | | 17:14 | 59-22.983 | 146-17.684 | CTD Max Depth 40m | SG |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 17:28 | 59-22.983 | 146-17.684 | CTD Recovered | SG |
| | 5/16/26 | 17:32 | 59-22.983 | 146-17.684 | Vertical Net Deployed | SG |
| | | 17:38 | 59-22.983 | 146-17.684 | Vertical Net Recovered | SG |
| | 5/16/26 | 18:18 | 59-22.983 | 146-17.684 | Trace Metals CTD Deployed | SG |
| | | 18:29 | 59-22.983 | 146-17.684 | Trace Metals CTD Recovered | SG |
| MID1 | 5/18/26 | 6:30 | 60-14.995 | 145-30.009 | CTD Deployed | IL |
| | | 6:36 | 60-14.995 | 145-30.009 | CTD Max Depth 10m | IL |
| | | 6:47 | 60-14.995 | 145-30.009 | CTD Recovered | IL |
| | 5/18/26 | 6:51 | 60-14.995 | 145-30.009 | Vertical Net Deployed | IL |
| | | 6:58 | 60-14.995 | 145-30.009 | Vertical Net Recovered | IL |
| MID1i | 5/18/26 | 7:36 | 60-10.501 | 145-34.572 | CTD Deployed | IL |
| | | 7:48 | 60-10.495 | 145-34.500 | CTD Max Depth 88m | MJP |
| | | 7:54 | 60-10.495 | 145-34.500 | CTD Recovered | MJP |
| MID2 | 5/18/26 | 8:36 | 60-06.066 | 145-39.000 | CTD Deployed | MJP |
| | | 8:45 | 60-06.066 | 145-39.000 | CTD Max Depth 108m | MJP |
| | | 9:08 | 60-06.066 | 145-39.000 | CTD Recovered | MJP |
| | 5/18/26 | 9:12 | 60-06.066 | 145-39.000 | Vertical Net Deployed | MJP |
| | | 9:22 | 60-06.066 | 145-39.000 | Vertical Net Recovered | MJP |
| | 5/18/26 | 9:38 | 60-06.066 | 145-39.000 | Vertical Net Deployed | MJP |
| | | 9:48 | 60-06.066 | 145-39.000 | Vertical Net Recovered | MJP |
| | 5/18/26 | 10:05 | 60-06.066 | 145-39.000 | CTD Deployed | MJP |
| | | 10:14 | 60-06.066 | 145-39.000 | CTD Max Depth 108m | MJP |
| | | 10:40 | 60-06.066 | 145-39.000 | CTD Recovered | MJP |
| | 5/18/26 | 11:10 | 60-06.066 | 145-39.000 | Trace Metals CTD Deployed | MJP |
| | | 11:26 | 60-06.066 | 145-39.000 | Trace Metals CTD Recovered | MJP |
| MID 2i | 5/18/26 | 12:10 | 60-01.525 | 145-43.494 | CTD Deployed | KAP |
| | | 12:17 | 60-01.525 | 145-43.494 | CTD Max Depth 87m | KAP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 12:22 | 60-01.525 | 145-43.494 | CTD Recovered | KAP |
| MID3 | 5/18/26 | 13:06 | 59-57.002 | 145-47.981 | CTD Deployed | KAP |
| | | 13:14 | 59-57.002 | 145-47.981 | CTD Max Depth 79m | KAP |
| | | 13:37 | 59-57.002 | 145-47.981 | CTD Recovered | KAP |
| | 5/18/26 | 13:42 | 59-57.002 | 145-47.981 | Vertical Net Deployed | KAP |
| | | 13:49 | 59-57.002 | 145-47.981 | Vertical Net Recovered | KAP |
| MID 3i | 5/18/26 | 14:36 | 59-52.503 | 145-52.456 | CTD Deployed | KAP |
| | | 14:42 | 59-52.503 | 145-52.456 | CTD Max Depth 95m | KAP |
| | | 14:46 | 59-52.503 | 145-52.456 | CTD Recovered | KAP |
| MID4 | 5/18/26 | 15:30 | 59-47.989 | 145-56.978 | CTD Deployed | KAP |
| | | 15:35 | 59-47.989 | 145-56.978 | CTD Max Depth 84m | KAP |
| | | 15:54 | 59-47.989 | 145-56.978 | CTD Recovered | KAP |
| | 5/18/26 | 16:00 | 59-47.989 | 145-56.978 | Vertical Net Deployed | KAP |
| | | 16:06 | 59-47.989 | 145-56.978 | Vertical Net Recovered | KAP |
| MID 4i | 5/18/26 | 16:46 | 59-43.496 | 146-01.475 | CTD Deployed | SG |
| | | 16:53 | 59-43.496 | 146-01.475 | CTD Max Depth 66m | SG |
| | | 16:58 | 59-43.496 | 146-01.475 | CTD Recovered | SG |
| MID5 | 5/18/26 | 17:38 | 59-38.998 | 146-05.999 | CTD Deployed | SG |
| | | 17:46 | 59-38.998 | 146-05.999 | CTD Max Depth 87m | SG |
| | | 18:06 | 59-38.998 | 146-05.999 | CTD Recovered | SG |
| | 5/18/26 | 18:10 | 59-38.998 | 146-05.999 | Vertical Net Deployed | SG |
| | | 18:18 | 59-38.998 | 146-05.999 | Vertical Net Recovered | SG |
| | 5/18/26 | 18:43 | 59-38.998 | 146-05.999 | Vertical Net Deployed | SG |
| | | 18:52 | 59-38.998 | 146-05.999 | Vertical Net Recovered | SG |
| | 5/18/26 | 18:59 | 59-38.998 | 146-05.999 | Trace Metals CTD Deployed | SG |
| | | 19:11 | 59-38.998 | 146-05.999 | Trace Metals CTD Recovered | SG |
| MID5i | 5/18/26 | 19:54 | 59-34.530 | 146-10.534 | CTD Deployed | MJP |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 20:05 | 59-34.530 | 146-10.534 | CTD Max Depth 104m | MJP |
| | | 20:14 | 59-34.530 | 146-10.534 | CTD Recovered | MJP |
| MID6 | 5/18/26 | 20:52 | 59-30.046 | 146-14.990 | CTD Deployed | MJP |
| | | 20:55 | 59-30.046 | 146-14.990 | CTD Max Depth 25m | MJP |
| | | 21:10 | 59-30.046 | 146-14.990 | CTD Recovered | MJP |
| | 5/18/26 | 21:14 | 59-30.046 | 146-14.990 | Vertical Net Deployed | MJP |
| | | 21:20 | 59-30.046 | 146-14.990 | Vertical Net Recovered | MJP |

**Table 10.** Cruise Event Log from R2R Event Logger

| Instrument | Action | Transect | Station | Cast | Latitude | Longitude | Seafloor | Author | Comment | da e ime8601 | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CTD911 | deploy | Seward | RES2.5 | 001 | NO_GPS | NO_GPS | 294 | sDanielson1 | | 5/3/26 20:30 | Mon 04 May 2026 19:30:13 |
| CTD911 | recover | Seward | RES2.5 | 001 | 59.8449 | -149.4666 | 294 | sDanielson1 | | 5/4/26 19:31 | Mon 04 May 2026 19:31:14 |
| CTD911 | deploy | Seward | GAK1 | 002 | 59.8449 | -149.4666 | | sDanielson1 | | 5/4/26 19:32 | Mon 04 May 2026 19:32:14 |
| CTD911 | recover | Seward | GAK1 | 002 | 59.8449 | -149.4666 | | sDanielson1 | | 5/4/26 19:32 | Mon 04 May 2026 19:32:21 |
| CTD911 | deploy | Seward | GAK2 | 003 | 59.8449 | -149.4666 | | sDanielson1 | | 5/4/26 19:32 | Mon 04 May 2026 19:32:53 |
| CTD911 | recover | Seward | GAK2 | 003 | 59.8449 | -149.4666 | | sDanielson1 | | 5/4/26 19:32 | Mon 04 May 2026 19:32:59 |
| CTD911 | deploy | Seward | GAK3 | 004 | 59.8449 | -149.4666 | | sDanielson1 | | 5/4/26 19:33 | Mon 04 May 2026 19:33:22 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CTD911 | recover | Seward | GAK3 | 004 | 59.8449 | -149.4666 | | sDanielson1 | 5/4/26 19:33 | Mon 04 May 2026 19:33:27 |
| CTD911 | deploy | Seward | GAK1 | 005 | 59.8449 | -149.4666 | | sDanielson1 | 5/4/26 19:33 | Mon 04 May 2026 19:33:55 |
| CTD911 | recover | Seward | GAK1 | 005 | 59.8449 | -149.4666 | | sDanielson1 | 5/4/26 19:34 | Mon 04 May 2026 19:34:07 |
| CTD911 | deploy | Seward | GAK1 | 006 | 59.8449 | -149.4666 | | sDanielson1 | 5/4/26 19:34 | Mon 04 May 2026 19:34:35 |
