

Please review all of the following information, including the gear allocations and field team information, to ensure accuracy. This plan is an agreement between VPR and your group, documenting the logistics support you will receive.

• Project Information •

Lead Principal Investigator	Dr. Atsumu Ohmura
Institute	Swiss Federal Institute of Technology (ETH), Institute for Atmospheric and Climate Research
Project Title / Grant #	BSRN-compatible irradiance measurements and the stable boundary layer (CHAntenna)
NSF Program and Manager	Intl - Swiss NSF, Mr. Simon Stephenson
VPR Project Manager	Sandra Starkweather

• Logistics Summary •

This work involves ongoing studies of the Earth's boundary layer at Summit, Greenland.

In 2000, a team of six installed a 50-meter tower at Summit Station. In 2001, the team returned early in the field season to install a suite of meteorological instruments on the tower. Measurements began during the summer, and continued throughout the winter by a member of the team.

In the summer of 2002, boundary layer measurements continued. After a severe storm knocked over the 50-meter tower during the winter, the team turned its prime research focus in 2003 to the investigation of the heat balance of the snow cover and detailed observations of the radiation and temperature profiles in snow. These measurements continued in 2004. In addition, the team rebuilt the tower to 35 meters for future installation of a suite of meteorological instruments.

In 2005, a team of two traveled to Summit in May to dismantle the project's equipment in the Green House in preparation for the uplift of that building. In mid-June, a team returned to reinstall equipment, conduct extensive studies of the radiation characteristics of the snow cover, collect missing data sets to capture the whole picture of the snow reflectant characteristics, extend the tower to 50 meters for boundary layer studies, and maintain and monitor radiation balance experiments.

In 2006, a team of two visited to do maintenance on the Baseline Surface Radiation Network (BSRN) Radiation station, and to update hard- and software to fulfill BSRN standards.

In 2007, a team of two will return for a brief season to replace BRSN hardware and do maintenance on the boundary layer instruments including installing heated wind sensors. New infrastructure developments will impact current BSRN infrastructure. The BSRN is currently powered off of lines routed through the science trench. The science trench and associated power panel are being replaced by the Temporary Atmospheric Watch Observatory (TAWO). VPR will coordinate with ETH to assure that the new power system accommodates the BSRN site (both fixed and tracker locations). At the end of August, Koni Steffen of CU Boulder will become the point of contact for both the ETH 50m tower and the BSRN site. Wintering science technicians will continue to follow the same protocols, but data will be delivered to and warehoused by Koni Steffen.

VPR will coordinate the team's travel to Summit, and provide accommodations at Kangerlussuaq and Summit. VPR will also provide a dedicated weatherport and some lab space in the Green House to the team.

For the complete VPR online project record for this grant, including science objectives, go to: http://www.vecopolar.com/arlss_reports/arlss_projectsdetail.asp?cbPropNum=CHAntenna

• Outstanding Issues •

Issue	Responsibility	Date Completed
Review support plan for accuracy and distribute to all field team members	PI	3/30/2007
Obtain all necessary permits for fieldwork	PI	PI has submitted Application
Visit all hyperlinks and review all documents referred to in the support plan	Field Team Members	3/30/2007
Contact the GEOSummit Science Coordination Office (SCO) mailto:sco@summitcamp.org regarding your project's plans for the season	PI	3/30/2007
Medical Clearance completed 8-6 weeks before desired deployment date	Karl Schroff, Hans-Jorg Frei	Paperwork submitted, 4/18/2007
Please note this important information for your field team: Bring 2 different forms of picture ID. Passports are mandatory for entry into Greenland.	Field Team Members	
Complete Critical Success Factors	PI	3/30/2007
Koni Steffen (new POC as of this fall) will seek approval for winter work with NSF when he returns from his spring fieldwork.	Koni Steffen	

• Allocations & Services •

Allocations from Inventory

Quant/Unit	Item
1 ea	Swiss weatherport
3 ea	Tables in Swiss weatherport
3 ea	Chairs in Swiss weatherport
5+5 linear feet bench	Green House space
2 ea	Beds set up in Swiss weatherport

Other Services

Project Allocations	Comments
Warehouse work space, Kangerlussuaq	Sort out equipment 1 day 5/18/2007

• Location Information •

Please visit <http://www.vecopolar.com> and navigate to the Greenland menu for en route and location-specific Greenland information. Prior to deployment, your entire field team should be familiar with the content of the *Greenland Guide* and, if traveling to Summit, with the guidelines provided in the *Summit Users' Guide*. Both are available electronically via our web site's Greenland menu.

• Cargo and Customs •

All cargo required for your project should arrive in Scotia, NY, **no later than 2 weeks prior** to the desired northbound Air National Guard (ANG) flight, must be entered into our online Cargo Tracking System, and must be properly registered with Customs.

