



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



5th May 00:00 – 24:00 JST Japan Standard Time (UTC+9)

1. Location

Position 40° 5.487' N, 144° 19.650' E
IODP-MSP borehole: M0088
Prospectus borehole: JTPN-07A
Water Depth: 7550 m

2. Operations Report

MBES/SBP survey around JTPN-07A was completed by 0500 hrs. Preparation of 20 m GPC operation began at 0600 hrs 1 mile upstream of Site JTPN-07A. The 20 m GPC assembly was run into water at 0640 hrs, the inclinometer and transponder were set on the winch cable at 20 m and 50 m above the GPC weighthead respectively, and the GPC assembly was lowered to 7700 m depth in cable length with winch speed 0.5 – 1.0 m/s (0 – 100 m depth in cable length) and 1.2 – 1.5 m/s (100 – 7700 m depth in cable length), and running was halted to stabilize the GPC assembly. A malfunction was found on the friction roller of the traction winch when running was restarted. Because the friction roller was not essential for full functioning of the 20 m GPC, a decision was made to operate without the friction roller at 0910 hrs. Running GPC down was resumed with 0.3 m/s of winch speed and the GPC assembly spudded-in and released Holes M0088 A and B at 0915 hrs with 7814 m of cable length. The GPC was run back with 1.0 – 1.5 m/s, and recovered on deck by 1215 hrs. Breaking out Trigger corer and sampling was conducted by 1230 hrs. Withdrawing and cutting core into 1 m sections were completed by 1430 hrs. Sampling from each section bottom end was conducted in No. 3 laboratory due to rough sea conditions. The deck crew and GPC operation team completed making up 40 m GPC assembly by 1700 hrs. MBES/SBP was not conducted due to rough sea conditions overnight.

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)	1.09	17.69
Curated length (m)	1.09	17.69
Recovery (%)	100	100
Number of sections	2	19

5. Time Breakdown

00:00 Continue MBES/SBP survey
#2(S-N): From Lat: 40°09.1329' N, Long: 144°19.8593' E to Lat: 40°01.2311' N, Long: 144°18.1684' E
#1(S-N): From Lat: 40°00.2852' N, Long: 144°18.8533' E to Lat: 40°01.3178' N, Long: 144°19.1138' E
Reboot SBP (around 02:20), continue #1 survey line
#1(S-N): From Lat: 40°00.9806' N, Long: 144°19.0143' E to Lat: 40°09.1281' N, Long: 144°21.0769' E
05:00 Stand-by at 1 mile upstream from Site JTPN-07A
06:00 Start 20 m GPC operation
06:20 Set Trigger corer to GPC assembly
06:40 Run GPC assembly into water. Inclinometer and transponder set on the 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 (7700 m depth in cable length).
09:00 Hold running GPC assembly at 7700 m depth in cable length for stabilization.
09:10 Resume running GPC assembly with 0.3 m/s of winch speed. Found malfunction on friction roller. Decision to proceed without friction roller.
09:15 Spud-in and release from Holes M0088 A and B at 7814 m in cable length (tension before: 3.9 tonf, 4.3 tonf, overpull 6.2 tonf).
09:30 Run GPC back to surface with 1.5 – 1.6 m/s winch speed.
11:20 Recover Trigger corer on deck.
12:15 Recover GPC assembly on deck. Dismantle Trigger corer, cut core and collect BW.

13:00 Start withdrawing and cutting core into 5 m segments, while preparing 40 m GPC assembly.
 13:30 Start cutting 5 m segment into 1 m sections while transferring sections to No. 3 laboratory.
 13:45 Start sampling from each section bottom end in No. 3 laboratory
 14:30 Complete cutting 5 m segments into 1 m sections.
 15:00 Complete sampling from each section bottom end, start curation and IW sampling
 17:00 Complete making up 40 m GPC assembly.

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

In port	10.0
Transiting	30.4
Operating	253.0
Technical downtime	0.0
Weather downtime	226.9
Other downtime (specify)	0.0

7. Weather

Cloudy and warm (~16 degC), with south to southeasterly winds (~10 m/s) with waves of 1 m during the day. After 1800 hrs, winds increased to >20 m/s, with 2.5 m waves until midnight. The surface current flowed unchanging throughout the day at ~1.5 knot to northeast.

8. Planned Activity for the next 24 hours

Conduct 40 m GPC at Site M0088.

9. Health and Safety and Environmental

Toolbox talk before the operation

10. Photo of the day



1) A deck crew propping up the core barrel with a bamboo pole (photo by LMaeda@ECORD/IODP/JAMSTEC)



2) A bird having a break on the deck (photo by NSakurai@ECORD/IODP/JAMSTEC)



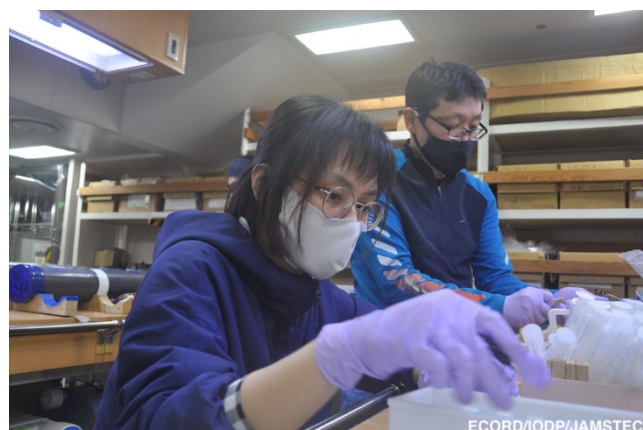
3) A deck crew removing Trigger weighthead from the core barrel (photo by LMaeda@ECORD/IODP/JAMSTEC)



5) Co-Chief Ken Ikehara checking a drilled hole for gas expansion in the core, tapping the base to encourage release (photo by LMaeda@ECORD/IODP/JAMSTEC)



4) A lab tech attaching "patch" on an expanded core section (photo by LMaeda@ECORD/IODP/JAMSTEC).



6) Scientist Kan-Hsi Hsiung checking and sorting IW bottles while Scientist Toshiya Kanamatsu places IW samplers in a core (photo by LMaeda@ECORD/IODP/JAMSTEC)