CLASS PROGRAM

NAME _____ ADDRESS _____

SCHOOL _____ CLASS _____

		PERIOD 1	PERIOD 2	PERIOD 3	PERIOD 4	PERIOD 5	PERIOD 6	PERIOD 7	PERIOD 8
TIME	FROM								
	TO...								
MONDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
TUESDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
WEDNESDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
THURSDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
FRIDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
SATURDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								

9¾ in. x 7½ in.

MADE IN U.S.A.

DRY LAB

*photocopy and scan at the end of every day
→optical engineer notes folder

5/9/13 -make an inventory once full supplies arrive

Accuri
-filter and tubes change at the end of each leg.

TODO:
-run all calibrations + create a template
-re-test the thresholds w/ cultures

5/10/13 • Changed fluidic bottle filters on:
-sheath fluid
-decontamination fluid
-cleaning fluid
• Changed sheath filter (inside instrument)
• Changed pump tubing on both waste (red) and sheath (blue) sides (inside instrument)
→purge air after above changes (eg 28 inst. manual)

Before cruise starts:
✓replace tubing for pump and filter
-re-calibrate Accuri (new 8+6 beads)
-cal. FlowCAM
-get all cleaning solutions mixed + in place
PRINT: -Revised protocols
-Daily c-lists + routine

5/11 For FlowCAM:
S - bead & size calibration
F - fluorescence calibration (says "for Accuri")
F Appendix E in FlowCAM protocol - purple border
S " D, once
F → every 2-3 weeks, or beginning + end of log
~~- measure tubing length~~
~~10% Clorox bleach~~
10% bleach solution - 10mL in to 90 mL H_2O
- leave closed, w/ bleach sitting, flush in the morning
- have Marci look at data - is 50mL a good amount to run?
- fix lid open

Accuri
- clean SIP w/ squirt bottles
- do a set of cals, inc. size before leaving
- also before leaving, make a new 6- and 8-peak stocks for first MAOcday...
...log -
CDom wiper:
...adds a point 2 um filter to "reference"
...change filter on wall once a week

★ make sure there is an empty bucket in lab at all times ★

Lee France cell 07 611 88986

From Lee:
- doc for FlowCAM ✓
- revised Accuri protocol ✓
- list of stuff that celine will get ✓
- log sheets
- daily checklists

→ send Lee screen shots and results when possible

*culture location ✓

→ email Bill Kelley re: insurance dates ✓

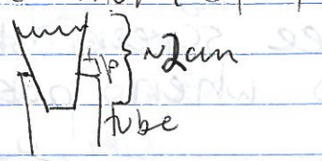
5/12/13 FlowCAM
tubing length:
above flow cell = 30cm
below " " = 37 cm
- maybe 0.5cm on goes onto pipette tip

- Context files for:
① manual prime
② sample
③ cleaning

- Note - while water is running, cannot do "setup and focus"

→ context files are done, need to edit:
- volume to be run

Size cal:
- prime w/ DIW, until level is ~2cm above the bottom of the pipette tip:



- load a run sample context file
- change the sample volume to 1 mL
- change the basic size acquisition filter (setup > context > filter (use ESB)) to min = 10, max = 2000
- pipette in 1mL of the 4x size mix
- run on auto image mode, save as; cal_size_mix_date
- load filters file
- make sure the histogram plot is correct.

filters should be: We only have 50!
(µm beads)

~~15 µm +/- 0.7~~
23 µm +/- 1
50 µm +/- 2.5

Bottles to label:

h

ALFA cleaning (amounts are enough for one cleaning)
5 95
10 190
① 1L DIW
② Detergent 50:1 (250 mL DIW and 5 mL detergent)
③ Bleach 50:1 (250mL DIW + 5mL bleach)
(DON'T USE STRONGER SOLUTIONS)

CDOM mapper
① DIW
ALFA ② Detergent (5% solution) 10mL det., 190 mL DIW
CDOM M. ③ Methanol (50% solution)
FlowCAM ④ HCl (10% solution)
Accuri
Ultra
IFCB