| CTD911 | recover | Seward | GAK1 | 006 | 59.8449 | -149.4666 | | sDanielson1 | 5/4/26 19:34 | Mon 04 May 2026 19:34:41 |
| TMCTD | recover | Seward | GAK1 | TM01 | 59.9638 | -149.3698 | 270m | aAguilarIslas1 | 5/5/26 1:03 | Wed 06 May 2026 00:03:51 |
| TMCTD | deploy | Seward | GAK1 | TM01 | 59.8659 | -149.4618 | 270m | aAguilarIslas1 | 5/5/26 0:06 | Wed 06 May 2026 00:06:55 |
| CTD911 | deploy | Seward | GAK4 | 008 | 59.4083 | -149.0483 | 199 | sDanielson1 | 5/6/26 16:15 | Wed 06 May 2026 16:15:01 |
| CTD911 | recover | Seward | GAK4 | 008 | 59.4083 | -149.0483 | 199 | sDanielson1 | 5/6/26 16:49 | Wed 06 May 2026 16:49:18 |
| CTD911 | deploy | Seward | GAK5 | 009 | 59.2783 | -148.9084 | 167 | sDanielson1 | 5/6/26 18:47 | Wed 06 May 2026 18:47:24 |
| CTD911 | recover | Seward | GAK5 | 009 | 59.2783 | -148.9084 | 167 | sDanielson1 | 5/6/26 19:23 | Wed 06 May 2026 19:23:51 |
| CTD911 | deploy | Seward | GAK5 | 010 | 59.2783 | -148.9084 | 167 | sDanielson1 | 5/6/26 20:42 | Wed 06 May 2026 20:42:36 |
| CTD911 | recover | Seward | GAK5 | 010 | 59.2783 | -148.9084 | 167 | sDanielson1 | 5/6/26 21:13 | Wed 06 May 2026 21:13:05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TMCTD | deploy | Seward | GAK5 | TM02 | 59.2783 | -148.9084 | 168 m | aAguilarIslas1 | | 5/6/26 22:01 | Thu 07 May 2026 01:19:33 |
| TMCTD | recover | Seward | GAK5 | TM02 | 59.2783 | -148.9084 | 168 m | aAguilarIslas1 | | 5/6/26 22:26 | Thu 07 May 2026 01:19:44 |
| CTD911 | deploy | Seward | GAK7 | 012 | 58.9718 | -148.6297 | 243 | sDanielson1 | | 5/7/26 2:26 | Thu 07 May 2026 02:26:18 |
| CTD911 | recover | Seward | GAK7 | 012 | 58.9717 | -148.6297 | 243 | sDanielson1 | | 5/7/26 3:00 | Thu 07 May 2026 03:00:51 |
| TMCTD | deploy | Seward | GAK7 | TM03 | 58.9717 | -148.6297 | 242 m | aAguilarIslas1 | First deployment did not close bottles. This is the 2nd attempt | 5/7/26 4:40 | Thu 07 May 2026 03:49:35 |
| TMCTD | recover | Seward | GAK7 | TM03 | 58.9717 | -148.6297 | 242 m | aAguilarIslas1 | | 5/7/26 5:06 | Thu 07 May 2026 05:06:34 |
| CTD911 | deploy | Seward | GAK8 | 013 | 58.8084 | -148.4899 | 289 | sDanielson1 | | 5/7/26 16:47 | Thu 07 May 2026 16:47:23 |
| CTD911 | recover | Seward | GAK8 | 013 | 58.8084 | -148.4899 | 289 | sDanielson1 | | 5/7/26 17:22 | Thu 07 May 2026 17:22:05 |
| CTD911 | deploy | Seward | GAK9 | 014 | 58.6801 | -148.3500 | 276 | sDanielson1 | Primary Productivity cast | 5/7/26 18:44 | Thu 07 May 2026 18:44:12 |
| CTD911 | recover | Seward | GAK9 | 014 | 58.6801 | -148.3499 | 276 | sDanielson1 | | 5/7/26 19:12 | Thu 07 May 2026 19:12:09 |
| CTD911 | deploy | Seward | GAK9 | 015 | 58.6801 | -148.3500 | 276 | sDanielson1 | | 5/7/26 20:42 | Thu 07 May 2026 20:42:45 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TMCTD | deploy | Seward | GAK9 | TM04 | 58.6801 | -148.3499 | 276 m | aAguilarIslas1 | | 5/7/26 22:03 | Thu 07 May 2026 22:03:58 |
| TMCTD | recover | Seward | GAK9 | TM04 | 58.6801 | -148.3499 | 276 m | aAguilarIslas1 | | 5/7/26 22:35 | Thu 07 May 2026 22:35:53 |
| CTD911 | deploy | Seward | GAK10 | 016 | 58.5411 | -148.2142 | 1460 | sDanielson1 | Bottom depth from Knudsen 12khz | 5/8/26 0:29 | Fri 08 May 2026 00:29:59 |
| TMCTD | deploy | Seward | GAK11 | TM05 | 58.3889 | -148.0729 | 1420 | aAguilarIslas1 | | 5/8/26 5:04 | Fri 08 May 2026 05:04:44 |
| CalVet net | deploy | Seward | GAK10 | 11 | 58.5411 | -148.2138 | 1460 | rHopcroft1 | | 5/7/26 23:57 | Fri 08 May 2026 00:51:27 |
| CalVet net | recover | Seward | GAK10 | 11 | 58.5409 | -148.2141 | 1460 | rHopcroft1 | | 5/8/26 0:06 | Fri 08 May 2026 00:52:04 |
| CalVet net | deploy | Seward | GAK9 | 10A | 58.6801 | -148.3499 | 275 | rHopcroft1 | Live sort | 5/7/26 19:57 | Fri 08 May 2026 00:55:04 |
| CalVet net | recover | Seward | GAK9 | 10A | 58.6801 | -148.3499 | 275 | rHopcroft1 | Live sort | 5/7/26 20:05 | Fri 08 May 2026 00:56:10 |
| CalVet net | deploy | Seward | GAK9 | 10 | 58.6801 | -148.3499 | 275 | rHopcroft1 | | 5/7/26 19:28 | Fri 08 May 2026 00:57:19 |
| CalVet net | recover | Seward | GAK9 | 10 | 58.6801 | -148.3500 | 275 | rHopcroft1 | | 5/7/26 19:36 | Fri 08 May 2026 00:58:01 |
| CalVet net | deploy | Seward | GAK8 | 09 | 58.8084 | -148.4899 | 290 | rHopcroft1 | | 5/7/26 16:12 | Fri 08 May 2026 00:59:03 |
| CalVet net | recover | Seward | GAK8 | 09 | 58.8084 | -148.4899 | 290 | rHopcroft1 | | 5/7/26 16:19 | Fri 08 May 2026 00:59:33 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | deploy | Seward | GAK7 | 08 | 58.9717 | -148.6297 | 250 | rHopcroft1 | | 5/7/26 3:14 | Fri 08 May 2026 01:00:22 |
| CalVet net | recover | Seward | GAK7 | 08 | 58.9718 | -148.6297 | 290 | rHopcroft1 | | 5/7/26 3:21 | Fri 08 May 2026 01:02:24 |
| CalVet net | deploy | Seward | GAK6 | 07 | 59.1168 | -148.7702 | 152 | rHopcroft1 | | 5/7/26 0:00 | Fri 08 May 2026 01:04:24 |
| CalVet net | recover | Seward | GAK6 | 07 | 59.1168 | -148.7701 | 152 | rHopcroft1 | | 5/7/26 0:07 | Fri 08 May 2026 01:04:44 |
| CalVet net | deploy | Seward | GAK5 | 6A | 59.2783 | -148.9084 | 168 | rHopcroft1 | | 5/6/26 20:13 | Fri 08 May 2026 01:06:41 |
| CalVet net | deploy | Seward | GAK5 | 6A | 59.2783 | -148.9084 | 168 | rHopcroft1 | | 5/6/26 20:21 | Fri 08 May 2026 01:07:10 |
| CTD911 | recover | Seward | GAK10 | 016 | 58.5411 | -148.2142 | 1463 | lSgouros1 | | 5/8/26 1:51 | Fri 08 May 2026 01:51:04 |
| CTD911 | deploy | Seward | GAK11 | 017 | 58.3890 | -148.0729 | 1433 | sDanielson1 | Bottom depth from Knudsen 12khz | 5/8/26 3:10 | Fri 08 May 2026 03:10:33 |
| CTD911 | recover | Seward | GAK11 | 017 | 58.3889 | -148.0729 | 1433 | sDanielson1 | | 5/8/26 4:28 | Fri 08 May 2026 04:28:38 |
| TMCTD | recover | Seward | GAK11 | TM05 | 58.3889 | -148.0729 | 1420 | aAguilarIslas1 | | 5/8/26 6:09 | Fri 08 May 2026 06:09:46 |
| multinet | deploy | Seward | GAK10 | 13 | 58.5405 | -148.2428 | 1460 | aPoje1 | | 5/8/26 7:35 | Fri 08 May 2026 07:35:47 |
| multinet | maxDepth | Seward | GAK10 | 13 | 58.5408 | -148.2278 | 1460 | aPoje1 | | 5/8/26 7:49 | Fri 08 May 2026 07:49:50 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| multinet | recover | Seward | GAK10 | 13 | 58.5420 | -148.2002 | 1460 | aPoje1 | 5/8/26 8:17 | Fri 08 May 2026 09:17:07 |
