



NAR Labs

National Applied Research Laboratories

台灣海洋科技研究中心

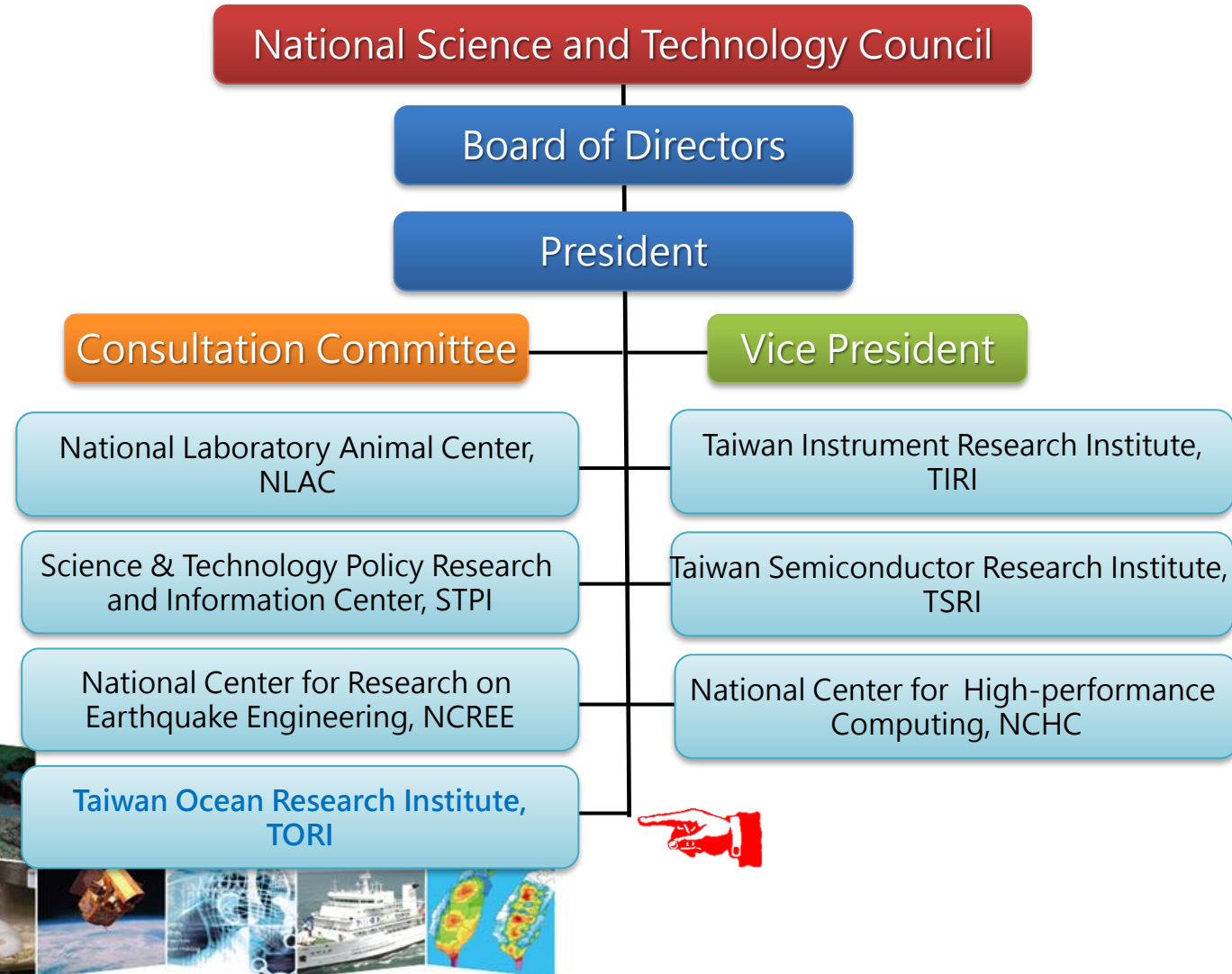
Taiwan Ocean Research Institute

The First 5 Years of *R/V Legend*

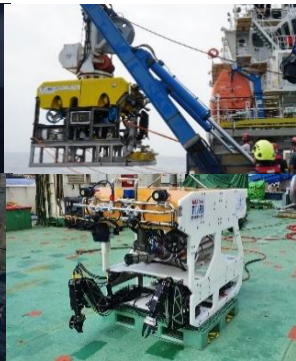
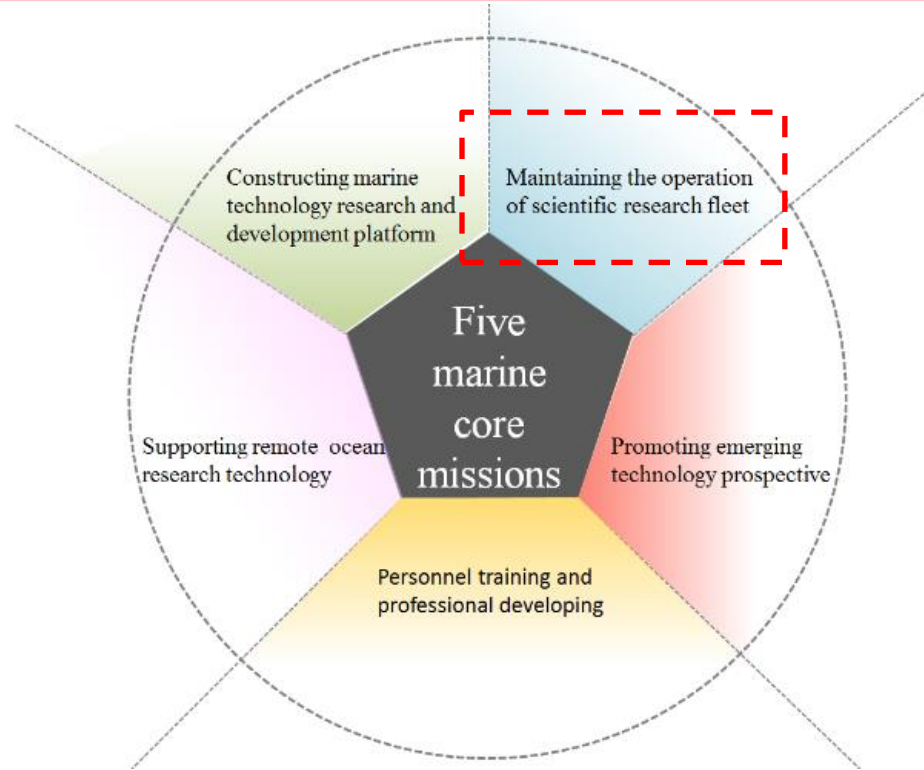
Research Vessel Operation Division
Jo Wu, Division Director
IRSO 2024

www.narlabs.org.tw

Organization of NARLabs



Core Missions of TORI



R/V Legend



勵進
R/V LEGEND

Gross Tonnage: 2,629

Breadth: 16 m

Total Length: 76 m

Cruising Speed
10 knots

Maximum Speed
12 knots

Dynamic Positioning System
DP 1

Max. Number of Researchers / Crews
24 / 19

Continuous Voyage Day
30 Days

Bridge
Large open area with near 360-degree visibility. Aft control station with clean visibility of aft work deck. Good communications with deck and labs.

Lifeboat & Life rafts
• Lifeboats are installed on both sides and can accommodate up to 43 persons each.
• Life rafts are located on the port and starboard side near the lifeboats (3 on each side) and can accommodate up to 25 persons each.

A-frame & Lifting Arm

- 1 6T Lifting arm
- 2 15T Main lifting arm
- 3 20T Side A-frame
- 4 16T Stern A-frame
- 5 LARS for ROVs

Main Deck