FlowCAM
sample bottles
vol?
① Filtered seawater (0.45 µM filter)
② Surface Niskin 2 x 250 mL
③ DCM Niskin 2x250mL
④ Bongo surface 50 mL
⑤ Bongo DCM 50mL
⑥ Bleach 50:1 (0.5mL bleach + 25mL DIW)
⑦ DIW

Accuri
~~See log sheets~~
① Surface Niskin
② DCM
(flowthru may be taken @ other times)
③ Make 0.2 filtered seawater

Daily cals: 8+6 peak beads, sure count + yellow beads
Every other? day: size cal w/ 4 diff sizes

5/17/13 Made new bead solutions for Accuri:
- 6 + 8 peak
- surecount + yellow standard
- sizes (1, 2, 4, + 10 µm)

Running all cals, editing protocol (small details)

TO RUN:

- New DIW - 2 min fast

SAVE
- 8-peak
- DIW - 2 min

SAVE
- 6-peak
- DIW - 3 min

SAVE
- count slow

SAVE
- count fast
- DIW - 2 min
- Backflush/unclog x 2
- DIW - 2 min

SAVE
- 1 µm size (fast and slow)
- DIW

SAVE
- 2 µm size (Fast AND slow)
- DIW

SAVE
- 4 µm size (fast and slow)
- DIW

SAVE
- 10 µm size (fast and slow)
- DIW
- Backflush/unclog x 2
- DIW

Cal files: 2 new cells

Count file:

Size file: 8 new cells (2 speeds ea. size)

TEST RUN OF ULTRAPATH

1/17/13 GOMaine water
- ran 1x cleaning cycle
- reference water (~20psu)
* filename: "test_lorient_r.txt" (r for ref)
- reference run:
  - int. time up to 385.0 to get a IMax of 75%
  - 200 cm pathlength
  - IMAX = 76%
- ref scan does not look too good.. need to use hplc water instead of DIW?

estelleDIMIER

1/8/13 Bottles still to be labeled:
For FlowCAM: • FSW (between samples + flushing @ beginning)
- * Sample bottles x6
- Bleach solution

Accuri: Sample bottles

5/19/13 Departure Day
- mixed new cleaning, decon, + sheath fluid for Accuri
- add 10 cm to FlowCAM input tube length → 0.078 ID
- had to replace flow cell. was dirty on the outside.
* NOTE - tighten the screw facing directly at the user on the flowcell holder so that the flowcell will not move.
  36 cm below flow cell
  30 cm above
* brand new flow cell is quite dirty on the outside of the glass...
- running bleach to clean inside
- lens paper used to clean outside of cell

Cleaning SIP on Accuri
- ran 6+8 peak & size cals (made new size bead stocks)

At sea:
- empty waste bottle
- empty Accuri waste

* Ask Celine:
- disposal of glass tubes? (at sea)

5/24/13 Station #155

LOCAL TIME ~~0730~~

0730 Turned on FlowCAM P+L, Accuri, Ultrapath

0740 Running sheath on Accuri to clear any bubbles. (3x5 min)
Made FSW w/flo-thru H_2O
Put fresh HPLC-grade H_2O in ultrapath bottle.
Checked u-path ref salinity: 34 psu

0800 → Local salinity = 35.3

- flow meter for IFCB + alfa showed 0.0 l/min; opened the valve under the bench more

0830 Running 6+8 peak beads on Accuri
-Put beads back in fridge, also put in u-path ref. H_2O
* Error message on COOM mapper: Run-time error 6: Overflow
-emailed Alan, will wait for response.

0843 Running count standard cal on Accuri

0900 Rinsed 0.2µm disk filter w/ 120mL of hplc water (two 60mL syringes full).
Wrapped filter in foil until use.

0910 Running a cleaning cycle on u-path:
Citranox → MeOH → HCl → hplc H_2O (wait for bubble; one min each)

0930 Got ref water from fridge; filling wave guide (ultrapath)

0945 Got surface samples for u-path from Rosette cast (3x250 glass amber bots) *filtered through @ 0.2µm disk into 3 other bottles

5/24/13 Stn 155 cont.

