



jsc2003e54128 Photo by Bill Stafford

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Seeking solutions

The KC-135 aircraft provided a microgravity environment for rehearsing spacewalk activity tasks for repairing damaged Shuttle tiles. Here, Astronaut Scott Parazynski injects the cure-in-place ablator into a damaged section of thermal tiles.

For more information about Johnson Space Center's role in NASA's Return to Flight Implementation Plan, please see pages 4-5.



Finding happiness

As we approach the end of October, the date Nov. 10 starts preying on my mind. To most folks that date is of little significance, but for Marines it's a big deal: It's the birthday of our beloved Corps. On or near that date all over the

world, no matter where they are – in bases, embassies, big-city hotels, ships or even foxholes – Marines dressed in their best will take time out to cut a birthday cake with a Marmaluke sword, recognize the youngest and oldest Marines present and read a message written in the 1920s by Gen. John H. Lejeune who was then their Commandant. If the situation permits, they will also celebrate with great vigor!

Why do Marines love their Corps? Why do they put up with low pay, grueling training and long separations from family, and still reenlist for more? Why are they willing to face death and give their lives to help their buddies? Why is their motto "Semper Fidelis" (Always Faithful) so sacred to them? My answer to these questions: Because being Marines makes them happy.

In his book *If Aristotle Ran General Motors*, Tom Morris states that the compelling motivation of all people is their desire for happiness. While many of us equate happiness with a combination of wealth, fame, power and the pleasure we can derive from possessing them, Morris concludes that the real key to happiness is "PARTICIPATION IN SOMETHING FULFILLING."

What is a fulfilling activity? It takes Morris an entire book to answer this question, but simply stated, a fulfilling activity is one that satisfies the four dimensions of human experience:

- 1) The intellectual dimension, which aims at truth.
- 2) The aesthetic dimension, which aims at beauty.
- 3) The moral dimension, which aims at goodness.
- 4) The spiritual dimension, which aims at unity.

I doubt that any of us will become rich or famous or powerful because of our activities here at Johnson Space Center. However, we do have the satisfaction of being part of a noble endeavor that is unique in history. A noble endeavor that is incredibly challenging, that embodies great risks and that requires us to be the bearers of truth no matter how unpopular that might make us. A noble endeavor that requires us to use our very best talents and to pull together in unity to get the job done. A noble endeavor that will culminate in an instrument of majestic beauty that will contribute to the betterment of humankind.

Being part of this noble endeavor makes me very happy! I hope you feel the same.

Beak sends...

APPEARING THIS MONTH IN OUR

Guest Space

Col. James Halsell

Lead of the Space Shuttle Return to Flight Planning Team



With the release of the first iteration of the NASA Implementation Plan, we have reached a milestone in our Return to Flight efforts: we are moving forward from planning to action. We now know where we need to go and how we can get there.

The Implementation Plan is the way that we will communicate to the rest of the world about how we're going to return to flight. It will also be a way for us to gauge our own progress. Copies of the Implementation Plan can be found online at <http://www.nasa.gov/news/highlights/returntoflight.html>.

Our Return to Flight Plan has two key elements: technical and human. The first part focuses on engineering and technical improvements, while the second part focuses on the NASA culture, management and decision-making. Some of these actions are called for in the *Columbia* Accident Investigation Board's report; others respond to needs that we have identified internally to "raise the bar." When we launch the Space Shuttle again, we will not only have met all of the CAIB Return to Flight requirements, we will have gone beyond them.

Many people throughout NASA have been working on parts of the technical areas of the Plan for a long time, and we added a number of new elements after the final CAIB report was released. Most of the new areas deal with the critical issues of management and culture, things that are harder for NASA to address. Because we are only now beginning to address these complex issues, our plans will evolve over the next several months as we prepare to Return to Flight. As we move forward, we will be working together to ensure that our management, culture and decision-making skills are on par with our technical expertise.

Some of the key themes on which we are focusing in each area are:

Improving the NASA culture

- Strengthening engineering and safety support
- Improving communication and decision-making
- Strengthening the Shuttle management organization
- Managing the Shuttle as a developmental vehicle
- Enhancing our benchmarking with other high-risk organizations
- Expanding technical and cultural training for mission managers

Returning safely to flight

- Eliminating critical ascent debris
- Improving our ability to assess vehicle condition and operational status
- Providing the capability to repair the thermal protection system on orbit
- Enhancing crew safety by developing procedures for keeping the Shuttle crew on the International Space Station if they can't return safely to Earth and by applying lessons learned to improve crew survivability

Enhancing our technical excellence

- Hardening the Shuttle against minor damage
- Improving vehicle processing
- Extending the Shuttle's life
- Addressing the risk of public overflight
- Improving the Certification of Flight Readiness process

As this list demonstrates, the work that we are doing goes beyond the Space Shuttle Program and Johnson Space Center, touching all areas of NASA. This NASA-wide effort is building new bridges among different centers and programs as we work together to Return to Flight. We still have hard work ahead of us to ensure that the changes we identify are implemented and institutionalized throughout the Agency. But with the talent, experience, hard work and dedication of all of NASA and our contractors, we can and will accomplish our shared goal of flying safely again.

As we move forward, we need to remember that the Implementation Plan is going to change as we learn more and work more on the issues that we, and the CAIB, have identified. There are no shortcuts; we have to consider all of the options for each challenge, both technical and human, and go through the process of finding the best solution. I am confident that we will; and when we do, we will know that we have honored the legacy of the *Columbia* and her crew.



