**GENERAL INFORMATION**

All User Programs wishing to conduct research onboard the *Amundsen* are asked to submit a formal Ship Time Application, whether or not they apply for supplemental support from the Amundsen Science Ship Time Fund. Please contact contact Alexandre Forest, Executive Director – Amundsen Science: ([Alexandre.Forest@as.ulaval.ca](mailto:Alexandre.Forest@as.ulaval.ca)) for a quote for your program.

A **User Program**:

* Has a cohesive research program with well-defined objectives and sound methodologies, and has already secured funding for ship time from a granting agency (e.g. NSERC in Canada) through some scientific review process that confirms the scientific excellence of the proposed program.
* Can be composed of partners from private sector, international and government, and from all sectors (i.e., natural, health and social sciences), and is strongly encouraged to include Canadian academic collaborators (mandatory for eligibility for Amundsen Science Ship Time funding, see the five categories of User Programs below).
* Is NOT a researcher or research group that is already conducting research on the *Amundsen* within the framework of a User Program. For example, an ArcticNet network investigator (NI) cannot submit a ship time application for activities conducted as part of the ArcticNet marine-based research program; ArcticNet constitutes the User Program and applies for all NIs.
* MUST have secured (or have applied for and anticipate) funding to cover ship time costs for the proposed research activities. Programs slated to go through such process are encouraged to contact us to discuss ship time availability and charter rates.
  + Funding can originate from multiple sources, including private sector, international or government.
  + Funding from each source must be demonstrated in the budget (Section D).

Two **types of application**:

* **Primary:** These applications request a significant amount of berths onboard (>5) and/or a significant amount of dedicated ship time.

Primary applications are strongly encouraged to be submitted at least 18 months prior to their expedition dates for efficient planning purposes. Official deadline is 30 September of any given year to be eligible for the following year (i.e., 30 September 2019 for the 2020 Expedition).

* **Secondary:** These applications are meant for smaller research teams requesting less than 5 berths onboard the ship, and who want to participate in an already scheduled expedition. An independent scientific program is necessary (i.e., not part of a User Program) in order to submit an application for Secondary use.

Secondary applications need also to be submitted before 30 September (i.e., 30 September 2019 for the 2020 Expedition).

Eligibility for Amundsen Science Ship Time funding is determined according to the following **five categories of User Programs**:

1. **Private sector-academic joint program**: **non-eligible** for supplemental ship time funding from the Amundsen Science program. The private sector partner is responsible for covering 100% of the program’s ship time costs plus the administrative, maintenance and recapitalization costs of the pool of equipment.
2. **International academic program with no Canadian participatio**n: **non-eligible** for supplemental ship time funding from the Amundsen Science program. The program is responsible for covering 100% of the program’s ship time costs.
3. **Canadian Government-academic program**: **eligible** for supplemental ship time funding from the Amundsen Science program. The Amundsen Science program can provide supplemental financial support up to a maximum of 60% of the total secured/anticipated program funding for ship time. Supplemental funding applies to ship time costs only, not research costs. The funds granted must be used towards providing access to the Facility for Canadian academics in the program.
4. **Canadian-international academic program**: **eligible** for supplemental ship time funding from the Amundsen Science program. The Amundsen Science program can provide supplemental financial support up to a maximum of 60% of the total secured/anticipated program funding for ship time. Supplemental funding applies to ship time costs only, not research costs. The funds granted must be used towards providing access to the Facility for Canadian academics in the program.
5. **Canadian academic-led program**: **eligible** for supplemental ship time funding from the Amundsen Science program. The Amundsen Science program can provide supplemental financial support up to a maximum of 60% of the total secured/anticipated program funding for ship time. Supplemental funding applies to ship time costs only, not research costs. The funds granted must be used towards providing access to the Facility for Canadian academics in the program.

Ship Time Applications must be submitted using the AmundsenShip Time Application form. The form is comprised of 5 sections:

**Section A – Program Information** will provide contact information, program title and general requirements for ship time and berths.

**Section B – Description of the Research** will summarize the research program and its relevance to the scientific mission of the *Amundsen*, for Canada and for HQP training.

**Section C – Expedition Logistics** will give details on the dates and location of the expedition, the timeline of operations, and the scientific and equipment requirements.

