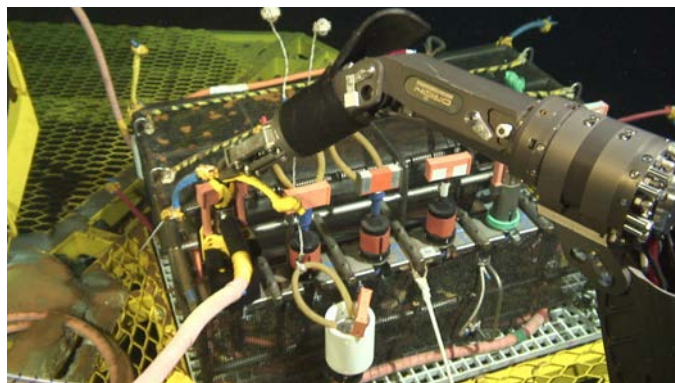
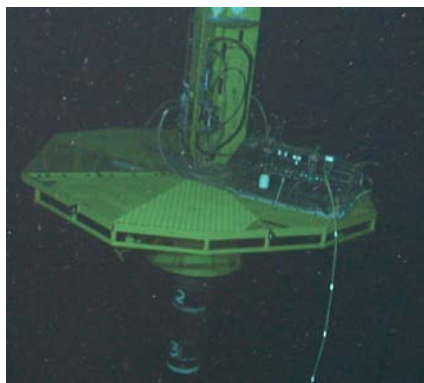
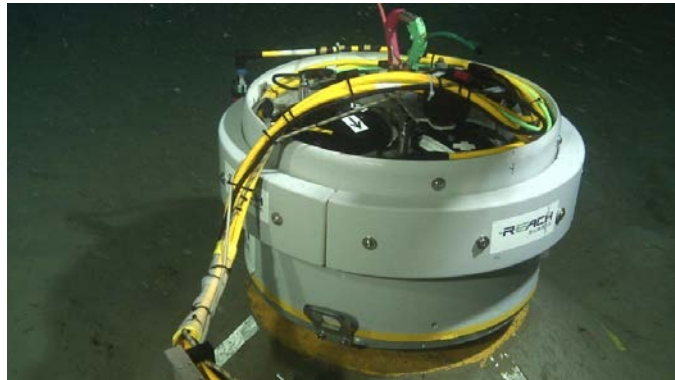




# KS-24-J03 Cruise Report R/V Shinseimaru & ROV Hyper Dolphin

Real-time ocean bottom crustal movement observation



Kumanonada Sea, Off Kiisuido Strait

Apr. 27th, 2024 – May 15th, 2024

R&D Group for Seafloor Observatory  
R&D Center for Earthquake and Tsunami Forecasting  
Research Institute for Marine Geodynamics  
Japan Agency for Marine-Earth Science and Technology

## Contents

<b>1. Cruise Information .....</b>	<b>3</b>
<b>2. Research Proposal and Science Party .....</b>	<b>3</b>
<b>3. Activity and Results .....</b>	<b>4</b>
<b>4. Dive Log .....</b>	<b>5</b>
<b>5. Notice on Using.....</b>	<b>12</b>

## 1. Cruise Information

Cruise ID:	KS-24-J03
Name of vessel:	Shinsei Maru
Title of cruise:	Real time ocean bottom crustal movement observation

Chief Scientist:	Affiliation	Duration
Shuhei NISHIDA	JAMSTEC	Apr. 27th – May 7th
Takashi YOKOBIKI	JAMSTEC	May 9th – May 15th

Boarding Scientist:	Affiliation	Duration
Toshiya Fujiwara	JAMSTEC	Apr. 27th – May 7th
Siri Chaterine Vassvag	Reach Subsea	Apr. 27th – May 7th
René Haugsdal	Reach Subsea	Apr. 27th – May 7th
Øystein Bergsagel	Reach Subsea	Apr. 27th – May 7th
Eiichiro ARAKI	JAMSTEC	May 9th – May 15th
Shuhei TSUJI	JAMSTEC	May 9th – May 15th
Morifumi TAKAESU	NME	Apr. 27th – May 15th
Masayuki TOIZUMI	NME	Apr. 27th – May 15th
Fumito SAKURAGI	NME	Apr. 27th – May 15th

