



Mission Success Bulletin

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<http://www.lockheedmartin.com/michoud/>

STS-114 Crew Visits ET Team

The Michoud Assembly Facility recently hosted the crew of STS-114 during a motivational/technical visit.

Commander **Eileen Collins**, accompanied by pilot **Jim Kelly** and mission specialists **Soichi Noguchi** and **Steve Robinson**, began their visit by bestowing 16 Silver Snoopy Awards to individuals for their long-term contributions to the External Tank Project (see page 2).

Along the way, the crew stopped to greet employees, thanking them for their contributions in the Columbia Accident Investigation Board (CAIB) and Return to Flight efforts.

"You motivate us," Collins told employees. "You are part of our team, and we are all striving for the same goal, and that is get the shuttle flying again."

STS-114, currently scheduled for launch no earlier than September 12, 2004, will be the first Space Shuttle flight since the *Columbia* accident - marking America's Return to Flight.

Originally designated as an International Space Station crew exchange mission scheduled in March of this year, STS-114 will now serve as a test flight to demonstrate on-orbit techniques and processes deemed essential by the CAIB



Flanked by STS-114 crew members, Ron Wetmore, vice president, External Tank Project, explains the modifications to ET-120.

before regular Space Shuttle flights resume.

The crew will provide a variety of photographic images of the ET after launch and test repair methods for Orbiter tiles and reinforced carbon-carbon leading edge panels.

The four-member crew may soon grow with the naming of additional astronauts to assist in these unique learning experiments.

"The Return to Flight mission is continually changing and includes setbacks and delays, which cause some of you to work long hours,"

Collins explained. "It is important for everyone on this team to realize that we are developing new concepts, ideas and procedures, and that we should draw motivation from the important challenge of space flight."

During a general assembly with Michoud employees, the astronauts shared their individual duties and responsibilities of the upcoming mission.

The crew then visited the Building 420 Modification Center for the technical segment of their visit. There, they inspected ET-120, the External Tank that will propel

them into orbit.

"We are thrilled to see our hardware," Kelly exclaimed as he walked atop the platform toward the tank's forward end.

Ron Wetmore, vice president, External Tank Project, carefully explained the various modifications of ET-120 to its crew.

Before departing the facility, Commander Collins took a final opportunity to express her crew's gratitude to the ET Team. "We thank you for all of your efforts, and remember when we go on our Return to Flight mission, we are taking all of you with us." ■



Michoud Supports OSP and Other Future Programs

Michoud Operations is pursuing several significant business opportunities in the competitive space business arena.

Recently, Lockheed Martin was one of three contractor teams competing for NASA's Orbital Space Plane (OSP). In a recent turn of events, however, Northrop Grumman dissolved its teaming agreement with Orbital Sciences Corporation to join with Lockheed Martin in competition against Boeing.

Orbital Sciences is negotiating with Lockheed Martin and Boeing in an attempt to secure a role on both teams.

OSP will initially support

the International Space Station (ISS) requirement for a crew rescue capability by 2008. Soon afterward, the vehicle will provide crew transfer and contingency cargo capability for supplies, food and other needed equipment to ISS.

Michoud Operations is supporting the Lockheed Martin team by providing design and analysis support and by building wind tunnel models for various proposal concepts.

"Our goal is to help the Lockheed Martin team win," said **Dan Ferrari**, manager, Business Development.

"We want to secure a

significant structural design and manufacturing role at Michoud, and make maximum use of the facility's existing infrastructure, skilled workforce and capabilities of the National Center for Advanced Manufacturing (NCAM)."

NASA plans to issue a Request for Proposal (RFP) for OSP design, development and production next month, with proposals due next March and an award announcement expected in August 2004.

Michoud also has submitted a proposal for a lead contracting role in the Force Application and Launch from Continental United States or

FALCON program for short.

FALCON is a joint Defense Advanced Research Projects Agency (DARPA)/Air Force program that calls for development of a reusable autonomous Hypersonic Cruise Vehicle (HCV), a Common Aero Vehicle (CAV) payload delivery system and a low-cost booster system - also called Small Launch Vehicle (SLV).

Both launch systems will be developed to boost the CAV munitions delivery system toward the target, with the SLV used at the outset of the program and the HCV to support next generation systems.

Michoud is bidding on the SLV part of the FALCON program.

A winner of Phase I will be announced this month.

"The near-term goal of FALCON is to develop and validate, in-flight, technologies for an affordable and responsive space launch vehicle that will provide a means of delivering a payload from the U.S. to anywhere on Earth within two hours," said **Mike Gnau**, manager, Business Development.

