



Polar Knowledge
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Canadian High Arctic Research Station campus /
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30 April 2025

Review Committee
European Space Agency
SUP FOUNDATIONAL INTEGRATED EXPERIMENTS (SUPFIX) –
POLAR, LAND, COASTAL FCP - FIXED CALL FOR PROPOSALS

Subject: The Copernicus Expansion Missions Sea Ice Experiment Project– Letter of Support

Dear Review Committee,

Polar Knowledge Canada (POLAR) is a Government of Canada agency responsible for advancing Canada's knowledge of the Arctic and strengthening Canadian leadership on polar science and technology. POLAR promotes and supports collaborative, science-based approaches, which include local and Indigenous Knowledge to develop evidence-based solutions and strengthen community resilience in a changing North. POLAR also operates the Canadian High Arctic Research Station (CHARS), Canada's flagship Arctic research facility in Cambridge Bay, Nunavut.

The proposed "*Copernicus Expansion Missions Sea Ice Experiment - CEMSIE*" project led by Dr. John Yackel from the University of Calgary with co-investigators from Canada and Europe, aligns closely with POLAR's strategic interest and priorities to improve knowledge of the Arctic marine cryosphere in the context of rapid climate change. In particular, the project's objectives to reduce uncertainties and enhance the accuracy of satellite monitoring of Arctic Sea ice concentration, thickness, and snow depth, and will improve knowledge in alignment with POLAR's cryosphere and climate change programs across northern Canada. The proposed project also intends to engage with the community of Cambridge Bay and collaborate with the community-based enterprise SmartICE, allowing the integration of Indigenous and local knowledge of the sea ice.

The CHARS facility has the required capacity and equipment to support the needs of this project proposal (accommodations, field technician, snowmachines and toboggans), and the project coordinators will apply for their seasonal/annual needs through POLAR's research support process for review and confirmation in fall 2025. If available and contingent on our scheduling capacity, the estimated value of this in-kind contribution would be approximately \$156,400.

POLAR looks forward to the opportunity to contribute to CEMSIE project should it be funded.

Sincerely,

David Hik
Chief Scientist and Vice-President (Research)
Canadian High Arctic Research Station
Polar Knowledge Canada

