International Research Ship Operators Film 2014

YouTube ref: https://www.youtube.com/watch?v=_MWe0iL-YKY

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Transcript

[Engine sounds play and UNESCO and Intergovernmental Oceanographic Commission logos and text appears on screen: Research Vessels, Champions of the seas: Exploring, sampling, discovering]

[Text appears: A compilation film prepared by International Research Ship Operators (IRSO). IRSO 2014. The IRSO forum is a group of research ship operators from 30 countries who manage over 100 of the world's leading marine scientific research vessels. IRSO supports the marine scientific community's research efforts at sea, promotes the research ship community and provides expert advice. IRSO: http://www.irso.unols.org/]

[Text appears: 2nd International Ocean Research Conference Barcelona 2014, (IORC) ONE PLANET ONE OCEAN Barcelona (Spain)

[Alfred-Wegener-Institut Helmholtz-Zentrum fur Polar und Meeresforschung logo and image appears of a ship moving through the ocean]

[Text appears: FS Polarstern auf dem Weg zur Neumayer Station III]

[Music plays and image changes to show the Polarstern ship from a side view]

[Image changes to show the Polarstern ship from the front view]

[Image changes to show the Polarstern from the side view and the camera zooms in on the name Polarstern on the side of the ship]

[Image changes and the camera zooms in on the stern of the ship]

[Image changes to show three people around a piece of marine equipment and then the camera zooms out to show five people working to lower the marine equipment into the ocean]

[Image changes to show the marine equipment sinking below the ocean's surface]

[Image changes to show three employees hauling a rope of life buoys to the stern of the vessel]

[Image changes to show a multi-corer being lowered into the ocean below the surface of the water]

[Image changes to show a female employee working in a lab and the camera zooms in on her gloved hands and the tubes she is working with]

[Image changes to show the engine room of the ship]

[Image changes to show a man inspecting a shaft with a torch]

[Image changes to show two men inside the navigation room of the ship]

[Image changes to show the Polarstern ship moving through the water]

[Image changes to show a person's hand on the ship's steering control]

[Image changes to show two helmsmen looking through a window, the camera zooms in on one of the employees as he looks through a pair of binoculars]

[image changes to show the Polarstern ship turning around in the water and waves washing over the decks]

[Image changes to show a view of the ocean through the bridge window]

[Image changes to show the waves washing over the stern of the ship]

[Image changes to show a simulation of a large ice berg with a tunnel through the centre of it and the camera zooms through the tunnel and zooms in on a simulation of the Polarstern behind the iceberg and text appears: Atlas Hydrographic]

[Image changes to show the simulated Polarstern using a sonar detector to investigate the ocean floor]

[Image changes to show a simulation of the Polarstern ship cutting its' way through ice floes and then the camera zooms in on the bow of the ship and then pans along the hull bottom to show pieces of ice floe moving underneath the ship and text appears: Old multibeam, Hydrosweep]

[Image changes to show the Polar stern ship cutting its' way through ice floes and the camera pans along the side of the vessel]

[Image changes to show the view of the ice floes from the bow of the ship]

[Image changes to show the view of the ice floes from the side of the ship]

[Image changes to show the view from the side of the stern of the ship as it cuts through the ice floes]

[Image changes to show the view from the bow of the ship as it cuts through the ice floes]

[Image changes to show the starboard walkway down the side of the Polarstern cabin and the camera pans along the ice floe cliffs on its' sides]

[Image changes to show the bow of the ship cutting through the ice]

[Image changes to show various snow equipment and the camera pans over the snowy landscape]

[Image changes to show a shipping container being craned from the deck of the Polarstern onto the snowy landscape]

[Image changes to show six people on shore turning the shipping container around]

[Camera pans along the length of the Polarstern]

[Image changes to show a snow plough towing a liquid shipping container on a trailer]

[Image changes and the camera pans along the length of the research station]

[Camera zooms in on the side of the building and the sign reads: Neumayer-Station, AWI, Helmholtz Gemeinschaft]

[Image changes to show guide ropes from the research station to a large orange building in the distance]

[Image changes to show the research station with the orange building in the distance]

[Image changes to show a person coming out of the door of a transportable orange building]

[Image changes to show a person going in the door of a small transportable white building]

[Image changes to show the research station again and the camera pans along the building showing the equipment outside]

[Text appears: FS Polarstern, auf der Fahrt zur, Neumayer Station III, Schnitt: Lars Grubner, Kamera: Lars Grubner, realnature.tv, Nina Machner, Animation: Atlas Hydrographic GmbH, Produktion: Alfred-Wegener-Institut, Helmholtz-Zentrum fur Polar – und Meereswissenschaften]

[Image changes to show a large orange ship moored in the water next to the ice floe and text appears: Australian Antarctic Division]

[Camera pans around the landscape and zooms in on the Aurora Australis ship]

[Sounds of the ship moving through the water play]

[Image changes to show a front view of the ship as it moves through the water and the camera pans along the side of the ship]

[Image changes to show the view of the waves splashing over the bow of the ship]

[Image changes to show the ship moving through the ice floes]

[Image changes to show the ship reversing out of the ice floe and then moving forward through the ice floe again]

[Image changes to show the ship ice locked and the equipment around the ship]

[Image changes to show the crane hoisting things off and on the ship]

[Image changes to show a side view of the Aurora Australis moving through the water]

[Image changes to show the Aurora against a background of icebergs]

[Image changes to show the Aurora Australis in a channel between the ice floes and the camera pans around the ship in an anticlockwise direction]

[Image changes to show a multi corer being lowered into the water from the deck of the Aurora Australis]

[Image changes to show employees inside the ship hauling the multi-corer into position]

[Image changes to show an employee on the deck of the ship watching a net as it is dropped into the water]

[Image changes to show three employees around the net as it is hauled up by crane]

[Image changes to show a team of people around a table sorting various specimens from the testing equipment]

[Camera zooms in on the specimens in one of the plastic boxes]

[Image changes to show employees digging a hole in the snow next to the Aurora Australis]

[Image changes to show six employees working around the hole]

[Image changes to show a front view of the Aurora Australis moving through the water]

[Image changes to show the Aurora Australis coming in to dock while three people watch from the dock]

[Image changes to show an ice floe and text appears: The British Antarctic Survey]

[Camera pans along the side of the James Clark Ross ship from bow to stern as it moves through the ice floe]

[Image changes to show the channel left behind the ship in the ice floe]

[Image changes to show a helmsman looking through the bridge cabin windscreen at the ocean and then the ice floes]

[Image changes to show the bow of the ship travelling through the sea ice]

[Image changes to show the view towards the stern of the ship as it cuts through the sea ice leaving a clear channel of water behind it]

[Image changes to show the view from the bow of the ship as it moves through the ice floes]

[Image changes to show the captain steering the ship and an observer looking through binoculars out of the bridge cabin window]

[Image changes to show three employees on the observation deck looking through binoculars]

[Image changes to show the main mast with revolving radars and flags fluttering in the breeze]

[Image changes to show three employees studying a navigation map]

[Image changes to show three employees working at computers in the depth sounding section]

[Image changes to show the computer screen with depth sounding information]

[Image changes to show a printout feeding from a printer]

[Image changes to show a piece of marine equipment being lowered on to the deck]

[Image changes to show a fine meshed net in a frame being emptied and samples being emptied from a black bucket into a white bucket]

[Camera zooms in on the specimens in the white bucket]

[Engine sounds play and the image changes to show the employees bringing the white specimen bucket into a room for sorting]

[Camera zooms in on the shrimp specimens in a white tray and then zooms out to show employees picking samples from the specimen tray with tweezers]

[Image changes to show an employee looking at a computer screen and then making notes in a notebook]

[Image changes to show the piece of marine equipment being hauled out of the water on to the stern of the ship and then image shows the employees hauling the piece of marine equipment into place on the deck]

[Image changes to show a white ship cutting through the water and text appears: NATO Science and Technology Organization – Centre for Maritime Research and Experimentation]

[Image changes to show the deck of the ship and the camera pans over the stern of the ship and into the ocean behind the ship]

[Image changes to show three employees hauling a large coil of rope up on a crane and then a piece of marine equipment being hauled up by crane and guided by employees on the deck]

