

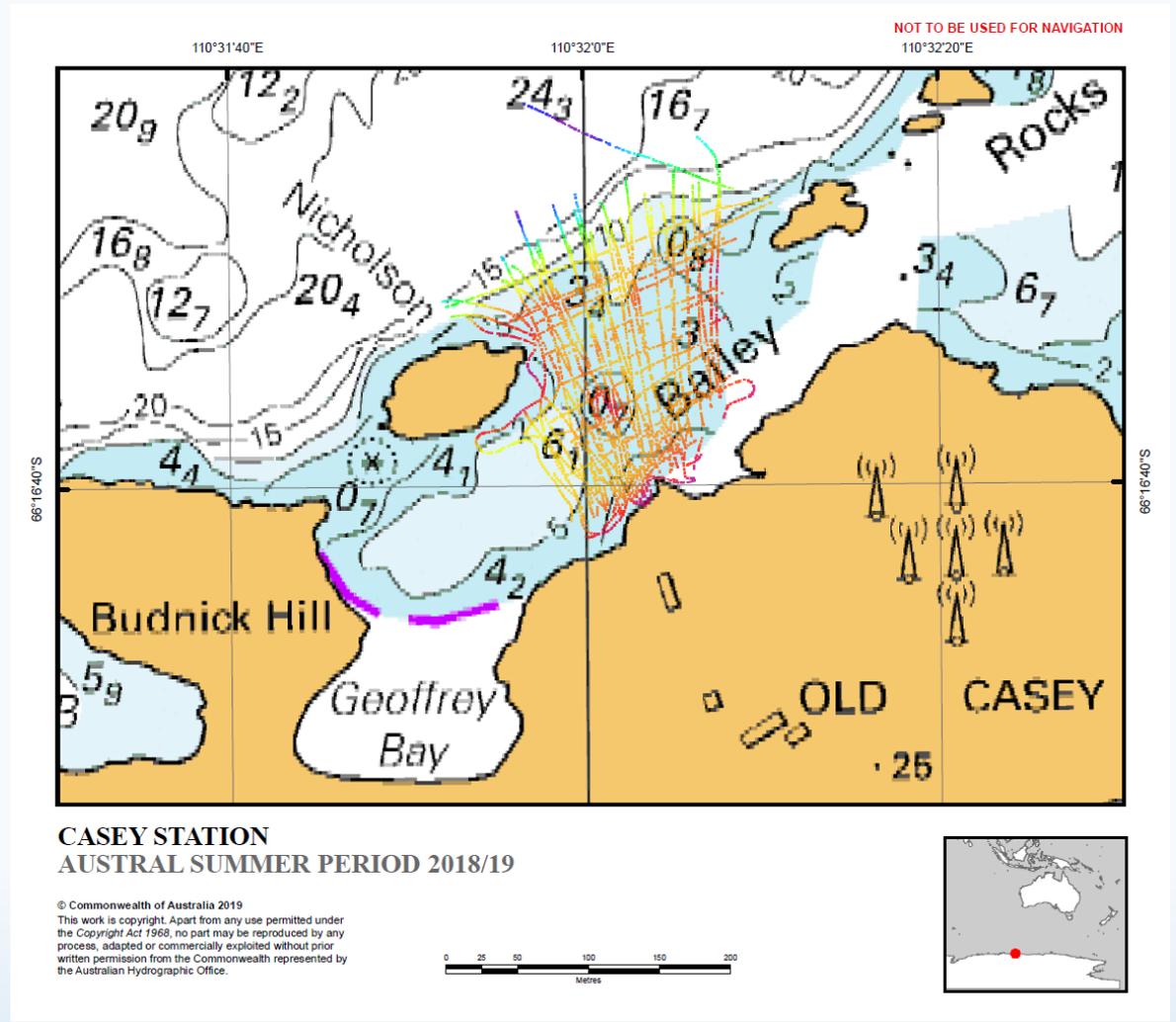
IHO Hydrographic Commission on Antarctica (HCA)

