



Week 1 Drilling and Scientific Report for IODP Expedition 386 Japan Trench Paleoseismology, 2021



18th May 00:00 – 24th May 24:00 JST Japan Standard Time (UTC+9)

1. Operations

- May 18th: The ship arrived at Site JTPC-03B at 0645 hrs. After a short MBES/SBP survey above the site, the 20th GPC operation with 20 m barrel string began at 0830 hrs. The 20 m GPC assembly was deployed into water at 0915 hrs, spudded-in Holes M0090 A and B at 1204 hrs, and recovered to deck at 1500 hrs. Cutting core into 1 m sections and sampling was completed by 1700 hrs. The ship began sailing to Site JTPS-07A after making up 20 m GPC assembly at 1930 hrs.
- May 19th: The ship arrived at Site JTPS-07A at 0045 hrs. MBES/SBP survey above the site was complete by 0215 hrs. The 21st GPC operation was conducted despite ~2.4 knot of surface current because wind speed and direction was steady. The 20 m GPC assembly was deployed into water at 1005 hrs, and spudded-in Holes M0091 A and B at 1238 hrs, and recovered to deck by 1515 hrs. Cutting core into 1 m sections and sampling from each section bottom end were completed by 1700 hrs. MBES/SBP survey around Site M0091 was started at 2015 hrs after making up 40 m GPC for the next run.
- May 20th: MBES/SBP survey around Site M0091 was complete by 0300 hrs. The 22nd GPC operation began at 0900 hrs after confirming favourable wind and surface current conditions. The 40 m GPC assembly was run into water at 0945 hrs, spudded-in Holes M0091 C and D at 1212 hrs, recovered on deck at 1515 hrs. Cutting core into 1 m sections and sampling were completed by 1845 hrs. The ship started sailing to off Miyako Bay for WOW at 1900 hrs.
- May 21st: The ship had arrived at a stand-by point off Miyako Bay by 0700 hrs, and the 40 m GPC assembly was made up while waiting on weather. The ship began sailing to Site M0087 at 1800 hrs.
- May 22nd: The ship arrived at Site M0087 at 0215 hrs and conducted MBES/SBP survey. The 23rd GPC operation was conducted using the 40 m barrel string, which was deployed into the water at 0850 hrs, and spudded-in Holes M0087 C and D at 1123 hrs, and recovered to deck by 1430 hrs. Cutting core into 1 m sections and sampling from each section bottom end were completed by 1630 hrs. The ship started sailing to Site JTPC-01A at 2000 hrs after making up 40 m GPC assembly.
- May 23rd: The ship visited Sites JTPC-01A and JTPC-03B to assess suitability for 40 m GPC operations, but by 0630 hrs found it surface current was too strong to maintain ship's position, and moved to Site JTPC-09B. While switching the barrel string assembly from 40 m to 20 m at Site JTPC-09B the bolts securing the top unit of the barrel string were damaged. The decision was made at 1130 hrs to replace all bolts of the barrel strings rather than conducting GPC operations. Inspection and replacement were complete by 1530 hrs, and making up 30 m GPC assembly was complete by 2030 hrs. The ship moved to Site JTPS-06B.
- May 24th: The ship arrived at Site JTPS-06B. The 24th GPC operation was conducted with 30 m barrel string. The GPC assembly was deployed into water at 0850 hrs, and spudded-in Holes M0092 A and B at 11:26 hrs, and recovered to deck by 1430 hrs. Cutting core into 1 m sections and sampling from each section bottom end were complete by 1630 hrs. MBES/SBP survey around Site M0092 began at 2015 hrs after making up the 40 m GPC for the next run.

2. Hole summary

Site	M0090		M0091		M0091		M0087		M0092	
Latitude	38° 17.834' N		37° 24.747' N		37° 24.741' N		39° 26.595' N		36° 54.672' N	
Longitude	144° 3.549' E		143° 43.729' E		143° 43.741' E		144° 13.087' E		143° 25.416' E	
Water depth (m)	7445		7802		7812		7518		7702	
Date	May 18		May 19		May 20		May 22		May 24	
Spud-in time	12:04		12:38		12:12		11:23		11:26	
Hole	A	B	A	B	C	D	C	D	A	B
On deck time	14:10	15:00	14:40	15:15	14:35	15:15	13:50	14:30	14:05	14:30
Barrel length (m)	1.5	20	1.5	20	1.5	40	1.5	40	1.5	30
Cored length (m)	1.154	19.6	0.835	19.22	0.765	31.12	0.835	26.345	1.1	30.07
Number of section	2	20	2	20	2	32	2	27	2	31

