



RV Investigator

Marine National Facility

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RV Investigator – a new era in marine and atmospheric research for Australian scientists



RV Investigator

Marine National Facility

- RV Investigator is a blue-water research vessel with the capability of conducting science in the areas of: Oceanography, Geosciences, Ecosystems and Atmospheric research.
- Owned by CSIRO Australia and operated by ASP Ship Management.
- Administered by the Marine National Facility.
- Available to Australian Marine Researchers and International Collaborators.



RV Investigator

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- In 2009 the Australian Government dedicated \$120M for a new research vessel - RV Investigator
- Designed by: Joint venture Robert Allan and Alion Science and Technology – Canada (RALion)
- Built: Sembawang Shipyard Singapore under contract to Teekay Holdings Australia Pty Ltd



RV Investigator

Marine National Facility

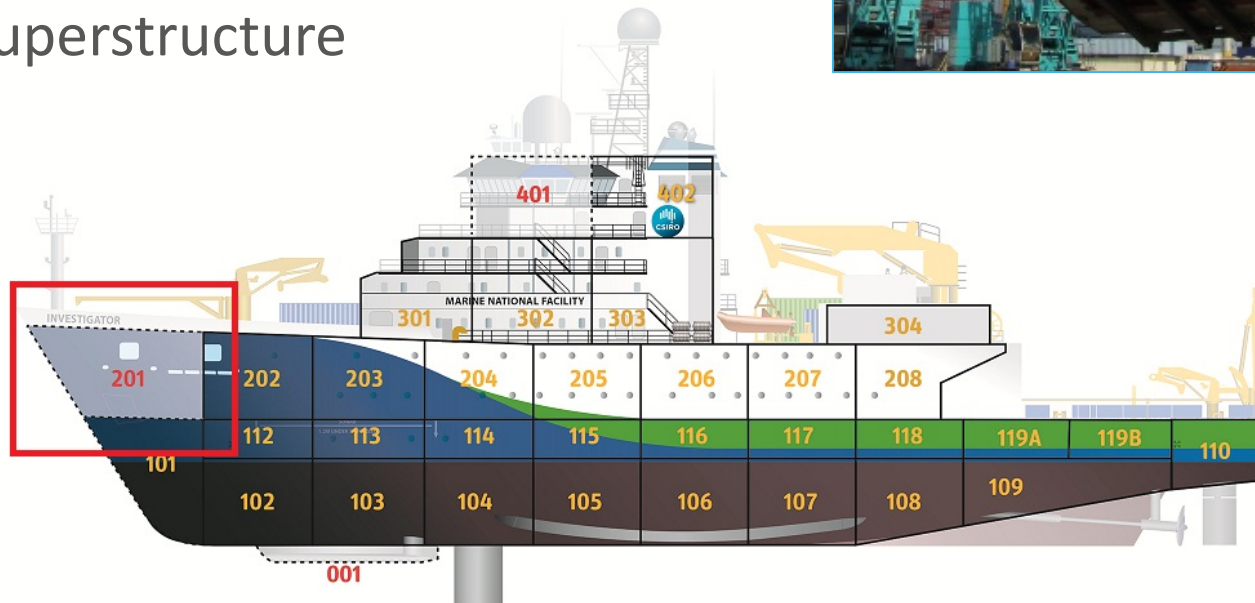
- Length: 93.9m, Height 37m, Beam 18.5m and Draft 6m
- 3 Diesel Engines - 3000kW, 2 AC Electric Drive Propulsion Motors 2600kW – Twin Screws
- Approx. 6,000 tonnes
- First Steel Cutting: Jan 2012
- Keel Laid: 9 May 2012
- Delivered (Yard): 4 Aug 2014
- Arrived Hobart: 10 Sep 2014
- Scientific Sea trials: 28 Oct 14 to 11 Feb 15



RV Investigator - Construction

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- Gondola: Holds an array of acoustic instruments
- Construction: Approx 33 large scale blocks, built individually and welded together to form the main superstructure