National Report by AUSTRALIA



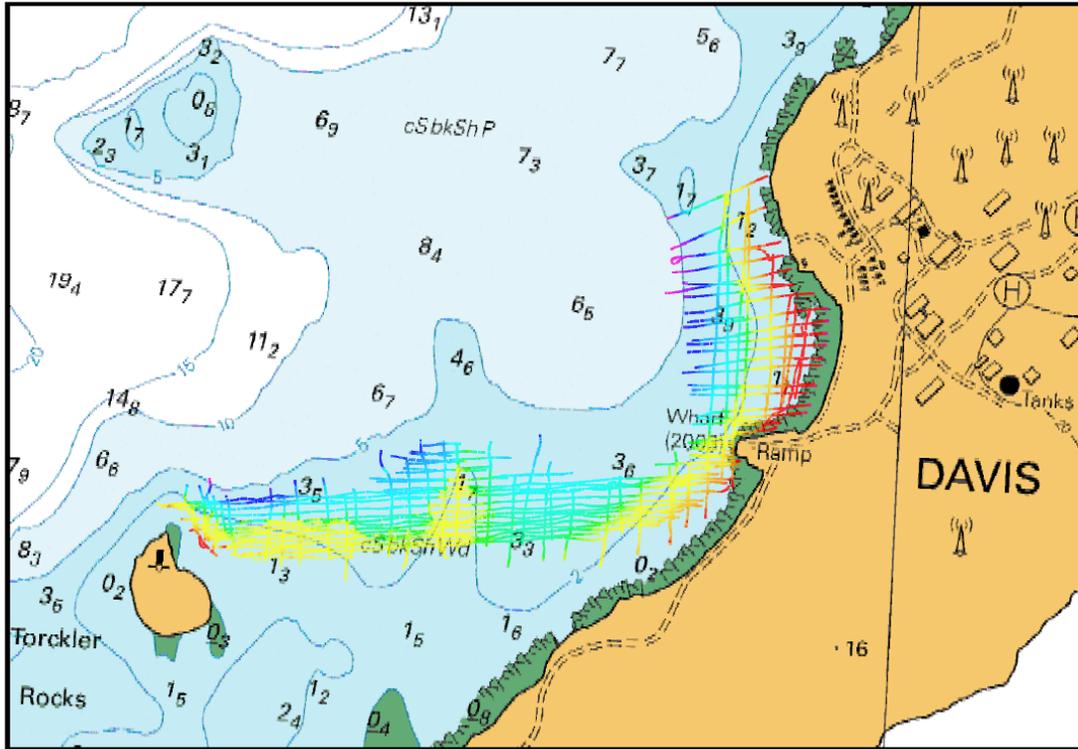
Survey progress in Antarctica since HCA-15 (June 2018)

Small infrastructure surveys to support the new AAD icebreaker at all Australian continental stations.



Survey progress in Antarctica since HCA-15 (June 2018)

NOT TO BE USED FOR NAVIGATION

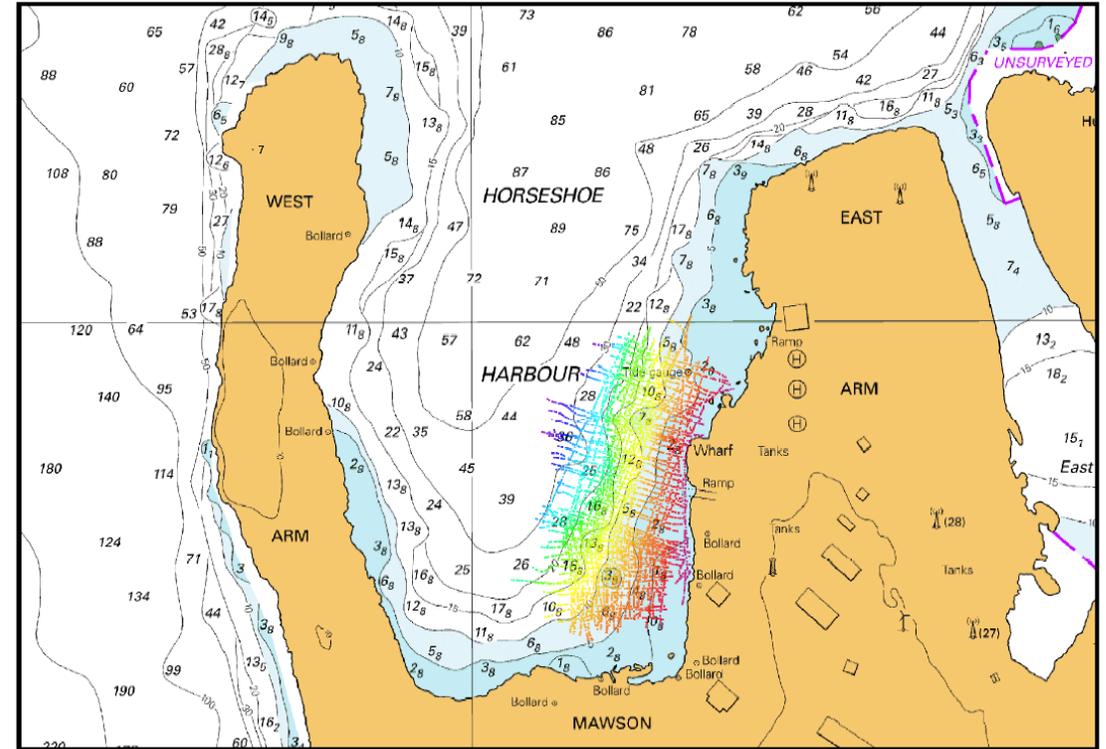


DAVIS STATION
AUSTRAL SUMMER PERIOD 2018/19

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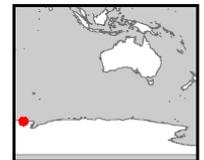