1010 Not getting a great ref. scan. Cleaning again.

1129 Cleaning cycle 4 times. ref is ~0.0 except in the UV - much higher.
- running the niskin samples.

ask JF → should the pump be running while the sample scan is going?

- 200m spectra #1 looks okay...maybe can just subtract the ref in post-processing?

Running:
- Cleaning
- Ref
- Sample 1 * all samples run w/ 200 cm pathlength
- Cleaning
- Ref
- Sample 2
- Cleaning
- Ref
- Sample 3

end: { Ref
{ Cleaning
- left w/ Water in tubing

1215 finished @ 1215

cont.

1237 Filtered ~~[illegible]~~ samples thru 300 µm mesh w/ FlowCAM plastic funnel.
- 4 bottles: 2x250mL surface niskin
2x250 mL DCM niskin

- new pipette tip on Flowcam funnel.

1241 Make filtered SW (from flo-thru) w/ .45µm disk filter + syringe, to flush FlowCAM w.

1421 Running fcam surf trigger mode

1608 Finished running Accuri surf. + DCM (w/ beads in each for conc.)
- not too much in water...

FCAM is running, ~30 mins per sample (for 50 mL of sample)

1625 Accuri shut off (finished its automatic cleaning)

FlowCAM running. Still to do on it:
- DCM auto mode
- conc. 0.2 water (net) A mode F mode
- conc. 20 water (next) "

* movement of the boat causes slight shifts in the flowcell + fluid inside... the background calibration is very sensitive, so this means the software starts seeing dirt on flowcell as cells to image. Problematic...

cont.

17:00 email from Alan - he also gets the same error messages; working on a software fix. Also recommends not using Port 4 since it's not pumping + thus could be drawing air into the system.

17:30 Running FCAM conc. 0.2 µm water (surf). Most stuff ~~looks~~ is small, rarely the chains we saw w/ the surf. riskn. maybe cells are damaged in the conc. water process?

18:00 Finished 0.2 conc. water. Did not filter thru 300µm net.
Started 20→ water (net). Did filter thru 300µm net.
- much more big stuff/chains in 20→ water.

18:35 Finished 20→ net water. ~~Many~~
Many phyto. cells (+ chains)

18:54 Trying to get IFCB into good focus. (using the focus motor under "hardware" tab.

19:31 Running meso (~800 m depth) samples in FlowCAM*... trigger mode = basically zero cells (did not filter first meso bottle... did filter second "A" bottle... do not expect a diff. for this reason.)

cont.

20:27 running meso on auto mode

- test on CDOM mapper for ALAN: run sample in place of ~~flow~~ ref H_2O.

LOCAL TIME Station day 2

0851 CDOM mapper crashing frequently. Screen shots sent to Alan.

0900 Started a new ALFA file: "alfa-20130525-070000" → made on 5/17
Running peak + count cals on Accuri.
- Also size cals (solutions made on 5/19

Fluor. cal on FlowCAM...

0921 CDOM mapper crashed again. (all new databases created since cruise start on 5/19 are due to software crashes)

0927 looks like some bubbles in IFCB images...
- stopped acq, running "debubble and refill".

0935 - re-started

Accuri 6+8 peak runs look ok, not perfect. Try making new bead solutions tmrw.

Running Accuri ~~flow~~ count cal - looks good

1014 Running accuri size cal. looks not quite as good as prev. runs - make new size stocks for next size cal.

1046 size 4μm beads are dramatically reduced in count.
→ discarding all bead solutions.

1126 cleaning Ultrapath
- took "dark scan" (w/shutter off) and "Reference scan"

5/26/13 Ran Ultrapath w/ flow-thru 1100 local time

5/27 Ran ultrapath w/ flow-thru 1800 local time

5/28 1200 - made new reference water, replaced old ref water in CDOM mapper, also added new HPLC water. Started a new CDOM mapper database.
- Crashed again.. before crashing, spectra did not look good.

