

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



19th May 00:00 - 24:00 JST Japan Standard Time (UTC+9)

#### 1. Location

Position 37° 24.747' N, 143° 43.729' E

IODP-MSP borehole: M0091 Prospectus borehole: JTPS-07A

Water Depth: 7802 m

#### 3. Operation

The ship arrived at Site JPTS-07A at 0045 hrs, and a single MBES/SBP survey line was conducted above the coring site and completed by 0215 hrs. Observed surface current flowed ~2.2 knot to the northeast with a ~ 7 m/s easterly wind. Monitoring of both the current and wind conditions began to determine if these conditions were steady. At 0915 hrs, a decision was made to go ahead the operation. After setting the inclinometer on a winch cable at 20 m above the GPC weighthead, the 20 m GPC assembly was deployed into the water at 1005 hrs and run down with winch speed set to 1.0 m/s. Running the GPC assembly was suspended at 7900 m depth in cable length at 1150 hrs for stabilization, and resumed with winch speed at 0.3 m/s after holding for 5 minutes. The GPC assembly spudded-in Holes M0091 A and B at 8162 m in cable length at 1238 hrs, and was run back to surface with winch speed set to 1.1 m, and recovered to deck at 1515 hrs. The Trigger corer was dismantled and sampled after GPC recovery, while the deck crew and GPC operation team started withdrawing and cutting the core into 5 m sections. Cutting the 5 m segment into 1 m sections started at 1545 hrs. Sampling at each section bottom end was conducted in No. 3 Laboratory due to heavy rain outside. Cutting and sampling was completed by 1700 hrs. Making up the 20 m GPC for next run was completed by 2015 hrs, after which MBES/SBP surveying began along the trench axis around Site M0091.

## 3. Science Report

N/A

4. Core Recovery Details

The Coro Recovery Betains		
Hole	A (Trigger corer)	B (GPC main)
Barrel length (m)	1.5	20
Cored length (m)	0.835	19.22
Curated length (m)	0.835	19.22
Recovery (%)	100	100
Number of sections	2	20

#### 5. Time Breakdown

- 00:00 Sail to Site JTPS-07A
- 00:45 Arrive at the site, and conduct MBES/SBP

From Lat: 37°28.0366' N, Long: 143°45.6121' E to Lat: 37°21.3088' N, Long: 143°42.4022' E

- 02:15 Stand-by at Site JTPS-07A. Begin monitoring of wind and surface current conditions
- 08:00 Continue to monitor wind and surface current condition
- 09:15 Decision made to conduct GPC operation.
- 10:05 Run GPC into water. Set inclinometer on a winch cable at 20 m above the GPC weighthead, and run down with winch speed at 1.0 m/s.
- Hold running GPC for 5 minutes at 7900 m depth in cable length for stabilization. Resume running GPC assembly with winch speed at 0.3 m/s.
- 12:38 Spud-in and release from Holes M0091 A and B at 8162 m in cable length (tension before: 4.0 tonf; after: 4.35 tonf; overpull: 7.1 tonf)
- 12:45 Run GPC assembly back to surface with winch speed at 1.1 m/s.
- 14:40 Recover Trigger corer to deck.
- 15:15 Recover GPC assembly to deck. Dismantle Trigger corer and begin sampling.

  Start withdrawing and cutting core into 5 m segments while preparing GPC assembly for the next run.
- 15:45 Start cutting 5 m segment into 1 m sections while transporting sections to No. 3 laboratory.
- 16:00 Start sampling from each bottom end at No. 3 laboratory.
- 16:45 Complete cutting core into 1 m sections

- 17:00 Complete sampling from each section bottom end
- 18:00 Start curation and IW sampling
- 20:15 Complete making up 40 m GPC for the next run Start MBES/SBP survey around Site JTPS-07A
- #1(N-S): From Lat: 37°28.8689' N, Long: 143°44.6805' E to Lat: 37°20.3878' N, Long: 143°43.1918' E #2(S-N): From Lat: 37°20.3856' N, Long: 143°42.4973' E to Lat: 37°28.8877' N, Long: 143°45.3372' E, ongoing

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

In port	35.0
Transiting	128.15
Operating	433.25
Technical downtime	0.0
Weather downtime	281.65
Other downtime (specify)	0.0

#### 7. Weather

Overcast in the morning, turning to heavy rain in the afternoon, with warm temperature (~20 degC), and moderate easterly wind (~7 m/s). Relatively large swell (wave height: 2 m) and relatively strong surface current was observed at the site flowing ~2.4 knot to northeast.

# 8. Planned Activity for the next 24 hours

40 m GPC at JTPS-07A.

## 9. Health and Safety and Environmental

Toolbox talk before the operation

10. Photo of the day



1) The trigger hook, after shooting 21 times (photo by TYokoyama@ECORD/IODP/JAMSTEC)



3) The section cutting team (photo by LMaeda@ECORD/IODP/JAMSTEC)



2) Rainwater tarp (photo by LMaeda@ECORD/IODP/JAMSTEC)