



National Aeronautics and Space Administration

# GODDARD NEWS

Greenbelt, Maryland/Wallops Island, Virginia

March 5, 1999 Vol. 3

The Goddard News is published weekly by the Office of Public Affairs, Goddard Space Flight Center, Greenbelt, MD 20771

## Goddard Employee Gets NASA's Inventor of the Year Award

**Chuck Clagett**, of Goddard's Guidance, Navigation and Control Center (GN&C), Code 573, was recently awarded NASA's Inventor of the Year Award.

The award was given to Clagett for his innovative high torque, low noise, SMEX Reaction Wheel Design. Clagett's reaction wheels have flown on both TRACE and SWAS spacecrafts and are flying on the WIRE spacecraft, launched this week. An integrated reaction wheel upgrade of this design will also be flown on the Triana spacecraft.

"Clagett's wheel program is a model of the Guidance Navigation and Control life cycle -- unique GN&C ideas developed with industry partnerships, responding to science needs, that are then licensed for commercial use through Goddard's commercialization office," said Frank Bauer, Chief of the GN&C, AET Directorate.

### Another Goddard First

Launched from Cape Canaveral in Dec. 1966, NASA's ATS 1 satellite provided the first transmissions of full-Earth, cloud-cover images from geosynchronous orbit. The spacecraft also provided the first realtime TV from the Pacific with coverage of NASA's Apollo 4 splashdown.

## NASA Collaborates with Other Agencies on New Lightweight Mirrors

Three government agencies--NASA's Next Generation Space Telescope (NGST) project office, the Air Force Research Laboratory and the National Reconnaissance Office--are participating in a \$15 million Advanced Mirror System Demonstrator (AMSD) program to develop extremely lightweight mirrors for space telescope use.

"This historic joint activity is but the first step in a longer term partnership between the agencies to develop even lighter, lower cost optics technology for missions beyond NGST," said **Bernard Seery**, project manager for NGST.

## NASA Selects Spacecraft Vendor For Coriolis Mission

by *Susan Hendrix, Office of Public Affairs*

Goddard's Rapid Spacecraft Development Office (RSDO) has selected Spectrum Astro, Inc. of Gilbert, Ariz. last week as the spacecraft vendor for the U.S. Air Force mission.

This selection marks the first use of RSDO's unique spacecraft catalog by a U.S. government agency other than NASA.

**Jim Adams**, RSDO Chief, said "It's important for NASA to pass along the efficiencies we've developed under the 'Faster, Better, Cheaper' paradigm to any agency that needs our help. We are proud to have been part of the team that got the Coriolis mission up and running."

The U.S. Air Force Space Test Program office at Kirtland AFB (Albuquerque) N.M. selected the commercially available satellite from a group of 16 contained in the RSDO's Rapid Spacecraft Acquisition Catalog of Indefinite Delivery/Indefinite Quantity contracts. The office will also manage the delivery order, which is valued at approximately \$36.4 million.

## WIRE Mission Update

After a successful launch at 6:57 p.m. (PST) on March 4, NASA's Wide-Field Infrared Explorer (WIRE) satellite experienced an anomaly during its second pass over the Poker Flats (Alaska) ground station.

Personnel at the ground station detected an unexplained spin. The spacecraft recovery team, headed by David Everett, is assessing the data stream from the spacecraft to determine the cause of the anomaly.

WIRE's four-month mission goal was to obtain a better understanding of how and when galaxies formed, and the subsequent history of star formation in the Universe.

## NASA Collaborates with National Park Service

"NASA-NPS Sharing a World of Resources" is a web site at <http://www.nps.gov/interp/nasa> that represents a major milestone in the effort between NASA and the National Park Service to improve public math and science literacy.

The on-line guide contains highlights of successful collaborations, documentation supporting the partnership, and a comprehensive listing of resources that are available from NASA and the National Park Service.

As a communication tool, employees will be able to learn more about each agency. Increased knowledge will lead to future cooperative efforts.

