

Space Systems Company—Michoud Operations

LOCKHEED MARTIN

We never forget who we're working for®

Mission Success

# Bulletin

October 22, 2007

on-line

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

## Discovery and ET-120 ready to fly

It has been a long time coming for ET-120. Consider that the tank has been delivered three times to NASA and mated to three Orbiters. Once again, though, we can say that it's at the pad and ready for flight.

Scheduled to lift off at 10:38 a.m. October 23, the STS-120 mission will propel *Discovery* toward the International Space Station where it will deliver the Harmony connecting node in preparation for the European and Japanese modules to come.

ET-120 has taken the long path to space. Its first DD250 date came on July 22, 2002. But after the *Columbia* accident and subsequent investigation, the tank underwent extensive Return to Flight modifications and was picked to be the first RTF tank.

On December 31, 2004, Lockheed Martin provided ET-120 a second time to NASA, and the tank shipped to Kennedy Space Center where it was first mated with *Discovery* on March 29, 2005.

ET-120 underwent a tanking test and a launch attempt in the spring of 2005 at KSC before NASA decided to delay the launch and switch tanks due to issues relating to potential ice debris, ET diffuser, and Engine Cut-Off sensor anomalies. As a result, ET-120 de-mated from *Discovery* and then mated a second time on July 22, 2005 to *Atlantis* to prepare for the second RTF flight.

Meanwhile, *Discovery* launched on the first RTF mission on July 26, 2005 with ET-121 providing the fuel to orbit. The launch incurred foam loss from a Protuberance Airloads (PAL) Ramp, so ET-120 de-mated from *Atlantis*. The tank was later returned home to Michoud post-Hurricane Katrina in October 2005 for more testing and retrofitting.

Technicians removed ET-120's PAL ramps, and replaced 14 of 16 Ice Frost Ramps with a new design underneath the ramps on the Liquid Hydrogen Tank. The tank's manually-sprayed Thermal Protection Systems underwent a fundamental redesign.

On July 23 of this year, ET-120 was delivered for a third time to NASA and immediately shipped to KSC.

Several weeks later on the STS-118/ET-117 launch August 8, two pieces of debris came off the Liquid Oxygen feedline support brackets. One piece hit a thrust strut at the bottom of the tank and bounced up into *Endeavour's* heat shield, creating a small divot/damage site.

Michoud sent a special team to the Cape that collaborated with KSC Operations and quickly worked a bracket retrofit on ET-120 in one week. This kept STS-120 on schedule and for the third time ET-120 mated with an Orbiter, this time *Discovery* on September 23, in preparation for its October 23rd launch.

A similar team traveled to KSC several weeks ago to work the bracket retrofit on ET-125, the launch-on-need tank for this mission. ET-125 is scheduled to launch December 6.

So at long last after many modifications and journeys, ET-120 — with *Discovery* at its side — stands at the pad ready. Godspeed. ■



# Karas answers employee questions at general assembly

*Human Space Flight Vice President John Karas spoke to employees at a General Assembly October 4 to thank them for their excellent performance on the ET project. Despite the recent disappointment on the Ares I Upper Stage program, Karas noted that Lockheed Martin management is looking for opportunities to bring additional work to Michoud. He referred to the upcoming Ares V program as the most important of all Constellation vehicles to build, and stated that Lockheed Martin will work very hard to win it. In response to a question from Ross Kaplan (right), Karas said that building an off-site Lockheed Martin facility was not a priority, but something the company would consider if it meant holding onto jobs. Karas said his goals are to retain talent, fly out the shuttle successfully, and win Ares V.*



*Karas answers an employee question.*

*Answering a question from Mark Pokrywka about the earliest and latest dates that Ares V work could begin here at Michoud, Karas replied there might be a decent chance that Ares V could move to the left and the proposal be submitted two years from now.*



# Leaders listen during Ask Interview with Michoud employees

In 2006, Lockheed Martin – Michoud Operations rolled out the Stay Interview process, which focused on post-Katrina retention by determining what employees liked or disliked about their work environment and by strengthening the lines of communication between leaders and employees.

