



**Trinity Section
American Nuclear Society**

P. O. Box 5367, Albuquerque, NM 87185-5367
<http://local.ans.org/trinity/>

DINNER MEETING ANNOUNCEMENT

"Recent Advances at LANL in Production of ⁹⁹Mo"

Speaker: Steven Klein, Los Alamos National Laboratory, R&D Scientist

***Abstract:** Since 2009 Los Alamos National Laboratory has provided technical support to private industry in developing three different technologies intended to produce the important medical isotope Molybdenum-99 (⁹⁹Mo). This work is supported by direct funding from NNSA (NA-21) and through the private entities under Cooperative Agreements. Two technologies employ fissile solutions of Low Enriched Uranium (LEU), one in the form of an aqueous homogeneous reactor (AHR), the other an accelerator-driven subcritical configuration. The third technology also utilizes an accelerator but not a uranium target. Research and development reported includes the review of the historical record of 65 years of operation of AHR at LANL; particularly the startling lack of empirical data directly applicable to the proposed systems and advances in our understanding of these processes over the last two years by theoretical treatment and directed experiments. The current state of progress toward realization of a domestic ⁹⁹Mo production capability and near-term plans are also discussed.*

***Biography:** Steve Klein is the technical lead for the AHR ⁹⁹Mo Project at LANL. He has over 35 years of systems engineering experience in a wide variety of military and commercial development programs, including those for proton cancer therapy and the critical assembly machines upgrade and relocation to NTS. He holds an advanced degree in Physics, is licensed as a Professional Engineer in the State of Texas, and is an Airline Transport Pilot.*

Place: Courtyard by Marriott, Santa Fe

3347 Cerrillos Road, Santa Fe, NM (505-473-2800)

Directions: From Albuquerque, take 1-25 North approximately 55 miles to Exit 278 (Cerrillos Road). Hotel is located 3 miles on the left-hand side of Cerrillos Road at Richards Avenue.

Date: September 23, 2011

Time: 6:00 Social Hour with Cash Bar

7:00 Buffet Dinner (Filet Mignon and Salmon)

7:45 Speaker

Cost: \$30 per person, $\frac{1}{2}$ price for students and children

We strongly encourage you to sign up and pay for this event using our PayPal payment account. Visit the "Calendar" page of our web site (<http://local.ans.org/trinity/calendar.html>) and select the appropriate payment button. You may use your own credit card and do NOT need to have a PayPal account to make the payment.

RSVP: If you do not use on-line payment, please RSVP no later than 19 Sep to:

Stephen Croft: scroft@lanl.gov (505-606-2083) or

Markku Koskelo: mkoskelo@aquilagroup.com (505-338-8083)

RSVP must be received by 19 Sep in order to give final numbers to the caterers. While we strongly encourage everyone to use on-line payment to sign up and prepay, an RSVP is a commitment to attend/pay at the door. We cannot afford "no shows" after the final count is given to the caterers, as the Section is partially subsidizing the cost of this event. If you cancel after 19 Sep, you will still be responsible for paying.