

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
On Track - Undergraduate Space Education (3)

Author: Mr. David Miles
University of Alberta, Canada, dmmiles@ualberta.ca

Prof. Ian Mann
University of Alberta, Canada, imann@ualberta.ca

Prof. David Knudsen
University of Calgary, Canada, knudsen@ucalgary.ca

Prof. Kathryn McWilliams
University of Saskatchewan, Canada, kathryn.mcwilliams@usask.ca

Mr. Kolbjørn Dahle
Andøya Space Center, Norway, kolbjorn@rocketrange.no

Mr. Jøran Grande
Norwegian Centre for Space-Related Education (NAROM), Norway, joran@narom.no

Prof. Jøran Moen
University of Oslo, Norway, j.i.moen@fys.uio.no

Mr. Eivin Thrane
Norwegian Centre for Space-related Education, Norway, e-vi-t@online.no

Mr. Arne Hjalmar Hansen
Andøya Space Center, Norway, narom@rocketrange.no

Prof. Jonathan Burchill
Canada, j.burchill@ucalgary.ca

Dr. Unni-Pia Løvhaug
University of Tromsø, Norway, unni.pia.lovhaug@uit.no

THE CANADIAN/NORWEGIAN STUDENT SOUNDING ROCKET PROGRAM (CANOROCK)
UPDATES AND GRADUATE TRAINING

Abstract

The Canadian-Norwegian Student Sounding Rocket (CaNoRock) program is a collaboration between the Canadian Universities of Alberta, Calgary and Saskatchewan and the University of Oslo, the Andøya Rocket Range and the Norwegian Centre for Space Related Education (NAROM). CaNoRock is in year two of a proposed ten year program which targets the training of undergraduate and graduate students in experimental space science. Previous presentations at the IAC have discussed the twice annual undergraduate student sounding rocket courses at the Andøya Rocket Range in Norway. In this paper, we present ongoing improvements to the program, student recruitment results, as well as a proposed follow-on program, all designed as an innovative approach to developing the future space workforce.

CaNoRock has recently completed follow-up surveys with previous participants to evaluate how effective the program has been in steering undergraduate students into space-related graduate studies and the aerospace industry. The three Canadian partner universities are developing hands on programs in physics, engineering and electronics to allow students to construct and test more sophisticated payloads before test-flying them during the field course at the Andøya Rocket Range. CaNoRock has led to two potential scientific sounding rocket collaborations. These will provide research opportunities for research scientists from Canada, Norway and other countries and offer thesis and training opportunities for graduate

students in instrumentation, campaign preparations, launch criteria decisions, payload integration, and data analysis. CaNoRock is proposing a complementary follow-on program called “CaNoSat” which will allow students to apply their skills and experience from CaNoRock to the development of Cube Satellites. These microsattellites would be launched into polar type orbits from Norway using modified sounding rocket technology. CaNoRock is undertaken with the financial support of the Canadian Space Agency.