[Image changes to show the piece of marine equipment being lowered into the water and beneath the surface]

[Image changes to show a Bluefin probe being lowered into the water]

[Image changes to show two men in a dinghy next to the white ship watching the probe]

[Camera zooms out to show the white ship with the probe just visible in the water]

[Image changes and zooms in on the two men in the dinghy]

[Image changes to show the white ship coming into the docks]

[Image changes to show the side of the white ship with the name Alliance IMO 8833752 printed on the side]

[Image changes to show a computer screen displaying a map in a cabin]

[Camera zooms out to show the whole cabin]

[Image changes to show some control panels]

[Image changes to show the engine room of the ship and then the camera zooms in on two employees talking in the engine room]

[Camera zooms in on the hands of one of the employees]

[Image changes to show a workshop inside the ship]

[Image changes to show the engine room again]

[Image changes and the camera pans over the engine and control room of the ship]

[Camera zooms in on two pressure gauges]

[Image changes to show another area of the controls and the camera pans around the room and zooms in on a bank of computers]

[Image changes to show three employees on the deck hauling on a rope]

[Image changes to show a dinghy on the deck of the ship]

[Image changes to show the two employees in the dinghy in the water hooking a grappling hook to the Bluefin cylinder probe]

[Camera zooms in on the Bluefin probe being lifted from the water and back on to the deck of the ship]

[Image changes to show the horn on the side of the ship and a sign “IMO 8833752”]

[Camera zooms in on the name “Alliance” on the bow of the ship]

[Music plays and CSIRO logo and text appears: Future Research Vessel Project]

[Image changes to show a large shed facility with flags along the front]

[Image changes to show a group of people with two large dragon creatures in the front of the group]

[Text appears: Investigator, CSIRO Research Vessel New Build Project Strike Steel Ceremony]

[Image changes to show a group of people around a plasma cutter]

[Image changes to show a sign “Investigator Fabrication Site]

[Image changes to show employees with face masks welding, cutting and grinding steel]

[Camera zooms in on the cut pieces of steel]

[Image changes to show a view of the whole fabrication site]

[Image changes to show a large trailer moving part of the hull of the ship around]

[Images flash through of a crane joining two parts of the ship together]

[Image changes to show dragon creatures either side of the walkway as a line of employees walk up a ramp]

[Image zooms in on three of the employees]

[Image changes to show a group of people watching as numerous balloons are let off from the deck of the ship]

[Image changes to show the dragon like creatures either side of the employees]

[Image changes to show a sign “Caution Lifting Operation”]

[Image changes to show the trailer and the crane moving back and forth next to the half built ship]

[Image changes to show two employees and then image changes back to the crane hoisting a large piece of equipment on to the deck of the ship and then the camera zooms in on two employees fitting the equipment into place]

[Images flash through in fast forward of another piece of equipment being lifted into place on the deck of the ship, an employee wearing a hardhat, parts of the steel hull, people moving another unpainted part of the ship into Chamber 1, the part of the ship coming back out painted, a part of the ship being lifted onto a semi trailer, the piece of the ship being hauled up onto the deck and other component parts being hauled up and into place as the ship comes together]

[Image changes to show a view of the Investigator and a sign “Investigator Erection Area”]

[Images continue to flash through of components of the Investigator being hauled into place by crane]

[Image changes to show the satellite equipment being lifted up on to the deck of the ship and put into place]

[Images flash through of people on the docks hauling the Investigator into place]

[Images flash through of the Investigator being lowered into the water and the camera zooms in on a ruler on the sides of the dock as the Investigator is being floated]

[Image changes to show the dragon like creatures lining either side of the walkway as a group of people walk up on a red carpet]

[Image changes to show a ship controller]

[Image changes to show three men talking together and then two men shaking hands]

[Image changes to show a woman coming forward and moving the ship’s steering wheel]

[Image appears of a sign on the side of the Investigator “Investigator, May her future be safe and prosperous as confetti and streamers rain past the side of the ship]

[Image changes to show the control room and the camera zooms in on the controls]

[Image changes to show the sleeping cabins on the ship and the camera zooms in on a single bed cabin and then a bunk bed cabin and the camera then pans up from the floor to the window showing a desk with a chair]

[Camera zooms in on a panel on the wall storing life vests and overalls]

[Image changes to show the dining room and the camera zooms in on the condiments on the table]

[Image changes to show the kitchen and the camera zooms in on the kitchen knives on the bench]

[Image changes to show the lounge rooms]

[Image changes to show the laundry area and the camera zooms in on the taps above the sink]

[Images flash through of a freezer and fridge room, a thermometer and a control room

[Image changes to show a bank of computers and the camera zooms in on one of the computer screen displaying a ship]

[Image changes to show an engine room and the camera zooms in on a generator room and then the camera pans around the whole room and the camera zooms in on the cooling fans on the generator]

[Image changes to show the engine room and the camera pans around the room]

[Image changes to show the ocean and the camera pans over the ocean until the Investigator ship comes into view]

[Image changes to show the Investigator moving through the water and the camera zooms in on the radar equipment]

[Image changes to show a view of the Investigator moving away from the camera and then the camera zooms in on the words “Investigator” on the bow of the ship]

[Camera pans around the Investigator ship and then zooms in on the ship travelling through the water]

[Camera zooms out to show the Investigator on the ocean]

[CSIRO logo and text appears: Big ideas start here, www.csiro.au]

[Engine sounds play and image changes to show another ship on the sea and text appears: French Polar Institute IPEV/SAPETRO]

[Camera zooms in on the ship as it moves through the water and then zooms in on to the deck as the shadow of a helicopter hovering above falls on the deck]

[Image changes to show two employees operating a crane and lowering a long sediment corer into the water and then the camera zooms in on the long sediment corer as it drops below the surface of the water]

[Underwater sounds play]

[Image changes to show a long sediment corer as it travels down through the water leaving a trail of bubbles in its’ wake]

[Image changes to show the long sediment corer being hauled back up to the ship]

[Image changes and the camera zooms in on a hand removing a syringe from the long sediment corer]

[Image changes to show the contents of the syringe being squeezed into small specimen bottles]

[The camera zooms out to show the male employee working with the syringes and specimen jars and then the camera zooms back in on the jars]

[Storm sounds are heard and the image changes to show a storm tossed clouds moving across the sky]

[Image changes to show the Marion Dufresne ship at dock]

[Music plays]

[Image changes to show the “Alkor” ship moving through the water and text appears: GEOMAR Helmoltz Centre for Ocean Research Kiel]

[Image changes to show the Poseidon ship moving through the water]

[Image changes to show two ships in the distance and the camera zooms in on the ships]

[Image changes to show one of the ships and then the camera zooms in and the second ship comes into view again]

[Image changes to show the two ships in the distance again and the camera pans over the surface of the water towards the ships]

[Image changes to show three employees on board the ship deploying an Abyss probe as two men in a small dinghy float close to the ship]

[Image changes to show the Abyss probe being lowered into the water as the two men in the dinghy observe]

[Image changes to show the path of the Abyss probe below the surface of the water]

[Ship engines and wind sounds are heard]

[Image changes to show two employees at the stern of the ship deploying a net and the camera zooms in on one of the employees and then zooms in again on the employee's hands hauling on the rope]

[Image changes to show the net being dragged aboard]

[Image changes to show two employees lifting the net and emptying a catch of fish into white plastic boxes]

[Image changes to show three employees sorting the fish in the tubs]

[Image changes to show two employees standing at a cleaning table with a filleting board]

[Image changes to show another piece of marine equipment being deployed beneath the surface of the water]

[Engine sounds are heard]

[Image changes to show an employee in a wetsuit hooking a large grappling hook to a round dome like submersible vessel]

[Image changes to show an employee operating the crane to drop the submersible vessel into the water as the employee in the wetsuit stands on top]

[Image changes to show the submersible vessel moving through the water as an employee in a wetsuit stands on top and hooks a grappling hook on to the top of it]

[Image changes to show a person inside the submersible vessel as it is being hoisted back on to the ship]

[Camera zooms in on the seaweed hooked in the submersible vessel]

[Image changes to show the Alkor ship with people in a rubber dinghy close to its' side]

