

**Remarks by The Honorable Sean O’Keefe
NASA Administrator
NASA Day of Remembrance Program
NASA Headquarters
January 27, 2005**

**Introductory Remarks by International Space
Station Expedition Ten Crew Members**

Remarks by Leroy Chiao

I’m Leroy Chiao, commander of the 10th Expedition to the International Space Station. Today, it’s important that we take a moment to pause and reflect on the sacrifices made in the cause of exploration.

Salizhan and I are proud to carry on the work of our brave colleagues who gave their lives onboard the Space Shuttle Columbia, during STS-107, nearly two years ago and to honor the legacy of the crews of Apollo One and the Space Shuttle Challenger.

And on this NASA Day of Remembrance, we are reminded of the contributions and sacrifices of the entire NASA Family. This year we want to remember our friends from the Jet Propulsion Laboratory in Pasadena, California, who in the simple act of going to work one day, lost their lives in a terrible automobile crash.

Remarks by Salizhan Sharipov

We share in the sadness of the families and coworkers. We take pride in their accomplishments and we honor their dedication.

Remarks by Leroy Chiao

As a society of explorers we will continue to push the unknown frontiers in our ongoing effort to pioneer the future. We will go on to do great things, to visit the heavens, to accomplish the impossible. And we will be guided by the memories of those we honor today.

Prayer by Reverend Jonathan Weaver, Greater Mt. Nebo AME Church

Let us pray. Our eternal God and our creator of all of human kind and creator and all of the heavens and the Earth, we come assembled on this Thursday afternoon to reflect on your goodness and also to remember those fallen heroes: Those that were a part of missions to soar beyond this Earth that were a part of missions of the Apollo, Columbia and Challenger. We remember them today for their service, their courage, their convictions.

We pray Lord God that indeed their lives of service will indeed be held close to our hearts and minds forever, and that their legacy will live on even beyond us, through our children and our children's children.

We thank you for the life of those employees that were part of the Jet Propulsion Laboratory who gave their lives on their way to work.

We ask that oh God that you will strengthen not only the families of these heroes, but all Americans and people everywhere that they will deepen their resolve to do something that will leave a lasting impression for those behind them.

We pray for all of the family of NASA, and that indeed you will deepen their resolve to soar, soar in all that they do, in a spirit of excellence, as we continue to learn more about the world and beyond in which we live and also places where we've never been before, but through the work of all of the workers and employees of NASA, some places and things that are unknown to us today, will be discovered because of the work of the people of NASA.

We thank you and we give you all glory, honor and praise, for what you have done for us, for what you are doing right now and for what you shall do. Amen. Let us now have a moment of silence for all of the fallen heroes of NASA.

Remarks by Administrator Sean O’Keefe

Reverend Weaver thank you very much for those thoughtful and I think very moving comments and prayer. Good afternoon ladies and gentlemen.

Today we carry on I think an important tradition of remembering and honoring those we’ve lost while carrying forward our mission of exploration and discovery.

It is most fitting that we gather here and in venues throughout the Agency as well for NASA Remembrance Day ceremonies, and as a family that we do so.

In our NASA Values we talk about the NASA Family as it should be: A diverse team who are

bound together in the most challenging and rewarding of endeavors. Every day we've got to recommit ourselves to respect each other, to trust each other, support each other, indeed celebrate together, dream together, and when it occurs, to indeed mourn together.

Through our NASA Family Assistance Fund, which was created in 2003, so many have generously supported that effort which is in support of each other in the times of greatest need.

This last Thursday in January, an annual effort to observe these important tragedies and events coincides with the exact dates of three of NASA's darkest hours, the tragic loss of our heroic Apollo 1, Challenger and Columbia crews: January 27th, 1967, January 28th, 1986 and February 1st, 2003.

As a result of these tragedies we recognize that constant diligence is what we owe each other—

family members—every day and all the time and in all circumstances.

On this NASA Remembrance Day we also remember those astronauts or astronaut candidates lost in the line of duty while training, experiencing their love of flight or exploration, or en route to another assignment—Charles Bassett, Sony Carter, Pete Conrad, Theodore Freeman, Edward Givens, David Griggs, Karl Heinze, Robert Lawrence, Robert Overmyer, Patricia Robertson, Elliot See, Stephen Thorne, and Clifton Williams.

I think our reflections should also be for those who joined our family in service when we needed them most. Like the helicopter pilot Buzz Mier and Texas Forest Service Ranger Charles Krenek, two members of the extended NASA family who we lost during the Columbia Recovery effort in east Texas.

