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

22nd April 00:00 - 24:00 JST Japan Standard Time (UTC+9)

1. Location

Position 36° 04.287' N, 142° 44.126' E
IODP-MSP borehole: M0081
Prospectus borehole: JTPS-01A
Water Depth: 8011 m

2. Operations Report

Due to high winds (~15 m/s) with low surface current (~1 knot) and large swell (~2.5 m) ship motion was severe. The captain confirmed that operating the DP system in manual mode he was able to control the ship position by 0600 hrs. The GPC assembly with 40 m barrel was set in vertical position to check sea condition, and run into water from 0710 hrs. Running GPC at ~1.5 m/s winch speed continued until cable length reached 8150 m. Following this the running speed was set at 0.3 m/s after pausing for 3 minutes to stabilize GPC assembly. Spud-in M0081 Holes C and D was confirmed at 0956 hrs. GPC was retrieved at 1.5 m/s and recovered on deck by 1300 hrs. The decision was made to postpone withdrawing and cutting cores until tomorrow due to rough sea conditions.
In the evening, the ship motion got too severe to stand up normally. So, most of the scientist returned to cabin early.

In the container laboratories, MSCL logging and measurements of refractive index, pH/Alkalinity, and NH4 of BW/IW for M0082 Hole A and B cores were started from 0400 hrs and completed by 1600 hrs.

3. Science Report

N/A

4. Core Recovery Details

Curation is ongoing.

Hole	C (trigger corer)	D (GPC main)
Barrel length (m)	1.5	40
Initial recovery (m)	-	-
Curated length (m)	-	-
Recovery (%)	-	-
Number of sections	-	-

5. Time Breakdown

00:00 Stand-by at 2 miles upstream from Site M0081
05:00 Drift vessel 1.5 miles upstream from the site, while conducting DPS positioning test using auto/manual mode
Prepare for running GPC
06:10 Set trigger and fill seawater in GPC.
06:40 Set GPC to vertical position and run Trigger corer into water. Check sea condition
07:10 Deploy GPC into water and set transponder and inclinometer at 50 m and 20 m above the weighthead respectively. Run GPC down to 8150 m of cable length (winch speed from 0 to 100 m: <1 m/s, 100 to 8150 m ~1.5 m/s)
09:45 Hold GPC at 8150 m of cable length to stabilize the assembly for 3 minutes, then resume running with 0.3 m/s of winch speed.
09:56 Spud-in M0081 Holes C and D (tension before shoot: ~5.8 tonf, after shoot: 6.3 tonf, overpull: 12.0 tonf)
10:00 Run GPC back to surface with ~1.5 m/s
11:30 Recover transponder and inclinometer
12:20 Recover Trigger corer on deck
13:00 Recover GPC on deck. Dismantle Trigger corer and collect BW and sediment samples from Trigger core.
13:30 Sail to off Ishinomaki due to rough sea condition.

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

In port	10.0
Transiting	22.65
Operating	73.5
Technical downtime	0.0
Weather downtime	123.65
Other downtime (specify)	0.0

7. Weather

Fine but cloudy and ~17 degC with a northeasterly wind maintaining ~ 15 m/s early in the day. The surface current kept ~1.0 knot toward northeast. The sea conditions worsened in the afternoon with wave heights exceeding 4 m after 1700 hrs due to a low pressure coming from north.

8. Planned Activity for the next 24 hours

Continue to move to off Ishinomaki for WOW. Withdraw and cut cores while sampling. Make up 20 m GPC

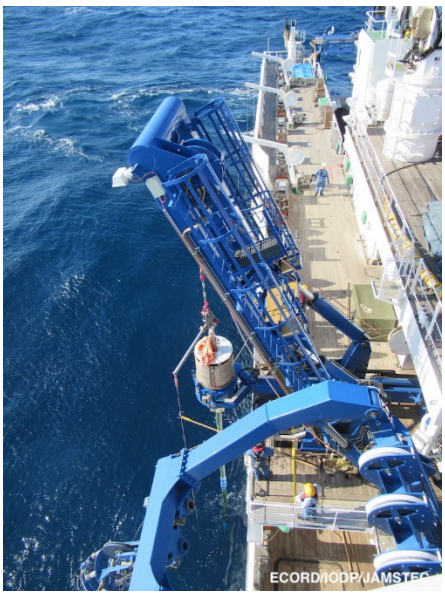
9. Health and Safety and Environmental

Some science party members had sea sickness in the evening.

10. Photo of the day

1) Captain himself operating DPS by manual mode (photo by LMaeda@ECORD/IODP/JAMSTEC)

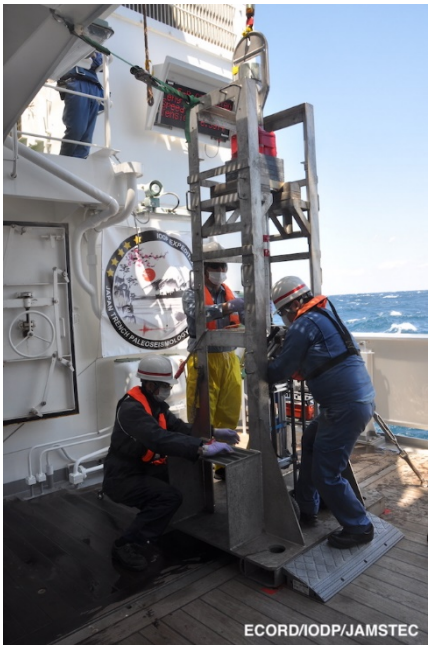
3) Chief Engineer himself operating the coring winch (photo by LMaeda@ECORD/IODP/JAMSTEC)



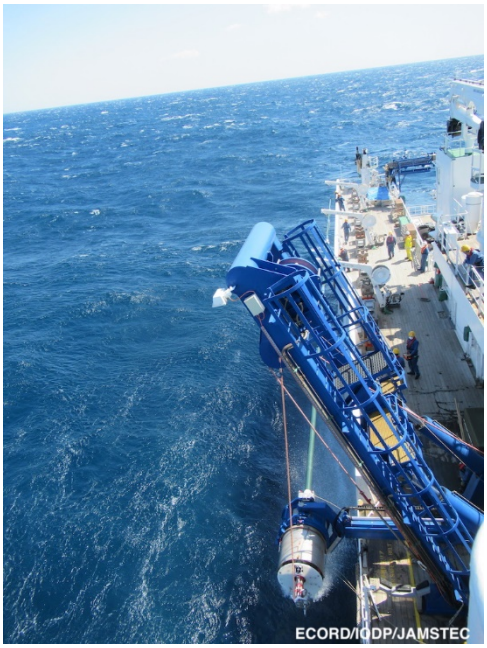
2) 40 m GPC just before running into water (photo by NSakurai@ECORD/IODP/JAMSTEC)

4) Co-Chief Ken Ikehara, Offshore EPM Lena Maeda, and Assist Offshore EPM Nori Sakurai: just after spud-in and release (photo by NOkutsu@ECORD/IODP/JAMSTEC)

5) 40 m GPC run back from water (photo by LMaeda@ECORD/IODP/JAMSTEC)



7) Lab tech preparing dismantle Trigger corer (photo by LMaeda@ECORD/IODP/JAMSTEC)



6) 40 m GPC recovered (photo by NSakurai@ECORD/IODP/JAMSTEC)

8) Microbiology specialist Kana Jistuno taking sediment samples from Trigger core (photo by NOkutsu@ECORD/IODP/JAMSTEC)