# MIT Building 44

November 21, 2019

Massachusetts Institute of Technology

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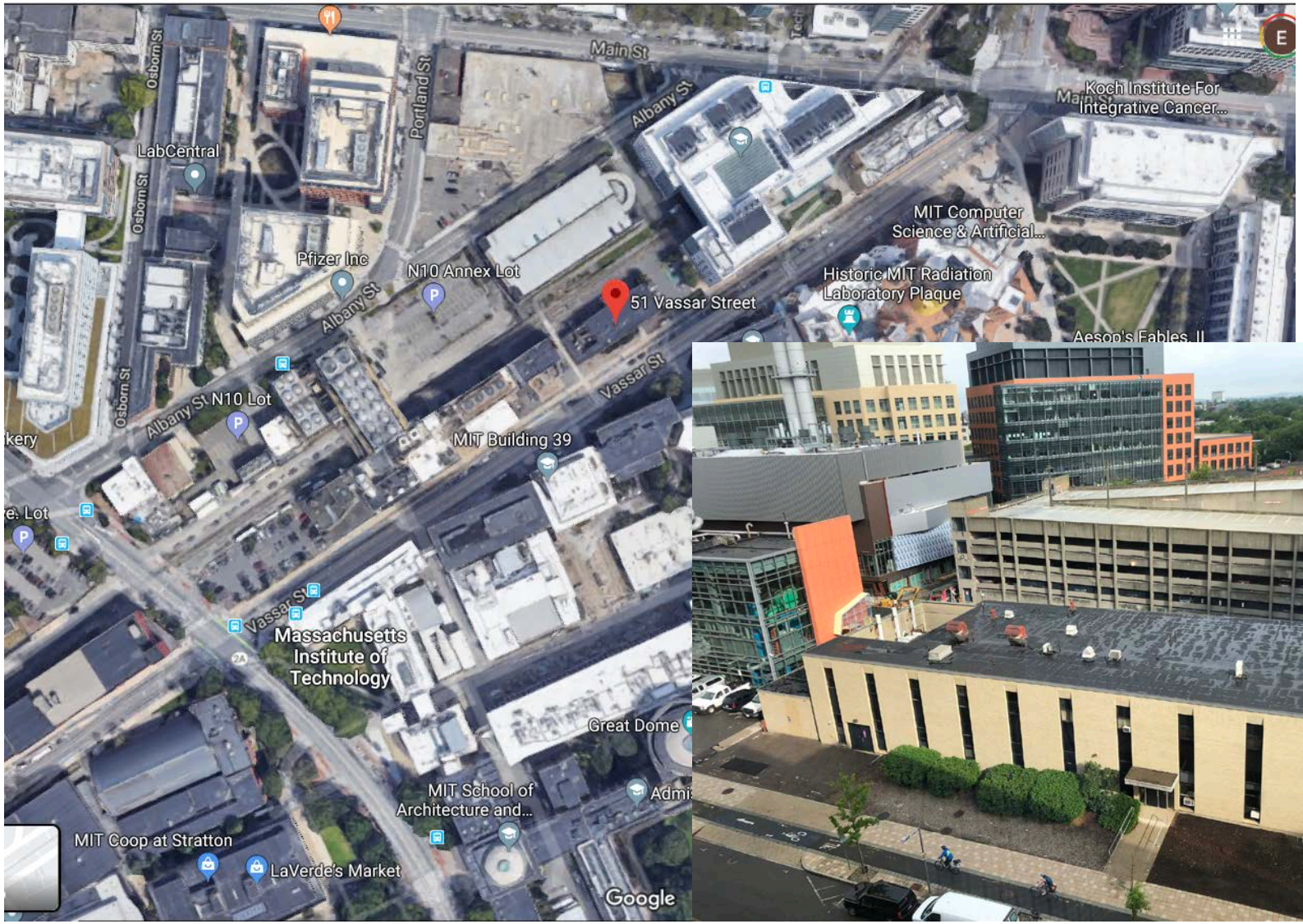
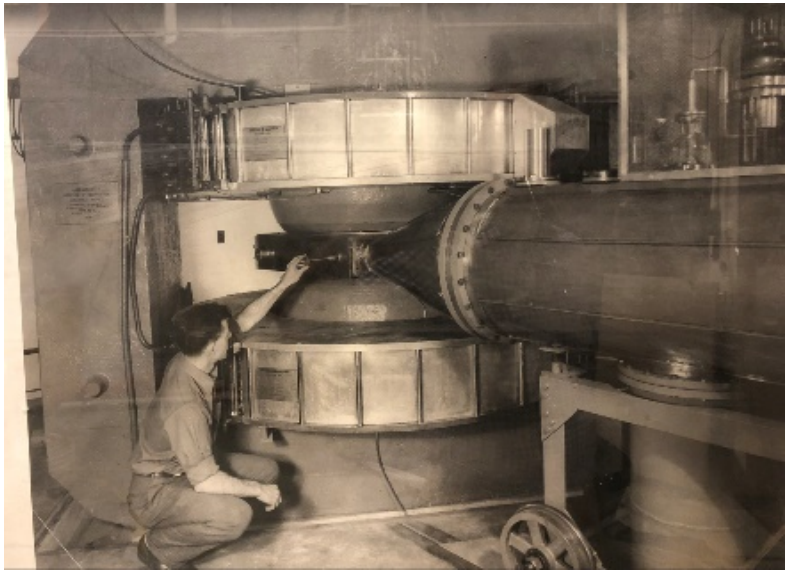