**Section D – Budget** will provide the details on each source of funding and request for supplemental funding from the Amundsen Science Ship Time Fund.

**Section E – Signature**

Refer to the *Guidelines* for more information on the application form and the required documents.

Visit the [CCGS *Amundsen*](http://www.amundsen.ulaval.ca/home.php) website for details on technical characteristics and scientific equipment, including deck and laboratory layouts of the vessel.

For any further questions, contact Alexandre Forest, Executive Director – Amundsen Science: ([Alexandre.Forest@as.ulaval.ca](mailto:Alexandre.Forest@as.ulaval.ca))

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| **SECTION A – PROGRAM INFORMATION** |

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| 1. **PROGRAM PROPONENT**   The program proponent is the organization or person responsible for the User Program and is the primary contact with respect to the evaluation process. | | | | | |
| Organization | |  | | | |
| Last name | |  | First name | |  |
| Contact address | | | Title / Position | | |
| Email |  | |
| Tel |  | |
| Fax |  | |
| 1. **PROGRAM TITLE**   Provide a descriptive title for the program and a short title (max. 20 characters). Identify the subject area or topic and select a few keywords describing the research that will be conducted. | | | | | |
| Full title | | | | | |
| Short title |  | | | | |
| Subject area |  | | | | |
| Keywords |  | | | | |

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| 1. **OVERVIEW OF PROGRAM REQUIREMENTS**   Define the type of application and the broad requirements of the user program in terms of dedicated work days and berths, dividing the number of berths into the four categories of participants onboard during the expedition. | | | | | | | | |
| Application type | | | | | Primary | | | Secondary |
| Is ship time funding secured? | | | | | Confirmed | | | Pending Enter a date |
| Request for Amundsen Science Ship Time funding | | | | | | Yes | | No |
| Expedition year | |  | | | | | | |
| Geographic area(s) | |  | | | | | | |
| Number of days requested | | | days | | | | Full leg (42 days) | |
| Number of berths requested | | | | | | | | |
|  | Private sector | | | berths | | | | |
|  | International | | | berths | | | | |
|  | Canadian government | | | berths | | | | |
|  | Canadian academia | | | berths | | | | |
| TOTAL | | | | berths | | | | |
| **SECTION B – DESCRIPTION OF THE RESEARCH** | | | | | | | | |

| 1. **RESEARCH SUMMARY**   Provide a separate summary (max. 1 page) of the research program, including scientific objectives and methodology. Particular emphasis should be placed on how the *Amundsen’s* capacities will enable the program to achieve its scientific objectives. A list of cited references can be added after the summary (max. 1 page). |
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| 1. **RELEVANCE**   Provide a separate short explanation (max. 1 page) stating how the proposed research program is relevant to Canada and to the scientific mission of the *Amundsen*, and describe its potential for training highly qualified personnel (HQP). |

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| **SECTION C – EXPEDITION LOGISTICS** |

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| 1. **EXPEDITION TIMING AND DURATION**   Define the preferred dates for the expedition and provide the relevant details regarding timing or duration of the field work. Justify any time or logistical constraints that should be taken into account in the planning of the expedition (e.g., minimum number of work days required, earliest or latest start date, etc.). | | | |
| Start date | Enter a date | End date | Enter a date |
| Justify any time or logistical constraints | | | |

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| 1. **GEOGRAPHIC AREAS**   Define the locations of sampling or research sites. Give any relevant detail regarding the study area and insert a table listing the stations and their coordinates in Degrees Decimal Minutes. | | | |
| Region(s) |  | | |
| Is a map provided in attachment? | | Yes | No |
| Will work be conducted in a foreign Exclusive Economic Zone (EEZ)? | | Yes | Country: |

