



Research Vessel ice-breaker Laura Bassi

Bergen, September 14th 2021

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| Special service - Research ship - unrestricted navigation ICE CLASS A PC-5 | Built in 1995, Yard Kverner Kleven Leirvik, Norway | Flag: Italy | Call sign ZDLS1 IMO No. 9114256 |
| Port of registry Trieste - No 807 | Owner: National institute of Oceanography and Applied Geophysics - OGS | Operator Argo Damar | Length O.A. 80.00 m Length B.P. 72.40 m |
| Depth mld. (to B-deck) 8.55 m | Breadth mld. 17.00 m | Draught Scantl. 6.85 m | DWT 1910 tonnes |
| GRT 4028 | Crew: 24 berths Available for charterers: 61 berths | Helideck D-Value 19.5 m | Dynamic positioning system |

Multi-purpose research vessel for marine geology and geophysics, biological, physical and chemical oceanography, atmospheric science

Main scientific equipment:

- Multibeam echosounders for shallow and deep water surveys;
- Sub bottom profiling system;
- Acoustic doppler current profiler;
- Fishing echosounder to locate and map the biomass.
- Intermediate resolution multichannel seismic reflection system
- Piston, gravity, box- and multi-coring systems
- CTD – Rosette
- Dry and wet labs

Management:

The vessel is managed jointly by the National Institute of Oceanography and Applied Geophysics - OGS (owner), the National Research Council CNR and the National Agency for New Technologies, Energy, and Sustainable Economic Development (ENEA) through a Technical-Operational Committee and a Scientific Committee.

The Laura Bassi is an infrastructure Eurofleets+

Formerly known as E. Shackleton and Polar Queen, the Laura Bassi was acquired by OGS in 2019 with funding allocated by the Italian Ministry of University and Research to increase and extend the national research capabilities in polar areas and to support the Italian National Antarctic Research Program (PNRA).

The first two expeditions were to Antarctica in 2019-20 and 2020-21 to serve the Italian base Mario Zucchelli in the Ross Sea and perform oceanographic research for PNRA.

After a major upgrade of hull-mounted and deck scientific instrumentation in the yard of Trieste and following sea trials in spring 2021, the Laura Bassi has undertaken her first scientific mission to the Arctic within the National Arctic Research Program, jointly funded by the Ministry of University and Research (MUR) and the Ministry of Foreign Affairs and International Cooperation (MAECI), and managed by CNR.

RESEARCH ACTIVITIES DURING THE ARCTIC MISSION

(Bergen 6 August – Bergen 14 September 2021)

PROJECTS FUNDED BY THE NATIONAL ARCTIC RESEARCH PROGRAM

Fish Communities of Northeastern Greenland shelf at a glance: diversity, functioning and resilience (CHANGE)

Principal Investigator: Laura Ghigliotti (CNR)

The project aims to study composition and patterns of species, analyzing occurrence, functional traits, linkages with other species and with habitats to test the hypothesis that the spatial-temporal variability in the seasonal sea-ice and properties of seawater can impact biodiversity by driving on-to-offshore and latitudinal differences, epitomized by on-to-offshore and north-to-south increase of boreal species in the fish communities.

Integrated Reconstruction of Ice sheet Dynamics during Late Quaternary Arctic climatic transitions (IRIDYA)

Principal Investigator: Renata Giulia Lucchi (OGS)

The project aims at performing a high-resolution, sub-centennial reconstruction of the palaeoceanographic and palaeoclimatic changes occurred around the Fram Strait during the last 60 ka and their impact on the paleo Svalbard-Barents Sea Ice Sheet dynamics. Late Quaternary climate changes of the paleo Svalbard Barents Sea Ice

Sheet are considered to be the best past analogue for the future evolution of the West Antarctic Ice Sheet and its contribution to future global sea level change.

Advancing knowledge on the present Arctic Ocean by chemical-physical, biogeochemical and biological observations to predict the future changes (CASSANDRA)

Principal Investigator: Maurizio Azzaro (CNR)

The project seeks to quantify the present state of the physical, chemical, biological and biogeochemical systems of a sub-Arctic historic transect at 75°N crossing the Greenland Sea Gyre. As part of the Synoptic Arctic Survey 2020/21 (SAS), The project operates with a multidisciplinary approach, making use of common protocols. Emphasis will be devoted to understanding the major ongoing transformations on the water masses, the marine ecosystem and the carbon cycle.

PROJECTS OF OPPORTUNITY FUNDED BY THE SHIP MANAGEMENT

Maintenance of oceanographic mooring S1 (lat. 76° 26' N, lon. 13° 56.5' E, 1000 m water depth), West Svalbard margin and CTD data acquisition. Project in cooperation between OGS and CNR within the SIOS Svalbard mooring Network.

Recovery of oceanographic mooring for the project 'long term monitoring in Kongsfjorden' (international cooperation)

During the transfer from Italy to Bergen, underway oceanographic, atmospheric measurements and deployment of oceanographic drifters were performed on behalf of scientific institutions.

Upon return to the home port of Trieste the Laura Bassi will leave to Antarctica for her third PNRA mission 2021-22.



OGS
Istituto Nazionale
di Oceanografia
e di Geofisica
Sperimentale



Consiglio Nazionale
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Agenzia nazionale per le nuove tecnologie,
l'energia e lo sviluppo economico sostenibile

