



# 18<sup>th</sup> Conference of the IHO Hydrographic Commission on Antarctica

## National Report (AUSTRALIA)

### Agenda item 07.2A



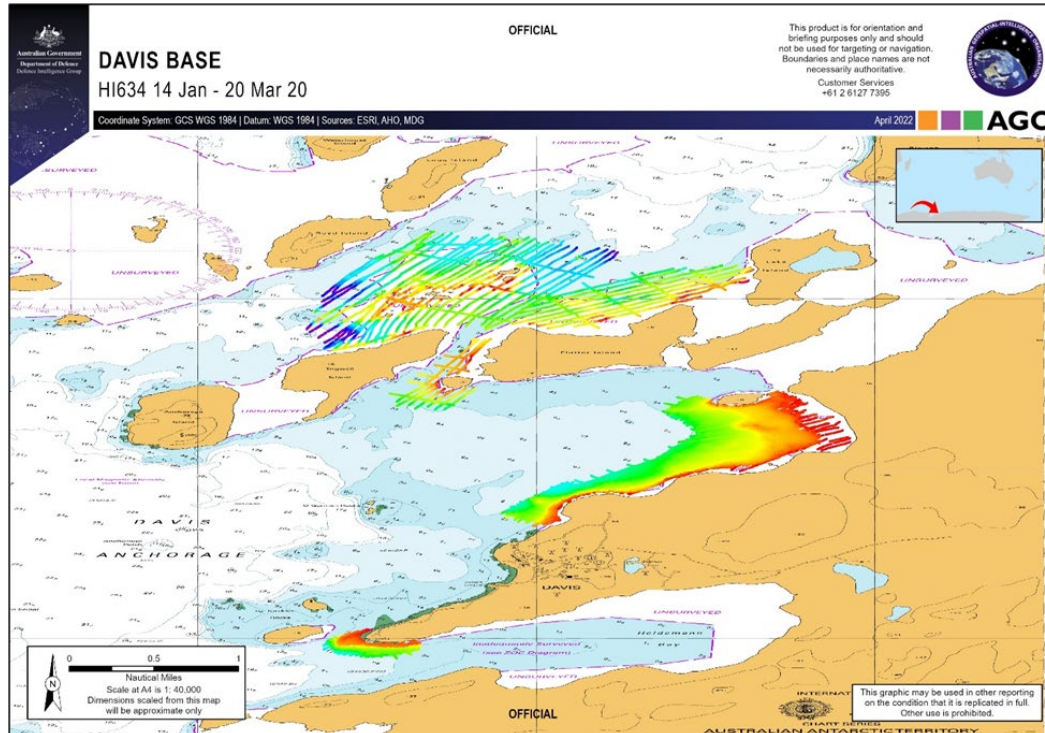
HCA-18, Berlin, Germany (hybrid), 24 – 26 May 2022



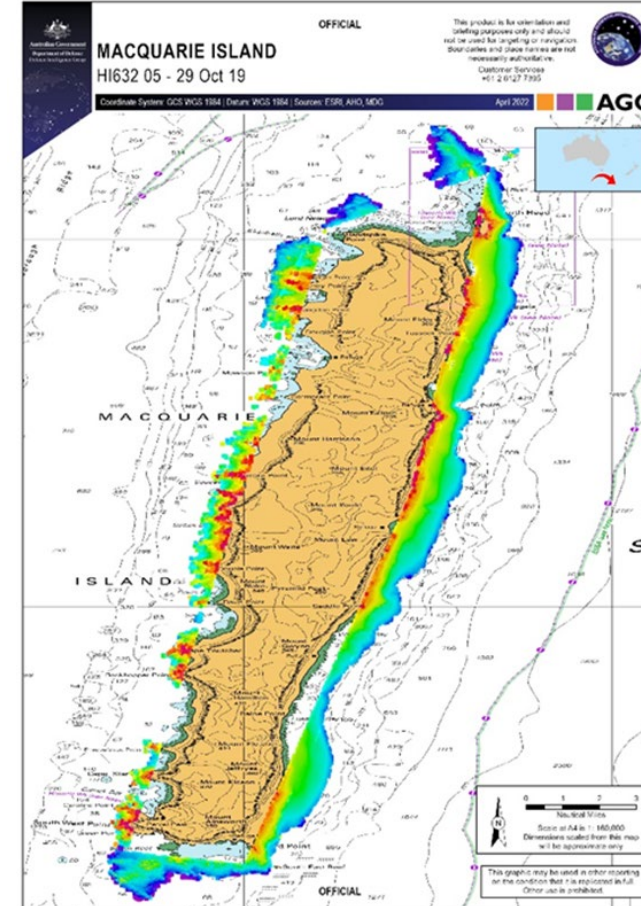
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# Surveys in Antarctica since HCA-17 (June 2021)

International  
Hydrographic  
Organization



**HI 634 - Operation Southern Discovery** - requested by the AAD to identify potential ship-to-shore landing areas in support of the Davis Aerodrome Project infrastructure upgrade.