This year, the Stay Interview process transitioned to the Ask Interview. The intent of the Ask Interview was to further candid communication between leaders and employees. Through the Ask process, leaders had the opportunity to listen to employees' questions or concerns about their current environment and perception of the future.

The Ask Interview extended to all employees, and leaders conducted the interviews. Over 1,700 responses were entered into the Ask response database. Responses indicated that, on average, employees are reasonably satisfied with their current work environment. They feel that their opinions are considered and valued; that they are appropriately rewarded for good work; and that their career aspirations are understood. Overall, employees also believe that they can achieve their career goals with Lockheed Martin.

Although employees are generally satisfied with their current environment, many expressed concerns about the future. Job security tops the list of concerns. The second concern is the uncertainty associated with the impending Michoud Operations & Maintenance (MOM) contract transition and Space Shuttle fly-out. Third, employees have varied concerns about stability, ranging from financial stability and New Orleans-area

quality of life, to program and job stability. Lastly, many employees stressed the significance of remaining with Lockheed Martin, primarily pertaining to meeting retirement or tenure milestones.

Facilities employees share these concerns, but they also have some more specific concerns relating to the uncertainty surrounding the successor contractor – such as will the successor contractor have comparable health benefits and pay levels? Will the same quantity of job opportunities be available?

Human Resources presented the Ask Interview results in detail to leaders who participated in an off-site strategic meeting September 27. Leaders engaged in facilitated discussions to determine how they would respond to case studies that were documented, anonymous summaries from actual Ask Interview responses.

Based on informal feedback from leaders and employees and on the number of responses entered into the database, the Ask Interview process appears to have been successful. Although the numbers and comments in the Ask database are helpful, the greatest benefit lies in enhanced interpersonal communications that enable leaders and employees to continue to sort through facts, options, and choices that best support the needs of our workforce and our customers. ■

## ET-120 Delivery Dates

July 22, 2002  
December 31, 2004 (RTF 1)  
July 23, 2007 (RTF 2)

## ET-120 Orbiter Matings

| <b>Orbiter</b>   | <b>Date</b>    | <b>Mission</b> |
|------------------|----------------|----------------|
| <i>Discovery</i> | March 29, 2005 | STS-114        |
| <i>Atlantis</i>  | July 22, 2005  | STS-121        |
| <i>Discovery</i> | Sept. 23, 2007 | STS-120        |





## Saturday, November 3 Fontainebleau State Park

- Opens at 8 a.m. and closes at dark
- Employees will receive 4 food tickets and a car pass to the park
- 20 free carnival rides for adults and children
- 20 employee-sponsored games – all proceeds to Children’s Hospital
- Face painting from 10 a.m. – 3 p.m.
- Cabbage Ball Tournament
- Free soft drinks and water
- Free hot dogs and hamburgers from 11 a.m. – 3 p.m.  
(food tickets needed for hamburgers)
- Concession stands will sell popcorn, cotton candy and candy apples
- Employees encouraged to bring picnic food (grills on-site)
- Beer \$1 per 14-oz cup
- Bands – 11:30 a.m. – 2:30 p.m. – “4 Unplugged”  
3:00 a.m. – 6:00 p.m. – “New Orleans Ragtime & Dixieland  
Jazz Band”
- First aid (ambulance) on-site staffed by paramedic/nurse
- Please **do not bring pets** or glass containers to Fall Festival
- Rain date – Sunday, November 4

## United Way 2007-2008 Michoud Campaign Incentives

### Ten (10) \$500 Cash Prizes *(before taxes)*

To be awarded at 2008 Kickoff  
*Qualification - 2007-08*  
*Sustaining Michoud UW contributor*  
*\$4 a week minimum*  
*VPs / Directors not eligible*

### Cruise for Two

To be awarded at 2008 Kickoff  
*Qualification - 2007-08*  
*Sustaining Michoud UW contributor*  
*\$500 or more annual contribution*

### \$500 in Gasoline

*(Shell Oil)*  
*2007-2008 Supportive Level*  
*Contributors in the*  
*Greater New Orleans area*

### Trip for Two

*2007-2008 Supportive Level*  
*Contributors in the*  
*Greater New Orleans area*

### New Honda Automobile

*2007-2008 Supportive Level*  
*Contributors in the*  
*Greater New Orleans area*

