**Jody Singer**

**Alabama/Germany Partnership Annual Meeting & Dinner Keynote Remarks**

**Davidson Center**

**7:00 pm March 4, 2020**

**(15 minutes)**

**Background:** You will speak at the Alabama/Germany Partnership (AGP) event the Huntsville/Madison County Chamber is hosting.

**Remarks**

**Introduction**

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* Thank you for the kind welcome.
* And, I’ll attempt some German to start with—
  + Guten Abend! (GOO-ten AH-bnnd)
* **I am honored to be here and so proud to observe this celebration of Alabama and Germany’s mutual support.**
* Our history of partnership and cooperation hearkens back to the very beginnings of the American space program.
* We were forever changed as a community and a nation… by a man named **Wernher von Braun:**
  + Marshall Space Flight Center’s first director…
  + And considered by many as the father of modern rocketry.
* When he and his team came to town in 1950, their work sparked the first age of human space exploration that would, more than a decade later, redefine what is possible.
* **Von Braun once said, “I have learned to use the word ‘impossible’ with the greatest caution.”**
* His belief in what we can achieve was unwavering.
* Look around you.
* Important milestones line the walls and hang above us…
* Artifacts and exhibits, from the Redstone-Mercury to the Saturn rockets and beyond.
  + They show us what it takes to explore, discover and make the unknown, known.
* When we went to the Moon 50 years ago, it may have been one small step for a man…
  + but it took a powerful and capable team alongside him to make that giant leap for mankind.
* And that was just the beginning of what’s to come.

**Big Headlines**

* If we hadn’t taken that first step for humanity…
  + We wouldn’t have the strong foundation and heritage of partnership that continues today.
* That first trip to the Moon enabled great observations and discoveries about not only the Moon, but our Earth and the origin of our universe.
* And there is so much more to learn and prove.
* Right now, humankind is on the brink of a monumental moment in history:
  + Together, we are going back to the Moon with the first woman and next man landing on the lunar surface by 2024.
  + But this time we will go further: This time (pause) the Moon will be our stepping stone to Mars.
  + NASA calls the program, *Artemis.*
* **And Marshall Space Flight Center, entering our 60th year, is essential for Artemis… working closely with our partners in the journey.**
* We draw upon our expertise, cultivated since the start of the von Braun era.
* And we build on that heritage… with a new rocket even more powerful that the Saturn V.
  + The team is making BIG progress on that vehicle: **Space Launch System**, the most powerful rocket ever built.
  + The first SLS core stage, the largest rocket stage since Apollo, is fully assembled and being tested at Stennis Space Center in Mississippi…
    - before heading to Kennedy Space Center in Florida for assembly and launch.
* It is happening.
* And it is because of that spirit of cooperation, that heritage of teamwork, that kind of partnership… that we are celebrating tonight.
* When the SLS launches for the first time, it will be an achievement all of humankind can celebrate.

**What I Have Learned**

Lesson 1

* I am honored to serve as Marshall Space Flight Center’s 14th director during this exciting time.
* And since my appointment in 2018, I have learned two big things that I want to share with you this evening.
* **The first is the power of the word, “we.”**
* **You see, *WE* are going.**
* We cannot go alone.
* Alabama and Germany remain intertwined today in this new, modern era of space exploration.
* And at the same time, Marshall is embracing new approaches in domestic and international partnerships.
* We work together… to address the top issues that threaten…
  + our planet,
  + our shared missions,
  + and our effort to learn more about the universe… as we reach for new heights.
* And we are already preparing for that first trip to Mars.

**NASA-German Partnership**

NASA InSIGHT

* NASA appreciates German Aerospace Center’s cooperation and partnership on instrumentation for the **NASA InSIGHT mission**… which is gathering data to teach us about Mars from its inside out.
* And German support is also crucial for the trip to the Moon, which will enable that journey to Mars.

European Service Module

* For the first time, NASA is using a European-built system as a critical element to power and propel an American spacecraft.
  + Airbus Defense and Space, based in Bremen, Germany with suppliers all over Europe, has built the powerhouse of the Orion crew capsule for the Artemis program.
  + The hardware is called the European Service Module, and it will provide essential in-space maneuvering capability, power, and more.
* The first European Service Module is being tested at Plum Brook Station in Ohio with the Orion capsule.
  + And the Airbus team is already working on more.
* With this key contribution, the ESA and Germany are enabling Orion to take astronauts further into space than ever before.