Readers will discover how NASA's science and research efforts can provide a global context for preserving and protecting our U.S. National Park System treasures.

For more information about this collaboration, contact **Toni Dufficy**, NPS Liaison to NASA Goddard Space Flight Center at 301/286-0535 or send her an e-mail at: [Toni\\_Dufficy@nps.gov](mailto:Toni_Dufficy@nps.gov)

## Calling Pioneers for a 21st Century Goddard

By Denise Konopka

Forty years ago, pioneers of Goddard Space Flight Center helped shape the future, which has become our history. If you count yourself among the best and brightest at Goddard, then you too have a chance to help shape Goddard's future.

Change is driving our organizational culture in new and exciting directions everyday. Yet at times it can appear threatening.

*Tools for Navigating Change* is a chance to embrace change and ready us for new ways of doing business in the 21st century.

This is a chance for those fearless about change to lead by example. If you know of someone or a group of people that you believe are ready to pioneer Goddard's next 40 years --- call Kathy Fontaine at x6-5247 or Denise Konopka at x6-1382 today.

What is TNC? TNC - or Tools for Navigating Change - is a unique, center-funded training program for civil servants and contractors at Goddard. The program is designed to provide useful skills for working in our ever changing professional environment.

Why is TNC unique? Anyone who attends TNC training will leave with tools and techniques that can immediately be used on-the-job. Several modules are available, covering different topics.

Any session can be requested on an "as needed" basis without funding or scheduling delays and the sessions compliment the Center's comprehensive training calendar.

How do I sign up? Complete a self-assessment to determine what skills you want to refresh, enhance and use. Registration is web-based and fully electronic. Go to the Office of Human Resources homepage at: <http://ohr.gsfc.nasa.gov/>

Visit Goddard News on the web at <http://pao.gsfc.nasa.gov/gsf/gnews/gnews.htm>

# Non-Conformance Reporting System Critical to ISO 9001 Certification

**Editor's note:** This is the third in a series of Goddard News interviews with key ISO 9001 officials. This week's interview is with Jay Garvin of Code 30, System Administrator for the Non-Conformance and Reporting System.

## *Explain the purpose/role of the non-conformance reporting and corrective action for ISO?*

ISO 9001 requires organizations seeking certification to have documented business systems, including a method for controlling nonconforming products and performing corrective and preventive actions. GSFC has chosen to implement these requirements by way of Goddard Procedures and Guidelines (GPG) 5340.2, "Control of Nonconforming Products" and GPG 1710.1A, "Corrective and Preventive Actions."

In support of the GPGs, Goddard created a computer database system known as the Non-conformance Reporting and Corrective Action (NCRCA) system. NCRCA provides a repository for documentation for non-conformance issues encountered during the normal day-to-day operations of the Center. The system serves as the location for quality records relating to non-conformance issues covered under the Quality Management System.

The NCRCA database captures, in an electronic format, information related to the non-conformance. The system applies to everything that is covered under the quality management system such as orbital flight hardware, balloons, sounding rockets, airplane payloads, mission operations, ground systems, and communication systems.

In addition, as we conduct ISO internal audits, deviations from procedures will be logged in the system. We also have people at KSC who are tied into the NCRCA system because we ship hardware to KSC and may encounter a non-conformance issue during processing prior to launch.

## *How is NCRCA organized?*

The NCRCA system is an electronic database on the Internet. Every employee on Center who uncovers any type of non-conformance must record it in the NCRCA system. The NCRCA system includes each directorate and project on Center. When a non-conformance is encountered, the person who discovered it will log onto the system, choose the project or directorate that has the non-conformance and record it.

The system assigns responsibility to three levels of personnel. Each Directorate and project has a Project Administrator assigned to manage the non-conformance recorded against the project or directorate. The Project Administrator assigns another person to be responsible for actually working with the non-conformance to process the record through all of the steps of corrective action through closure. The third level of responsibility rests with Center employees to identify and record the non-conformance in the system.