| multinet | deploy | Seward | GAK11 | 14 | 58.3810 | -148.1021 | 4400 | aPoje1 | 5/8/26 9:31 | Fri 08 May 2026 09:31:06 |
| multinet | maxDepth | Seward | GAK11 | 14 | 58.3844 | -148.0882 | 4400 | aPoje1 | 5/8/26 9:47 | Fri 08 May 2026 09:47:00 |
| multinet | recover | Seward | GAK11 | 14 | 58.3923 | -148.0540 | 4400 | aPoje1 | 5/8/26 10:22 | Fri 08 May 2026 10:22:27 |
| multinet | deploy | Seward | GAK12 | 15 | 58.2390 | -147.9646 | 1480 | aPoje1 | 5/8/26 11:32 | Fri 08 May 2026 11:32:48 |
| multinet | deploy | Seward | GAK12 | 15 | 58.2413 | -147.9489 | 1480 | aPoje1 | 5/8/26 11:49 | Fri 08 May 2026 11:49:00 |
| multinet | recover | Seward | GAK12 | 15 | 58.2465 | -147.9144 | 1480 | aPoje1 | 5/8/26 12:24 | Fri 08 May 2026 12:24:30 |
| multinet | deploy | Seward | GAK13 | 16 | 58.0937 | -147.8214 | 2111 | aPoje1 | 5/8/26 13:42 | Fri 08 May 2026 13:42:24 |
| multinet | maxDepth | Seward | GAK13 | 16 | 58.0964 | -147.8053 | 2111 | aPoje1 | 5/8/26 13:59 | Fri 08 May 2026 13:59:34 |
| multinet | recover | Seward | GAK13 | 16 | 58.1004 | -147.7782 | 2111 | aPoje1 | 5/8/26 14:35 | Fri 08 May 2026 14:35:08 |
| CalVet net | deploy | Seward | GAK12 | 13 | 58.2431 | -147.9342 | 2165 | rHopcroft1 | 5/8/26 16:01 | Fri 08 May 2026 19:02:44 |
| CalVet net | recover | Seward | GAK12 | 13 | 58.2432 | -147.9341 | 2165 | rHopcroft1 | 5/8/26 16:09 | Fri 08 May 2026 19:03:12 |
| CalVet net | deploy | Seward | GAK11 | 12 | 58.3890 | -148.0729 | 1433 | rHopcroft1 | 5/8/26 4:36 | Fri 08 May 2026 19:05:37 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | recover | Seward | GAK11 | 12 | 58.3889 | -148.0729 | 1433 | rHopcroft1 | | 5/8/26 4:45 | Fri 08 May 2026 19:05:57 |
| CalVet net | deploy | Seward | GAK5 | 6 | 59.2783 | -148.9084 | 168 | rHopcroft1 | | 5/6/26 19:45 | Fri 08 May 2026 19:07:18 |
| CalVet net | recover | Seward | GAK5 | 6 | 59.2783 | -148.9084 | 168 | rHopcroft1 | | 5/6/26 19:53 | Fri 08 May 2026 19:08:02 |
| CalVet net | deploy | Seward | GAK4 | 5 | 59.4083 | -149.0484 | 196 | rHopcroft1 | | 5/6/26 17:08 | Fri 08 May 2026 19:09:06 |
| CalVet net | recover | Seward | GAK4 | 5 | 59.4083 | -149.0484 | 196 | rHopcroft1 | | 5/6/26 17:16 | Fri 08 May 2026 19:09:20 |
| CalVet net | deploy | Seward | GAK1 | 4A | NO_GPS | NO_GPS | 268 | rHopcroft1 | Live sort | 5/4/26 17:41 | Fri 08 May 2026 19:10:27 |
| CalVet net | recover | Seward | GAK1 | 4A | NO_GPS | NO_GPS | 268 | rHopcroft1 | | 5/4/26 17:53 | Fri 08 May 2026 19:10:41 |
| CalVet net | deploy | Seward | GAK1 | 4 | NO_GPS | NO_GPS | 268 | rHopcroft1 | | 5/4/26 17:11 | Fri 08 May 2026 19:12:33 |
| CalVet net | recover | Seward | GAK1 | 4 | NO_GPS | NO_GPS | 268 | rHopcroft1 | | 5/4/26 17:22 | Fri 08 May 2026 19:12:51 |
| CalVet net | deploy | Seward | GAK3 | 3 | NO_GPS | NO_GPS | 194 | rHopcroft1 | | 5/4/26 3:01 | Fri 08 May 2026 19:13:45 |
| CalVet net | recover | Seward | GAK3 | 3 | NO_GPS | NO_GPS | 194 | rHopcroft1 | | 5/4/26 3:12 | Fri 08 May 2026 19:14:35 |
| CalVet net | deploy | Seward | GAK2 | 2 | NO_GPS | NO_GPS | 229 | rHopcroft1 | | 5/4/26 0:30 | Fri 08 May 2026 19:15:37 |
| CalVet net | recover | Seward | GAK2 | 2 | NO_GPS | NO_GPS | 229 | rHopcroft1 | | 5/4/26 0:39 | Fri 08 May 2026 19:15:53 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | deploy | Seward | RES2.5 | 1 | NO_GPS | NO_GPS | 285 | rHopcroft1 | 5/3/26 19:26 | Fri 08 May 2026 19:16:54 |
| CalVet net | recover | Seward | RES2.5 | 1 | NO_GPS | NO_GPS | 285 | rHopcroft1 | 5/3/26 19:37 | Fri 08 May 2026 19:17:20 |
| TMCTD | deploy | Seward | GAK13 | TM06 | 58.0986 | -147.7955 | 2060 | aAguilarIslas1 | 5/8/26 21:49 | Fri 08 May 2026 21:49:11 |
| CalVet net | deploy | Seward | GAK13 | 14 | 58.0984 | -147.7933 | 2111 | rHopcroft1 | 5/8/26 21:01 | Fri 08 May 2026 21:49:32 |
| CalVet net | recover | Seward | GAK13 | 14 | 58.0986 | -147.7955 | 2111 | rHopcroft1 | 5/8/26 21:09 | Fri 08 May 2026 21:49:52 |
| TMCTD | recover | Seward | GAK13 | TM06 | 58.0987 | -147.7955 | 2060 | aAguilarIslas1 | 5/8/26 22:54 | Fri 08 May 2026 22:54:00 |
| CalVet net | deploy | Seward | GAK14 | 15 | 57.9439 | -147.6535 | 3070 | rHopcroft1 | 5/9/26 0:28 | Sat 09 May 2026 01:07:43 |
| CalVet net | recover | Seward | GAK14 | 15 | 57.9439 | -147.6535 | 3070 | rHopcroft1 | 5/9/26 0:36 | Sat 09 May 2026 01:08:14 |
| multinet | deploy | Seward | GAK13 | 17 | 58.0859 | -147.8145 | 2111 | aPoje1 | 5/9/26 6:38 | Sat 09 May 2026 06:38:03 |
| multinet | maxDepth | Seward | GAK13 | 17 | 58.0920 | -147.8034 | 2111 | aPoje1 | 5/9/26 6:53 | Sat 09 May 2026 06:53:50 |
| multinet | recover | Seward | GAK13 | 17 | 58.1078 | -147.7783 | 2111 | aPoje1 | 5/9/26 7:30 | Sat 09 May 2026 07:30:14 |
| multinet | deploy | Seward | GAK14 | 18 | 57.9305 | -147.6723 | 3230 | aPoje1 | 5/9/26 9:10 | Sat 09 May 2026 09:10:46 |
| multinet | maxDepth | Seward | GAK14 | 18 | 57.9368 | -147.6625 | 3230 | aPoje1 | 5/9/26 9:24 | Sat 09 May 2026 09:24:45 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| multinet | recover | Seward | GAK14 | 18 | 57.9503 | -147.6435 | 3230 | aPoje1 | | 5/9/26 9:55 | Sat 09 May 2026 09:55:15 |
| multinet | deploy | Seward | GAK15 | 19 | 57.8058 | -147.5197 | 4400 | aPoje1 | | 5/9/26 11:18 | Sat 09 May 2026 11:18:54 |
| multinet | maxDepth | Seward | GAK15 | 19 | 57.8009 | -147.5134 | 4400 | aPoje1 | | 5/9/26 11:31 | Sat 09 May 2026 11:31:00 |
| multinet | recover | Seward | GAK15 | 19 | 57.7877 | -147.4953 | 4400 | aPoje1 | | 5/9/26 11:59 | Sat 09 May 2026 11:59:18 |
| multinet | deploy | Seward | GAK15 | 20 | 57.8079 | -147.5185 | 4400 | aPoje1 | EtOH | 5/9/26 12:32 | Sat 09 May 2026 12:32:31 |
| multinet | maxDepth | Seward | GAK15 | 20 | 57.8025 | -147.5120 | 4400 | aPoje1 | EtOH | 5/9/26 12:44 | Sat 09 May 2026 12:44:07 |
| multinet | recover | Seward | GAK15 | 20 | 57.7899 | -147.4990 | 4400 | aPoje1 | EtOH | 5/9/26 13:11 | Sat 09 May 2026 13:11:15 |
| CTD911 | deploy | Seward | GAK15 | 021 | 57.7916 | -147.5004 | 4615 | sDanielson1 | Primary Productivity cast | 5/9/26 16:05 | Sat 09 May 2026 16:05:58 |
| CTD911 | recover | Seward | GAK15 | 021 | 57.7916 | -147.5004 | 4615 | sDanielson1 | | 5/9/26 16:25 | Sat 09 May 2026 16:25:48 |