Cruise period:	Leg1: Apr. 27th – May 7th
	Leg2: May 9th – May 15th

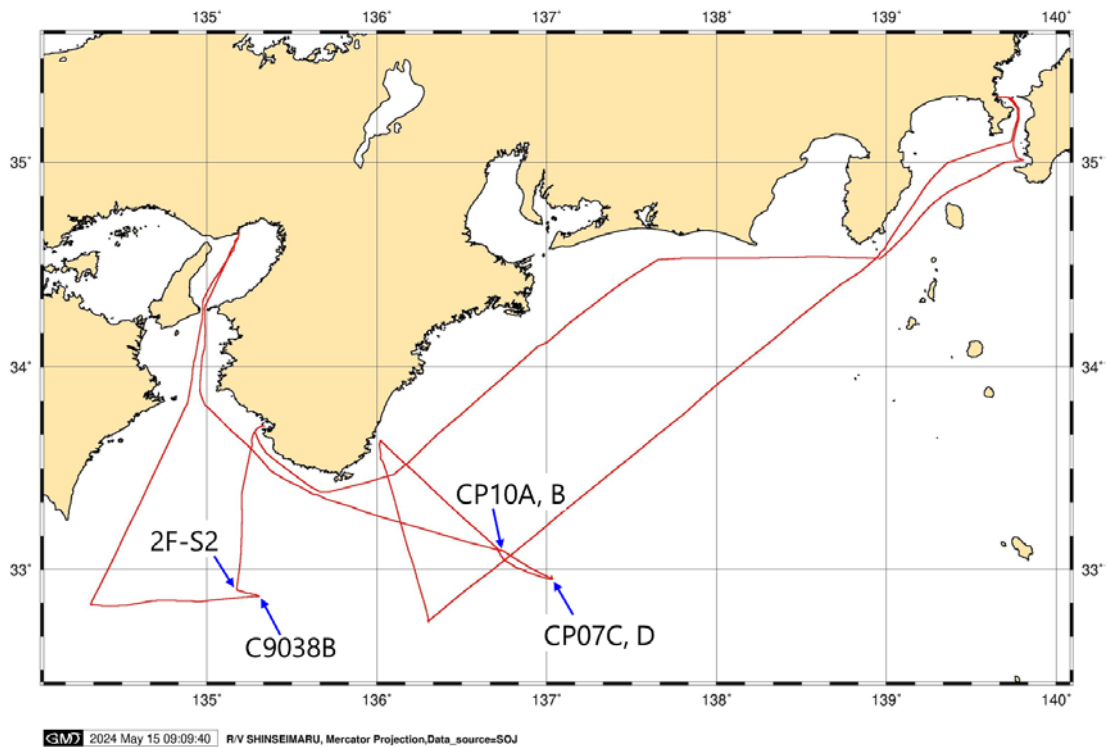
Ports of	departure: JAMSTEC Yokosuka HQ
	call: Kobe Port
	arrival: JAMSTEC Yokosuka HQ
Research area:	Kumanonada Sea, Off Kiisuido Strait

## 2. Research Proposal and Science Party

Science Party List:	Affiliation:
Eiichiro ARAKI	JAMSTEC
Takashi YOKOBIKI	JAMSTEC
Hiroyuki MATSUMOTO	JAMSTEC
Shuhei NISHIDA	JAMSTEC
Yuya MACHIDA	JAMSTEC
Shuhei TSUJI	JAMSTEC
Satoru BABA	JAMSTEC
Takane HORI	JAMSTEC
Shuichi KODAIRA	JAMSTEC
Shojiro ISHIBASHI	JAMSTEC
Takashi TONEGAWA	JAMSTEC
Koichiro OBANA	JAMSTEC
Toshiya FUJIWARA	JAMSTEC
Siri Chaterine VASSVAG	Reach Subsea
René HAUGSDAL	Reach Subsea
Øystein BERGSAGEL	Reach Subsea

