

**Remarks by the Honorable Sean O’Keefe  
NASA Administrator  
College of Aeronautics  
Commencement Address  
Flushing, New York  
"Pioneering the Future"  
May 23, 2004**

Good morning. President Fitzpatrick (Dr. John Fitzpatrick) thank you so much for your warm welcome.

I appreciate very much your kind invitation and that of all the Board of Trustee members here today to speak to the College of Aeronautics' very accomplished class of 2004.

And thank you for the tremendous honor that has been bestowed upon me today. I will treasure it always.

I am also grateful for the facilitating role of your trustee Dr. Julian Earls, our outstanding director of

the NASA Glenn Research Center, as well as a frequent participant in the New York City marathon.

Let us acknowledge at the outset the most important people here today. Would the soon-to-be-graduates please rise and join me in recognizing the people who have really made all this possible – your family members. Please join me in a round of applause for them.

I know the primary job of a commencement speaker is to be brief and be gone. I also know that all that stands between you and the fulfillment of your achievement is me.

Certainly the most that any commencement speaker ever hopes to convey is one or two nuggets you can take away and say, "Well, it was memorable for those points." I'll try not to disappoint on this score.

And so the two points I hope to convey today are about the values of public service and the possibilities we can imagine if we yield to the human desire to explore.

Now I'm of Irish heritage, as you might have figured, and as some of you know, the Irish have a saying that you have to draw a line in life...on one side of it you put the past...and on the other, the future. For some people, the hard part is deciding which part of the line you want to live on...Well today, despite the renown Irish tendency to dwell on the past...I will focus on the future...the future you will help to create.

This is a most fitting venue to discuss the future, as we are fairly close to the sites of the 1939 and 1964 World's Fairs, two seminal events in our nation's history that promoted the "benefits of technology for tomorrow's America."

The theme of the 1964 World's Fair was "Man's Achievements in an Expanding Universe." In addition to being able to see actual NASA space capsules, attendees at that World's Fair were enchanted by a 360 degree Cinerama movie entitled, "To the Moon and Beyond."

Today the dream of interplanetary exploration is alive once again, and at NASA we are excited about the tremendous possibilities our efforts to extend civilization's horizons to the surface of planet's beyond our own will bring about.

Indeed, I trust that the graduates of the College of Aeronautics will be among those who help us pioneer the space frontier, or who will help our nation build on our wonderful aviation system.

That's why I'm very pleased to hear from President Fitzpatrick about the progress of so many College of Aeronautics students--soon to be alumni

of the Vaughn College of Aeronautics and Technology--in getting a leg up on productive aerospace careers.

President Fitzpatrick has told me about Daniel and Liliana Rilas, a couple who came here from Romania with no family or friends here in the U.S. They started life over completely, working their way through college with Daniel clerking at a video store and Liliana working as a waitress and sales clerk.

Daniel will graduate today with a B.S. in Airport Management and Liliana with an AAS in Airport Management. This fall Liliana who graduates magna cum laude will study accounting at Baruch College, while Daniel will be pursuing his MBA there. I congratulate this couple on their remarkable accomplishments.

I also congratulate Adam Kasprzyk, your Casey Jones Award recipient who came with his family to

the U.S. three years ago from Poland. While studying for his B.S. in Mechanical Technology, Adam has worked with Northrop Grumman on the new E2C advanced electronic warfare plane for the Navy and with Sikorsky on helicopter systems design.

So you see if you combine an excellent College of Aeronautics education with a commitment to succeed, you can go very far indeed.

There are, of course, many other venues that will enable you to help create a positive future in the century that is just beginning.

One of those is through service to others, which has always been a theme of this outstanding institution.

President Fitzpatrick has also proudly told me about students who are already demonstrating a

commitment to public service and community engagement.

I was very impressed to learn about Anishkha Crawley, an Aviation Maintenance Management student from the Bahamas. As President of your Women in Aviation-International Chapter, she led the organization in sponsoring many philanthropic events such as blood drives, fundraising for breast cancer research and fundraising for AIDS research and services.

Anishkha was also instrumental in the creation of the extraordinarily successful Women in Aviation Day, an event designed to expose junior high, high school, and college age women to other women with successful careers in the field of aviation.

Aniskha, that's a record you can be very proud of and I salute every College of Aeronautics student who has taken part in community service activities.

I hope that as graduates you will build on this great spirit of philanthropy.

This is an extraordinary time in our country's history. Americans have demonstrated, through countless acts of kindness, that our country's greatest strength lies in the hearts and souls of our citizens. As new college graduates, you now have the opportunity to share your time and talents with those who need it most.

Indeed, the President has asked all Americans to dedicate a part of our careers in service to others.

President Bush created the USA Freedom Corps to help Americans answer his "call to service" by providing meaningful opportunities to serve both at home and abroad.

Along your career development path, I encourage you to give the Freedom Corps serious consideration. Service like this will provide you the

opportunity to help countless others and by doing so enrich your own lives.

Let me now turn to the world and world's beyond you will help shape in the years ahead. In the first half of the 21<sup>st</sup> century, as you pursue your careers, the graduates of the College of Aeronautics will have the opportunity to make America a better place.

Your generation will help make our aviation system more efficient and more secure. And as the President has proposed, you will have the opportunity to participate in a renewed spirit of discovery in our country.