**HI 632 LADS** survey conducted cover poorly surveyed waters and identify the extent of dangers to navigation in close proximity of Macquarie Island

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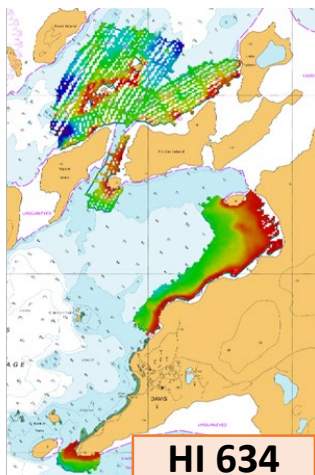
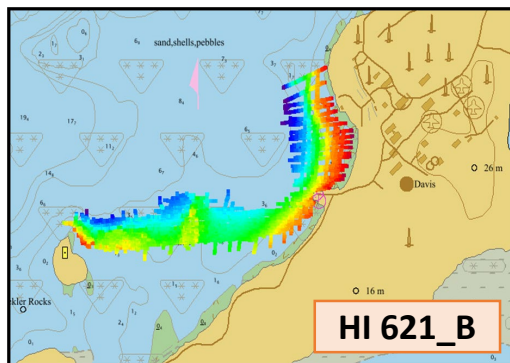
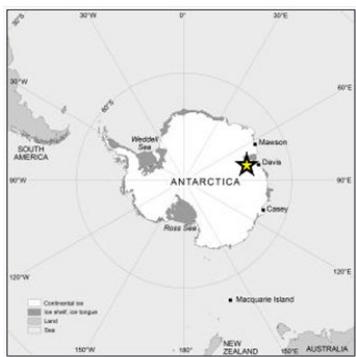
# Charting progress in Antarctica since HCA-17

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Organization

## Davis Station

ENC – AU4602P0

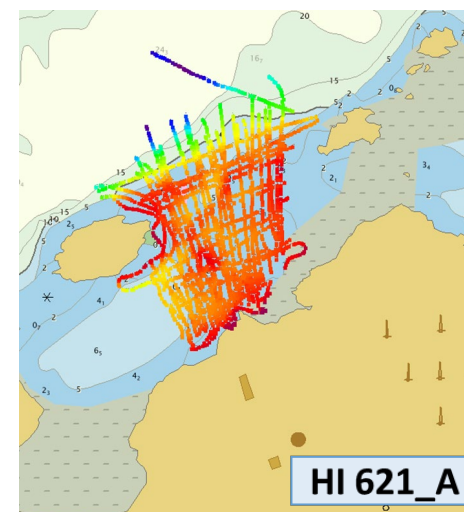
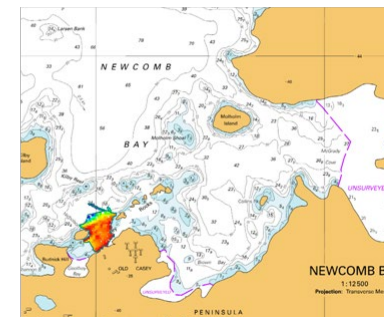
Updated for survey HI 634 and  
HI621B.



## Casey Station

ENC – AU5AQCAS & AU4601P0

Updated for survey HI 621\_A



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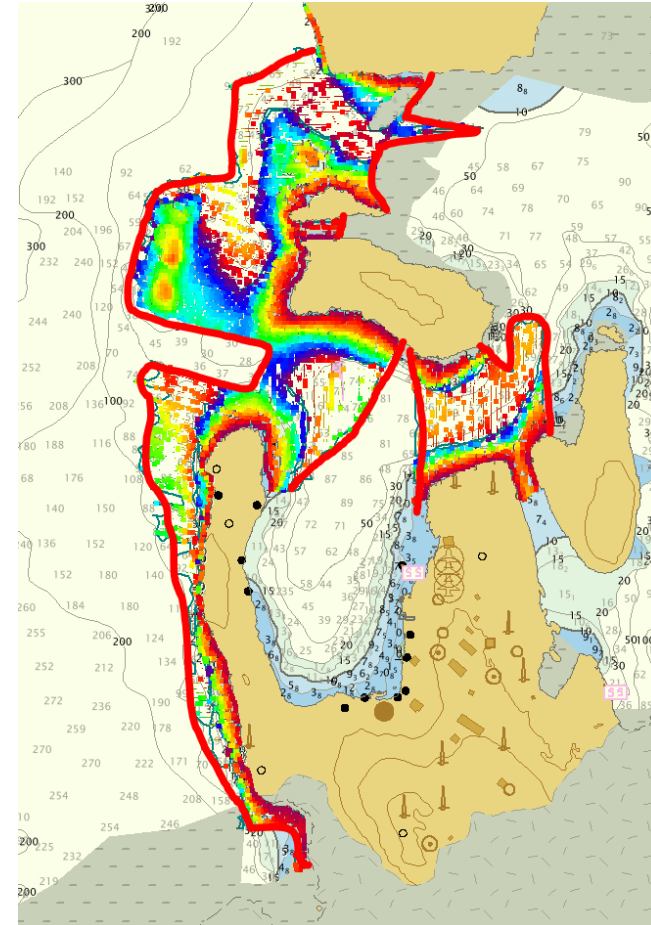
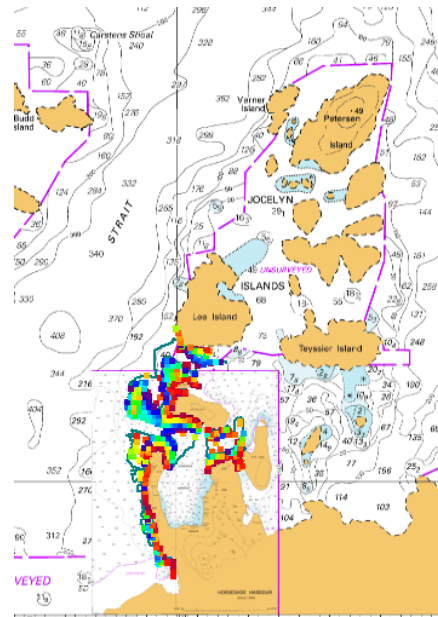
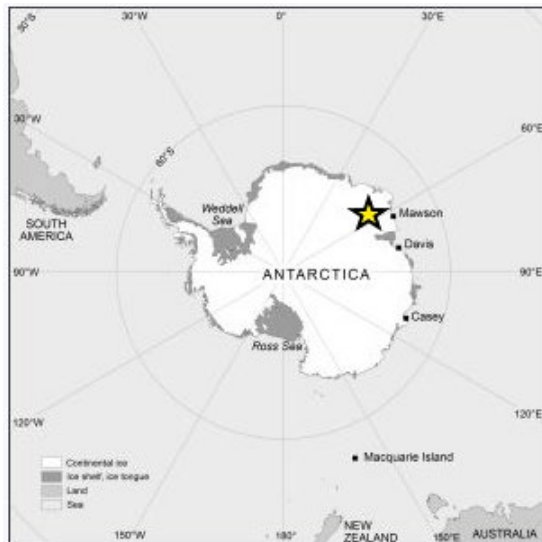
# Charting progress in Antarctica since HCA-17