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| 1. **WORK PROGRAM AND TIMELINE OF OPERATIONS**   For each station/research site listed in Section C.2, provide a description of the methods and/or operations that require dedicated ship time on site, such as sampling activities, multibeam surveys, etc. Estimate the time required on site to carry out these operations, and tally the resulting total ship time. Add lines as necessary. |

| **Station ID** | **Detailed description of operations or activities on station** | **Time**  **(hours or days)** |
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| **Total ship time (work days) requested** |  |

| 1. **FACILITIES AND EQUIPMENT REQUIREMENTS**   Select the required facilities, sampling equipment and instrumentation needed to conduct the proposed research program. List and provide details of any additional requirements (i.e., not listed) at the end of each sub-section (4.1 to 4.6). These equipment systems and facilities are presented under the components outlined on the *Amundsen* website. | | | | | | |
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| * 1. **Internal/external laboratories and instrumentation**   The *Amundsen*’s 22 internal and external laboratories and workspaces include nearly 300 m2 of dry and wet laboratory space and instrumentation for performing chemical, biological and sedimentary analyses. | | | | | | |
|  | Radioisotope laboratory (Radvan) | | | | | |
|  | Portable ultra-clean in-situ laboratory for mercury speciation and contaminants studies (PILMS) | | | | | |
|  | General purpose chemistry and biology laboratory | | | | | |
|  | Moonpool: Internal CTD-Rosette and Remotely Operated Vehicle (ROV) deployment station | | | | | |
|  | Sea surface underway monitoring system (TSG, fluorometer, data logger) | | | | | |
| List any other lab space or instrument requirements | | | | | | |
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| * 1. **Deck equipment, oceanographic samplers and ice equipment**   With its extensive array of samplers and heavy equipment, the *Amundsen* is capable of investigating a wide range of environments from the sediments of the sea floor to benthic and pelagic ecosystems and the water column. Its various auxiliary transportation systems allow scientists to sample away from the vessel by sea, ice and air. | | | | | | |
|  | CTD-Rosette system (see website for a complete list of sensors) | | | | | |
|  |  | Deck station | |  | | Moonpool station |
|  | Kongsberg Hugin 3000 Autonomous Underwater Vehicle (AUV) | | | | | |
|  | Moving Vessel Profiler MVP300-1700 (see website for a complete list of sensors) | | | | | |
|  | Plankton samplers | | | | | |
|  |  | In situ zooplankton imager - LOKI (Lightframe On-sight Keyspecies Investigation System) | | | | |
|  |  | Bioness 200µ multinet horizontal plankton sampler with altimeter, CTD, GPS and flowmeter | | | | |
|  |  | Hydrobios 200µ multinet vertical plankton sampler with flowmeter and CTD | | | | |
|  |  | Isaacs-Kidd Midwater Trawl Net (RMT) with 7m2 aperture | | | | |
|  | Benthos samplers | | | | | |
|  |  | Beam trawl |  | | Agassiz trawl | |
|  | Sediments samplers | | | | | |
|  |  | Piston core | | | | |
|  |  | CASQ gravity core | | | | |
|  |  | Box core (BX 650 MK III) capable of retrieving a 160L undisturbed seafloor sample | | | | |
|  | Light work-class Remotely Operated Vehicle (ROV) – new model 2020 | | | | | |
|  | Kongsberg HUGIN 1000 Autonomous Underwater Vehicle (AUV) (contact us for availability) | | | | | |
|  | Helicopter Bell 429 | | | | | |
|  | Scientific barge | | | | | |
| List any other sampling equipment requirements | | | | | | |
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| * 1. **Oceanographic mooring instrumentation**   Instrumentation for 26 oceanographic moorings includes current meters, sediment traps, hydrophones, profilers and a variety of sensors for measuring conductivity, temperature, and other oceanographic properties. See website for full list of mooring equipment and instrumentation. | | | | | | |
|  | Mooring and mooring instrumentation | | | | | |
| Describe briefly the proposed mooring work including a list of the main components to be deployed | | | | | | |
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| * 1. **Ocean-sea ice-atmosphere instrumentation**   An ensemble of ship-based sensors and physical samplers are available on board to study the interactions between the ocean-sea ice-atmosphere interfaces and to investigate sea ice dynamics and processes. | | | | | | |
|  | Ship-based meteorology (see website for a complete list of sensors and instruments) | | | | | |
|  | Met/Ocean Buoys | | | | | |
|  | On-ice operations | | | | | |
| Describe briefly the proposed on-ice sampling work (i.e. not ship-based) including mean of access to the ice (helicopter, air boat, etc.), methods and instrumentation | | | | | | |
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| * 1. **Ocean colour near and remote sensing**   The *Amundsen*’s equipment pool includes the most recent remote and near sensing technologies and autonomous floats that are used to measure ocean colour and biological productivity in ice-infested waters. | | | | | | |
|  | Near and remote sensing activities (see website for a list of sensors and instruments) | | | | | |
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| * 1. **Sonars and associated facilities**   The *Amundsen*’s sophisticated hull-mounted sonars allow for bathymetric mapping and investigation of the upper layers of seafloor sediment whenever the ship is in transit. With the gate valve and SX90 sonar, researchers are able to conduct unprecedented fisheries and marine mammal research in Arctic seas. | | | | | | |
|  | Multibeam echosounder (Kongsberg EM-304, 30 kHz) | | | | | |
|  | Sub-bottom profiler (Knudsen K320R, 3.5 kHz) | | | | | |
|  | Echo sounder (Simrad EK80) with 38-120-200kHz operating frequencies | | | | | |
|  | Hull-mounted ADCP 150 kHz | | | | | |
|  | HiPAP 502 High Precision Acoustic Positioning System (Kongsberg) / Transponders | | | | | |
| List any other sonar instruments and facilities requirements | | | | | | |
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| * 1. **User-supplied equipment**   List and describe any specialized sampling gear or equipment not included in the *Amundsen* equipment pool (see website) that will require dedicated ship time to deploy or operate. | | | | | | |
| List and briefly describe any supplemental equipment or instruments | | | | | | |

