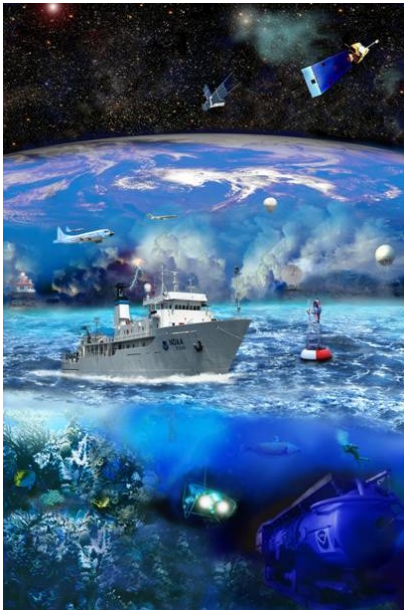


Potential U.S. Contributions to the GRUAN Effort
Presented by: Howard Diamond - U.S. GCOS Program Mgr.

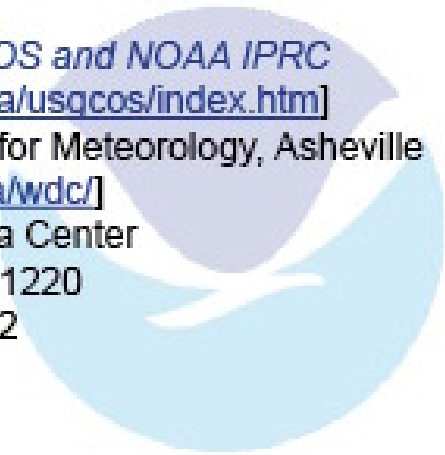
**Meeting on Implementation of the GCOS Reference
Upper Air Network (GRUAN)**

Lindenberg, Germany

26-28 February 2008



Howard J. Diamond,
Program Manager, U.S. GCOS and NOAA IPRC
[<http://www.ncdc.noaa.gov/oa/usgcos/index.htm>]
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Organizations Involved

- **U.S. Department of Energy's (DOE) Atmospheric Radiation Measurement (ARM) Program**
- **National Aeronautics and Space Administration (NASA)**
 - **Cooperative work with Howard University (Beltsville site)**
 - **Possible coordination with SHADOZ program**
 - **Possible testing work at Wallops Island**
- **National Center for Atmospheric Research (NCAR)**
- **National Oceanic and Atmospheric Administration (NOAA)**
 - **Air Resources Laboratory (ARL)**
 - **Climate Prediction Center (CPC)**
 - **Climate Program Office (CPO)**
 - **Earth Systems Research Laboratory (ESRL)**
 - **National Climatic Data Center (NCDC)**
 - **Center for Satellite Applications and Research (STAR)**
 - **National Weather Service Office of Operational Systems (OOS)**

Table of Focal Points

DOE	NCAR	NOAA
Jennifer Comstock	Kevin Trenberth	Howard Diamond, NCDC
Wanda Ferrell *	June Wang	Ellsworth Dutton, ESRL
Raymond McCord *	Steve Williams	Joe Facundo, OOS *
Doug Sisterson		Mitch Goldberg, STAR
Jimmy Voyles *		Tom Karl, NCDC *
		Chet Koblinsky, CPO *
		Craig Long, CPC *
		Matt Menne, NCDC
		Chris Miller, CPO *
		Bill Murray, CPO
		Dian Seidel, ARL
		Tom Peterson, NCDC *

