



Daily Drilling and Scientific Report for IODP Expedition 386 Japan Trench Paleoseismology, 2021



28th May 00:00 – 24:00 JST Japan Standard Time (UTC+9)

1. Location at noon

Position 38° 17.719' N, 144° 3.528' E

IODP-MSP borehole: M0090

Prospectus borehole: JTPC-03B

Water Depth: 7450 m

3. Operation

The ship arrived at Site JTPC-01A at 0600 hrs where surface current was observed to be flowing at ~3.2 knots. The decision was made to move to Site M0090 (JTPC-03B) for 40 m GPC operations. Surface current was 1.7 – 2.2 knots at the site and wind speed 12 m/s. The decision was made to start the 40 m GPC operation at 0930 hrs as wind speed had decreased and was forecast to lessen further. The GPC assembly was deployed at 0955 hrs and run down at 1.1 m/s winch speed after setting inclinometer on a winch cable at 20 m above the GPC weighthead. Running was suspended at 7600 m depth in cable length at 1225 hrs for stabilization and resumed after holding for 3 minutes at 0.3 m/s. Holes M0090 C and D were spudded-in and released at 7684 m of cable length at 1233 hrs. The GPC assembly was run back to surface at 1.1 m/s and recovered to deck at 1515 hrs. Soon after recovery, the Trigger corer was dismantled, and BW and sediment at the bottom were sampled, while the deck crew and GPC operations team began withdrawing and cutting the core into 5 m sections. At 1545 hrs the science party started cutting 5 m segments into 1 m sections while sampling from each section bottom end. Sectioning and sampling were completed by 1915 hrs, and then curation and IW sampling began. Making up the 30 m GPC assembly was complete by 2130 hrs. The ship set sail for Site JTPN-01A, as surface current at JTPC-01A had not improved.

3. Science Report

N/A

4. Core Recovery Details

Hole	C (Trigger corer)	D (GPC main)
Barrel length (m)	1.5	40
Cored length (m)	1.075	33.935
Curated length (m)	1.075	33.935
Recovery (%)	100	100
Number of sections	2	34

5. Time Breakdown

00:00 Continue to sail to Site JTPC-01A.
06:00 Arrive at Site JTPC-01A. Observed 3.2 knot of the surface current. Moved to Site JTPC-03B.
07:30 Arrive at Site JTPC-03B. Wait on wind speed to decrease.
09:30 Prepare running 40 m GPC
09:55 Set Trigger corer to GPC assembly
10:20 Run GPC assembly into water. Set inclinometer on a winch cable at 20 m above the GPC weighthead. Start running down the GPC assembly with winch speed at 1.1 m/s
12:25 Hold running the GPC assembly for 3 minutes at 7600 m depth in cable length for stabilization. Resume running the GPC assembly down at 0.3 m/s.
12:33 Spud-in and released from Holes M0090 C and D at 7684 m in cable depth (tension before: 5.2 tonf, 6.1 tonf, overpull 10.6 tonf).
12:45 Run GPC back to surface with 1.1 m/s of winch speed.
14:40 Recover Trigger corer on deck
15:15 Recover GPC assembly on deck.
Dismantle Trigger corer, cut core and collect BW.
Start withdrawing and cutting core into 5 m segments.
15:45 Start cutting core into 1 m sections while collecting sediment samples from each section bottom end
19:15 Complete cutting core into 1 m sections.
21:30 Complete making up 30 m GPC assembly.
Start sailing to Site JTPN-01A

6. Hours (inc. cumulative total) – no contractual implications can be made from these figures

In port	35.0
Transiting	161.75
Operating	540.5
Technical downtime	4.0
Weather downtime	318.5
Other downtime (specify)	34.25

7. Weather

Fine with some clouds and warm (~18 degC) all day. A westerly wind blew ~12 m/s in the morning and decreasing to less than 8 m/s with wave heights of 2.5 m. The surface current flowed 1.7 – 2.2 knot to northeast at the site.

8. Planned Activity for the next 24 hours

Sail to Site JTPN-01A. Conduct 30 m GPC.

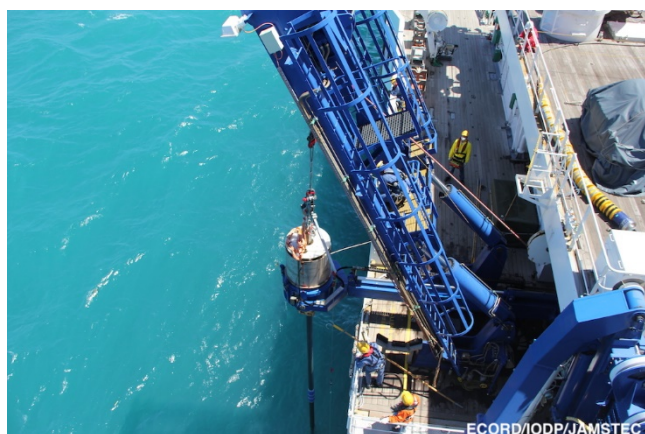
9. Health and Safety and Environmental

Toolbox talk before the operation

10. Photo of the day



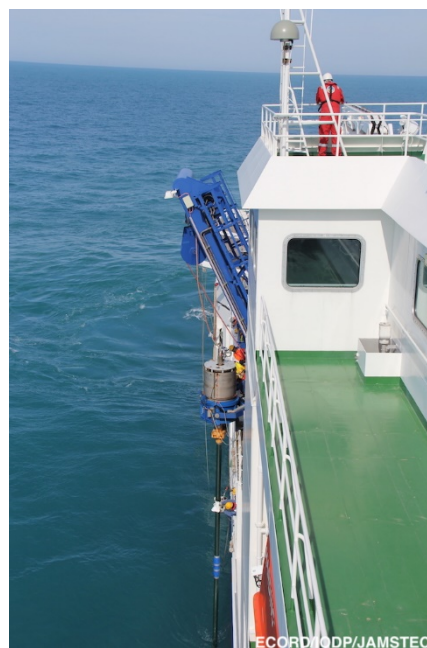
1) Boundary of Kuroshio Current (darker water) at sea surface (photo by NOkutsu@ECORD/IODP/JAMSTEC)



2) GPC assembly in vertical position (photo by LMaeda@ECORD/IODP/JAMSTEC)



3) GPC weighthead into the water (photo by LMaeda@ECORD/IODP/JAMSTEC)



4) Running GPC assembly back to surface (photo by LMaeda@ECORD/IODP/JAMSTEC)



5) The GPC folk arm (photo by
LMaeda@ECORD/IODP/JAMSTEC)