Phase II will be a separate procurement for a three-year design, build and flight demonstration program with a value of up to \$120 million.

"Like OSP, we intend to make maximum use of Michoud's existing infrastructure, workforce and NCAM to win FALCON," Gnau said. "And our development of hybrid rocket technology over the last 14 years will prove to be a safe, reliable, low cost and environmentally friendly propulsion system for SLV." ■



Seventeen employees receive Silver Snoopies.

The STS-114 crew recently presented Silver Snoopy awards to deserving employees for their outstanding work in the shuttle program. Front Row from left: Buddy Padgett, Terry Roche, Iris Davis, Charmaine Lemaire, Marie Barré, Dee Willick and Troy Miller. Back Row: astronauts Jim Kelly and Soichi Noguchi, Lavon Ladnier, Lloyd Breedlove, Willie Howard, L.J. Ledet, Jack Garrard, Tim McCaffery, Ed Dragon, Mike Moore, Jerry Bultman and astronauts Steve Robinson and Eileen Collins. Jim Feeley (pictured at right) received his Snoopy from astronaut Tony Antonelli at a subsequent occasion.



For more information on OSP, visit www.ospnews.com/
For more information on FALCON, visit the DARPA web site at www.darpa.mil/

Michoud Operations' United Way Campaign

October 13 - 24, 2003

Even in America, hardship remains a daily companion to many. In every community, both friends and neighbors can find themselves in real need through no fault of their own.

The needs and the reasons vary: after school programs for the children of working parents; home support for independent senior citizens; special assistance for the sick or handicapped; or a safety net for those affected by fire, floods or other disasters.

One organization lends a hand to provide local solutions to local problems: the United Way. The strength of the United Way, however, is the support of individuals who see a need and take steps to meet it through their donations.

Each year, Michoud Operations employees have opened their hearts to their neighbors and communities by generously donating to the United Way.

A community-based, community-run organization, United Way assists people and non-profit agencies in our local area. When you give to United Way, the money you donate stays where you live.

Every year United Way campaigns raise funds for dozens of local organizations like the American Red Cross, Boy & Girl Scouts, St. Tammany Association for Retarded Children (STARC), Big Brothers/Big Sisters, Second Harvesters Food Bank, YMCA/YWCA, Cancer Association of Greater New Orleans and the United Negro College Fund.

These United Way agencies



and others have been able to help thousands in our communities, in large part, because of the generosity of your past contributions.

Nearly one in three people in our area is helped in one way or another by the health and human care programs funded through the United Way.

Last year, Michoud employees raised \$284,000 for the United Way. This year, the campaign begins on

October 13 and continues through October 24. Again, this year's campaign is on-line (see table below).

Michoud will once again offer employees a chance to win prizes for their participation (see box below).

Employees can select from the following United Way Agencies:

- * UW-LA New Orleans
- * UW-CA Los Angeles
- * UW-FL Brevard
- * UW-LA St. Charles
- * UW- MS Southern Mississippi
- * UW-AL Madison County

Your contributions make the good works of the United Way agencies possible, many of which receive no government funding. It is up to us to make certain that these and other vital resources are available in our community when a crisis arises.

Contributions may be directed to the United Way agency of your choice. A new designation form must be filled out each year. Please see your departmental coordinator for forms or call the United Way in your area. ■

To access LMPeople, you'll need your User ID and Password. United Way coordinators at Michoud are available to assist you if necessary. To donate, follow these steps:

Go to the Michoud Operations Intranet or Gumbo (<http://gumbo/>)

- Look to the left and click on **Human Resources**
- Then click on **LMPeople**
- Type in your **User ID and Password**
- Select **ACCT02** as domain
- Then click on **"Click Here"**
- My Money/Payroll Data
- Charitable Contributions

United Way Campaign Incentives

Prizes available from Michoud Operations to participating employees:

- (20) \$50 Gift certificates to a selection of outstanding local restaurants
- (10) \$100 "I" Bonds
- (6) Pairs of Club Level Tickets to a New Orleans Hornets Game
- (5) \$100 "I" Bonds per month for sustaining contributors

Prizes available from area United Way for Supportive Level contributors:

- A 2003 Honda Civic - (Courtesy Royal Honda Olds Mazda)
- \$500 in gasoline - (Courtesy Spur Gasoline, Murphy Oil USA)
- Two nights at Broadwater Resort - (Courtesy of President Casino, based on availability, holidays excluded)

Communications Survey



We want to know how we can better provide timely information to you. Please take a few minutes to complete the survey, then return it via company mail to Communications, Department 3030. The first 50 surveys returned receive a gift. To be eligible for entry prizes, please provide:

Name _____ Dept. No. _____

The *Mission Success Bulletin* is published every other month and contains information about Return to Flight, program status, new business, promotions and awards, other general Michoud news and employee anniversaries.