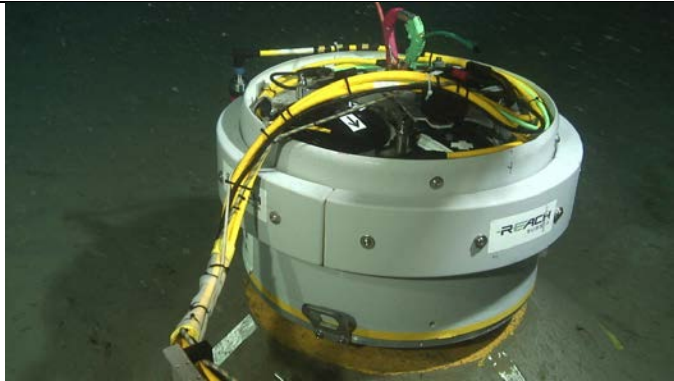
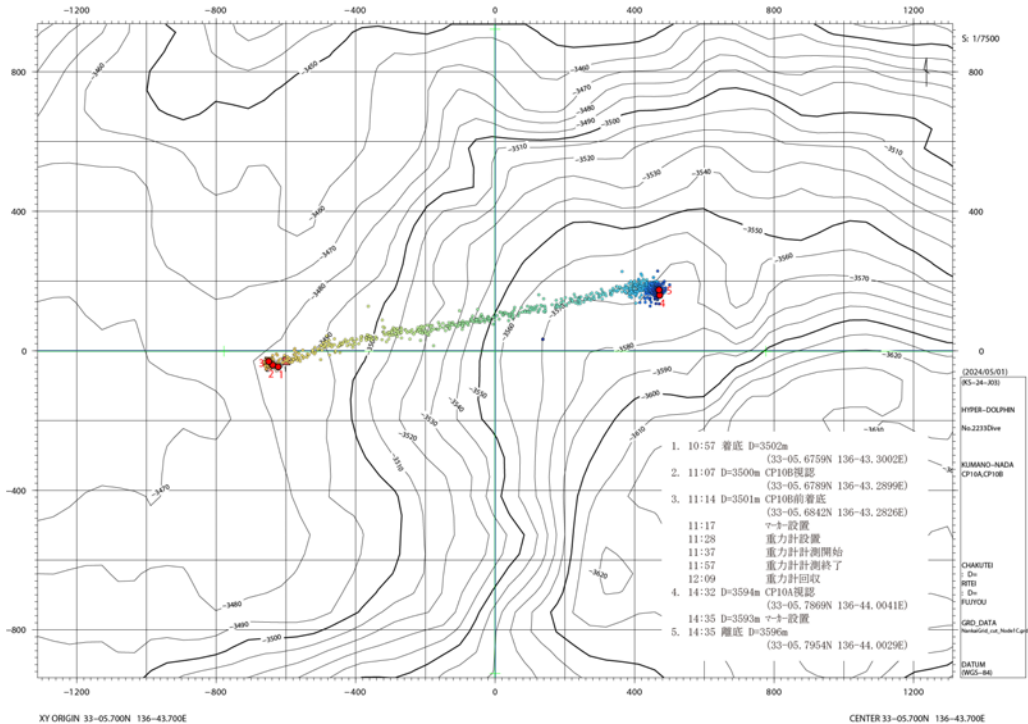
### 3. Activity and Results