NOT TO BE USED FOR NAVIGATION



MAWSON STATION
AUSTRAL SUMMER PERIOD 2018/19

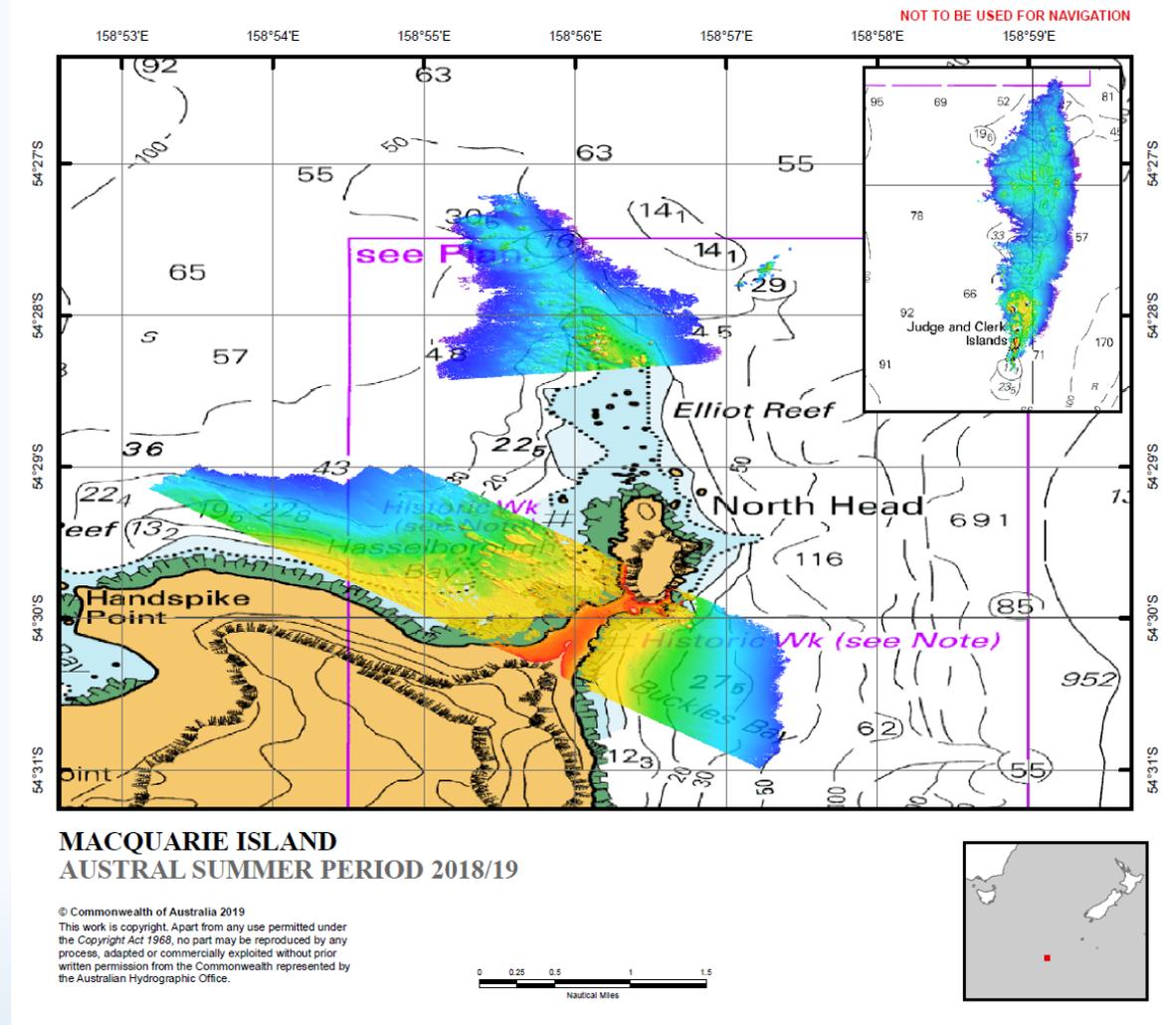
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Survey progress in Antarctica since HCA-15 (June 2018)

