

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



26th April 00:00 - 24:00 JST Japan Standard Time (UTC+9)

1. Location

Position 40° 23.726' N, 144° 25.328' E

IODP-MSP borehole: M0084 Prospectus borehole: JTPN-09A

Water Depth: 7590 m

2. Operations Report

Winds were very strong >18 m/s in the morning at Site JTPN-09A, and the decision was made to delay GPC deployment until the winds dropped to <15 m/s. At noon, the captain confirmed the ship can maintain position under manual DP mode, and the go ahead was given to deploy the GPC. The 20 m GPC assembly was run into the water at 1320 hrs and reached 7750 m depth in cable length by 1550 hrs. Holes M0084 A and B were confirmed spud-in and release at 1602 hrs at 7872 m in cable length. The GPC assembly was run back and recovered on deck at 1840 hrs, and deck crew and the GPC operation team began withdrawing and cutting core into 5 m segments. The science party commenced cutting core into 1 m sections from 1900 hrs while transferring sections to No.3 Laboratory. Conditions were too cold on deck to effectively collect sediment samples outside. Sampling sediments from each section bottom end was therefore conducted in No.3 Laboratory.

3. Science Report

N/A

4. Core Recovery Details

Hole	A (Trigger core)	B (GPC main)
Barrel length (m)	1.5	20
Cored length (m)	0.95	19.94
Curated length (m)	0.95	19.94
Recovery (%)	100	100
Number of sections	2	21

5. Time Breakdown

- 00:00 Continue stand-by at Site JTPN-09A
- Observed >18 m/s winds, wave height 3 m and current 1.3 knot. Delayed GPC deployment until wind speed decreased to <15 m/s.
- 12:30 Observed wind <15 m/s and confirmed the ship can maintain position by manual mode. Began 20 m GPC deployment at JTPN-09A
- 13:00 Set Trigger corer to GPC assembly
- 13:20 Run GPC into water. Set inclinometer and transponder on a winch cable at 20 m and 50 m above the weighthead of GPC respectively. Set winch speed 0.5 1.0 m/s (to 100 m depth in cable length) and 1.2 -1.5 m/s (7750 m depth in cable length).
- 15:50 Hold running GPC 3 minutes at 7750 m depth in cable length for stabilization. Resume running GPC down with 0.3 m/s.
- 16:02 Spud-in and released from Holes M0084 A and B at 7872 m in cable depth (tension before: 3.9 tonf, 4.3 tonf, overpull 7.1 tonf).
- 16:15 Run GPC back to surface with 1.2 1.5 m/s winch speed.
- 18:15 Recovered Trigger corer on deck
- 18:40 Recovered GPC assembly on deck
- 19:00 Withdrawal and cutting core into sections while preparing 20 m GPC assembly for the next run.
- 21:00 Complete cutting core into 1 m sections. Commenced sediment and IW sampling at No. 3 Laboratory
- 23:00 Complete making up 20 m GPC for the next run

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

In port	10.0
Transiting	30.4
Operating	118.0
Technical downtime	0.0
Weather downtime	165.9
Other downtime (specify)	0.0

7. Weather

Cloudy and cold (\sim 3 degC) with strong northerly winds (>18 m/s) in the morning. The wind speed decreased gradually and dropped below <14 m/s by noon. The surface current flowed eastwards at <1.5 knot, and wave height was \sim 2 m.

8. Planned Activity for the next 24 hours

20 m GPC at JTPN-10A

9. Health and Safety and Environmental

Toolbox talk before the GPC operation

10. Photo of the day



1) Toolbox talk: be careful of unexpected swell motion! (photo by LMaeda@ECORD/IODP/JAMSTEC)



3) Deck crew removing Trigger lock pin (photo by LMaeda@ECORD/IODP/JAMSTEC)



2) GPC set to vertical position (photo by NSakurai@ECORD/IODP/JAMSTEC)



4) A lab tech inserting a tube to collect bottom water from Trigger corer (photo by LMaeda@ECORD/IODP/JAMSTEC)



5) Preparing GPC assembly under the full-moon (photo by LMaeda@ECORD/IODP/JAMSTEC)