

ESP Drifter Deployment Plan
Gene Massion

Revision

1 May 12, 2011 Initial Draft

Ship: University of Hawaii R/V Kilo Moana

Departure Date: September 6, 2011

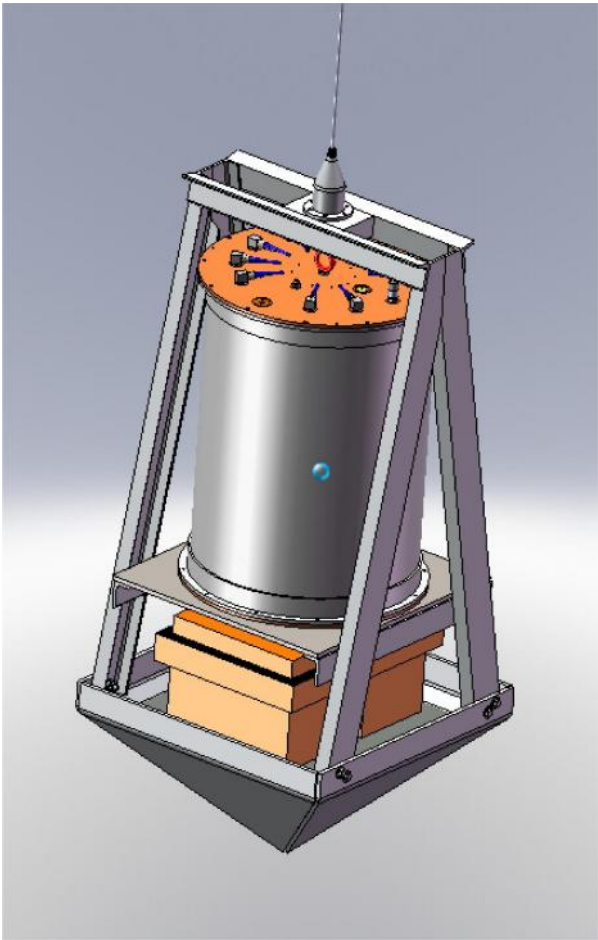
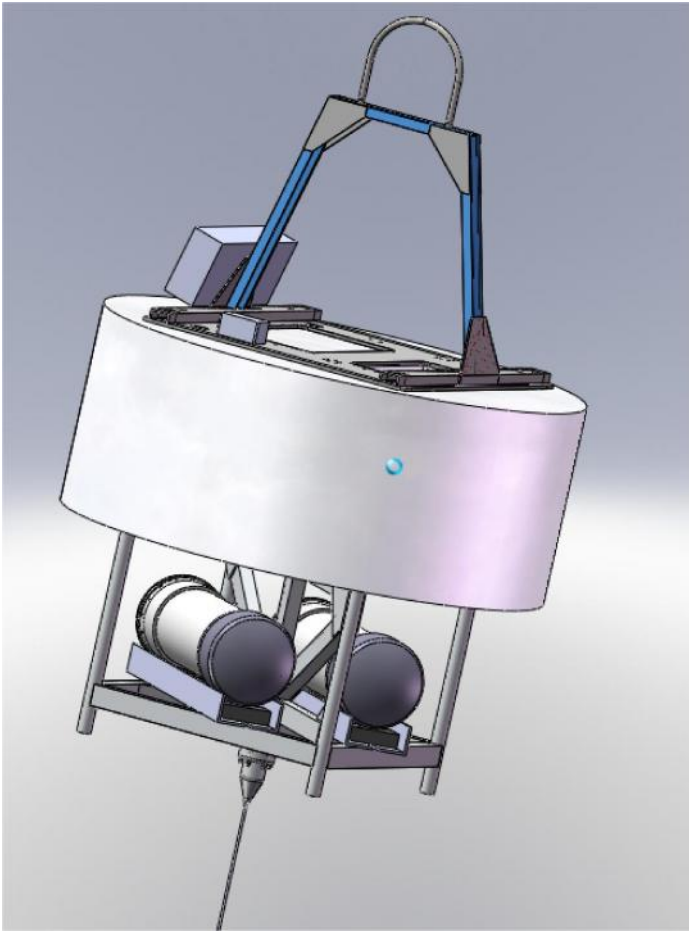
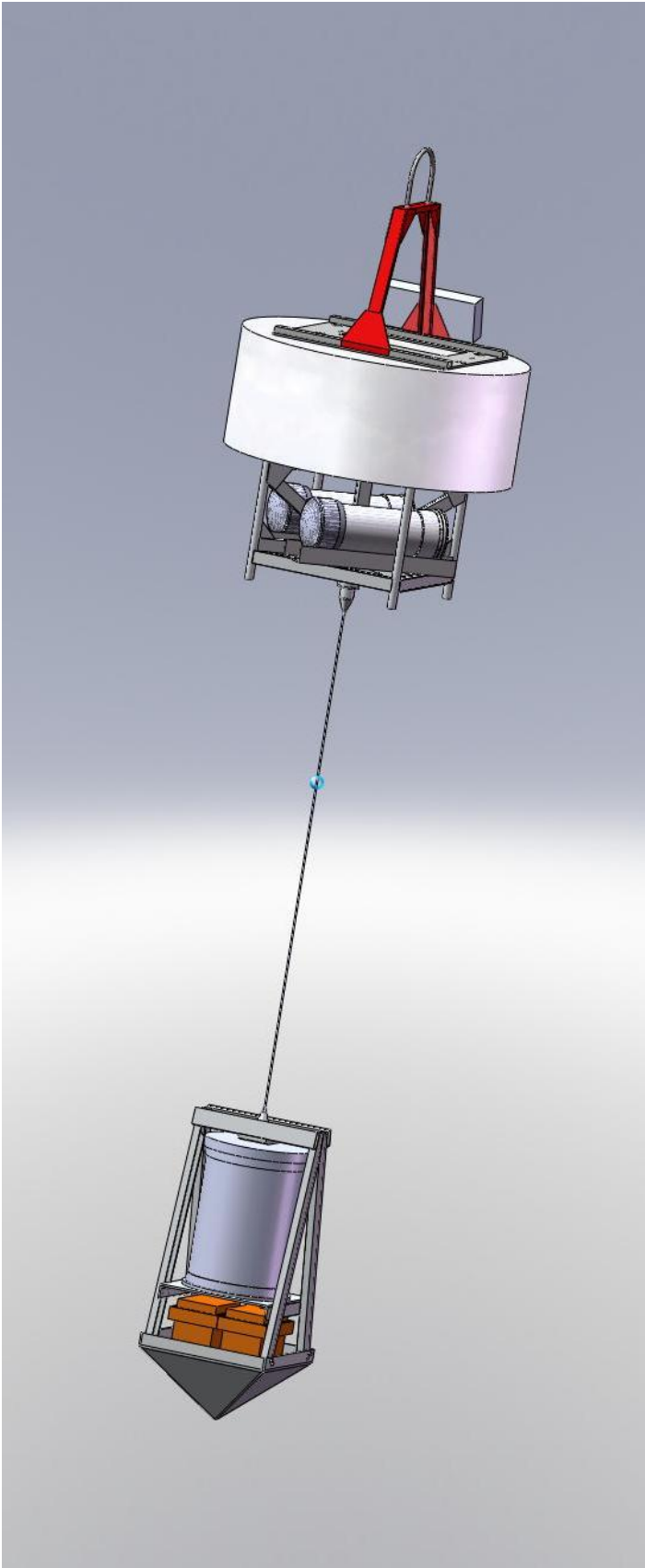
Return Date: September 21, 2011