## Donate Today!

Follow these steps:

Go to  
<https://www.LMPeople.com>

- Log on using your user name and password
- Click to expand Pay/Benefits section, go to Payroll Deductions
- Click on Charitable Contributions

See your coordinator for new IRS record-keeping rules for charitable deductions



# Kingsley House: an example of United Way at work



*Executive Director Keith Leiderman provides a tour of the facilities at Kingsley House, a United Way partner agency, for the Lockheed Martin group.*

To truly understand the impact of a contribution to United Way, just look around. It should be no exaggeration to say a majority of Michoud Operations employees have been helped by a United Way agency or one of their programs within the past two years.

But even without the devastation of a recent hurricane, the need and the help continue today.

As Lockheed Martin begins its 2007 United Way Campaign, members of the Michoud campaign staff took a field trip to Kingsley House to view from a different perspective how United Way works for our community.

Founded in 1896, the mission of Kingsley House is to educate children, strengthen families, and build community. The facility was the first



*Paula Hartley meets a little friend at Kingsley House.*

care agency in New Orleans to integrate in 1964, despite the fact that it was illegal at the time. Since 2005, Kingsley House has stepped up as a saving grace to thousands of families who were victims of Hurricane Katrina's destruction.

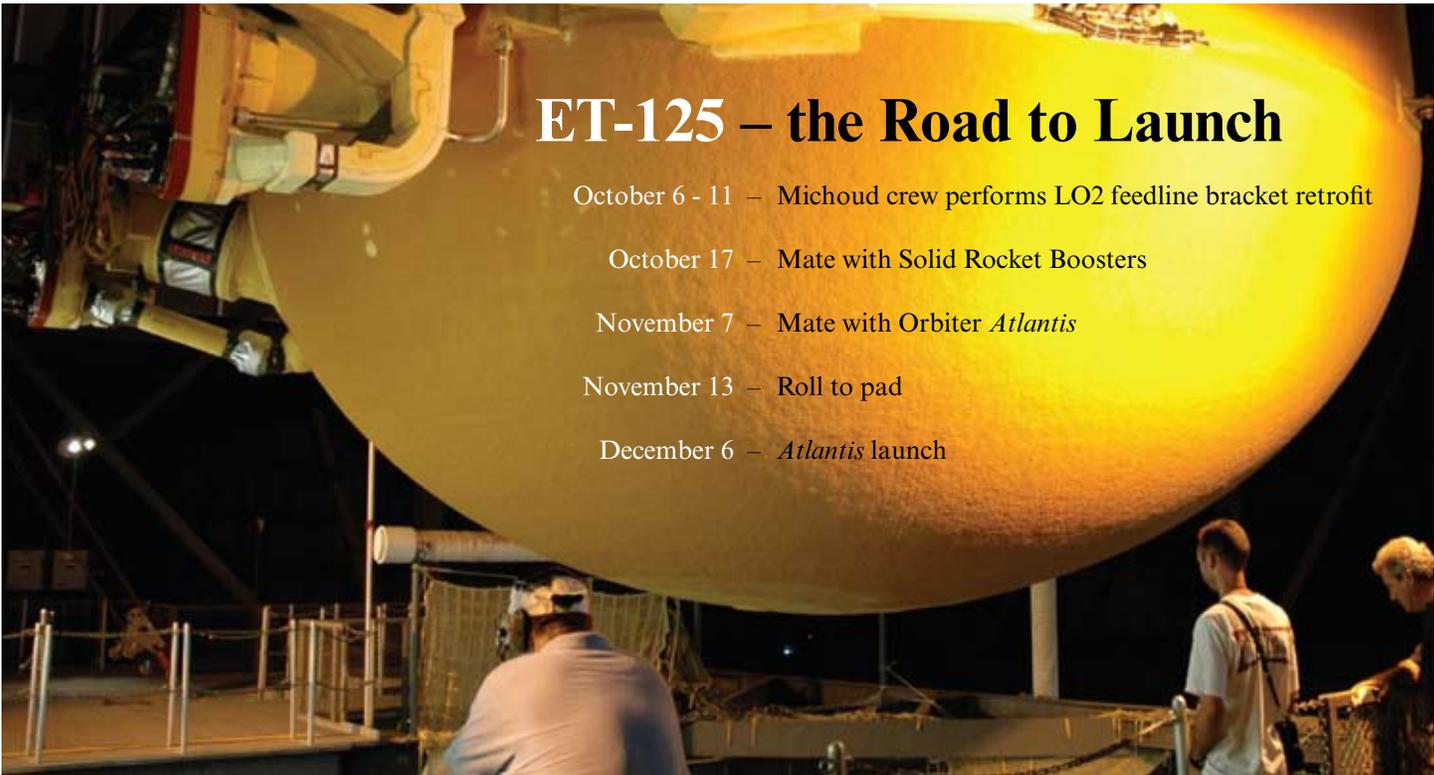
Today, the agency offers several opportunities to families in need, including a Head Start Program for pre-school children, an After-School Program, Teen Services, Adult Services, Mobile Medical Services, and a Family Counseling Program.

