

ICARP III Activity - Reporting Template



Title of activity Geology of the Arctic – A new synthesis		
Type of activity IASC Workshop (repurposed)	Date NA	Place NA
Main organizer(s) (name and/or organization) and additional partners Bernard Coakley (University of Alaska Fairbanks) with partners Carlo Barbante (University of Venice), Peter Jordan (University of Groningen), Victoria Pease (University of Stockholm) and Carsten Piepjohn (Bundesanstalt für Geowissenschaften und Rohstoffe)		
Abstract¹ This work will build on the activity of the Geosciences Action Group, the Circum-Arctic Lithospheric Evolution project and workshops on Arctic Ocean scientific drilling, previously supported by IASC, to develop a new synthesis of geological and geophysical data that will form the basis for developing a forward-looking science plan for solid earth sciences to be developed as part of the ICARP III process. We will put a particular emphasis on drawing people from the research groups working on mapping the circum-Arctic Extended Continental Shelves into this program. These programs have acquired large quantities of new data in the Arctic Ocean. Including these data and the results from these groups into a new synthesis of arctic geology will be transformative.		
Main contributions to ICARP III² in terms of the ICARP III priorities³ Special volume published by the Geological Society of London entitled Emerging Questions in Arctic Geoscience. This volume will include eight papers as follows; Coakley et al., Exploring the Arctic Ocean - Understanding the basin features in place and time Andresen et al., Paleozoic fold belts of the Arctic Toro et al., Mesozoic orogens of the Arctic Piepjohn et al., Eureka Deformation in the Arctic - An outline Dahl-Jensen et al., Sensitivity of ice sheets Barbante et al., The Anthropocene: Mans footprint on the Arctic environment		

¹ Provide a short summary of the activity

² List a few key statements (findings, priorities, recommendations) that you would like to see reflected in the overarching ICARP III products

³ ICARP III priorities:

- identify Arctic science priorities for the next decade
- coordinate various Arctic research agendas
- inform policy makers, people who live in or near the Arctic and the global community
- build constructive relationships between producers and users of knowledge

Farrell & Jordan, Prehistoric uses of circumpolar mineral resources: insights and emerging questions from Arctic Archaeology

Kruse & Hacquebord, Historical perspectives: the European commercial exploitation of Arctic mineral resources after 1500 AD

Each of the papers focuses on a different aspect of geosciences as was discussed by the IASC Geosciences Action Group, summarizes important observations and trends and develops recommendations for future scientific programs. This is essential to recognize the role of the geosciences in IASC and to support ICARP III.

The original intent for the grant was to support workshops for groups of co-authors to meet, discuss objectives for their papers and work on their texts. No one requested funding for these workshops. The papers were prepared without workshops. The IASC-provided funds have since been re-purposed to support participation of the lead authors in Session C3, "Emerging Questions in Arctic Geoscience," at ICARP III in Toyama, Japan. Any residual funds will be used to pay costs for color or expanded figures for the GSL volume described above.