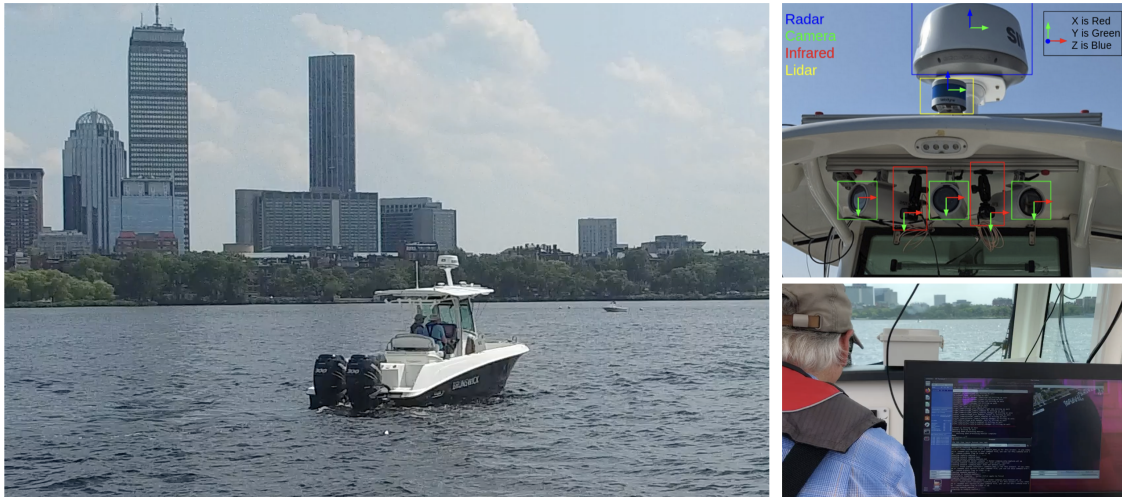


R/V Philos - The Autonomous Boston Whaler, a.k.a., "RoboWhaler"



R/V Philos is a 7 meter Boston Whaler that has been outfitted with sensors, hardware, and electrical infrastructure to be used as a mobile marine autonomy laboratory. The vessel is primarily used in two modes, manned and unmanned. In the manned mode R/V Philos is used to collect coordinated marine perception datasets as well as marine support. In unmanned mode R/V Philos becomes 'RoboWhaler' and is used to test advanced marine perception and sensor fusion algorithms, as well as to test marine autonomy behaviors.

Size:	7 meters
Sensors:	GPS, IMU, 4G Broadband Radar, VLP-16 Velodyne 3D Lidar, 3 FLIR Blackfly 1.3 MP Cameras (center, left, right), 2 FLIR ADK 0.3 MP Infrared Cameras (left, right)
Supplemental Equipment:	2 KW 120 VAC Inverter, 18 inch daylight display, distributed network access
Top Speed:	(under autonomy) 10 meters / sec
Propulsion:	Twin 250HP Mercury Marine Motors
Software:	Sensor System ROS, Autonomy System MOOS-IvP
Further Info:	https://oceanai.mit.edu/pavlab/docs/OCEANS21-2021157455.pdf
Datasets:	https://seagrant.mit.edu/auvlab-datasets-marine-perception-1
Philos USV Photos:	https://oceanai.mit.edu/media/PhilosUSV/album
Current Projects:	https://oceanai.mit.edu/pavlab/proj/seebyte
Recent Events:	https://oceanai.mit.edu/media/Jul2721-MIT-NeptuneTests/album

Recent Publications

2021 (2 items)

1. Michael DeFilippo, Michael Sacarny, and Paul Robinette. Robowhaler: A robotic vessel for marine autonomy and dataset collection. In *OCEANS 2021 MTS/IEEE*, October 2021.
2. Conlan Cesar, Benjamin Whetton, Michael DeFilippo, Michael Benjamin, Michael Sacarny, Scott Reed, and Andrea Munafo. Coordinating multiple autonomies to improve mission performance. In *OCEANS 2021 MTS/IEEE*, October 2021.

Other Photos





References

- [1] Conlan Cesar, Benjamin Whetton, Michael DeFilippo, Michael Benjamin, Michael Sacarny, Scott Reed, and Andrea Munafo. Coordinating multiple autonomies to improve mission performance. In *OCEANS 2021 MTS/IEEE*, October 2021.
- [2] Michael DeFilippo, Michael Sacarny, and Paul Robinette. Robowhale: A robotic vessel for marine autonomy and dataset collection. In *OCEANS 2021 MTS/IEEE*, October 2021.

