



“YOKOSUKA” Cruise Report

YK17-02

Sea Trial of AUV “JINBEI”,

Suruga-Bay

18/Feb./2017-22/Feb./2017

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

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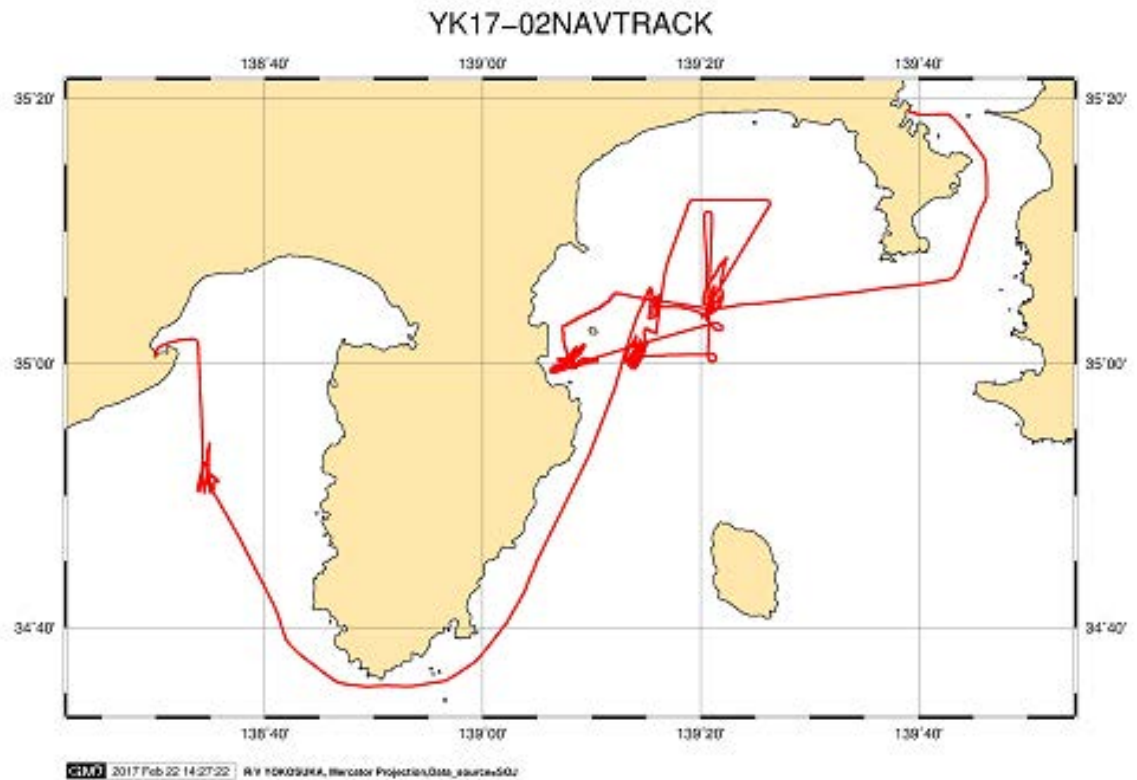
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1. Cruise Information

- Cruise ID YK17-02
- Name of vessel R/V YOKOSUKA
- Title of the cruise Sea trial of AUV “JINBEI”
- Title of the proposal Sea trial of AUV “JINBEI”
- Cruise period 18/FEB./2017-22/FEB./2017
- Ports of call Yokosuka(Departure) - Shimizu(arrival)
- Research area Sagami-Bay
- Research map



2. Researchers

- Chief scientist [Affiliation]

Yoshinobu NAMBU [JAMSTEC]

- Representative of the science party [Affiliation]

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- Science party(List) [Affiliation]

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3. Experiment

- Outline:

We took place performance test for the AUV “JINBEI” such as maneuverability test and acoustic telemetry. And we confirmed every functions of the AUV after improvement and big maintenance.

- Experiment items:

- 1) Tests of SBP
- 2) Functional tests for the vehicle
- 3) Maneuverability tests for the vehicle
- 4) Confirmation for acoustic telemetry
- 5) Drill of launch and recovery

3.1. AUV ”JINBEI”



Type	: AUV
Size	: $4 \times 1.1 \times 1.0$ m
Weight	: 1,700 kg
Maximum Depth	: 3,000 m
Cruising Speed	: 0.7 - 3.0 knots
Min Cruising Alt.	: 30 m
Min Turning Radius	: 20 m
Endurance	: 10 hours (@ 2 knot)
Communication	: Acoustic, Optical, Satellite & Wireless LAN
Navigation System	: INS, DVL, Depth censer, Altimeter & SSBL

3.2. Cruise Log

Date	Description (local time)
18-Feb-17	08:00 departure from JAMSTEC, Yokosuka 10:20 arrived at Hatsushima off, Sagami bay Dive#44 17:02 JINBEI on board [Noon] c NNE 4 3 1 8
19-Feb-17	08:58 Dive#45 15:50 JINBEI on board [Noon] bc ESE 2 2 1 8
20-Feb-17	Dive is canceled due to bad sea conditions [Noon] r WSW 9 5 2 4
21-Feb-17	08:53 Dive#46 14:13 JINBEI on board 15:00 departure from test area Suruga bay [Noon] bc NW 4 3 2 8
22f-Feb-17	08:45 arrived at Shimizu [Noon] c NE 1 1 1 6

3.3. Experiment results

Dive#	Contents	Results
#44 depth:1450m Sagami bay	●Scenario cruising with depth control (3.0knot)on the bottom of ups and downs ●Acoustic communication test (measurement, uplink and downlink) ●Data acquisition for sensors(SSS, etc) ● Training for Launch and Recovery	OK
#45 depth:1,330m Sagami bay	●Scenario cruising with depth control (3.0knot)on the bottom of ups and downs ●Acoustic communication test (measurement, uplink and downlink) ●Data acquisition for sensors(SSS, etc)	OK
#46 depth:1,310m Sagami bay	●Scenario cruising with depth control (3.0knot)on the bottom of ups and downs ●Acoustic communication test (measurement, uplink and downlink) ●Data acquisition for sensors(SSS, etc)	OK

3.4. Summary

The test area was change at first in Sagami Bay from Izu Ogasawara (myojin knoll) of a schedule by the weather, but the sea conditions were stable, and it was possible to put the scheduled confirmation item into effect completely and do, and the goal could be achieved for the most part. AUV was sailed the complicated bottom of the sea and acquired a sound communication test and data of each sensor including SSS data in a scenario sailing test. On the Equipment for launch and recovery, it was adjusted onboard, and bad point was improved and work became stable.

Future's problem got new knowledge about the scenario contents and sailing route decision as well as was also found. Further adjustment and improvement are being piled up for actual practical use continuously.

4. Notice on Using

This cruise report is a preliminary documentation as of the end of the cruise.

This report may not be corrected even if changes on contents (i.e. taxonomic classifications) may be found after its publication. This report may also be changed without notice. Data on this cruise report may be raw or unprocessed. If you are going to use or refer to the data written on this report, please ask the Chief Scientist for latest information.

Users of data or results on this cruise report are requested to submit their results to the Data Management Group of JAMSTEC.