

DeepPIV on ^{RACHEL LARSON} VENTANA Deployment # 45 Checklist
v 5.0.0 22 August 16
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Dive Objective: _____

Deployment Date: 01-10-17

Recovery Date: _____

Person performing topside checklist: KATIAN

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 Silex USB Controller and connect
4. Open Sony Remote Camera Controller and modify camera settings
5. 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 digital level, compare laser sheet alignment with camera housing glass port
 - i. Record digital level reading on laser sheet: _____
 - ii. Record digital level reading on camera housing: _____
 - f. Power down the laser
 - g. Replace protective covers on laser and camera housings
 - h. Remove protective shroud from DeepPIV instrumentation
 - i. Close Remote Camera Controller software, disconnect Silex USB connection
6. Power down DeepPIV

Pre-deployment:

1. Verify that DeepPIV laptop and peripherals are connected (Ethernet, USB, 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 Silex USB Controller and connect
 - ii. Open Sony Remote Camera Controller
 - b. DeepPIV laser

- i. Power up the laser, rotate the dial to 2 V
 - ii. Record output ADC: _____
 - iii. Measure laser power: _____
- c. AJA/Shogun HD recorder (record, stop, playback)
- 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): _____
 - 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. Translational stage
 - i. Ensure that Ethernet cable is connected
 - ii. Open ELMO Controller software
 - iii. Direct connect to motor
 - iv. Set baud rate to 19200
 - v. Set COM port (either 1/2): _____
 - vi. Connect
 - vii. Use Velocity Mode, hit stop to prevent screw from turning
 - viii. Set speed to 500 RPM and hit go, stop; reverse direction, go, stop
- f. Sizing lasers
4. Sync all components (including Science and DeepPIV camera) with ship's NTP and record video on both cameras
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: _____ PDT
 - b. Latitude: _____ deg
 - c. Longitude: _____ 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: _____ 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