

Oak Ridge Associated Universities Museum of Radiation and Radioactivity – a most unique collection

(As published in The Oak Ridger's Historically Speaking column the week of February 7, 2022)

This Historically Speaking column is intended to introduce readers to one of Oak Ridge's prized museums that is not usually included when I mention Heritage Tourism assets in the "Secret City" of Oak Ridge. The reason I do not include it is that the museum is used for training and research purposes and not intended for public access. It is in a controlled area and security requirements prevent casual access by the public.

The **Museum of Radiation and Radioactivity** was created and is operated by Oak Ridge Associated Universities as an educational and research facility. The artifacts are owned by the ORAU Foundation. The museum is located on ORAU's South Campus in the Health Physics Training facility at the corner of Bethel Valley Road and Pumphouse Road. There it is an integral part of Health Physics training programs.

The entire museum collection is available online at: <https://www.ornl.gov/health-physics-museum/>

The museum exists to chronicle the scientific and commercial history of radioactivity and radiation. It has been deemed the official repository for historical radiological instruments by the Health Physics Society. While the original purpose of the museum was to capture the history of Health Physics instrumentation, many other most interesting and unique radiation related artifacts are also included.

Among the unusual items are: Atomic Toys (an Atomic Train, a box of Atomic Fire Balls candy, an Atomic Robot Man, a model Simpson's Nuclear Waste Truck, and even the first issue of the *Atomic Bunny* comic book); Consumer Products (Fiesta ware, Depleted Uranium dice, Vaseline and Uranium glassware, and Check-up Gum); and many more technical instruments and historical artifacts.

The item Frank Munger found fascinating when he was given a tour, a few years ago before his retirement, for his Knoxville News Sentinel *Atomic City Underground*, http://knoxblogs.com/atomiccity/2012/01/20/worlds_best_collection_of_ever/ was a most unusual one. It is a special set of eyeglasses lens that were said to help eye conditions by being worn 10 minutes twice a day and keeping the eyes closed when wearing them. Here is a link to these "glasses" on display in the museum: <https://www.ornl.gov/health-physics-museum/collection/radioactive-quack-cures/pills-potions-and-other-miscellany/degnens-radio-active-eye-applicator.html>

Paul Frame is the key person who has led the creation of the most unusual museum collection I have ever seen. I have been privileged to be able to tour the museum and have taken a few people there who had special reasons for gaining access. It is my hope that this unusual museum may one day be available to the public through organized tours. But for now, online access is the best and only public option.

Paul says of his involvement in creating such an outstanding unique collection, "When I joined Professional Training Programs (then located on Laboratory Road) as an instructor in 1984/85 I went about opening closets and drawers to get an idea of where things were and what we had. In the process I ran across some old, ca 1930 x-ray tubes. Thinking these might be of interest to the course participants, I requested a display cabinet for the tubes and other items related to the course material.

"Roger Cloutier, who oversaw Professional Training Programs, arranged for the case with the admonition that I do not get any ideas, but I didn't know what he meant since I had no ideas. Shortly thereafter, I started getting offers of donations from the participants. This led to me researching the history behind the displayed items so that the latter were not simply objects in a case. That was the beginning. I can't remember the exact date, but the collection moved to the Scarboro facility around 2005. That move was a lot of work but not so much for me – Howard McCloud and Marsha Worthington did the heavy lifting.

The collection has always been in a Department of Energy facility. As you know, access for members of the public has become more problematic since 9/11. In the past we had regular displays at AMSE. We also had displays at Health Physics Society meetings (e.g., 1995 in Boston – celebrating 100th

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anniversary of the discovery of x-rays and radioactivity), and displays in Washington DC at the National Building Museum, etc. etc. It was a lot of trouble. There was no money to do this. Items got broken or lost. Arranging such displays sounds nice if you are not the one doing it.

“However, the collection can be seen online by anyone who can access the internet. When parts of the collection were at AMSE (for example) the audience was limited to those who knew about the exhibit and could get there. And they would be charged admission.

“The website describing the collection has a much larger potential audience, it is free, and the online descriptions are more informative than what you could put on a card in a display case. Because of the online availability, we frequently get permission requests to use photographs of various items in books, displays, presentations, etc.

“Also, I often get requests for help/information from the public. Today I responded to an email from someone trying to find a home for a major collection of x-ray equipment. Yesterday I responded to an email from a woman who accidentally ran a piece of uranium glass through her washer and drier.

“A major audience is found in the various state and federal radiation protection programs – these folks often encounter unknown radioactive items as part of their job, and they use the website to help identify these objects. This is just one of many ways the collection is used.

Pam Bonee, ORAU's Director, Communications and Marketing, realizes the importance of this unusual museum for training purposes. Without the actual equipment and components of radiation instrumentation to view, students would have trouble envisioning the history of radiation research and development over the years. She agreed to do this article to help the public also better realize some of the history of radiation and radioactivity through virtual access online.

Oak Ridge Associated Universities has recently upgraded the website: <https://www.ornl.gov/health-physics-museum/> which will take you to the entire collection online with exceptional descriptions for each unique item. You will want to take time to examine this phenomenal collection which is now more user friendly and inviting online. I have enjoyed it and found the website to be state-of-the-art and amazingly well done.

This museum is yet another example of the extraordinary resources available to researchers and training programs in Oak Ridge. ORAU provides innovative scientific and technical solutions for the U.S. Department of Energy and other federal agencies to advance national priorities in science, health, and education. This is done by integrating academic, government and scientific resources globally. ORAU is recognized as an organization that produces results when national and global priorities require innovative scientific and technical solutions.

I am pleased to bring you readers insights and online access to this marvelous and unique resource of Health Physics related artifacts contained in our most unusual museum. Enjoy your virtual tour by going online at: <https://www.ornl.gov/health-physics-museum/>

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Dr. Paul Frame shows artifacts from the museum to Alan Lowe, Executive Director of the American Museum of Science and Energy



Alan Lowe shows how this machine examined a person's foot to get the proper fitting shoe

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Trinitite from the Trinity Site of the first atomic explosion



Remember irradiated dimes and other such things?

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The radium glasses tried on by Frank Munger