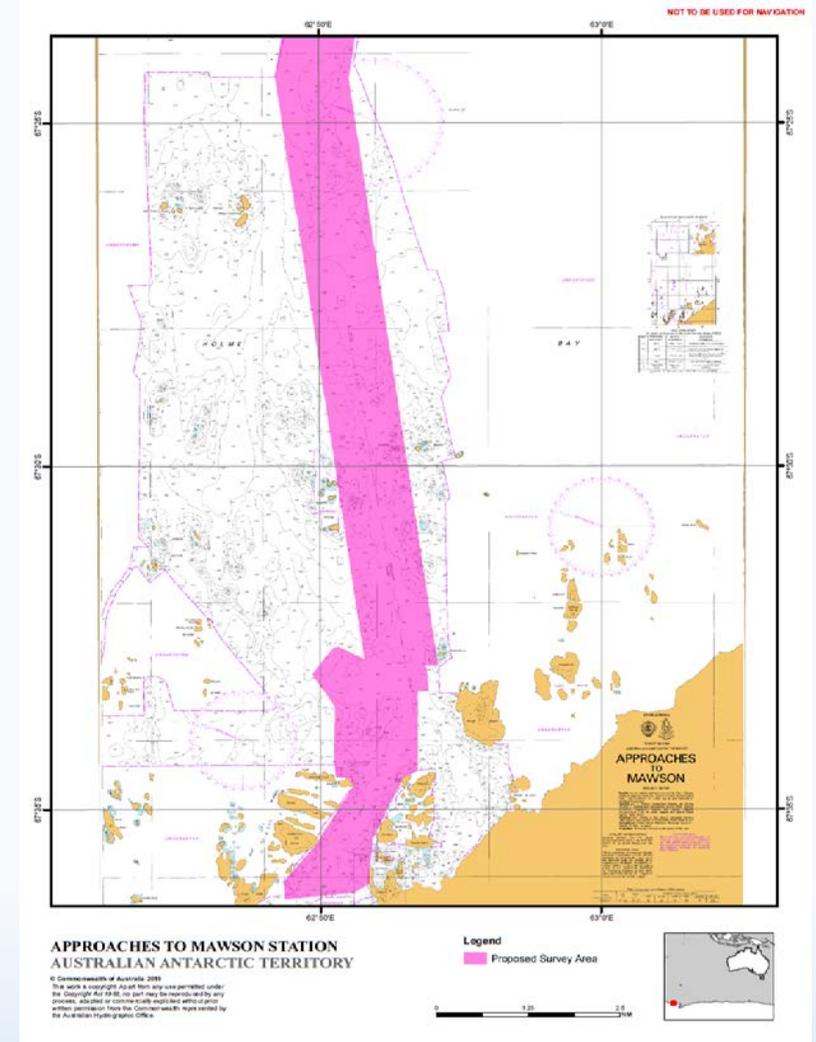
Beach landing site and approach surveys to support the new AAD icebreaker and station modernisation at Macquarie Island.

Opportunistic data collection over poorly charted offshore reefs and islands.



Planned Survey Activities 2019-20

Re-survey of approach route to Mawson Station and manoeuvring area in Kista Strait off West Arm to support the new AAD icebreaker.

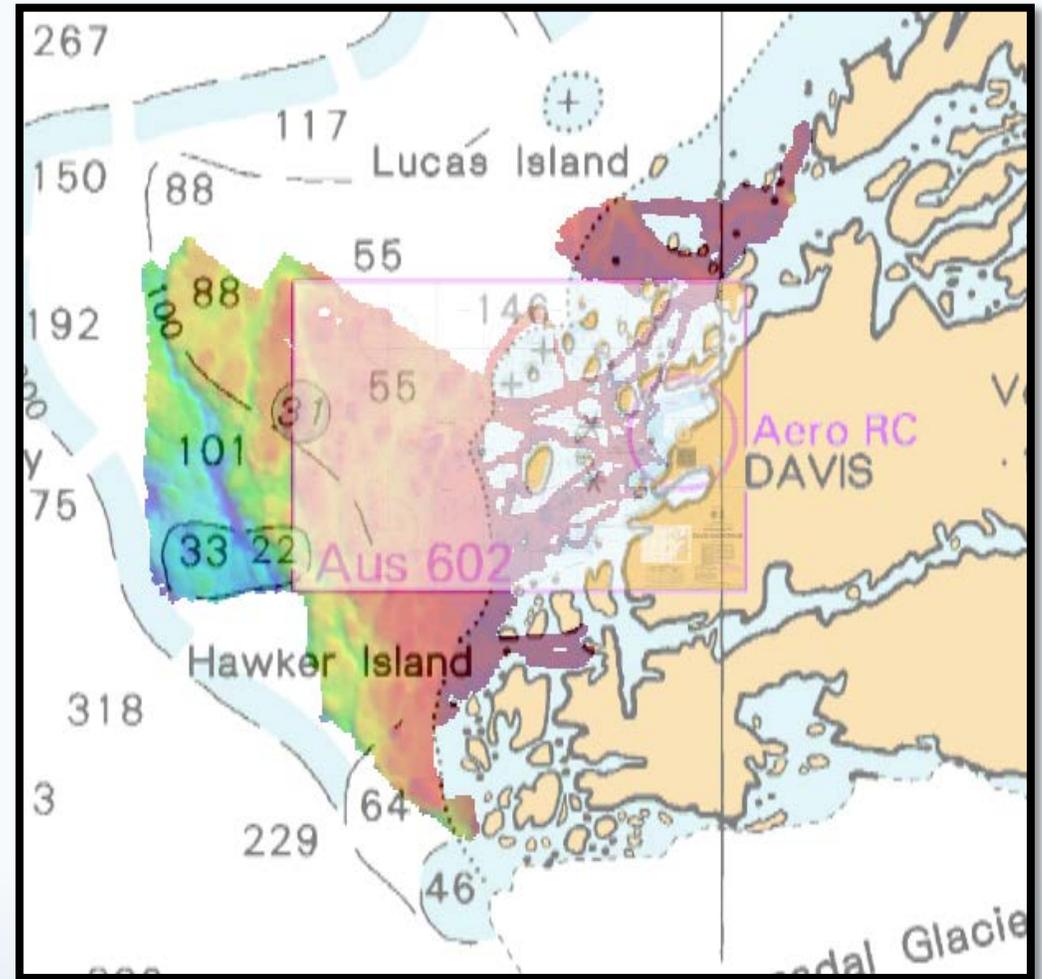


Charting completed in Antarctica since HCA-15 (June 2018)

