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Mirai “Cruise Report”
MR17-07C Leg 2

FYH29 (FY2017) SIP Project for Development of New-Generation Research Protocol for Submarine Resources: survey for baseline condition of hydrothermal vent area and in situ examination of observation tools.

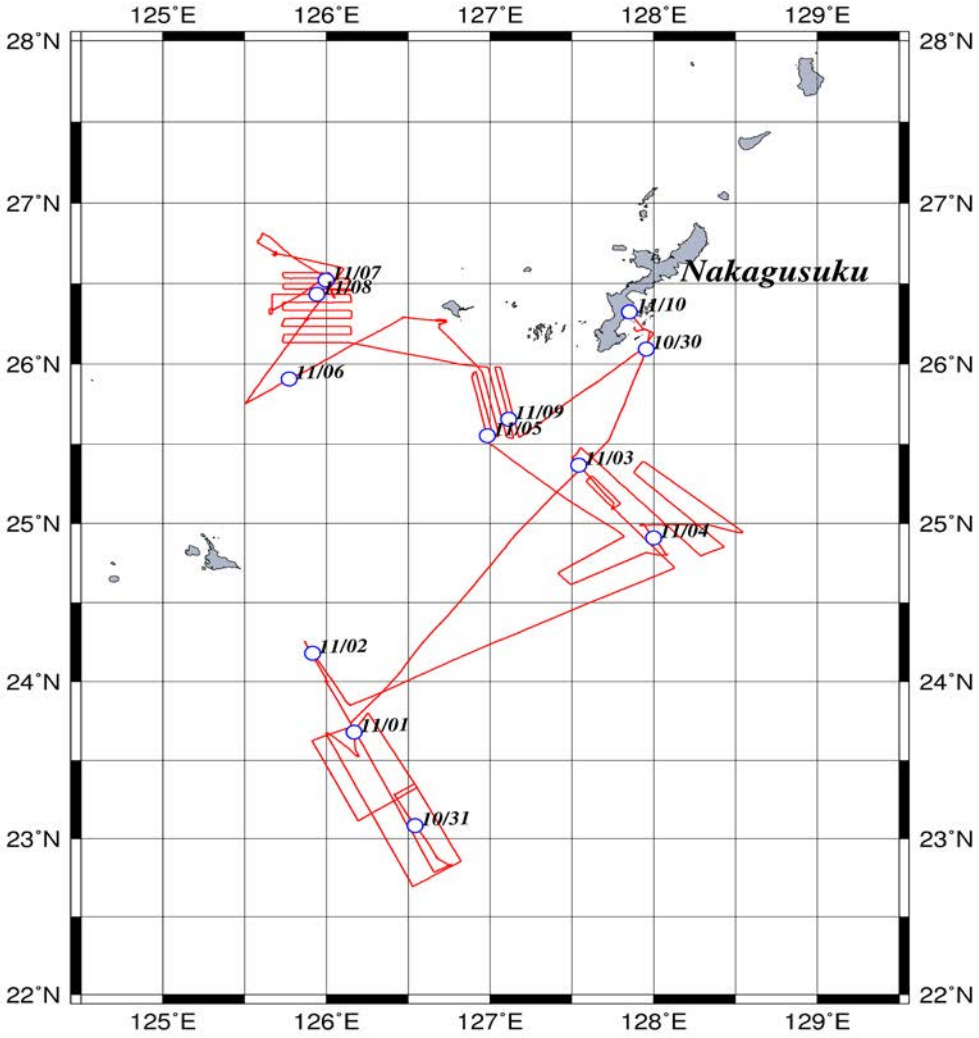
Okinawa Trough and adjacent sea area
Oct. 30, 2017 - Nov. 10, 2017

Japan Agency for Marine-Earth Science and Technology
(JAMSTEC)

1. Cruise Information

- Cruise ID MR17-07C Leg2
- Name of vessel Mirai
- Title of cruise FYH29 (FY2017) SIP Project for Development of New-Generation Research Protocol for Submarine Resources: survey for baseline condition of hydrothermal vent area and in situ examination of observation tools.

- Chief Scientist [Affiliation] KAWAGUCCI Shinsuke [JAMSTEC]
- Cruise period Oct 30 2017 - Nov 10 2017
- Ports of departure / call / arrival Nakagusuku (boat) - Nakagusuku
- Research area Okinawa Trough and adjacent sea area
- Research map



2. Research Proposal and Science Party

- Research proposal Title: SIP Project for Development of New-Generation Research Protocol for Submarine Resources: survey for baseline condition of hydrothermal vent area and in situ examination of observation tools.
- Representative of the Proposal [Affiliation]
  KIKAWA Eiichi [JAMSTEC]

- Representative of the Science Party [Affiliation]
  YAMAMOTO Hiroyuki [JAMSTEC]
- Science Party Onboard [Affiliation, assignment etc.]