RV Investigator - Main Capabilities

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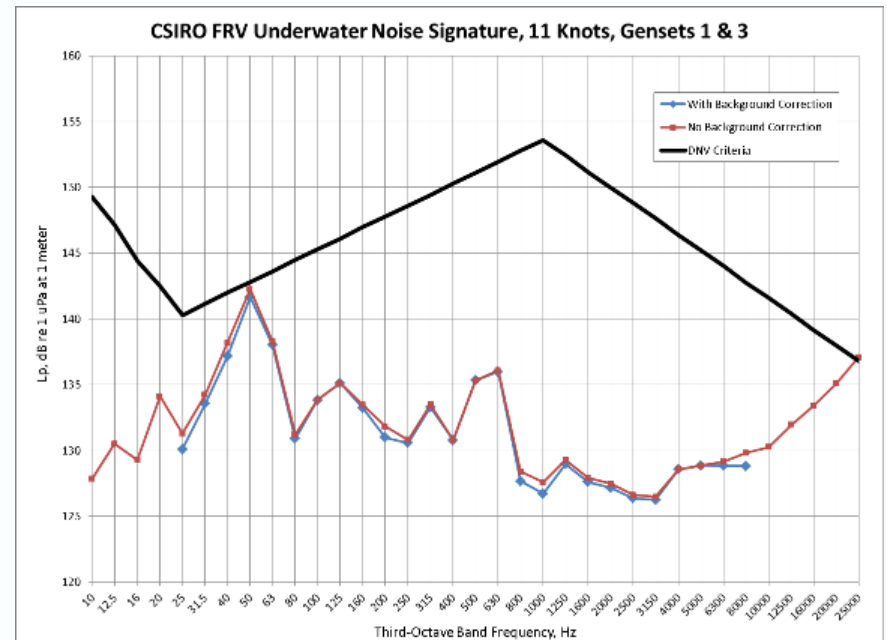
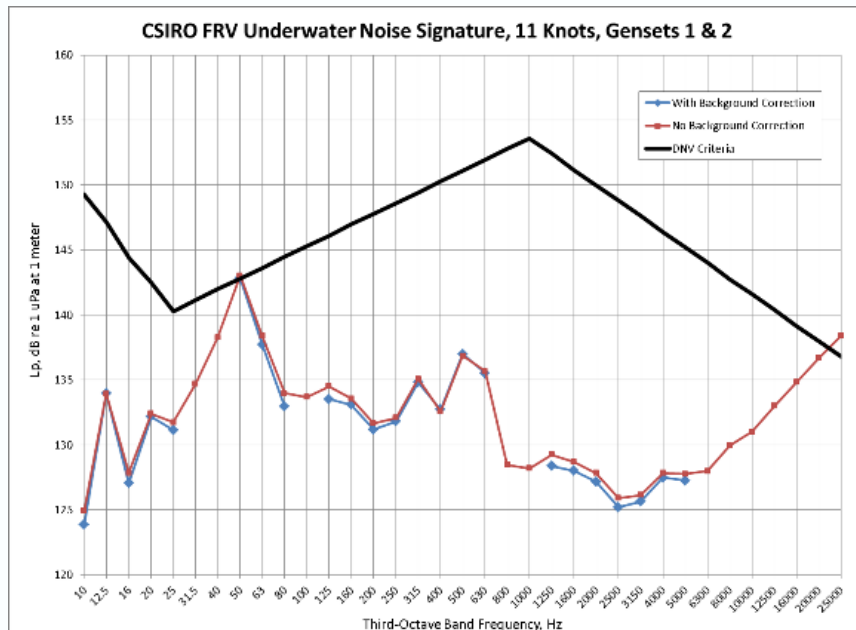
- DNV Silent R
 - Compliant
- Atmospheric Research
 - Dedicated Aerosol and Atmospheric Chemistry labs
 - Weather Radar
- Oceanography
 - Trace metal clean sampling system
 - SBE 911 plus and 17plus CTD systems
 - TRIAXUS - Towed undulating sampler
- Ecosystem Science
 - Trawl capability to 4000 m
 - Towed camera system to 6000m
- Geosciences
 - Coring system and Seismic compressors
 - Multi-beam systems on gondola and drop keels



RV Investigator - Main Capabilities

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- DNV Silent R
 - Investigator is the first diesel electric AC drive twin screw research vessel to achieve Silent-R compliance
 - The measurement bandwidth is from 10 Hz to 25kHz @ 11kts



