

Cruise Summary

1. Cruise Information

- Cruise ID: YK25-17
- Name of vessel: R/V Yokosuka
- Title of the cruise : Performance verification test of URASHIMA 8000 (2/2)
- Chief scientist: Takeshi Nakatani [JAMSTEC]
- Representative of the Science Party: Takuya Shimura [JAMSTEC]
- Cruise period: November 6, 2025 – November 26, 2025
- Ports of departure / call / arrival:
Yokosuka Shin Port / Sendai-Shiogama Port, Sendai Port Area / Yokosuka (JAMSTEC)
- Research area: Sagami-Bay, Takuyo-Daisan seamount, and Japan Trench

2. Overview of the Observation

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JAMSTEC has upgraded the URASHIMA AUV from a 3,500m-class to an 8,000m-class vehicle to establish a platform for deep-sea scientific surveys, including in the Japan Trench.

During the YK25-17 cruise, following YK24-18 (Nov–Dec 2024), YK25-02 (Mar 2025), and YK25-12 (Jul 2025), sea trials of the URASHIMA 8000 were conducted using the R/V Yokosuka. A total of seven dives (#320–#326), including two overnight dives, were successfully executed for a total submerged time of 79 hours and 25 minutes, reaching a maximum depth of 7,482 m (Dive #326). Dive #324 successfully demonstrated stable, long-duration survey line navigation for over 23 hours at 3 knots in the Japan Trench. Through these dives, the project confirmed the stabilization of the DVL (Doppler Velocity Log) ground speed measurement in deep water, the successful real-time uplink of high-resolution SSS (Side Scan Sonar) images via high-speed acoustic communication, and verified the practical performance enabling wide-area, high-resolution surveys in the ultra-deep sea.