After campaign members interacted with the children and seniors served by Kingsley House, **Paula Hartley**, chairperson of Lockheed Martin's United Way campaign, was impressed. "Partnering with United Way, Kingsley House ensures the future of our great city by providing a hot meal, a warm smile, education, opportunity and compassion to our young children and our elderly.

"In a city devastated both economically and socially by the effects of Katrina, the staff at Kingsley House has demonstrated that just a handful of folks with incredible passion, optimism, and resources can prevail," Hartley summed up. "My heart was touched as I witnessed their true sense of family!" ■



*Melanie Enxing plays with one of the children.*



## ET-125 – the Road to Launch

October 6 - 11 – Michoud crew performs LO2 feedline bracket retrofit

October 17 – Mate with Solid Rocket Boosters

November 7 – Mate with Orbiter *Atlantis*

November 13 – Roll to pad

December 6 – *Atlantis* launch

---

## Marshall evaluation team visits Michoud facility



As a finalist for the 2007 Marshall Space Flight Center Contractor Excellence Award, Michoud Operations hosted a NASA evaluation team visit on October 2. Gathered in the Model Room are from left: Paula Hartley, Lockheed Martin team lead and director, Safety & Product Assurance; Dave Spacek, team lead, MSFC Safety & Mission Assurance; Andrea Nunn, Office of the Chief Information Officer; John Chapman, ET project manager; Irene Taylor, Safety & Mission Assurance; Willie Love, Office of Diversity & Equal Opportunity; Cheryl Harrell, Office of the Chief Financial Officer; Philisha Byrd, Exploration Launch Office; Steve Tesney, Safety & Mission Assurance; and Hal Simoneaux, director, Production Operations. NASA will announce the winners in each category later this year, with awards presented at MSFC in early 2008.

# Lockheed Martin sends student to World Space Week

*New Orleans teen takes unforgettable zero-gravity flight*

It started out like any other day with clean, crisp skies in Las Vegas – perfect flying weather. Honors student **Devin Green** from Eleanor McMMain High School stood on the airport tarmac in Las Vegas ready for the adventure of her life – a zero-gravity flight, similar to the one the astronauts experience in training.

Devin was attending World Space Week, courtesy of Lockheed Martin Space Systems – the sponsor of the October 4-7th conference in Las Vegas. As part of the Youth Inspiration Project that inspires students to excel in school, she also qualified for the zero-gravity plane ride that simulates the weightlessness of space travel.

Selected from a number of student candidates across New Orleans by Lockheed Martin, Devin had the chance to fly like Superman, flip like an Olympic gymnast, and enjoy 10-times more hang-time than the world's best basketball player. During the flight, she saw water hover before her eyes. Releasing a handful of M&M's, she chased them down in mid-air like a game of human Pac-Man.

Devin joined students from eight other countries on the flight from Bahrain, China, Colombia, the Czech Republic, Italy, Nigeria, Norway, and Thailand in recognition of the 50th anniversary of the Space Age and to symbolically launch humankind's next 50 years in space.

"It's really an honor and a privilege to be representing my school, city, and country at World Space Week," she said. "Especially, everything we've been through with Hurricane Katrina as a city."

