

Letter of Interest

Large campaign proposal:

CAESAR

(Cold Air outbreaks Experiment in the Sub-Arctic Region)

Approximately 19 Feb – 4 April 2022

Date: 15 Sept 2019

To: Shree Mishra, NSF LAOF Program Director
Brigitte Baeuerle, LAOF Request Coordinator

From: Paquita Zuidema, University of Miami
Greg McFarquhar, University of Oklahoma
Bart Geerts, University of Wyoming

This letter is intended to inform NSF of our intent to request the NSF NCAR C-130 aircraft for a deployment, probably based in northern Scandinavia. Suitable bases are Kiruna, Sweden, and Andenes, Norway. We are exploring the pros and cons of a field campaign over the Labrador Sea (with Goose Bay or St John's Newfoundland as base) as opposed to the Norwegian Sea, but the timing and facility instruments would be the same, whichever region will be targeted. The intent is to characterize the cold-air outbreak cloud regime, which commonly occurs over both Seas.

The specifics of the request will be very similar to last year's CAESAR request. That is, 145 research flight hours, a 45-day field phase, from about 19 Feb till 4 April 2022, with a flexibility of about 1 week in either direction. The C-130 will be equipped with a large number of facility-supported (LAOF-funded) instruments. The list of LAOF probes likely will be the same as last year, including the AVAPS (160 dropsondes), CVI, AutoGNI, HOLODEC, VCSEL, WCR and WCL. The array of user-supplied probes likely will be the same as well, including MARLi.

Since this is a "large" campaign, a proposal containing the Scientific Project Overview (SPO) will be submitted, together with the Experiment Design Overview (EDO), by 15 Jan 2020. As part of this process, we will request a deployment cost estimate by 15 Nov 2019.