

**OPENING STATEMENT**  
**The Honorable Steven M. Palazzo (R-MS), Chairman**  
**Subcommittee on Space and Aeronautics**  
**Hearing on**  
***National Priorities for Solar and Space Physics Research and***  
***Applications for Space Weather Prediction***

Wednesday, November 28, 2012  
10:00 a.m. – 12:00 p.m.  
2318 Rayburn House Office Building

I would like to begin by thanking our witnesses for taking time from their busy schedules to appear before us this morning to examine the National Research Council's recommendations for the U.S. solar and space physics research program and applications for space weather prediction. I realize you and your staff devoted considerable time and effort preparing for this hearing and we appreciate your expertise as we consider these issues in the upcoming session of Congress.

Our hearing today will focus on the incredible work being accomplished by NASA's Heliophysics Division and on the important operational aspect this research has for space weather prediction at NOAA. NASA has developed and launched a broad network of spacecraft that allow researchers to better understand the Earth-Sun system. Their findings are used daily to help preserve our technological infrastructure by allowing system operators to better react to variations of the Sun. Building our knowledge in this field is essential for maintaining our way of life on Earth as well as for the improving the capability of enabling human exploration beyond the protection of Earth's atmosphere and magnetosphere.

Together with a ground-based infrastructure of solar telescopes managed by the National Science Foundation, NASA and NOAA coordinate critical measurements into useable models that predict how space weather will affect our satellites, electric power grid, airline operators, and more. The Space Weather Prediction Center operated by NOAA's National Weather Service, provides real-time monitoring and forecasting of solar and geophysical events and is continuously exploring new models and products to transition to operations.

Today's hearing will examine the requirements for a robust space-based solar and space physics research program and discuss the application of this research for an operational space weather program. The baseline assessment in this examination will be the set of recommendations outlined by the National Research Council's *Solar and Space Physics: A Science for a Technological Society* decadal survey. Notably, the survey committee acknowledged the prospect of limited budgets and therefore recommended NASA "stay the course" on major programs under development – specifically for Solar Probe Plus. The survey committee further recommended that NASA utilize its current resources most effectively by focusing resources on those activities that will "DRIVE – or Diversify, Realize, Integrate, Venture, Educate" the next generation of solar and space physics research.

The survey committee also provides specific recommendations for our nation's space weather enterprise and provides detailed recommendations to NASA, NSF and NOAA on how to best accomplish a robust space weather and climatology program for the future.

As we enter into the next solar maximum – an 11 year solar cycle that is marked by increased solar activity – the availability of solar wind measurements in particular are essential for maintaining our way of life. As has been stated countless times over the last several years, however, we face a tough budget environment. In order to continue a robust solar and space physics program, a prudent and careful examination of the core capabilities and essential services this country needs is first and foremost on our agenda.

I look forward to today's discussion, and wish to again thank our witnesses for their presence.

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