

Challenge to the Deep Ocean

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The world's deepest seabed of Mariana trench including Challenger Deep (about 11,000 m water depth) is unknown area in the world. It is very difficult to reach and survey there, because all instruments must be protected against extremely pressurized environment and it needs much costs and risks to investigate the only 0.1% area of whole ocean. But since there is a very important area for science, it needs to develop the deep sea exploring system.

Human occupied vehicle (HOV) "Trieste" dive to Challenger Deep first time in the world in 1960 and they reported to watch the fish. After that a few vehicles (ROV: Remotely operated vehicle, or HOV) reached there but no one watch fishes.

New ROV "UROV11K" system equipped with a high-resolution 4K camera and various sensors (Figure 1) was developed to survey and observe the deepest seabed.

I introduce UROV11K system and deep sea research vehicles.



Figure 1. UROV11K system