



WCRP-FPA2 Polar Challenge

Application Form¹

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Version 1.3

Polar Challenge Committee
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¹ This document is subject to change, refinement and further development without notice, and only the latest issued version shall be considered as the official and binding reference. Please visit <http://www.wcrp-climate.org/polarchallenge> for the latest version.

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1. DOCUMENT REVISION HISTORY

1 March 2016	Version 1.0	Initial version
22 March 2016	Version 1.1	Amendment regarding ship time support
25 May 2016	Version 1.2	Include mention of the “Partnership Platform” web page; editorial changes.
16 May 2017	Version 1.3	Added cross-references to provision 5.9 in Tag document; added provisions detailing cases of partial fulfillment and partial prize award; added provisions concerning potential late registration; editorial changes.

2. DEFINITIONS

Throughout this document, as well as all other documentation relating to the WCRP-FPA2 Polar Challenge, the following definitions shall apply:

“Challenge”, “Competition”, or “Polar Challenge”	shall denote the WCRP-FPA2 Polar Challenge
“Guidelines”	shall denote the entirety of the Challenge’s documentation and information material onto which binding character is conferred. These documents include, in order of precedence: <ul style="list-style-type: none">• this Application Form;• the Rules and Procedures Document;• the Regulations and Standards for Installation of Mission Verification Tags;• any other documents made available alongside the above three documents on the “Guidelines” section of the Challenge homepage.
“Organizer(s)”	shall denote the World Climate Research Programme (WCRP), its sponsors (including but not limited to WMO, IOC and ICSU), individual officers and employees as well as its contractors and agents, the Challenge sponsors, committees and panels
“Competitor(s)”, “Participant(s)”, “Team(s)”	shall denote any or all Teams competing for the Challenge
“Tag”, “Sensor Tag”, “Verification Tag”	shall denote the mandatory mission verification sensor tag, one of which is to be installed by the Competitors on each and every competing autonomous underwater vehicle (AUV).

3. TEAMS

For the purpose of this competition, a team is a collaborative group of individuals, each affiliated with a university, research organization, commercial entity or similar unit possessing adequate technical knowledge to support a mission in pursuit of competition goals, which together compete as one participating group in the Polar Challenge in adherence to the Challenge Guidelines laid out in this Application Form document, the Rules and Procedures document, the Regulations and Standards for Installation of Mission Verification Tags, as well as in any other documents referenced on the Guidelines section of the Challenge homepage. Organizations and individuals can be based anywhere.

Each Team must designate a single individual to serve as the Team Leader and must also identify one representative for, and along with, each additional team's constituting entities. Each Team Member must have reached the age of majority in their jurisdiction of residence at the time of entry. One organization may be affiliated with multiple teams.

The Team Leader will serve as the primary Point of Contact with the Organizers of the Competition from the time of the application onward. The official address of a Team is the one of the Team Leader as stated in the Application Form. Correspondence to the Team is regarded as successfully delivered after dispatch to either the stated postal or email address of the Team Leader. It is the sole responsibility of the Team Leader to ensure that all points of contacts provided during the application phase are correct, operational and kept up-to-date.

Team leadership may be transferred from the Team Leader to another eligible individual. Transfer of team leadership occurs when the organizers receive a written statement to that effect, co-signed by both the former and future respective incumbent.

Collaboration between different teams is encouraged. Specific requests for collaboration may be conveyed in the Application Form (see below). The organizers will then liaise teams as appropriate. Similarly, competitors looking for ship time support through organizations who have offered such opportunity to the Organizers may express such need in the same section of the Application Form.

The number of individuals contributing to team efforts toward Challenge completion need not be limited to the list of Team Members given in this Application Form. All Team Members that represent an organization with which further team supporters, i.e. beyond those listed in the application form, are associated will be jointly and severally responsible for any and every such individual's actions within the scope of the Competition.