[The camera pans along the length of the Alkor and then focuses in on a large piece of marine equipment being deployed into the water]

[Water sounds are heard]

[Image changes to show the men in the rubber dinghy moving with the piece of marine equipment and then the camera zooms out to show the Alkor ship in the background and three pieces of the marine equipment in the water]

[Image changes to show the Maria S. Merian ship as it moves through the water and the camera pans around the ship]

[Music plays]

[Image changes to show the Sonne ship in the water and the camera pans around to show the Sonne ship moving towards the camera]

[Image changes and the camera pans around the dock area to show the Sonne ship and then the camera zooms in on the sign "Science" on the side of the hull]

[Image changes to show the ship moving through the water and then images flash through of the ship from different angles]

[Image changes to show a ship travelling through the water and text appears: Ifremer: French Institute for Exploitation of the Sea]

[Camera pans in an anticlockwise direction around the ocean showing the Ifremer ship from the front, side and then rear views]

[Image changes to show the ship from an aerial view and the camera pans along the deck of the Ifremer ship as it rotates in the water]

[Image changes to show the Ifremer ship from the front view and then the image changes again to show the Ifremer ship from the side view]

[Camera pans around the seascape to show the Ifremer ship moving away and a side view of the ship as it moves through the water]

[Image changes to show the ship rotating in the water and moving away from the camera]

[Camera pans around the seascape to perform a full circle around the Ifremer ship]

[Camera zooms in on the deck of the ship to show a net being hauled in and then zooms out to show the whole Ifremer ship]

[Image changes to show an employee astride a yellow submersible with the words Ifremer nautile printed on the side while a person observes from a rubber dinghy]

[Camera zooms in on the nautile as it is hauled towards the ship]

[Image changes to show the nautile being winched aboard and being lowered into place on the deck]

[Motor sounds are heard]

[Image changes to show a Victor 6000 ROV being hauled up off the deck and being deployed into the water]

[Image changes to show the Ifremer ship moving through the water]

[Image changes to show the Ifremer ship from a side view and then image changes to show the Ifremer ship from a front view as it moves through the water]

[Image changes to show the ship from the rear view and then the camera zooms in on the bow of the ship with the word Pourquoi printed on the side of the bow]

[Image changes to show and aerial view over the bow of the ship as it moves through the water]

[Image changes to show a blue green screen and the colours resolve into a sign “Institute of Oceanology Chinese Academy of Sciences Ke Xue”]

[Image changes to show a sign “Ke Xue” on a simulated ship and the camera gradually zooms out to show the whole ship]

[Text appears on the screen: National Major Science and Technology Infrastructure Multipurpose Oceanographic Research Vessel]

[Text appears on screen: Ship Owner: Institute of Oceanology, Chinese Academy of Sciences]

[Text appears: Builder: Wuchang Shipbuilding Industry Co., Ltd.]

[Text appears: Designer: Marine Design & Research Institute of China]

[Image changes to show a simulated helicopter coming down towards the ship and then lifting off again]

[Camera pans along the deck of the simulated ship from bow to stern and text appears: Complement: 80 persons (Scientists: 56, Crew: 24)]

[Image changes and the camera pans along the side view of the simulated ship and text appears: Network Center and Acoustic Apparatus Controlling Centre are on the take boat deck, Special and General Laboratory are on upper deck]

[Image changes and the camera zooms in on the upper deck to show the bridge area with computer screens displaying a navigational map]

[Camera pans along a bank of computers in the bridge area and then the camera pans around the bridge area]

[Camera zooms in on a lounge area in the control room]

[Image changes to show an aerial view of the ship and text appears: Atmosphere and Air-Sea Flaxes Observation Platform are on foremast and compass deck]

[Camera pans along the side of the deck from bow to stern]

[Camera pans along an aerial view of the deck from stern to bow and text appears: Container Laboratory]

[Image changes and the camera pans along the deck and text appears: Open and Covering Work Deck, Winch Control Room, Side A Frame, Drop Keels]

[Image changes to show a view of the bottom of the ship with sonar waves beneath and the camera zooms in on the bow thrusters and the open groove covers and then closed groove covers and text appears: Bow Thruster & Groove Cover]

[Image changes to show a simulated electric propulsion system and text appears: Electric Propulsion System]

[Camera zooms in on the simulated generators, switchboard, transformers, frequency converters and bow thruster motors one at a time and they flash on and off and text appears: Generators, Switchboard, Transformers, Frequency Converters and Bow Thruster Motors]

[Camera zooms in and pans around the compact azipod propellers underneath the ship and text appears Compact Azipod Propulsion]

[Image changes to show a room with chairs and tables and computer screens lining the walls]

[Camera pans around the room and text appears: It supplies water, electricity, basic instruments for geological, chemical, physical, biological, atmosphere samples analysis and data processing]

[Camera pans over the control and display unit of ROV and USBL and text appears: It includes the control and display unit of ROV and USBL]

[Image changes to show the Winch Room and the camera pans around the Winch Room and text appears: Winch Room]

[Camera pans around the bridge area from an external view and then from an internal view]

[Image changes to show a multicorer moving out of its' storage room and text appears: CTD]

[Image changes to show the multi corer being deployed and lowered into the ocean]

[Image changes to show the multicorer revolving underwater]

[Image changes to show the multicorer being drawn back up to the surface of the water]

[Image changes to show a long sediment corer being lowered into the water]

[Image changes to show the long sediment corer coming to rest on the ocean floor, taking a sample from the ocean bed and being drawn up again and text appears: Multinet Plankton Samplers]

[Image changes to show the crane at the stern of the ship being lowered out over the water]

[Image changes to show the plankton sampling net moving across the ocean bed and text appears: Plankton Sampling Net]

[Image changes to show a simulated ship drawing behind it two pieces of marine equipment beaming sonar on to the ocean floor as it moves through the water and text appears: Deep Towed Vehicle]

[Image changes to show another piece of marine equipment being deployed from the stern of the ship and text appears Multi-channel Digital Seismics]

[Camera zooms in on the rope attached to the equipment and then image changes to show the stern view of the deck of the ship]

[Image changes to show another piece of marine equipment four yellow egg like shapes on the top being deployed and then the camera zooms in on the equipment in the water]

[Image changes to show a ROV being deployed from the stern of the ship and text appears: ROV]

[Image changes to show the ROV rotating below the surface of the water and then image changes to show the ROV emitting sonar being towed behind and underneath the ship's hull]

[Image changes to show the ship on the surface of the water sending a sonar beam down below to show the fish on the ocean floor and text appears: Fishery Echo Sounder, ADCP]

[Image changes to show a net on the ocean floor below the ship sending out the sonar beam and text appears: Multibeam Echo Sounder]

[Image changes to show and aerial view of the ship and the camera pans around in an anticlockwise direction until the ship is moving away from the camera]

[Text appears: Atmospheric Detection System, Shipboard Automatic Weather Station System MAWS420, Air-Sea Fluxes Observation System MK3, Captive Boat/Sounding Rocket, Water Column Exploration System, CTD SBE 911 Plus, ADCP OS-38k, WH Marine300k, Undulated Towed Vehicle SeaSoar Mark II, Plankton Sampling Net, Multinet Plankton Samplers Maxi Multinet, Scientific Fishery Echo Sounder EK60, Seafloor Exploration System, Shallow Water Multibeam SONIC 2024, Deep Water Multibeam SB3012, Topographic Parametric Sonar and Echo Sounder System TOPAS PS 18, Marine Gravitymeter KSS32M, Marine Magnetometer SeaSPY, Multi-channel Digital Seismic System, Deep-sea Extreme Environment Exploration System: Deep Towed Vehicle, UNBL Positioning System Ranger 2, ROV Quasar MkII, TV Grab, Gravity Piston Sampler, Core Sampling Drill, Remote Sensing Validation System, Wave Measuring System Miros AS, UV-VIS Spectrophotometer Cary100, Multi-spectral Absorption and Attenuation Meter AC-S, Spectral Scattering Meter BB9, Hyperspectral Surface Acquisition System HyperSAS, Hyperspectral Profiler HPROH]

[Logos and text appears: Institute of 3D Design, Wuchang Shipbuilding Industry Co., Ltd., Institute of Oceanology, Chinese Academy of Sciences, Cooperated Products]