14:51 took a flow-thru sample
- made new 6+8 peak stocks, size stocks, daily count standard.
- Running Accuri cals.

local time
1800 Ran ultrapath, w/ cont. flow water
temp = 10.39°C
sal = 35.3
Sal ref = 35 psu
200 cm pathlength
77% Imax
385 int. time
lat = 59.3979 °N
lon = -9.3258

Accuri:
- ran all cals: peaks, counts, sizes
- doesn't look like too much in the water sample from cont. flow
2min FL3 slow: 26.3 μL/min
" " fast: 130.8 μL/min
" FSC slow: 26.3 μL/min

Flow cam: running 200mL @ 1.5 mL/min
time start: 14:20 (from flow-thru)
duration: 2hrs 12 min
# of particles: ~~[illegible]~~ 28,770
vol ~~sampled~~ processed: 199.6
ESD: mean = 27.25
min = 10.00
max = 99.94
fluid vol imaged = 29.644 mL
1.5 mL/min

TO DO on Wed 5/29:
- 50 mL @ diff. speeds in FlowCAM test.
- Run Accuri - first make sheath fluid
- Run ~~Coast~~ ultrapath (new ref water + HPLC water for cleaning)
- FlowCAM fluor. cal?
- Accuri cryovials?
- make ALFA cleaning solutions
- test of new vs. old ref water ✱

5/29/13 Took flow-thru water:
0802 UTC
60.6374°N
-8.2697° W
t = 9.8233 °C
S = 35.3 psu

~~0830 started~~
UTC time from now on

0830 - started a 50 mL @ 1.5 mL run w/ flow-thru water on mm-1 FlowCAM (speed test)

0907 started next 50 mL run on FlowCAM, @ 0.75 mL/min.

- made new Liter of Accuri sheath fluid
- made bleach + detergent solutions for cleaning ALFA.

5/29 sent ~~ALFA~~ ALFA screen shots to Mark, and accuri screen shots to Lee

1020 - started zooprocess for yesterday's 200 mL run and today's 2 x 50 mL runs.

1217 - mixed new ref water w/ fresh HPLC water; 34 psu local sol = 35.3 psu

1253 - running ~~coast~~ peak ~~decant~~ cals on Accuri
- turning on + cleaning U-path.

1324 - running count cals on Accuri
- FlowCAM, upath, Accuri ready for rosette H2O

1407 started running FlowCAM surface Auto-mode, 200 mL, 1.5 mL min-

1426 - running ultrapath IMAX = 75%

1443 - running Accuri samples

1503 - finished running ultrapath + Accuri

5/30 Faroe Islands

0700 Cleaned ALFA (flow-thru is stopped)

5/31/13 Underway again from Faroe Is.

1700 Re-started flow-thru + all instruments, except CDom mapper. Still having problems, in touch w/ Alan Hails.

Focus motor:
2012 >> 350

6/1/13

1000 Email from Alan w/ several things to try on CDom mapper... no luck; still having error message/ software crashing. Also, now the software seems to stop and we get "not responding" in task manager at the first reference cycle.

1010 Starting a new ALFA file w/ new settings: PDP shots = 75
Blue Int. = 0.7
Green Int. = 3
"alfa_20130601-101000"

No sample today - waiting for intn'l w

Next to do:

Accuri
- 5 min sample runs
- extended cleaning cycle

FlowCAM
- try 100 mL (max raw images = 99999)
- process + sort data ✓
- Fluorescence cal

→ inventory of glass vials
→ send Lee IFCB images

1500 Power outages on all instruments.
Re-started ALFA
Re-started IFCB

0800 STATION 157
- mixed new ultrapath water
- local sal = 35.0
ref sal = 35 psu

★PD ACCURI ex. cleaning @ end of the day.
- started ACCURI
- changed all re-useable tips

0820 - started a new ALFA file

6/2/13

- replaced white pad under Accuri SIP

0900 Running FlowCAM fluorescence cal

0920 Running Accuri ✱ cals
- very slight doubling in peak cals
- count cals look good

1000 FlowCAM fluor. cal stopped at 30 mins..
the context file overrides the stop conditions (apparently)

1005 Started running flowCAM Auto-image.
100 mL
1.5 mL/min
99999 max raw images

1045 starting Accuri Samples

11:20 Finished Accuri
started FCAM fluorescence run
- lots of tintinids

1142 Running extended clean of flow cell on the Accuri
~~did not hear pumps running,~~
~~and then done~~

6/2/13

1314 Accuri restarted w/ DIW
(message for extra start-up time = expected)
- Ultrapath start running
- Processing FlowCAM images w/ Zoo~~scan~~ process

1326 Accuri shutdown

✱ Added the CDOM barcode to the comment line on the TIDAS DAQ software.