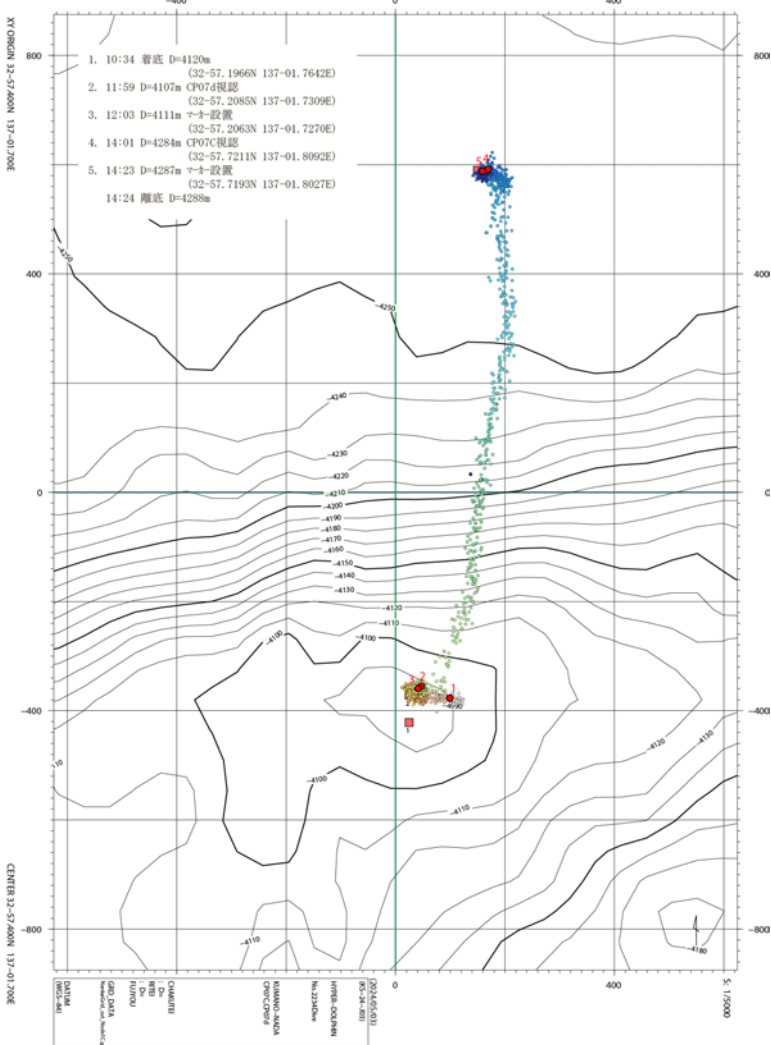
- A) The gravity observation was carried out at platforms CP10B, CP07C, CP10A, and CP10B in that order which were installed on the seafloor in advance.
- B) The optical fiber sensing was conducted by connecting the fiber cable installed in the C9038B borehole to the optical fiber sensing device on board via ROV.
- C) The pressure hull of two fiber-optic strainmeters which installed at 2F-S2 were backfilled with sand.


