

Development of the glass sphere housing for the ultra-deep seafloor observations

Toshihiko Kanazawa[1], Hideyuki Murakami[2]

[1] ERI, Tokyo Univ, [2] KAIYO DENSHI

About 70% of the earth's surface is covered by the seafloor of which water depth exceeds 10 km in some places. For the seafloor geophysical or geochemical observations, we need a reliable pressure vessel for our instruments against such ultra-deep ocean. For extending the observational area into the ultra-deep seafloor, we have developed a glass sphere housing (outer diameter of 43 cm) which can be deployed to the 9,000 m water depth seafloor. By the development, the geoscientific observations near trench axis have become to be possible, which are very important for studying possible large earthquakes near plate boundaries.

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