I'm excited that as the second century of flight unfolds, as you use your training in management, computerized design, electronic technology, flight, aviation maintenance and aeronautical engineering technology, you will help carry the torch of

exploration to heights unimagined and into frontiers unknown.

We have indeed accomplished a great deal in NASA's 45 years, but are only just now at the beginning of this age of space exploration.

I'm reminded of a remarkable piece that David McCullough wrote just a few years ago -- a historical biography of John Adams, the second President, in which Adams lamented that the pride of the American fleet, the USS Constellation lay at anchor in Boston Harbor for days and days at a time because the weather wouldn't permit it to sail.

In space exploration we are in the equivalency of that time. Even though the Constellation was, at that period, the pride of the American fleet -- the force projection that the US aspired to forever -- it couldn't get underway.

A force of nature, which has always either enabled or deterred new advancement, limited it. And that is the weather. We are in the same mode right now with space exploration, an age of sail. Conditions must be perfectly right for us to proceed. And we aspire to the "Age of Steam."

Your generation is privileged to be alive when for the first time in human history we have the ability to enter the "Age of Steam" in space exploration. I hope more than a few of you join NASA in this quest and come work at places like Julian's Glenn Research Center where we are conducting tremendously exciting research on advanced propulsion systems for spaceflight.

As the men and women of NASA implement our bold new space exploration vision, we will work with our international partners to extend the reach of

human civilization and the spirit of freedom ever outward, using a meticulous stepping stone approach.

Those of you in this class of 2004 are probably familiar with our stepping stones if you are among the 125 million visitors to the NASA website over the course of the last four months, accounting as many of you probably did for the 10 billion hits that we have had to our website in that span of time.

So many will already recognize these points. To help refresh your memory, the stepping-stones are as follows: First, we will return the Space Shuttles safely to flight and in so doing honor the legacy of our remarkable Columbia astronauts, who were lost so tragically a year ago.

Second, we will complete the International Space Station and use this research laboratory that orbits 250 miles over our heads--and comes around every

90 minutes-- to test the long-term effects of space travel on human beings.

Third, we will send robotic probes and then human explorers on to the Moon to demonstrate technologies needed for Mars and beyond.

And finally, through an effort aptly named Project Constellation, recalling John Adams' lament of 200 years ago, we will develop those capabilities that will allow humans to explore the far reaches of the solar system.

This approach will allow us to learn from our experiences and to incorporate new technological developments along the way.

And as the ongoing missions of the Mars Exploration Rovers Spirit and Opportunity demonstrate when you go out to various places in the solar system and ask profound questions, you may very well receive profound answers.

The discovery by the Opportunity Rover of evidence that Mars once had large amounts of surface water is a profound finding indeed.

And what Opportunity has told us is that the climate and atmosphere of Mars was once profoundly different. Understanding why it changed may well provide us a whole new perspective on our place in this solar system, in the galaxy and indeed in the broader universe.

Now just think about the other compelling scientific discoveries that the continued exploration of space will bring about in the coming decades.

When the history of your time is written, we can well imagine that your generation of explorers will have sought life's abodes in our corner of the universe.

You will be able to look up to the stars that once guided the sailing vessels of yore and map continents

on dozens of their planets, and in so doing gather knowledge that may help improve our own human condition here on Earth.

The pursuit of our new exploration vision will spur technological developments that will lead to new products and services and tangibly improve the lives of people throughout the world.

Just as the Apollo program led to important advances in computing and electronics when that 1964 World's Fair was underway, the potential spinoff benefits from the Constellation exploration program will be just as considerable.

Since the Apollo era, MRI's, cataract detection, and heart pumps are all examples of NASA technologies used to advance our exploration goals being applied to productive use in society.

We believe the technology development necessary to execute and implement our new space

exploration vision will accelerate advances in robotics, autonomous and fault tolerant systems, human-machine interface, life support systems and novel applications of nanotechnology and microdevices.

Those of you who engaged in laboratory work on these cutting-edge topics will be in a great position to be the movers and shakers of our nation's technological future.

We're optimistic that our space program boosts the opportunities we will have to become a smarter, safer, healthier and more intelligent world on a scale never seen before in the history of the planet, at a pace hardly thought possible.

But in sharp contrast to the Apollo era, for which the price of being second was catastrophic, this is not a race. Instead it will be a journey, propelled by a renewed spirit of exploration and discovery.

The first explorers to set foot on Mars may well indeed be sitting in this audience today. You will have the means to make this vision come to pass, because as the President has observed, "Exploration is not an option we choose. It is a desire written in the human heart."

As all of you look forward to the challenges and opportunities you have ahead, whether they are in space exploration, or in the other technical fields the College of Aeronautics has well prepared you to enter, I think it is worth recalling a thought offered by the distinguished American jurist Oliver Wendell Holmes. "Greatness is not in where we stand, but in what direction we are moving. We must sail sometimes with the wind, and sometimes against it -- but sail we must, and not drift, nor lie at anchor."

Pursue that instinct. Pursing your dreams. And together I believe we can achieve some remarkable accomplishments.

In closing, I wish to congratulate all of you on your achievements up to this special point. I congratulate your faculty members who have guided you to this day, your family members who have supported you, and I wish all of you the very best in your pursuit of a life that matters, continuing to stand as you have for excellence and service to causes greater than your individual self-interest.

Thank you and Godspeed to the graduates of the class of 2004.