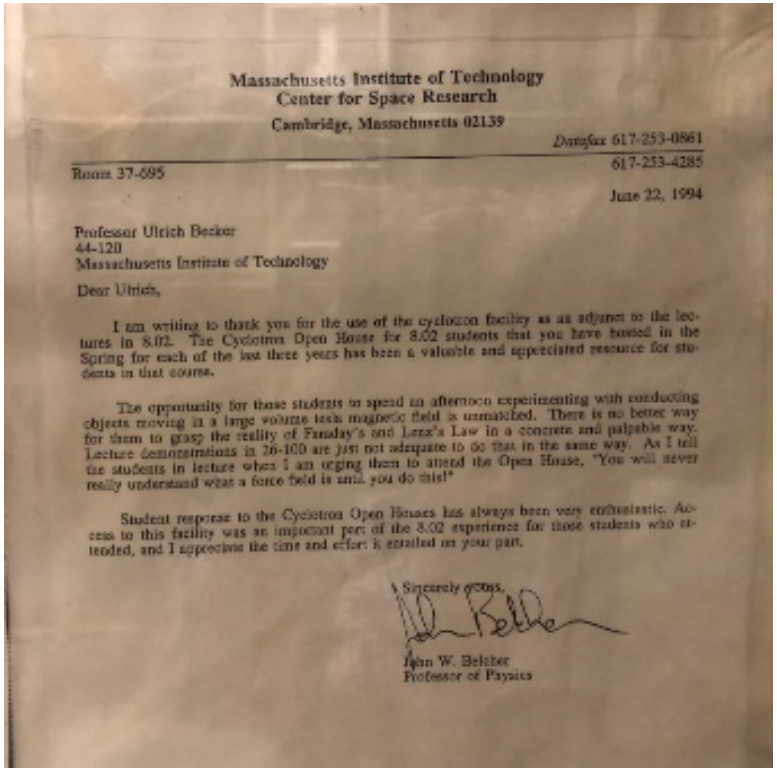
# MIT Building 44

**Cyclotron Laboratory**

The Cyclotron was conceived and developed in the late 1930s for use in nuclear physics research using particle acceleration to generate radioactive substances for medical research.

The new College of Computing Building will include an homage to the groundbreaking research generated by the cyclotron in Bldg. 44.



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June 22, 1994

Professor Ulrich Becker
44-120
Massachusetts Institute of Technology

Dear Ulrich,

I am writing to thank you for the use of the cyclotron facility as an adjunct to the lectures in 8.02. The Cyclotron Open House for 8.02 students that you have hosted in the Spring for each of the last three years has been a valuable and appreciated resource for students in that course.

The opportunity for those students to spend an afternoon experimenting with conducting objects moving in a large volume task magnetic field is unmatched. There is no better way for them to grasp the reality of Faraday's and Lenz's Law in a concrete and palpable way. Lecture demonstrations in 26-100 are just not adequate to do that in the same way. As I tell the students in lecture when I am urging them to attend the Open House, "You will never really understand what a force field is until you do this!"