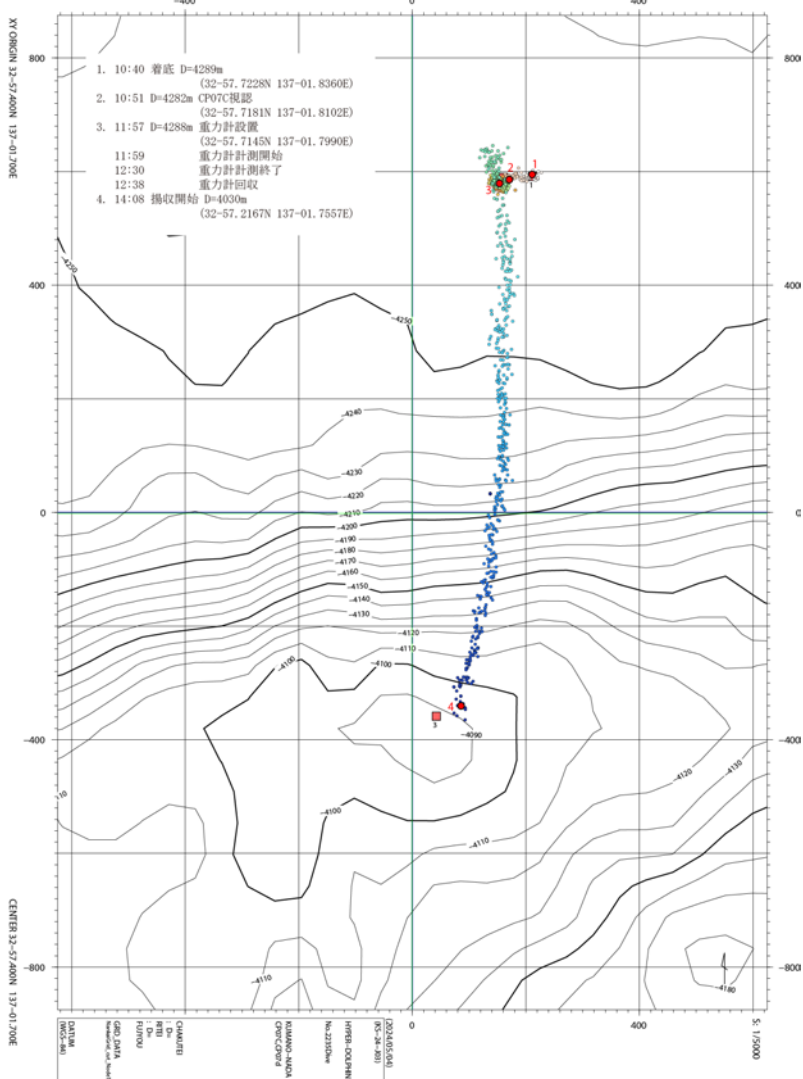


A Vessel Trajectory during KS-24-J03


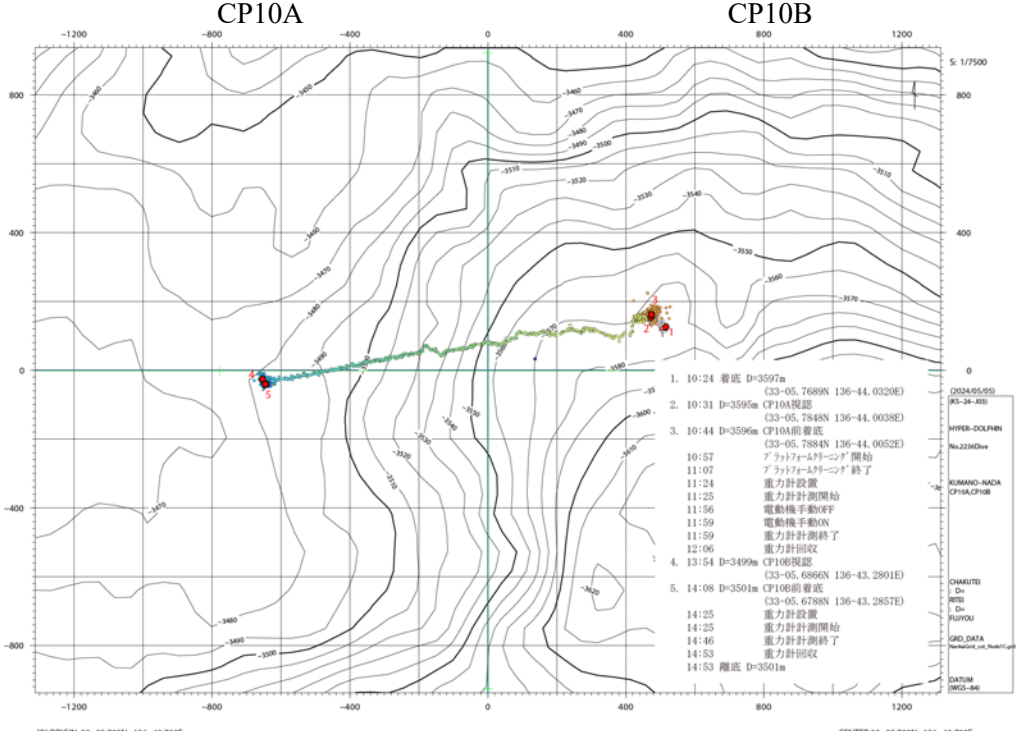
#### 4. Dive Log

No.	Dive Num. Date	Site	Staying Time	Latitude	Longitude	Depth
	HPD2233 2024/5/1	CP10	10:57	33-05.6759N	136-43.3002E	3502
			14:35	33-05.7954N	136-44.0029E	3596
	Work Summary	The ROV performed gravity measurement and marker buoy installation at CP10B. Then, the ROV moved to CP10A for marker buoy installation.				
						