Davis Station

Paper – AUS 602 published 31st May 2019

ENC – AU4602P0 published 21st March 2019

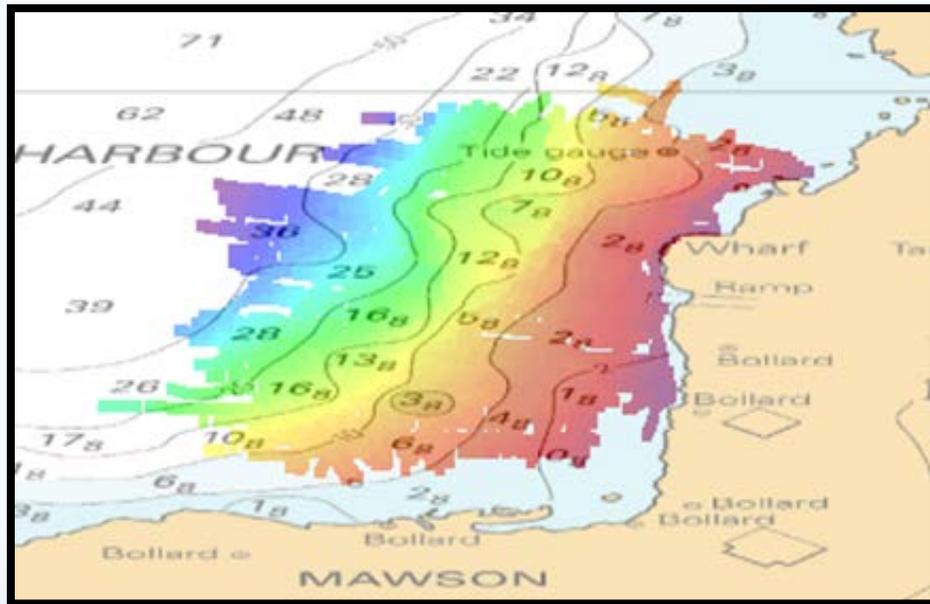


Planned Charting activities in Antarctica for 2019-2020

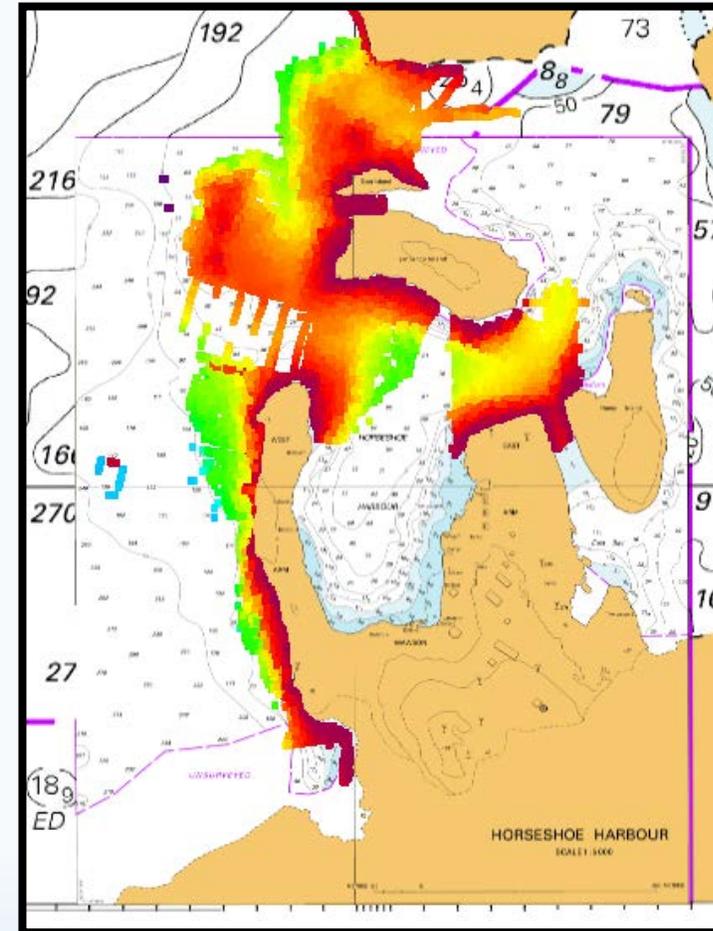
Mawson Station

Paper – AUS 599, AUS 600, AUS 449

ENC – AU5600P1, AU468062, AU468063, AU270060



HI 621C



HI 607

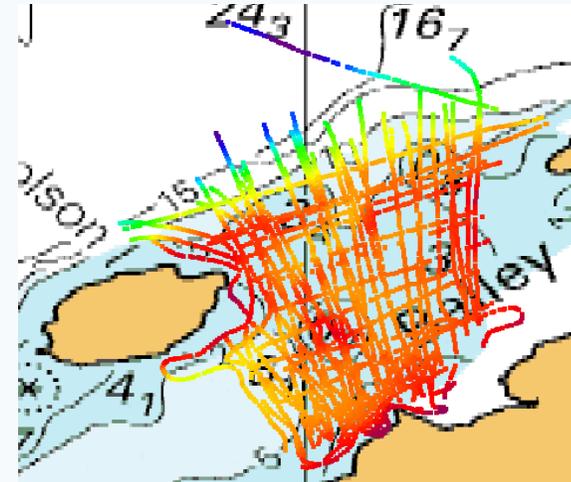


