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Poster
NOAA’s Office of Space Weather Observations (SWO) recently completed a cost-benefit analysis for the Space Weather Next (SW Next) program. SW Next is designed to ensure the continuity of space-based observations necessary to sustain operational space weather monitoring and forecasting capabilities at NOAA’s Space Weather Prediction Center (SWPC) starting in the 2030s and beyond. The program will also introduce enhancements beyond current capabilities to better serve industries impacted by space weather. SW Next is a program comprising multiple flight and instrument projects, as well as partner and commercial data, that together provide comprehensive knowledge of the sun, the space environment, and the upper atmosphere.

As part of the program's formulation, SWO, in collaboration with NOAA’s Chief Economist, conducted a detailed study to identify the economic and societal benefits associated with SW Next observations. Value is derived from the ability of end-user communities to mitigate detrimental space weather impacts by utilizing timely and accurate space weather information in their operational decisions.

Value chains were constructed to understand how user communities derive this value. These chains trace how SW Next sensors will feed into the event-driven products issued by SWPC and ultimately inform user decisions. This trace is key to understanding the program's value and crucial for tracing user-needed improvements back to model and sensor performance. The valuation of these benefits builds upon past studies to develop a Monte Carlo model simulating the occurrence and impacts of space weather events of various magnitudes. The quantification of the return on investment in the SW Next program informs formulation decisions for future projects and demonstrates the value of the program.
Poster session day
Tuesday, April 28, 2026
Poster location
34
Meeting homepage
2026 Space Weather Workshop
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