From Tantalus to Today: The History of the Synchrotron Radiation Center

Eric Verbeten - History of Science University of Wisconsin Madison,
John Morgan, Esther Olson, Chris Moore - Synchrotron Radiation Center Education & Outreach
Richard Staley - Associate Professor, History of Science University of Wisconsin Madison

Abstract:

In 1968 the first storage ring dedicated to synchrotron radiation research, Tantalus, was commissioned in an underground, bunker like vault on the edge of a cornfield twenty miles south of Madison. There, a growing international community interested in solid-state research began investigating more deeply the nature of matter. Since then Tantalus’ successor Aladdin, a second-generation light source commissioned in 1985, replaced the lower energy Tantalus ring. This goal of this history project aims to preserve the histories of the Tantalus and Aladdin facilities.

I conducted oral histories and collected documents in order to compile an archive. Oral histories were used to uncover details about the facility’s past. To do this, I conducted twenty different interviews—including some follow up interviews—which allowed for a window into the personal stories of those who worked at the Tantalus and/or Aladdin facilities. Complimentary to the interviews was the archival process. This consisted of locating the many boxes of primary source material scattered around the facilities and then analyzing them for historically valuable information. These materials included: newsletters, proposals, schematics, meeting minutes, photographs, publications, and logbooks. The aforementioned primary sources helped reinforce events and especially dates about which the interviewees were uncertain. This dichotomy is also useful in that primary source documents can reveal specific information on significant events about which the interviews could not provide details.

Each interview was later transcribed and both the audio and transcription files are stored on a central server. The end goal for the archive is to consolidate all of the boxes and then send the condensed archive to the University of Wisconsin Madison’s archives. This will ensure their safekeeping and it will allow others to readily access the information.

Currently, we have the history of the SRC facilities outlined. My research with the interviews and archiving have covered the entire 41 years of the SRC’s history as well as the events leading up to Tantalus’ commissioning in 1968.

The objective now is to focus attention on several of the significant events in the history of these facilities. To do this I will conduct more follow up interviews as well as analyze the primary sources for new information. One focal point will be to investigate the 1984-85 years of the Aladdin accelerator when the facility lost its funding from the National Science Foundation (NSF). This was a major event in the history and requires more investigation to understand the circumstances and how the SRC staff overcame the challenges.

These investigations revealed the unique history of these facilities and their impacts on the science community.