Planned Charting activities in Antarctica for 2019-2020

Casey Station

Paper – AUS 601, AUS 454

ENC – AU5601P1, AU4601P0, AU270100, AU270110

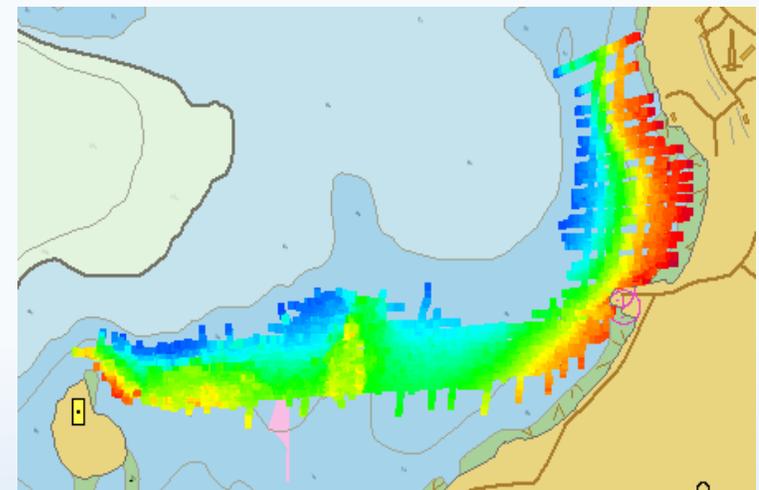


HI 621A

Davis Station

Paper – AUS 451 – Block to be done Q3 2019
generalising AUS 602

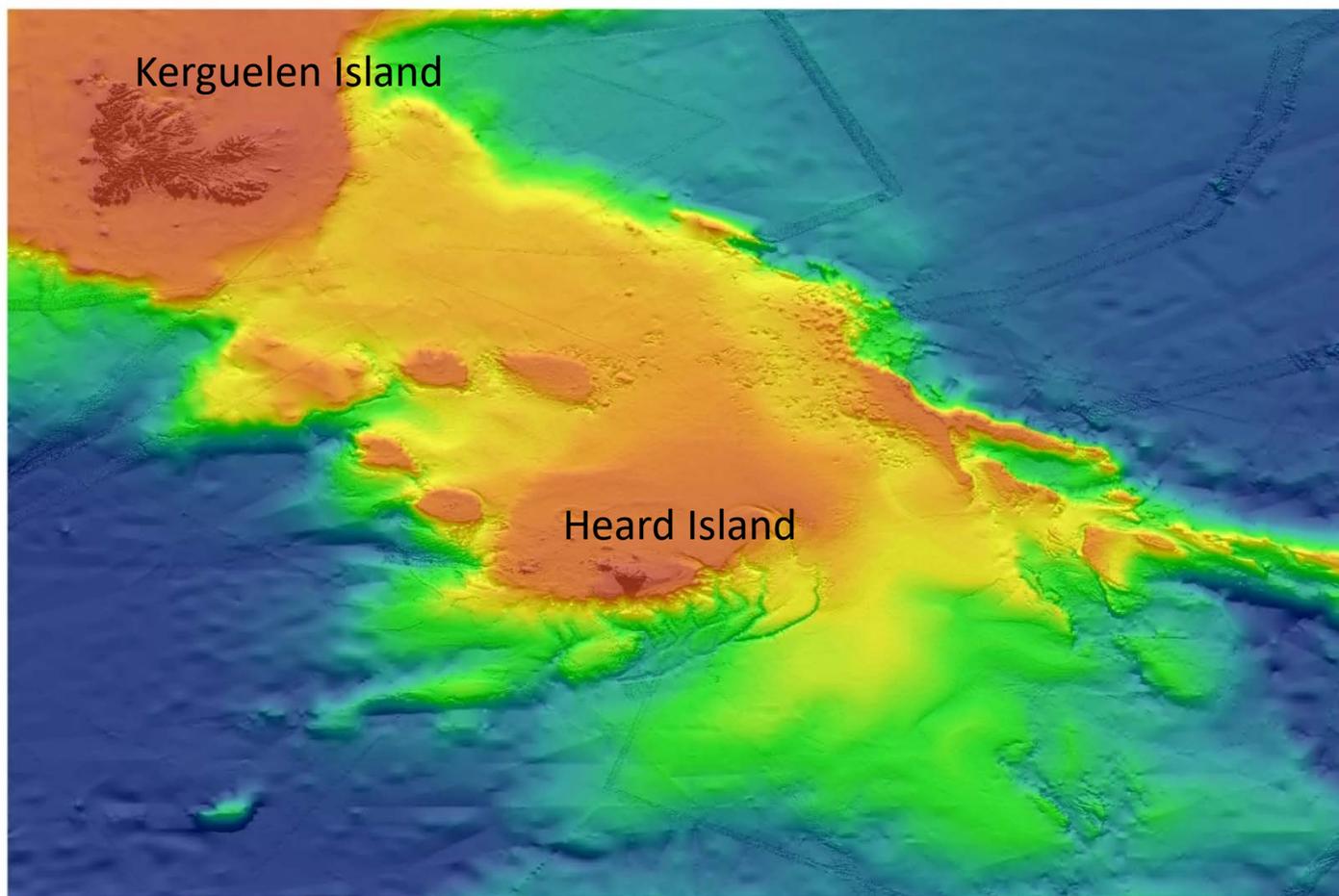
ENC – AUS270070 – Update to be done Q3 2019
generalising AUS4602PO



