DeepPIV on Rachel Carson RSV Ventana **Deployment #69 Checklist**
v 6.0.0 02July17
K. Katija

laser @ 5 — wide — zoomed in
manual focus: C746 n C88C
manual exposure: F1.6 (iris)
gain 8-10
shutter 1/60
BKR mode

+ #70

Dive Objective: Laser / PIV for filter feeding midwater animals. NO data collected
V4061 + V4062 - no laser/PIV done.

Deployment Date: _____
Recovery Date: _____
Person performing topside checklist: _____

to run camera: FCB control software
to run laser: DeepPIV main
to run pump: Elmo composer

Pre-deployment alignment:

1. Verify that DeepPIV laptop and peripherals are connected (Ethernet, usb, mouse, monitor, AJA/Shogun recorder)
2. Power up DeepPIV
3. Open Sony Camera Software and modify camera settings
4. Verify laser and camera alignment
   a. Place protective shroud around DeepPIV instrumentation
   b. Remove protective covers on laser and camera housings
   c. Check that housing markings on laser and camera housing are aligned
   d. Power up the laser
      i. Rotate the dial to 2 V in Laser dialog tab
      ii. Record output of ADC: _____
      iii. Measure laser power: _____
   e. Using focus board after attaching to laser housing, ensure
      i. Laser sheet and camera axis are aligned: _____
      ii. Laser sheet is aligned with camera plane: _____
   f. Power down the laser
   g. Replace protective covers on laser and camera housings
   h. Remove protective shroud from DeepPIV instrumentation
   i. Close Camera software
5. Power down DeepPIV

completed 08.14.17

Pre-deployment:

✓1. Verify that DeepPIV laptop and peripherals are connected (Ethernet, USB/serial, mouse, monitor, AJA/Shogun recorder)
✓2. Power up DeepPIV
✓3. Run predive test program and verify correct operation of the following systems:
   ✓a. DeepPIV camera (ISO, shutter speed, f-stop, record)
      i. Open Sony Camera Software
      ✓ii. Change camera settings Com 11, 9600 bps
   ✓b. DeepPIV laser
      i. Power up the laser, rotate the dial to 2 V

K(o): 831-775-1952
K(c): 206-351-6045

enable DGH

ii. Record output ADC: ~~2200~~ 2200

iii. Measure laser power: 2

c. AJA/Shogun HD recorder (record, stop, playback)
   i. Change file names to correspond to deployment number – Done
   ii. Record sample footage of ROV science and DeepPIV cameras

power on (R side)

d. Dye injector/vortex generator (disconnect tubing if dye injector being used, move piston, reset piston, set different increments)
   i. Note COM port on ROV: _____
   ii. Note COM port on Serial-to-USB converter (either 1/2): _____
   iii. Open ELMO Controller software
   iv. Direct connect to motor – "open comm" direct "
   v. Set baud rate to 19200
   vi. Set COM port (~~either 3/4~~): 6
   vii. Connect
   viii. Use Velocity Mode, hit stop to prevent dye leakage
   ix. Set speed to 100 rpm and hit go, stop; reverse direction, go, stop

e. Sizing lasers

4. Sync all components (including Science and DeepPIV camera) with ship's NTP and record video on both cameras of timestamp (using time.gov if NTP not available)
5. Check that all cable connectors and dummies are installed and tight
6. Check that all dye/vortex generator tubing is installed and tight
7. Open all dye valves and connectors
8. Remove protective covers on laser and camera housings

Deployment:

1. Deploy ROV, noting exact time and position of launch.
   a. ROV launch time: 08:04 PDT
   b. Latitude: W 36 41.6885 deg
   c. Longitude: W 122 ~~12~~ 2.7764 deg
2. Record time it takes for ROV to submerge: _____
3. Dive plan: refer to _____
4. Start AJA/Shogun recorder when event of interest occurs; stop when finished

* turn off recorder. TURN OFF LASER FOR RECOVERY

Recovery:

not me

1. Record the time that ROV is on deck: _____ PDT
2. Power down DeepPIV
3. Close all dye injector/vortex generator valves
4. Rinse instrument housings and attachments with fresh water
5. Replace protective covers for laser and camera housings

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