| CTD911 | deploy | Seward | GAK15 | 022 | 57.7916 | -147.5004 | 4549 | sDanielson1 | | 5/9/26 17:35 | Sat 09 May 2026 17:35:00 |
| CalVet net | deploy | Seward | GAK15 | 16 | 57.7916 | -147.5005 | 4354 | rHopcroft1 | | 5/9/26 16:46 | Sat 09 May 2026 18:23:51 |
| CalVet net | recover | Seward | GAK15 | 16 | 57.7916 | -147.5004 | 4354 | rHopcroft1 | | 5/9/26 16:55 | Sat 09 May 2026 18:24:29 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TMCTD | deploy | Seward | GAK15 | TM07 | 57.7916 | -147.5004 | 4610 | aAguilarIslas1 | | 5/9/26 20:14 | Sat 09 May 2026 20:14:57 |
| CalVet net | deploy | Seward | GAK15 | 16A | 57.7916 | -147.5004 | 4354 | rHopcroft1 | Live sort | 5/9/26 19:16 | Sat 09 May 2026 20:19:41 |
| CalVet net | recover | Seward | GAK15 | 16A | 57.7916 | -147.5004 | 4354 | rHopcroft1 | | 5/9/26 19:25 | Sat 09 May 2026 20:21:24 |
| TMCTD | recover | Seward | GAK15 | TM07 | 57.7916 | -147.5004 | 4610 | aAguilarIslas1 | | 5/9/26 21:08 | Sat 09 May 2026 21:08:49 |
| CTD911 | recover | Seward | GAK15 | 022 | 57.7916 | -147.5004 | 4549 | sDanielson1 | | 5/9/26 19:18 | Sat 09 May 2026 21:18:25 |
| ISIIS imager | recover | Seward | NaN | NaN | 59.9593 | -149.3757 | | aPoje1 | DPI recovery | 5/11/26 8:35 | Mon 11 May 2026 09:24:34 |
| ISIIS imager | deploy | Seward | NaN | NaN | 57.7608 | -147.4700 | | rHopcroft1 | DPI deployment | 5/10/26 0:11 | Mon 11 May 2026 09:27:42 |
| multinet | deploy | Seward | GAK03 | 1 | NO_GPS | NO_GPS | 217 | aPoje1 | | 5/4/26 6:22 | Mon 11 May 2026 13:05:03 |
| multinet | maxDepth | Seward | GAK03 | 1 | NO_GPS | NO_GPS | 217 | aPoje1 | | 5/4/26 4:38 | Mon 11 May 2026 13:05:32 |
| multinet | recover | Seward | GAK03 | 1 | NO_GPS | NO_GPS | 217 | aPoje1 | | 5/4/26 4:38 | Mon 11 May 2026 13:05:52 |
| multinet | deploy | Seward | GAK02 | 2 | NO_GPS | NO_GPS | 235 | aPoje1 | | 5/4/26 10:23 | Mon 11 May 2026 13:06:42 |
| multinet | maxDepth | Seward | GAK02 | 2 | NO_GPS | NO_GPS | 235 | aPoje1 | | 5/4/26 10:26 | Mon 11 May 2026 13:07:02 |
| multinet | recover | Seward | GAK02 | 2 | NO_GPS | NO_GPS | 235 | aPoje1 | | 5/4/26 11:04 | Mon 11 May 2026 13:07:18 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| multinet | deploy | Seward | GAK01 | 3 | NO_GPS | NO_GPS | 268 | aPoje1 | | 5/4/26 12:32 | Mon 11 May 2026 13:07:59 |
| multinet | maxDepth | Seward | GAK01 | 3 | NO_GPS | NO_GPS | 268 | aPoje1 | | 5/4/26 12:43 | Mon 11 May 2026 13:08:15 |
| multinet | recover | Seward | GAK01 | 3 | NO_GPS | NO_GPS | 268 | aPoje1 | | 5/4/26 13:12 | Mon 11 May 2026 13:08:31 |
| multinet | deploy | Seward | GAK01 | 4 | NO_GPS | NO_GPS | 268 | aPoje1 | EtOH | 5/4/26 13:35 | Mon 11 May 2026 13:09:04 |
| multinet | maxDepth | Seward | GAK01 | 4 | NO_GPS | NO_GPS | 268 | aPoje1 | EtOH | 5/4/26 13:51 | Mon 11 May 2026 13:09:22 |
| multinet | recover | Seward | GAK01 | 4 | NO_GPS | NO_GPS | 268 | aPoje1 | EtOH | 5/4/26 14:22 | Mon 11 May 2026 13:09:43 |
| multinet | deploy | Seward | GAK04 | 5 | 59.4203 | -149.0599 | 199 | aPoje1 | | 5/6/26 6:25 | Mon 11 May 2026 13:10:27 |
| multinet | maxDepth | Seward | GAK04 | 5 | 59.4148 | -149.0538 | 199 | aPoje1 | | 5/6/26 6:36 | Mon 11 May 2026 13:10:47 |
| multinet | recover | Seward | GAK04 | 5 | 59.3955 | -149.0371 | 199 | aPoje1 | | 5/6/26 7:12 | Mon 11 May 2026 13:11:02 |
| multinet | deploy | Seward | GAK05 | 6 | 59.2922 | -148.9219 | 167 | aPoje1 | | 5/6/26 8:25 | Mon 11 May 2026 13:11:58 |
| multinet | maxDepth | Seward | GAK05 | 6 | 59.2864 | -148.9164 | 167 | aPoje1 | | 5/6/26 8:36 | Mon 11 May 2026 13:12:13 |
| multinet | recover | Seward | GAK05 | 6 | 59.2717 | -148.9033 | 167 | aPoje1 | | 5/6/26 9:07 | Mon 11 May 2026 13:12:28 |
| multinet | deploy | Seward | GAK05 | 7 | 59.2933 | -148.9225 | 167 | aPoje1 | EtOH | 5/6/26 9:49 | Mon 11 May 2026 13:12:55 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| multinet | maxDepth | Seward | GAK05 | 7 | 59.2859 | -148.9150 | 167 | aPoje1 | EtOH | 5/6/26 10:04 | Mon 11 May 2026 13:13:08 |
| multinet | recover | Seward | GAK05 | 7 | 59.2704 | -148.9022 | 167 | aPoje1 | EtOH | 5/6/26 10:35 | Mon 11 May 2026 13:13:23 |
| multinet | deploy | Seward | GAK06 | 8 | 59.1311 | -148.7814 | 147 | aPoje1 | | 5/6/26 11:52 | Mon 11 May 2026 13:14:15 |
| multinet | maxDepth | Seward | GAK06 | 8 | 59.1257 | -148.7769 | 147 | aPoje1 | | 5/6/26 12:02 | Mon 11 May 2026 13:14:30 |
| multinet | recover | Seward | GAK06 | 8 | 59.1089 | -148.7603 | 147 | aPoje1 | | 5/6/26 12:35 | Mon 11 May 2026 13:15:01 |
| multinet | deploy | Seward | GAK07 | 9 | 58.9780 | -148.6036 | 243 | aPoje1 | | 5/7/26 6:09 | Mon 11 May 2026 13:15:34 |
| multinet | maxDepth | Seward | GAK07 | 9 | 58.9743 | -148.6189 | 243 | aPoje1 | | 5/7/26 6:24 | Mon 11 May 2026 13:15:57 |
| multinet | recover | Seward | GAK07 | 9 | 58.9660 | -148.6532 | 243 | aPoje1 | | 5/7/26 6:58 | Mon 11 May 2026 13:16:12 |
| multinet | deploy | Seward | GAK08 | 10 | 58.8237 | -148.4739 | 285 | aPoje1 | | 5/7/26 8:17 | Mon 11 May 2026 13:17:33 |
| multinet | maxDepth | Seward | GAK08 | 10 | 58.8174 | -148.4801 | 285 | aPoje1 | | 5/7/26 8:30 | Mon 11 May 2026 13:17:49 |
| multinet | recover | Seward | GAK08 | 10 | 58.8020 | -148.4968 | 285 | aPoje1 | | 5/7/26 9:02 | Mon 11 May 2026 13:18:03 |
| multinet | deploy | Seward | GAK09 | 11 | 58.6977 | -148.3364 | 282 | aPoje1 | | 5/7/26 10:07 | Mon 11 May 2026 13:18:37 |
| multinet | maxDepth | Seward | GAK09 | 11 | 58.6912 | -148.3415 | 282 | aPoje1 | | 5/7/26 10:19 | Mon 11 May 2026 13:18:52 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| multinet | recover | Seward | GAK09 | 11 | 58.6758 | -148.3531 | 282 | aPoje1 | | 5/7/26 10:48 | Mon 11 May 2026 13:19:07 |
| multinet | deploy | Seward | GAK09 | 12 | 58.6958 | -148.3373 | 282 | aPoje1 | EtOH | 5/7/26 11:22 | Mon 11 May 2026 13:19:28 |
| multinet | maxDepth | Seward | GAK09 | 12 | 58.6900 | -148.3419 | 282 | aPoje1 | EtOH | 5/7/26 11:33 | Mon 11 May 2026 13:19:43 |
| multinet | recover | Seward | GAK09 | 12 | 58.6760 | -148.3538 | 282 | aPoje1 | EtOH | 5/7/26 12:00 | Mon 11 May 2026 13:19:57 |