* Not able to attend meeting

Possible NASA focal points TBD

Potential Contributions from U.S. *

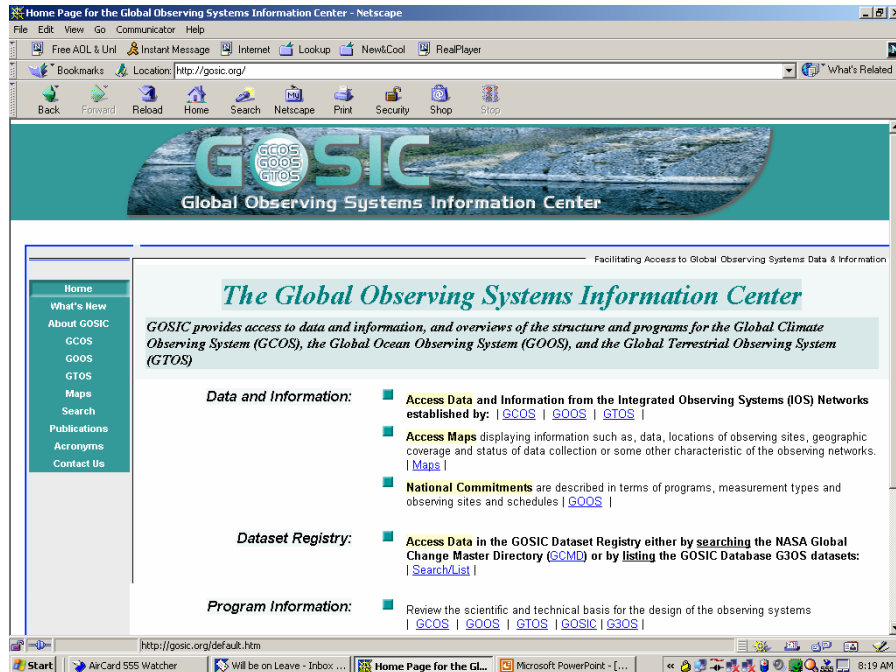
- ARM Climate Research Facility (ACRF) is prepared to contribute in-kind resources as follows:
 - Up to 5 ACRF sites to be used as potential GRUAN sites
 - Data archival and management
 - In-Kind QA/QC & Production of Value Added Product Generation
- NCAR is prepared to consider participating as follows:
 - Contribute to developing & deploying a reference radiosonde
 - Provide a variety of research-related data management functions
 - Contribution to deployment & data processing of a ground-based GPS receiver for GRUAN
 - GPS Radio Occultation (GPS-RO) work; NSF Workshop at NCAR [March 2008]
 - Potential value of GPS-RO observations for climate [list of 10 issues from NSF]
- NOAA can possibly contribute as follows:
 - Network analyses, OSSEs, developing country and WG support, and team w/ARM sites
 - Design work on a reference radiosonde and testing
 - Build on stratospheric water vapor observations at Boulder and Lauder
 - Data archival & management (mirror to ACRF), portal hosting, post-processing QA/QC
 - WMO Global Space-based InterCalibration System (GSICS) Coordination Center participation
 - Collocation of GRUAN to satellite products for statistical comparisons and monitoring

* Contingent Upon Available Funding and Eventual GRUAN Workplan

NSF GPS-RO Issues for March 2008 Workshop

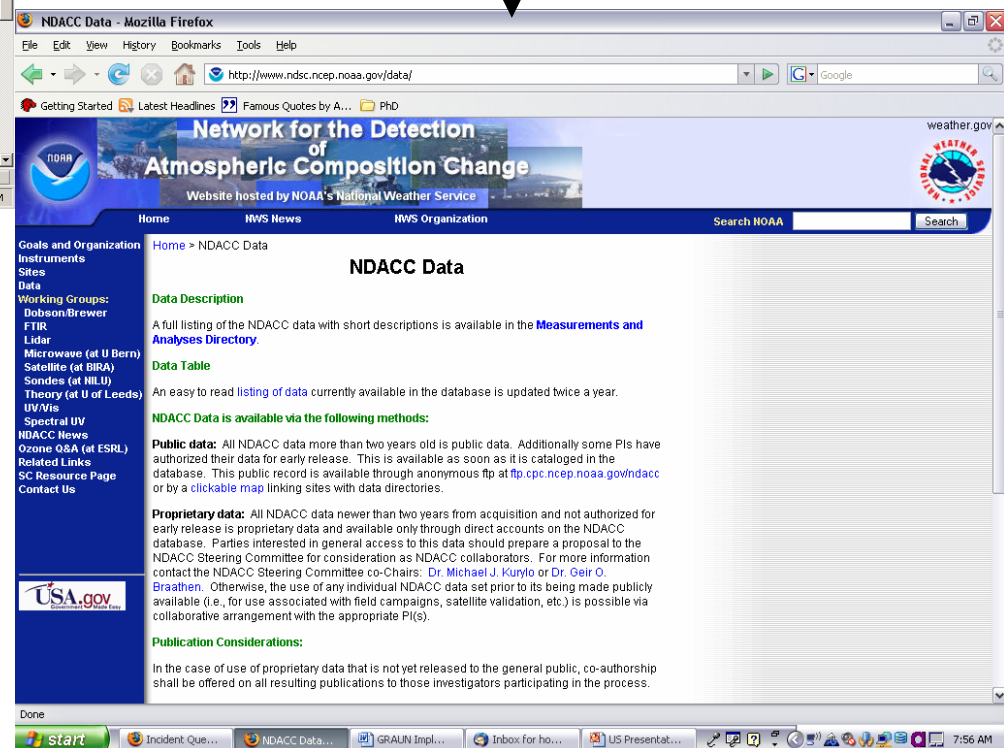
- *Comparability of data from different COSMIC satellites*
- *Comparability of CHAMP & COSMIC (and other?) GPS satellite systems*
- *Reproducibility of refractivity results*
- *Reproducibility of temperature results*
- *Impact of assumptions on both refractivity and retrieved profiles*
- *Refractivity (or delay) vs. retrieved meteorological profiles*
- *Profiling of the lower troposphere*
- *Impact of observations scattered across space and time*
- *Potential aliasing by water vapor changes in GPS-RO temperature time series*
- *Water vapor retrievals*

Existing Web Portals to Support International Climate Observing Efforts



Global Observing Systems Information Center (GOSIC) - <http://gotic.org>

Network for the Detection of Atmospheric Composition Change (NDACC) Portal - <http://www.ndsc.ncep.noaa.gov/data/>



Danke Schön