510 sq m in area with 850 anchor bolt holes and provision for both 10- and 20-foot containers. The deck is equipped with two A-frames, two lifting arms, and a LARS for ROVs. The aft door of the wet laboratory opens directly out onto the working deck.

LARS for CTDs
Improves operator safety to launch and recover CTDs.

TORI
NAR Labs 國家實驗研究院
台灣海洋科技研究中心
Taiwan Ocean Research Institute



Management

證書號碼 Certificate No. DOC-18-008

符合文件
DOCUMENT OF COMPLIANCE

中華民國
REPUBLIC OF CHINA

茲由中華民國交通部委託中國驗船中心依照
一九七四年海上人命安全國際公約修正案之規定發給本文件
Issued under the provisions of the INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as amended, under the authority of the Government of the REPUBLIC OF CHINA by
CR Classification Society

公司之名稱及地址：
Name and address of the Company:

財團法人國家實驗研究院 National Applied Research Laboratories
3F., No. 106, Sec. 2, Heping E. Rd., Da'an Dist., Taipei City 10622, Taiwan
(詳見 ISM Code 第 1.1.2 節 (see paragraph 1.1.2 of the ISM Code))

公司識別碼 Company identification number: 4181950

茲證明 該公司之安全管理系統業經評鑑並已符合國際船舶安全營運及防止污染管理章程 (ISM Code) 之相關規定，該公司管理之船型限於以下所列者 (刪除不適用者)：
THIS IS TO CERTIFY THAT the safety management system of the Company has been audited and that it complies with the requirements of the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) for the types of ships listed below (delete as appropriate).

