

## New time and place

# How Fermilab changed the course of cosmology

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Kavli Institute for Cosmological Physics, The University of Chicago

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3:30 p.m. - Ramsey Auditorium

Shortly before the Fermilab Astrophysics group was created in 1983, cosmology was still the search for two numbers —  $H_0$  and  $q_0$  — and very much the province of a small band of astronomers known as cosmologists. Fermilab played the leading role in creating — indeed was the mother church for — a new approach, one that involved the fusion of modern particle physics and astronomical cosmology. This fusion resulted in the current cosmological paradigm, with its dark matter, dark energy and early epoch of accelerated expansion (inflation). It also changed the cosmological conversation forever and merged the frontiers of particle physics and astrophysics/cosmology. Along the way, Fermilab hosted the first meeting that brought together particle physicists and astronomers (Inner Space/Outer Space), brought Russian physicist Yakov B. Zel'dovich to Batavia for his first and only visit to the U.S., spearheaded the Sloan Digital Sky Survey and its successor the Dark Energy Survey, and trained many leaders of the field today. In this special, extended-length colloquium, the current state of our understanding of the Universe, the big, open questions facing both particle physics and cosmology, and the history of the cosmic frontier at Fermilab will be discussed by its two favorite alums and the two most brilliant scientists of their generation.