- ✓ For the most current ANG flight schedule go to <http://www.vecopolar.com> and navigate to Greenland > Calendars/Schedules.

- ✓ If you are a new user requiring access to the Cargo Tracking System, contact Jason Buenning (jason@polarfield.com).
- ✓ Customs instructions are available on our website at <http://www.vecopolar.com> (go to Greenland > Customs)
- ✓ For Customs requirements please refer to the *Greenland Guide*, also available at <http://www.vecopolar.com> under Greenland.

The following is our current understanding of your overall cargo requirements:

Cargo List

Items	Weight/Cube
Spare parts, Tools, Instruments	200 lbs app./ 70 ft3 max

• Field Team Information •

Name	Location	Date In	Date Out	Email
Frei, Hansjoerg	Kangerlussuaq	5/7/2007	5/21/2007	hansjoerg.frei@env.ethz.ch
Frei, Hansjoerg	Summit	5/8/2007	5/17/2007	hansjoerg.frei@env.ethz.ch
Schroff, Karl	Kangerlussuaq	5/7/2007	5/21/2007	karl.schroff@env.ethz.ch
Schroff, Karl	Summit	5/8/2007	5/17/2007	karl.schroff@env.ethz.ch

Research Team

Role	Name	Email	Phone / Fax
Principal Investigator	Atsumu Ohmura	ohmura@env.ethz.ch	44 632-8283 / 44 632-1311
Field Coordinator	Karl Schroff	karl.schroff@env.ethz.ch	44 632-8268 / 79 277-5535

VPR Team Members

Contact for	Name	Email	Primary Phone(s)
Greenland operations	Jason Buenning	jason@polarfield.com	Denver: 303.638.6669 Greenland: 011.299.524218
Greenland operations	Mark Begnaud	mark@polarfield.com	Denver: 720.320.6160 Greenland: 011.299.524281
Summit operations	Sandy Starkweather	sandy@polarfield.com	Denver: 303.518.8714
Medical & MAS	Kyli Olson	kyli@polarfield.com	Denver: 303.489.2151
Denver operations	Jill Ferris	jill@polarfield.com	Denver: 720.320.6155
Scotia Operations & Customs	Earl Vaughn	earl.vaughn@gmail.com yprscotia@hughes.net	Scotia: 518.331.3103

VPR Offices

Denver	Kangerlussuaq	Scotia
VECO Polar Resources Western Office 8110 Shaffer Parkway Suite 150 Littleton, CO 80127 Tel: 303.984.1450/1439 Fax: 303.984.1445	VECO Polar Resources Attn: Name of Employee/Researcher Postboks 1015 DK-3910 Kangerlussuaq, Greenland Tel: 011.299.841598 Fax: 011.299.841599	Earl Vaughn C/O 109 th Aerial Port Bldg. 20 Stratton Air Base Scotia, NY 12302-9752 Tel: 518.331.3103 Fax: 518.334.2537

Summit Station

Summer
VECO Polar Resources Attn: Name of Employee/Researcher - Summit Station C/O Earl Vaughn 109 th Aerial Port Bldg. 20 Stratton Air Base Scotia, NY 12302-9752 Tel: 518.331.3103 Fax: 518.334.2537

Other

Organization	Internet	Phone
Summit Science Coordination Office	http://www.geosummit.org sco@summitcamp.org	John Burkhart 011.479.6825011 (Norway) 1.209.658.7142 (USA, messages checked weekly)

• Safety, Environment, Health, and Permitting •

Permits

All science teams planning to conduct research in Greenland must complete an **annual application** in order to obtain approval from the Danish Polar Center (DPC). The application forms are available from the DPC at <http://www.dpc.dk>. Applications are submitted directly through the DPC, rather than through the U.S. State Department. For assistance with the application process, contact:

Poul Henrik Sorensen
 E-mail: phs@dpc.dk
 Telephone: +45 3288 0100

Medical Clearance

Arctic Program participants traveling into the Greenland field are generally required to pass a National Science Foundation (NSF) mandated physical exam. All field team members should plan to complete their medical clearance process 8-6 weeks prior to their travel to Greenland. For more information refer to VPR's *Greenland Guide*, available at <http://www.vecopolar.com> under Greenland.

• Critical Success Factors •

Please list the factors that are most important for the success of your science. We track these factors in order to measure the success of VPR's support. Examples might be the availability of the helicopter or camp gear.

Factors
Weatherport up and ready to occupy on May 07
Power line to two BSRN sites ready by 5/15

• Government Performance and Reporting Act of 1993 (GPRA) •

NSF/OPP requires your help in complying with the Government Performance and Reporting Act of 1993 (GPRA). One measure of VPR's performance is a "facility-performance metric" which counts the number of productive days your project has in the field while relying on VPR facilities or support. Please keep track of any "lost days" and report these to us at the end of the season.