客船 Passenger-ship	化學液體船 Chemical-tanker
高速客船 Passenger-high-speed-craft	氣體運輸船 Gas-carrier
高速貨船 Cargo-high-speed-craft	海上移動式鑽探平台 Mobile offshore-drilling-unit
散裝船 Bulk-carrier	其他貨物 Other cargo ship
油輪 Oil-tanker	

本符合文件有效期限至
This Document of Compliance is valid until July 25, 2023 但應接受定期評鑑。
Completion date of the verification on which this certificate is based July 26, 2018
subject to periodical verification.

本證書所依據之評鑑完成日期
Date of initial / renewal verification on which this certificate is based August 10, 2018

發證地點
Issued at Taipei

發證日期
Date of issue August 09, 2018




CHEN HWEN CHENG 中國驗船中心驗船師
Chief Surveyor
CR Classification Society

Form No. GC70/08.2016 - 12 -

國際船舶保全證書
INTERNATIONAL SHIP SECURITY CERTIFICATE

茲由中華民國交通部委託中國驗船中心依照
國際船舶和港口設施保安章程 (ISPS章程) 之規定發給本證書
Issued under the provisions of the
INTERNATIONAL CODE FOR THE SECURITY OF SHIPS AND
OF PORT FACILITIES (ISPS CODE) 中華民國
under the authority of the Government of
the REPUBLIC OF CHINA by CR Classification Society

證書號碼 Certificate No. ISSC-18-027



船名 Name of ship	<u>勵達 LEGEND</u>
船號或信號符號 Distinctive number or letters	<u>015850 / BIBP</u>
船籍港 Port of registry	<u>Kaohsiung</u>
船舶型式 Type of ship	<u>Other Cargo Ship</u>
總噸位 Gross tonnage	<u>2629</u>
IMO編號 IMO number	<u>9804100</u>
公司名稱及地址 Name and address of the company	<u>財團法人國家實驗研究院 National Applied Research Laboratories 3F., No. 106, Sec. 2, Heping E. Rd., Da'an Dist., Taipei City 10622, Taiwan</u>
公司識別碼 Company identification	<u>4181950</u>

茲證明
THIS IS TO CERTIFY:

- 本船之保安系統和任何相關之保安設備業已按 ISPS 章程 A 部分第 19.1 節之規定驗過；
that the security system and any associated security equipment of the ship has been verified in accordance with section 19.1 of part A of the ISPS Code;
- 驗過顯示本船之保安系統和任何相關之保安設備在各方面均令人滿意，且本船符合公約第 XI-2 章和 ISPS 章程 A 部分之適用要求；
that the verification showed that the security system and any associated security equipment of the ship is in all respects satisfactory and that the ship complies with the applicable requirements of chapter XI-2 of the Convention and part A of the ISPS Code;
- 本船有一份經認可之「船舶保安計畫」。
that the ship is provided with an approved Ship Security Plan.

本證書所依據之初次/換新驗證日期
Date of initial / renewal verification on which this certificate is based August 10, 2018

本證書有效期間至
This certificate is valid until August 09, 2023 但應按 ISPS 章程 A 部分第 19.1.1 節規定驗過。
subject to verifications in accordance with section 19.1.1 of part A of the ISPS Code.

CHEN HWEN CHENG 中國驗船中心驗船師
Chief Surveyor
CR Classification Society

Form No. GC67/05.2014 - 14 -

海事勞工證書
MARITIME LABOUR CERTIFICATE

中華民國
REPUBLIC OF CHINA

(註：本證書應附有海事勞工符合聲明)
(Note: This Certificate shall have a Declaration of Maritime Labour Compliance attached)

本證書係根據「2006年海事勞工公約」(以下簡稱「本公約」) 第五條和第五標題之規定
經中華民國政府授權，由中國驗船中心簽發
Issued under the provisions of Article V and Title 5 of the Maritime Labour Convention, 2006
(Referred to below as "the Convention") under the authority of the Government of the
the REPUBLIC OF CHINA by CR Classification Society

證書號碼 Certificate No. MLC-18-079

船舶項目
Particulars of the ship

船名 Name of ship	<u>勵達 LEGEND</u>
船號或信號符號 Distinctive number or letters	<u>015850 / BIBP</u>
船籍港 Port of registry	<u>Kaohsiung</u>
登記日期 Date of registry	<u>November 15, 2017</u>
噸位 Gross tonnage ¹	<u>2629</u>
IMO編號 IMO number	<u>9804100</u>
船舶型式 Type of ship	<u>Special Purpose Ship</u>
船東名稱 Name of the ship owner	<u>財團法人國家實驗研究院 National Applied Research Laboratories</u>
船東地址 ² Address of the ship owner ²	<u>3F., No. 106, Sec. 2, Heping E. Rd., Da'an Dist., Taipei City 10622, Taiwan</u>

1 對於國際海事組織通過的噸位丈量標準所包括的船舶，總噸位為包括在《國際噸位證書 (1969)》“噸位”欄中的噸位。見本公約第二條第 (1)(c) 款。
For ships covered by the tonnage measurement interim scheme adopted by the IMO, the gross tonnage is that which is included in the REMARKS column of the International Tonnage Certificate (1969). See Article III(c) of the Convention.

