

Using supercomputers to-probe the early universe

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[Los Alamos staff help improve U.S. capability to detect underground nuclear explosions](#)

Los Alamos National Laboratory staff were instrumental in the fifth conventional explosion experiment as part of the NNSA's Source Physics Experiment (SPE) series.

The SPE series, conducted at the Nevada National Security Site, advances the United States' verification mission for detecting and understanding underground nuclear explosions.

"The goal of SPE is to understand the generation of S-waves from explosive sources," said Catherine Snelson, a geophysicist at Los Alamos that led the Laboratory's team.

“The most recent SPE shot was a great success and has led to about three times more data than what we have acquired on previous shots.”

By conducting the experiments near the location of previous underground nuclear tests, researchers are able to better compare data from conventional and nuclear explosions. This helps to advance the United States’ capability to differentiate low-yield nuclear test explosions from other seismic activity such as mining operations and small earthquakes.

Having this advanced capability helps to identify whether state or non-state actors are hiding low-yield nuclear testing to develop or improve nuclear weapons.

[Read more.](#)

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Chris Clark for [LADailyPost](#)

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