## *What new features does the NCRCA system support?*

Internal audits can now be performed and any non-conformance encountered in the audit will be captured in the NCRCA system. A permanent record will exist of what problems were uncovered and how they were resolved. Center management will now have a tool to assess where problems exist and how to allocate resources in order to correct and prevent systemic problems.

## NASA will Study Ideas to Transform Earth Observations

NASA's New Millennium program has selected four concepts for further study as candidates for its Earth Observing-3 (EO-3) mission, including two concepts involving Goddard scientists.

Among the concepts selected was a proposal by **Del Jenstrom**, manager of Advanced Geosynchronous Studies at Goddard, for "Active large aperture optical systems to provide high resolution thermal imaging from geosynchronous orbit." **Jenstrom** will lead this study.

**Dr. James F. Gleason**, a member of the Laboratory of Atmospheres at Goddard, will work with **Dr. Jack Fishman**, a member of the Atmospheric Science Division, Langley Research Center, on a Langley led concept called "Geostationary tropospheric trace-gas imager."

The primary goal of the New Millennium program is to identify, develop and validate key instrument and spacecraft technologies that can lower cost and increase performance of science missions in the 21st century.

## *What is your role with the non-conformance and corrective action process?*

I serve as the system administrator. I run the NCRCA system, provide help desk services and provide training for Center personnel who will be using the system. I also present management reports to senior Center management regarding the types of problems being encountered on Center.

## *So NCRCA is something that all employees should become familiar with?*

Yes. Most employees are covered by the quality management system and will have some level of involvement with NCRCA.

They may write a non-conformance, be asked to review a non-conformance, or be assigned as a non-conformance leader or project administrator. The system relies heavily on the Center's e-mail system, so each employee could conceivably receive an e-mail message requesting input on a non-conformance issue.

## *Since this effort involves most of the employees at Goddard, how will employees be informed of their responsibilities?*

There were several ISO 9000 training sessions recently that all supervisors attended. Supervisors went through the GPGs. For many, this was their first exposure to ISO 9000.

After everyone is trained on ISO 9000, we'll then train folks on the non-conformance system. My office is providing two types of training to Center employees—general awareness training and specific project administrator and non-conformance leader training.

## *If there are questions after attending training, who would someone contact?*

Once employees begin using the NCRCA system, the assigned project administrator can provide assistance. Or, employees can contact me personally.

## *Is there anything else you will like for employees to know about the non-conformance and reporting system?*

I would like to encourage employees to go to the web site at: <http://scylla.gsfc.nasa.gov/cars/cgi-bin/index.cgi> and log into the system as a guest. Find out what the system is all about by viewing some of the non-conformance issues that are in the system.

Also, employees should know that effective Jan. 4, all non-conformance issues must be logged into the system. Employees will find that the system is user-friendly. So even employees who haven't received training should be able to create a non-conformance record.

## Goddard's 40th Anniversary

**Remember to check out Goddard's 40th Anniversary web site at <http://pao.gsfc.nasa.gov> for a calendar of events!**

## Health of Greenland's Glaciers Addressed in Study

Wallops Flight Facility researcher, **Bill Krabill**, says that Greenland's southeastern glaciers are rapidly thinning and their lower elevations may be particularly sensitive to climate changes.

Krabill's findings are featured in the March 5 *Journal of Science*.

For the complete story go to:

<http://www.wff.nasa.gov/pages/featurestory1.html>

 <b>staff</b>	Subscription Information: GSFC & WFF Mailing List Offsite Commercial Subscriptions Retiree Subscriptions
Executive Editor: James Sahli Managing Editor: Susan Hendrix Senior Photographer: Mark DeBord Submission deadline: Friday each week submissions subject to editing For additional information contact Susan Hendrix 301•286•7745	Contact: Gweny Durrah, Code 239 Jim Sahli, Code 130 Bob Wilson 301•422•8334