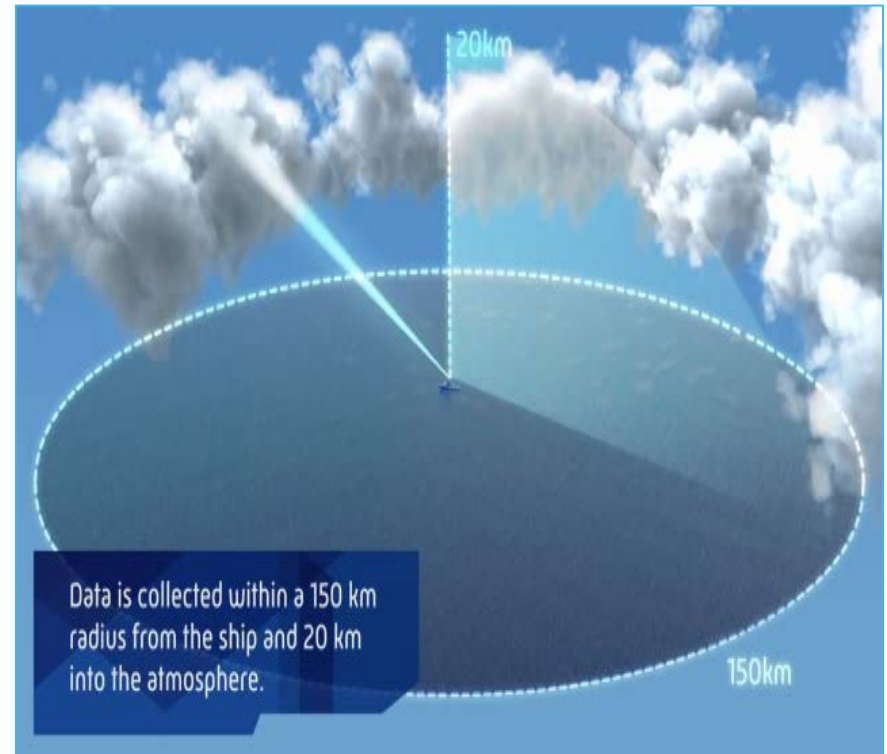
RV Investigator - Main Capabilities

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- Atmospheric Research

- Dedicated Aerosol and Atmospheric Chemistry labs
- Dual Polarization Doppler C-band Weather Radar (250kW)
- Green house gas spectrometers
- Meteorological Instruments
 - Wind speed & direction
 - T&RH, rain gauges
 - Pressure
 - SW and LW Radiometers
- Ozone and Radon detectors
- Sea surface temperature

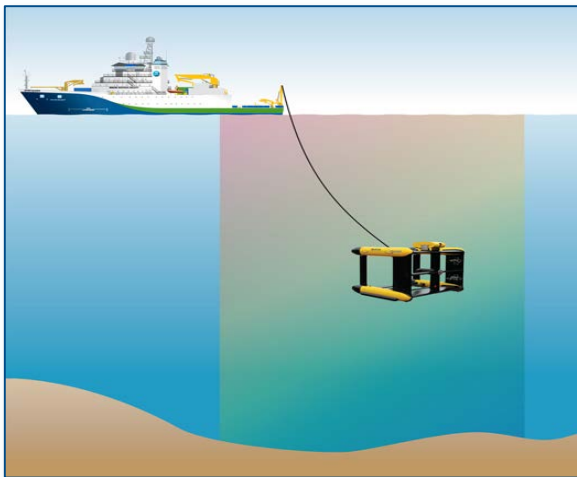
The data will be used to improve climate models and weather predictions for Australia and the rest of the world.



RV Investigator - Main Capabilities

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- Oceanography
 - Trace metal clean water sampling system
 - Trace metal SBE 9plus with 17plus, CTD 12 bottle carousel
 - SBE 911 CTD, 24 and 36 bottle carousel
 - TRIAXUS - Towed undulating sampler



