Telephone Interview of Dan Shapira, March 28, 2013, by Steven B. Krivit

Dan Shapira: Hello?

Steven B. Krivit: Hi Dr. Shapira, this is Steven Krivit, I'm the editor of *New Energy Times*. I'm writing about the fusion work you did at Oak Ridge in 2001, do you have a moment?

DS: A moment? Yes.

SK: Oh, thank you. And to help me be accurate, is it okay for me to record?

DS: That's fine with me.

SK: Back in 2001, you were attempting to confirm or disconfirm the Taleyarkhan group experiment and you brought in your own neutron detector into their laboratory, it was the engineering - I forget the name of the laboratory, you brought your own neutron detector in there and you tried to observe data.

What I don't understand is, in your PRL paper that you published a year later, you said that you had - "We have repeated the experiment of Taleyarkhan," and I'm trying to understand what you meant by "repeated," [that is,] you "have repeated" the experiment.

DS: We left his detector in and added our detector. We had both detectors in.

SK: I missed a word — you left, you had — oh, you left his -

DS: Yes we left his detector in, which is the way he did it, but we added our detector.

SK: I'm still -

DS: He - what happened is, he borrowed a detector from me, which I told him was not a neutron detector, it was a plastic detector, it was a detector that detects also neutrons but it's mostly gammas, charged particles, anything, and that's how he published his first results.

And I didn't initiate it. I was asked by the lab director, the associate director, [Jim Roberto], to confirm, he asked me to confirm the experiment — very interested in going — first, they asked me to review the paper, a copy of the paper he wrote, and I was one of the reviewers. It didn't hold water.

SK: So you brought in…

DS: They asked me how much time it will take to do a good experiment to look at neutrons. Jim Roberto asked me "How long would it take you to do a good experiment to detect neutrons and clear away anything else that could have happened?" And you know, "make sure it's not neutrons from the neutron source and things like this."

I said "Well, you know I did an experiment at Brookhaven, and it will take me about a year to get the setup right." He said, "Okay, well, you have three months and together with Taleyarkhan, you should repeat the experiment." So essentially, Taleyarkhan set it up. The only thing I brought is my own neutron detector, I told him to add it to the setup, that's all.

SK: Did you have anything to do with designing or constructing the experiment?

DS: Yeah, sure I had to modify the experiment a lot, because when he did the experiment, he did continuous exposure and, if you know, he used a neutron source. A neutron source makes a lot of neutrons, in case you don't know.

SK: Yes, PNG.

DS: Exactly, and what happens is, what I modified is the data acquisition. I shut it off - when he had the pulse on the PNG on the neutron generator, I shut off the acquisition for 10 microseconds and then started it. And that was the main difference. This way it eliminated the first large burst of neutrons that came out.

SK: So when you went in...

DS: And that's what I wrote down, if you read the paper.

SK: So you, I've read several of the papers, I know you -

DS: I didn't write several, I only wrote one paper.

SK: One paper, yeah. I have some of the internal reports too. I know that according to the reports I have, two times, I think, the setup didn't work, but on July 24, is when everything finally worked and you were in there for the afternoon.

DS: Yeah, that's right because, what didn't work was the - he couldn't get the cavitation, he said. He had to tell me when he had the cavitation the way he wanted it. And that means to me, the time I would do the measurements.

SK: And was this on an experiment that he constructed or you constructed?

DS: I told you, again it's an experiment we constructed together, in a sense. He did the whole, he had the cavitation set up, his detector set up, everything. I

added the neutron detector and the data acquisition that shuts off for 10 seconds after the neutron detector. These are the main differences. Do you want me to tell you again?

I was asked to do it. I didn't volunteer to do it. I wasted a year on the analysis and the write-up and setting up the experiment. As far as I was concerned, it was a waste of a year of my time. I didn't get a great "thank you," but that's okay. I did what I thought was right and I was required to do it. I couldn't tell the lab associate director "No, I'm not going to read the paper. No, I'm not going to do the experiment." That was not my choice. And I think the lab associate director did the right thing, because, as it turns out, I think, I wouldn't say that there is or no - I don't talk about the effect. My question, "Did we see it?" No, we didn't. That's all. If someone else saw it, fine. They have to prove it to me or to anyone. I'm not a stakeholder. I don't deal with fusion energy. I deal with neutron measurements, I deal with measurements of charged particles. I'm good at nuclear measurements, that's my expertise.

SK: When did you retire from ORNL?

DS: I was laid off July last year.