COMMITTEE ON SCIENCE SPACE AND TECHNOLOGY

Opening Statement of Chairman Brian Babin

Full Committee Hearing
Weathering the Solar Storm: Advancing America's Space Weather Capabilities
November 19, 2026

Today's hearing presents the Committee with an opportunity to examine an issue that is critical to our nation but is often overlooked: space weather.

Simply put, space weather is the term used to describe the interaction of solar activity with Earth's atmosphere and any resulting effects. While many think of beautiful displays such as the aurora, space weather can have serious effects on our daily lives.

Space weather also raises significant national security questions. Can we accurately predict and identify a space weather event in the upper atmosphere and properly attribute it to a natural phenomenon? Or do we risk misattributing the effects to a hostile act?

Vital components of our nation's infrastructure are vulnerable to the effects of a severe space weather event. For example, such an event could seriously damage transformers, disrupting the power grid and potentially leaving millions of Americans without electricity for extended periods of time.

Solar storms can also disrupt positioning, navigation, and timing (PNT) systems, which can affect shipping and aviation routes as well as financial systems.

The loss of PNT capabilities can have profound consequences, particularly for agriculture. A severe geomagnetic storm in May 2024, known as the Gannon superstorm, is estimated to have caused up to $500 million in losses for farmers due to the inability to use PNT for precision planting.

Earlier this year, the Artemis II mission launched, sending four astronauts farther from Earth than anyone has ever traveled. Many Members of this Committee were in Florida for that launch. While we were keeping an eye on potential storms on the Space Coast, forecasters were monitoring solar activity to ensure it wouldn't interfere with the mission.

Closer to home, we must be mindful of the risks posed by space weather as we expand our activities in low Earth orbit. We are increasingly dependent on space-based assets for communication, navigation, weather forecasting, and so many other daily activities.

This is the first time the Committee has held a hearing on this topic in over seven years, giving us a chance to assess the progress made during that time and the challenges that remain.

In 2020, Congress passed and President Trump signed the Promoting Research and Observations of Space Weather to Improve the Forecasting of Tomorrow Act, more commonly known as the PROSWIFT Act. This law provided congressional direction regarding the federal government's role in observing and predicting space weather events for the first time. In late June, President Trump released an updated National Resilience Strategy. The strategy identifies space weather among the threats facing our nation, recognizing its potential consequences for national security.

In just the last year, our agencies have taken steps to advance our understanding of the Sun. Last September, NOAA launched the SWFO-L1 spacecraft, now known as SOLAR-1, which provides continuous observations of the Sun in greater detail than before. These observations will help us issue earlier warnings, giving emergency responders more time to prepare for potentially disruptive solar events.

As part of that same launch, NASA sent two spacecraft to Lagrange Point 1 to expand our understanding of solar activity and improve our ability to forecast future solar events.

I look forward to working with Ranking Member Lofgren, the Trump Administration, and external stakeholders to ensure the United States is better equipped to anticipate and respond to future solar storms.

I thank our expert panel of witnesses for being here today and for their willingness to share their expertise. I welcome a productive discussion.