

Briefing on Purdue Investigation for the Office of Naval Research

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Arlington, VA, February 18, 2009

Science Basics

Generation of neutrons or tritium at a statistically significant level above background are signatures of fusion, and proof of a nuclear reaction.

Experiments that show positive results with test configurations and negative results with control configurations – **independent of secondary analysis** – provide strong support of an hypothesis.

Some Early Related History

1967: Taleyarkhan Co-Author Colin West Publishes Seminal Paper in Nature on SL

?: Taleyarkhan Co-Author Richard Lahey responsible for major aspect of BWRs

1982: Hugh Flynn Awarded U.S. Patent on AICF

1997: Seth Putterman Awarded U.S. Patent on AICF (Even though he had not yet done it)

DARPA AICF: First Round

1999: Four Groups Selected

2001: Taleyarkhan group (based at Oak Ridge) is first to achieve AICF

“Sound of Neutrons” [\(Show video\)](#)

Events 2002

**March – Taleyarkhan Group Publishes
Seminal Paper (attempts to censor)**

**April – Tsoukalas begins to recruit
Taleyarkhan**

**May - Tsoukalas invites Taleyarkhan
to Purdue to give colloquium**

May 2003 Oak Ridge Videos

(Show videos)

Viewed by:

- Lee Riedinger (Exec. V.P. for S&T)**
- Glenn Young (Director Physics Division)**

Response:

- “Sent their recommendation to support publication to ORNL President William Madia”**

Green light given for 2004 paper

Tsoukalas Group Ramps Up

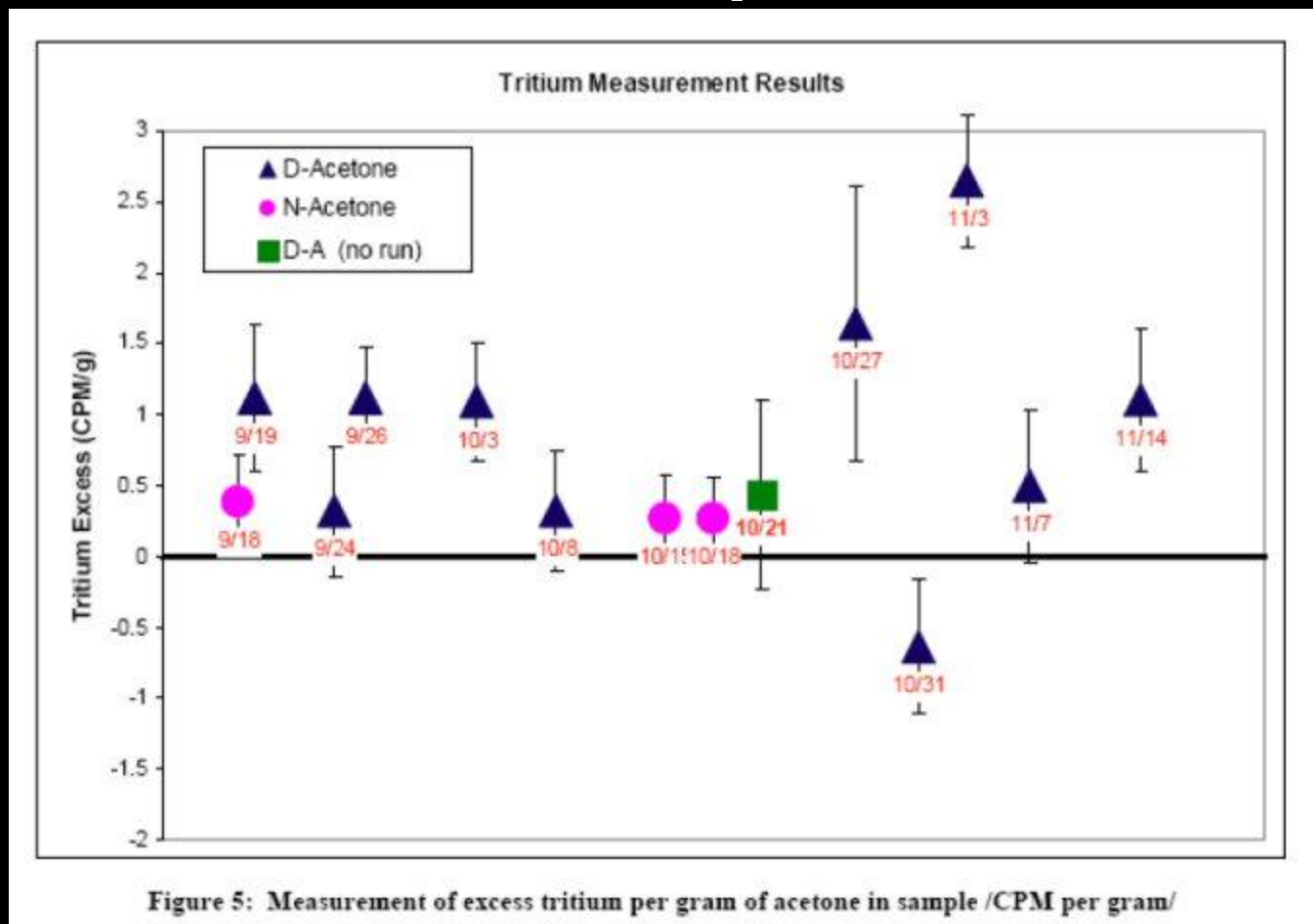
2003: Lefteri Tsoukalas Group Begins AICF