[Music plays]

[Institute of Marine Research logo and text appears: The Research Vessel of IMR, Norway]

[Image changes and shows a motorboat moving through the water past the side of a ship and text appears: G.O. Sars, Built 2003, Length 77.5 metres, Width 16.4 metres, Tonnage 4067 grt]

[Camera zooms in on the upper deck of the ship]

[Image changes and shows a piece of marine testing equipment being deployed into the water]

[Image changes and shows the bridge of the ship]

[Image changes and shows another ship and the camera pans around the ship and text appears: G.M. Dannevig, Built 1979, Length 27.8 meters, Width 6.7 meters, Tonnage 171 grt]

[Image changes and shows the G.M. Dannevig ship at dock and the camera pans in a clockwise direction around the harbour]

[Image changes and shows the Dr. Fridtjof Nansen ship and text appears: Dr. Fridtjof Nansen, Built 1993, Length 56.8 meters, Width 12.5 meters Tonnage 1444 grt]

[Image changes and the camera zooms in on the bridge of the ship]

[Image changes and shows the stern of the ship]

[Image changes and shows an employee guiding a multicorer and then the camera zooms out and shows two employees deploying the multicorer]

[Image changes to show the bow of the ship as it moves through the water and the spray as it washes over the bow]

[Image changes to show the Johan Hjort ship and text appears: Built 1990, Length 64.4 meters, Width 13.0 meters, Tonnage 1950 grt]

[Image changes to show the Johan Hjort moving through the water from the front view and the camera pans in an anticlockwise direction to show a side view of the ship]

[Image changes to show a net being lowered on to the stern deck]

[Image changes to show the water washing over the bow of the ship]

[Image changes to show the Hakon Mosby ship from a front view and text appears: Built 1980, Length 47.2 meters, Width 10.3 meters, Tonnage 701 grt]

[Image changes to show employees on the stern deck with different pieces of marine testing equipment]

[Image changes to show a long cylindrical sediment corer being deployed by two employees]

[Image changes to show a view of the rear side of the Hakon Mosby ship]

[Institute of Marine Research logo and text appears: The next line of Research Vessels working for the IMR, Norway]

[Image changes to show a model ship and Skipsteknisk and Institute of Marine Research logos and text appears: Dr. Fridtjof Nansen, Built Planned 2016, Length 74.5 meters, Width 17.4 meters, Tonnage 3850 grt]

[Image changes to show the model of a ship rotating in a clockwise direction and text appears: Kronprins Haakon, Built Planned 2017, Length 100 meters, Width 21 meters, Tonnage 9600 grt]

[Institute of Marine Research logo and text appears: Music Kevin MacLeod, Editing Espen Bierud, Aleksander Sandvik 2014]

[Image changes to show the bow of the Hakuho Maru ship and text appears: Japan Agency for Marine-Earth Science and Technology (JAMSTEC)]

[Camera pans in an aerial view along the ship from the bow to the stern and then zooms out to show the whole ship moving through the water]

[Image changes to show the bow of the Kairei ship and the camera zooms out and pans in an anticlockwise direction to show the whole ship moving through the water.

[Image changes to show a barge like ship moving through the water and moving in an anticlockwise direction]

[Image changes to show the bow of the Mirai ship and then the camera zooms out to show the Mirai moving through the water]

[Image changes to show the Natsushira ship and the camera pans along the ship from the bow to the stern and then the ship rotates in an anticlockwise direction to show the rear view of the ship]

[Camera zooms in on the stern of the ship and a piece of marine testing equipment with the word “Jamstec” printed on the roof is deployed beneath the surface of the water]

[Image changes to show three computer screens with a type of fish with large flapping fins displayed]

[Image changes to show a person viewing the operation of a piece of marine testing equipment on the computer screen]

[Image changes to show a person’s hand operating a touch screen computer to control the equipment]

[Image changes to show two people operating a bank of computers]

[Engine sounds are heard]

[Image changes to show a ship with a large crane tower moving through the water]

[Image changes to show a view of the crane tower looking towards the top and then the camera pans down the crane tower to the deck]

[Image changes to show five employees on the deck operating a winch with a hook attached]

[Image changes to show a helicopter in the sky and the camera pans around to capture the helicopter landing on the helipad on the deck of the ship]

[Image changes to show a ship moving through the water towards the camera and the camera pans along the length of the ship from bow to stern as the ship turns in an anticlockwise direction and then travels away from the camera showing the wake behind the ship]

[Image changes to show a submersible being lifted from its’ housing and along the deck of the ship]

[Image changes and the camera zooms in on the submersible as it is lowered over the stern of the ship and into the water]

[Camera zooms in on the submersible as it sinks below the surface of the water]

[Image changes to show the Yokosuka ship with the crew members gathered along the railing all waving]

[Engine sounds play]

[CSIC AND Unidad de Technologia Marina logos appear]

[Image changes to show the A33 ship on the ocean against a background of snow covered mountains]

[Camera zooms in on the ship and the mountains behind it]

[Image changes to show a view over the bow of the ship and the camera pans backwards and forwards over the ocean]

[Images appear of employees on the bow of the ship moving around the bow of the ship in fast motion as the ship travels towards a bridge in fading daylight]

[Camera zooms in on the bridge as the ship passes underneath it and the camera follows the bow of the ship as it moves towards the lights of the harbour]

[Text appears: BO Sarmiento de Gamboa]

[Image appears of a ship travelling towards the camera and the camera zooms in on the bow of the ship and the camera pans over the ship from bow to stern]

[Image changes and the camera pans along the length of the ship as it rotates in a clockwise direction]

[Image changes and the camera zooms in on a sign “Sarmiento de Gamboa on the bow of the ship]

[Image changes to show the Sarmiento de Gamboa travelling away from the camera and turning in an anticlockwise direction]

[Image changes to show an aerial view of the ship turning in an anticlockwise direction on the ocean]

[Image changes to show a side view of the ship travelling through the water]

[Image changes to show a view of the stern of the ship as it turns in a clockwise direction in the water]

[Image changes to show the sign “Sarmiento de Gamboa on the stern of the ship and the camera pans along the length of the ship from the stern to the bow]

[Image changes to show the deck of the ship]

[Image changes to show the upper deck of the ship as the ship rotates clockwise in the water]

[Camera zooms in on the lifeboat on the ship]

[Image changes to show employees walking on the upper decks]

[Text appears BO Garcia del Cid]

[Image changes to show the Garcia Del Cid at dock and the camera zooms out]

[Image changes to show a rear view of the Tarracona ship and then images flash through of the ship from the side view]

[Image changes to show a view of the upper decks of the Tarracona ship]

[Text appears on the screen: RV Tangaroa, New Zealand’s only deep water research and survey vessel. New Zealand’s only vessel with DPT dynamic positioning. New Zealand’s only ice-strengthened survey vessel. Equipped for deep sea HD camera operations and seabed sampling. Equipped for environmental survey, ocean science and fisheries work. Works throughout the South Pacific, Southern Ocean, and Antarctic.]

[Image changes to show the Tarracona ship and the camera pans over the ocean as the ship turns in a clockwise direction]

[Image changes to show a model ship on a model ocean and the camera zooms in on the bow thrusters in the bottom of the ship and then zooms out to show the ship on the model ocean again]

[Image changes to show the actual ship on the ocean]

[Image changes to show the ship travelling towards the camera through sea ice]

[Image changes to show two employees deploying a piece of marine testing equipment from the deck of the ship]

[Image changes to show the marine testing equipment plunging into the water and then image changes to show the bed of the ocean]

[Image changes to show an employee's hand working a computer and then the camera zooms up to the employee's face]

[Image changes to show the bed of the ocean displayed on the computer screen and images flash through of seaweed, anemones and sea urchins on the ocean bed]

[Image changes to show the marine testing equipment being pulled to the surface of the water and then hauled up on to the ship by three employees]

[Image changes to show the model ship on the model ocean deploying a piece of marine testing equipment to survey an underground pipe on the ocean bed]

[Image changes to show a multicorer being hauled to the surface of the water and back to its' housing on the deck of the ship]

[Image changes to show an employee pouring water into three plastic containers attached to pipes]

[Image changes to show an employee screwing a cap on a white plastic bottle and handing it to another employee]

[Image changes to show a female employee putting funnels into plastic bottles]

[Image changes to show small sea creatures on the computer screen]

[Image changes to show the model ship moving over the model ocean and beaming sonar onto the ocean bed and then the camera zooms in on the ocean bed and the camera pans over the ocean bed surface]

[Image changes to show an employee pointing to a display on a computer screen]

[Image changes to show the Tangaroa Wellington moving through the water away from the camera]

[Text appears: RV Kaharoa, Capable of working throughout New Zealand's EEZ and further afield. Equipped for biology, ecology, geology and sedimentology surveys. Equipped for acoustic measurement of fish abundance.

