

DeepPIV on Ventana 2/19/2019
v 8.1.0 17 July 18

Deployment # 95

Dive Objective/Results:

V41 81

PIV on sponges. DeepPIV recorded with VARS recording
system (to RAID) for storage on M3.

Deployment Date: 2/19/2019

Recovery Date: 2/19/2019

Person performing topside checklist: Joost

Pre-deployment alignment: 2/15/2019

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:
 - 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

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 predrive 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: 1982
 - iii. Measure laser power:

- 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: _____
 - iii. Open ELMO Controller software
 - iv. Direct connect to motor
 - v. Set baud rate to 19200 and set COM port: _____
 - vi. Connect
 - vii. Use Velocity Mode, hit stop to prevent dye leakage
 - viii. 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: 0:45 AM PDT
 - b. ROV dive number: ✓4181
 - c. Latitude: 36 44.7844 deg
 - d. Longitude: 122 3.0835 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

Recovery:

1. Record the time that ROV is on deck: 1:25 PM 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
6. Rinse off DeepPIV