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3. Research/Development Activities

● CTD/ water sampling

All the participants involved

CTD/Carousel Water Sampling System, which is 36-position Carousel water sampler (CWS) with Sea-Bird Electronics, Inc. CTD (SBE9plus), was used during this cruise. 12-litter Nislin Bottles and Sample Bottles were used for sampling seawater. The sensors attached on the CTD were temperature (Primary and Secondary), conductivity (Primary and Secondary), pressure, dissolved oxygen (RINKOⅢ: Primary SBE43: Secondary), transmission, fluorescence, turbidity, colored dissolved organic matter sensor and altimeter. The Practical Salinity was calculated by measured values of pressure, conductivity and temperature. The CTD/CWS was deployed from starboard on working deck. The CTD raw data were acquired on real time using the Seasave-Win32 (ver.7.23.2) provided by Sea-Bird Electronics, Inc. and stored on the hard disk of the personal computer. Seawater was sampled during the up cast by sending fire commands from the personal computer. We stop at each layer for 30 or 60 seconds to stabilize then fire.

Seawater were collected at total 17 sites (12: Ryukyu trench, 1: Kerama Gap, 2: Hydrothermal sites, 2: Okinawa Trough). The seawater samples were subsampled by appropriate manners for each of chemical and microbial analyses.

Table 1 MR17-07C Leg2 Cast table

Stnnbr	Castno	Date(UTC)	Time(UTC)		BottomPosition		Depth	Wire	HT Above	Max	Max	CTD	Remark
		(mmddyy)	Start	End	Latitude	Longitude	(m)	Out (m)	Bottom (m)	Depth	Pressure	Filename	
C02	1	103017	21:41	01:47	22-53.10N	126-40.28E	6060.0	6039.3	10.7	6039.0	6164.1	C02M001	MYK-1
C03	1	103117	04:26	08:38	23-16.99N	126-24.85E	6351.0	6327.8	9.4	6330.0	6465.6	C03M001	MYK-2
C04	1	103117	21:34	01:52	23-31.81N	126-11.54E	6417.0	6379.5	10.5	6378.0	6515.4	C04M001	MYK-3
C05	1	110117	04:33	08:50	23-41.97N	126-09.97E	6436.0	6426.9	9.0	6431.0	6570.4	C05M001	MYK-4
C06	1	110117	21:36	23:03	24-00.00N	126-00.07E	1760.0	1754.7	9.5	1748.0	1766.6	C06M001	MYK-5
C07	1	110217	01:03	02:33	24-15.17N	125-52.20E	1559.0	1544.8	10.3	1535.0	1550.6	C07M001	MYK-6
C08	1	110217	05:00	07:17	23-51.32N	126-08.44E	3002.0	2994.9	7.3	2994.0	3034.8	C08M001	MYK-7
C09	1	110217	21:33	00:41	25-05.92N	127-45.06E	4499.0	4478.5	9.8	4474.0	4551.1	C09M001	KRM-5
C10	1	110317	04:00	05:53	25-24.96N	127-30.01E	2404.0	2392.0	8.7	2390.0	2419.4	C10M001	KRM-6
C11	1	110317	21:32	01:57	24-59.74N	127-55.30E	6484.0	6478.7	9.8	6480.0	6621.8	C11M001	KRM-4
C12	1	110417	04:29	08:56	24-48.17N	128-04.99E	6490.0	6470.2	10.1	6473.0	6614.5	C12M001	KRM-3
C13	1	110417	22:04	23:39	25-56.06N	126-53.88E	1844.0	1836.5	9.6	1835.0	1855.2	C13M001	KRM-8
C14	1	110517	02:31	04:08	25-33.05N	126-59.11E	1786.0	1773.4	14.6	1770.0	1789.2	C14M001	KRM-7
C15	1	110517	22:31	23:56	26-17.30N	126-28.29E	1085.0	1069.8	9.8	1070.0	1079.8	C15M001	ANA
C16	1	110617	05:05	06:53	25-44.99N	125-29.97E	2091.0	2072.4	13.6	2072.0	2096.0	C16M001	KRM-X
C17	1	110717	04:30	06:06	26-27.16N	126-01.91E	1803.0	1782.1	15.7	1780.0	1799.4	C17M001	APA-w
C18	1	110717	22:05	23:45	26-19.99N	125-40.00E	1944.0	1929.4	8.4	1926.0	1947.7	C18M001	KRM-9

4. 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.
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