NAAMES 4

March - April 2018

⇒ NOTE the accumulation of
biofouling on the tygon tubing,
starting April 3-4. Pieces were
detatching and passing through
instruments when the tubing
was squeezed during cleaning/debubbling.

2018/03/20
17:08 Start in-line system   17:08

- instrument order → ACS → BB3 → LISST → WSCD
  ↳ ALFA
  → IFCB
  → FRR

2 debubblers (small)

Wayne switch system

Fresh 0.2 μm filter (was in tap water all night
No bubbles at all leaving puerto Rico
Water coming from pump is pulsing
~~Leak on fitting~~ Fitting on switch system is cracked and leaky
  ↳ working on a fix
Data before 2018/03/20 17:08 ~~from~~ BB3 + WSCD is total
  ↳ there is bubbles!

10 s   to fill 0.5 L → 3 L/min when FlowControl 1.234 L/min
  ↳ adjusted the K factor in FlowControl 4000 → 1381
     ↳ volume looks reasonable now

21:12 Stop In Line Entering British waters ~~4000 → 1381~~

2018/03/21   Run DI through ACS + LISST
  ↳ BB3 is with James for calibration with M2lor
12:47 Clean ACS + LISST
             ↳ LISST was not covered with masking
12:57 ⊂

14:40 Start In Line

19:38   Computer of InLine crashed → Blue screen !!!
          ⌐ restart the in-line
          ⌐ LISST had to be reset to avg 250 samples

24:40   Re-sync time went back by 5 min
          ⌐ IFCB

2/18
48   Inline computer went down

     changed flash lamp delay to
     150/3

     Many good runs were done to position the camera
     Run 1 first 5mL + debubble from InLine

     Stop InLine
02T032442   Start InLine
T031440   inLine after bleach and blocked cycle
215466   Change camera gain settings from 1 to 6 with GigView
022330   in between the 2 runs
031018   Stop InLine
033373   Run sample from Bryan   id:06482
          ⌐ concentrated through mesh during Rx from John
036385   Start InLine

2018/03/22

1:48   In Line computer crashed (blue screen)
        ⌐ Lenovo E530
    Restart in Line on HP computer
    In Line Flow Control stopped on Flow Control
                              on Total

16:16   Stop inline

     clean ACS, BB3, LISST
     Run DI ACS BB3 LISST
       ⌐ attenuation of ACS is much higher ~0.6

16:55   Restart In Line

2018/03/23

15:41   Force InLine to Filter
15:58   Stop InLine
        clean ACS, BB3, LISST
16:25   Run DI: ACS BB3 LISST → forget to cover LISST
                          with dark plastic bag
16:38   Restart InLine

2018/03/24   Bug in Compass Schedule → stop automatically
               saving file

11:53   ACS keeps drifting

Left column:

16:15 — Run DI then ACS301, BB3, LISST
DI   c = 0.7   for ACS

17:00 — Run DI through new ACS 298
↳ 650 mm   0 for both a and c

17:12 — Start inline   with ACS 298
ACS298 spectrum looks great · it's a little less stable than the other ACS301

18:15 — Switch was in force total → moved it to auto

/03/25
16:26 — Restart Flow Control restarted after crash

16:45 — Stop inline
Cleaning

16:45 — Run DI

	ACS	BB3	+FDOM
c(650):	+0.025 m⁻¹	81 83 65	11
a(650):	-0.025 m⁻¹	470 592	

$c(650): +0.025 \, m^{-1}$
$a(650): -0.025 \, m^{-1}$

16:55 — Restart Inline

03/26 — <u>Change filter</u> + dark BB3

14:55 — Switch to filtered

15:05 — computer is doing a file for only 2 minutes

~15:10 — Run
$c(650)=+0.025$
$a(650)=-0.02$

	BB3	FDOM
	90 90 82	12
	470 532 660	

15:26-15:35 — Dark BB3

Right column:

2018/03/27
16:08 — Stop Inline
Clean instruments

16:40 — Run DI through instruments

16:50 — Resume Inline (forced filtered for 20min)

Generally more air in system
↳ bubbles go to second debubbler

17:12 — ACS started logging (was not running before)

2018/03/28
16:37 — Switch to Filter
↳ get 2 mins for ACS

16:40 — Switch back to auto
only ACS running

17:10 — Stop inline + clean instruments

17:30 — Run DI from Jason → LISST chamber was leaking during DI

17:40 — Force Filter

2018/03/29
01:51 — Bubbles going through the 2 debubblers!
⟹ !

