Thank you for the kind introduction, Don, and good morning everyone.

It’s always a pleasure to welcome to Penn State scientists who are making discovery central their life’s work. To those of you representing NASA, the Jet Propulsion Laboratory, the National Observatory, and other vital institutions: thank you for taking the time to review in detail Penn State’s proposal for the Extreme Precision Doppler Spectrometer project. This endeavor is very important not only to our research team, led by Dr. Survath Mahadevan, but also to our entire University, which cites Discovery as a core institutional value.

The concept of “discovery,” especially in this area, resonates strongly with me, personally and professionally. I originally hail from New Zealand, and I came to the United States about 35 years ago. It was a transformative time in my life, with many friends and colleagues around the world I could engage with, and numerous educational and professional opportunities I could pursue.
The CEO of Amazon, Jeff Bezos, once said, “There will always be serendipity involved in discovery,” and that certainly has been true for me. While blazing new trails—some by chance, others purposefully—I learned, experienced and discovered so many things about myself and my place in the world. I recall my time at Caltech in the early 1980s when Voyager 1 and 2 were up in space, snapping pictures of Saturn. I and many others adorned our offices with those spectacular images.

Never could I have imagined, though, that three decades after leaving New Zealand, I would be the Executive Vice President and Provost at Penn State, one of the world’s most renowned and revered public research universities that makes discovery a large part of its mission.

Ever since Penn State’s first President, Evan Pugh, discovered in 1857 that plants take nitrogen from the soil and not from the air, this University’s blend of distinguished faculty, inspired students, and research infrastructure has led to some incredible discoveries.

You may have heard just last week that Penn State professor Chad Hanna was part of the team that discovered gravitational waves, confirming several important predictions of Albert Einstein’s theory of general relativity. Esteemed professor Stephen Hawking congratulated the team and said the discovery “has the potential to revolutionize astronomy.”
Also, Cecilia McGough, an undergraduate in Penn State’s Schreyer Honors College, recently was credited with the co-discovery of a new pulsar after considerable research. This impressive find will help astronomers better understand how binary neutron star systems form and evolve.

Yes, we’re big on discovery at Penn State; in fact, we thrive on it. We’ve fostered a longtime, beneficial partnership with NASA through many projects—from sounding rocket flights, the development of the Advanced CCD Imaging Spectrometer on NASA’s flagship Chandra mission, and the Swift gamma-ray burst satellite, whose Mission Operations Center is only about four miles from here.

Meanwhile, rapidly growing research groups are working to discover planets beyond our solar system, to characterize planetary systems and their host stars, and to understand the implications for the possibility of life beyond Earth and the origins of our own solar system.

We are living in a proverbial “Golden Age” for exoplanets, and Penn State is at the center of it. Penn State Evan Pugh Professor Alex Wolszczan discovered the first exoplanets. Fellow Evan Pugh Professor James Kasting developed the crucial concept of the “Habitable Zone,” and Larry Ramsey, a Penn State Eberly College of Science Distinguished Senior Scholar, created many key aspects of fiber technology required for precision spectroscopic measurements. Penn State is now pushing the precision limits of spectroscopy with the Habitable Zone Planet Finder, which is dedicated to finding
Earth-like planets around cool stars. The team includes many graduate students, postdocs, and professors representing several University departments.

I should add that, last summer, I spoke at the first annual Emerging Researchers in Exoplanet Science Symposium, hosted by Penn State. Nearly 100 participants from around the world convened here to share knowledge, ideas and the promise of meaningful discoveries. It was an exceptional event.

With all of this focus on and dedication to discovery of exoplanets, it should come as no surprise that Penn State is so intensely interested in NASA’s plans to construct and install in Arizona a high-precision spectrograph to find planets around other stars. The Penn State team’s instrument concept, named NEID after the local Native American word for “discover” or “visualize,” is a $9.7 million project that will lead to the commissioning of a premier instrument available to the U.S. scientific community by 2019. This technology and the strong team working on it—with close collaborators from the Goddard Space Flight Center, the University of Pennsylvania, the National Institute of Standards and Technology, and partners in Australia and India—is very well positioned to push the limits of precision.

Penn State is a very special place, with enormous energy, pride, commitment, passion, and academic and research excellence. We are committed to the success of this proposal, and tremendously excited by the capability to participate in the science that this instrument will enable.
It is a privilege to have you here. Thank you very much for your time for consideration.