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## Mawson Station

ENCs – AU5AQMAW, AU468062

Updated for survey HI 607.



**HI 607**

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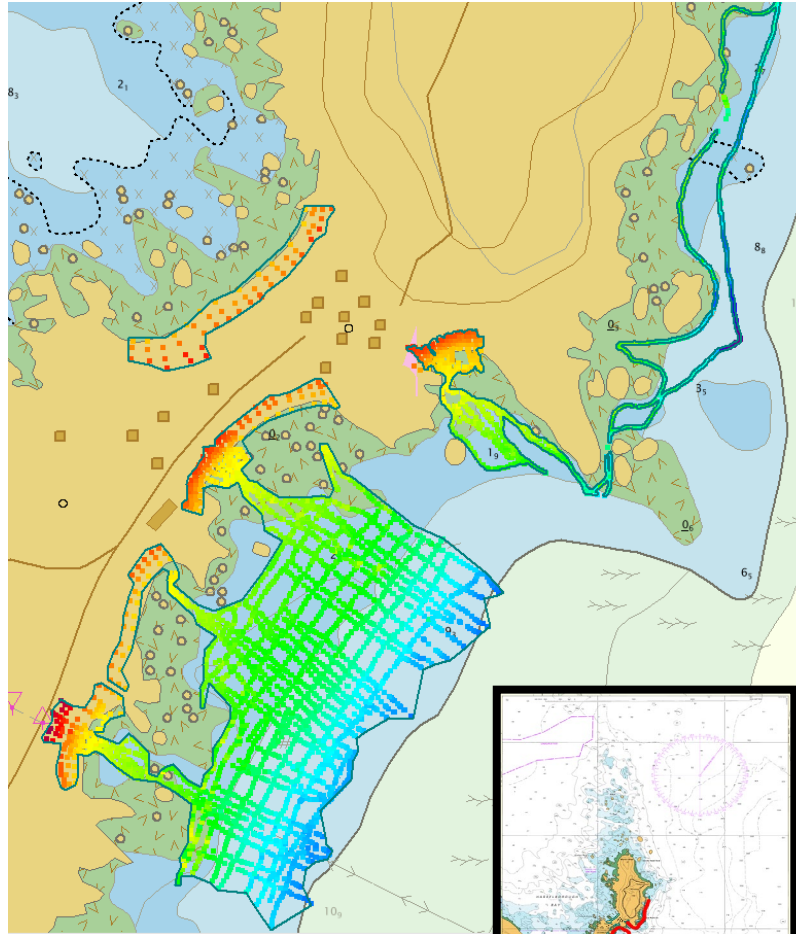
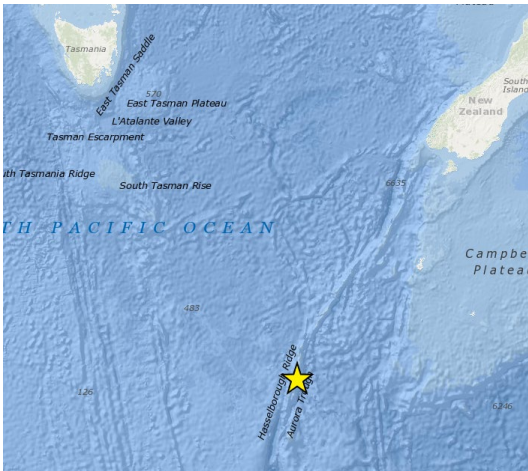