- Before Taleyarkhan comes to Purdue
- Uses POC through Lahey/RPI to gain protocol details from ORNL
- Uses ORNL Test Section?

**2003: (Sept. 19) Tsoukalas Group Performs
First Independent Replication of AICF**

Tsoukalas Replication

2003 (Nov. 14) Tsoukalas Group Runs 9th
Positive Replication



Taleyarkhan “Officially” Starts at Purdue

2003: Invited to Work at DARPA

**2003: Aug. 18 - Taleyarkhan's Tenure at
Purdue Begins**

**2003: Nov. 7 - Purdue Announces hiring of
Taleyarkhan**

Events 2003

Dec – Taleyarkhan's plans to work at DARPA change; has to stay home at Purdue

~ Dec. - Xu leaves Tsoukalas group, begins own experiments in Tsoukalas-managed lab

Events: Spring-Summer 2004

March 3 – N.Y. Times: “Experts Say New Desktop Fusion Claims Seem More Credible”

March 22 – “Additional Evidence...” PRE

May - Taleyarkhan's lab established

Summer – Putterman/Suslick and Tsoukalas
"I also learned from Josh Walter that Tsoukalas was in direct contact with Seth Putterman and Ken Suslick, two of Taleyarkhan's known competitors."

(Jenkins affidavit, pages 3 and 4, paragraph #17)

Events: Summer-Fall 2004

~Summer – Clikeman/Tsoukalas turn positive tritium data into negative data

- Violate day-of-collection LS protocol**
- Re-test tritium (LS) six months after it was created**
- Gradually re-adjust and re-adjust data**

Oct. 8 -- Jay Gore, Purdue associate dean of research writes email:

- Tone reveals fear, uncertainty, doubt**
- References Putterman and Suslick as “the experts” whose opinion Purdue should follow.**

Events: Fall 2004

Sept. 17-18 - BBC Horizon films at Purdue. Taleyarkhan declines to participate with Putterman replication attempt – no trust.

Oct. 7-10 - UCLA performs replication attempt for BBC (Show video clip**)**

Fall – UCLA submits DARPA proposal for same type of replication as done for BBC

Events: 2005

Feb. 16 - BBC airs UCLA failure to replicate.

- Insinuates that Taleyarkhan group experiment is therefore a failure
- Insinuates Taleyarkhan a mere dreamer
- Putterman gleeful, “we had fun...needed money”

~Feb. – March -- DARPA Approves proposal for UCLA replication attempt

April 7 - RPI/Lahey: Visits UCLA:

“Replication doomed to failure”

Several major breaches of “mirror” design

Putterman/Suslick Non-Mirror Experiment

Report to the U.S. Government: “An exact duplicate of Taleyarkhan's reactor was built.”

Design/Protocol Variations:

- 1. Use of NC gas**
- 2. Physical structure of test section**
- 3. Design/application of**
- 4.**
- 5.**

Putterman/Suslick Non-Mirror Experiment

“Based upon these blueprints, UCLA organized for 'identical' parts to be produced”

No Blueprints from ORNL exist, only hand-drawn sketches

Blueprints from RPI exist, Putterman, according to Lahey, declined to use them

Events: 2005

April 28 - UCLA/Putterman-Naranjo-Gimzewski: Publish Crystal Piezo Fusion

**May 3 - Xu, Y., and Butt, A., "Confirmatory Experiments..." NED
- Use ORNL Test Section**

July 5 - Purdue Primary Committee Voting on Tenure and Promotions

Events: 2006

Jan. 27 - "Nuclear Emissions During Self-Nucleated..." PRL

**March 1 – 2:00 p.m. - UCLA/Putterman:
Insinuates Taleyarkhan Fraud via Cf-252
Spiking**

**March 1 - 4:00 p.m Nature/Reich: Contacts
Taleyarkhan Regarding Cf-252 Spiking
Insinuation**