2 船東：依公約所有人員就船舶所有人員就船舶所有人員應承擔之責任及本公約所規定的職責和責任的另一組織或個人，如代理人、代理人或船東。無論是否有其他組織或個人代表船東履行了這些職責或責任。見本公約第二條第 (1)(c) 款。
Ship owner means the owner of the ship or another organization or person, such as the manager, agent or bareboat charterer, who has assumed the responsibility for the operation of the ship from the owner and who, on assuming such responsibility, has agreed to take over the duties and responsibilities imposed on ship owners in accordance with the Convention, regardless of whether any other organizations or persons fulfil certain of the duties or responsibilities on behalf of the ship owners. See Article III(1)(c) of the Convention.

Form No. GC20/05.2014 - 14 -

The first research vessel carry out ISM/ISPS/MLC Code in Taiwan, actually it requires a long running-in period.

Equipment

➤ Gondola

MBES : Kongsberg EM122/2040

SBES : Kongsberg EA600

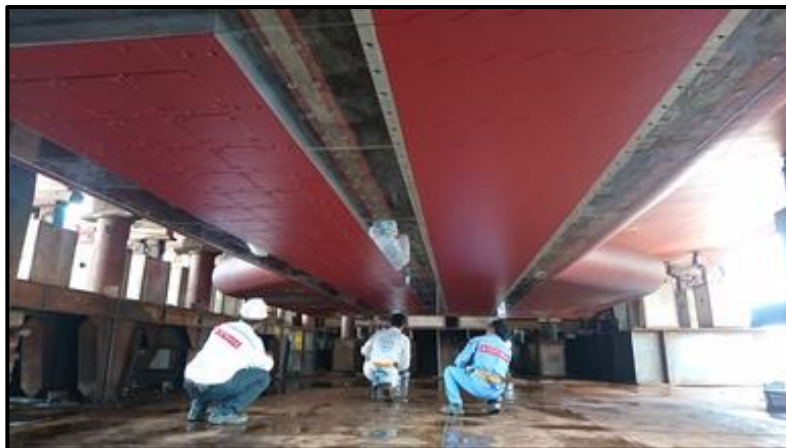
SBP : Kongsberg SBP120

ADCP : Teledyne RDI 38/150 kHz

SSBL : Kongsberg HiPAP 102

GNSS : Kongsberg Seapath 380

➤ SRP, DP1



Main Deck

850 Securing Screw Holes



A-Frame

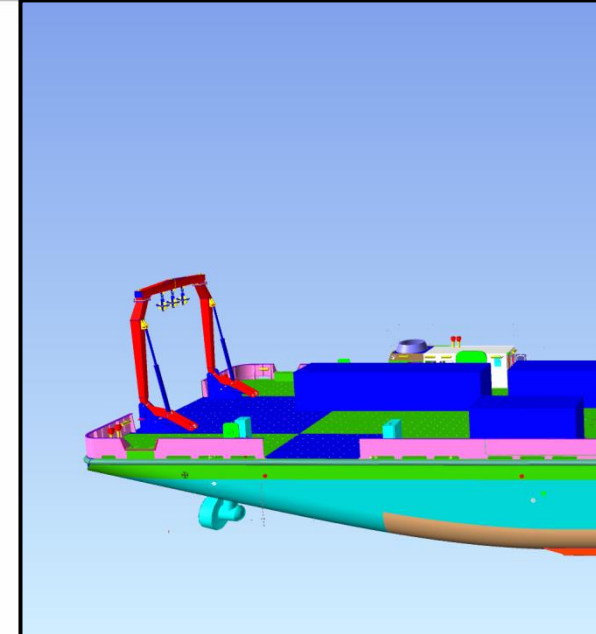
170° Operating Range

NARLabs



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ELECTRIC AND HYDRAULIC DECK MACHINERY