[Image changes to show the RV Kaharoa ship travelling though the water]

[Image changes to show the view from the stern of the ship as it tows a piece of marine testing equipment and then the camera zooms in on the equipment in the water]

[Image changes to show an employee working at a computer]

[Image changes to show the RV Kaharoa travelling through the water away from the camera]

[Text appears: RV Ikatere, Versatile multi-role inshore vessel. Equipped with multi-beam transducers for mapping the seabed. Two Hamilton jet units that make it highly manoeuvrable. Ideal for work in shallow waters. Dynamic positioning facility allows vessel to remain on station]

[Image changes to show the RV Ikatere rotating in a clockwise direction in the water and then travelling away from the camera]

[Image changes to show a view looking towards the back of the ship and the words "Research MNZ 133 appear painted on the side of the ship]

[Image changes to show a view down the side of the vessel as it moves through the water]

[Image changes to show two employees hauling a multicorer back on to the stern of the boat]

[Image changes to show the boat and the camera pans along the shoreline as the boat travels through the water]

[Image changes to show a side view of a white ship against a shoreline of tall buildings and text appears: The National Oceanic and Atmospheric Administration (NOAA) USA]

[Camera pans around the seascape until the ship is seen from the front view]

[Camera zooms in on the bow of the NOAA S222 ship as it moves through the water against a background of skyscrapers]

[Camera zooms out until the whole ship is seen as it moves through the water]

[Image changes and the camera continues to pan around the horizon to show the NOAA S222 ship from a front view against the shoreline of skyscrapers and then the camera zooms in on the ship again]

[Image changes to show the Statue of Liberty]

[Image changes to show the bridge of the ship]

[Image changes to show the side of the ship Discovery and text appears: The National Oceanography Centre, UK]

[Camera pans along the deck of the Discovery ship from bow to stern to give an aerial view]

[Image changes to show the Discovery ship in the harbour]

[Image changes to show the Discovery rotating in the water and slowly moving forward]

Narrator: Stand by, Frank Wave bridge deck, we're all set down here, if everything's good up for you can we deploy please.

[Image changes to show a bank of computer screens displaying the Discovery ship and an isis ROV]

[Image changes to show a piece of marine testing equipment being lowered into the water from the deck of the ship]

[Image changes to show the isis ROV as it travels through the water]

[Image changes to show two employees watching the bank of computers displaying the isis ROV and controlling the arm of the isis ROV]

Narrator: Take it down, take it down on the floor and just give it a little push.

[Image changes to show the isis ROV moving up to a weed covered coral formation with small shrimps swimming around it]

[Camera zooms in on the shrimps covering the coral formation and the camera pans over the coral]

[Image changes to show sea urchins on the bed of the ocean and the camera zooms in on three of them]

[Camera pans over the bed of the ocean showing sea urchins]

[Engine sounds play]

[Image changes to show a yellow AUV AutoSub6000 being deployed and sinking below the surface of the water]

[Camera zooms in on the AUV AutoSub6000 and the camera pans the length of the equipment]

[Image changes to show the side of the ship as it moves through the water]

[Image changes to show the AUV AutoSub6000 being manoeuvred into a net and being hauled back onto the deck of the ship]

[Image changes to show five employees on the deck of the ship holding the net with the AUV AutoSub6000 inside]

[Image changes to show the James Cook ship as it moves through the water and as it disappears from the screen a shoreline dotted with houses is seen]

[Image changes to show a side view of the James Cook ship crossing the screen from left to right with a yacht passing across the screen in front of the ship from right to left]

[Image changes to show a stern view of the James Cook ship passing from left to right across the screen. As it disappears from the screen a flotilla of yachts is seen in the background]

[Image changes to show the ocean and text appears: Schmidt Ocean Institute]

[Image changes and Schmidt Ocean Institute logo and a ship appears in the harbour against a background of skyscrapers]

[An inset photograph appears of two ship captains and Eric and Wendy Schmidt and then text appears: Schmidt Ocean Institute was founded in 2009 by Eric and Wendy Schmidt to enable technologically-advanced oceanography]

[Image changes and a ship appears in the ocean rotating in and anticlockwise direction and text appears: Using state-of-the-art research vessel Falkor, Schmidt Ocean Institute is able to support multidisciplinary international collaborations]

[Image changes to show employees working at a bank of computers]

[Camera zooms in on one of the employees operating one of the computers in the bank of computers and text appears: Welcome to Falkor]

[Image changes to show a facing view of a female employee studying the computer screen displays]

[Image changes to show a rear view of two employees studying the bank of computer screen displays]

[Image changes to show one employee controlling a piece of marine testing equipment from a bank of computers]

[Image changes to show a dinghy being held out over the surface of the water by a crane and text appears: In 2013, Falkor began science services following a year of sea trials]

[Image changes to show the dinghy being lowered into the water and then an image flashes through of employees at work in a laboratory]

[Image changes to show a ROV being swung into place by four employees and text appears: Falkor is able to support various deep ocean scientific robotic vehicles]

[Image changes to show pitch propellers working beneath the surface of the water and text appears: Falkor is 83m (272 ft), is equipped with two main controllable pitch propellers and a bow thruster]

[Image changes to show a fish next to the arm of a ROV below the surface of the water]

[Image changes to show a view of the crane at the stern of the ship and then the camera zooms in on four employees working to attach a piece of marine science research equipment to the crane and text appears: Technological Advancement]

[Image changes to show a multicorer displayed on a computer screen as it descends below the surface of the water]

[Image changes to show an employee studying the display on a computer screen]

[Image changes to show a multicorer plunging beneath the surface of the water as it is deployed and text appears: Schmidt Ocean Institute supports technologically innovative oceanographic research for up to 36 days at sea]

[Image changes to show two employees on the deck of the ship as a piece of marine testing equipment hangs suspended from a crane]

[Image changes to show a model of a ROV moving along below the surface of the water and text appears: In 2015, Schmidt Ocean Institute plans to build the world's most advanced full ocean depth undersea robotic research vehicle for use on Falkor]

[Image changes to show a diagram, a photo and then the actual depth elevator/lander platform and text appears: Adding to Falkor's capabilities two new full ocean depth elevator/lander platforms were built in 2014]

[Image changes to show a water sampling rosette and text appears: Falkor's CTD and water sampling rosette are used during nearly every research cruise]

[Image changes to show a SAAB SeaEye Falcon ROV moving under the water and rising to the surface and text appears: Falkor's 300m SAAB Sea Eye Falcon ROV has an HD camera and a robotic arm]

[Image changes to show an employee controlling a robotic arm in a workshop]

[Image changes to show employees watching a blimp flying above the deck of the ship and text appears: Aerial observation with our 4m (13ft) RC blimp has 1000m range, pan-tilt video mounts, and monitoring equipment]

[Image changes and the camera pans along the ocean floor]

[Image changes to show a robotic arm operating on the ocean floor and text appears: Schmidt Ocean Institute support innovation in AUV, ROV, and other related technologies]

[Image changes to show a net being moved along the ocean floor and being rotated by a robotic arm]

[Image changes to show a robotic arm lifting tubed samples from a piece of marine testing equipment]

[Camera zooms in on a piece of marine testing equipment]

[Image changes to show four employees guiding a piece of machine testing equipment as it is lifted by crane at the stern of the ship]

[Image changes to show a ROV Sentry moving along the surface of the water alongside the ship]

[Image changes to show the ocean bed and other displays on a bank of computer screens and text appears: Falkor is equipped with a suite of acoustic sensors, including multibeam mapping sonars]