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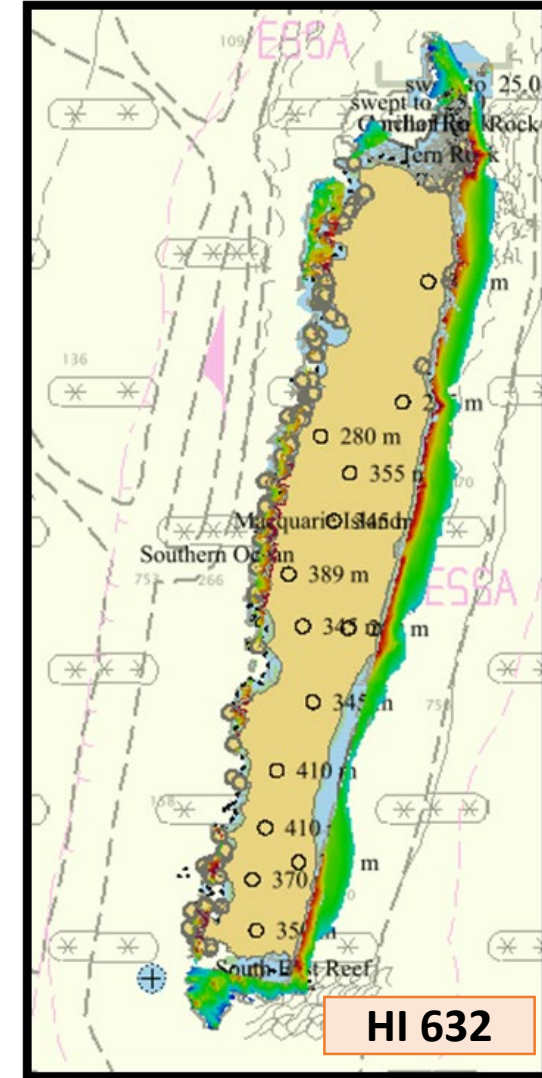
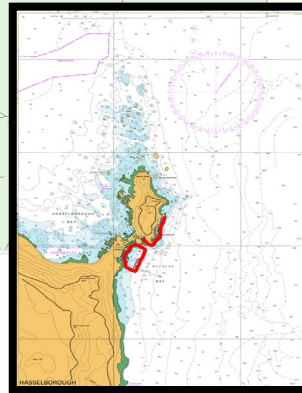
# Charting progress in Antarctica since HCA-17

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**Macquarie  
Island  
ENC –  
AU455158  
Updated for  
survey HI 625**



**HI 625**



**HI 632**

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# Relations with Other Organizations - Australian Antarctic Division (AAD) - RSV *Nuyina*'s maiden voyage.



Australian Government

Department of Agriculture,  
Water and the Environment  
Australian Antarctic Division

RSV *Nuyina* successful  
maiden voyage to  
the Antarctic in  
Dec 2021-Jan 2022,



RSV *Nuyina* unloads its landing barge off Casey research station,  
with cargo ship Happy Dragon in the background (Photo: Pete Harmsen/AAD)

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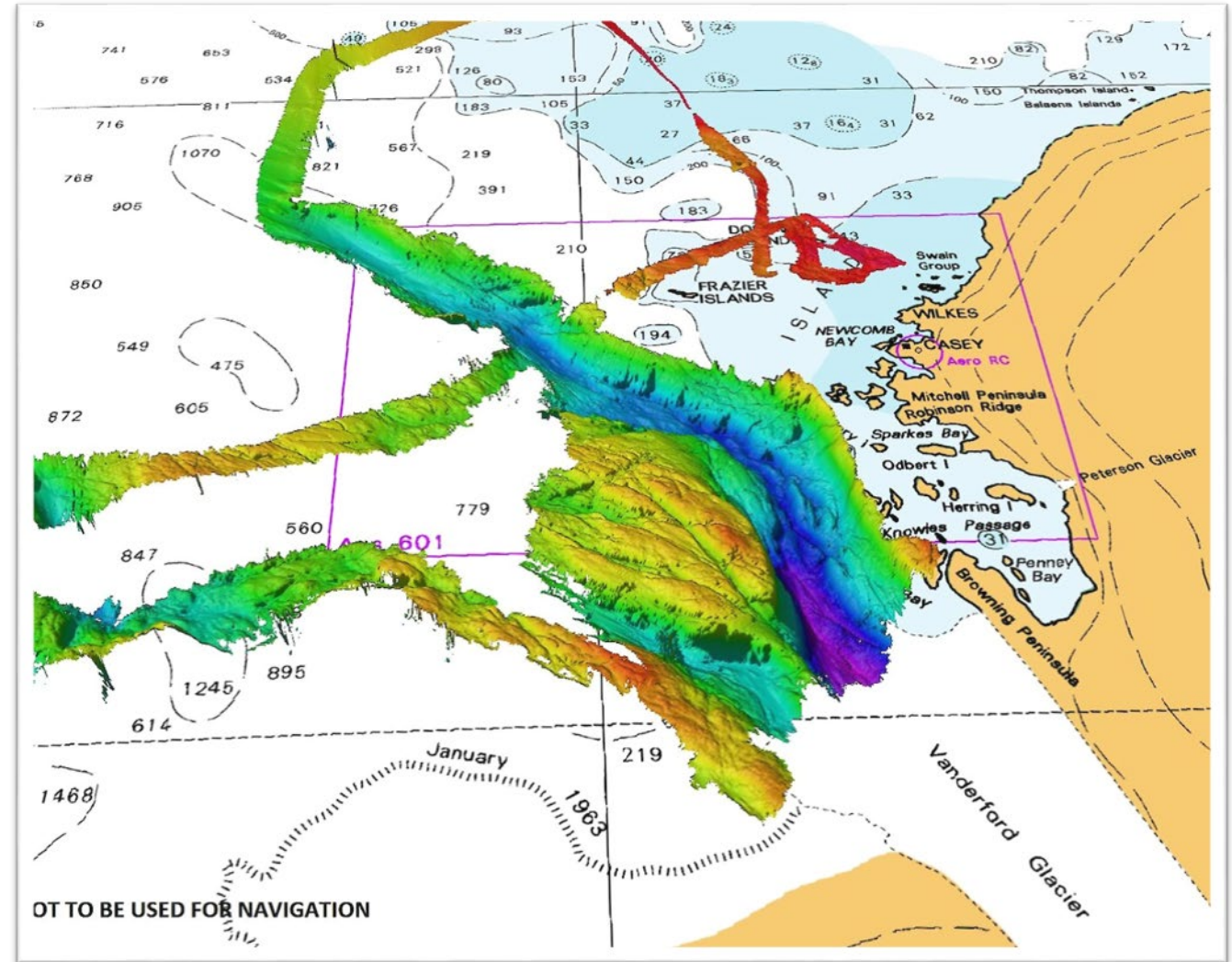
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# AAD - Deep Glacial Canyon Discovered

After leaving Casey, acousticians mapped the morphology and extent of the channel in full detail while testing the capabilities of the multibeam system.