1						

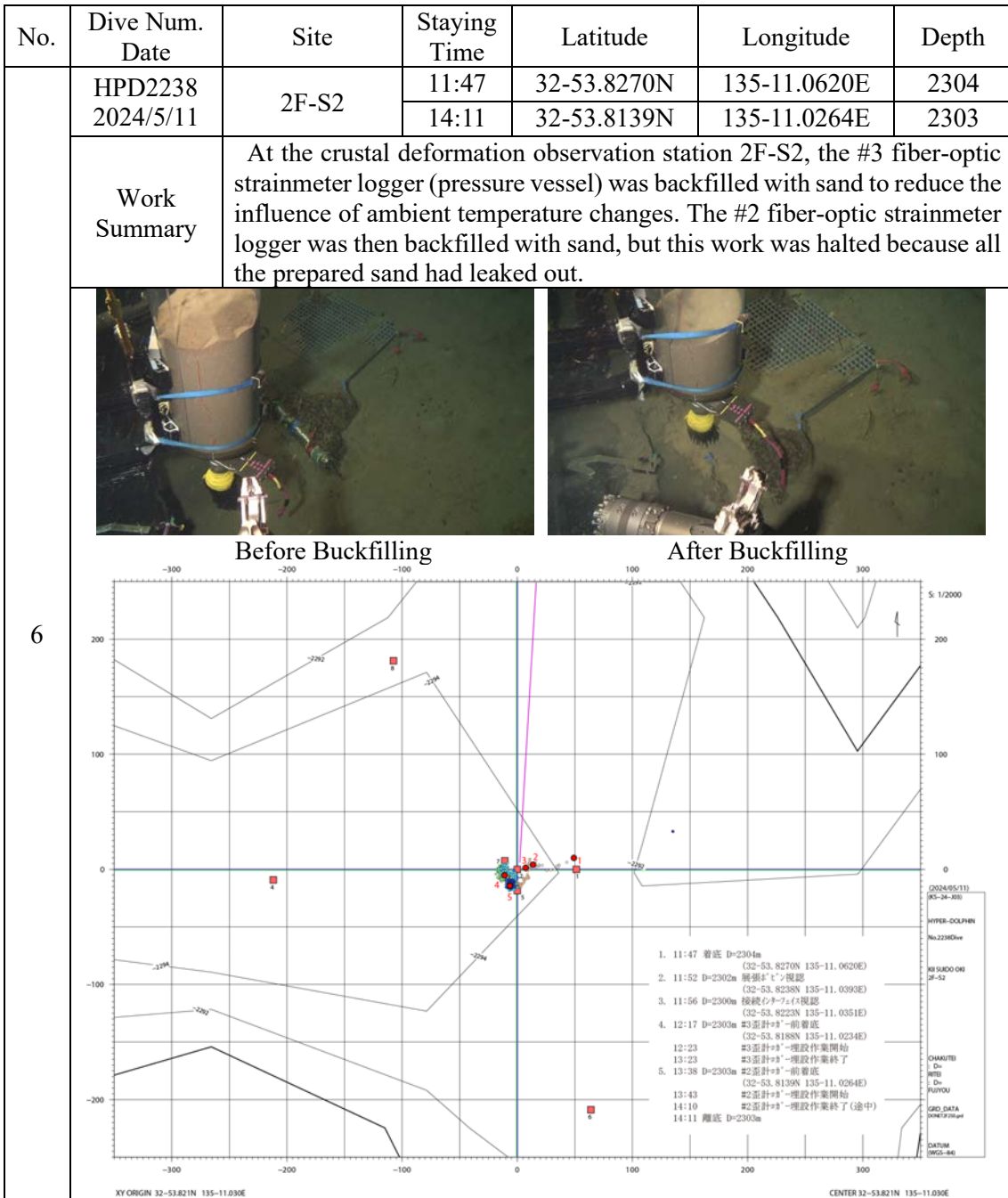
No.	Dive Num. Date	Site	Staying Time	Latitude	Longitude	Depth
	HPD2234 2024/5/3	CP07	10:34	32-57.1966N	137-01.7642E	4120
			16:39	32-57.7193N	137-01.8027E	4288
	Work Summary	The ROV searched for and found the gravity platform CP07d and set up a marker buoy near CP07d. The ROV then moved to CP07C, set up a marker buoy near CP07C; We tried to observe the gravimeter at CP7C, but it was time to leave the platform, so the ROV left the platform.				
						
