

DeepPIV on MiniROV Deployment #11 Checklist

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K. Katija

Dive Objective: Deep PIV science deployment
- dye visualizations around enter house of Bathochordaeus
- tail chamber PIV & exhaust chamber flow of multiple individuals
- 3D reconstructions of range of gelatinous species

Deployment Date: 12-02-15

Recovery Date: 12-02-15

Person performing topside checklist: KAKANI KATIJA

Pre-deployment:

1. Ensure that comm and power systems on MiniROV are functioning normally.
2. Align the laser and camera
 - a. Attach protective shroud and cloth to MiniROV's body
 - i. Zero digital level based on orientation of MiniROV sitting on deck
 - ii. Verify alignment of shroud using a digital level
 - iii. Record digital level reading on shroud: _____
 - ✓ b. Enable Tilt and Laser controls in LabVIEW
 - ✓ c. Zero the Science Camera
 - i. Click Zero button in Tilt dialog tab
 - ii. Click Home button in Tilt dialog tab
 - iii. Record digital level reading on camera: _____
 - d. Remove laser housing protective cover, and put on protective goggles
 - ✓ e. Power up the laser
 - i. Rotate the dial to 1.5 V in Laser dialog tab
 - ii. Record output of ADC: _____
 - f. Verify that laser sheet is perpendicular to Science camera
 - i. Measure angle of laser sheet on shroud using a digital level
 - ii. Record digital level reading of laser sheet: _____
 - g. Power down the laser
 - h. Replace laser housing protective cover
3. Remove protective shroud from MiniROV.
- ✓ 4. Secure protective shroud on deck of ship.
5. Run/pre-dive test program and verify correct operation of the following systems:
 - ✓ a. MiniROV LED lights
 - ✓ b. Science camera (adjust zoom, focus, shutter speed, and IR filter settings)
 - ✓ c. AJA HD recorder (record, stop, playback)
 - ✓ d. Dye injector/vortex generator (disconnect tubing if dye injector being used, move piston, reset piston, set different increments)
 - ✓ e. Sizing lasers (measure separation at multiple distances)
- ✓ 6. Sync all components (including Science camera) with ship's NTP

N/A

- ✓ 7. Start MiniROV dive log
- ✓ 8. Check that all cable connectors and dummies are installed and tight.
- ✓ 9. Check that all dye/vortex generator tubing is installed and tight.
- ✓ 10. Open all dye valves and connectors.
- ✓ 11. Remove laser housing protective cover.
- ✓ 12. Check that the MiniROV tool sled is secure.
- ✓ 13. Check for tools left on and in MiniROV frame.
- ✓ 14. Remove MiniROV hold-down straps.

Deployment:

- ✓ 1. Start AJA recorder
2. Deploy MiniROV, noting exact time and position of launch.
 - a. MiniROV launch time: 06:29:40 PDT
 - b. Latitude: 36° 43.3674 deg
 - c. Longitude: 122° 5.435 deg
3. Record time it takes for MiniROV to submerge: ~ 10 mins
4. Dive plan: refer to _____

Recovery:

- ✓ 5. Check that the laser is powered down.
- ✓ 6. Change the Science camera settings (focus and others) to auto and zoom to wide.
- ✓ 7. Complete MiniROV dive log
- ✓ 8. Stop recording video with Aja
- ✓ 9. Recover MiniROV.
- ✓ 10. Secure MiniROV and DeepPIV on the ship deck.
- ✓ 11. Record the time that MiniROV is on deck: 12:33:10 PDT
12. Close all dye injector/vortex generator valves.
13. Replace laser housing protective cover.

focus setting @ 362F
3117 } zoom all the way first & then focus
 => set focus using that setting.