TRIPLEXTM
FOR THE ROUGHEST CONDITIONS

Bridge

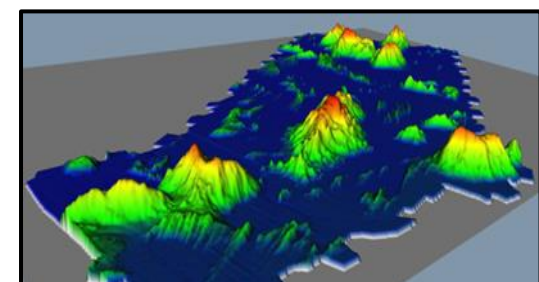
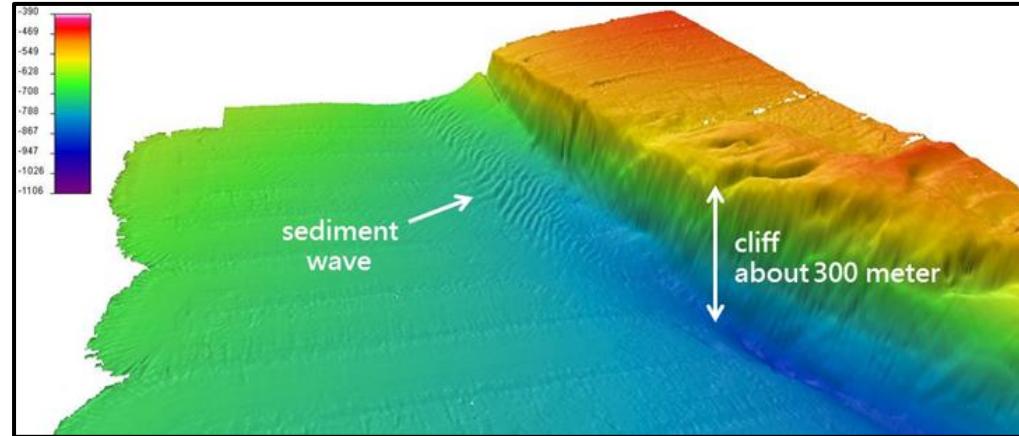
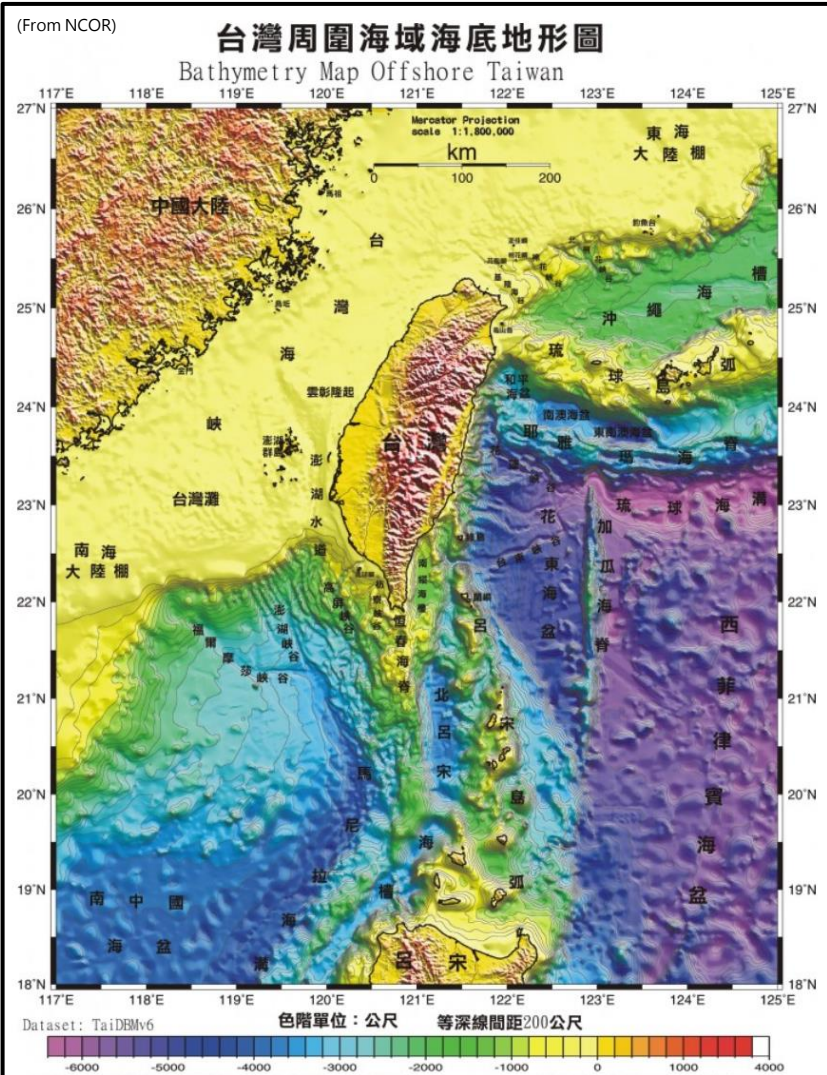
360° View