4. ELIGIBILITY

Eligible for participation in the Challenge is any team:

- a) that is constituted in a manner compatible with the stated definition of a “team”;
- b) which, due to the technologically challenging nature of the competition’s missions and their verification by the Organizers, will have registered with the Organizers prior to any efforts by the Judge Panel toward verifying the team’s mission;
- c) for which no conflicts of interest, financial or otherwise, exist for each and every team member as well as their hosting organizations or entities;
- d) which as a whole, and including each and every team member, pledges to participate in the competition according to the Challenge Guidelines laid out in the Application Form document, the Rules and Procedures document, the Regulations and Standards for Installation of Mission Verification Tags and any other documents referenced on the Guidelines section of the Challenge homepage, as well as in full adherence to fairness and ethical as well as scientific integrity.

The organizers reserve the right to exclude from the competition at any time any team for which any of the above criteria ceases to be met, or for which a previous cessation of fulfillment of the above criteria becomes known.

The Organizers do not in principle exclude applications from teams which aim to submit evidence for the completion of a mission – in full or partial fulfillment of the main, plus potentially bonus, mission – which would have been achieved before the filing of the complete Challenge Application Form with the Organizers. However, prospective Competitors are most strongly encouraged to conclude the registration stage as early as possible, and in particular before any AUV or related ship operations toward Challenge completion would commence. The Organizers and Judge Panel reserve the full right, in their sole and final discretion, to only partially or even not at all award any Challenge prize funds for missions for which the corresponding Application Form has been received after the date of claimed Challenge completion or even after any initial attempt to it. In no case will any mission be eligible for any (neither full nor partial) prize award for which any single of the main deployment days of an AUV or any associated supporting vessel would have taken place before the Challenge’s official opening on 15 March 2016.

Excluded from participation are any members of, and teams including members of, the Challenge’s organizing institutions, Challenge co-sponsors and endorsers, as well as of their respective, if applicable, parent organizations or sub-units; members of the Challenge’s Judge Panel; members of the Polar Challenge Committee; members of any new entity established by the Organizers for the purpose of Challenge implementation; members of any commercial entity hired by the Organizers, in particular for any services related to mission verification; and both immediate family members (spouses, parents, step-parents, children, step-children, siblings,

step-siblings, or their respective spouses, regardless of where they live) as well as persons living in the same households of any of the above.

The Organizers affirm that the Competition Guidelines and application requirements are intended to be fully non-discriminatory in all respects. Decisions to decline a team application, as well as prize award decisions by the Judge Panel, are made solely on the ground of technical adherence and conformity to the overarching Challenge vision of a future polar under-ice observing system.

Prospective applicants who feel that their technology or approach is unduly excluded or obstructed by the current Challenge Guidelines are asked to enter into contact with the Organizers, who may, in their sole discretion and final authority, initiate a review process of Challenge Guidelines in light of that team's technological proposal. This option includes, as laid out in Section 5.9 of the "Regulations and Standards for Installation of Mission Verification Tags" document and Section 6 of the "Rules and Procedures" document, the possibility for prospective applicants, who feel that the Challenge's verification tag is unsuitable for their respective approach for technical, financial, or other substantive reasons, to propose alternative verification strategies that at the same time uphold the strong and complete chain of evidence implied by the original Challenge verification strategy.

The Organizers will not accept team registrations attempted through modified application forms, that is, application forms for which the content has been altered beyond the foreseen completion of team and mission information.

5. INSTRUCTIONS FOR APPLICATION

When applying for the Polar Challenge, Teams should fill out and return this document in Microsoft Word format. The document can be submitted either via postal service or email to the above stated address of the Polar Challenge Committee (in the latter case, a scanned signature is sufficient). When filling out the fields below, prospective teams must keep intact all other content of the original file. (Instructions for completion of the form or example content are given in italics.)

6. TEAM DETAILS

Please provide below a team name by which your team will be officially identified for all purposes of the Challenge. Also provide the names of partner organizations in this context, with associated point of contacts and collaborators.

Team Name

The Team _____ applies herewith for participation in the WCRP-FPA2 Polar Challenge.

