

Table 1: Draft list of deck operations to be carried out at sampling stations during Leg 1a and Leg 1b of the 2014 CCGS *Amundsen* Expedition.

Station type (symbol)	Duration of operations	Sampling operations
CTD (C)	~30 minutes	<ol style="list-style-type: none"> 1. Bottom-surface profiles of temperature, salinity, light transmittance, PAR, chlorophyll <i>a</i> fluorescence, oxygen and currents using the Seabird 911+ profiler with LADCP (1 CTD cast = 30 min). An Underwater Vision Profiler coupled to the Rosette will collect <i>in situ</i> zooplankton images. No water sampling.
CTD + Nutrients (N)	1 hr	<p><u>Same as CTD</u> +</p> <ol style="list-style-type: none"> 1. Rosette sampling for high-resolution profile of nutrients and phytoplankton biomass.
BASIC (B)	6 to 8 hrs	<p><u>Same as CTD-Nutrients</u> +</p> <ol style="list-style-type: none"> 1. Additional Rosette sampling for DOC, DIC, contaminants, nutrients, total and fractionated Chl <i>a</i> and CDOM, phytoplankton absorption, total suspended matter, HPLC, FISH, DNA, RNA, pigment content, fatty acid markers (1 or 2 additional CTD-Rosette casts = 1 - 2 hrs). 2. Light profiles with PNF and Secchi disk (30 min). 3. Box coring of bottom sediments (1 deployment = 45 min). 4. Deployment of Agassiz sledge for sampling the epibenthic fauna (1 deployment = 45 min). 5. 6-Net Vertical Sampler (6NVS) tow for the determination of zooplankton and ichthyoplankton densities (1 vertical tow = 45 min) 6. Double Square Net (DSN) tow for the determination of zooplankton and ichthyoplankton densities (1 horizontal net tow = 45 min).
Full (F)	12 to 15 hours	<p><u>Same as Basic (~6 hrs)</u> +</p> <ol style="list-style-type: none"> 1. 2 additional CTD-Rosette deployments (2 hrs). 2. Hydrobios deployment (1 hr) 3. Bioness deployment (1 hr) 4. IKMT deployment (45 min) 5. Light-frame On-sight Key-species Investigation (LOKI) deployment (1 deployment = 1 hr) 6. MOKI zooplankton recorder deployment (1 deployment = 1hr) 7. High volume water pumping (30 min – or to be carried out simultaneously with other deployments) 8. Gravity core at selected stations (1 deployment = 30 min)

Additional information for Leg 1a operations:

1. ROV deployments along the coast of Baffin Island for exploration of deep sea corals (approx. 45 hours for ROV deployments and multibeam surveys);
2. Daily coordinated sampling operations with AWI Polar 6 plane in Lancaster Sound (between LS entrance and Resolute);
3. 1 additional CTD-Rosette cast for DMS, Primary Production, CO₂ and CH₄ sampling at Nutrient stations #322, 325, 343, 346;
4. MVP transect across entrance to Lancaster Sound;
5. Melt pond sampling in Wellington Channel (while at Basic station #342)
6. Opportunistic deployment of Zodiac for sea-surface microlayer sampling;
7. Opportunistic deployment of the benthic beam trawl;
8. Launch of radiosondes (underway operation);
9. Pending Nunavut scientific licence approval and if ice conditions allow, opportunistic deployment of the SX90 sonar while conducting Lancaster Sound transects.

Additional information for Leg 1b operations:

1. Deployment of underwater gliders in Baffin Bay (approx. 6 hrs);
2. Ice island operations (approx. 24 hrs);
3. CASQ coring operations at stations #200, 204 and 210 with potential additional deployments in northern Baffin Bay;
4. Short multibeam surveys at Basic stations #200, 204 and 210 to support CASQ coring operations;
5. MVP transect between Basic stations #200 and #204;
6. MVP transect below Kane Basin (vicinity of Basic station #129);
7. Melt Pond sampling operations along the north-south transect in northern Baffin Bay, Ellesmere Island coast;
8. Opportunistic deployment of landing barge for measurement of water column optical properties;
9. Opportunistic deployment of Zodiac for sea-surface microlayer sampling;
10. Opportunistic deployment of the benthic beam trawl;
11. Launch of radiosondes (underway operation);
12. Pending Nunavut scientific licence approval and if ice conditions allow, opportunistic deployment of the SX90 sonar in NWP.