12:20 — Stop in line   ? first time clean WSCD
Clean ACS, LISST, WSCD, BB3

12:40 — Run DI from Jason → DI from Jason would have less CDOM?
↳ according to James

12:50 — Resume Inline (20min filtered)

03/30
10:45 Switch to filtered
11:00 Stop inline
Clean ACS, BB3, LISST
↳ BB3 had a few big particles in it.

Run DI from Atlantis
↳
11:45 Resume Inline in Filtered

11:55 autoswitch

Stormy weather debubbler ~~get out handles a lot of bubbles~~

Filtered Flow is ~3 L/min when total is 5 L/min
⇒ Switch filter tomorrow

03/31
15:3?
15:40 Switch to Filtered

Clean BB3, ACS, LISST ✓
Run dark on BB3 ✓

Change filter ↳ 0.2 µm MNY921EGS ✓
P/N: 1222470
Lot#: 60518663

DI Run ⇒ DI water was too warm & degassing
↳ ⇒ bad DI Run
↳ DI from Jason
16:?? Resume Inline (forced filter)
17:30 Flow Control stuck on Filtered

04/01/2018   time 3:34 GMT; last file on dashboard
~~is not~~
is from 01:29. Tried to connect to
remote desktop but would not connect.
Turned off IFCB (could not shutdown
through the normal routine)

2018 04 01
1434   Switch to 10 mins of filter pre-cleaning

1515   DI water files created
DIW from Jason's UV treated system,
debubbled for ~4 hrs
1528   Filtered running (force filter) after debubbling
system

17:00   Moving a lot!

2018 04 02
16:30   Stop Inline
Clean
17:—   Run DI

2018 04 03
14:30   Found BB3 not responding
↳ unplug from system
no BB box straight from ACS to LISST
14:58   Changed BB3 cable
↳ BB Box back In Line
14:20   Stop + Clean

Left page:

04 03
5:12 | Flow rate of 3.0 L/min on Filtered

30-13:44 | Air in BB box + LISST
  to BB3 off for a few minutes
  → Testing fixed wire

04 04
15:15 | Stop inline
  Dark BB3   57 50 65
                670 532 660
  Clean
  Run DI
    to issue with BB3 box → lot of white things
                          coming into the box
    → BB3 better DI run at the end
  Change filter P/N 1222 470 Lot#: 60518660 0.2 μm
17:18 | Resume InLine
    Big particle detaching from tubes and going into instruments
18:30 | Filt spect from ACS is unstable
19:50 | A little unstable
04 05
17:15 | Stop inline   Alarm went on!
  ~~XXXXXXXXX~~
  Clean instruments
  Run DI issue of white coating going off the tubing
          and getting in BB box

Right page:

16:30 | Stop inline   InLine
  Clean
  Run DI twice 2x20 L   14:56 first run
  ACS looks good   15.03 second run
  BB3 too high at the beginning start looking reasonable
                                              at 15:03
15:30 | Resume InLine
  to issue of bubbles when on filtered
  → flow rate is low 2.5 L/min on filt
                      3.5 L/min on tot
  → white film inside tubes
  FDOM higher than usual 14-15 counts

2018 04 07
15:20 | Stop InLine
15:50 | Clean → some deposit in BB Box
        Start DI + 20L
        BB3 really high at first
16:00 | Switch to other DI tank +20L
        BB3 reasonable
16:00 | LISST was not doing 250 avg → might device
        Switch LISST back to 250 avg
16:20 | Resume InLine

2018 04 08
  Stop InLine

Left column:

2018 04 03
12:42

Flow rate increase significantly
Water is at 6.2°C ~~much~~ (cooler by ~10°C then before)
lot of bubbles coming in debubbler 1
Water is pulsing with pitch of the boat (35 knots wind)
& little strong outside

13:04

BB3 + WSCD were not logging
Strong all past night debubbler 1 handle
most of the bubbles
Temp back up

:20

Power Failure of the ship
→ pump off → No more water
→ ACS, BB3, LISST, WSCD off!

:45

Power is back
→ pump is off

15:52

Cleaning InLine
Run Dark on BB3
Change Filter 0.2µm P/N 1222670 Lot# 60 518660

16:50

Run DI

17:00
18:10

Resume BB3, WSCD, LISST
Resume ACS

Right column:

2018 04 10

16:30 Stop In Line
       Clean

17:02 Run DI 20L
17:08   Second tank 20L

17:15 Resume InLine

17:30 Switch to total

2018 04 11
01:08 Tube going to switch system won't off
       & water all over the ground
       → filter is full of air but no
         air went to instrument
       → wait for end of filtered seawater to
         troubleshoot

2:35   Unstable ACS spectrum
       High values in BB3 due to checking

16:30 Stop inline

17:00 Run DI 40L

2018 04 12
17:17:15 | Stop In Line   The end of NAAMES 4
         | Clean
2:40 | Run DI