

GEST DIGEST

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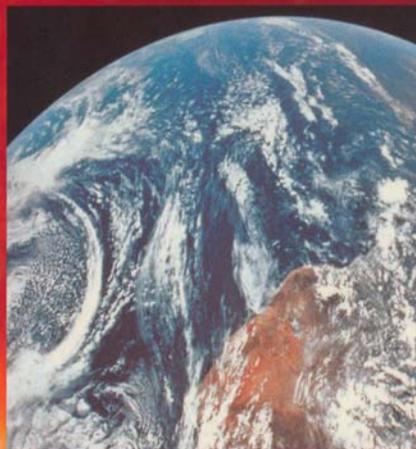
JUNE 2004

Solar Variability and Its Effects on Climate

Dr. Judit M. Pap

Solar Variability and Its Effects on Climate

Judit M. Pap and Peter Fox
Editors



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Congratulations

The GEST Center extends congratulations to Dr. Judit Pap on her accomplishment in the editorial work of the publication of *Solar Variability and Its Effects on Climate*.

Solar Variability and Its Effects on Climate is published under the aegis of the AGU Books Board. Dr. Judit Pap, Senior Research Scientist of the Goddard Earth Sciences and Technology Center (GEST), is one of the publishing editors. Dr. Pap joined GEST in December 2001. Her work on calibration and interpretation of solar irradiance variations observed from spacecraft is cutting-edge using satellite instruments and analysis.

This monograph represents a state-of-art-description of the most recent results on solar variability and its possible influence on the Earth's climate and atmosphere.

Because this monograph covers a range of topics, including the Sun's interior and atmosphere, energy transport and radiation processes, measurements of solar energy flux variations and their interpretation, and terrestrial effects related to solar changes, it will be an important resource for both scientists and students with various interests.

A full interview with Dr. Pap describing contents of the book is published in EOS, Volume 85, Number 30, 27 July 2004.

IN THE NEWS

Virtual Telescope in Education

**Somesh Kumar (GEST Graduate Student in Computer Science)
and Kudos to Dr. Susan Hoban**



For the past year, Somesh Kumar has been working with NASA's Goddard Space Flight Center (GSFC) on a cutting edge project that offers to bring outer space into classrooms around the world, virtually. Kumar, a second year [computer science](#) master's student, is working at GSFC through a collaborative agreement with [UMBC's Goddard Earth Sciences and Technology Center](#) (GEST). Thanks to close proximity and its many collaborative research initiatives with NASA, UMBC—which ranks 16th in the nation for NASA funding - offers students, like Kumar, the wonderful opportunity to work at NASA.

"VTIE, which stands for [Virtual Telescopes in Education](#) , aims to be a complete computer portal for teachers and students interested in astronomy," says Kumar, describing his master's project, which is funded by the National Science Foundation (NSF). " Presently, VTIE contains three interfaces - one for teachers, one for students and one for the general public - that are designed to help comprehensively guide teachers and students through a serious astronomy project. It features many sophisticated tools and services, including a service allowing students to operate a virtual observatory," Kumar explains.

Designed for middle and high school students, Kumar explains, "VTIE guides students through writing proposals, collecting data and ultimately reporting their results." It does so through a proposal generation interface, a research and information gathering tool, an image gathering and analysis tool and a step-by-step scientific paper-writing tool. It also provides students with a lab notebook, a dictionary and glossary tools. For teachers, VTIE features tools for reviewing/editing proposals and papers and classroom management tools. For both students and teachers, there is a Message Center to exchange information and view the status of student proposals or papers.

Kumar has been working on the VTIE project under the mentorship of Dr. Yelena Yesha, UMBC Professor of Computer Science and Electrical Engineering, and Dr. Susan Hoban, Senior Research Scientist of the GEST Center. Kumar recently presented his master's work at the NASA National Science Foundation—Tennessee State University (NASA-NSF-TSU) Research Symposium. He also presented his work at this year's Graduate Research Conference (GRC'04) at UMBC. This summer, he attended a VTIE training session for teachers at the NASA National Radio Astronomy Observatory (NRAO) in Greenbank , WV.

GRANTS SUBMITTED

The following GEST Faculty submitted grant proposals in June 2004

Chun-Lin Shie - Chemical Tracer Transport in CRYSTAL-FACE: Mesoscale Forecasts and Coupled Model Analyses.

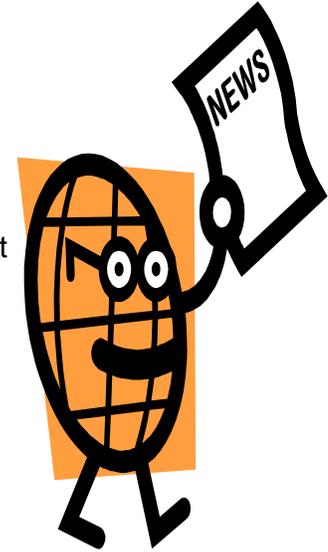
Guojun Gu - Satellite and Field Experiment Analysis of Subseasonal and Synoptic Variability of the Eastern Pacific ITCZ and its Effect on Tropical Cyclogenesis.

Mircea Grecu - Latent Heating Estimates from Airborne Observations to Support the Analysis and Forecasting of Tropical Cyclone.

Julio Bacmeister/David Lary - Single Column Simulations of Convective Tracer Transport and Water Isotope Profiles.

Oreste Reale - Sensitivity of Eastern Pacific Tropical Cyclogenesis in the NASA fvGCM to Improvements in the Representation of the Large Scale Low-Level Moisture Flux Convergence.

J.J. Wang - The Structure and Evolution of Tropical Convection and Anvil Clouds.



GEST Faculty Quarterly Meetings

August 19, 2004

Dec. 15, 2004

IMPORTANT DATES

July GEST Annual Research Program Plan distributed (ARPP)

Aug. No health insurance taken out of pay one cycle
GEST Faculty Quarterly Meeting - Aug. 19th

Sept. Consulting Report due to Nancy
- Labor Day Holiday September 1st
NASA Fiscal Year ends Sept. 30

Oct. Columbus Day Holiday - October 14th
- **Open enrollment for Health Plans** -

Nov. Veterans Holiday - November 11th
- Thanksgiving - November 27th

Dec. All non-US citizens must file new Citizenship Status Form and W4
- GEST Faculty Quarterly Meeting- Dec. 15th, GSFC

Christmas - December 25th
- Moving expenses this year taxed final paycheck of year

Please email information for the newsletter to roscoe@umbc.edu prior to the 15th of each month