Sampling notes, Line P cruise 2023-066, 30 April to 16 May 2023

CTD/Rosettes:

77 files, 0001 to 0153.

0 stand-alone CTD.

59 rosette casts.

3 casts needed two files (68/69, 86/87, 90/91).

0 file not needed.

CTD 1515 used from cast 0001 to 0058, CTD 0550 used for the rest of the cruise.

Seasave version 7.26.7.121

Configuration files:

2023-066Start.xmlcon was used from file 0001 to 0039.

The deck unit was set to average every 24 lines.

2023-066\_average-1.xmlcon ended up not being used.

Because we also changed the fluo cable to 10x gain before the following cast.

2023-066\_average-1\_10xFLUO.xmlcon was used for file 0041.

Averaging set up to 1 file, fluo gain cable changed to 10x.

2023-066\_average-1\_10xNew\_FLUO\_3640.xmlcon was used from 0044 to 0058.

We swap Fluorometer 3685 to Fluorometer 3640.

9p-550 2023-066 P18 on.xmlcon was used from 0060 to 0144.

CTD 0550 replaced CTD 1515.

9p-550 2023-066 P18 on\_3xFluo.xmlcon was used from 0145 to 0153.

Fluorescence was maxing out with the 10x cable.

Standard procedure:

The rosette was brought to the surface. Pumps were turned ON. The rosette was brought down to 10m and kept there for 30 seconds. Once back at the surface, the data started to be archived, with the rosette at the surface for 30 (60?) seconds longer. Then the cast would start.

For the Line P rosette casts (0001 to 0091):

Niskin bottles closed from 0 to 400 dbar (both included) had a wait time of 60 seconds.

All Niskin bottles deeper than 400 dbar had a wait time of 30 seconds.

For all rosettes in the Strait of Georgia (0117 to 0153):

All Niskin bottles had a wait time of 30 seconds.

Problems with CTD:

Casts 0001 to 0039: The deck unit was set to average 24 lines of data so the files are very small.

Most casts from 0036 to 0091 (P11 to P26): lots of spikes in the data, in all sensors and pressure.

Cast 0047 (P15): we lost connection with the CTD at ~375 dbar. There is no upcast and no Niskin closed.

Cast 0068, P20 deep: Software crashed at 3185 on the downcast. File 0069 is the rest of the downcast and all the upcast.

Casts 0086/87, P26 deep: because of all the “scan length errors” we were getting we started a new file for the upcast of P26 Deep.

Casts 0090/91, P26 DMS: because of all the “scan length errors” we were getting we started a new file for the upcast of P26 DMS.

In the “test” directory with the CTD data there is a file called 2023-066-test600m. This could be renamed 2023-066-0101 and be a ‘real’ CTD cast. No CHE file as the bottles were only closed for testing.

Niskins & Samples at CTD/Rosette casts:

Cast 0001 – SI03: only 15 Niskin closed; probably interference with the UHF radios.

Cast 0058 – P17: A Niskin got closed at 2000 for bulk water. Sample number 404 was assigned to this bottle, but that sample number got used again on cast 0060. Since the Niskin on cast 0058 was just for bulk water, the Niskin doesn’t have to go in the CHE file.

Cast 0060 – P18: Full salinity and oxygen samples profiles because of new CTD and oxy sensor.

Cast 0096 – PA-017: Niskins were closed at depth but they were “just closed”, no sample taken.

File names – Headers:

Cast 0045: not a cast.

Cast 0069 – upcast of P20 deep: called 0068-1; should be renamed 0069.

Cast 0086 – P26 deep downcast: wrong depth, should be 4224 not 4364.

Casts 0120 to 0131: missing the “0” (2023-066-120 …)

Cast 0109 – CPE1: wrong station name, should be CPE1, not CPE.

Casts with no PAR sensor (the sampling logs don’t all have the correct information):

0039 – P12 Deep; 0049 – P14; 0052 – P16 Deep; 0053, 0054, 0055 (P16 Cesium); 0060 – P18; 0062 – P19; 0068/69 – P20 Deep; 0075 – P22; 0079 – P24; 0086/87 – P26 Deep.

Cast out of order:

0019 – P4 DMS; 0041 – P12 DMS; 0049 – P16 DMS; 0058 – P17; 0071 – P20 DMS; 0091 – P26 DMS.

Casts with no Niskin closed:

On Line P: 0047 – P15 and 0096 – PA-017 (0096: Niskins closed but no CHE file needed).

Many after 0117.

Loops:

See loops log.

TSG:

The water didn’t get turned on until ~P6, and for some reason the recording seems to have stopped on May 13.