| CTD911 | deploy | Montague Strait | MS3 | 024 | 59.9317 | -147.8569 | 167 | lSgouros1 | | 5/11/26 20:57 | Mon 11 May 2026 20:57:57 |
| CTD911 | recover | Montague Strait | MS3 | 024 | 59.9317 | -147.8570 | 167 | lSgouros1 | Dry cast | 5/11/26 21:11 | Mon 11 May 2026 21:11:25 |
| CTD911 | deploy | Montague Strait | MS4 | 023 | 59.9197 | -147.8280 | 120 | lSgouros1 | Dry cast | 5/11/26 20:24 | Mon 11 May 2026 21:14:55 |
| CTD911 | recover | Montague Strait | MS4 | 023 | 59.9197 | -147.8280 | 120 | lSgouros1 | | 5/11/26 20:40 | Mon 11 May 2026 21:15:32 |
| CTD911 | deploy | Montague Strait | MS1 | 025 | 59.9543 | -147.9264 | 170 | lSgouros1 | | 5/11/26 21:36 | Mon 11 May 2026 21:36:24 |
| CTD911 | recover | Montague Strait | MS1 | 025 | 59.9543 | -147.9264 | 169 | lSgouros1 | | 5/11/26 21:51 | Mon 11 May 2026 21:51:18 |
| CTD911 | deploy | Montague Strait | MS2 | 026 | 59.9433 | -147.8955 | 193 | sDanielson1 | | 5/11/26 22:10 | Mon 11 May 2026 22:25:26 |
| CTD911 | recover | Montague Strait | MS2 | 026 | 59.9433 | -147.8955 | 193 | sDanielson1 | | 5/11/26 22:47 | Mon 11 May 2026 22:47:22 |
| TMCTD | deploy | MS | MS2 | TM08 | 59.9433 | -147.8955 | 186 | aAguilarIslas1 | | 5/11/26 23:28 | Mon 11 May 2026 23:28:54 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TMCTD | recover | MS | MS2 | TM08 | 59.9432 | -147.8953 | 186 | aAguilarIslas1 | 5/11/26 23:54 | Mon 11 May 2026 23:54:15 |
| CalVet net | deploy | PWS | MS2 | 17 | 59.9433 | -147.8955 | 192 | rHopcroft1 | 5/11/26 22:54 | Mon 11 May 2026 23:54:47 |
| CalVet net | recover | PWS | MS2 | 17 | 59.9433 | -147.8954 | 192 | rHopcroft1 | 5/11/26 23:05 | Mon 11 May 2026 23:55:32 |
| CTD911 | deploy | Icy Bay | IB1.5 | 027 | 60.2573 | -148.2668 | 153 | sDanielson1 | 5/12/26 3:24 | Tue 12 May 2026 03:24:04 |
| CTD911 | recover | Icy Bay | IB1.5 | 027 | 60.2573 | -148.2668 | 153 | lSgouros1 | 5/12/26 3:55 | Tue 12 May 2026 03:55:05 |
| CalVet net | deploy | PWS | IB1.5 | 18 | 60.2573 | -148.2668 | 153 | rHopcroft1 | 5/12/26 3:59 | Tue 12 May 2026 04:39:31 |
| CalVet net | recover | PWS | IB1.5 | 18 | 60.2573 | -148.2668 | 153 | rHopcroft1 | 5/12/26 4:04 | Tue 12 May 2026 04:39:52 |
| multinet | deploy | PWS | KIP2 | 21 | 60.2676 | -147.9940 | 588 | aPoje1 | 5/12/26 6:06 | Tue 12 May 2026 06:06:41 |
| multinet | maxDepth | PWS | KIP2 | 21 | 60.2749 | -147.9891 | 588 | aPoje1 | 5/12/26 6:19 | Tue 12 May 2026 06:19:45 |
| multinet | recover | PWS | KIP2 | 21 | 60.2905 | -147.9802 | 588 | aPoje1 | 5/12/26 6:48 | Tue 12 May 2026 06:48:43 |
| multinet | deploy | PWS | PWS1 | 21 | 60.3664 | -147.9434 | 253 | aPoje1 | 5/12/26 7:36 | Tue 12 May 2026 07:36:13 |
| multinet | maxDepth | PWS | PWS1 | 22 | 60.3730 | -147.9397 | 253 | aPoje1 | 5/12/26 7:48 | Tue 12 May 2026 07:48:56 |
| multinet | recover | PWS | PWS1 | 22 | 60.3880 | -147.9288 | 253 | aPoje1 | 5/12/26 8:18 | Tue 12 May 2026 08:18:29 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| multinet | deploy | PWS | PWS2 | 22 | 60.5280 | -147.8203 | 719 | aPoje1 | | 5/12/26 9:22 | Tue 12 May 2026 09:22:39 |
| multinet | maxDepth | PWS | PWS2 | 23 | 60.5327 | -147.8091 | 719 | aPoje1 | | 5/12/26 9:35 | Tue 12 May 2026 09:35:47 |
| multinet | recover | PWS | PWS2 | 23 | 60.5427 | -147.7812 | 719 | aPoje1 | | 5/12/26 10:05 | Tue 12 May 2026 10:05:30 |
| multinet | deploy | PWS | PWS2 | 24 | 60.5234 | -147.8320 | 719 | aPoje1 | EtOH | 5/12/26 10:42 | Tue 12 May 2026 10:42:10 |
| multinet | maxDepth | PWS | PWS2 | 24 | 60.5286 | -147.8193 | 719 | aPoje1 | EtOH | 5/12/26 10:56 | Tue 12 May 2026 10:56:19 |
| multinet | recover | PWS | PWS2 | 24 | 60.5410 | -147.7891 | 719 | aPoje1 | EtOH | 5/12/26 11:28 | Tue 12 May 2026 11:28:43 |
| multinet | deploy | PWS | PWS3 | 25 | 60.6583 | -147.6904 | 741 | aPoje1 | | 5/12/26 12:33 | Tue 12 May 2026 12:33:35 |
| multinet | maxDepth | PWS | PWS3 | 25 | 60.6618 | -147.6792 | 741 | aPoje1 | | 5/12/26 12:45 | Tue 12 May 2026 12:45:59 |
| multinet | recover | PWS | PWS3 | 25 | 60.6714 | -147.6513 | 741 | aPoje1 | | 5/12/26 13:15 | Tue 12 May 2026 13:15:48 |
| CTD911 | deploy | PWS | PWS3 | 028 | 60.6665 | -147.6662 | 702 | lSgouros1 | | 5/12/26 15:20 | Tue 12 May 2026 15:20:02 |
| CTD911 | recover | PWS | PWS3 | 028 | 60.6665 | -147.6662 | 703 | lSgouros1 | | 5/12/26 16:18 | Tue 12 May 2026 16:18:59 |
| CTD911 | deploy | PWS | PWS2 | 029 | 60.5350 | -147.8016 | 727 | sDanielson1 | Primary Productivity cast | 5/12/26 17:58 | Tue 12 May 2026 17:58:04 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CTD911 | recover | PWS | PWS2 | 029 | 60.5350 | -147.8016 | 727 | sDanielson1 | | 5/12/26 18:24 | Tue 12 May 2026 18:24:01 |
| CTD911 | deploy | PWS | PWS2 | 030 | 60.5350 | -147.8016 | 727 | sDanielson1 | | 5/12/26 19:40 | Tue 12 May 2026 19:40:54 |
| CTD911 | recover | PWS | PWS2 | 030 | 60.5350 | -147.8016 | 727 | sDanielson1 | | 5/12/26 20:35 | Tue 12 May 2026 20:35:18 |
| TMCTD | deploy | PWS | PWS2 | TM09 | 60.5350 | -147.8016 | 726 | aAguilarIslas1 | | 5/12/26 21:14 | Tue 12 May 2026 21:14:54 |
| TMCTD | recover | PWS | PWS2 | TM09 | 60.5350 | -147.8016 | 726 | aAguilarIslas1 | | 5/12/26 22:07 | Tue 12 May 2026 22:07:13 |
| multinet | deploy | PWS | PWS2 | 1 | 60.5350 | -147.8016 | 727 | rHopcroft1 | Deep vertical | 5/12/26 22:30 | Wed 13 May 2026 00:50:09 |
| multinet | recover | PWS | PWS2 | 1 | 60.5350 | -147.8016 | 727 | rHopcroft1 | Deep vertical | 5/12/26 23:15 | Wed 13 May 2026 00:50:57 |
| multinet | deploy | PWS | PWS2 | 1A | 60.5350 | -147.8016 | 727 | rHopcroft1 | Shallow vertical | 5/12/26 23:44 | Wed 13 May 2026 00:51:54 |
| multinet | recover | PWS | PWS2 | 1A | 60.5350 | -147.8016 | 727 | rHopcroft1 | Shallow vertical | 5/12/26 23:58 | Wed 13 May 2026 00:52:25 |
| CTD911 | deploy | PWS | PWS1 | 031 | 60.3804 | -147.9361 | 347 | sDanielson1 | | 5/13/26 1:18 | Wed 13 May 2026 01:18:20 |
| CTD911 | recover | PWS | PWS1 | 031 | 60.3804 | -147.9362 | 347 | sDanielson1 | | 5/13/26 1:57 | Wed 13 May 2026 01:57:25 |
| CTD911 | deploy | PWS | KIP2 | 032 | 60.2782 | -147.9863 | 581 | sDanielson1 | | 5/13/26 2:57 | Wed 13 May 2026 02:57:36 |
