

Nevada Site Office News

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National Nuclear Security Administration Scientists to Conduct Piano Subcritical Experiment

The National Nuclear Security Administration Nevada Site Office will conduct a subcritical experiment called *Piano* at the Nevada Test Site on September 18, 2003.

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 reliability 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.

Piano, a Lawrence Livermore National Laboratory subcritical experiment, will be conducted at the Nevada Test Site's U1a Complex located 85 miles northwest of Las Vegas. The U1a Complex is designed to contain these experiments in a safe and secure environment in an underground laboratory of horizontal tunnels with small excavated experiment alcoves mined at the base of a vertical shaft, approximately 960 feet beneath the surface.

Lawrence Livermore scientists conducted their last subcritical experiment, *Oboe 9*, on June 7, 2002. The last subcritical experiment conducted was *Rocco*, by Los Alamos National Laboratory, on September 26, 2002. To date, 19 subcritical experiments have been conducted at the Nevada Test Site.

NV-03-27

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