

DeepPIV on 08-15-17 ^{Rachel Carson} ^{Ventana} Deployment # 68 Checklist
v 6.0.0 02 July 17

K. Katija

on Rachel Carson, 1080p 30/1080i 60, no 34HDSI

- 595 mm blank
camera & laser sheet
- 449 mm in-air
foam plane

Dive Objective:

dolichoneura PIV (at least one potential data set)

Deployment Date: 08-15-17

Recovery Date: _____

Person performing topside checklist: _____

KAKOTAI

- Gray cable from port
side of room to SDI
- SDI out to black 72ch
cable

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: 2014
 - iii. Measure laser power: N/A
 - 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
on 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 pre-dive 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
 - ✓ b. DeepPIV laser
 - i. Power up the laser, rotate the dial to 2 V

- ii. Record output ADC: 2014
- iii. Measure laser power: N/A
- c. AJA/Shogun HD recorder (record, stop, playback)
 - ✓ i. Change file names to correspond to deployment number
 - ✓ ii. Record sample footage of ROV science and DeepPIV cameras
- 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
 - 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 *← part of ROV pilot checklist*
- ✓ f. 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)
- ✓ g. Check that all cable connectors and dummies are installed and tight
- ✓ h. Check that all dye/vortex generator tubing is installed and tight
- ✓ i. Open all dye valves and connectors
- ✓ j. Remove protective covers on laser and camera housings

Deployment:

1. Deploy ROV, noting exact time and position of launch.
 - a. ROV launch time: 09:30 PDT
 - b. Latitude: 36°45.9630 deg
 - c. Longitude: 121°59.2895 deg
2. Record time it takes for ROV to submerge: _____
3. Dive plan: refer to interpassus pic drive
4. Start AJA/Shogun recorder when event of interest occurs; stop when finished

Recovery:

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