| CTD911 | recover | PWS | KIP2 | 032 | 60.2780 | -147.9862 | 581 | sDanielson1 | | 5/13/26 3:52 | Wed 13 May 2026 03:52:57 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CTD911 | deploy | Seward | GEO | 033 | 59.0148 | -148.6927 | 231 | sDanielson1 | | 5/13/26 22:00 | Wed 13 May 2026 22:00:11 |
| Bongo Net | other | Kodiak | KOD10 | 1 | 57.2066 | -149.7173 | 2550 | aPoje1 | maxdepth | 5/14/26 14:05 | Thu 14 May 2026 14:05:59 |
| Bongo Net | recover | Kodiak | KOD10 | 1 | 57.2016 | -149.7197 | 2550 | aPoje1 | | 5/14/26 14:15 | Thu 14 May 2026 14:15:28 |
| CTD911 | deploy | Kodiak | KOD10 | 034 | 57.2065 | -149.7172 | 2550 | sDanielson1 | | 5/14/26 16:12 | Thu 14 May 2026 16:12:50 |
| CTD911 | recover | Kodiak | KOD10 | 034 | 57.2065 | -149.7172 | 2550 | sDanielson1 | | 5/14/26 16:32 | Thu 14 May 2026 16:32:01 |
| CTD911 | deploy | Kodiak | KOD10 | 035 | 57.2065 | -149.7172 | 2550 | sDanielson1 | | 5/14/26 18:01 | Thu 14 May 2026 18:01:18 |
| CTD911 | recover | Kodiak | KOD10 | 035 | 57.2065 | -149.7172 | 2550 | sDanielson1 | | 5/14/26 19:14 | Thu 14 May 2026 19:14:35 |
| CalVet net | deploy | PWS | PWS3 | 19 | 60.6665 | -147.6662 | 702 | rHopcroft1 | | 5/12/26 16:24 | Thu 14 May 2026 19:21:07 |
| CalVet net | recover | PWS | PWS3 | 19 | 60.6665 | -147.6662 | 702 | rHopcroft1 | | 5/12/26 16:33 | Thu 14 May 2026 19:21:33 |
| CalVet net | deploy | PWS | PWS2 | 20 | 60.5350 | -147.8016 | 727 | rHopcroft1 | | 5/12/26 18:44 | Thu 14 May 2026 19:22:34 |
| CalVet net | recover | PWS | PWS2 | 20 | 60.6665 | -147.6663 | 727 | rHopcroft1 | | 5/12/26 16:53 | Thu 14 May 2026 19:23:09 |
| CalVet net | deploy | PWS | PWS2 | 20a | 60.6358 | -147.6985 | 727 | rHopcroft1 | | 5/12/26 17:09 | Thu 14 May 2026 19:24:57 |
| CalVet net | recover | PWS | PWS2 | 20a | 60.6126 | -147.7230 | 727 | rHopcroft1 | | 5/12/26 17:18 | Thu 14 May 2026 19:26:22 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | deploy | PWS | PWS1 | 21 | 60.3817 | -147.9361 | 347 | rHopcroft1 | | 5/13/26 1:04 | Thu 14 May 2026 19:28:37 |
| CalVet net | recover | PWS | PWS1 | 21 | 60.3804 | -147.9362 | 347 | rHopcroft1 | | 5/13/26 1:13 | Thu 14 May 2026 19:29:13 |
| CalVet net | deploy | PWS | KIP2 | 22 | 60.2780 | -147.9862 | 581 | rHopcroft1 | | 5/13/26 4:01 | Thu 14 May 2026 19:31:15 |
| CalVet net | recover | PWS | KIP2 | 22 | 60.2780 | -147.9862 | 581 | rHopcroft1 | | 5/13/26 4:09 | Thu 14 May 2026 19:32:32 |
| CalVet net | deploy | Kodiak | KOD10 | 23 | 57.2065 | -149.7172 | 2550 | rHopcroft1 | | 5/14/26 16:40 | Thu 14 May 2026 19:34:06 |
| CalVet net | recover | Kodiak | KOD10 | 23 | 57.2065 | -149.7172 | 2550 | rHopcroft1 | | 5/14/26 16:48 | Thu 14 May 2026 19:34:28 |
| CalVet net | deploy | Kodiak | KOD10 | 23a | 57.2065 | -149.7172 | 2550 | rHopcroft1 | EtOH | 5/14/26 17:29 | Thu 14 May 2026 19:35:01 |
| CalVet net | recover | Kodiak | KOD10 | 23a | 57.2065 | -149.7172 | 2550 | rHopcroft1 | EtOH | 5/14/26 17:37 | Thu 14 May 2026 19:35:55 |
| TMCTD | deploy | Kodiak | KOD10 | TM10 | 57.2065 | -149.7172 | 2520 | aAguilarIslas1 | | 5/14/26 19:52 | Thu 14 May 2026 19:52:16 |
| TMCTD | recover | Kodiak | KOD10 | TM10 | 57.2053 | -149.7199 | 2520 | aAguilarIslas1 | | 5/14/26 20:58 | Thu 14 May 2026 21:28:58 |
| CTD911 | deploy | Kodiak | KOD9 | 036 | 57.3218 | -149.9271 | 1330 | sDanielson1 | | 5/14/26 22:03 | Thu 14 May 2026 22:03:38 |
| CTD911 | recover | Kodiak | KOD9 | 036 | 57.3218 | -149.9267 | 1330 | sDanielson1 | | 5/14/26 23:17 | Thu 14 May 2026 23:17:49 |
| CalVet net | deploy | Kodiak | KOD9 | 24 | 57.3218 | -149.9272 | 1330 | rHopcroft1 | | 5/14/26 23:25 | Fri 15 May 2026 00:10:47 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | recover | Kodiak | KOD9 | 24 | 57.3218 | -149.9292 | 1330 | rHopcroft1 | | 5/14/26 23:33 | Fri 15 May 2026 00:11:11 |
| CalVet net | deploy | Kodiak | KOD8 | 25 | 57.4386 | -150.1324 | 715 | rHopcroft1 | | 5/15/26 1:51 | Fri 15 May 2026 02:19:16 |
| CalVet net | recover | Kodiak | KOD8 | 25 | 57.4378 | -150.1339 | 715 | rHopcroft1 | | 5/15/26 1:59 | Fri 15 May 2026 02:19:43 |
| TMCTD | deploy | Kodiak | KOD08 | TM11 | 57.4378 | -150.1339 | 726 | aAguilarIslas1 | | 5/15/26 2:22 | Fri 15 May 2026 02:22:47 |
| TMCTD | recover | Kodiak | KOD08 | TM11 | 57.4378 | -150.1337 | 726 | aAguilarIslas1 | | 5/15/26 3:11 | Fri 15 May 2026 03:11:22 |
| CalVet net | deploy | Kodiak | KOD7 | 26 | 57.5571 | -150.3389 | 185 | rHopcroft1 | | 5/15/26 4:21 | Fri 15 May 2026 04:21:18 |
| CalVet net | recover | Kodiak | KOD7 | 26 | 57.5575 | -150.3396 | 181 | rHopcroft1 | | 5/15/26 4:31 | Fri 15 May 2026 04:48:33 |
| CTD911 | deploy | Kodiak | KOD8 | 037 | 57.5575 | -150.3395 | 715 | sDanielson1 | fix time/date | 5/15/26 4:52 | Fri 15 May 2026 04:52:22 |
| CTD911 | recover | Kodiak | KOD8 | 037 | 57.5575 | -150.3395 | 715 | sDanielson1 | | 5/15/26 4:52 | Fri 15 May 2026 04:52:38 |
| CTD911 | deploy | Kodiak | KOD7 | 038 | 57.5575 | -150.3395 | 180 | sDanielson1 | fix time/date | 5/15/26 4:53 | Fri 15 May 2026 04:53:03 |
| Bongo Net | deploy | Kodiak | KOD6 | 2 | 57.6767 | -150.5590 | 100 | aPoje1 | | 5/15/26 6:34 | Fri 15 May 2026 06:34:12 |
| Bongo Net | other | Kodiak | KOD6 | 2 | 57.6742 | -150.5547 | 100 | aPoje1 | maxdepth | 5/15/26 6:40 | Fri 15 May 2026 06:40:29 |
| Bongo Net | recover | Kodiak | KOD6 | 2 | 57.6722 | -150.5513 | 100 | aPoje1 | | 5/15/26 6:45 | Fri 15 May 2026 06:45:47 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bongo Net | deploy | Kodiak | KOD7 | 3 | 57.5632 | -150.3504 | 136 | aPoje1 | | 5/15/26 7:52 | Fri 15 May 2026 07:52:29 |
| Bongo Net | other | Kodiak | KOD7 | 3 | 57.5597 | -150.3443 | 170 | aPoje1 | maxdepth | 5/15/26 8:01 | Fri 15 May 2026 08:01:51 |
| Bongo Net | recover | Kodiak | KOD7 | 3 | 57.5566 | -150.3383 | 170 | aPoje1 | | 5/15/26 8:10 | Fri 15 May 2026 08:10:27 |
| Bongo Net | deploy | Kodiak | KOD8 | 4 | 57.4370 | -150.1460 | 670 | aPoje1 | | 5/15/26 9:21 | Fri 15 May 2026 09:21:56 |
| Bongo Net | other | Kodiak | KOD8 | 4 | 57.4389 | -150.1370 | 670 | aPoje1 | maxdepth | 5/15/26 9:33 | Fri 15 May 2026 09:33:16 |
| Bongo Net | recover | Kodiak | KOD8 | 4 | 57.4404 | -150.1285 | 670 | aPoje1 | | 5/15/26 9:44 | Fri 15 May 2026 09:44:28 |
