



THE UNIVERSITY OF CHICAGO
ENRICO FERMI INSTITUTE
THE ARTHUR H. COMPTON LECTURES
Sixtieth Series

“The Origin of Mass in Particle Physics”

By AMBREESH GUPTA
RESEARCH SCIENTIST, ENRICO FERMI INSTITUTE

Dear Friends of the Enrico Fermi Institute:

We cordially invite you to join us for the next series of the Arthur H. Compton Lectures. The Lectures have the purpose of bringing to the general public, to the friends of the Enrico Fermi Institute, to members of the University community, and to interested citizens of the Chicago area, a descriptive account of some of the frontiers of present-day science. We don't expect you to have a formal background in mathematics and the sciences, but we hope to appeal to your curiosity and we wish to share with you some of the excitement of modern scientific research.

In the upcoming series of lectures entitled: "The Origin of Mass in Particle Physics", Research Scientist Ambreesh Gupta will discuss the concept of mass in particle physics. Mass, which is a familiar perception in our daily life, has played a pivotal role in physics since the time when Newton first discovered the laws of motion more than three centuries ago. Today, we have an elegant description of the fundamental building blocks of nature in the form of "The Standard Model of Particle Physics". This highly successful description emerged during the last fifty years with the phenomenal progress in both theoretical and experimental ideas. The only missing piece in this description is the experimental confirmation of the prediction related with the origin of mass. Intense experimental search in the last decade or so, so far, has failed to produce clear evidence. One of the largest experimental endeavors ever undertaken, both in size and complexity, is now in progress to understand this mystery.

Ironically, even though the answer to this question of mass will be the final building block, it will also show the incompleteness of the Standard Model. It will raise questions related to deeper structures in matter, of hidden symmetries and of higher dimensions, where we may be forced again to rethink the present understanding of space and time.

No scientific background is required.
Just bring your curiosity and join us in exploring the world of particle physics.

We hope you can join us for the first lecture on Saturday, October 2, 2004 at 11 AM in Room 106 of the Kersten Physics Teaching Center, 5720 South Ellis Avenue. Enter through the door at the southwest corner.

Sincerely,
James E. Pilcher, Director

