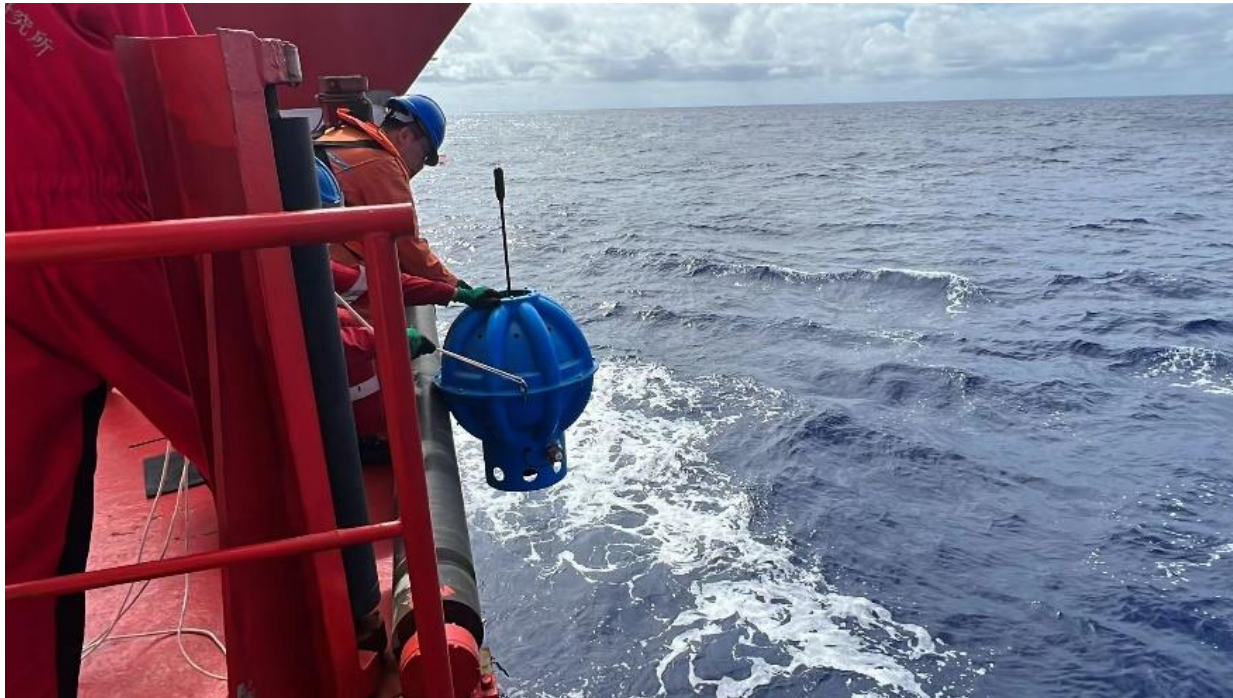




Understanding oceans
Sustaining future



Update of Xuanwu Float



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2024.3

Technical specifications



Maximum profiling depth:	200~6000 dbar, adjustable
Weight:	53kg
CTD:	SBE-61
Successful rate of data transmission:	>95%
Communication:	Iridium (two-way)
Retransmission enabled	Yes
Parking pressure:	200~5000 dbar, adjustable
Parking accuracy:	±500 dbar

Update of Xuanwu



	V1.0	V2.0
Development time	2022	2023
Cycle counts	130	160
Maximum pressure	60.21 Mpa	>60.28 Mpa
Battery capacity	125Ah (25°C)	216Ah (25°C)
Buoyancy compensation	No	Yes
CTD	SBE61, vertical	SBE61, horizontal