1410 Finished ultrapath

✱ changed 0.2 µm filter on wall for CDOM ~~mapper~~ mapper

CDOM mapper cleaning:
H_2O, det, air, meOH, HCl

1820 CDOM mapper:
Ran for ~20 min to get bubbles out of new 0.2 µm filter. took off orange caps; tubes just in bottles w/ parafilm on top. Primed all ports; started
✱ Run-time error 13 at end of cleaning sequence. cycle (before ref)
- changed all cleaning to "0" in parameters (and cycles between cleaning = 100).
- manually collecting dark + ref, then set of sample spectra.

6/3:
- make Ref water
- Accuri peak + count cal (no size)

6/3/13 STATION 158

0630 Made new ref water for u-path

CDOM mapper crashed in the night; restarted.

0800 Accuri count cal: made new 6 + 8 peak vials; 6 peak had doubling, re-made a new one, still has slight doubling - tried adjusting SIP.

U-path ref H_2O in the fridge

0830 ~~Restarted~~ New ALPA file started
Checked IFCB images (processed)

1100 Cleaned u-path. ~~IMAX~~ IMAX = 67% ↘ water thru.
- changed int. time to 390 msec.
IMAX = 70% now..
- changed to 400 ms 71%
* Use Monitor under "scan" (or button)
405 sec, 75% IMAX

1242 Started FlowCAM auto surf.
100 mL 90000 max images
1.5 mL min^{-1} 20 µm min size

6/3/13
1415 Accuri + FCAM are running
- making Accuri & fluid solutions

1506 Accuri shutdown

1815 ~40 mins left on last FCAM run
(when done, start processing w/ zooprocess)
→ need more log sheets

Focus on IFCB - email from Lee + Rob.

Inventory of under the bench:
Green bag #1 = 10 packs of glass vials = 250 vials
" " #2 = 8 " " " " = 200 "

Ultrapath - don't forget to check the "monitor" button, also Referencescan should be w/ ref water.

1840 Another FCAM sample: 20-180 DCM net

6/4/13
0755 u-path ref water made (35.5 psu)
* ~~Flow thru water taken~~ (0755 UTC)
~~67.1954° N 0.23786° E~~
~~temp = 8.75°C Sal = 35.15 psu~~
(HPLC not ready, re-taking more water later)

icetnic
thomas_leeuw@unit.manned

6/4/13

1115 Finished U-path w/ flow-thru.
★ Every day from now on (except full station or CTD cast):
Take a flow-thru sample @ the same time as HPLC, DOC, and nutrients (so, those three plus Accuri, FCAM, + U-path are all run w/ same H_2O).

1348 Zooprocess validation from 6/2/13
Raw images:
# of tintinnids: 8, 8, 8, 2, 5, 6, 6, 7, 10, 9, 10, 5, 9. 93 tot.
File = flowcam_20130602-stn157_S_A (raw)
Work images:
# of tintinnids: ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ||||/ ~~66~~ 70 tot
file = ~~f~~ 20130602_stn157_s_a

Meso FlowCAM:
67 10.05 0905
0 13.064
B02 = ~~400~~ vol conc — D02 ~~50~~ vol.
45.4 vol pump
Comment = ~~40000~~
B20 = ~~50~~ vol. conc.
xx vol. pump
~~700,000~~ comment

ue

6/5/13 Station 159 (short) = surface only

1330 Made ref water
- Started CDOM mapper
1345 → crashed, error 6 overflow
- restarted

1350 calibrating Accuri (peaks)

1600 count cal + sample (Accuri)

1615 FCAM Auto started

CDOM mapper is still going; spectra look generally correct but noisy (?)