1. What do you think about the frequency of the *Mission Success Bulletin (MSB)*?

Not often enough _____ About right _____ Too often _____

2. Do you receive the MSB?

Yes _____ No _____

3. Do you read a paper copy of the MSB?

Never _____ Sometimes _____ Usually _____ Always _____

4. Do you read the electronic version of the MSB on the Intranet?

Never _____ Sometimes _____ Usually _____ Always _____

5. Check the news you like to see in the MSB.

____ ET Program ____ News from Across NASA
____ New Business ____ Safety
____ Employee News ____ Community Relations
____ Shuttle Program News ____ Employee Milestones

6. Other thoughts about MSB?

Info SPACE is an electronic newsletter distributed Mondays and Wednesdays or whenever important news occurs.

7. How often do you read *Info SPACE*?

Never _____ Sometimes _____ Usually _____ Always _____

8. How often do you link to more information or to see a photo?

Never _____ Sometimes _____ Usually _____ Always _____

9. Is the real-time information provided by *Info Space* important to you?

Yes _____ No _____

10. Do you read *Info SPACE* on the Intranet?

Never _____ Sometimes _____ Usually _____ Always _____

11. How often do you read special editions of *Info SPACE* that contain executive messages, or real-time news alerts?

Never _____ Sometimes _____ Usually _____ Always _____

12. Check the news you like to see in *Info SPACE*?

____ Return to Flight ____ NASA News
____ Lockheed Martin News ____ Healthcare & Benefits
____ Executive Messages ____ Employee Awards
____ Special Events ____ Discount Promotions
____ Volunteer Activities

13. Other thoughts about *Info SPACE*?

ETV (employee television) is an enhanced EWS system updated several times daily that includes information about Lockheed Martin, NASA, news, weather and sports.

14. How often do you see ETV or EWS?

Rarely _____ Daily _____

15. How often do you stop and read the news items?

Never _____ Sometimes _____ Daily _____

16. How frequently should news items change on the screen?

Less Frequently _____ About right _____ More frequently _____

17. What attracts more attention on ETV?

News crawl across bottom of screen _____
News items/images _____ Both _____

18. Check the news you like to see on ETV?

____ Michoud Operations News ____ NASA News
____ Aerospace Industry News ____ Corporate News
____ National/Local News ____ Weather
____ Sports

19. Other thoughts about ETV?

On Michoud's Gumbo Intranet, information is displayed on the banner, in large picture format, on the Return to Flight page and in "What's New."

20. Do you read the Gumbo Intranet?

Never _____ Sometimes _____ Usually _____ Daily _____

21. Do you find useful information on the new Return to Flight page?

Yes _____ No _____

22. Do you ever go to "What's New" under "Announcements?"

Yes _____ No _____

23. Other thoughts about Gumbo?

Tear off and mail to Communications, Dept. 3030

UWS Tool “Stirs Up” Interest with ET Demo

Representatives from NASA, Boeing, Northrop Grumman and Bollinger Shipyards recently visited Michoud to watch a final ET Quarter Dome weld demonstration as part of the Next Generation Launch Technology Risk Reduction program.

The Universal Weld System (UWS) - the latest tool addition to the National Center for Advanced Manufacturing (NCAM) - successfully welded three ET Dome gore panels together.

The exhibition showcased Michoud’s ability for large scale complex curvature welding, a culmination of 15 months of work that involved Self Reacting Friction Stir Weld (FSW) process development and two hardware demonstrations.

The Dome gore panels welded as part of this demonstration were ET Liquid Oxygen Tank 2195 aluminum-lithium panels. This is significant for two reasons; first, the technology has been demonstrated on complex curvature hardware representative of ET Dome and Ogive gores. Second, it brings closer the potential to reinstate 2195 on ET Domes, which would reduce overall ET weight. The UWS was sized with the potential of future ET production in mind.

The demo marks a significant contractual milestone under the NASA-funded project, worked through NCAM and the University of New Orleans.

“The demo signifies that Michoud has advanced this technology to a point that future programs would have less work to do to bring it to the level of implementation in a production environment,” commented **Jules Schneider**, FSW program manager.