3. Science

N/A

4. HSE Activity

Toolbox meeting before each GPC operation

5. Outreach Activity

N/A

6. Figures

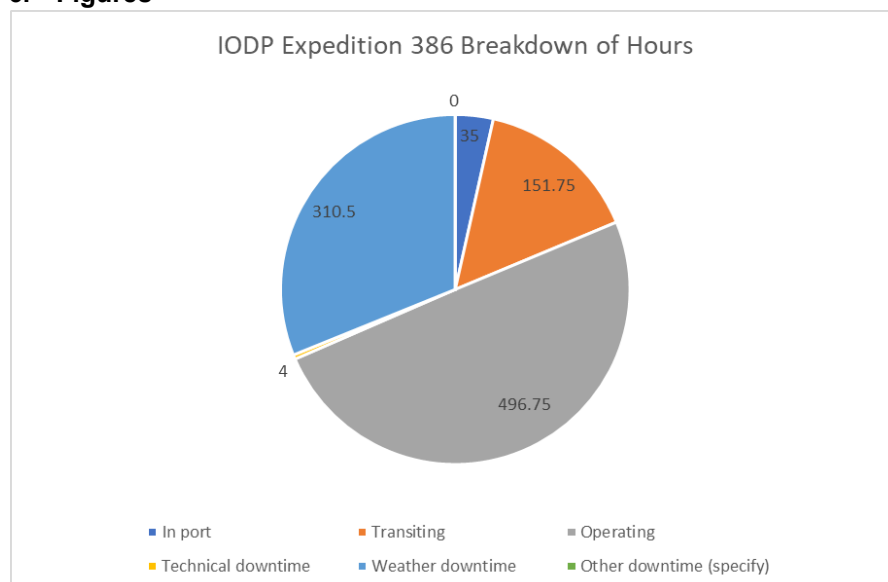


Figure 1: Breakdown of hours from 00:00 18th May to 24:00 24th May 2021.

Proposal Site	Site	20 m GPC			1st 40 m GPC			2nd 40 m GPC			% Recovered vs planned
		Trigger core (Hole A)	GPC main (Hole B)	Date collected	Trigger core (Hole C)	GPC main (Hole D)	Date collected	Trigger core (Hole E)	GPC main (Hole F)	Date collected	
JTPS-01A	M0081	1.21	19.89	20/04/2021	1.07	35.57	22/04/2021	1.07	37.74	14/05/2021	93.2
JTPS-02A	M0082	1.455	18.71	21/04/2021	0.97	36.67	15/05/2021				92.3
JTPS-05B											0.0
JTPS-06B	M0092	1.1	30.07	23/05/2021							50.1
JTPS-07A	M0091	0.835	19.22	19/05/2021	0.765	31.12	20/05/2021				83.9
JTPS-09A											0.0
JTPS-10A											0.0
JTPC-01A											0.0
JTPC-02A											0.0
JTPC-03B	M0090	1.154	19.6	18/05/2021							32.7
JTPC-04B	M0089	1.43	18.1	09/05/2021	0.705	36.9	10/05/2021				91.7
JTPC-05A	M0083	1.615	19.52	24/04/2021	1.4	36.89	01/05/2021	0.92	36.61	11/05/2021	93.0
JTPC-08A											0.0
JTPC-09A											0.0
JTPN-02A	M0087	1.475	18.975	03/05/2021	0.835	26.345	22/05/2021				75.5
JTPN-05A	M0086	1.4	18.24	02/05/2021							30.4
JTPN-07A	M0088	1.09	17.69	05/05/2021	0.96	36.48	06/05/2021				90.3
JTPN-09A	M0084	0.95	19.94	26/04/2021	0.46	35.44	28/04/2021	0.5	37.82	12/05/2021	93.2
JTPN-10A	M0085	0.72	18.31	27/04/2021	0.33	33.69	29/04/2021				86.7

PLANNED	UNDERWAY	COMPLETE	SOUTHERN
PLANNED	UNDERWAY	COMPLETE	CENTRAL
PLANNED	UNDERWAY	COMPLETE	NORTHERN
NOT PLANNED			

(not inc. Trigger Cores)

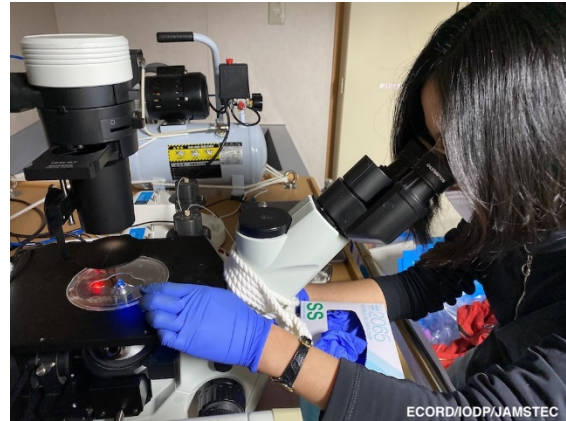
TOTAL CORES RECOVERED	24
% OF EXP.386 PLANNED CORES	58.5
TOTAL LENGTH RECOVERED (m)	659.536
TOTAL % REC LENGTH vs PLANNED	52.3

Figure 2: Cores recovered for Week 6 (18th May to 24th May 2021).

7. Photographs



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



3) Microscope fluorescence observation (photo by NOkutsu@ECORD/IODP/JAMSTEC)



2) Deck crew and GPC operation team checking barrel alignment (photo by LMaeda@ECORD/IODP/JAMSTEC)



4) Misty Miyako Bay (photo by TKanamatsu@ECORD/IODP/JAMSTEC)