RV Investigator - Main Capabilities

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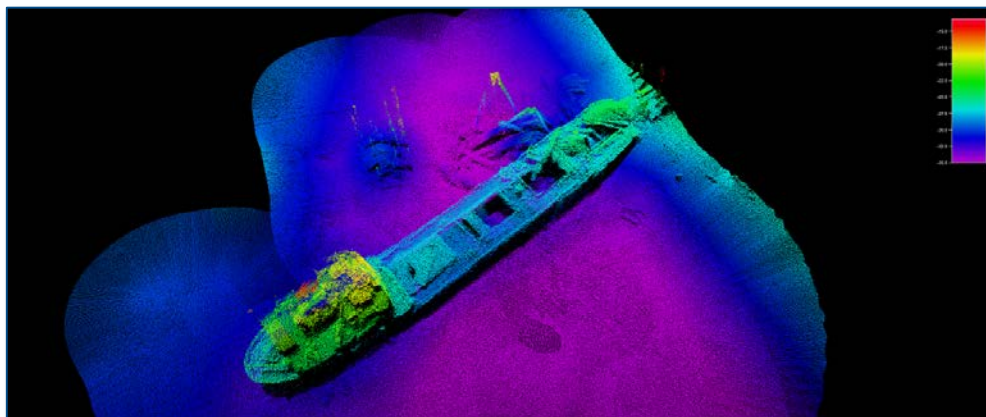
- Ecosystem Science
 - Winches
 - 2 x Trawl winches (8000m)
 - 2 x CTD winches (7000m of 8mm wire)
 - Coring and hydrographic winches
 - Net drum and Gilson winches
 - Towed body – fibre capable
 - Heavy duty general purpose winch.
 - A-frame (multi-block)



RV Investigator - Main Capabilities

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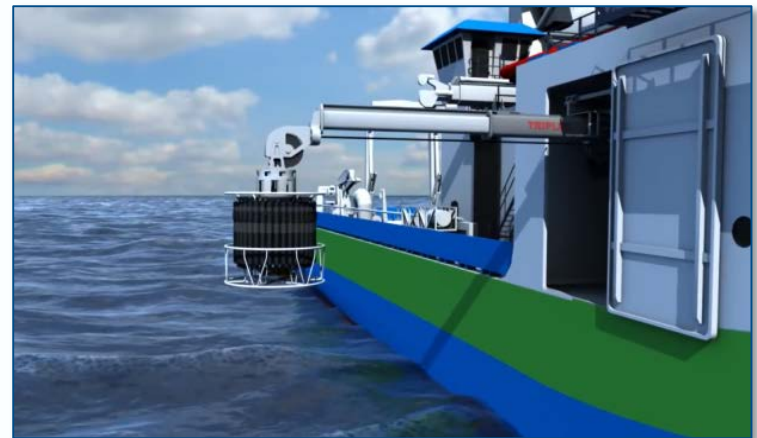
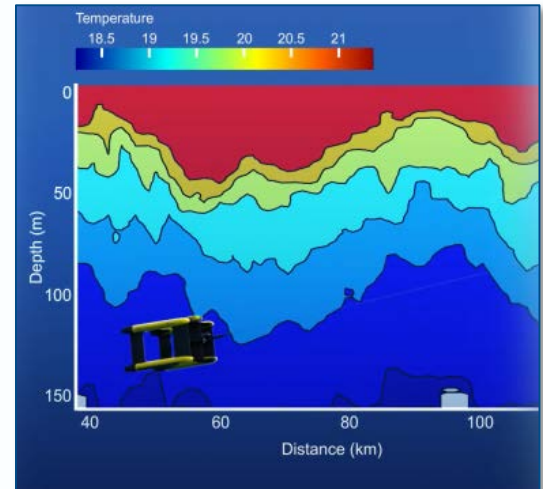
- Geosciences
 - Coring system and Seismic compressors
 - Gondola
 - Multi-beam systems, EM122, EM710, ME70
 - Drop keels
 - EK60 Sounder (18, 38, 70, 120, 200 & 333kHz)
 - ADCP 75 & 150kHz



RV Investigator – Scientific Sea Trials

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- Sea acceptance trials: 28 Oct – 1 Nov 14
 - CTD
 - Winches
 - Triaxus
 - Acoustic Calibration
- Personal Experience
 - Very stable in rough conditions (5-6m Swells)
 - Increased our weather window for operations
 - Accommodation/cabins are first class
 - Meal and Lounge areas are very comfortable.
 - Very spacious moving around the vessel and in compartments



For further information visit our
blog at <http://csirofrvblog.com/>

Questions

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