Michoud is pursuing other potential applications, ranging from future NASA launch vehicles to shipbuilding and aeronautical programs. NASA, Lockheed Martin and the State of



David Chua (left) of MTS Systems, which built the Universal Weld Machine, and Wes Martin, Program Management & Technical Operations, inspect the Self Reacting Friction Stir Weld head prior to the full-scale demonstration.

Louisiana worked together to purchase the UWS tool.

Other recent NCAM upgrades include a new environmental enclosure building around the Fiber Placement Machine (FPM) to provide temperature and humidity control; and a state-of-the-art portable dimensional inspection system that measures large parts without the need for a conventional fixed installation coordinate measuring machine.

Several projects are currently in procurement. One is a universal automated Non-Destructive Evaluation system that inspects both composite and metallic parts for subsurface defects. Another is a large-scale 5-axis high speed machining system that will dramatically increase material removal rates and reduce part-cutting time, thus reducing production costs. ■

Michoud Gets Serious about Computer Use

Steve Stefancik carries several large case files at least four inches thick. “These contain material and pictures of websites that our employees have visited,” says the Information Technology Systems (ITS) manager.

Stefancik forwards information to an executive committee that investigates whether employees spend too much time visiting inappropriate Internet sites that aren’t job-related.

Specifically, NASA and Lockheed Martin policies

prohibit employees from using government and company equipment to visit sexually explicit, gambling, hate and chat room sites or to give their e-mail address to one of these sites. Employees also are prohibited from using work computers to conduct another business.

If the executive committee determines there is excess or inappropriate usage, it will send a letter to the employee and/or supervisor or take more drastic action. Because of several recent incidents involving pornography, management will increase monitoring of employees’ access to these types of sites.

Stefancik says some employees try to avoid

Internet detection through elaborate means such as setting up host sites or using other protocols to download data. Sometimes they download software to wipe their system clean.

“But we can track it all. When they cross our firewall, a record is generated, and we can see what they do. NASA can see it too.”

ITS software categorizes other web sites that employees visit such as entertainment, shopping, travel, sports, general news and vehicles.

“We monitor our data to see how full the ‘pipeline’ is getting,” Stefancik says. “If we ever ask NASA for more bandwidth, we better be using what we have properly.” ■

*For the latest info,
go to...*

*General RTF News
on the Gumbo
website*

*Return to
FLIGHT*

Milestones

Employees celebrating anniversaries
with Lockheed Martin in September and October

30 years

Jerry Bultman
Warren Schrieffer
Randall Tassin

25 years

Charles Arthur
Bettye Bell
John Blevins
Robert Burge
Dexter Dennis
Dolores Guillmette
Albert Hale
Michael Howard
Barney Lampp
Karen Lewis
Patricia Malphurs
Lawrence Morris
Perry Morton
William Ory

Brian Pearson
Scott Phillips
Geneva Robertson
David Rodrigue
Antoinette Sandifer
Darrilyn Schexnayder
Timothy Smith
William Sukman
Donald Wallen

20 years

Robert Carey
Joseph Colombo
Jerry Craft
Richard Evans
Arthur Fauver
Guy Jackson
Elvis Joseph
Charles Kennon
Richard Knight

Martin Kruger
Andrew Laurant
Emile Lehmann
Douglas Lemoine
Jimmy Miller
Patti Murphy
Michael Quiggle
Ronald Smallwood
Terry Spiehler
Jerry Tines

15 years

Glenn Bunch
Terrence Burke
Howard Cole
Susan Craddock
Sharon Dillon
Frank Duncan
Eugene Fourcade
Frank Gause

Tommy Imbraguglio
Chad Jones
Joseph Lincoln
Michael Mathes
Joseph McCormac
Domingo Reyes
Keith Savoy
Danny Wild

10 years

Larry Ivey
George Page

5 years

Miles Arthur
John Hall
Gregory Jones
Gene Lassus
Gregory Schieleit
Morrie Voss

Honorees recognized at SFA anniversary in Washington

Being named an Honoree is one of Michoud Operations' highest forms of recognition. These 14 Honorees celebrated Space Flight Awareness' 40th anniversary in Washington D.C. recently. Front row from left: Robert Gallagher, Philip Kopfinger, Tony Napolitano, Shy Parikh, Patrick Pansano and Robert McKenzie. Back row: Jerry Fabre, Matt Wallo, Michael Simpson, Richard Harris, astronaut Frank Calderio, Greg Lain, Glenn Schmitt, Fulvio Manto and Brian Knipfing.



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