Research

* Closer to home, we also partner for crucial atmospheric research that could make life here on Earth, better.

ISS

* And this year we celebrate 20 years of continuous human presence aboard the International Space Station.
  + That success and commitment has been achieved through strong international partners and support from Germany.
* German astronauts have achieved groundbreaking science and fulfilled important roles on the ISS.
* German astronaut Alexander Gerst’s work on the ISS Blue Dot mission earned him Germany’s Order of Merit in 2015.
  + He later returned to the ISS as its second European commander.
* And, German astronaut Hans Schlegel (HANS Shh-LAY-glll) represented the European Space Agency on an expedition to deliver and connect the ESA’s laboratory, Columbus, to the ISS.
* **Columbus remains the largest single contribution to the ISS made by the ESA.**
  + And it was designed and integrated in Bremen before being delivered to the launchpad in Florida to fly aboard Space Shuttle Atlantis.
* The German Space Operations Centre near Munich controls the lab… which can support ten racks of experiments.
* The work that astronauts and scientists from around the world accomplish there…leads to knowledge here on Earth—
  + and discovery (pause) that makes a difference.
* Marshall Space Flight Center manages NASA’s science on station… and the work between American astronauts and their international partners intersects above us daily.
  + **It’s the power of “we” that leads to great things.**
* Since the early days of the Army Ballistic Missile Agency, into the start of the agency we are today…
  + NASA is all about cooperation like this.
* NASA welcomes opportunities to strengthen our bond with the German Space Agency and other European partners.

Lesson 2

* The second big thing I have learned is what a team… **what that “WE”… can accomplish**.
* Through my time at NASA’s Marshall Space Flight Center, I have led my teams through launches, hardware development, and the beginnings of the SLS program.
* It is truly amazing to see flight hardware at Marshall and the Michoud Assembly Facility that we manage in New Orleans.
* Every bolt.
* Every screw.
* Every piece of metal.
* Each part of the rocket that will once again lift humans out of Earth’s atmosphere…
  + represents the drive in all of us to keep reaching for that next “impossible” thing.
* **I too have learned to use the word “impossible” with caution.**
* Our team—NASA, industry and international partners— taught me that.
* And we keep that sentiment true today.
* We dare to *dream*, courageously *act*, and determinedly *achieve*…
  + because of the shared belief in what we are doing and how it will benefit mankind.
* That belief connects Alabama to Germany, though we are oceans apart.
* I am grateful for that partnership, that dedication and that strength.

**Action**

* Once again, we call on that strength and courage to meet our respective challenges.
* NASA is working with industry to acquire human landing systems that will take humans from a lunar outpost to the surface of the Moon.
* But it will take even more systems, knowledge and processes…
  + to stay on the Moon…
  + and get to Mars.
* **We will rely on help from companies and international partners with what *else* is needed.**
  + Developing deep space habitats to stay in space longer, and further away from Earth.
  + Rapid transit propulsion to get there fast.
  + Ways to manage resources we find at the destination.
  + And then, interpreting what we learn from our trip to the Moon to inform our journey to Mars.
* At the same time, the International Space Station is, and continues to be, a global endeavor.
  + The unique microgravity laboratory will allow us to continue moving humanity toward the Moon and Mars.
* We will again build on that heritage…
  + learning from our past achievements and carrying them forward.
* We go (pause) together.

**Conclusion**

* After Apollo 11, von Braun said from right here in the greater Huntsville area, “The world is with us.”
* I know, looking out at each of you, that this is true today.
* With Alabama and Germany cooperating through organizations like this one (gesture to the room)…
  + And Marshall’s adaptation to new ways of partnership…
  + All of us (pause) can reach for the stars.
* Some say the world is watching as we make history again.
* But I want to say tonight, that the world is hand in hand, holding our collective breath in anticipation for what we can achieve…
  + And working together to one day send humankind further into space than ever before.
* Thank you… and have a good night.