Buoyancy compensation module



6 elastic elements



Save ~20% consumption for each cycle



V2.1

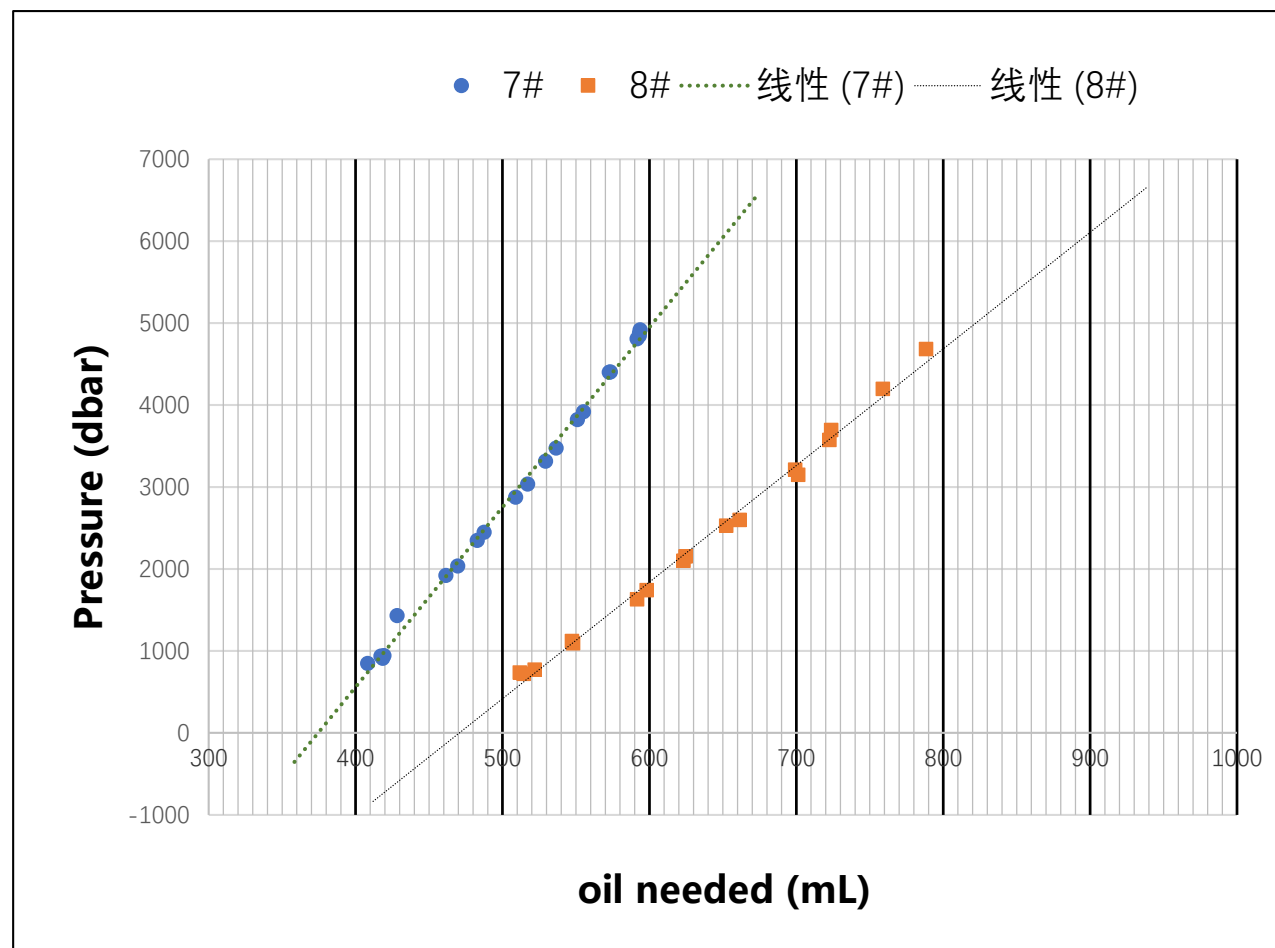
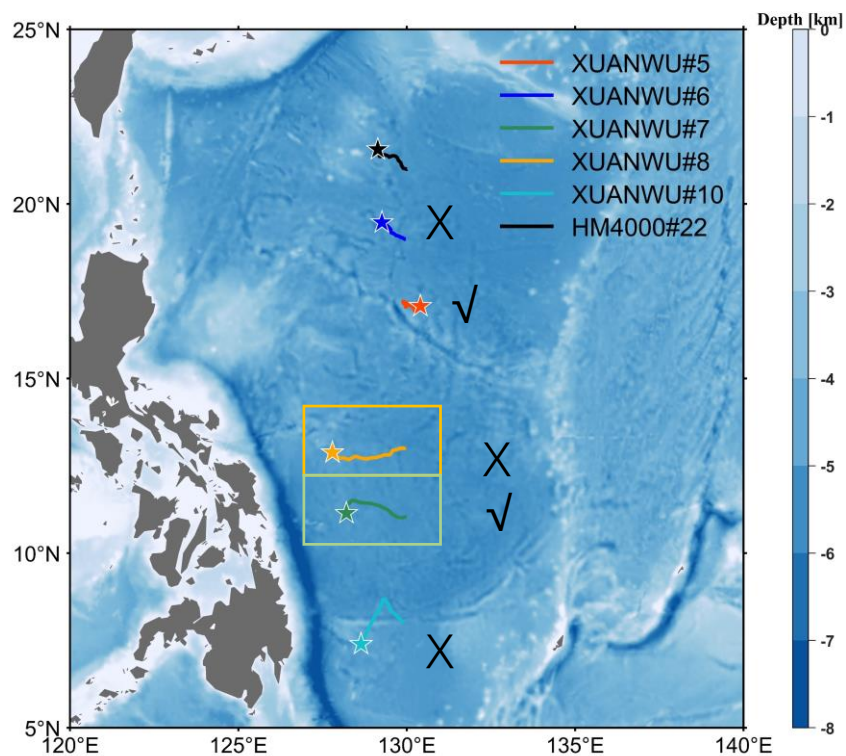