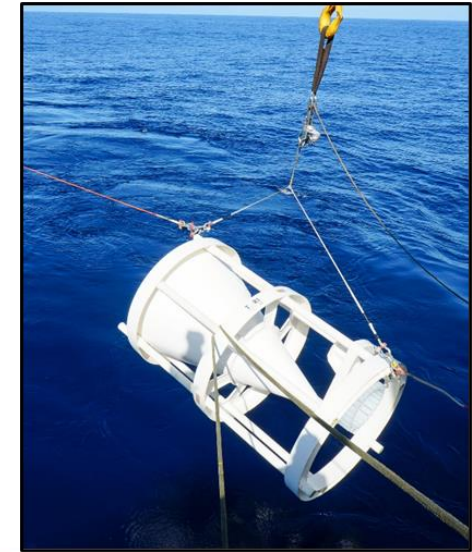
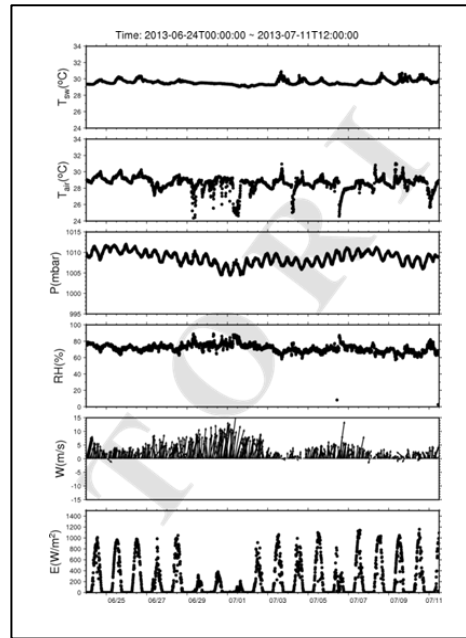
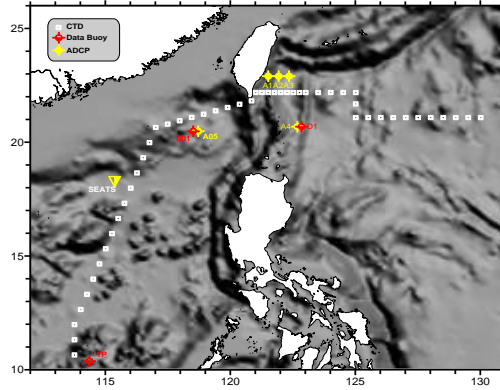
View from Captain



Sea Floor Mapping



Mooring System



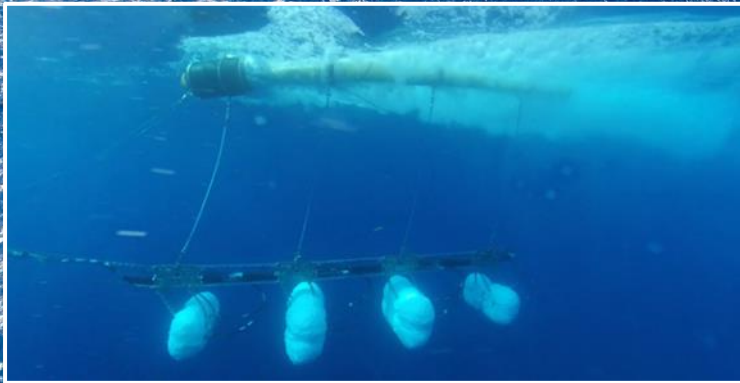
Seismic Survey(LMCS)



3 Km-Long Streamer

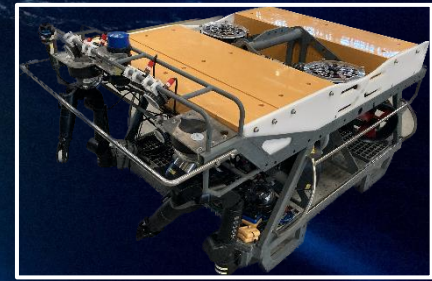
Airgun Arrays

Tailbuoy



Remotely Operated Vehicle(ROV)

Case 1: Hydrothermal Vents(Black Smokers)



