

OPENING STATEMENT
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of the Subcommittee on Research and Technology

House Committee on Science, Space, and Technology
Subcommittee on Research and Technology
Subcommittee on Space
“The Great American Eclipse: To Totality and Beyond”
September 28, 2017

Thank you, Chairwoman Comstock, Chairman Babin, and all of the witnesses for sharing your insights and experience with us today.

The Great American Eclipse offered up a chance for scientists to obtain one-of-a-kind measurements of the Sun’s outer atmosphere, or corona. The 2017 solar eclipse was unique because it traversed a path across a large, continuous land mass. By gathering data along the path of totality, researchers were able to take measurements of the Sun’s corona over a time span of 90 minutes, rather than the 2 minutes one would experience from a single site. I look forward to hearing from our witnesses today about how scientists are stitching these observations together to study the structure, temperature, and evolution of the corona.

The key benefit of this dataset is that it informs computer simulations of solar activity. These models help scientists predict and mitigate disruptive solar storms that threaten critical infrastructure like GPS and communications satellites and electric grids. Experiments conducted during the eclipse also enlisted the help of members of the public as data collectors. This was the first total solar eclipse visible across the United States since the advent of the smart phone, and many observers were able to collect data right from their personal devices. For instance, NASA’s GLOBE Observer app relied on volunteers to measure cloud and temperature data before and after the eclipse. Other projects involving public participation included the Citizen CATE experiment, in which volunteers across the country used identical telescopes to capture high-resolution images of the eclipse, and the NSF-funded EclipseMob experiment, in which enthusiasts operated radio receivers to study the effects of sunlight on radio and telecommunications signals that travel through the ionosphere.

The 2017 total solar eclipse was also an event that reached beyond the bounds of science. It captured the imagination of millions of Americans, whether they were only able to see the partial eclipse, or they found themselves in the path of totality. Preliminary estimates tell us that about a third of eclipse watchers took photos or recorded video and about one fifth of eclipse watchers posted their recordings to social media. The 2017 solar eclipse was likely the most watched, studied, photographed, and shared solar eclipse in history.

I look forward to learning about the research that was enabled by the eclipse and to hearing the panelists’ thoughts on how we can best capitalize on the widespread excitement generated by the eclipse to keep the public engaged with science going forward.

Thank you, again to the witnesses for being here today. I yield back the balance of my time.