Oceanic Radiance and Imaging: FLIP Support for September '08 Experiment

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LONG-TERM GOALS

The long-term goal of this work was to expand the capabilities of R/P FLIP by installing a new starboard boom to match the capabilities of the existing port boom.

OBJECTIVES

In addition to the long-term goal, the objectives of this work were to undertake a sea trial of the new starboard boom prior to its use in the RaDyO Santa Barbara Channel Experiment in September 2008, and to provide tug, and other support for towing and mooring FLIP.

APPROACH

The new starboard boom was designed and fabricated at the Marine Physical Laboratory (MPL), Scripps Institution of Oceanography. Tug and other logistical support for the boom sea-trial and the Santa Barbara Channel Experiment were arranged by Capt. William Gaines of MPL.

WORK COMPLETED

All of the work described above was completed at the completion of the Santa Barbara Channel Experiment.

RESULTS

The construction of the new starboard boom significantly improved the capability of R/P FLIP, and in view of the damage to the port boom during the SBC Experiment, the availability of the new starboard boom was critical to the success of the FLIP component of the experiment.

Report Documentation Page

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14. ABSTRACT
The long-term goal of this work was to expand the capabilities of R/P FLIP by installing a new starboard boom to match the capabilities of the existing port boom.

15. SUBJECT TERMS

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The scientific results that depended on the availability of the starboard boom will be reported by the individual PIs who used it to deploy instruments.

Figure 1 shows FLIP moored during the SBC Experiment with the starboard boom extending to the right from FLIP.

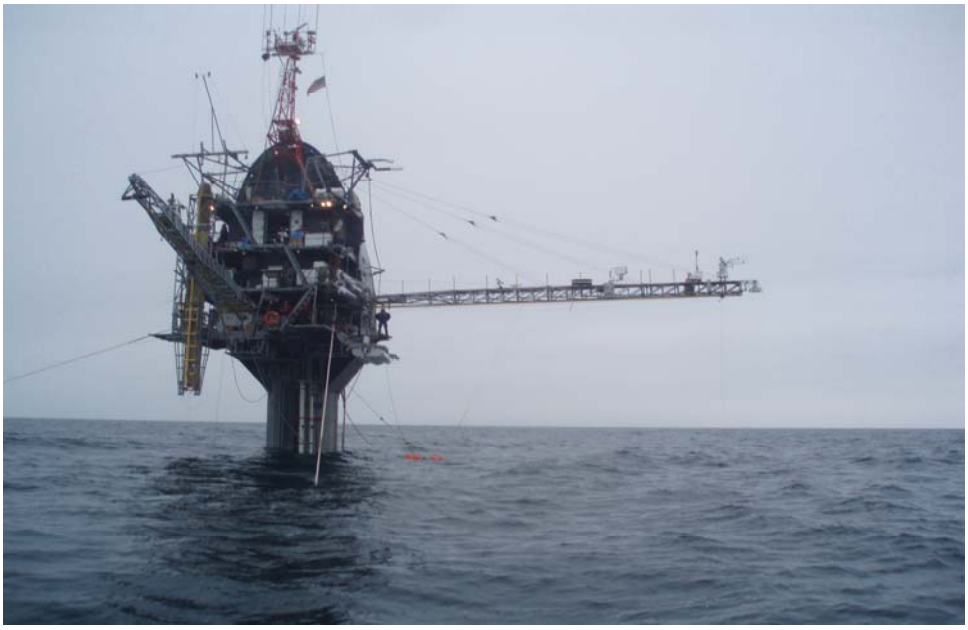


Figure 1: R/P FLIP deployed in the Santa Barbara Channel in September 2008. The new starboard boom extends off to the right from FLIP.

Figure 2 shows a schematic and some detail of the PI's instruments deployed from the new starboard boom.

IMPACT/APPLICATIONS

The new starboard boom has had a significant impact on the capabilities of FLIP to support not just RaDyO and the Hi-Res DRIs but also many areas of air-sea interaction research and, more generally, any programs requiring a stable platform for upper ocean and lower atmosphere research.

RELATED PROJECTS

The work completed under this grant is related to all the RaDyO projects that have used FLIP or will be using FLIP in the Hawaii Experiment in 2009. It will also have a positive impact on FLIP's capabilities for the Hi-Res DRI.

REFERENCES

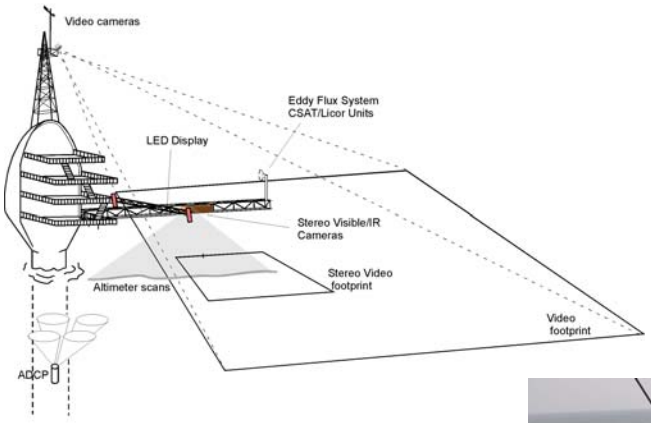
None.

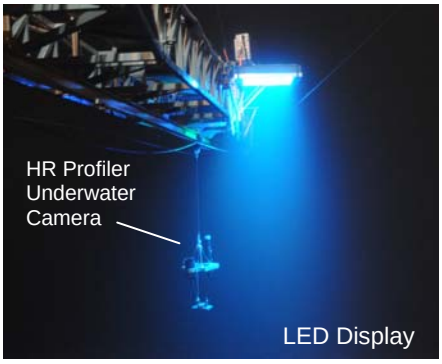
PATENTS

None

HONORS/AWARDS/PRIZES

None





Deployed instrumentation:
11Mpx 12bit digital camera (Crow's nest)
Stereo Visible System
LED display
Dopbeam + Underwater Camera
Scanning LIDAR
Eddy Covariance system
NTP time server (GPS sync)

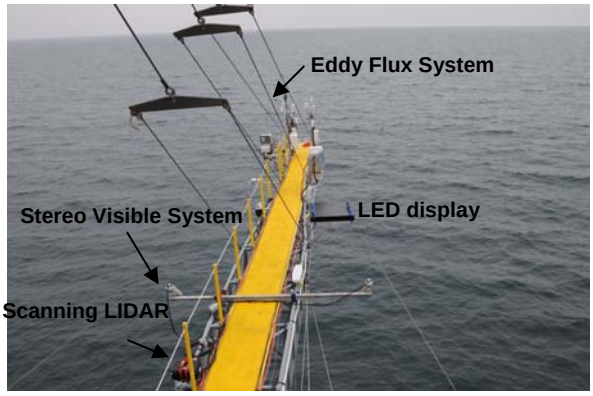


Figure 2: Deployed instrumentation during the Santa Barbara Channel Experiment in September 2008, with photographic detail of some instruments on the new starboard boom.