[Image changes to show an employee working at a bank of computers and the camera gradually pans along the bank and text appears: Falkor can stream HD video to YouTube to support real-time participation of shore-side scientists in research at sea]

[Image changes to show two employees preparing to deploy a piece of marine testing equipment]

[Image changes to show two employees looking at a piece of marine testing equipment and text appears: Intelligent Observation]

[Image changes to show an employees' hands syringing a sample from a test tube and then the camera zooms out to show the employee looking at the sample and text appears: Schmidt Ocean Institute support development and at-sea testing of new technologies to improve coverage and resolution of ocean observation]

[Image changes to show an employee looking at a bank of computer screens]

[Image changes to show four employees holding up a cone shaped net on the deck of the ship]

[Image changes to show a female employee looking through a microscope]

[Image changes to show a ROV Sentry being deployed below the surface of the water and text appears: Open Sharing of Information]

[Image changes to show a computer screen displaying the ocean bed and text appears: Schmidt Ocean Institute supports hi-tech science at sea in exchange for the commitment to openly share research outcomes and data]

[Image changes to show one person taking a movie of another person against a background of a bank of computers]

[Image changes to show the computer screen display]

[Image changes to show an employee removing samples from a multicorer in a laboratory]

[Image changes to show three female employees looking at a sample in the laboratory]

[Image changes to show five students next to the railing on the deck of the ship and then the camera zooms in on two of the students and text appears: Training the Next Generation]

[Image changes to show two people looking at a specimen in a clear plastic container and text appears: Schmidt Ocean Institute hopes to inspire a deep passion for the ocean sciences by supporting student participation on research cruises]

[Image changes to show a group of students and crew moving through the water in a small boat]

[Image changes to show a group of students watching as crew attach a hook to a piece of marine science testing equipment]

[Image changes to show a female taking notes from the display on the bank of computers in front of her and text appears: Schmidt Ocean Institute support high-risk high-reward oceanographic research]

[Image changes to show students in life belts on the stern deck of the ship]

[Image changes to show a world map with coloured pinpoints and text appears: Previous Research Expeditions]

[Image changes to show a ROV ROPOS and then image changes to show it being deployed from the Falkor ship and text appears: Expeditions around British Columbia, Canada were completed to better understand low-oxygen waters using ROV ROPOS to document marine life]

[Image changes to show a map of the ocean floor and text appears: Falkor has completed many high resolution multibeam maps of the Roatan escarpment, the Campeche Escarpment, and the Northwestern Hawaiian Islands]

[Image changes to show HROV Nereus being deployed and text appears: In June 2013, HROV Nereus was operated from Falkor to explore deep ocean hydrothermal vent sites and streamed 60 hours of HD video live to YouTube]

[Image changes to show a close up view of HROV Nereus]

[Image changes to show a view of deep-diving toothed whales as they swim through the water and text appears: In 2014, three student-led cruises were completed including one that explored the feeding behaviour of deep-diving toothed whales off Kona, Hawaii]

[Image changes to show the AUV Sentry being deployed and text appears: In 2014, Falkor surveyed the base of underwater volcano Loihi with AUV Sentry to understand where bacteria are feeding on iron. Sentry spent 104 hours surveying 216 km and taking 49,130 photos]

[Image changes to show the Falkor moving through the water and text appears: Scientists that would like to work aboard Falkor can submit Expressions of Interest by December 5, 2014. www.schmidtocean.org]

[Text appears in yellow on a black screen: www.schmidtocean.org]

[Text appears: UC San Diego]

[Image changes to show a view of a jetty and text appears: Scripps Institution of Oceanography UC San Diego]

[Image changes and the camera pans over the city and over the docks showing three ships and a FLIP moored]

[Image changes to show the FLIP moving through the water and sinking below the surface until only the very end of FLIP is showing above the water]

[Image changes to show the stern of the R/V Melville ship and text appears: R/V Melville]

[Image changes to show the R/V Melville moving through the water and then image changes to show an employee hitting a suspended chain net with a hammer]

[Camera zooms in on the net as it is lowered to the deck then the camera zooms out to show three employees watching as one employee removes rocks from the net]

[Image changes to show four employees preparing to deploy a ROV]

[Image changes to show the ROV suspended above the ocean surface and then image changes to show the marine science testing equipment being deployed]

[Image changes to show employees studying a bank of computers and controlling the equipment]

[Image changes to show the Roger Revelle ship and text appears R/V Revelle]

[Image changes and camera zooms in to show two employees filling sample tubes from taps in a piece of marine testing equipment]

[Image changes to show the Roger Revelle ship next to a huge iceberg]

[Image changes to show the Roger Revelle from a stern view and the camera zooms out to show an employee in an observation point]

[Image changes to show the ship against a sunset]

[Image changes to show the ship New Horizon and text appears: R/V New Horizon]

[Image changes to show a view of the bridge on the New Horizon and then image changes to show a rear view of the New Horizon]

[Camera zooms in to show the deck of the New Horizon and then the camera zooms in to show employees around a multicorer while an employee watches a double net floating in the water alongside the ship]

[Image changes to show employees holding up the double net]

[Image changes to show employees looking over the railing at a multicorer floating in the water and then the camera zooms in on the multicorer as it is raised to the surface of the water]

[Image changes to show the multicorer being hauled back up on to the deck of the ship]

[Image changes to show employees preparing a net and then the camera pans along the net from the deck to the water]

[Image changes to show two employees preparing the net for deployment]

[Image changes to show the net being winched back to the deck of the ship by a crane]

[Image changes to show a group of employees around black plastic tubs sorting samples]

[Camera zooms in on a shrimp displayed on one employee's hand]

[Image changes to show the Robert Gordon Sproul ship and text appears: R/V Robert Gordon Sproul]

[Image changes to show the Robert Gordon Sproul moving through the water and then image changes to show three employees preparing to deploy a ROV]

[Image changes to show the three employees coiling ropes and then the camera zooms in on the ROV as it is drawn out of the water]

[Image changes to show employees placing the ROV back on to the stern deck of the ship]

[Image changes to show the radars spinning on the bridge]

[Image changes and the camera zooms in on the crane as it hauls a piece of marine science testing equipment back to the deck of the ship]

[Image changes to show two employees guiding a piece of marine science equipment as it is hauled back on to the deck]

[Image changes to show a woman emptying water into the harbour as five people on the dock watch and clap at the bow end of the Sally Ride and text appears: R/V Sally Ride]

[Image change to show the Sally Ride being lowered into the water]

[Image changes to show the Sally Ride at sunset]

[Image changes to show a jetty and text appears: Scripps Institution of Oceanography UC San Diego]

[Text appears: UC San Diego]

[Engine sounds play]

[Text appears: Un Oceano, Un Futuro, Centenario Instituto Espanol De Oceanografia]

[Music plays]

[Image changes to show the bow of the Angeles Alvarino ship cutting through the water and then the camera zooms out to show a side view of the whole ship]

[Image changes to show the Angeles Alvarino from a front view]

[Image changes to show the Angeles Alvarino as it rotates in an anti clockwise direction]

[Image changes to show two ships in the water and then the camera zooms in on one from the front view]

[Image changes to show the two ships in the water again and then the camera zooms in on the Angeles Alvarino again]

[Image changes to show the two ships in the water and then the camera zooms in on the Angeles Alvarino again and the camera pans around the seascape as the ship rotates in the water]

[Image changes to show the two ships moving through the water and then the camera zooms in on one of the ships from the front view and then the side view]

[Image changes to show the two ships in the water and then the camera zooms in on the bow of the Ramon Margalef and then zooms out to show the two ships again]

[Image changes and the camera zooms in on the bow of the Ramon Margarlef as it cuts through the water and then the camera zooms out to show the whole ship]

[Image changes to show the two ships on the water and the camera pans around in an anticlockwise direction over the seascape and text appears: Oceanographic and Fisheries Research Vessel, Buque de Investigacion Oceanografica y Pesquera]

[Image changes and logo and text appears: Armon]

[Image changes to show the Angeles Alvarino at dock and then the camera pans over the deck of the ship from stern to bow and then the camera pans up the mast to the top]