The channel is more than 2200 metres deep, 2000 metres wide and at least 55 kilometres long.







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# AAD - Nuyina meets the ice again

Another successful voyage to Antarctica in Feb –March 2022. Trips this season were supported by ships *Happy Dragon* and MPOV *Aiviq*.



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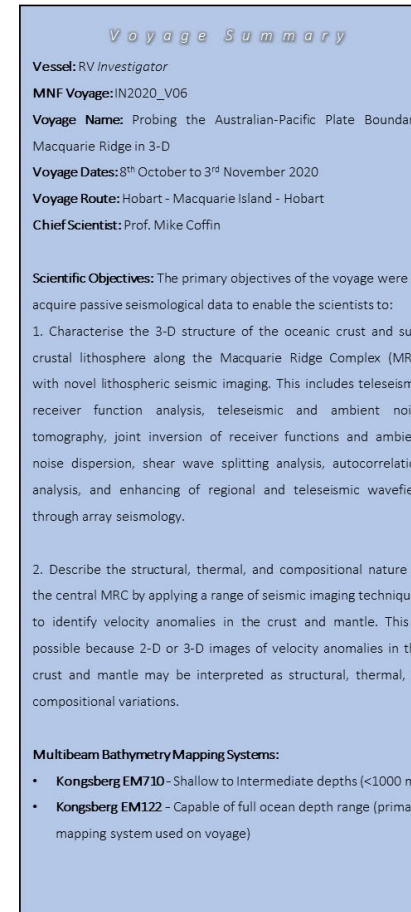
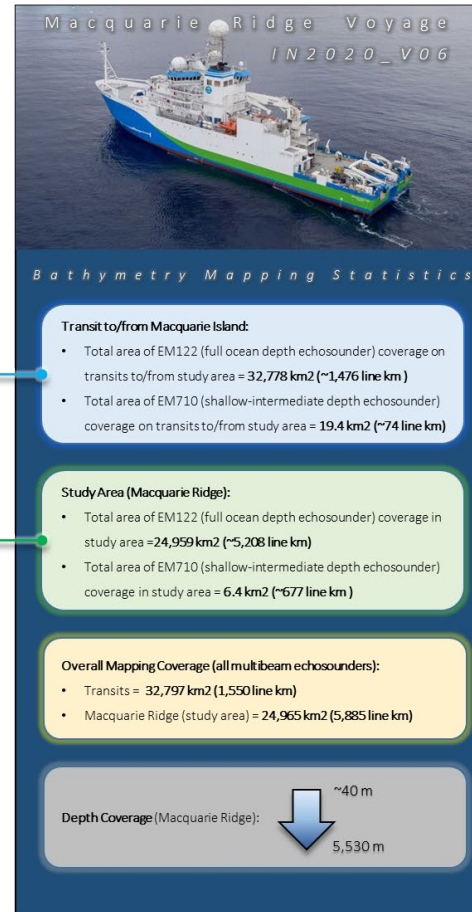
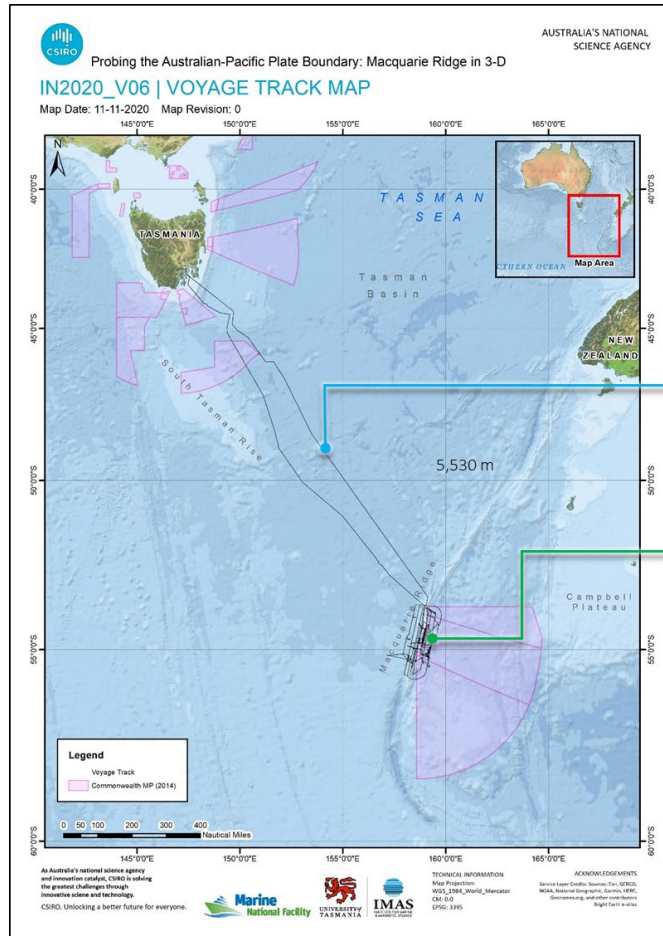
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# Relations with Other Organizations - CSIRO – Macquarie Ridge Voyage – RV Investigator



