Remarks by The Honorable Fred Gregory
NASA Acting Administrator
International Workshop on Exploration Science
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Thank you Ghassem (Dr. Ghassem Asrar, NASA Deputy Associate Administrator, Science Mission Directorate) for that very gracious introduction. Good morning ladies and gentlemen.

I'm delighted to welcome our distinguished guests representing the world's spacefaring nations.

And it's great to see so many of my friends and colleagues from the International Space Station partnership and other collaborative projects with NASA.

This is a wonderful time to discuss the possibilities for long-term international cooperation in space science, as never before has the potential to

use space to obtain profound knowledge and to serve humanity been greater.

Those of us engaged in this business are blessed with a tremendous opportunity not only to be leaders in the world of science, but also to serve as an example of what people of goodwill can accomplish when they are committed to advancing the most noble of human aspirations.

It was in this spirit that I had the wonderful experience of flying into Earth orbit on the STS-51B mission twenty years ago, a mission devoted to scientific discovery.

This seven day mission was the second flight of the European Space Agency's Spacelab module. During 12 hour shifts, we worked very hard on a range of experiments in materials processing, environmental observations, life science, astrophysics, and technology development. It was a

true honor to play a part in the advancement of scientific knowledge on this flight.

Recently, I also felt the tremendous spirit of international space cooperation when I visited Bangalore, India last June for a conference on space science.

It was heart warming to witness a country with so much potential energetically using space to educate its people, improve health care, respond to natural disasters and contribute to the exploration of the Moon and other celestial bodies.

Having just made so many new friends on that trip to India, I was profoundly saddened by the devastation that occurred when the December 26th Indian Ocean Tsunami hit coastal areas of India, as well as Sri Lanka, Somalia, Thailand, Myanmar (Mee-Ann-Mar), Malaysia, Indonesia and the Maldives.

Out of this tragedy, however, came another opportunity for the space science community to show the enormous good we can do.

During the actual Tsunami event for the first time, orbiting satellites observed and measured the tsunami in the open ocean.

These measurements, taken by U.S. and French teams working in parallel with altimetry data from the Jason and Topex/Poseidon oceanography satellites will be of great value for testing tsunami predictive models and developing future early warning systems.

Additionally, using satellites and instruments from our Earth Observing System, NASA was able to produce data that assisted humanitarian relief efforts after the disaster.

For example, we provided MODIS and EO-1 Hyperion sensor data collections and historical data to the U.S. Navy to help them safely bring ships

involved in the relief effort into ports damaged by debris and sediments.

We were glad we could be able to assist.

Last month, the participants at the Third Earth Observation Summit in Brussels endorsed the Group on Earth Observation's Ten-Year Implementation Plan.

This plan gives a high priority to using Earth Observation Systems to reduce the loss of life and property from disasters.

For our part, to help further the goals of the GEO Implementation Plan, NASA is contributing the 18 Earth Observation Research spacecraft that are used to study the Earth system, improve prediction of Earth system changes and help inform policy and management decisions.

Of course we are here today to discuss a number of potential avenues for cooperation in addition to Earth Observations.

These are opportunities provided by the Vision for Space exploration, our nation's strategy to further the exploration of the planets and the far reaches of the Universe.

Having long advocated that our space program has goals bold enough to inspire young people and challenge our best scientific minds, I couldn't be more pleased that NASA's exploration sights are being raised considerably.

Under the Vision for Space Exploration we will use astronaut pioneers, robotic explorers and a new generation of powerful space telescopes to help discover the answers to fundamental questions of importance to science and society and develop revolutionary technologies and capabilities for the future.

We very much want to make this quest to expand our exploration horizons to the moon, Mars and beyond, as President Bush said, one in which other

nations will share with the United States the "challenges and opportunities of this new era of discovery."

The Vision for Space Exploration is premised on the fantastic science return we can expect to receive by focusing our exploration and discovery efforts on the most promising targets out there. Accordingly, President Bush is asking the U.S. Congress to fund a new series of lunar science missions beginning in 2008 and new Mars missions targeted to begin in 2011.

The Vision also defines the members of this community as those who seek to improve the human condition by expanding our knowledge and understanding of who we are, where we came from and where we are going.

Through exploration activities already underway, and others in development, we will also seek to

answer the question that's been asked since the dawn of civilization: Are we alone in the Universe?

This conference takes place at a time when international cooperation in space science has never been greater. And the progress we are celebrating is truly extraordinary.

The partnership between the European Space Agency, Italian Space Agency and NASA on the history making Cassini-Huygens (Hoi-Gens) mission to Saturn and Titan, demonstrates that when we work together on ambitious projects such as this, we can achieve an amazing science return.

What we've learned from the Cassini-Huygens mission indicates that Titan is still an active world that continues to evolve with methane as a key player in regularly reshaping the moon's surface.

Tomorrow another science first will occur when Cassini passes just 530 kilometers above the icy moon Enceladus (En-Sell-Ah-Duss).

We’re also experiencing what can be described as a golden age of Mars exploration right now, with more spectacular missions to follow.

On the Martian surface, the missions of NASA’s twin rovers, Spirit and Opportunity, have been incredibly productive.