We also know this NASA Day of Remembrance that tragedy can occur in places far from where we

normally expect to see risks present, but that we all encounter every day, just in the act of being human and going about our daily business. And such as it was on the winding mountain road that normally would safely convey our colleagues from the Jet Propulsion Lab that three were fallen.

To the friends and family members of those we lost in that accident, Dorothy Forks, Jane Galloway, and Kerri Agey, and to our colleagues still recovering, our hearts go out to you as a family.

While this NASA Day of Remembrance provides a special setting for us to put aside for a time our work assignments so that we can remember NASA's fallen heroes, it is also important to note that they are very much in our thoughts and prayers throughout the year.

Every day that I walk into my office, I pass a hallway display that celebrates the lives and the accomplishments of the Columbia crew.

Every day, and every day until the day I leave this Agency I will wear this pin in remembrance of them and the sacrifices they made and the time that we have spent in recovery for them and with their families and always remembering that's what the price of diligence requires. Rick Husband, Willie McCool, Mike Anderson, Dave Brown, Kalpana Chawla, Laurel Clark, and Ilan Ramon.

Every day that we take another step toward safely returning to flight, we think of them and how the entire NASA Family is striving to honor their legacy and to assure that those who follow have learned.

The Challenger Crew remains much in our thoughts as well. Last summer we had the opportunity to present to the family members of Dick Scobee, Mike Smith, Judy Resnik, Ellison Onizuka, Ron McNair, Greg Jarvis and Christa McAuliffe the

crew member's well-deserved Congressional Space Medals of Honor.

This occasion served to remind us of the wonderful work that the Challenger Centers for Space Education do in helping to carry out the crew's legacy by inspiring our next generation of explorers.

And throughout this past year, when profound scientific discoveries were made and we celebrated together as a consequence of our victories on Mars, we took great pride in the fact that our Exploration Rovers Spirit and Opportunity began their exploration quests from locations designated Columbia Memorial Station and Challenger Memorial Station.

Although the Apollo 1 tragedy is now receding in time, the loss of those great trailblazing astronauts Gus Grissom, Roger Chaffee, and Ed White still sears in our collective memory.

These three intrepid space explorers were also honored last year when we named the hills seven miles northwest of the Spirit Rovers landing site on Mars in their memory. They were engaged in this business when it was really, really hard. And today in so many ways it is no less so. The price of diligence is still exceedingly high.

Last September, I had the honor of representing the NASA family at the Rededication of the Ed White Memorial Hospital in St. Petersburg, Florida, and to share with the audience how throughout one of our nation's most consequential decades, the daring, courage, and eagerness to explore of folks like Gus, Roger and Ed never failed to lift our countrymen's spirits. And indeed today they are still a lasting part of our memory.

To help discuss the legacy of these astronaut pioneers and provide a unique view on what it takes to achieve mission safety, we are most privileged

here as members of the NASA family to have among us a member of the NASA family who is a veteran of one Apollo and two Space Shuttle flights, astronaut T.K. Mattingly, a beloved member of the NASA Family who served with Gus, Roger and Ed, and who also flew on a Space Shuttle Discovery Mission with Challenger astronaut Ellison Onizuka. It is my pleasure to introduce T.K. Mattingly.

Remarks by T. K. Mattingly

Thank you Sean. I appreciate the opportunity to participate in this event where we think about things that have happened, our friends, and perhaps most importantly to do a rededication so that their work will continue.

I am going to share a couple of observations. One of the advantages of getting to be an old codger is that you will have seen a lot of things. And some of the things that we saw and learned are lessons that came starting in the Apollo era and continued to

serve us well ever since. The Administrator talks about this as “the family.” It clearly is that. It is the epitome of teamwork. And I think the experience of Apollo taught us a great deal about what that means.

Space is not a hostile place. It’s kind of a natural place. What makes it interesting to operate there is the fact that physics requires us to lighten our vehicles and that means the margins that we operate with are inherently very, very, small. They are adequate, but not generous. Our job every day is for us to stay within those margins and achieve great missions. This Agency has done an absolutely remarkable job for year after year of taking vehicles and operating with small margins very successfully.

Occasionally we trip. I think the people that were part of the Apollo program in the beginning had enjoyed a period of relative success during Mercury and Gemini. They too operated with small margins. And they too had to learn how to stay within the box.

Sometimes success is the hardest thing to do.
Maintaining our eternal vigilance while we are
succeeding is hard work.