| Bongo Net | deploy | Kodiak | KOD9 | 5 | 57.3213 | -149.9379 | 1859 | aPoje1 | | 5/15/26 10:57 | Fri 15 May 2026 10:57:50 |
| Bongo Net | other | Kodiak | KOD9 | 5 | 57.3221 | -149.9278 | 1859 | aPoje1 | maxdepth | 5/15/26 11:09 | Fri 15 May 2026 11:09:44 |
| Bongo Net | recover | Kodiak | KOD9 | 5 | 57.3233 | -149.9190 | 1859 | aPoje1 | | 5/15/26 11:20 | Fri 15 May 2026 11:20:43 |
| CTD911 | deploy | Kodiak | KOD6 | 039 | 57.6709 | -150.5493 | 99.5 | sDanielson1 | | 5/15/26 14:32 | Fri 15 May 2026 14:32:52 |
| CTD911 | recover | Kodiak | KOD6 | 039 | 57.6709 | -150.5493 | 99.5 | sDanielson1 | | 5/15/26 15:03 | Fri 15 May 2026 15:03:43 |
| CTD911 | deploy | Kodiak | KOD5 | 040 | 57.7844 | -150.7612 | 86.8 | sDanielson1 | | 5/15/26 16:33 | Fri 15 May 2026 16:33:13 |
| CTD911 | recover | Kodiak | KOD5 | 040 | 57.7844 | -150.7612 | 86.8 | sDanielson1 | | 5/15/26 17:02 | Fri 15 May 2026 17:02:33 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | deploy | Kodiak | KOD5 | 28 | 57.7848 | -150.7616 | 87 | rHopcroft1 | 5/15/26 17:10 | Fri 15 May 2026 17:39:53 |
| CalVet net | recover | Kodiak | KOD5 | 28 | 57.7857 | -150.7626 | 87 | rHopcroft1 | 5/15/26 17:17 | Fri 15 May 2026 17:40:03 |
| CalVet net | deploy | Kodiak | KOD5 | 28A | 57.7860 | -150.7629 | 87 | rHopcroft1 | 5/15/26 17:38 | Fri 15 May 2026 17:40:16 |
| CalVet net | recover | Kodiak | KOD5 | 28A | 57.7870 | -150.7636 | 87 | rHopcroft1 | 5/15/26 17:44 | Fri 15 May 2026 18:00:35 |
| CTD911 | deploy | Kodiak | KOD5 | 041 | 57.7874 | -150.7639 | 87 | sDanielson1 | 5/15/26 18:06 | Fri 15 May 2026 18:06:28 |
| TMCTD | deploy | Kodiak | KOD05 | TM12 | 57.7874 | -150.7639 | 87 | aAguilarIslas1 | 5/15/26 19:06 | Fri 15 May 2026 19:06:30 |
| CTD911 | recover | Kodiak | KOD5 | 041 | 57.7874 | -150.7639 | 87 | sDanielson1 | 5/15/26 18:50 | Fri 15 May 2026 19:10:29 |
| TMCTD | recover | Kodiak | KOD05 | TM12 | 57.7874 | -150.7639 | 87 | aAguilarIslas1 | 5/15/26 19:26 | Fri 15 May 2026 19:26:07 |
| CTD911 | deploy | Kodiak | KOD4 | 042 | 57.9014 | -150.9704 | 77 | lSgouros1 | 5/15/26 20:28 | Fri 15 May 2026 20:28:11 |
| CTD911 | recover | Kodiak | KOD4 | 042 | 57.9012 | -150.9702 | 77 | lSgouros1 | 5/15/26 20:52 | Fri 15 May 2026 20:52:27 |
| CalVet net | deploy | Kodiak | KOD4 | 29 | 57.9012 | -150.9703 | 78 | rHopcroft1 | 5/15/26 20:56 | Fri 15 May 2026 21:00:54 |
| CalVet net | recover | Kodiak | KOD4 | 29 | 57.9012 | -150.9702 | 78 | rHopcroft1 | 5/15/26 21:03 | Fri 15 May 2026 21:01:28 |
| CalVet net | deploy | Kodiak | KOD6 | 27 | 57.7631 | -150.7196 | | rHopcroft1 | 5/15/26 16:14 | Fri 15 May 2026 21:03:09 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | recover | Kodiak | KOD6 | 27 | 57.7772 | -150.7463 | | rHopcroft1 | | 5/15/26 16:21 | Fri 15 May 2026 21:03:16 |
| CalVet net | deploy | Kodiak | KOD3 | 30 | 58.0148 | -151.1780 | | rHopcroft1 | | 5/15/26 22:41 | Fri 15 May 2026 22:41:20 |
| CalVet net | recover | Kodiak | KOD3 | 30 | 58.0149 | -151.1774 | | rHopcroft1 | | 5/15/26 22:48 | Fri 15 May 2026 22:48:27 |
| CTD911 | deploy | Kodiak | KOD2 | 044 | 58.1300 | -151.3850 | 126 | sDanielson1 | | 5/15/26 23:50 | Sat 16 May 2026 00:15:44 |
| CTD911 | recover | Kodiak | KOD2 | 044 | 58.1299 | -151.3865 | 126 | sDanielson1 | | 5/16/26 0:36 | Sat 16 May 2026 00:36:06 |
| CTD911 | deploy | Kodiak | KOD3 | 043 | 58.0140 | -151.1773 | 82 | sDanielson1 | | 5/15/26 22:05 | Sat 16 May 2026 00:37:08 |
| CTD911 | recover | Kodiak | KOD3 | 043 | 58.0148 | -151.1780 | 82 | sDanielson1 | | 5/15/26 22:37 | Sat 16 May 2026 00:37:17 |
| CalVet net | deploy | Kodiak | KOD2 | 31 | 58.1299 | -151.3865 | 126 | rHopcroft1 | | 5/16/26 0:37 | Sat 16 May 2026 00:37:30 |
| CalVet net | recover | Kodiak | KOD2 | 31 | 58.1300 | -151.3867 | 126 | rHopcroft1 | | 5/16/26 0:39 | Sat 16 May 2026 00:39:26 |
| CalVet net | deploy | Kodiak | KOD2 | 31A | 58.1304 | -151.3868 | 126 | rHopcroft1 | etOH | 5/16/26 0:56 | Sat 16 May 2026 00:56:03 |
| CalVet net | recover | Kodiak | KOD2 | 31A | 58.1304 | -151.3868 | 126 | rHopcroft1 | | 5/16/26 1:04 | Sat 16 May 2026 01:04:16 |
| TMCTD | deploy | Kodiak | KOD02 | TM13 | 58.1304 | -151.3868 | 127 | aAguilarIslas1 | | 5/16/26 1:08 | Sat 16 May 2026 01:08:53 |
| TMCTD | recover | Kodiak | KOD02 | TM13 | 58.1304 | -151.3868 | 127 | aAguilarIslas1 | | 5/16/26 1:28 | Sat 16 May 2026 01:28:27 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CTD911 | deploy | Kodiak | KOD1 | 045 | 58.2442 | -151.5886 | 69 | sDanielson1 | | 5/16/26 2:39 | Sat 16 May 2026 02:39:00 |
| CTD911 | recover | Kodiak | KOD1 | 045 | 58.2442 | -151.5887 | 69 | sDanielson1 | | 5/16/26 3:03 | Sat 16 May 2026 03:03:17 |
| CalVet net | deploy | Kodiak | KOD1 | 32 | 58.2430 | -151.5891 | 70 | rHopcroft1 | | 5/16/26 3:10 | Sat 16 May 2026 03:10:31 |
| CalVet net | recover | Kodiak | KOD1 | 32 | 58.2408 | -151.5900 | 70 | rHopcroft1 | | 5/16/26 3:15 | Sat 16 May 2026 03:15:12 |
| CTD911 | deploy | Middleton | MID8 | 046 | 59.2254 | -146.2004 | 642 | lSgouros1 | | 5/16/26 22:37 | Sat 16 May 2026 22:37:28 |
| CTD911 | recover | Middleton | MID8 | 046 | 59.2254 | -146.2004 | 642 | lSgouros1 | | 5/16/26 23:40 | Sat 16 May 2026 23:40:24 |
| CTD911 | recover | Middleton | MID8 | 046 | 59.2254 | -146.2004 | 642 | lSgouros1 | | 5/16/26 23:40 | Sat 16 May 2026 23:40:25 |
| CalVet net | deploy | Middleton | MID8 | 33 | 59.2254 | -146.2004 | 612 | rHopcroft1 | | 5/16/26 23:46 | Sat 16 May 2026 23:48:37 |
| CalVet net | recover | Middleton | MID8 | 33 | 59.2254 | -146.2004 | 612 | rHopcroft1 | 45 deg angle | 5/16/26 23:54 | Sat 16 May 2026 23:54:33 |
| CalVet net | deploy | Middleton | MID7 | 34 | 59.3830 | -146.2946 | 49 | rHopcroft1 | | 5/17/26 1:32 | Sun 17 May 2026 01:52:36 |
| CalVet net | recover | Middleton | MID7 | 34 | 59.3830 | -146.2946 | 49 | rHopcroft1 | | 5/17/26 1:37 | Sun 17 May 2026 01:52:52 |
| TMCTD | deploy | Middleton | MID7 | TM14 | 59.3831 | -146.2946 | 60 | aAguilarIslas1 | | 5/17/26 2:17 | Sun 17 May 2026 02:17:08 |
