



Nevada Site Office News

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NNSA Conducts Pollux Subcritical Experiment at Nevada National Security Site

LAS VEGAS – The National Nuclear Security Administration (NNSA) today announced that Pollux, a subcritical experiment, was successfully conducted December 5, 2012, at its Nevada National Security Site (NNSS).

The experiment, conducted by staff from NNSS, Los Alamos National Laboratory and Sandia National Laboratories, gathered scientific data that will provide crucial information to maintain the safety and effectiveness of the nation's nuclear weapons.

“Challenging subcritical experiments maintain our capabilities to ensure that we can support a safe, secure and effective stockpile without having to conduct underground testing,” said NNSA Administrator Thomas D’Agostino. “I applaud the work done by the men and women who worked to make this experiment successful. Experiments such as this help deliver President Obama’s nuclear security agenda.”

Pollux was the 27th subcritical experiment to date. The previous subcritical experiment, Barolo B, was conducted on Feb. 2, 2011. Pollux employed a superb new diagnostic that recently won an R&D 100 award.

“Diagnostic equipment fielded by our scientists resulted in more data collected in this single experiment than all other previous subcritical experiments,” said NNSA Deputy Administrator for Defense Programs Don Cook. “This type of data is critical for ensuring our computer simulations can accurately predict performance, and thus continued confidence in the safety and effectiveness of the nation’s stockpile.”

Christopher Deeney, NNSA Assistant Deputy Administrator for Stockpile Stewardship said, “Pollux will provide a significant data set to verify codes important to laboratories' stockpile missions.”

Subcritical experiments examine the behavior of plutonium as it is strongly shocked by forces produced by chemical high explosives. Subcritical experiments produce essential scientific data and technical information used to help maintain the safety and effectiveness of the nuclear weapons stockpile. The experiments are subcritical; that is, no critical mass is formed and no self-sustaining nuclear chain reaction can occur; thus, there is no nuclear explosion.

Watch a video of the experiment on [YouTube](#).

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