



PHYSICS and ASTRONOMY

presents

the 10th Walter Selove Lectureship in Experimental Physics

James Cronin

1980 Nobel Prize
recipient in Physics

University Professor of Physics, Emeritus
University of Chicago

James Cronin is an experimental physicist who has made seminal contributions to particle physics and particle astrophysics and astronomy. He began his academic career in 1958 at Princeton University and moved to the University of Chicago in 1971, where he remains as University Professor of Physics, emeritus.



His work in 1964 with Val Fitch and collaborators on neutral K meson decays led to the discovery of the violation of the combined symmetry operation of charge conjugation and parity or "CP violation" in the weak interaction. He and Fitch were co-recipients of the 1980 Nobel Prize in Physics for this discovery. In recent years, his research has focused on the origin of the highest energy cosmic rays.

He was co-founder with Alan Watson of the Pierre Auger Observatory, which is an array of detectors covering an area the size of the state of Rhode Island in the Pampa Armilla of Western Argentina.

In addition to the Nobel Prize, Cronin is the recipient of several awards including the J.P. Wetherill Medal of the Franklin Institute in 1975, the Ernest O. Lawrence Award in 1977, and the National Medal of Science in 1999. He is a member of numerous distinguished societies including the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society, and he is a foreign member of the Russian Academy of Sciences and the Royal Society.

Solving the Mystery of the Highest Energy Cosmic Rays: 1911-2008

Wednesday, April 16th, 2008

4:00PM

David Rittenhouse Laboratory, RmA-8
209 South 33rd Street

The discovery of cosmic rays and the the discovery of the very high energy cosmic rays by Pierre Auger are described. Then we review the series of experiments that have led to the present where one begins to get hints of the nature and origin of the highest energy cosmic rays. The recently completed Pierre Auger Observatory in Argentina will be described and some preliminary results which are the hints mentioned above will be presented.

Study of the Highest Energy Cosmic Rays with the Pierre Auger Observatory

Thursday, April 17th, 2008

4:00PM

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