CARGO 6 CRUISE OUTLINE
Schedule of activities
Times in **bold** are critical

Travel day, September 15

Two vans from Twin Cities. Northbound drivers/riders are Sandy Brovold, Bridget Seegers, Robert Sterner, and Nathan Brovold. Drivers and riders back to Cities are Brovolds, Seegers, and Sterner. Thomas Pevan out again to deploy the FRR and hopefully our new fluoroprobe and phyto PAM. We would skip much of the filtering but would still need to do some for optical absorption measurements.

Day One: September 16th

All hands: Science meeting on board at 06:00

07:00 Depart for CD-1

11:00 CD-1 Activities

1. CTD profile
2. Bio-optical profiling (1 hr)
3. Water sampling for core chemistry and biology -- Eight depths with Niskin rosette.
4. Collect water for grazing incubations (Niskins)
5. Collect water for three photosynthetron PI runs (3 depths, Niskins)
6. Six net tows, two at each of three depth intervals
7. Bio-optical profiling (1 hr)
8. Collect water for optical absorption

18:00 Latest possible departure time for WM

Cruise time minimum 7.5 h

Day Two: September 17th

Begin deck work at WM at 02:00

1. CTD profile
2. Collect water for bottle array, in situ grazing
3. Bio-optical profiling (1 hr)
4. Prepare in situ incubation bottles
5. Deploy bottle array **by 0530 (sunrise at 0640)**
6. Collect water for core chemistry and biology - Eight in situ incubation depths plus 1 deep sampling.
7. High resolution NO3 sampling (18 additional depths)

8. Six net tows, two at each of three depth intervals
9. Bio-optical profiling (1 hr)
10. Collect water for optical absorption

20:00, Day Two, retrieve bottle array **(sunset at 19:06)**

Depart WM for CD-1. Minimum cruise time 7.5 h (allow some weather buffer)

While underway, process bottle array incubations, perform other opportunistic sampling.

Day Three: September 18th

05:00 Arrive CD-1

1. CTD profile
2. Bio-optical profiling
3. Collect water for St. Paul grazing incubations
4. Net tows

Cruise time 4 hr

Time for additional sampling while inbound.

Home no later than 17:00, Day 3, or sooner if weather allows

Science Crew Primary Duties:

Robert Sterner – Rad van bottle array and PI curves
Sandy Brovold – Process chemistry samples, assist in rad van as needed
Nathan Brovold – Assist Sandy and Bridget on deck and with filtering
Bridget Seegers – Grazing studies and net tows
Tom Pevan – Bio-optical profiling and water collection for optical absorption
Marine Intern – Assist with water collection from Niskins and net tows as needed.

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