Team Leader – Team Member 1 - leading organization

First name and last name of Team Leader

Affiliation and full contact details

Date of birth

Nationality

First and last names of Polar Challenge collaborators in the leading organization

Team Member 2 – partner organization

Point of contact: first and last name

Affiliation and full contact details

First and last names of Polar Challenge collaborators in the partner organization 2

Team Member 3 – partner organization

Point of contact: first and last name

Affiliation and full contact details

First and last names of Polar Challenge collaborators in the partner organization 3

[... continue list as appropriate]

7. EXECUTIVE SUMMARY

Please provide below a short half-page executive summary, covering Team composition, partner organizations, attribution of funding programs or institutions, mission description, AUV technology, as well as any other relevant information. This information will be made public on the Polar Challenge web page when and if the application is confirmed by the Organizers. The Organizers reserve the right to conduct editorial changes, for example for brevity or readability:

8. CHALLENGE

Two bonus challenges can be attempted in addition to the main under-ice navigation task. Please see the Rules and Procedures document for details and check the corresponding box if you are aiming also for the:

- Bonus demonstration 1:
Regular observations of sea ice thickness or draft

- Bonus demonstration 2:
Successful under-ice transmission of position and environmental data via

the [WIS/GTS](#) (WMO Information System Global Telecommunication System)

9. GRANTS AND SPONSORS

Please provide below details on any dedicated research grants that have been awarded to your Team in full or partial support of its attempt to complete the Challenge mission and eventual bonus demonstrations (e.g., funding organization, grant references, short grant summary, funding levels). Should you receive support from one or more commercial sponsors, you are in every case required to disclose these here. To, among others, exclude any unethical type of sponsorship, please include, besides the name of the sponsor, a description of the form of (past, present, or future) support received, and any potentially agreed forms of your team's support to the sponsor, for example including, but not limited to, banner advertisement space on the team's AUV, product placement, website advertisement banners, advertising apparel, or promotional media products. The Organizers reserve the right, in their sole discretion, to reject a team application due to sponsoring agreements that are in violation of the Challenge Guidelines and expected ethical conduct of its implementation:

10. MISSION DESCRIPTION

Indicate below the overall AUV mission setup, its key technical elements, and how it complies with the main challenge goal of 2000km autonomous under-ice navigation:

Provide details on the overall time frame, planned deployment, accurate navigation strategy, way points and/or route planning and recovery areas:

Describe below any other infrastructure supporting the overall mission (such as navigation or communication aids, etc):

Describe below the logistical infrastructure available to support your mission (e.g. ships, aircrafts and period of operation):

Provide below a list of planned scientific measurements and related details (parameters, horizontal and vertical resolution, accuracy, etc):

Provide below details on how the verification tag will be mounted on the AUV(s) (see the document "Regulations and Standards for Installation of Mission Verification Tags" for details), and assess the impact of that installation location on the tag sensor functionality:

If you aim for the bonus demonstration 1, please explain below how you will conduct ice thickness measurements:

If you aim for the bonus demonstration 2, please explain below how you plan to achieve under-ice transmission of position and environmental data onto WIS/GTS:

Describe below the list and details of engineering tests planned in controlled environments:

If you plan to cooperate with other research groups or projects which are not primarily aiming to complete the challenge (e.g., other polar field experiments), please provide details below:

If you are looking for ship time support, please provide details below:

Should your team plan to conduct a number of different missions, please submit, as part of this application form, one separate version of this Section “Mission Description” for every different technological approach your team will take. Should there be only minor differences in AUV technology, instead only detail these differences in the below Section “AUV description”:

11. AUVs DESCRIPTION

Please provide hereafter a list of autonomous underwater vehicles expected to be used, together with key technical details (e.g. power source, expected speed, endurance, depth, navigation technology, sensors, ...) and how many of each you aim to deploy. Further note that you may have to provide specific information (serial number, manufacturer, model type, etc.) for every deployed AUV during later stages of the competition:

12. TECHNOLOGY AND MISSION RISK ASSESSMENT

For the Organizers to assess the likelihood of success of the proposed mission(s), please provide below a concise list of possible single points of failure of the proposed technology, main mission and eventual bonus demonstration. Please rate associated likelihood (low, medium, or high) and impact (low, medium, or high):