1650 Did de-bubble + refill on IFCB; restarted a

1720 After debubble + refill, positions in the ROI vs. peak plot look good.

FCAM capture x vs capture y looks good. Also, changed the min. diameter to 20 µm... 10 gets too much junk (unidentifiable)

1857 CDOM mapper still running, data looks okay? proper general shape but noisy?

* check flowcam & comp. free space!!

~~Fmnw: clean MLFA (when flow thru is stopped)~~
- Send screen shots to LKB
- validated predicted vignettes
- email re: CDOM mapper

6/6/13 Station 160 (shore station)

0700 made new ref water (and replaced CDOM mapper ref + HPLC-H2O)
psu = 35
local = 35.17

0725 Prepped bottles w/ stickers, got new empty logsheets
Turned on Accuri

0730 Running Accuri peak cals
U-path ref water dishes

0745 checked IFCB images

0755 IFCB Focus:
-350 >> (760 pos)
350 >> 1050 pos
350 >> 1400 pos
350 >> 1750 pos
(all objects now out of focus, going back the other way)
Back to zero pos →

IFCB focus:

6/6/13
-350 pos
-700 pos
-1050 pos
-1400 pos
-1750 pos

0800 Rosette arrive - go to get H2O + filter CDOM

0825 -2100 pos
all objects out of focus
-1400
-1050 some in focus now
-700 " "
-350
-300
-250
-200 getting better
-150
-100

0830 Turn off u-path, start cleaning cycle. First put Accuri + FCAM samples in fridge.
Added new NaOH + Citranox to cleaning bottles (pour outside)

0841 IFCB - made small motor step=20
-80 pos
-60 pos Some still out of focus
-40
-20 most in focus
0 pos →

6/6/13

0853 IFCB focus (v-path running also)
+20 pos
40 pos
Small step 10
50 pos most things in focus (best yet)
60 pos
50 pos
Small step size = 5
45 pos
40
35

0930 Finished v-path. Dumping waste.

0940 Started FCAM-A (made filt. seawater for priming + filtered sample thru 300 µm mesh).
Making Accuri count standard
- filtering accuri sample + FSW

0950 Started a new ALFA file
Running count + size cals on Accuri

0955 IFCB focus end on pos = 55
- check processed image files from after this time later.

1100 Running FSW + Samples on Accuri.
Running FCAM Trigger mode
Running CDOM mapper w/ new .exe!
- Spectra look pretty good, emailed Alan one.

6/6/13

1300 After lunch - did all lab dishes + started Zooprocess on FCAM computer.
Always check disk space on FCAM comp. before running samples

→ new Z: drive on FCAM computer - this is the back-up drive. In general, work on the C: drive, which is the local FCAM comp.

158 0603 - 0746 67.082
W 0°.150
A-20 SRF 37.04 mL

6/7/13 Same as yesterday. - short station 161
Made new sheath fluid for Accuri.
Did a longer manual cleaning on CDOM mapper.

0944 IFCB debubble + refill

6/8/13 ~~Shor~~ Short station 162

0800 CDOM mapper - water (fluids) appears to be going in but not coming out... open later to look inside.

0930 - made new Accuri size stocks
- peaks cals have doubling, tried backflush + unclog, did not work, removed SIP to clean top w/ squrt bottle. Running DIW for 15 min (did 2x B-flush/unclog first)

- Accuri peak cal looks a little better after SIP removal + cleaning

6/9/13 Long Station #163

0630 made ref water - 35 psu
local = 34.8
temp = 21°C

0700 New ALFA file
Checked IFCB images - lots of blobs, mostly small single cells, many not in focus.

CDOM mapper: opened yesterday, is leaking inside somewhere. Unpluggid per Alan's instruction + waiting on him for more info.

6/9/13

0922 "Backflush with sample" on IFCB (Stop acq. first)

0940 Checked IFCB camera - screen was black,* stopped acq., unchecked backflush, start again.
* nevermind - checked "view images" and it was fine.
LOTS of blobs post-backflush!

