



California State University, Los Angeles

SCIENCE SERIES

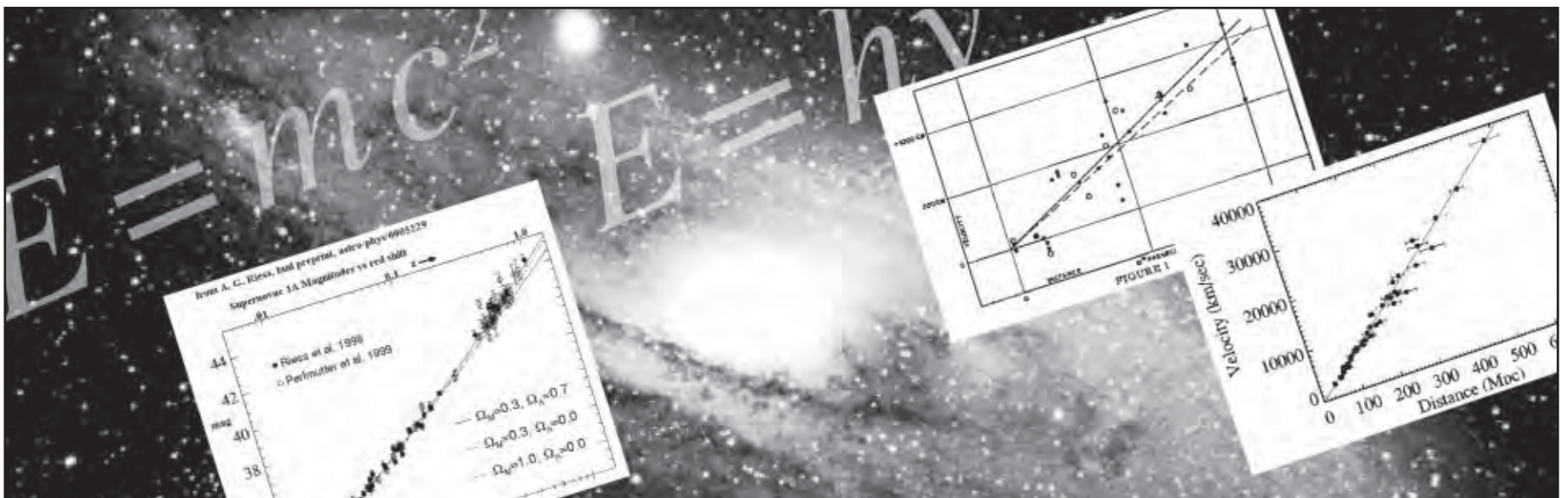
THE WORLD YEAR OF PHYSICS

In 1905, Albert Einstein wrote his legendary articles which provided the basis of three fundamental fields in physics: the theory of relativity, quantum theory and the theory of Brownian motion. Professor Martin Epstein will discuss the life and on going impact of this remarkable man on the development of physics, astronomy and cosmology.

It is well known that the liquid ^4He condenses into the superfluid state below about 2 K through Bose-Einstein condensation. Superconductivity can occur when charged bosons undergo a phase transition below the Bose-Einstein condensation temperature. Professor Guo-Meng Zhao will show how the binding of two charged carriers into a local pair (a boson) in copper oxide perovskites could provide an insight into high-temperature superconductivity via the Bose-Einstein condensation mechanism.

A hundred years ago it was believed that we live in an eternal, dark, mostly empty space, sprinkled with stars and filled with ether that carries light and radio waves. By now we know that we live in an expanding, evolving universe, whose dominant content is detectable but unknown, and whose shape, beginning and end take perhaps the most fascinating forms. Professor Milan Mijic will discuss the old and new pictures of the universe that were developed in the past hundred years, and the scientific evidence that led to them.

Professor Susan Terebey will review the searches that are currently underway for planets around other stars. Results from the Hubble Space Telescope and new Spitzer Space Telescope show all aspects of planetary systems from their early formation as gaseous disks to the active planet building phase. However, don't expect to visit extrasolar planets anytime soon. Einstein's theory of special relativity says spacecraft can't go faster than the speed of light. This means space exploration of even nearby stars is unlikely, given the vast distances involved.



WINTER & SPRING 2005 - SCIENCE LECTURE SERIES

presented by

The Department of Physics and Astronomy

All lectures will be on Wednesday evenings at 8:00 pm in the Physical Sciences Building, room 158. Lectures are free and open to the public. Metered parking is available adjacent to the Physical Sciences Building in Parking Lot B and in the parking structure adjacent to the Luckman Theatre.

SPEAKER	DATE	LECTURE
Martin Epstein	Feb. 2, 2005	<i>The Life of Albert Einstein and His Lasting Impact on Physics</i>
Guo-Meng Zhao	Mar. 2, 2005	<i>Bose-Einstein Condensation and High Temperature Superconductivity</i>
Milan Mijic	Apr. 13, 2005	<i>How to Imagine the Universe?</i>
Susan Terebey	May 4, 2005	<i>The Search for Extrasolar Planets</i>

Contact the Department of Physics and Astronomy at (323) 343-2100 or physics@calstatela.edu for more information.