

# Western Science

Western University  
DEPARTMENT OF PHYSICS AND ASTRONOMY

## ELIZABETH LAIRD MEMORIAL LECTURE

Thursday, 4<sup>th</sup> October 2012  
5:00 p.m. (doors open @ 4:30)  
in Conron Hall (UC 224)

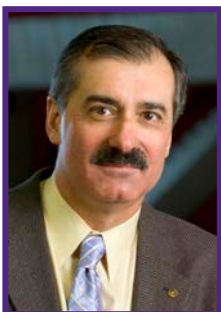
**Dr. Edward W. "Rocky" Kolb**

Department of Astronomy and Astrophysics  
The University of Chicago

### "Mysteries of the Dark Universe"

**Ninety-five percent of the universe is missing!**

Astronomical observations suggest that most of the mass of the universe is in a mysterious form called dark matter and most of the energy in the universe is in an even more mysterious form called dark energy. Unlocking the secrets of dark matter and dark energy will illuminate the nature of space and time and connect the quantum with the cosmos.



**Brief Bio:** Edward W. Kolb, known to most as Rocky, is the Arthur Holly Compton Distinguished Service Professor of Astronomy & Astrophysics and the Chair of the Department of Astronomy & Astrophysics at the University of Chicago, as well as a member of the Enrico Fermi Institute and the Kavli Institute for Cosmological Physics. In 1983, he was the founding head of the Theoretical Astrophysics Group and, in 2004, the founding Director of the Particle Astrophysics Center at Fermi National Accelerator Laboratory in Batavia, Illinois. His field of research is the application of elementary-particle physics to the very early Universe. In addition to over 200 scientific papers, he is a co-author of *The Early Universe*, the standard textbook on particle physics and cosmology.

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**Dr. Edward W. "Rocky" Kolb**  
**Department of Astronomy and Astrophysics**  
**The University of Chicago**

## Biographical Information

Edward W. Kolb (known to most as Rocky ) is the Arthur Holly Compton Distinguished Service Professor of Astronomy & Astrophysics and the College and Chair of the Department of Astronomy & Astrophysics at the University of Chicago, as well as a member of the Enrico Fermi Institute and the Kavli Institute for Cosmological Physics. In 1983 he was the founding head of the Theoretical Astrophysics Group and in 2004 the founding Director of the Particle Astrophysics Center at Fermi National Accelerator Laboratory in Batavia, Illinois.

Kolb is a Fellow of the American Academy of Arts and Sciences and a Fellow of the American Physical Society. He was the recipient of the 2003 Oersted Medal of the American Association of Physics Teachers for notable contributions to the teaching of physics, the 1993 Quantrell Prize for teaching excellence at the University of Chicago, and the 2009 Excellence in Teaching Award from the Graham School of the University of Chicago. His book for the general public, *Blind Watchers of the Sky*, received the 1996 Emme Award of the American Aeronautical Society.

The field of Rocky's research is the application of elementary-particle physics to the very early Universe. In addition to over 200 scientific papers, he is a co-author of *The Early Universe*, the standard textbook on particle physics and cosmology.

Kolb's research was recognized by the 2010 Dannie Heineman Prize for Astrophysics, awarded by the American Astronomical Society and the American Institute for Physics. He holds an honorary degree, Doctor Honoris Causa, from the University of Lyon, France. **In the autumn of 2012 he will be in residence at the University of Heidelberg as the recipient of the J. Hans D. Jensen Prize.**

He has travelled the world, if not yet the Universe, giving scientific and public lectures. Rocky has been a Harlow Shapley Visiting Lecturer with the American Astronomical Society since 1984. In recent years he has been selected by the American Physical Society and the International Conference on High-Energy Physics to present public lectures in conjunction with international physics meetings. Rocky presented a special public lecture in Salonika Greece as part of the cultural celebration of that city, and he was selected to address the president of Pakistan as part of the celebration of the 50th anniversary of the founding of the country. He has been the Oppenheimer lecturer in Los Alamos, and in Athens (Ohio) and Troy (New York) he presented the Graselli Lecture and the Resnick Lecture. He has also presented public lectures at the Royal Society of London, as well as Vienna, Barcelona, Rio de Janeiro, Glasgow, Edinburgh, Valencia, Victoria, Montreal, Bonn, Karlsruhe, Rome, Toronto, Copenhagen, Turin, Uppsala, Hamilton, and Vancouver.

Rocky has appeared in several television productions, most recently interviewing Stephen Hawking for the Discovery Channel. He can also be seen in the IMAX film *The Cosmic Voyage*.