Employees encouraged to use JSC Lessons Learned Database

The Johnson Space Center Lessons Learned Database (LLDB) is active and ready for new lessons to be recorded. The site can be accessed from the JSC homepage or directly at <http://iss-www.jsc.nasa.gov/ss/issapt/lldb/>. This has been a challenging year with some projects ending and new projects emerging. Passing along past experiences can be a great help to those charged with these new programs and projects. All employees are encouraged to document their experiences in the LLDB.

For more details on using the LLDB, visit JSC Features at www.jsc.nasa.gov/jsfeatures.

An attitude of gratitude

Combined Federal Campaign gives employees a chance to make a difference

By Melissa Davis

FOR EIGHT MONTHS,

the NASA Johnson Space Center family has experienced an outpouring of community support in response to the *Columbia* tragedy. Now, employees have a chance to say "thank" you in a big way through the JSC Combined Federal Campaign (CFC).

The CFC is an annual fund-raising drive conducted by federal employees in their workplace each fall. Each year federal employees and military personnel raise millions of dollars through the CFC that benefit thousands of nonprofit charities.

The JSC CFC, which is the second-largest CFC in the Texas Gulf Coast Region, runs Oct. 14 through Nov. 14. This year's goal is \$580,000.

The theme for the CFC is "What Makes America Great." The NASA family has benefited from much of that greatness following the *Columbia* tragedy, said Truda Furr, Human Resources Specialist and CFC Chairperson.

"When you consider your level of giving, please reflect on how the many charities and local communities gathered to help our NASA people in our time of need after Feb. 1," she said. "Many of us saw firsthand the generous people that came together to support us. The stories are too numerous to share all of them."

In addition to returning the support NASA received from a number of service agencies during the *Columbia* tragedy, employees never know when they will need such agencies for personal reasons.

"Why should we give? That is an often-asked question at Combined Federal Campaign time," Deputy Center Director Randy Stone said. "The answer is simple: we are blessed with good jobs and it is the right thing to do. Most of us will never need any of the services funded by the CFC, but someday you might, and you will be glad you were generous."

The CFC is a designation campaign, which means a person can designate a donation to one specific charity or as many as five different charities. There are more than 1,800 local, national and international charities listed in the CFC Agency Guide.

"I encourage each of you to examine the many ways you can make a difference in the lives of those around you, your community and your country," said Lt. Gen. Jefferson D. Howell, Jr., JSC Center Director. "With your ongoing support, I am confident that together we can continue to make a difference by giving generously to this year's Combined Federal Campaign."

Furr pointed out that, if every donor who contributed to the CFC in 2002 contributed an additional \$2 per week, the CFC would generate an additional \$1.1 million for charity.

"It's time we give back to the communities and charities that supported us," she said. "So please, when your canvasser comes by your office, generously support this year's Combined Federal Campaign."

Please visit <http://jscpeople.jsc.nasa.gov/cfc/> for more information about JSC's CFC.

A MESSAGE FROM THE DIRECTOR OF FLIGHT CREW OPERATIONS

It's that time of year again – the Combined Federal Campaign is getting ready to kick off. We have the opportunity to help those in our community who are less fortunate than us and to give back to those in East Texas who gave so much to help us during the *Columbia* recovery effort.

We are definitely blessed to be part of the NASA family. We have shown time and again how we take care of one another in times of need. During this last year, our family grew.

I'd like to share a few examples of how we were supported by the community around us following the events of Feb. 1:

Strictly by the numbers, when the search was complete, more than 30,000 people participated. They covered 700,000 acres of difficult terrain on foot and recovered 39 percent of *Columbia* by weight – including critical hardware and debris that allowed us to determine the cause of the accident.

On a more personal level, Pilot "Buzz" Mier and Texas Forest Service helicopter crewman Charles Krenek gave their lives in support of the effort when their aircraft crashed into the dense Piney Woods forest of East Texas.

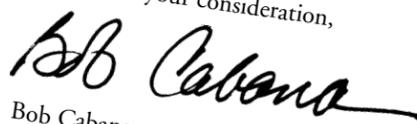
Pat Fulford was so focused on preparing hot meals for all the people engaged in the recovery effort that she was stunned to learn that the house she shared with husband Norm was consumed by fire. Undeterred by this personal setback, Pat steadfastly continued her tireless volunteer work, which she humbly described as "just a small contribution." Her fellow volunteers at the command post then gallantly rose to the occasion and provided the Fulfords with badly needed support in their moment of need.

Roger and Belinda Gay, the owners of Fat Fred's Convenience Store and Restaurant in Hemphill, provided 3,000 meals each day for two weeks free of charge to feed the recovery team members. Roger was the commander of the local Veterans of Foreign Wars post and Belinda was the president of the ladies auxiliary.

Finally, the inscription on the T-shirts worn by many of the *Columbia* Recovery team members summed it all up: "Their mission has become our mission."

The Combined Federal Campaign is an excellent way for us to help repay the community for their tremendous support. You can even designate what specific organization in the community you want to receive your donation. Please take time to fill out your donation form and turn it in. Remember, it's not how much you give, but that you participate and show your support.

Thanks for your consideration,



Bob Cabana
Director, Flight Crew Operations