

Aug. 27, 2007 Purdue University Final Report of C-22 Inquiry Committee

Appendix B – Tabulation of Allegations

(Retyped by Taleyarkhan from PURDUE Aug.27-Inq.Cmt.Report-To-ONR-AppendixB.pdf)

The Inquiry Committee received original allegations from the following individuals and organization:

- Office of Naval Research (ONR) (anonymous underlying sources)
- Kenneth Suslick (University of Illinois)
- Lefteri Tsoukalas (Purdue University)
- Seth Putterman (UCLA)
- Brian Naranjo (UCLA)
- Joshua Walter (Purdue University)

Some persons also endorsed or adopted by reference allegations that originated from others. Several of the allegations were duplicative, overlapping, or open-ended. The Inquiry Committee organized the allegations according to the publication or event that was the primary focus of the allegation.

| Allegation Label / (Source) | Allegation |
|------------------------------------|---|
| Group A | Publication: R. P. Taleyarkhan et al., Evidence for Nuclear Emissions During Acoustic Cavitation, <i>Science</i> 295, 1868 (2002) |
| A.1 | Taleyarkhan used ²⁵² Cf to fabricate and/or falsify his bubble fusion replication results. Source: ONR |
| A.2 | Taleyarkhan improperly omitted a negative sonofusion result by deleting the 5-18-01 draft's reference to tritium smear data that was consistent with background contamination. Source: Suslick |
| A.3 | During the "initial refereeing process" for Taleyarkhan's Science publication, Taleyarkhan suppressed a null result obtained by Saltmarsh and Shapiro in Taleyarkhan's lab using Taleyarkhan's equipment. Source: Suslick |
| A.4 | Taleyarkhan selectively processes his experimental data in order to create a misimpression of statistical significance. Source: Suslick |
| A.5 | Figure 3 is replicated in later publications with subtle data movements. Source: Suslick, ONR |
| Group B | Publication: R. P. Taleyarkhan et al., Additional evidence of nuclear emissions during acoustic cavitation, <i>Physical Review Letters</i> 69, 036109 (2004) |
| B.1 | Taleyarkhan used ²⁵² Cf to fabricate and/or falsify his bubble fusion replication results. Source: ONR |
| B.2 | Taleyarkhan selectively processes his experimental data in order to create a misimpression of statistical significance. |

| | |
|----------------|---|
| | Source: Suslick |
| Group C | Y.Xu and A. Butt, Confirmatory experiments for nuclear emissions during acoustic cavitation. Nuclear Engineering and Design 235, 1317 (2005) |
| C.1 | Taleyarkhan used ^{252}Cf to fabricate and/or falsify his bubble fusion replication results. Source: ONR |
| C.2 | Taleyarkhan intentionally left his name off the publication in order to create a misleading impression of independent confirmation of sonofusion. Source: Suslick |
| C.3 | Taleyarkhan managed the generation of the research reported in the NED paper. Source: Tsoukalas |
| C.4 | The Xu data must have been fabricated because there is no record of acquisition of previously unused deuterated acetone by personnel in the Xu/Taleyarkhan laboratory. Source: Tsoukalas |
| C.5 | Taleyarkhan manipulated the press characterization of the Xu research to create a misleading appearance of independent supervision by Tsoukalas. Source: Tsoukalas |
| C6 | The NED and NURETH-11 papers rely upon falsified and/or plagiarized calibration data. Source: Tsoukalas |
| Group D | Publication: Y. Xu et al., Bubble Dynamics and Tritium Emission During Bubble Fusion Experiments, (Oct. 2, 2005) Paper wi/abstract for 11th international topical meeting on nuclear reactor thermal-hydraulics [NURETH-11] |
| D.1 | Taleyarkhan used ^{252}Cf to fabricate and/or falsify his bubble fusion replication results. Source: ONR |
| D.2 | Taleyarkhan intentionally left his name off the publication in order to create a misleading impression of independent confirmation of sonofusion. Source: Suslick |
| D.3 | Taleyarkhan manipulated the press characterization of the Xu research to create a misleading appearance of independent supervision by Tsoukalas. Source: Tsoukalas |
| Group E | Publication: R. P. Taleyarkhan et al., Bubble Nuclear Fusion Technology, Multiphase Science & Technology 17, 191-224 (2005) |
| E.1 | MST data is the same as NED/NURETH data, lacking proper attribution to the original sources, leading to the claim that RT “was allegedly (wrongfully) presenting same results as outcome(s) of different experiments.” Source: ONR |
| E.2 | Taleyarkhan used ^{252}Cf to fabricate and/or falsify his bubble fusion replication results as reported in NED and NURETH-11. Source: ONR |
| E.3 | Figure 8b of the MST paper plagiarizes Xu’s NED Figure 8 and NURETH Figure 6. Source: Suslick |
| Group F | Publication: R. P. Taleyarkhan et al., Nuclear Emissions During Self-Nucleated Acoustic Cavitation, Physical Review Letters 96, 034301 (2006) |
| F.1 | Taleyarkhan’s “PRL publication improperly attributes the neutron energy spectrum to D-D fusion, despite evidence that it is inconsistent with the spectrum expected for D-D fusion and is consistent with the spectrum for ^{252}Cf .” Source: ONR; Suslick; Putterman |
| F.2 | Taleyarkhan was federally funded for the work reported in Physical Review Letters (PRL 96) |

