



COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

For Immediate Release
April 26, 2018

Media Contacts: Thea McDonald, Brandon VerVelde
(202) 225-6371

Statement by Chairman Andy Biggs (R-Ariz.)
Surveying the Space Weather Landscape

Chairman Biggs: Good morning, and welcome to today's joint Environment and Space Subcommittee hearing, entitled "Surveying the Space Weather Landscape." I would like to first thank our excellent witnesses for being here today and for testifying on this important topic.

With an issue as complex and consequential as this one, it is undeniably important we begin a dialogue on what the status quo is and in what direction momentum is heading. There are many avenues we could explore for this hearing, from innovative space weather technologies and the accuracy of space weather forecasting models, to the potential impacts space weather can have on our terrestrial environment. While all of these topics are important and worth addressing, I think it is crucial that we first lay the groundwork for understanding the current policies, procedures and major players in both the private and public sectors.

I am glad, then, to have key stakeholders from private industry as well as academia, along with leaders from the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) with us here. I look forward to hearing from them about not only what their efforts have been in this arena, but also what they think the future holds for the observation, modeling and forecasting of space weather events.

Just as it is a primary driver of weather on Earth, the sun is also the largest driver of disturbances in our space environment. Solar winds, whose charge and intensity ebbs and flows with various solar phenomena, interact with Earth's magnetic field or magnetosphere in interesting and sometimes highly adverse ways. The result of these interactions are what we refer to as space weather storms. While often relegated to the magnetosphere, these storms can and do have tangible - and sometimes highly damaging - effects in the upper atmosphere and at the terrestrial level. These can range from issues with the performance and reliability of space-borne and ground-based technological systems, all the way to endangering human life or health.

As with terrestrial weather, without thorough monitoring and accurate modeling, we simply have no good way to predict space weather events and, in turn, no ability to ensure that citizens are kept out of harm's way if severe events arise. In the federal government, NASA and NOAA are tasked with monitoring and issuing forecasts that inform the public. To make these forecasts, countless dollars are spent on observation and data collection, but despite this, space weather science, as a discipline, is still in its nascent phase.

While I certainly have no doubt that NASA and NOAA play a vital role in monitoring solar phenomena and making space weather forecasts, one of the questions we need to explore in this hearing is whether it makes sense to rely on government alone for addressing space weather challenges. In the twenty-first century, the landscape has changed, and as we can see from our witnesses today, the federal government isn't the only game in town - nor, I would argue, should it be.

Forecasting space weather depends on understanding the fundamental processes that give rise to hazardous events. Particularly important is the study of processes that link the Sun-Earth system and that control the flow of energy toward our planet. Partners in the private sector can - and should - use their advanced and innovative technologies to help us more thoroughly understand these phenomena and improve our space weather predictions. In the face of space weather challenges, instead of continuing to think inside the "government-only" box, NASA and NOAA need to look to private partners who are ready and willing to help.

Last year, President Trump signed into law the Weather Research and Forecasting Innovation Act, a comprehensive bill to increase our weather forecasting capabilities to better protect lives and property. What I like most about this legislation is that it compels the government to innovate by partnering with the growing private sector to test and validate its data in order to enhance our nation's forecasting capabilities. It is my hope that, on the subject of space weather, we will continue to look to that law as a model.

Adverse space weather presents unique challenges, and the consequences of inaction could be far-reaching and catastrophic. However, I believe that through the right combination of government monitoring, private industry innovation and good old American determination, we will be able to respond to any future challenges that may arise. I look forward to learning more today from our witnesses about this topic, about their efforts to advance understanding in this field and about the technologies and methods that will lead the way to a better and smarter future.

###