Student response to the Cyclotron Open Houses has always been very enthusiastic. Access to this facility was an important part of the 8.02 experience for those students who attended, and I appreciate the time and effort it entailed on your part.

Sincerely yours,

John W. Belcher
Professor of Physics

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**Cyclotron Time Capsule**

In 1939 a group of MIT engineers placed a brass capsule beneath the 18-ton -magnet of the cyclotron. The capsule was to be opened in 50 years.

The project will include the removal of the time capsule from the cyclotron and is coordinating with the MIT Museum.

President Compton holds a "time capsule" packed with scientific literature which he sealed in a great slab of iron which will form the base of the big machine. Looking on is Dr. Robley D. Evans, in charge of cyclotron research. [RDE_12]

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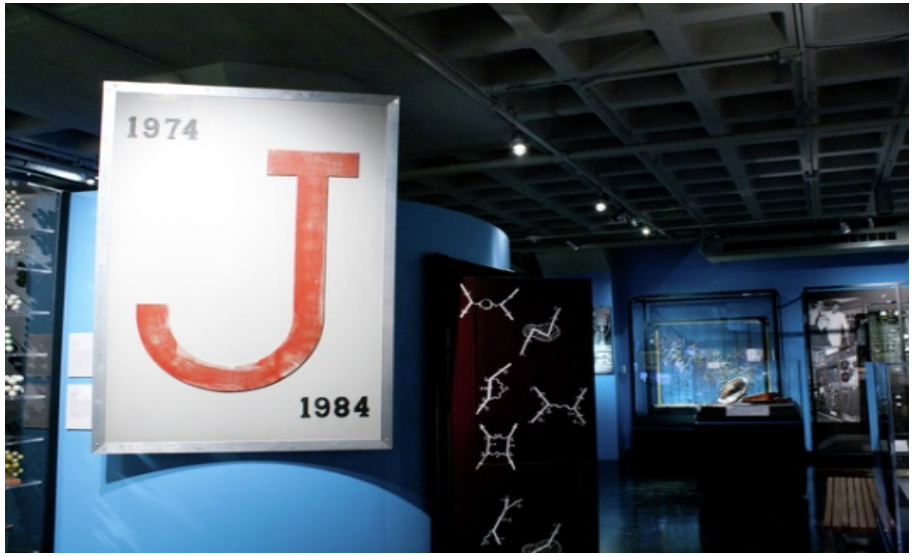
**High Energy Particle Physics (the J sign)**

In 1974 MIT Professor Samuel Ting discovered a new kind of heavy elementary particle (the J particle).

Professor Ting won the 1976 Nobel Prize for this discovery. The particle was independently and simultaneously discovered by a team at the Stanford Linear Accelerator Center whose leader, MIT alumnus Burton Richter, shared the prize with Ting.

The J sign remained above the entrance to Bldg. 44 for 35 years.


As part of the relocation of Professor Ting's current research program to Bldg. 26 to enable the construction of the new College of Computing, the sign was removed and loaned to the MIT Museum by the MIT Department of Physics.



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**Alpha Magnetic Spectrometer**

The Alpha Magnetic Spectrometer (AMS) is a state-of-the-art particle physics detector was designed by Professor Samuel Ting to operate as an external module on the International Space Station (ISS).

It uses the unique environment of space to study the universe and its origin by searching for antimatter, dark matter while performing precision measurements of cosmic rays composition and flux.

Building 44 has operated as a remote Payload Operations Center for the AMS Project with direct connection to the primary Payload Operations Center in CERN Switzerland and a direct connection to Johnson Space Center and the ISS.

To enable the construction of the new College of Computing a new remote Payload Operations Center was created in Building 26. The renovation was completed in October of 2019 and is fully operational.


# MIT Building 44

**Public Art – Invaders by Gary Wiley**

Gary Wiley's outdoor sculpture *Invaders* (1981) is composed of four distinct wall-mounted butterflies. It was conceived as a reconfigurable installation.

To enable the construction of the new College of Computing the Artwork was removed from Building 44 and reinstalled on Building 57. The removal and reinstallation was executed in the summer of 2019.