| | |
|----------------|--|
| | and has since allegedly claimed he was not. Source: ONR |
| F.3 | In January 2006, after spectrum analysis was conducted allegedly proving his use of ^{252}Cf , Taleyarkhan published fabricated and/or false scientific statements in his PRL: "Introduction. –Previously, we have provided evidence [1(a),2-4] for 2.45 MeV neutron emission and tritium production during external neutron-seeded cavitation experiments with chilled deuterated acetone, and these observations have now been independently confirmed [5]." Taleyarkhan intentionally left his name off of the Xu publications in order to create a misleading impression of independent confirmation of sonofusion. Source: Suslick; ONR; Tsoukalas |
| Group G | Publication: R. P. Taleyarkhan et al., Reply, Physical Review Letters 97, 149404 (2006) |
| G.1 | Taleyarkhan's response to the Naranjo critique was intentionally misleading Source: Naranjo; Suslick |
| G.2 | In his published response to a forensic analysis by Dr. Brian Naranjo, Taleyarkhan claims to show the same fusion data but, allegedly actually deleted some of his originally published results data on fusion signal. Source: ONR |
| Group H | Demonstration: August 2003 demonstration at ORNL |
| H.1 | In an August 2003 experiment, Taleyarkhan displayed improper experimental technique and improperly attempted to enlist Walter and Bougaev as endorsing authors of a related publication. Source: Walter, Bougaev |
| Group I | Event: Early 2004 Harrassment/Intimidation |
| I.1 | Taleyarkhan interfered with Walter's conduct of a cavitation cell experiment in January-February 2004 in RHPH G60. Source: Walter |
| Group J | Event: Miscellaneous intimidation Source: Walter |
| Group K | Demonstration: Demonstration in RHPH G60 on 9-19-03 |
| K.1 | Taleyarkhan fabricated a fusion demonstration in RHPH G60. Source: Walter |
| Group L | Presentation: September 2005 presentation at Wayne State |
| L.1 | Taleyarkhan falsely cited the Xu publications as an independent confirmation of sonofusion. Source: Suslick. |
| Group M | Demonstration: March 2006 DARPA demonstration |
| M.1 | Taleyarkhan selectively published only his sonofusion signal detections and suppressed that his experiments usually yield a null result (1-in-15 produce a sonofusion signal). Taleyarkhan's failure to publish a null result from his DARPA-funded research, including the March 2006 Purdue demonstration, is suppression of lack of reproducibility. Source: Suslick; Putterman |
| M.2 | Taleyarkhan selectively processes his experimental data in order to create misimpression of statistical significance. Source: Suslick |
| M.3 | The March 2006 demonstration was a "bait and switch" designed to obstruct inquiry into replication of Taleyarkhan's published experiment configurations. Taleyarkhan obstructed inquiry into the demonstration and into archive of sonofusion equipment and data. Source: ONR; Suslick |

| | |
|----------------|---|
| M.4 | Taleyarkhan altered records regarding charges to the ONR/DARPA accounts. Source: Tsoukalas. |
| Group N | Event: Purdue University's handling of June 2006 Suslick communication. |
| N.1 | In June 2006, pursuant to Dr. Suslick's allegation that Dr. RT committed fraud; Purdue University officials did not conduct an inquiry into those allegations in violation of their own process. Source: ONR |