270	 <p>1. 10:34 着底 D=4120m (32-57.1966N 137-01.7642E) 2. 11:59 D=4107m CP07d視認 (32-57.2085N 137-01.7309E) 3. 12:03 D=4111m 十字設置 (32-57.2063N 137-01.7270E) 4. 14:01 D=4284m CP07C視認 (32-57.7211N 137-01.8092E) 5. 14:23 D=4287m 十字設置 (32-57.7193N 137-01.8027E) 14:24 離底 D=4288m</p>					



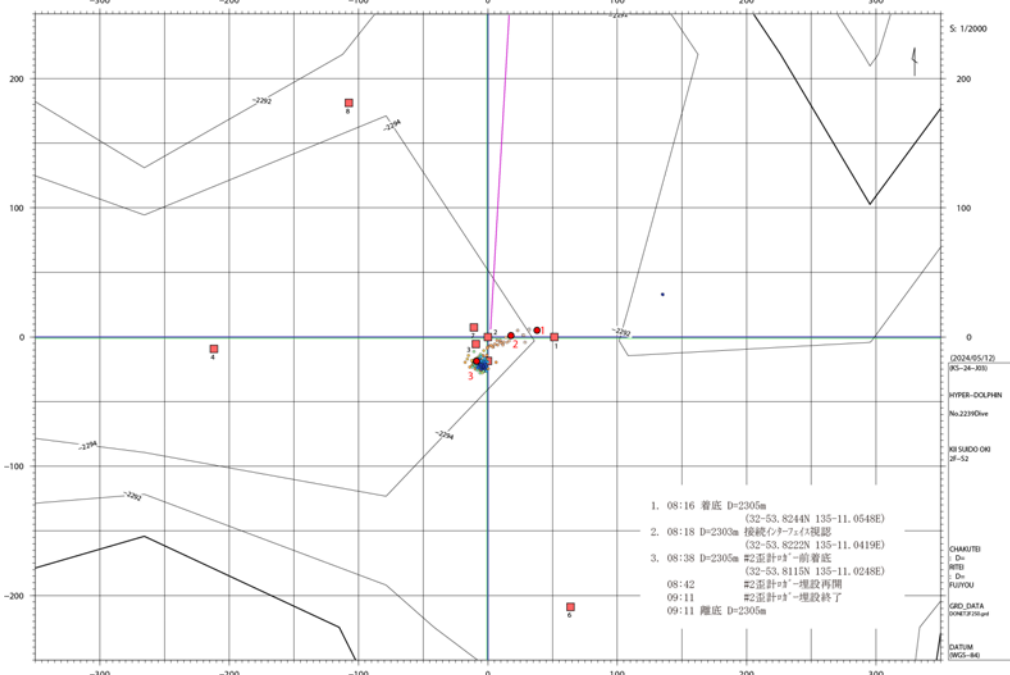
No.	Dive Num. Date	Site	Staying Time	Latitude	Longitude	Depth
	HPD2235 2024/5/4	CP07	10:40	32-57.7228N	137-01.8360E	4289
			14:08	32-57.2167N	137-01.7557E	4030
	Work Summary	Gravimetry measurements were performed on the CP07C gravity observation platform. The ROV was lifted because it was time to leave the bottom while moving to CP07d.				
	 <p style="text-align: center;">CP07C</p> 					