A senior and president of McMMain's FIRST Robotics team, Devin lived with her family in the Ninth Ward and stayed in the city during Hurricane Katrina. When the levees failed, family members evacuated by pushing their truck through flood waters to safety. After spending several months in a Dallas school, she returned to McMMain when it reopened in January 2006.

Prior to Devin's trip to Las Vegas and the zero-gravity flight, the McMMain FIRST Robotics team toured the ET production line. **Wanda Sigur**, ET program manager, congratulated her and the team on their accomplishments, and **James Moffett**, Weld Operations senior manager, provided a tour for the group which included several FIRST Robotics mentors – **James Batiste**, **Raynard Bender**, **Gilbert Bennett**, and **Thioreau Hawkins**.

McMMain's FIRST Robotics team, also sponsored by Lockheed Martin, won the "Team Spirit" Award earlier this year at the Bayou Regional Competition in New Orleans. For more information about World Space Week, go to [www.worldspaceweek.org](http://www.worldspaceweek.org) ■



*McMMain High student Devin Green (left) of New Orleans shares a floating experience with fellow World Space Week participant Sunaree Naeramit of Thailand as they encounter weightlessness aboard a Zero G flight.*

# NASA Safety & Mission Success Awareness Day 2007

Tuesday, November 6

Stand-down – first half of day during 1st shift  
with activities for 2nd & 3rd shifts

Guest speaker: retired astronaut **Eileen Collins**

An annual event emphasizing Safety awareness

This year's focus – Traffic Safety  
with additional emphasis on  
Motorcycle Safety, Seatbelt Check, Safety Jeopardy  
& Automotive Safety sessions



## Milestones *Employees celebrating anniversaries with Lockheed Martin in November 2007*

|  |  |   |   |   |
|--|--|---|---|---|
| <b>35 Years</b><br>Philip Therrien   | Steven Hanberg<br>Oba Ladnier<br>Robert Michel   | Dennis Collier<br>Susan Foozer<br>Ronnie Fortenberry                | Charles Carpenter<br>Clarence Creggett<br>Guy Dazzo   | Beatrice St. Amant<br>Charles Thomas                                |
| <b>30 Years</b><br>Lawrence Allen<br>Olympe Augustin<br>Eric Bennett<br>Brad Cartwright<br>Jerry Graves<br>O'Neal Peters | Carolyn Monteith<br>Jeffrey Norris<br>Lionel Roche'<br>Cheryl Troullier<br>Graf Weller<br>David Wilson | Russell Harris<br>Linda Laborde<br>John Padgett<br>Roger Reinmuller | Alfous Ferrier<br>George Grass<br>Jules Hunt<br>Howard Jones<br>Arthur Kennedy<br>Russell Mitchell<br>Mark Moore<br>Allen Narcisse<br>Alfred Olivier<br>Matthew Robertson | <b>5 Years</b><br>Vaughan Hart<br>Richard Stephens<br>Eladio Torres |
| <b>25 Years</b><br>Thomas Barrett<br>Brian Cerny   | <b>20 Years</b><br>Marie Barré<br>Darren Bergeron<br>Paul Chapman                                      | <b>15 Years</b><br>Steven Muchnick                                  | <b>10 Years</b><br>Russel Bergeron<br>Dameon Bickham  |   |

## Emergency Information

To find out work status during hurricane season at Michoud, go to [www.mafstatus.com](http://www.mafstatus.com)  
or call 257-1MAF or 1-800-611-3116, check ETV or listen to WWL-870 radio or visit [wvl.com](http://wvl.com)  
or watch WWL-TV, Channel 4 or go to [wvlv.com](http://wvlv.com)

## Mission Success Bulletin on-line

LOCKHEED MARTIN 

Lockheed Martin Space Systems Company – Michoud Operations

Volume 26, Number 10 • October 22, 2007

**Director of Communications:** Marion LaNasa

**Editor:** Harry Wadsworth

**Graphics, Photography:** Steve Boxall, Chip Howat, Jon Irving, Shannon Jurado, Ryan Martin, George Shelton

**Contributors:** Marjorie Bilinski, Chip Howat, Linda Leavitt-Bell, Michelle Morlier

*Mission Success Bulletin* is published by the Communications Department.