Case 2: Air Force FDR

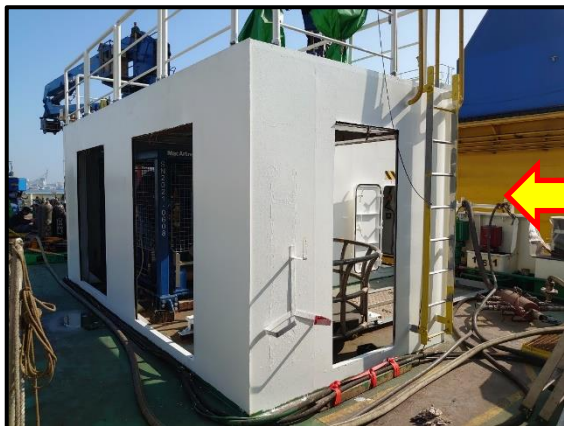
Modify(Before)

CTD LARS



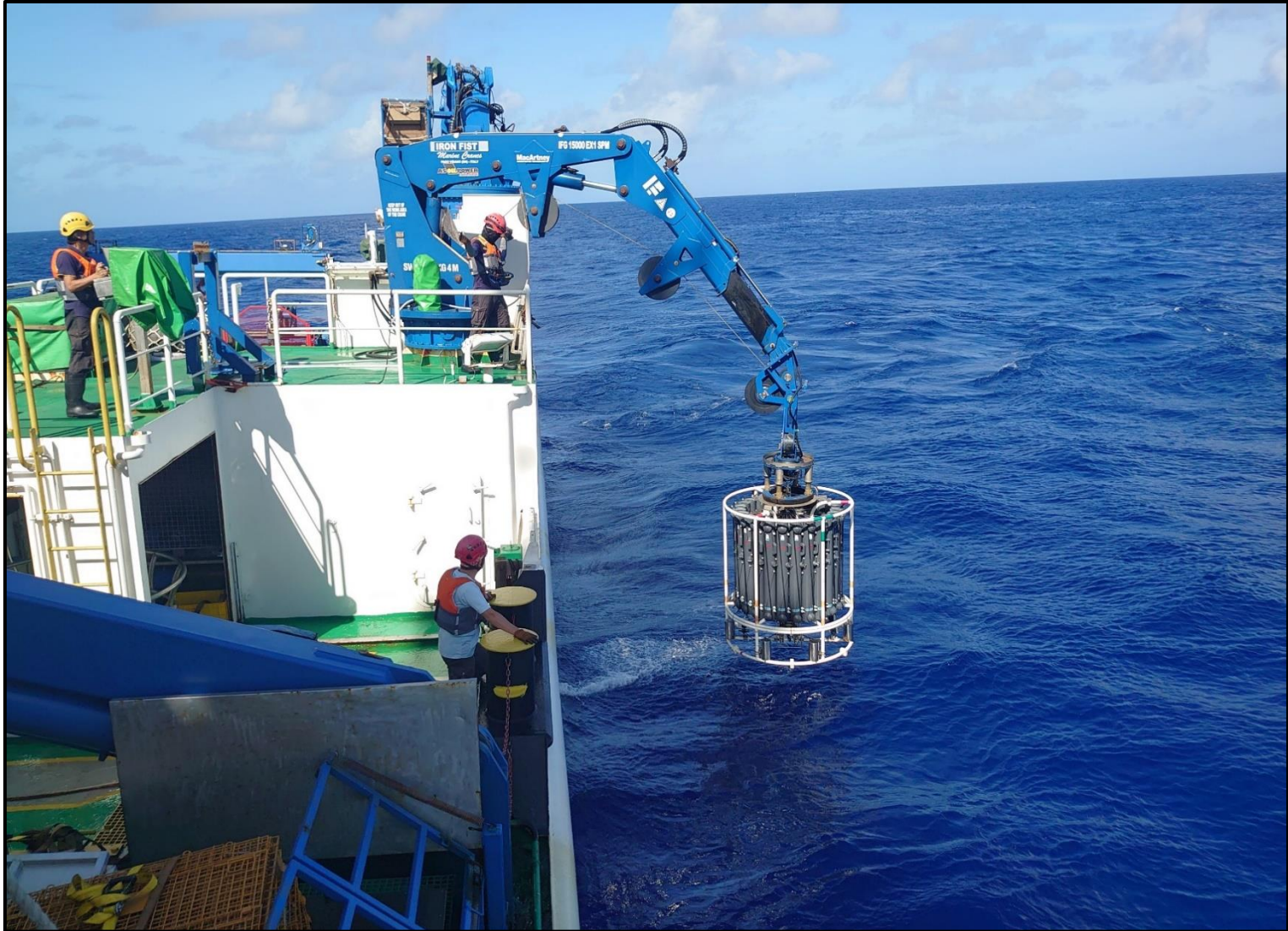
Modify(Underway)