[Images flash through of the bow of the ship, the bridge of the ship, the crane, a chain, Angeles Alvarino Instituto Espanol de Oceanografia 1914 printed on the hull and equipment on the different decks]

[Image changes to show the crane and the camera pans up the crane from the bottom to the top]

[Images continue to flash through of the decks and the equipment on the decks and the lifeboat]

[Image changes to show a view over the stern of the ship into the sea]

[Image changes to show the navigation room in the bridge and images flash through of the bank of computers]

[Image changes to show a stairway leading below deck]

[Image changes to show a corridor and then images flash through of the kitchen, the lounge, the dining room, the sleeping quarters, the bunks and the captain's cabin]

[Text appears: Armon]

[Images flash through of the different areas of the ship]

[Images flash through of the engine rooms and text appears: Armon]

[Image changes to show the whole ship in the water and then the camera zooms in on the middle area of the ship and then zooms in again to show a group of employees watching as a multicorer is deployed]

[Image changes to show the multicorer sinking below the surface of the water and then the camera zooms out to show the whole ship again]

[Image changes to show the ship travelling through the water]

[Camera zooms in on the employees around the crane, zooms out to show the whole ship travelling through the water and then zooms in to show the employees around the crane again]

[Image changes to show the ship travelling towards the left of the screen and the camera pans around in a clockwise direction to show a rear view of the ship, a side view and then a front view]

[Image changes to show a rear view and then a side view of the ship as it travels through the water]

[Image changes to show the ship travelling across the screen from the right to the left and then the camera zooms in on the bow of the ship as it cuts through the water]

[Image changes and the camera zooms out to show the whole ship moving through the water and then images flash through of a front view, the two ships, one ship and then two ships again moving through the water]

[Image changes to show a side view of one ship moving through the water and then the camera pans around in an anticlockwise direction to show the two ships again]

[Image changes to show one ship travelling through the water again and then image changes to show the two ships again]

[The sounds of the sea are heard and people talking in another language]

[Image changes to show a ship on the sea and text appears: Dansk Aleekspedition 2014, En film af Line Reeh, Technical University ofDenmark]

[Image changes to show the sea and the camera pans over the seascape]

[Image changes to show the bow of the ship in the harbour]

[Image changes to show employees preparing to deploy a large net on the deck of the ship]

[Image changes to show employees hauling the net back on to the deck at the stern end]

[Image changes to show an employee in the bridge and then the camera zooms in on the net on the computer screen]

[Image changes to show the employee in the bridge and then image changes to show the net being deployed from the rear of the ship]

[Image changes to show a view of the deck looking from the stern to the bow]

[Image changes to show the net being hauled back up on to the deck]

[Image changes to show hands moving specimens from a glass jar into a petri dish with tweezers]

[Image changes to show employees studying specimens in a laboratory]

[Image changes to show an employee picking specimens out of a square dish with tweezers]

[Image changes to show the specimens in a petri dish underneath the microscope]

[Image changes to show a computer screen displaying the petri dish of specimens underneath the microscope]

[Image changes to show the employee with his eye to the microscope]

[Image changes to show five employees looking at samples in a clear plastic cylinder of water and then the image shows one of the employees reaching in with tweezers to select a specimen]

[Image changes to show four employees looking through the clear plastic cylinder with a shining torch]

[Image changes to show an employee in the lab looking through a microscope]

[Image changes to show a large net being dragged back up on to the boat at the stern end and the camera zooms in on the end of the net being squirted with water from hoses]

[Image changes to show the sieve at the net base being emptied into a black plastic bucket and then the camera zooms in on one of the employees stirring his hand around in the bucket and bringing up handfuls of the bucket contents]

[Image changes to show the employee carrying the bucket along the deck]

[Image changes and the camera zooms in to show a hand plucking samples from the petri dish with tweezers and then the camera zooms in on the petri dish contents through the microscope]

[Image changes to show the bow of the ship moving through the water]

[Image changes to show the stern of the boat as it moves through the water]

[Image changes to show the upper decks of the boat looking towards the stern]

Image changes to show two employees in the bridge and then the camera zooms in on a hand on the controls]

[Image changes to show the view of the ocean through the bridge window]

[Image changes to show a multicorer being drawn up to the surface of the water and back on to the deck of the ship]

[Image changes to show employees taking samples from the multicorer]

[Image changes to show a male and female employee in conversation looking at a pin up board]

[Image changes to show an employee's hand reaching into a plastic bucket to take a sample of water in a clear rectangular dish and then the camera zooms in on the contents of the bucket with a plastic cup floating inside it]

[Image changes to show three employees studying the contents of a white plastic bucket]

[Image changes to show one employee looking into a water sample in a clear plastic measuring container]

[Image changes to show a computer screen displaying a marine specimen against a ruler]

[Image changes to show four employees on the deck of the ship and then the camera zooms in on their faces]

[Image changes to show two employees working on the crane and then the image changes to show a flag fluttering at the top of the mast]

[Image changes to show the crew gathered on the deck and text appears: Tak til hele holdet fra togtben 1]

[University National Oceanographic Laboratory System logo and text appears: UNOLS Ship Safety Orientation]

[Music plays]

[Image changes to show a ship at dock and the camera pans along the ship to the bow]

[Image changes to show a piece of marine research equipment being deployed by crew members and then image changes to show the marine research equipment being towed behind the ship]

[Images flash through of pieces of marine research equipment including a multicorer]

Narrator: Welcome aboard. You are about to join a UNOL's Oceanographic Research vessel. Safety is our foremost priority. This programme begins your onboard safety orientation. You'll receive additional training during your cruise. Take it seriously. Your life could depend on it.

[Image changes to show two people walking up the gangplank on to the ship and the camera pans along the ship as they continue to walk around the deck]

[Image changes to show a female demonstrating how to put on a life vest while two males watch her]

[Image changes to show two people putting on wetsuits]

[Image changes and the camera pans along the deck to the stern of the ship to show a piece of marine research equipment in the process of being deployed]

Narrator: This ship is equipped to accomplish scientific research but working at sea can be dangerous.

[Image changes to show rain on the upper deck]

The ocean is a hostile environment.

[Image changes to show a view through the bridge window of waves washing over the bow of the ship as it travels through the water]

Wind, waves, cold water, even sea ice pose objective hazards to the lives of seamen, scientists and technicians.

[Image changes to show two crew members carrying a piece of marine research testing equipment to the edge of the deck]

While you're on board you bear responsibility for contributing to your own safety, the safety of your crew mates and the safety and security of your vessel.

[Image changes to show the ship at dock and then image changes to show crew members moving around a piece of marine scientific research equipment to line it up with the crane and then image changes to show a person signalling]

This vessel works under UNOL's safety standards, state and university regulations and U.S. coastguard rules that impose health, safety, security and environmental requirements on virtually every aspect of this operation. The goal of our safety plans and procedures is to help us achieve our safety goal to cause no accidents, no injuries to personnel and no environmental damage.

[Image changes to show an employee taking a water sample from a tap in the side of a piece or marine scientific research equipment and then the camera follows the employee as he takes the sample to a female seated on the deck]

A key objective of our safety programme is supporting the health and welfare of all ship's personnel, that's you, members of the science party and the crew.

[Camera zooms in on the female as she syringes water from a clear container and then shakes the sample up and down]

Aboard this vessel, health, safety, security and environmental responsibility are everyone's concerns. They represent a culture you are expected to live by at all times.

[Image changes to show a female inducting a group of people about safety on the ship]

Female: You come across a fire on the ship while we're out here there's phones all over the ship. Call the bridge, 102, if you don't remember that...

Narrator: Ensuring that everyone conducts him or herself in a manner that promotes the safety and security of this vessel requires clear channels of communication.

[Image changes to show crew members lifting a non slip surface on to a piece of marine science research equipment and then camera pans over the deck to show the work area and then pans up to two employees attaching the non slip surface to the marine science research equipment]

Everyone on board has the right and the responsibility to report accidents, injuries, near misses, safety hazards and defects in the ship or its' operations to ensure that the ship leadership team has access to the best information available from every level.

[Image changes to show crew members and scientists standing around a table talking]

Our reporting policy requires scientists and crew members to alert their superiors about health, safety, security or environmental issues.

[Image changes to show crew members and scientists and the camera pans around the group on the deck]

Only by working together can we reduce the risks that affect our workplace and the jobs we perform.