## Surveys in Nov 2020 - Macquarie Ridge Voyage – RV Investigator

- 27 days survey operation
- Kongsberg EM710 & EM122
- AUS604 and ENC 455158
- Macquarie Ridge Study area - 24,965 km<sup>2</sup> (5885 line km)
- Depth Coverage 40m to 5530m



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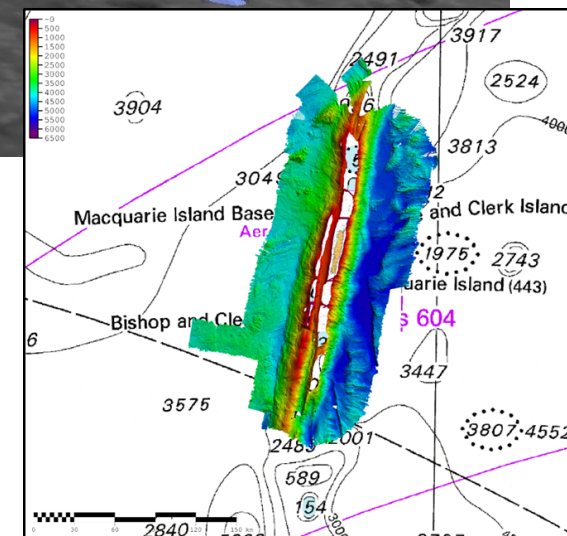
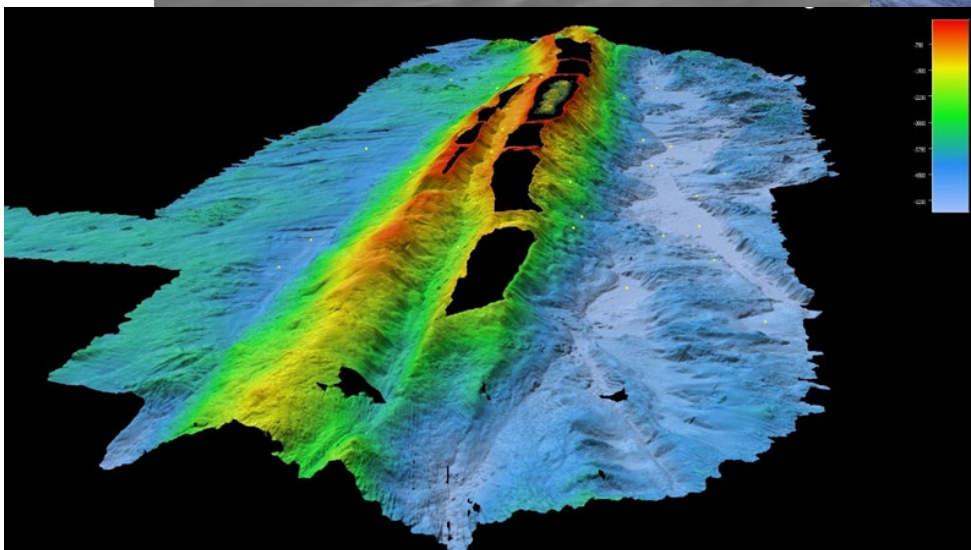
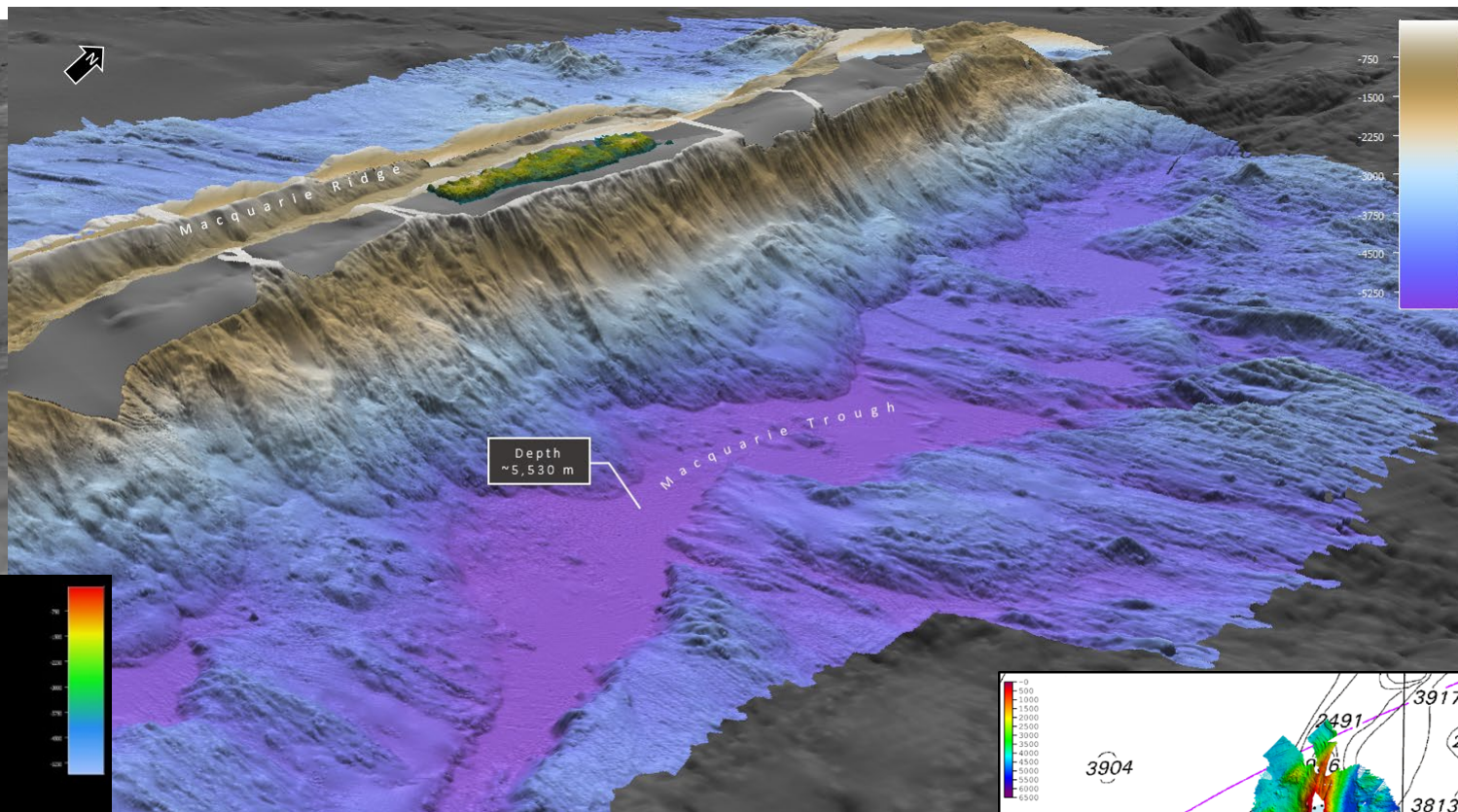
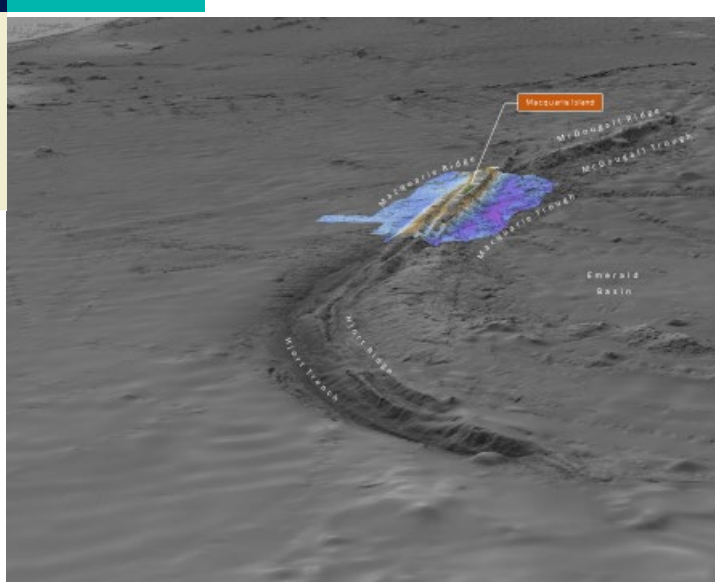




