

Tiksi Hydrometeorological Observatory

Update – May 14, 2007

Dear Tiksi Hydrological Observatory Participants –

It has been two months since our Boulder meeting, and I would like to thank all the participants for their excellent contributions. In particular I would like to thank our Russian participants for making a long trip to Colorado. We would like to also thank Roshydromet for contributing to the travel costs that made the travel possible.

The following is an update on progress with the Tiksi Hydrometeorological Observatory Project. Remember that the original objectives of the March 7-9 2007 meeting were to:

- Approve a final Work Requirements document to guide constructions of a clean air facility in summer/fall of 2007
- Begin to coordinate measurement activities and programs
- Training of Tiksi personnel on first instruments to be deployed in Tiksi

Progress: Approve a final Work Requirements document to guide constructions of a clean air facility in summer/fall of 2007

The Hydrometeorological Observatory of Tiksi – Tiksi Clean Air Facility (TCAF) Requirements Document has been completed and reviewed. It has been accepted by NSF. On May 8th the first team of specialists from the Polar Foundation was making a site visit to Tiksi to inspect the site and begin preparations. The construction will be staged over 2007 and 2008. The document can be obtained on an ftp site (instructions below).

Begin to coordinate measurement activities and programs

Twenty science presentations were made on possible projects for Tiksi including

- UV monitoring
- Permafrost
- Climate Reference Air Temperature, Precipitation Accumulation, Wind Speed, Surface Skin Temperature
- Surface Radiation
- CH₄, CO₂, CO, H₂, N₂O, INSTAAR: $\delta^{13}\text{C}$ (CO₂), (¹⁸O, CO₂), SF₆, $\delta^{18}\text{O}$ (CO₂), $\delta^{13}\text{C}$ (CH₄), δD (CH₄)
- Black Carbon in Snow
- GPS Water Vapor
- Persistent Organic Pollutants (Mercury and other Metals)
- Winter Precipitation and Snow Cover
- Surface Ozone
- Surface Energy Fluxes
- Aerosol optical, chemical, microphysical hygroscopic growth and CCN
- Aerosol particle size, complex refractive index, phase function, single scattering albedo
- Atmospheric black carbon

The presentations can be obtained at an ftp site (instructions below)

Permission has recently been obtained from Russian customs for transport of equipment originating in the U.S. (and Finland?) into Russia. It has not yet been settled if custom taxes and duties will be assessed. We are beginning the process of arranging to have the first set of instruments (Ozone Sampler and Aethalometer) travel from the U.S. to Russia. We expect to have this first shipment escorted through customs by a person affiliated with the Tiksi project (to be determined). This transfer of equipment into Russia will be accompanied by documents supporting Science and Technology exchanges and Cooperation in the Areas of Meteorology, Hydrology and Oceanography that have been agreed upon between the United States of America and the Russian Federation. These documents have specific language on facilitating the transfer of technologies including hardware. It is not yet determined if this will be sufficient to either move equipment and samples through customs or to waive customs fees.

Training of Tiksi Personnel

Successful training sessions on the surface ozone sampler and the carbon cycle gas sampler were attended by Ms. Marina Ivanova and Mr. Alexander Sinyakov. Ms. Ivanova and Mr. Sinyakov are meteorologist/engineers that assigned to the Tiksi Weather station. Operations Manuals for this equipment can be found at an ftp site (instructions below).

Other

We have received word from Roshydromet that a project has been approved to digitize the historical weather station data from Tiksi. This data will be invaluable to provide historical context for the new measurement programs.

Next Steps

Site Visit in Summer of 2007t:

Please submit your name immediately to Taneil.Uttal@noaa.gov if you intend to go on a site visit to Tiksi in the summer of 2007. It is assumed that costs for this trip will be the responsibility of individual programs/institutions; however we will coordinate travel arrangements through NOAA for the U.S. participants. Indicate preferred times of travel in July and August. We may try to coordinate so that we are on-site the same time as the Polar Foundation construction and survey crews.

Making Phase 2 arrangements for instrument transfers to Russia

The present list of equipment that has been granted permission for transfer into Russia includes the following:

- (1) Carbon Cycle Gas Sampler (NOAA)
- (2) Surface Ozone Sampler (NOAA)
- (3) Suite of instruments for measurements of surface radiation budgets (NOAA)
- (4) Suite of instruments for Flux Measurements (NOAA)
- (5) Integrating nephelometer and light absorption photometer (NOAA)
- (6) A Climate Reference Network suite of instruments (NOAA)
- (7) Aethalometer -Black Carbon Sampler (NOAA)

- (8) Snow soot sampling equipment (University of Washington)
- (9) UV Radiometer (Biospherical)
- (10) CH₄/ CO₂ Samplers (Finnish Meteorological Institute)

If your equipment is not on this list, please contact Taneil.Uttal@noaa.gov . We will begin a second phase of permissions documents since this process can take several months.

FTP Instructions

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> ftp ftp.etl.noaa.gov
> user: anonymous
> password: YourEmailAddress
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ftp> cd /user/tuttal/TiksiMeeting2007/TCAF_Requirements
(or)
ftp> cd /user/tuttal/TiksiMeeting2007/Tiksi_presentations
(or)
ftp> cd /user/tuttal/TiksiMeeting2007/Instruction_Manuals
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From these locations, you can download documents that are of interest to you.

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