During the Cold War there was an expression,
“Trust but verify.” Sometimes it’s easy to forget that.
We built a design that works based on an assumed
environment we will operate in and an assumed set of
procedures. We don’t quit the design process until
that’s ready and it works. When we go to operate,
the first thing we have to do is make sure the vehicle
is like the design, that the mission is within the box.
And then when it comes time to operate we take it
out, and we haven’t stopped the execution. We have
to make sure that we remain within the box, and
when it isn’t possible, that we recognize it and we
take action at the appropriate time.

We tripped in Apollo. We’ve tripped since then.
What we learned in Apollo was after the fire. This
entire organization: contractors, the civil service

people, the military people, and most importantly their families, took it to task as one thing to be accomplished. And it took a lot of work that we still follow today. It takes total professionalism, starting with the Secretary who will not let anything get by, that the message always gets through; to the contracting people who can find a way for us to use contracts as ways to collaborate to get it right, not as a way of placing blame; to engineers who design things that are tolerant of humans and to humans who respect them. All of that is a total intensive effort requiring massive attention to detail. Most important, everybody in that crowd accepts personal responsibility for the piece they touch. And that's why it works. Over the training period we learned to trust each other, through experience, not by fiat. And that trust, when you look each other in the eye and say, "It won't fail because of me," is why we can go places, and why we can aspire.

Actually the forefathers of this country, in the Declaration of Independence, closed it out with a statement that really describes what we do: “We mutually pledge to each other, our lives, our fortunes, and our sacred honor.” When I read that, I read NASA. You folks have established the standards for how to go forward, for how to responsibly go where people haven’t gone, to manage risk and not to gamble. And with this continued effort you will return to flight. You will accomplish things we can’t imagine today. And most important in doing that, the sacrifices of the troops that defend our right to do these things, of the families who have lost folks...and all the casualties are not in the cockpit, there are casualties in families around the country from people working so hard. All of them and our crewmates will not have died in vain because of your efforts. Godspeed.

Remarks by Sean O'Keefe

Thanks T.K. for those very thoughtful comments. And it has been a consistent theme that I've heard each time I've had the privilege to hear you speak that if we all just dedicate ourselves to what we're tasked to do, this is going to work.

And it's going to work as best as we know how to make it happen, and as safely as we can make it. And that's a consistent theme that I've heard from him and been inspired by throughout the time that I've serve in this capacity. And I thank you sir for that constant reminder.

Another great friend in our midst who I think has some reflections and thoughts he'd like to offer as well is our friend and colleague the Honorable Frederick Gregory, who serves as the Deputy Administrator. He has some specific thoughts he'd like to share about his friends on the Challenger crew

and we worked to overcome that tragedy as a family then, and how we can draw on that now.

Remarks by Deputy Administrator Fred Gregory

Thank you Sean. As an astronaut this day has special meaning for me as I was very close to the Challenger crew, many of whom were fellow members of my astronaut class of 1978. They were close friends, they were neighbors, they were part of the NASA family.

Before I go any further, I would like to thank the Administrator for mentioning among those we memorialize today Air Force Major Bob Lawrence. He was a fellow Vietnam Era pilot, and was extremely talented. He lost his life in a training accident in 1967. He was slated to become America's first African American astronaut as part of the Department of Defense's Manned Orbital

Laboratory program, the MOL program. Bob was a real inspiration to me as I focused my career choices.

The Challenger astronauts have also been my inspiration. For eight years we had trained together, studied together, worked together, celebrated together and laughed together.

As fate would have it, I was the capsule communicator on the day Challenger launched 19 years ago.

It is still painful to think about those moments when we lost contact with the crew and our worst fears were realized. It was my intent that day, at that moment, to press the transmit button as I saw the Challenger break up, and say, “Godspeed Challenger.” I didn’t. And I should have.

I miss the Challenger astronauts more than words can adequately express.

When Challenger launched, it had also been 19 years since our last tragedy, but we had never at that point lost a crew in space before.

It is hard to put a finger on what our collective mindset was back then, but I think it's the case when you have a successful launch after successful launch it's human nature to place the possibility of failure deep into the recesses of your mind. Perhaps we all fell victim to that mode of thinking.

Challenger forced us to confront the possibility of failure, and resulted in a new ethos toward safety throughout this Agency.

I know many of the people here worked hard to rebound from the Challenger tragedy, and as a result of your efforts we were able to resume Shuttle operations and move into the International Space Station era.

We've instituted technical improvements to the Shuttle system and tried our best to empower workers to raise safety issues.

The Columbia tragedy, however, reminds us of the necessity to never let down one's guard when it comes to mission safety, and of the need to be thinking constantly about the possibility of problems occurring in spaceflight that haven't occurred yet.

