

**Remarks by the Honorable Sean O’Keefe  
NASA Administrator  
Gannon University Commencement Address  
Erie, Pennsylvania  
"Pioneering the Future"  
May 8, 2004**

Good afternoon. President Garibaldi (Dr. Antoine Garibaldi), Bishop Trautman (Bishop Donald Trautman), thank you so much for your warm welcome.

I appreciate very much your kind invitation to speak to Gannon's very accomplished class of 2004 and for the tremendous honor that's been bestowed on me today. I will cherish this always.

First, let us acknowledge at the outset the most important people here in this auditorium. I ask the presumptive graduates to please rise and now join me in recognizing the people who have really made all

this possible – your parents. Please join me in a round of applause for them.

My job as your speaker is to be brief and be gone. That's the primary point. You're not here to listen to me. Certainly the most that any one ever hopes from a graduation speech is one or two nuggets you can take away and say, "Well, it was memorable for those points." I hope not to disappoint on this score.

I'm Irish, 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.

As you might expect, we at NASA believe President Bush's vision to extend civilization's horizons to surfaces beyond our planet will be a significant part of that future.

Indeed, I trust that some of you will follow in the footsteps of John Mangus, a distinguished 1956 Gannon graduate, who devoted his career at NASA to helping unlock the great mysteries of the Universe.

John, a native of Warren, Pennsylvania served as a Senior Scientist at our Goddard Space Flight Center. After a distinguished NASA career he is sharing his experience and giving back to the community, living his life long creed that "knowledge is freedom." He and Louise have given of their time and their resources--they have established an endowment scholarship for Gannon science students who come here from Warren.

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

One of those is through service to others, which has always been a theme of this outstanding institution. And this was certainly instilled in John Magnus, an exemplary graduate of this great university.

President Garibaldi has proudly told me about the student body's commitment to public service.

I'm very impressed by your GIVE day--Gannon's Invitation to Volunteer Everywhere--a day in which every Gannon student devotes a day to community service.

I'm certain that Bishop Trautman and the Erie community value the annual Christmas dinner the Gannon Social Work Club organizes for the less fortunate, a tradition that is now 27 years running.

And folks in places as diverse as Valdosta, Georgia, Agua Prieta, Mexico and New York City benefited this year from your volunteer activities. That's a record you all can be very proud of.

I certainly hope you build on this foundation of service and consider a life long commitment. Certainly, my training at Loyola University from priests who represent the Jesuit faith contributed to my commitment to this goal, just as the ethic instilled here at Gannon will contribute to yours.

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, assuming the faculty doesn't reconsider their decision to confer degrees in the next few minutes, you now have the further

opportunity to share your time and talents with those who need it most.

Indeed, the President has asked all Americans to dedicate a portion of their adult lifetime in service to others.

President Bush created the USA Freedom Corps to help Americans answer this "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 to enrich your own lives.

As we consider the times we live in, I think part of what compels us to consider our obligation to help others is an unforgettable day in our recent history.

Make no mistake about it, 9/11 was a defining moment for our country and affected each of us in profound ways.

I still mourn the loss of a friend and former graduate student of mine at Syracuse, Brady Howell. Brady was a Presidential Management Fellow who was working that day for the Chief of Naval Operations in the Pentagon. Like all of you he came out of college eager to take on the world. And he made a tremendous contribution to our country in the short time that he was able to work in the public service and in doing so, lived a life that mattered.

From that horrible in New York City, at the Pentagon and in a Pennsylvania farm field a couple hours away from here, we learned about the tremendous capacity of folks to band together to help each other.

We've learned to appreciate the service of brave people like Brady Howell, of Todd Beamer and his fellow passengers on Flight 93 and of a dedicated Fire Department Chaplain, Father Michael Judge, who gave his life while providing spiritual comfort to others.

We should all hope to live up to their selfless example. Through your deeds and actions your generation can live the motto of the 9/11 heroes: "Let's roll."

Sadly, we will face the horrors of terrorism and many other challenges to the human condition in the years ahead, but your generation is more than up to the task of confronting these challenges and leading us to an even better path.

In the years ahead each you will have exciting opportunities. You can help us protect our homeland security as local boy Secretary Tom Ridge is doing

for us now. You can promote democracy abroad, fight new and deadly diseases, enhance environmental quality, improve our schools, and advance economic and technological progress. And the President has given us a renewed spirit of discovery. I'm very excited that as the second century of flight unfolds, those of you who will pursue science and technology careers will help carry the torch of exploration to heights unimagined and into frontiers unknown.

We have accomplished a great deal in NASA's 45 years, but we are only at the beginning of the 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. He points to Adams' lament that the flagship of the U.S. Navy, the USS Constellation, which was commissioned as a demonstration of

resolve to people around the globe that we intended to be global players, that we intended to engaged in world commerce, laid at anchor, day after day after day because the weather wouldn't permit it to sail.

We are in the same mode right now in space exploration. We are in an age of sail. Everything must be exactly perfect for everything to occur exactly right, and particularly the weather.

We are indeed aspiring to an "Age of Steam."

Your generation is privileged to be alive when for the first time in human history we have the ability to enter that "Age of Steam" in space exploration. More than a few of you I am sure will join NASA and the broader aerospace community in helping us to achieve that objective. I hope more than a few of you join NASA in this quest.

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 throughout the solar system, using a meticulous stepping stone approach.

Those 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.

Second, we will complete the International Space Station and use this research laboratory that orbits 250 miles over our heads 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, we 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--these are actually the first missions to be conducted in this new exploration era--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.

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.

It will be your sublime task to look up to the stars that once guided the sailing vessels of yore and map continents on dozens of their planets, some of which will show signs of life supporting atmosphere.

You will also help to search for evidence that life once existed or currently exists on planets within our own solar system.

We are also quite confident that the pursuit of our vision will spur other 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 your parents were growing up, the potential spinoff

benefits from this broad based exploration program could be considerable.

Since that time, 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.

Like me I hope you are absolutely thrilled that human beings are headed to the cosmos. The first explorers to set foot on Mars may well indeed be sitting in this audience today. It is up to us to make this vision come to pass.

As all of us look forward to the challenges and opportunities we have ahead, whether they be in space exploration, or in all the fields that Gannon has well prepared you to enter, recall the words of 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.

Congratulations on all of you on your achievements. I congratulate your faculty members who have guided you to this day, your families who have put up with 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.