V2.0

Maximum Pressure (dbar)	6000	6000
CTD	SBE61	SBE61
Weight in air	58.3 kg	53.6 kg
Estimated Cycle counts	160	130
Dimensions	D: 600mm, H: 1300mm	D: 600mm, H: 1300mm
communication	Iridium, two-way communication	Iridium, two-way communication
Parking pressure	200-5000m, adjustable	200-5000m, adjustable
Buoyancy compensation	YES	NO

Buoyancy Compensation under test

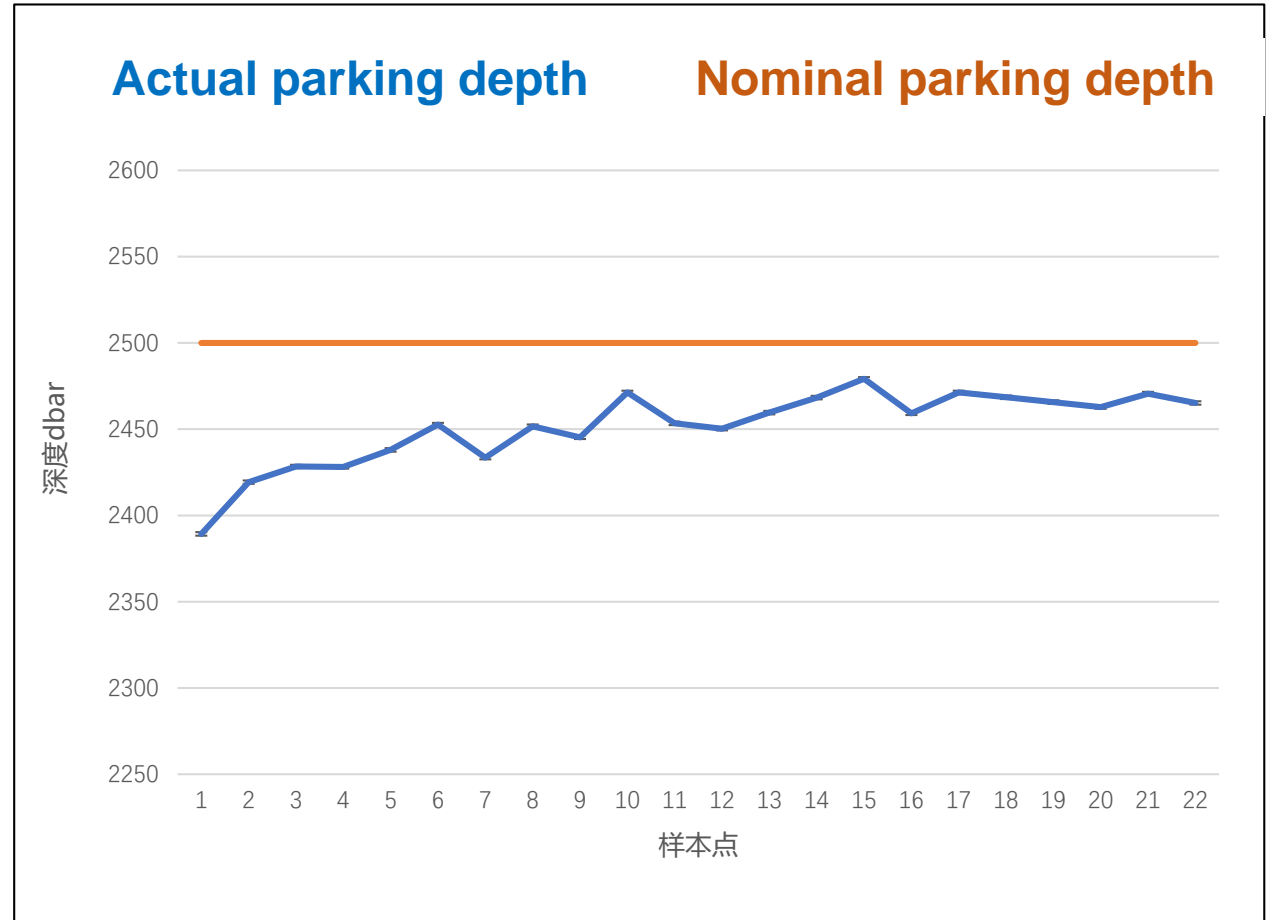
5/7#	6/8/10#
YES	NO



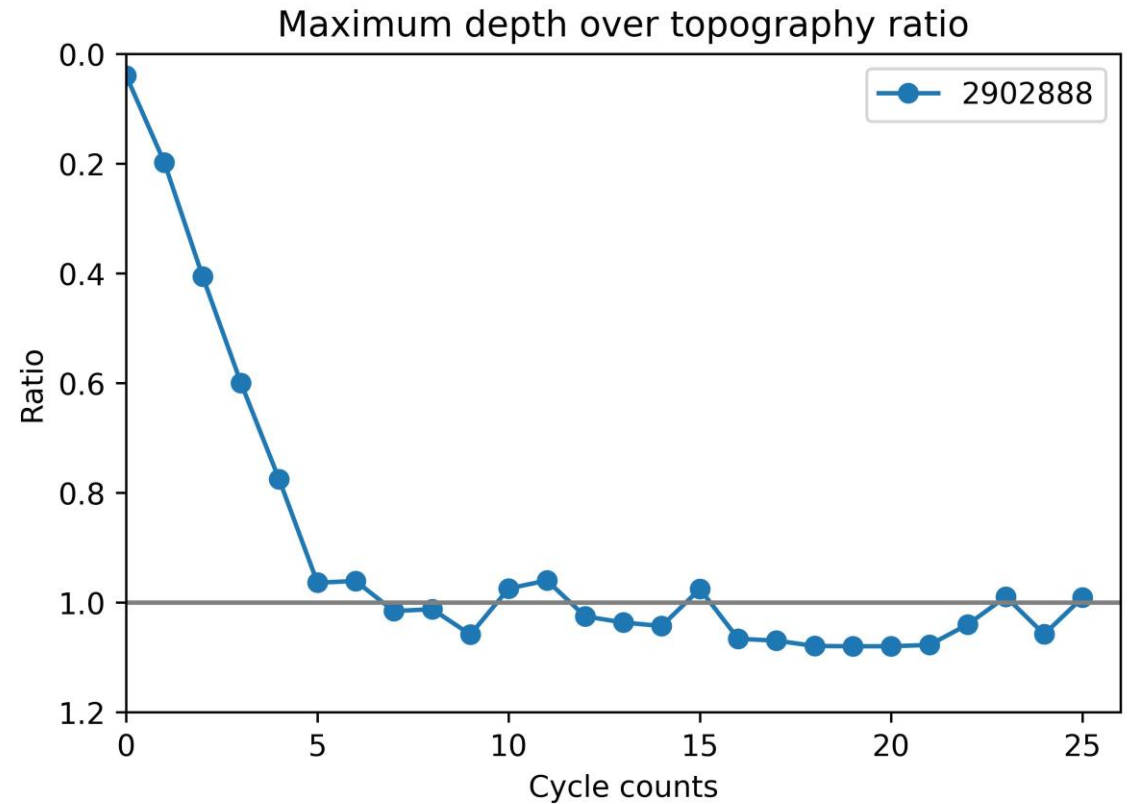
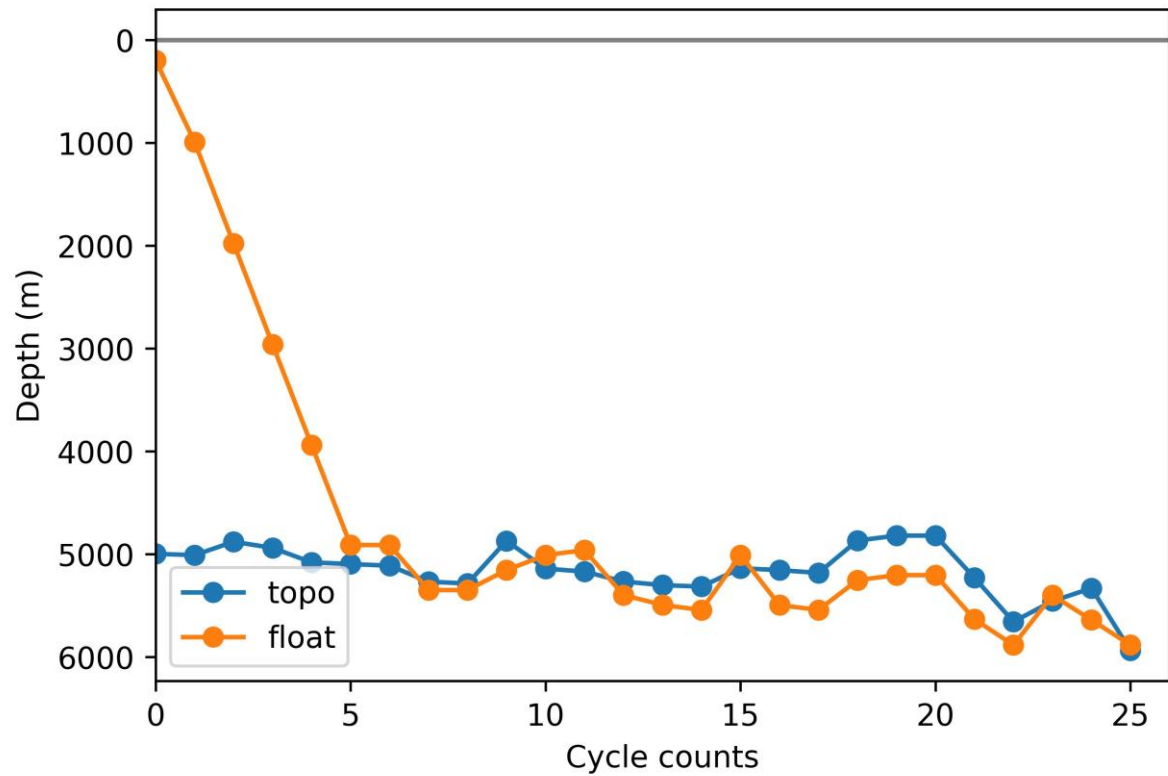
Elastic deformation of an elastic element under high pressure

About the parking accuracy

The parking accuracy achieved ± 200 dbar compared to the target of ± 500 dbar



About the max. depth



Further improvements are needed in the lifetime, reliability and parking accuracy.