13. ENVIRONMENTAL IMPACT

Please assess below the environmental impact of your planned mission and provide details on mitigation plans to minimize such impact:

If the use of acoustic, electro-magnetic or laser sources is foreseen, please provide details on setup, frequencies, power level, expected range, emission policies, etc., and assess the potential impact on marine mammals and the environment:

14. ROUGH COST ESTIMATE FOR SCALED-UP NETWORK

Please perform below a brief, order-of-magnitude estimate of the time, material, logistics, financial, personnel-related, infrastructure and any other efforts that would be needed to scale up your proposed technology to a polar-wide (i.e., either in the Arctic or Antarctic or both) under-ice autonomous observing network. This information is requested to ensure that both the Competitor's and Organizers' interpretations of up-scaling potential of that Competitor's approach are consistent with the Challenge overall vision:

15. BANK ACCOUNT DETAILS OF LEAD ORGANIZATION

Please provide below the bank account details of the leading organization where any Prize money funds would be transferred to in case of, and subject to, any prize award by the Judge Panel (account holder name, address, IBAN, SWIFT, bank name and address):

16. ADDITIONAL INFORMATION

Please state here any additional elements you would like to include in your application:

17. OPPORTUNITIES FOR COOPERATION

Please state below whether you are seeking to team up with other Competitors to share selected resources like, for example, infrastructure or ship time. If so, you may also include a clearly-marked section that will be forwarded verbatim, together with your team's contact information, by the Organizers to all other Competitors (but not be published otherwise). In addition, you may include a section clearly marked to that effect to be included on the Challenge's online "Partnership Platform" web page (<http://wcrp-climate.org/partnership-platform>):

18. CONFIDENTIALITY

Note that a team's Executive Summary (i.e., Section 7 of this document) will be made public on the Competition home page. The Organizers reserve the right to make public other selected aspects of the Team's application for the purpose of public description of the competition and its competitors. This right does not extend to any passages explicitly marked as confidential in this application form. Passages are considered marked as confidential when set in red text color or within embracing "CONFIDENTIAL" text marks. The Organizers encourage all Teams to uphold these conventions throughout all written communication between the Team and Organizers.

19. LIABILITY

The Organizers (including its officers, employees, contractors and agents, as well as those of any of its co-sponsors) of the WCRP-FPA2 Polar Challenge assume no liability for, nor on behalf of, the Competitors.

By registering to the Competition, teams acknowledge they fully understand and agree to the terms laid out in the Application Form document, the Rules and Procedures document, the Regulations and Standards for Installation of Mission Verification Tags and any other documents referenced on the Guidelines section of the Challenge homepage, and any subsequent amendments. Teams enter the Competition at their own risk.

Except for any liability that cannot by law be excluded, the Organizers assume no liability (including negligence), for any personal injury, death, or any loss or damage (including loss of opportunity), whether direct, indirect, special or consequential, arising in any way out of the competition, including through, but not limited to:

- a. unsuccessful application to the Competition;
- b. any technical difficulties or equipment malfunction;
- c. any theft, unauthorized access or third party interference with equipment;
- d. any modification of the Challenge Guidelines;
- e. any variation in award value;
- f. denied access to area of operation;
- g. denied shipping;
- h. non-consideration for the Prize due to inflicted harms to the environment or similar misconduct during AUV mission;
- i. lack of evidence to support the validation of a claimed mission or demonstration;
- j. outreach activities and data publication related to the Competition;
- k. any tax liability incurred by a winner;
- l. the participation in the Competition;
- m. any impacts of force majeure.

Each Team shall be solely liable for any loss, damage, death or injury to third parties resulting from the performance of its participation in the Competition as well as the preparation and travel associated with the Competition, including, but not limited to, any of its media events or prize award ceremonies. Each Team and Team Member shall be liable to each of the other Teams and Team Members pertaining acts or omissions of itself and of its employees, agents and subcontractors indispensably provided that such liability shall not extend to claims for indirect or consequential loss or damages such as, but not limited to, loss of profit, opportunity, revenue, or the like. The latter qualifications shall not apply in the case of damage caused by a willful act or gross negligence.

