

AEON ALTO Landers: 6-month recovery/redeployment cruise

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The F/V *Beast of Burden*, under Captain Joe Clancy, left Gloucester Massachusetts on July 19th 2021. This research cruise was a service trip to replace two previously deployed landers at AEON stations 4 and 5 as well as to add an additional lander at AEON station 3.

Upon arrival to each station, the deployed lander was first communicated with via the acoustic releases and range was established. If the range was acceptable, the landers were released from the anchor. Once the lander was spotted on the surface, the vessel approached the lander on the starboard side and was hooked via a snap hook line that went to the crane. The lander was then brought on board over the starboard side and placed on a pallet for return shipment to JASCO.

At two of the three stations (AEON 4 and 5) were redeployed with new landers, and an additional station (AEON 3) was deployed as well. **An AZFP with transducers were installed on landers for station 3 and 4 and a WBAT was installed on the lander for station 5.**

Lander deployment was performed via the crane, winch, and quick release. The lander was lifted and suspended over the starboard of the vessel and then lowered into the water. Once the lander was fully submerged, the quick release was triggered, and the lander dropped. For each station, acoustic ranging measurements were taken at multiple locations around the lander to triangulate a more precise lander position on the seafloor (Table 1). At completion of the cruise the retrieved landers from station 4 and 5 were disabled and prepared for return shipment to JASCO. The cruise completed on July 23rd 2021.



Figure 1 Back deck of the F/V *Beast of Burden* showing landers and deck configuration.

Table 1. Lander deployment locations, depth and estimated bottom locations

Station	AMAR	Echo-sounder	Drop Location		Drop Date	Time (UTC)	Estimated Location via triangulation		Depth (m)
			Latitude (N)	Longitude (W)			Latitude (N)	Longitude (W)	
5	378	267834	42.8667	70.0633	2021-07-20	21:14	42.86729	70.06414	135
3	495	55145	42.6225	68.1405	2021-07-22	22:06	42.62235	68.14116	110
4	679	55146	43.8098	67.67967	2021-07-22	12:25	43.80923	067.67885	225