



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY

Opening Statement

Chair Lizzie Fletcher (D-TX)
of the Subcommittee on Environment

Joint Subcommittee Hearing:
Space Weather: Advancing Research, Monitoring, and Forecasting Capabilities
Wednesday, October 23, 2019

Good afternoon and welcome to today's joint subcommittee hearing on advancing our nation's space weather activities.

I am happy to be here with my colleague, Space and Aeronautics Subcommittee Chairwoman Horn to discuss the important topic of space weather. The term space weather may not be familiar to everyone, but we are aware of some of its more benign examples, such as the Northern lights.

Space weather describes naturally occurring disturbances in space that are primarily driven by the Sun. These variations in the space environment can negatively impact technology in space such as satellites for weather and GPS, pose health risks to our astronauts, and also affect critical ground-based systems such as electric grids.

Despite knowing the potential for these significant impacts, our ability to forecast space weather events with significant notice is limited at best. Given our society's dependence on many technologies that could be impacted by space weather events, it's critically important that we understand both the physical processes that drive these phenomena, and how we can forecast them earlier to allow adequate protection of critical assets. For this we need to invest in scientific research and sustained observations.

NOAA is responsible for the civilian forecasting through the National Weather Service's Space Weather Prediction Center (SWPC). The forecasters and scientists at SWPC collect data and observations from their own network of satellites, and work in close partnership with other federal agencies including NASA, who we have here today, the U.S. Air Force, the National Science Foundation, and the United States Geological Survey among others. Assets in space provide key data necessary for accurate and timely space weather forecasts. Disruptions in this data due to malfunctions, as we are currently seeing with NOAA's Deep Space Climate Observatory satellite, without a long-term redundancy plan puts our critical infrastructure in space and on the ground at risk.

A recent study contracted by NOAA on customer needs for space weather products and services found that space weather disturbances can impact major sectors of society including aviation, electric power, navigational satellites and emergency management. It highlighted the utility and importance of NOAA's space weather products to protecting their infrastructure from damage, but also made clear that they can be further improved to allow for greater accessibility and usability.

Improvements in our understanding of space weather will come through robust collaboration between the federal government and partners in both the commercial and academic sectors. Though we only have witnesses representing the government and commercial sectors today due to unforeseen circumstances, I would just like to stress the important role that the research community plays in shaping these conversations. This is especially true when it comes to understanding the outstanding science questions in this field. It is critical that we continue to foster these partnerships between the government, academia, and commercial sectors.

I am looking forward to today's discussion about the current state of our space weather activities, from fundamental research to forecasting, and receiving feedback on how Congress can support improvements to our forecasting capabilities.

Thank you.