MBARI Crew

- | | | | |
|-------------------|--|--------------------|--------------------|
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Time Line (details TBD)

- 1) September (August?) x MBARI Shipping Container arrives at UH Marine Center
 - a. UH offloads container and connects to shore power
- 2) September (August?) x MBARI crew arrives at UH Marine Center
- 3) September x MBARI crew moves ESP to 10' container (Question 1,2)
- 4) September x-y MBARI crew prep and check ESP
- 5) September x-y MBARI & KM crew mount antennas and run cables
- 6) September x Load ship
- 7) September x Deploy ESP
- 8) September x Recover ESP





Deployment plan

Crew required: Deck supervisor, 2 tag line handlers, 1 quick release tender, 1 E/M cable tender, winch operator, crane operator, acoustic release operator

- 1) Test Benthos release on winch wire at 23 meter depth
- 2) Stage the ESP under the U-frame
 - a. Soft line on winch (Q4)
 - b. Mark the soft line at about 20 meters
 - c. MBARI supplied Benthos acoustic release between winch line and ESP pad eye (Q3)
 - d. 2 tag lines
 - e. E/M cable tender tends E/M cable between buoy and ESP
 - f. Check everything is clear for deployment
- 3) Stage the buoy under the crane (port side of U-Frame?)
 - a. Crane hook to 20' sling to MBARI supplied "Sea-catch" manual quick release to buoy bale REMOVE THE SAFETY PIN
 - b. 2 tag lines
 - c. Check the recovery line bundle and grapple loop
 - d. Check everything is clear for deployment
 - e. Quick release tender tends release line
- 4) Confirm ESP and Buoy are working properly
- 5) Put the buoy in the water slightly port of the U-frame and leave it on the crane hook
 - a. Put enough slack in the 20' sling so the buoy isn't snapping tight but the crane hook isn't banging into the buoy
 - b. Recover the tag lines
- 6) Put the ESP in water and lower away
 - a. Recover the tag lines
 - b. Slow down when approaching the 20 meter mark
 - c. We should see the ESP and the buoy start to move toward each other
 - d. Continue lowering until the winch line gets near the buoy
- 7) Trigger the acoustic release
- 8) Confirm ESP is free: should see the winch line swing away
- 9) Recover winch line
- 10) Pull the buoy quick release
- 11) Done

Recovery Plan

Crew required: Deck supervisor, 2 tag line handlers, 1 E/M cable tender, winch operator, crane operator

- 1) Find the buoy
 - a. We should have a recent GPS fix, a nav light on the buoy and a RF beacon (Q7)
- 2) Position the KM as appropriate for grappling
- 3) Grapple the recovery lines bundle off the buoy
 - a. The recovery lines bundle has a light line and loop for grappling. The bundle itself will have a line attached to the buoy bale, a pair of tag lines for the buoy and the ESP safety/recovery line. The ESP safety/recovery line is attached to a quick release on the bottom of the buoy.
 - b. The ESP safety/recovery line should release from the Buoy when we pull up the recovery lines bundle, if it doesn't see below.

- 4) Put the buoy recovery line on the crane hook (Q5)
 - a. Position the ESP relative to the U-frame similar to deployment
- 5) Put the ESP recovery line on the winch wire/line
 - a. Note: if the ESP recovery line doesn't release from the ESP when the recovery line bundle is grappled up from the buoy, skip step 5-6 and do the following
- 6) Winch up the ESP to ~10 feet below the surface
- 7) Recover the buoy
 - If the ESP recovery line didn't release in step 5 do the following
 - a. Pick the buoy straight up until the buoy deck is a couple of feet higher than the KM deck
 - b. Swing the crane until the buoy is near the transom
 - c. Pull the ESP safety/recovery line release with a boat hook
 - d. Recover the buoy and attach the ESP recovery line to the winch and take the load on the winch (Q6)
- 8) Recover the ESP
 - a. Attach tag lines ASAP with MBARI tag line boat hooks.
- 9) Done

Questions

- 1) Does UH already have a suitable refrigerated container?
- 2) Is a fork lift available? Can qualified MBARI crew drive it?
- 3) Answered- Can UH supply 2 acoustic releases (1 primary and 1 spare)? Does the deckbox use a hull mounted transducer or a dunker?
- 4) Does UH have appropriate soft line for the ESP (2500 lbf weight in air, ~20,000 lbf break strength)? We don't need a lot of line, can we wrap it over the top of the wire on the winch if necessary?
- 5) Can the crane pick the buoy if it has a ~20' recovery line?
- 6) Can we pass a master link & shackles through the various turning blocks on the U-frame? We have a wide mouth Skookum block if necessary.
- 7) Answered- What kind of RF beacon locator does the KM have? Will it work with a standard Novatech beacon?

UH Contact Information

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