

Horology at the MIT Museum

By Bob Frishman, NAWCC Silver Star Fellow (MA)

Split | Second is the title of a new time-easement exhibit at the museum of the Massachusetts Institute of Technology on its Cambridge campus. A focus on horology at one of the world's top-ranked universities is most welcome.

The MIT Museum's holdings are modest compared to the Collection of Historical Scientific Instruments at Harvard. Harvard's collection was established in 1948 by the late David P. Wheatland (1898–1993), who saved invaluable old clocks and instruments from dark closets and dumpsters. Today, it boasts 20,000 objects, most of them digitized, and a permanent public gallery.

Just two miles apart in Cambridge, the museums at MIT and Harvard deserve visits before MIT's exhibit closes in January 2027. Recently, I had an informative private tour of the MIT offerings with Florencia (Flori) Pierri, associate curator of Science and Technology. After my hour with her, I enjoyed adjacent exhibits that spotlight more aspects of the museum's year-long TIME theme: *Lighten Up! On Biology and Time*, *Freezing Time: Edgerton and the Beauty of the Machine Age*, and *Janet Echelman: Remembering the Future*.

In a single, large, well-lit room, *Split | Second* moves visitors chronologically through Western timekeeping. Small, pocket-size sundials, from the 17th century and later, lead to mechanical, spring-driven clocks and watches. The rarest is an all-wood pocket watch circa 1850 attributed to the innovative Bronnikov family of Russian watchmakers. Perhaps better than squinting at an actual Hamilton watch, the exhibit includes a large, illuminated, high-resolution transparency of the 987A military-grade movement, captured in 1944 by famed American photographer Berenice Abbott (1898–1991).



MIT Museum curator Florencia Pierri stands with her exhibit's ca. 1910 tellurion made by A. J. Nystrom & Co. AUTHOR'S PHOTO.

Electric timekeeping has appropriate examples from Henry Warren's Telechron firm in Ashland, MA. Warren graduated from MIT in 1894. Back-lit lantern slides illustrate the master clocks he developed to keep AC generation at 60 hertz, ensuring the accuracy of his plug-in clocks and enabling safe interconnections between the modern grid's power stations. The advent of Accutron and quartz timekeeping follows.

The "Atomic Time" section chronicles the development of the cesium clock that today governs the modern world. Most intriguing is the laboratory notebook of MIT physics professor Jerrold Zacharias (1905–86), open to a 1952 page of notes and drawings that address the concept of his "Fallotron." He developed a working

atomic clock prototype by 1954 and partnered with the National Company to make it commercially successful. More supremely accurate devices, using optical cavities and ytterbium ingots, were provided by MIT's Experimental Atomic Physics Group.

Besides Berenice Abbott's art/science photograph, two contemporary artists are represented. An entire wall is devoted to Jonathan Keats's 1995 *New England River Time*, a digital display of hours speeding up or slowing down based on seasonal flow rates of five local rivers.

Artist Agustina Woodgate loaned a version of her 2019 *National Times (Workout)* that has eight "slave" clocks

driven by a "master" clock mounted above them. Her similar exhibit at the 2019 Whitney Biennial in New York also explored the controversial "master/slave" terminology. Reacting to a review of that 2019 artwork, I noted in a published letter to the *Wall Street Journal* that these time-distribution clocks were historically and officially known as "secondary" clocks.

For more information about *Split | Second*, visit mitmuseum.mit.edu/time.