HI 621B



New Kerguelen Plateau bathymetry compilation

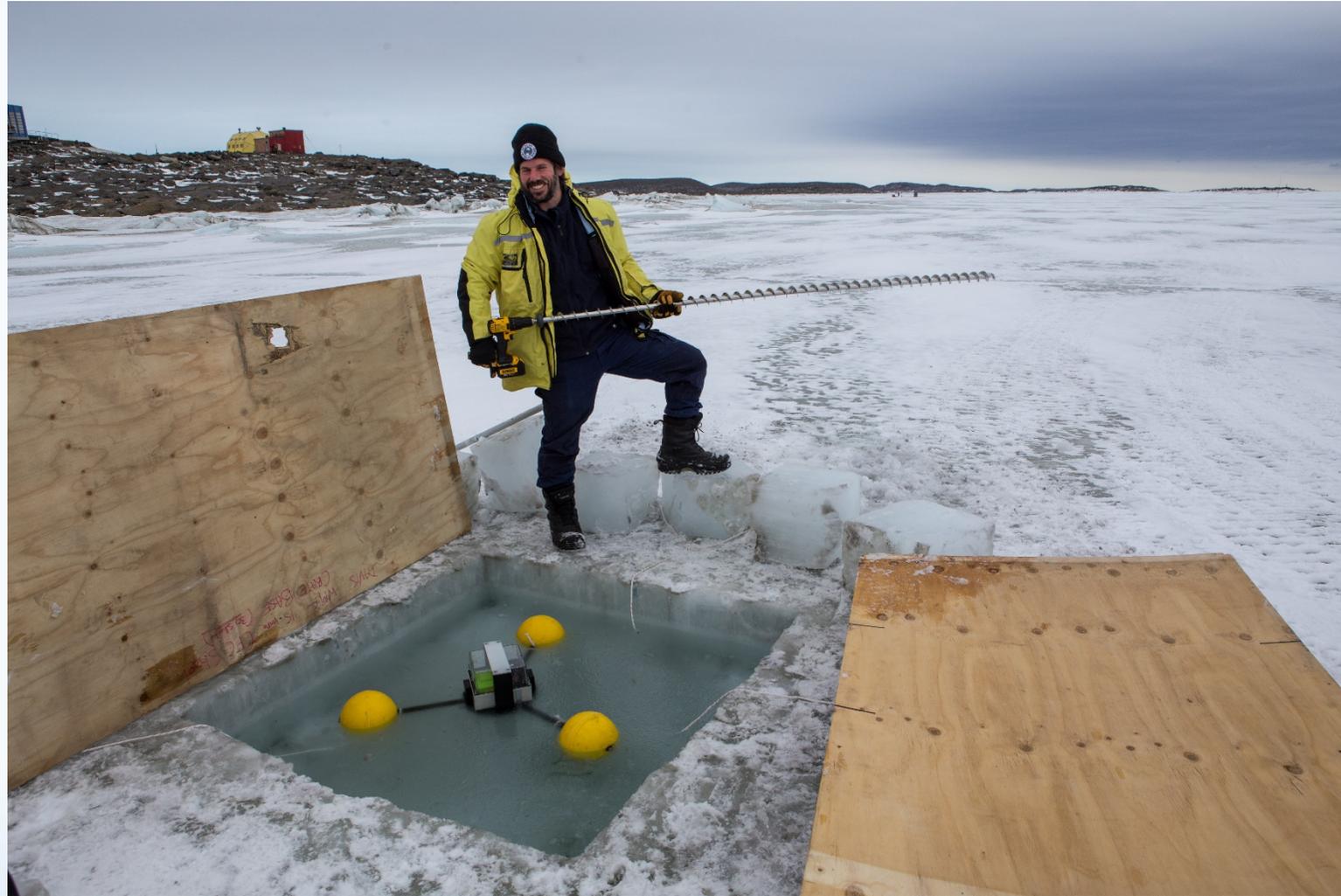


Data and information available from:

<https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/71552>



Davis Station Tide Gauge



Macquarie Island Tide Gauges



Operation Southern Discovery



Operation SOUTHERN DISCOVERY
ADF support to the AAD

NAVY DAILY

HOME FLEET OPERATIONS PEOPLE COMMUNITY EVENTS SPORT

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Antarctic Adventure for Two Navy Officers

Published on 30 January 2018 CMDR Joanne Haynes (author), Unknown (photographer)

Location(s): Casey Station, Antarctica

Topic(s): Operation SOUTHERN DISCOVERY

A photograph showing two Navy officers standing in front of a red and white aircraft. The aircraft has "New Borek Air Ltd." written on its side. The officers are wearing winter gear and are smiling for the camera.

Australia's new Antarctic science and resupply ship, RSV Nuyina

AUSTRALIA'S NEW ANTARCTIC ICEBREAKER



RSV Nuyina

AUSTRALIAN ANTARCTIC PROGRAM

RSV Nuyina can:

- break 1.65 m thick ice at a continuous speed of 3 knots
- cruise efficiently at 12 knots, with a maximum speed of 16 knots
- handle sea state 9 (waves over 14 m)
- handle Beaufort 12 winds (hurricane)
- cope with air temperatures as low as -30°C and up to 45°C
- support voyages of up to 90 days

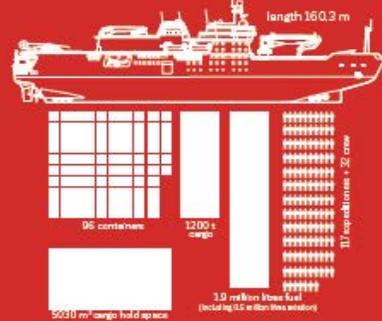
Australia's new icebreaker, RSV Nuyina, will make its maiden voyage to Antarctica in 2020-21. The ship will be the main lifeline to Australia's three Antarctic research stations and its sub-Antarctic station on Macquarie Island, and will support Australia's leadership role in Antarctic and Southern Ocean scientific research. The ship is also flexible enough to cope with future research and operational demands during its expected 30 year lifetime.

Scientific capability

The Nuyina is the only ship in the world to have a watertight room or 'wet well' to process seawater for left and other fragile marine organisms, at up to 1800 litres per minute. Other state-of-the-art scientific equipment includes acoustic instruments to map and visualise the sea floor and organisms in the water column, and instruments to measure atmospheric gases, cloud properties, wave heights and ice conditions.

What's in a name?

The word nuyina means 'southern lights' in *palawa karr* - the language spoken by Tasmanian Aborigines today. It is pronounced "noy-yea-nah". The name Nuyina recognises the long connection that Tasmanian Aboriginal people have with the southern lights (or *aurora australis*). The ship name was suggested by Australian schoolchildren through a 'Name our icebreaker' competition.



AUSTRALIAN ANTARCTIC PROGRAM



Australia's new Antarctic science and resupply ship, RSV Nuyina

"Silent R" acoustic rating at 8 knots minimises noise radiating from the ship

Dynamic positioning system maintains ship's position ± 20 m in sea state 4 (moderate seas)

Heavy Lifting:

- 1200 tonne (t) capacity below decks in up to 96 20-foot shipping containers
- 60 20-foot containers above deck for cargo and labs
- Cranes: 2 x 55t on bow; 1 x 15t side loader; 1 x 15t aft; and smaller cranes on science work deck
- Helicopters: 4 small (B3s) or 2 medium (S92s)
- Tenders: 3 ship + 1 science
- Barges: 2 x 45t capacity

2 diesel engines (19 200 kW total) for icebreaking and two electric motors (7400 kW total) powered by diesel generators for silent operations

Moon pool to deploy autonomous vehicles and oceanographic equipment

2 controllable pitch propellers; 3 bow and 3 stern thrusters for manoeuvring

Once in a generation investment
A new icebreaker represents a once in a generation investment by the Australian Government and is the centrepiece of the Australian Antarctic Strategy and 20 Year Action Plan launched on 27 April 2016. The \$1.9 billion package will cover the design, build and 30 year operational and maintenance lifespan of the icebreaker. It is the single biggest investment in the history of Australia's Antarctic Program.

Australian Government
Department of the Environment and Energy
Australian Antarctic Division

AUSTRALIAN ANTARCTIC PROGRAM

www.antarctica.gov.au/icebreaker

Illustration: Images: Denis O'Hare, Murray Wood, E. Hansen, Yo. Ogoe, Rob. Hoffman and Christina Schilling
Concept Art: Image: © Wendy Pether - Arctic Research © Australian Antarctic Division 2014