| TMCTD | recover | Middleton | MID7 | TM14 | 59.3830 | -146.2946 | 60 | aAguilarIslas1 | | 5/17/26 2:30 | Sun 17 May 2026 02:30:11 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Bongo Net | deploy | Middleton | KOD10 | 1 | 57.2122 | -149.7149 | 2550 | aPoje1 | 5/14/26 13:55 | Sun 17 May 2026 04:00:56 |
| CTD911 | deploy | Middleton | MID1 | 048 | 60.2499 | -145.5001 | 15 | sDanielson1 | 5/18/26 14:30 | Mon 18 May 2026 16:21:38 |
| CTD911 | recover | Middleton | MID1 | 048 | 60.2499 | -145.5001 | 15 | sDanielson1 | 5/18/26 14:55 | Mon 18 May 2026 16:22:26 |
| CTD911 | deploy | Middleton | MID1i | 049 | 60.1750 | -145.5761 | 95 | sDanielson1 | 5/18/26 15:36 | Mon 18 May 2026 16:23:18 |
| CTD911 | recover | Middleton | MID1i | 049 | 60.1750 | -145.5761 | 95 | sDanielson1 | 5/18/26 15:36 | Mon 18 May 2026 16:23:52 |
| CTD911 | deploy | Middleton | MID2 | 050 | 60.1009 | -145.6490 | 116 | sDanielson1 | 5/18/26 16:35 | Mon 18 May 2026 16:35:46 |
| CTD911 | recover | Middleton | MID2 | 050 | 60.1011 | -145.6500 | 116 | sDanielson1 | 5/18/26 17:06 | Mon 18 May 2026 17:06:14 |
| CTD911 | deploy | Middleton | MID2 | 051 | 60.1011 | -145.6499 | 116 | lSgouros1 | 5/18/26 18:05 | Mon 18 May 2026 18:05:39 |
| CTD911 | recover | Middleton | MID2 | 051 | 60.1011 | -145.6499 | 116 | lSgouros1 | 5/18/26 18:37 | Mon 18 May 2026 18:37:00 |
| TMCTD | deploy | Middleton | MID2 | TM15 | 60.1011 | -145.6499 | 117 m | aAguilarIslas1 | 5/18/26 19:10 | Mon 18 May 2026 19:10:42 |
| TMCTD | recover | Middleton | MID2 | TM15 | 60.1011 | -145.6499 | 117 m | aAguilarIslas1 | 5/18/26 19:27 | Mon 18 May 2026 19:27:32 |
| CTD911 | deploy | Middleton | MID2i | 052 | 60.0254 | -145.7249 | 95 | sDanielson1 | 5/18/26 20:10 | Mon 18 May 2026 20:10:03 |
| CTD911 | recover | Middleton | MID2i | 052 | 60.0254 | -145.7248 | 95 | sDanielson1 | 5/18/26 20:21 | Mon 18 May 2026 20:21:23 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CTD911 | deploy | Middleton | MID3 | 053 | 59.9500 | -145.7997 | 87 | sDanielson1 | 5/18/26 21:07 | Mon 18 May 2026 21:07:12 |
| CTD911 | recover | Middleton | MID3 | 053 | 59.9499 | -145.7996 | 87 | sDanielson1 | 5/18/26 21:35 | Mon 18 May 2026 21:35:43 |
| CTD911 | deploy | Middleton | MID3i | 054 | 59.8750 | -145.8743 | 103 | sDanielson1 | 5/18/26 22:47 | Mon 18 May 2026 22:47:53 |
| CTD911 | recover | Middleton | MID3i | 054 | 59.8750 | -145.8743 | 103 | sDanielson1 | 5/18/26 22:48 | Mon 18 May 2026 22:48:00 |
| CTD911 | deploy | Middleton | MID4 | 055 | 59.7998 | -145.9496 | 92 | sDanielson1 | 5/18/26 23:30 | Mon 18 May 2026 23:30:07 |
| CTD911 | recover | Middleton | MID4 | 055 | 59.7998 | -145.9497 | 92 | sDanielson1 | 5/18/26 23:53 | Mon 18 May 2026 23:53:14 |
| CTD911 | deploy | Middleton | MID4i | 056 | 59.7250 | -146.0246 | 75 | sDanielson1 | 5/19/26 0:48 | Tue 19 May 2026 00:48:19 |
| CTD911 | recover | Middleton | MID4i | 056 | 59.7249 | -146.0246 | 75 | sDanielson1 | 5/19/26 0:56 | Tue 19 May 2026 00:56:32 |
| CTD911 | deploy | Middleton | MID5 | 057 | 59.6500 | -146.1000 | 96 | lSgouros1 | 5/19/26 1:36 | Tue 19 May 2026 01:36:45 |
| CTD911 | recover | Middleton | MID5 | 057 | 59.6500 | -146.0999 | 96 | lSgouros1 | 5/19/26 2:05 | Tue 19 May 2026 02:05:39 |
| TMCTD | deploy | Middleton | MID5 | TM16 | 59.6502 | -146.1004 | 86 m | aAguilarIslas1 | 5/19/26 2:58 | Tue 19 May 2026 02:58:13 |
| TMCTD | recover | Middleton | MID5 | TM16 | 59.6502 | -146.1004 | 86 m | aAguilarIslas1 | 5/19/26 3:11 | Tue 19 May 2026 03:11:51 |
| CTD911 | deploy | Middleton | MID5i | 058 | 59.5756 | -146.1748 | 112 | sDanielson1 | 5/19/26 3:54 | Tue 19 May 2026 03:54:20 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | deploy | Middleton | MID1 | 35 | 60.2499 | -145.5001 | 16 | aPoje1 | | 5/18/26 14:52 | Tue 19 May 2026 04:05:30 |
| CalVet net | recover | Middleton | MID1 | 35 | 60.2499 | -145.5001 | 16 | aPoje1 | | 5/18/26 14:54 | Tue 19 May 2026 04:05:45 |
| CalVet net | deploy | Middleton | MID2 | 36 | 60.1011 | -145.6500 | 117 | aPoje1 | | 5/18/26 17:13 | Tue 19 May 2026 04:06:35 |
| CalVet net | recover | Middleton | MID2 | 36 | 60.1011 | -145.6500 | 117 | aPoje1 | | 5/18/26 17:20 | Tue 19 May 2026 04:07:01 |
| CalVet net | deploy | Middleton | MID3 | 37 | 59.9499 | -145.7996 | 87 | aPoje1 | | 5/18/26 21:43 | Tue 19 May 2026 04:08:23 |
| CalVet net | recover | Middleton | MID3 | 37 | 59.9500 | -145.7996 | 87 | aPoje1 | | 5/18/26 21:49 | Tue 19 May 2026 04:08:40 |
| CalVet net | deploy | Middleton | MID4 | 38 | 59.7998 | -145.9497 | 94 | aPoje1 | | 5/18/26 23:58 | Tue 19 May 2026 04:10:12 |
| CalVet net | recover | Middleton | MID4 | 38 | 59.7998 | -145.9497 | 94 | aPoje1 | | 5/19/26 0:04 | Tue 19 May 2026 04:10:38 |
| CTD911 | recover | Middleton | MID5i | 058 | 59.5755 | -146.1755 | 112 | sDanielson1 | | 5/19/26 4:10 | Tue 19 May 2026 04:10:48 |
| CalVet net | deploy | Middleton | MID2 | 36A | 60.1011 | -145.6500 | 117 | aPoje1 | EtOH | 5/18/26 17:39 | Tue 19 May 2026 04:13:25 |
| CalVet net | recover | Middleton | MID2 | 36A | 60.1011 | -145.6499 | 117 | aPoje1 | | 5/18/26 17:47 | Tue 19 May 2026 04:13:51 |
| CalVet net | deploy | Middleton | MID5 | 39 | 59.6500 | -146.0999 | 96 | aPoje1 | | 5/19/26 2:10 | Tue 19 May 2026 04:17:48 |
| CalVet net | recover | Middleton | MID5 | 39 | 59.6500 | -146.0999 | 96 | aPoje1 | | 5/19/26 2:16 | Tue 19 May 2026 04:19:05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CalVet net | deploy | Middleton | MID5 | 39A | 59.6502 | -146.1004 | 96 | aPoje1 | EtOH | 5/19/26 2:42 | Tue 19 May 2026 04:21:01 |
| CalVet net | recover | Middleton | MID5 | 39A | 59.6502 | -146.1004 | 96 | aPoje1 | EtOH | 5/19/26 2:50 | Tue 19 May 2026 04:21:42 |
| CTD911 | deploy | Middleton | MID6 | 059 | 59.5007 | -146.2499 | 36 | lSgouros1 | | 5/19/26 4:52 | Tue 19 May 2026 04:52:01 |
| CTD911 | recover | Middleton | MID6 | 059 | 59.5007 | -146.2498 | 36 | lSgouros1 | | 5/19/26 5:07 | Tue 19 May 2026 05:57:54 |
| CalVet net | deploy | Middleton | MID6 | 40 | 59.5007 | -146.2498 | 37 | aPoje1 | | 5/19/26 5:14 | Tue 19 May 2026 15:32:43 |
| CalVet net | recover | Middleton | MID6 | 40 | 59.5008 | -146.2498 | 37 | aPoje1 | | 5/19/26 5:17 | Tue 19 May 2026 15:33:29 |