## PROJECT INFORMATION

| | |
|---|---|
| **Lead Principal Investigator** | Robert de Zafra |
| **Institute** | State University of New York at Stony Brook, Department of Physics |
| **Project Title / Grant #** | Support for Atmospheric Field Research at Thule, Greenland (0936365) |
| **NSF Program and Manager** | NSF\GEO\AGS, Dr. Alexander Pszenny |
| **PFS Project Manager** | Susan Zager |

## LOGISTICS SUMMARY

This grant supports a program of trace gas measurements in the middle atmosphere (stratosphere and mesosphere) over Thule Air Base, Greenland, from 2009 to 2011 using a ground-based millimeter-wave spectrometer (GBMS). The effort continues collaborative research involving Stony Brook University (U.S.), the National Institute for Geophysics and Vulcanology, the University of Rome "la Sapienza" (the latter two in Rome, Italy). This specific grant will help to remedy the cost of transporting required liquid nitrogen (LN2) to Thule, Greenland, through the purchase of a small nitrogen liquefier for on-site use.

A small field team will visit in each year of the grant to run the GBMS and LiDAR systems, both of which will be housed in the laboratories of the DMI, in rooms set up and reserved for that purpose. A Danish Meteorological Institute (DMI) technician at Thule will build a reserve supply of LN2 prior to the researchers' arrival at Thule, and maintain that supply with daily production during the time that the researchers are visiting and observing.

When possible, the PI will combine logistics for this project with that of the Muscari grant (GBMS).

In early January, 2010, a team of three researchers—Giovanni Muscari and two colleagues--will travel via AMC to Thule. They will spend about ~two weeks installing and testing instruments and the LN2 generator. When this work is finished, one team member will depart, leaving Professor Muscari and a colleague to operate the LiDAR and GBMS instruments. These two will depart mid-February, returning to the US via AMC flight.

CPS will arrange/pay for Thule clearances and access to infrastructure/services at the base, shipment of LN2 generator, tickets and cargo on AMC flights. The investigators will arrange for and pay all other logistics expenses from their grant(s).

For the complete CPS online project record for this grant, including science objectives, go to: http://www.polar.ch2m.com/arlss_reports/arlss_projectsdetail.asp?cbPropNum=0936365

For up-to-date information on the project's schedule, please view the online Greenland calendar (www.polar.ch2m.com > Greenland > Calendars/Schedules).

## SPECIAL REQUIREMENTS

| Issue | Responsibility | Date Completed |
|---|---|---|
| Review support plan for accuracy and distribute to all field team members. | PI | |
| Visit all hyperlinks and review all documents referred to in the support plan. | Entire field team | |
| Process clearances/letters from Danish Ministry of Foreign Affairs, USAF and NSF for team. | CPS | 25 Dec 09 |
| Send LN2 generator via AMC freight. | PI/CPS | Arrived 17 Dec 09 |
| Maintain lodging/work facility in a clean and safe manner and cooperate with other researchers/staff sharing the facility. | Entire field team | |
| Complete Critical Success Factors | PI | 1/4/2010 |

**Other Services**

CPS has arranged the following support at Thule

| | |
|---|---|
| Internet service in Bldg. 353. | TeleGreenland |
| Lodging, workspace in Bldg. 353. | CPS (N/C) |
| Contract new electrical outlets in 353 to accommodate LN2 generator. | Greenland Contractors |
| Warehouse space in Bldg. 628. | CPS (N/C) |

## LOCATION INFORMATION

Please visit http://www.polar.ch2m.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

**Cargo List**

| Items | Weight/Cube |
|---|---|
| 1 – LN2 generator and spare dewar | 200/12 |

## SUPPORT SCHEDULE

| Date | Location | Activity |
|---|---|---|
| 07 Jan 10 | BWI/THU | Muscari, DiBiagio, DiSarra fly via AMC from BWI to THU. |
| 08 Jan 10 | THU | Team sets up LN2 generator and instruments; begins work in 216 and 353. |
| 22 Jan 10 | THU/BWI | DiSarra departs THU on the AMC flight. |
| 19 Feb 10 | THU/BWI | Muscari and DiBiago depart THU on the AMC flight. |

For the most up-to-date information on the project's schedule, please view the online Greenland calendar (http://www.polar.ch2m.com/ > Greenland > Calendars/Schedules).

## FIELD TEAM INFORMATION

| Name | Location | Email |
|---|---|---|
| Muscari, Giovanni | Thule | muscari_AT_ingv.it |
| DiBiagio, Claudia | Thule | dibiagio_AT_ingv.it |
| DiSarra, Alcide | Thule | disarra_AT_casaccia.enea.it |

## PROJECT CONTACT INFORMATION

**Research Team**

| Role | Name | Email | Phone / Fax |
|---|---|---|---|
| Principal Investigator | Robert de Zafra | rdezafra_AT_notes.cc.sunysb.edu | 631.632.8137 |

**CPS Team Members**

| Contact for | Name | Email | Primary Phone(s) |
|---|---|---|---|
| Thule operations | Susan Zager | Susan at polarfield.com | Denver: 720.320.6159 |
| Thule operations | Kim Derry | Kim at polarfield.com | Denver: 970.321.6595 |

**CPS Offices**

| Denver | Kangerlussuaq | Scotia |
|---|---|---|
| CH2M HILL Polar Services<br>8110 Shaffer Parkway<br>Suite 150<br>Littleton, CO 80127<br>Tel: 303.984.1450/1439<br>Fax: 303.984.1445 | CH2M HILL Polar Services<br>Postboks 1015<br>DK-3910<br>Kangerlussuaq, Greenland<br>Tel: 011.299.841598<br>Fax: 011.299.841599 | Earl Vaughn<br>C/O 109th Aerial Port, Bldg. 20<br>Stratton Air Base<br>Scotia, NY 12302-9752<br>Tel: 518.344.2635<br>Cell: 518.331.3103 |

## SAFETY, ENVIRONMENT, HEALTH and 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. For assistance with the application process, contact:
Poul Henrik Sorensen
E-mail: phs at dpc.dk
Telephone: +45 3288 0100

## 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 CPS' support.

| Factors |
|---|
| Securing Thule permits for research |
| Shipping cargo to/from Thule |
| Electrical wiring of Bldg. 353 to power the liquefier |
| Availability of lodging at bldg. 353 |

## GOVERNMENT AND PERFORMANCE 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 CPS' performance is a "facility-performance metric" which counts the number of productive days your project has in the field while relying on CPS facilities or support. Please keep track of any "lost days" and report these to us at the end of the season.