CU-Boulder's *MAVEN* Mission to Mars

Washington, DC

October 22, 2013

- Thank you, Ryan Chreist [Assistant Vice Chancellor for Alumni Relations] for that gracious introduction.

- Chancellor Philip DiStefano; Dr. Bruce Jakosky; Members of the Colorado delegation – Representatives Jared Polis and Ed Perlmutter; industry partners and friends…thank you for this opportunity to join in this celebration of the long-standing partnership between CU-Boulder and NASA, especially as we prepare for our next great collaboration – November's *MAVEN* mission to Mars.

- The Mars Atmosphere and Volatile EvolutioN (*MAVEN*) mission is on schedule for a Nov. 18 launch from Kennedy Space Center.

- It will be the first mission devoted to understanding the Martian upper atmosphere.

- The goal of *MAVEN* is to determine the role that loss of atmospheric gas to space played in changing the Martian climate through time. It will also help us answer the question: Where did the atmosphere – and the water – go?

- Fortunately we were able to restart *MAVEN* work early during the recent government furlough, allowing us to preserve the November launch window

- In fact, the spacecraft underwent a spin test this week at Kennedy Space Center and will soon be fueled.

- *MAVEN* is a great example of NASA's commitment to strong public-private partnerships.

- This is the first Mars mission managed by NASA's Goddard Space Flight Center not far from here in Greenbelt, Maryland.
- But the heart of the mission is in Colorado.
- In a few minutes you will hear from *MAVEN's* principal investigator, Dr. Bruce Jakoksy, who is based at UC - Boulder's world renowned Laboratory for Atmospheric and Space Physics (LASP).
- Additional Colorado partners are United Launch Alliance, the provider of the Atlas V rocket and Lockheed Martin Space Systems, who manufactured the spacecraft.
- In addition, the University of California at Berkeley's Space Sciences Laboratory provides science instruments for the mission. NASA's Jet Propulsion Laboratory (JPL) in Pasadena, Calif., provides navigation support, Deep Space Network support, and *Electra* telecommunications relay hardware and operations.

- Since 1948, LASP has played a leading role in the exploration of our Earth and solar system and you have partnered with NASA on dozens of missions, including *LADEE*, our latest mission to study the moon's atmosphere.

- *LADEE*, which went into lunar orbit on October 6 has a CU Boulder built Lunar Dust experiment instrument aboard, which is designed to help us learn more about the behavior of lunar dust.

- In addition to the numerous science projects we have worked on together, CU has been a pipeline of talent – producing scores of scientists and engineers who are not only making a difference in space exploration, but in numerous other ways that are keeping America a global leader in technology and innovation.

- Eighteen CU-Boulder astronaut affiliates have flown into space, including the late Scott Carpenter, the beloved NASA astronaut who passed away on October 10. One of the original Mercury 7 astronauts, Scott became the second American to orbit Earth in 1962. His courage and achievements helped set the stage for more than a half-century of American leadership in space.

- I also want to personally thank the University for lending us one of your most brilliant professors, Dr. Waleed Abdalati, who recently returned to the classroom after serving as NASA's Chief Scientist.

- While NASA and CU-Boulder have been partners for a very long time, the *MAVEN* mission is one of the largest and most innovative we have ever undertaken.

- It is part of NASA's commitment to meet the President's goal of sending humans to Mars by the 2030s.
- Humankind's fascination with Mars is more than a science-fiction fantasy. Mars is the most Earthlike of any planets we have begun to explore.
- If life exists beyond Earth, Mars is one of the most likely places. What we can learn about Mars from further studies will improve our understanding of planetary and biological processes that affect Earth from its core to the top of the atmosphere.
- While this is not the purpose of *MAVEN*, our studies of past and present environments on Mars could tell us whether life has existed or still exists there. Even if we learn Mars has never had life, answering that question would tell us something about life and life-enabling conditions that we cannot learn on Earth.

- It is worth noting that America’s Mars exploration program and our track record of successful missions to Mars are second to none.

- The U.S. is the only nation that has successfully landed missions on the Martian surface.

- The Administration’s proposed $17.7 billion fiscal year 2014 budget for NASA aligns NASA's full spectrum of activities to meet the President's challenge to send humans to an asteroid in 2025 and Mars in the 2030s.

- This budget makes it clear that the Administration remains committed to a vibrant and coordinated strategy of Mars exploration and continuing America’s leadership role in the exploration of the Red Planet.

- Our goals include both new path-breaking robotic missions to Mars, and a groundbreaking asteroid mission on the way to our ultimate goal of a human Martian mission.

- Ongoing and future missions will continue to improve our understanding of Mars, allowing us to make better site selections for future lander missions and to better understand the Mars atmosphere to support precision entry, descent and landing, all while continuing to make scientific discoveries.

- Nine years ago, we landed the Spirit and Opportunity rovers on the surface of Mars and we currently have two satellites in Mars orbit observing the planet. In August of 2012, after the most harrowing landing in the history of planetary exploration, the *Curiosity* rover touched down on the Martian surface.

- For more than a year now, *Curiosity* has been assessing whether Mars was or is today an environment able to support life. The science being conducted on *Curiosity* is also paving the way for a future human mission.

- On the heels of *Curiosity*, our plans call for another mission to the Red Planet, in addition to *MAVEN's* launch next month.

- Over the past year, we have recalibrated our Mars science program in order to optimize both what it can achieve scientifically and how it advances our human exploration goals.

- As a former astronaut who has flown four missions on the space shuttle, including the 1990 flight that deployed the Hubble telescope, I've learned that scientific discovery and human exploration go hand in hand.

- I want to close by thanking the University of Colorado for your leadership in space exploration and your strong partnership with NASA.

- I also want to commend your commitment to inspire the next generation of scientists, engineers and explorers.

- Finally, I want to thank Dr. Jakosky, his team at CU-Boulder and our industry partners for leading us back to Mars with *MAVEN*.

- NASA's vision is to reach new heights and explore the unknown so that what we do and learn will benefit all humankind. I believe that unraveling the planetary puzzle about Mars is the essential next step in realizing that vision.

- With your help we will continue to pursue a joint strategy of scientific and human exploration so that we can return greater benefits to Earth and to the American people.