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# CSIRO – Macquarie Ridge Voyage

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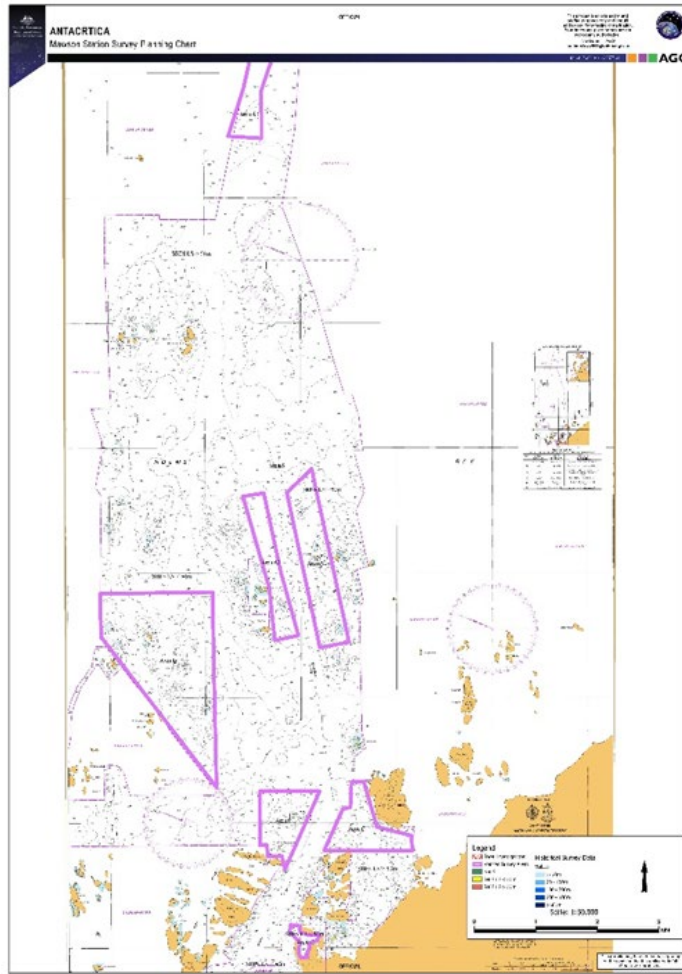