In this business, you can never be flying the last mission.

While we can't bring back our astronaut heroes, we are now obliged to consistently learn from and act on the lessons of our tragedies so that we will be better equipped in the future to ensure that an astronaut's faith in the diligence of the people who support them is never misplaced.

I certainly had that faith during the three times I rode on the Shuttle into orbit, and I can tell you that I

would willingly climb into the Shuttle cockpit without hesitation again.

There have been many positive changes taking place throughout this Agency with regard to how we work collectively to ensure mission safety, and I'm convinced that we will be able to sustain this vital focus.

I want to thank everyone for participating in this ceremony today--I'm not surprised, because this is the NASA family--and for your commitment to conducting our exploration missions as safely as humanly possible. Thank you.

Remarks By Administrator Sean O'Keefe

Thanks Fred for those very thoughtful comments and reflections and reminder that both of you, T.K. and Fred, bring to us the pass down the line requirements that we all have: The lineage, the legacy that we all have an opportunity to contribute

to. In that regard, nearly two years ago, we made a solemn promise to the American people that we would find the problems that contributed to the loss of Columbia and its brave crew, to fix them, and return to flight. It is with tremendous satisfaction that I can say we are well on the road to achieving all three of those commitments.

We have as a consequence of an exhaustive investigation determined the cause of the Columbia accident. We are diligently, constantly 24/7 in the process of fixing it, and meeting the objectives of every one of the recommendations the Columbia Accident Investigation Board provided: to our satisfaction, that we can live with, that we know that when the time comes to fly that we will be confident that we've done our absolute best and that it won't happen because of me. And if every one of us do that, we can achieve that. And that third objective, on the day that occurs, we will have fulfilled that

obligation and promise we made to the American people to explore and discover on their behalf again, but also to do so remembering the legacy of the Columbia crew.

We will never eliminate the inherent risks. I know that each of us are committed to doing everything possible to minimize the risks the crews will face. Tremendous diligence to the task at hand is what we need to redouble our efforts to do in this time ahead.

Indeed, those who have entrusted this tremendous portfolio, to explore and discover for them, the American people will be watching, as they should.

It is fair to say that we are a much different Agency today than the one that willed with all our heart and soul that Columbia come safely home that sunny morning in Florida two years ago. We are a different Agency than that day.

We have empowered a new Safety and Engineering Center to take a rigorous approach to analyzing and dealing with the safety risks of all our missions. We have a very vigorous return to flight team that is implementing those recommendations diligently. We've imposed on many different external experts to assure that we haven't talked ourselves into the easiest answer, but instead that we are implementing the best answer. We are taking all the steps necessary to ensure that every single member of the NASA Family can raise safety concerns at any time and in any place. Are there still those among us who believe that is not true? Of course. And it is each of our obligation, individually, to assure that we eliminate any doubt in anyone's mind on that point. On this vital change to our NASA culture, we cannot step back. And indeed it is important that we regularly, as we do here on this day on an annual basis at least. But that every day we

remember what the price of failed diligence has yielded. It's not out of malice. It's more an absence of complete attention to diligence.

This is how we are approaching our milestone driven work to launch the Space Shuttle Discovery on the STS-114 mission.

As all of us proceed with NASA's Return to Flight activities, we all need to be ever mindful of the remarkable legacies of our Apollo 1, Challenger and of Columbia.

These astronauts conducted their mission of exploration and discovery with exemplary spirit and commitment. And they trusted all of us. Their dedication and ultimate sacrifice became the inspiration for our nation's new Vision for Space Exploration, a long-term mission worthy of the risk we take on when we explore the unknown. In so many ways that is their legacy.

We all look forward to the day when our STS-114 crew members, Eileen Collins, James Kelly, Wendy Lawrence, Soichi Noguchi, Steve Robinson, Charles Camarda, and Andrew Thomas, all our friends, all our colleagues, will travel into space to forward the cause of exploration, traveling with the knowledge of the legacy they represent as well. That all of us are.

This is a day of remembrance for us at NASA, but it is also a day of renewal and hope. It is also today the 60th anniversary of the liberation of Auschwitz. We remember today the victims of the Holocaust. And so in renewing our spirit and hope, and that which humans can overcome, and at the same time acknowledge the failings of the past, it becomes an opportunity to renew that spirit of commitment.

On STS-114 and all subsequent missions, I certainly will join all Americans in wishing the

NASA Family great success. And to the crew and all those who will follow I wish you Godspeed. Thank you all very much for participating in this NASA Day of Remembrance.