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| **SECTION D – BUDGET** |

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| 1. **BUDGET**   List each source of funding, its category (i.e., private sector, international, government or academic) and corresponding amount being provided for ship time. The program MUST have already secured funding or have submitted an application for funding to cover the costs of ship time. Indicate the number of berths provided for each category of participants through each source of funding. | | | |
| **Source of funding / Granting agency** | **Amount ($CAD)** | **Status** | **Participants (# of berths)** |
|  |  | Confirmed  Pending  (Date) | Private sector      International      Can. Government      Can. Academia |
|  |  | Confirmed  Pending  (Date) | Private sector      International      Can. Government      Can. Academia |
| **TOTAL** |  | | |

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| 1. **ELIGIBILITY FOR AMUNDSEN SCIENCE SHIP TIME FUND**   Select the category of User Program and indicate if you require supplemental financial support from the Amundsen Science Ship Time Fund. | | | |
|  | 1. **Private sector-academic joint program:** **non-eligible** for supplemental ship time funding from the Amundsen Science program. The private sector partner is responsible for covering 100% of the program’s ship time costs plus the administrative, maintenance and recapitalization costs of the pool of equipment. | | |
|  | 1. **International academic program with no Canadian participation:** **non-eligible** for supplemental ship time funding from the Amundsen Science program. The program is responsible for covering 100% of the program’s ship time costs. | | |
|  | 1. **Canadian Government-academic program:** **eligible** for supplemental ship time funding from the Amundsen Science program. The Amundsen Science program can provide supplemental financial support up to a maximum of 60% of the total secured/anticipated program funding for ship time. Supplemental funding applies to ship time costs only, not research costs. The funds granted must be used towards providing access to the Facility for Canadian academics in the program. | | |
|  | 1. **Canadian-international academic program: eligible** for supplemental ship time funding from the Amundsen Science program. The Amundsen Science program can provide supplemental financial support up to a maximum of 60% of the total secured/anticipated program funding for ship time. Supplemental funding applies to ship time costs only, not research costs. The funds granted must be used towards providing access to the Facility for Canadian academics in the program. | | |
|  | 1. **Canadian academic-led program: eligible** for supplemental ship time funding from the Amundsen Science program. The Amundsen Science program can provide supplemental financial support up to a maximum of 60% of the total secured/anticipated program funding for ship time. Supplemental funding applies to ship time costs only, not research costs. The funds granted must be used towards providing access to the Facility for Canadian academics in the program. | | |
| Request for financial support from Amundsen Science Ship Time Fund | | Yes | No |

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| 1. **AMUNDSEN SCIENCE SHIP TIME FUND**   If you are applying for supplemental funding from the Amundsen Science Ship Time Fund, clearly justify the need for this financial support to complete the proposed field program. This section is of the utmost importance in the review process by the User Advisory Committee (criteria #6) to prioritize ship time applications and funding applications, and decide how to allocate the funds among the selected research programs. |
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| **SECTION E – SIGNATURE** | | | |
| Signature |  | Date |  |