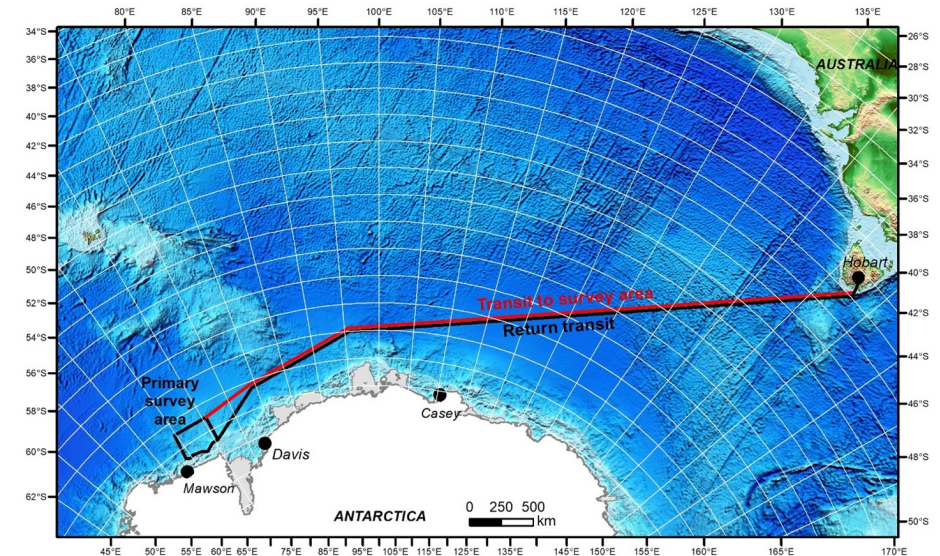
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# Planned Survey Activities for 2022-2023

International  
Hydrographic  
Organization



Planning is underway for the Antarctic season 22/23 with survey operations likely using RSV Nuyina , AAD new Antarctic research vessel alternatively using workboats deployed from Nuyina.



## Proposed RV Investigator Antarctic Voyage (TBC)

Antarctic Bottom Water production in the past: Records from marine sediments, Cape Darnley, East Antarctica

- 15 days multibeam data acquisition proposed
- Mapping undertaken along the upper and mid-continental slope in outlined 'primary survey area.'
- Water depths mapped range from 400-3500m.

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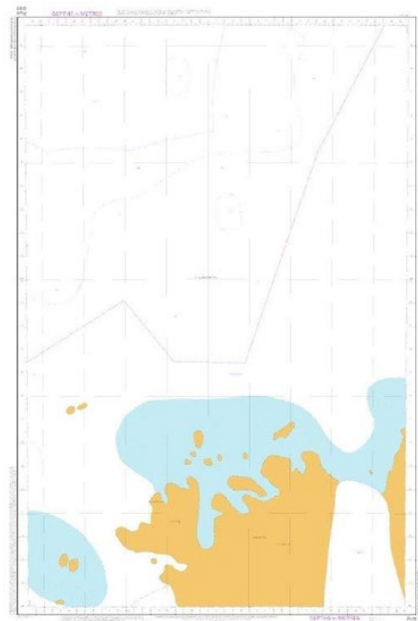
# Planned Charting Activities for 2022-2023

## NEW CHARTS

### **Approaches to Larsemann Hills**

New INT Chart  
@1:50000 being  
planned.

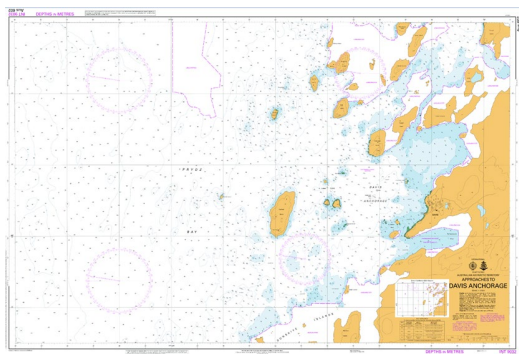
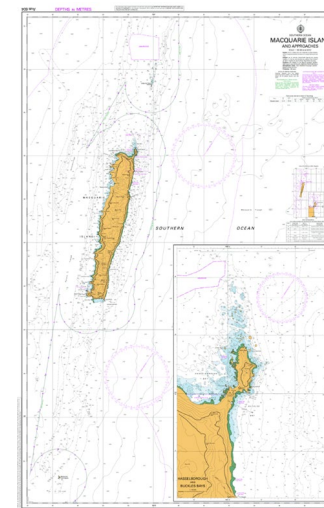
Possible collaboration  
between the National  
Hydrographic Office,  
India (NHO) and  
Australian  
Hydrographic Office  
(AHO).



### **Macquarie Island**

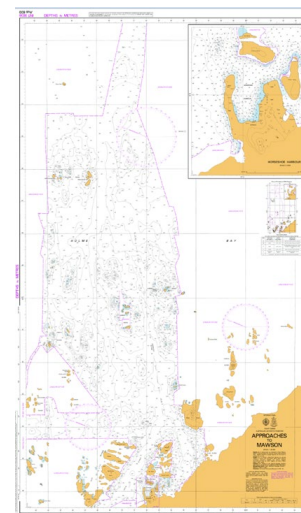
AUS604 -Macquarie Island and  
Approaches 1:100000 (including plan:  
Hasselborough and Buckles Bays  
1:15000).

Update chart for latest ENC AU455158  
and AU455159 containing new  
surveys: HI623, HI625, HI632 and ESSA.



### **Davis Station**

AUS602 (INT9032) Approaches to  
Davis  
Anchorage - 1:12500  
Update chart for latest ENC  
AU4602P0  
containing new surveys: HI 634,  
HI 621 B



### **Mawson Station**

AUS600 (INT9036) Approaches to  
Mawson 1:25000  
(including plan Horseshoe Harbour  
1:5000)

Updated for latest ENCs:  
AU5AQMAW, AU468062,  
AU468063 containing new survey:  
HI 607

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**Other matters of relevance to HCA, particular issues that may require HCA consideration and/or may need to be reported to A-3 (3-year IHO Work Programme, IHO Strategic Plan,...)**

- Note the report



**Australian Government**  
Department of Agriculture,  
Water and the Environment  
Australian Antarctic Division



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