3

No.	Dive Num. Date	Site	Staying Time	Latitude	Longitude	Depth
	HPD2236 2024/5/5	CP10	10:24	33-05.7689N	136-44.0320E	3597
			14:53	33-05.6788N	136-43.2857E	3501
	Work Summary	Gravimetry measurements were performed on CP010A, the platform for gravity observation. After that, the ROV moved to CP10B and performed the gravimetry measurement.				
						
4	 <p>XY ORIGIN 33-05.700N 136-43.700E      CENTER 33-05.700N 136-43.700E</p> <p>020240505S 03-24-00E HYPER-DOLPHIN No.2236Dive KUMANO-NADA CP10A/CP10B</p> <p>QIARUTEI : Dc : 0010 : Dc : FUUYOU GEO_DATA MapData2024_05_05/0505032400E</p> <p>DATUM [WGS-84]</p> <ol style="list-style-type: none"> <li>10:24 着底 D=3597m (33-05.7689N 136-44.0320E)</li> <li>10:31 D=3595m CP10A視認 (33-05.7848N 136-44.0038E)</li> <li>10:44 D=3596m CP10A前着底 (33-05.7884N 136-44.0052E) 10:57 プラットフォームリフト開始 11:07 プラットフォームリフト終了 11:24 重力計設置 11:25 重力計測開始 11:56 電動機手動OFF 11:59 電動機手動ON 11:59 重力計測終了 12:06 重力計回収</li> <li>13:54 D=3499m CP10B視認 (33-05.6866N 136-43.2801E)</li> <li>14:08 D=3501m CP10B前着底 (33-05.6788N 136-43.2857E) 14:25 重力計設置 14:25 重力計測開始 14:46 重力計測終了 14:53 重力計回収 14:53 離底 D=3501m</li> </ol>					





No.	Dive Num. Date	Site	Staying Time	Latitude	Longitude	Depth
7	HPD2239 2024/5/12	2F-S2	08:16	32-53.8244N	135-11.0548E	2305
			09:11	32-53.8115N	135-11.0248E	2305
	Work Summary	Backfilling of #2 fiber-optic strainmeter logger, which was interrupted the previous day, was carried out at 2F-S2.				
						
		Before Buckfilling		After Buckfilling		
 <p>1. 08:16 着底 D=2305m (32-53.8244N 135-11.0548E)</p> <p>2. 08:18 D=2303m 接続ケーブル7mを確認 (32-53.8222N 135-11.0419E)</p> <p>3. 08:38 D=2305m #2歪計#1'-前着底 (32-53.8115N 135-11.0248E)</p> <p>08:42 #2歪計#1'-埋設再開 09:11 #2歪計#1'-埋設終了 09:11 離底 D=2305m</p> <p>2024/05/12 03-24-005 HYPER-DOLPHIN No.223904e MISUDO Oki 2F-S2 CHAMUTSU D= RISU D= FUJIOU GRID DATA WMS/CRS DATUM WGS-84</p> <p>XYORIGIN 32-53.821N 135-11.030E CENTER 32-53.821N 135-11.030E</p>						

## 5. Notice on Using

This cruise report is a preliminary documentation as of the end of cruise.  
This report is not necessarily corrected even if there is any inaccurate description (i.e. taxonomic classifications). This report is subject to be revised without notice. Some data on this report may be raw or unprocessed. If you are going to use or refer the data on this report, it is recommended to ask the Chief Scientist for latest status.  
Users of information on this report are requested to submit Publication Report to JAMSTEC.

<http://www.godac.jamstec.go.jp/darwin/explain/1/e#report>  
E-mail: [submit-rv-cruise@jamstec.go.jp](mailto:submit-rv-cruise@jamstec.go.jp)