CTD LARS

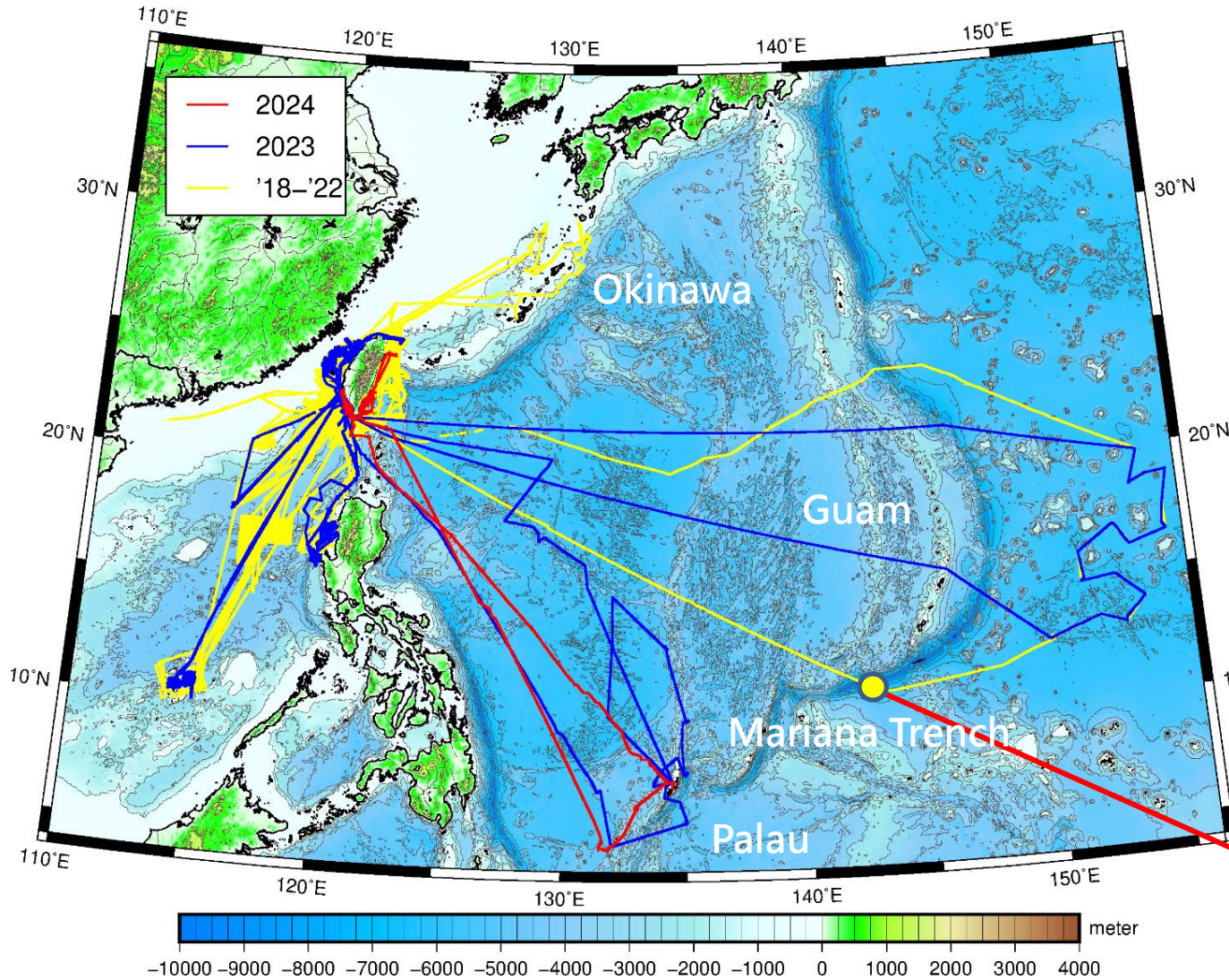


Modify(After)

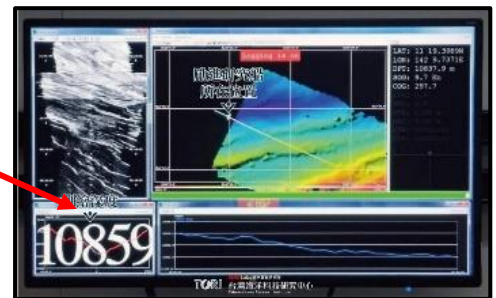
CTD LARS



Tracks over the past years



2019-2024	
Sailing Days	968
Cruises	116
Nautical Miles	119,163



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NARLabs

勵進

R/V LEGEND