Additionally, each Team agrees to indemnify and hold harmless the Organizers of the Competition (including its officers, employees, contractors

and agents) and its sponsors and partners for any loss, damage, death or injury to third parties or other Teams or other parties resulting from the performance of said Team's participation in the competition. The Team Leader's Organization shall assume responsibility for any and all activities of the Team that may take place during the WCRP-FPA2 Polar Challenge in its entirety.

20. INSURANCE

The Team Leader and Team Members undertake to take out and maintain, at the Team's own expense, adequate liability insurance, health insurance, accident insurance, life insurance, automobile insurance, workers compensation insurance, or any other relevant type of insurance to cover for any one event of personal injuries, loss of life and damage to property as well as in respect of public and products liability, or any other losses or damages resulting directly or indirectly from the Team's participation in the Competition or from any direct or indirect actions or omissions on the part of the Team's agents, employees, or contractors. If, for any reason, any such insurance is or becomes not effective, the Organizers will assume no liability, compensation or other responsibility for the Competitors.

21. APPLICABLE LAW AND JURISDICTION

Any dispute between the Organizers and the Competitors arising out of the interpretation or execution of the Challenge Guidelines shall be settled by mutual agreement. If the Organizers and the Competitor are unable to reach agreement on any question in dispute or on a mode of settlement other than arbitration, either party shall have the right to request arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL), as currently in force. The Competitor agrees to be bound by any arbitration award rendered in accordance with the above, as the final adjudication of any such dispute.

22. SEVERABILITY CLAUSE

Should any provision of this Application Form document, of the Rules and Procedures document, of the Regulations and Standards for Installation of Mission Verification Tags or of any other document referenced on the Guidelines section of the Challenge homepage be or become ineffective or impracticable, this shall not affect the validity of the remaining provisions of the entirety of these Guidelines documents. The Organizers will aim to replace any such ineffective or impracticable provision part by an effective or practicable one which comes closest to the intent and purpose of the replaced one. The preceding provisions apply accordingly in case that the Application Form, Rules and Procedures document, Tag Regulations document, or any other applicable Guideline documents prove to be incomplete.

23. PRIVILEGES AND IMMUNITIES

Nothing in or relating to this WCRP-FPA2 Polar Challenge Application Form or the overall Challenge Guidelines shall be deemed a waiver, express or implied, of any of the privileges and immunities of the World Meteorological Organization (WMO), including its subsidiary organs.

24. DECLARATION

By submission of this Application Form, the Team Leader on behalf of all Team Members declares:

1. the Team's intent to compete in the WCRP-FPA2 Polar Challenge according to the conditions laid out in this Application Form document, the Rules and Procedures document, the Regulations and Standards for Installation of Mission Verification Tags and any other documents referenced on the Guidelines section of the Challenge homepage; and that the team as a whole as well as each team member individually is eligible for participation in the Competition according to the above-mentioned documents as well as any local, regional or state law at both the respective locations of residence as well as at any planned mission operation locations;
2. that the Team Leader has the full and explicit consent of all Team Members on their participation in the Competition; that all organization affiliations are truthfully stated; and that each team member has the right to represent for the purposes of the Competition any organizations stated as their affiliation;
3. that the Team Leader and all Team Members have read, understood, and will abide by all rules and regulations set out in this Application Form document, the Rules and Procedures document, the Regulations and Standards for Installation of Mission Verification Tags, and any other documents referenced on the Guidelines section of the Challenge homepage, including any of their respective amendments;
4. that all Team Members undertake to participate in the competition in fairness and full ethical and scientific integrity;
5. that the Team has taken note of the actions required to maintain their candidate status throughout the competition, in particular, at their own cost, the purchase and installation of a sealed verification tag on each of their competing AUVs according to the Regulations and Standards for Installation of Mission Verification Tags document; and that the integration of any such verification and reporting requirements into all aspects of the