The journal Science Magazine recently praised these rovers for the scientific breakthrough of 2004, the discovery that Mars once indeed harbored a shallow salty sea, which may have been conducive to life.

More recently, exciting new results from the European Space Agency’s Mars Express spacecraft have provided tantalizing clues of other prospects for the role of water and potentially hospitable environments on the planet.

Right now, of the over 60 space science missions NASA is conducting, well over half involve

partnerships with other nations, including most of the nations represented in this room.

So we have a very strong foundation of positive collaboration to build upon as we start to talk about potential future Earth observation missions, astronomy missions and concepts for missions to Mars and other exciting targets such as the fascinating moons of Jupiter and Saturn and the main belt asteroids.

Let me emphasize that we have a unique opportunity here today. I trust that during this workshop there will be ample opportunities for participants to share your space exploration plans, so that we can identify common objectives, partnership opportunities and potential shared assets.

I hope we can really tap our collective imaginations to help chart out a bold, broad-based international space science agenda for the decades ahead.

If you have ideas about missions we can jointly work on, we want to hear them. If you have useful thoughts about how we can learn from past partnerships to enhance the science return on future missions, we want to hear that too.

At the end of this workshop we promise to develop a mechanism for follow-up discussions about the ideas generated here.

We are serious as NASA transforms our organization to be better aligned with the goals of the Vision about strategically seeking creative partnerships with industry, academia and the international community.

I know first hand, for example, how much NASA has benefited from the good ideas of our international partners on the International Space Station project.

I've learned by a great deal by chairing the Station's Multilateral Coordination Board. Among

my biggest lessons was that the fears a lot of folks expressed about the ability of 16 distinct nations to sustain a complex project of this nature were dead wrong.

Indeed, the way the partner nations came together to work out a solid plan for sustaining Expedition science activities onboard the International Space Station following the Columbia accident was quite impressive. I truly appreciate how our partners rose to this grand occasion.

Let me also stress that our exploration vision extends to the stars. Eleven years ago we didn't even know for certain if there were planets beyond our own solar system. Working with new scientific observation capabilities, astronomers have now found well over 125 planets orbiting other stars--and the number continues to climb with new discoveries and innovative new techniques.

Our quest for knowledge about these planets has barely begun. Within this decade, NASA will launch powerful space-based telescopes that can infer the presence of newly-formed planets circling young stars, count the planets around far off stars, and detect planets just a few times larger than Earth orbiting nearby stars.

The Space Interferometry Mission will be capable of detecting and measuring the mass of near Earth-sized planetary bodies orbiting nearby stars.

The Kepler mission will provide the first opportunity to learn how common it is for a star to have an orbiting Earth-sized planet.

Also, the James Webb Space Telescope, a large, infrared telescope, the product of a very strong international partnership, will be launched in 2011 to study the earliest galaxies and stars.

The results from these telescopes will be factored into the design of an advanced space telescope, the

Terrestrial Planet Finder, a large space telescope capable of finding Earth-like planets and detecting the chemicals in their atmospheres that may indicate the presence of life. Future telescopes will be able to map continents on these distant bodies.

Please allow me to conclude by drawing on my own experience as a space explorer to offer a thought about the spirit in which NASA and the entire space science community will continue to advance humanity's science and exploration frontiers as the second century of flight unfolds.

As you could well imagine, the first time I flew in space on that STS-51B mission, it was simply magnificent to view the Earth, the cradle of humanity, from this unique vantage point.

I remember how during my first two days in orbit I was absolutely fascinated to look down on the Washington, D.C. area and to marvel how this was

what my hometown looked like from over 100 miles overhead.

I must admit my crewmates weren't as fascinated as I was about looking at Washington, as they were focused on their own hometowns. Maybe that's because Washington is the city where all federal taxes are gathered! At any rate, we were all hometown centric.

After the third and fourth day as we kept looking down, I noticed that all the Americans on the crew had become U.S. centric, and took special notice when we flew over the continental U.S., Alaska and Hawaii.

During this phase of the mission our crewmember from the Netherlands, Lodewijk van den Berg, similarly enjoyed looking down on Holland's tulip fields and fertile agricultural regions. And Taylor Wang, who was born in Shanghai, loved to look at the vast landscapes of mainland China.

After five or six days something remarkable happened. We had all lost that nationalism and began looking at our home planet as citizens of the world.

I am filled with joy to think that as NASA takes on the great challenge of extending our exploration reach throughout the solar system and beyond, we will tap the creativity of men and women of many different nationalities, races and religions. This great quest to explore the cosmos is truly an endeavor of all humankind. This is the element of space exploration that has the greatest meaning for me.

In conclusion, I want to thank you once again for your warm welcome and for the wonderful opportunity to be your speaker this morning.

As I said earlier, I encourage everyone here to freely contribute to this workshop so that we can continue to enrich the dialogue we've established on space science cooperation.

Also, please give us your best ideas on how we might enhance cooperation between the various space agencies present. We promise to listen carefully to your thoughts and suggestions.

And who knows what concrete plans and innovative partnership ideas can come out of this conference? I know for certain that the climate has never been better for us to join together to make significant progress in the scientific study of our world and the worlds around us. So let's get to work!

Thank you again for your warm welcome.