[Camera zooms in on three men holding a ROV]

The goal is to maintain effective, honest and open communications between scientists and the ship's crew at all times.

[Text appears: Ship Familiarization]

[Image changes to show a female seated at a desk looking at a computer.

Regulations require that everyone complete a ship familiarization within 24 hours of boarding. This video begins that process.

[Image changes to show a male coiling a rope while another employee looks on.

On most vessels the Chief Mate serves as Safety Officer under the authority of the Master.

[Image changes to show three people ascending a staircase]

Male: If you follow me right this way gentleman up the stairs. Please keep your hands on the railings at all times.

[Image changes to show the Safety Officer opening a locker and then the camera zooms in on the contents of the locker showing safety equipment and camera pans from the bottom to the top]

The Safety Officer or his assistant will give you a tour of the ship and alert you to guidelines you are expected to follow, for example, areas that have restricted access.

[Image changes to show three people gathered around a desk with life vests on it]

Additionally you will participate in an orientation that teaches you more about your specific health, safety, security and environmental responsibilities.

[Image changes to show three people on the deck of the ship looking at a life buoy hanging on the cabin wall and then the camera zooms in on the Safety Officer demonstrating the use of the life buoy]

You are required to participate in these ship familiarisation procedures. The ship's crew or the Chief Scientist can further direct you if you have questions about any aspect of safety or of vessel operations.

[Text appears: Maritime security]

[Image changes to show an aerial view of a ship moving along in the harbour]

Some UNOL's vessels operate under a vessel security plan that outlines security procedures.

[Image changes and camera zooms in on the bow of the ship at dock and image shows two people on the dock throwing a rope to a male in the bow of the ship.

International law has designated three levels of threat to maritime security or MARSEC. At MARSEC Level 1 minimum appropriate protective security measures shall be maintained at all times. [Text appears: Maritime Security MARSEC. At MARSEC Level 1, Minimum appropriate protective security measures shall be at all times.

[Image changes to show a person operating the controls at the bridge]

Marsec Level 2 requires that a heightened awareness to security shall be maintained due to the greater risk of a security incident.

[Text appears: MARSEC Level 2, Requires that a heightened awareness to security shall be maintained due to the greater risk of a security incident]

[Image changes to show the bow of the boat again and the person on the shore pulling the rope attached to the ship]

MARSEC Level 3 means a security incident is considered probable or imminent so that specific security measures must be undertaken.

[Text appears: MARSEC Level 3, A security incident is probable or imminent. Specific security measures must be undertaken]

[Image changes to show the water churning between the side of the vessel and the dock]

Narrator: At MARSEC Level 3 the following procedures may occur.

[Text appears: At MARSEC Level 3 the following may occur: The vessel may be evacuated. The vessel may be locked down. The vessel may be moved. The vessel may use armed security guards. The vessel may use divers. The vessel may use waterborne security patrols.]

[Music plays and text appears: THE UNOLS Office would like to thank the National Science Foundation and the Office of Naval Research for their generous financial support to produce this film. Our appreciation also goes out to the Captain and Crew of the R/V Thomas G. Thompson and the University of Washington, School of Oceanography, with special thanks to Capt. Douglas Russell, Capt. Bill Rall, and Jim Postel. We are also very grateful to Dr. Matthew Alford and John Mickett of the UW's Applied Physics Lab for allowing filming to be done while on their cruise. This film is dedicated to the men and women who have served or are serving on all UNOLS oceanographic research vessels. Their commitment to safety is key to the success of the UNOLS consortium]

[Department of the Navy Science and Technology, NSF and the School of Oceanography University of Washington logos appear]

[Text appears: UNOLS Office URI-Grad. School of Oceanography, South Ferry Rd., Narrangansett, RI 02882, www.unols.org, mailto:office@unols.org, Tel: 401-874-6825]

[Text appears: Produced by: John Sabella & Associates, Inc., Port Townsend, Washington, www.johnsabella.com]

[Text appears: University-National Oceanographic Laboratory System, 2013]

[Image changes and an image appears of a view from an aeroplane window over a mountain as it flies]

[Text appears: An Arctic Science Expedition]

[Image changes and an aerial view of the bow of a ship appears and text appears: On an Icebreaker]

[Image changes to show a world map plotting the route of the vessel.

[Image changes to show five people watching as the forefront person draws back an arrow and fires it from a bow from the deck of a ship and text appears: Launching Drift Arrows]

[Images flash through of a group of people in the bridge area, a group of people being lowered into the water in a dinghy and then the camera follows the dinghy in the water]

[Image changes to show three employees deploying a piece of marine science research testing equipment and camera follows the equipment as it splashes into the ocean and text appears: Satellite Drifters]

[Images flash through of people chopping up vegetables, preparing pizzas, eating food in the dining room, a submersible, a male working at a computer, a group of people at the stern of the ship, a male operating some controls and a group of people bringing a ROV back on the stern deck of the ship]

[Text appears: Mooring Recovery]

[Images continue to flash through of a rope of sensors being hauled back on to the ship's deck]

[Text appears: Sensors come back with a story]

[Camera zooms in on one of the sensors and then the camera pans around a three males in a control room in the ship]

[Image changes to show the view from the bridge window down into the ocean below]

[Image changes to show the propellers in action below the surface of the water]

[Image changes to show a view of the crane]

[Text appears: A Bearded Seal Sings]

[Image changes to show a sensor underwater probing the ocean and text appears: Sensors probe the Arctic Ocean]

[Image appears of a multicorer being drawn back to the surface of the ocean and then winched up by crane]

[Music plays]

[Images flash through of the multicorer being pulled back into the stern of the ship, people working to unload and take samples from it, the ship's propellers working below the surface of the water, a ROV being deployed from the stern of the ship, the ROV as it splashes down into the ocean, the ROV as it moves about underwater, another piece of marine science research testing equipment being deployed, a chain of sensors hanging from the side of the ship, a piece of marine science testing equipment being drawn to the surface of the water, being hauled back on the ship, a piece of marine science testing equipment plummeting to the depths of the ocean, with the sensors attached and fish swimming past the sensors as they continue downwards]

[Image changes to show the bow of the ship as it plows through the ocean]

[Text appears: Arctic Gyres, By Dave Forucci, Produced by Studio Sea, UnderseaImages.com, Thanks to USCGC Healy Crew & Scientists of HYL 1203, Visit www.DriftArrow.com]

[Engine sounds are heard]

[Text appears: With thanks to the following institutes for kindly providing footage: Alfred Wegener Institute, Helmoltz Centre for Polar and Marine Research, Australian Antarctic Division – Commonwealth of Australia, British Antarctic Survey (BAS), French Polar Institute IPEV/SAPETRO, French Research Institute for Exploitation of the Sea (Ifremer), GEOMAR Helmholtz Centre for Ocean Research Kiel, Institute of Marine Research Norway, Institute of Oceanology China, Chinese Academy of Sciences (IOCAS), Japan Agency for Marine-Earth Science and Technology (JAMSTEC) Film clip of the Yokosuka, copyright 'JAMSTEC/NHK', Marine National Facility (MNF), Australia, Marine Technology Unit (CSIC), National Institute of Water and Atmospheric Research (NIWA), National Oceanic and Atmospheric Administration (NOAA),National Oceanography Centre, UK (NOC), (RRS Discovery footage, copyright of the University of Southampton, 2014 underwater footage, copyright of the Natural Environment Research Council), NATO Science and Technology Organization – Centre for Maritime Research and Experimentation, Schmidt Ocean Institute, USA, Scripps Institution of Oceanography, UC San Diego, Spanish Institute of Oceanography (IEO), Technical University of Denmark (DTU Aqua), United States Coast Guard, University –National Oceanographic Laboratory System (UNOLS)]

[National Oceanography Centre, United National Educational Scientific and Culture Organisation, International Oceanographic Commission and Instituto Espanol de Oceanographia logos and text appears: The production was coordinated by the Instituto Espanol de Oceanografia and the National Oceanography Centre, UK (NOC) with thanks to NOC IT, Special thanks to Jackie Pearson (NOC) and Jesus Carranza (IEO), who made this video possible, IRSO 2014]