



Preface to the Proceedings of the 26th Annual Wisconsin Space Conference

New Horizons

When Alice Bowman took the stage as one of the keynote speakers at the 2016 Wisconsin Space Conference, I knew we were in for a treat. I hoped for a personal account of one of the most exciting and scientifically significant planetary missions in history and was rewarded with that and more. Ms. Bowman, Mission Operations Manager for the New Horizons Pluto mission, had become a symbol of a new culture of exploration. Gone were control rooms full of men in white shirts and black ties. The New Horizons flyby team is more than 25% female – still low by the standards of the 21st century American workforce, but a significant improvement for NASA. The obstacles and challenges this team had overcome in the preceding nine years and three billion miles is a famous and enduring legacy of the mission. While New Horizons plodded along (at more than 30,000 mph), the global economy collapsed and partially rebounded, wars raged, NASA pivoted from the moon to Mars, and Pluto lost its status as a planet. All the while, a small group of people kept the little 500 kg spacecraft alive and talking to earth. What lessons would Ms. Bowman have for us?



One of the messages Ms. Bowman shared that day was about the conditions for creativity. It was about the environments in which people feel comfortable exploring radical ideas and in which creative solutions to difficult challenges percolate from all directions. The collaborative and egalitarian spirit of the New Horizons team is an essential element of the program's stunning against-all-odds success. The imperative of creating the conditions for creative problem solving is one embraced by the mission of the Space Grant program. In these pages, I hope you can see that science and engineering is an essentially collaborative enterprise that relies crucially on communities built among educators, students, and industry partners. The stories in this issue are the result of learning from each other and establishing partnerships around challenging frontiers. So please enjoy this year's *Proceedings* and find in the work of our contributors the spirit of adventure and collaboration.

Kevin M. Crosby, Director, WSGC January, 2017