Many particles in the water today - for the first time I had to use two filters to get thru the CDOM filtering

1612 Running FCAM. File naming error:
flowcam_20130609_stn163_S_A SHOULD BE:
flowcam_20130609-stn163-B20_A
AND: flowcam_20130609_stn163_S_A_true is the real file of that name.

1730 Make new 6+8 peak beads.
Flipped top O-ring on SIP.
Re-running cals.
Looks bad - triplets.
Tightened SIP collar. Looks good!
Re-running FSW + Sample.

6/10/13 2nd day of long station - only meso water from rosette.
Using cont. flow water for Accuri, Upath, FCAM (also meso in FCAM)

- Made new Accuri sheath fluid

Lab room is hot today. (heaters are on)

Accuri cals still look good.

Upath ending IMAX was 83%?
Why so much higher? Ask Joanne.

6/11/13 Daily cast will be @ ~2pm

0923 Running extended cleaning solution on Accuri

1600 Noticed IFCB was not restarted after last night's AC-S cleaning - start acq.

Ultrapath reference spectra look good.

AC-S filtered flow is back up to ~7 l/min (was down to ~1 yesterday) after new filter.

6/12/13 Short station. #165
0730 Made new ref. water.
0800 Started up Accuri, running peak cals. Added more decon + cleaning fluid to bottles (did not mix more; already had some in mixing bottles)
- mixed more diluted bleach for FCAM cleaning.

0900 U-path ref is exactly at zero all across...?
→ axis values were off - needed click on the small "LY" button to make it pink instead of the "LX" button being pink
- had to click the button again. Data + ref. look nice.

1030 ~~Data~~ IFCB debubble + refill; backflush w/sample ~~for one syringe~~

6/13/13 LAST station! :: #166 (Daily/short)

W/backflush left on on IFCB, data look good... maybe this will help?

6/13/13 - List of things to tell next dry lab person → Dry lab report
- FlowCAM # of vignettes

6/15/13 w/ Joannie in Tromso
1) - ALFA cleaning &
2) - CDOM mapper (get it working?)
3) - FlowCAM (change flowcell + calibrate) + syringe cleaning
4) - Accuri - change filters + pump tubing
5) - Ultrapath data
6) - chemical inventory + dilutions

1) ALFA: • 2 cleaning cycles. The 2nd was done to try to get a filter spectra as we still could see a little peak ~ 625nm

• the 2nd cleaning cycle improved it a bit but still see that little peak

• Mark from Ali's email & Alexander think it could be due to air in the instrument. They suggested filling the instrument with milliQ water via gravity (no pump): MilliQ bottle as high as possible. Joannie & I will try it today (17 June)

2) CDOM Mapper: • its works ↔ We tried with sampled offshore seg water (low CDOM) and were not successfull.
We added the tec. drops and got a beautiful spectra ... then diluted with filtered sea water.

2X • The same sample filtered (sea water + tec. drop) was analyzed with ultrapath (50cm pathlength): same shape for spectra but relative values were a little higher with CDOM Mapper
Cetrom & CDOM mapper 1.17 1/m ultrapath 0.7 1/m

• We noticed with CDOM mapper unconstant (no replicable) spectrum within its 10 samples cycles!

(-) For unknown reason, do not continously work? software

3) FlowCAM: we change the flowcell & clean the syringe & filled the bleach 10%" bottle & calibrate for size & count beads.
- created a new context file: run_sample_context_Tromso.ctx

4) Accuri: we changed filters into bottles + inside Accuri
• we changed tubing into 2 pumps inside Accuri
• We will (17 June) look at results and Ali will demo.

5) Ultrapath data looked good.

6) Chemicals : 2.5L Citranox to be diluted
5L Methanol or more to be diluted
(Dilute) Fill up the 5l 250mL bottles 0.1N (or 1%)

⇓

See Mats, Geraldine, Sophie and/or Marianne at NPI
or Gerald or Claudia at Akvaplan for fumehood