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Sonia Fernandez

Big Bang, Dark Energy the Focus of Annual Las Cumbres Observatory Lecture

Distinguished astronomer John E. Carlstrom will discuss observational foundations of current theories on the origin of the universe in a lecture on April 26 at 7:30 p.m., at the Santa Barbara Museum of Natural History, 2559 Puesta del Sol Road in Santa Barbara.

"Exploring the Universe from the South Pole: An Evening with Professor John E. Carlstrom," is the latest in a series of annual talks in the Las Cumbres Observatory Lectures series. A collaboration between the Las Cumbres Observatory Global Telescope Network, the UC Santa Barbara Department of Physics, and the Santa Barbara Natural History Museum, the series is part of the three organizations' efforts at reaching out and educating community, students, and scientists about the latest developments in the fields of astrophysics and cosmology.

Tickets are $8 for museum members, and $10 for non-members. Advance tickets are not available and there are no reservations for this event. Tickets may be purchased as early as 7 p.m. on the evening of the lecture. For more information, call (805) 682-4711, extension 173.

We live in the wake of the Big Bang, the prevailing cosmological theory that explains the origin of our universe. And, according to astronomical observations, the universe

continues to expand at an accelerating pace. Ordinary matter ó the material that makes humans and stars ó accounts for a meager 5 percent of the content of the universe, while the elusive and little-understood dark matter and dark energy comprise the rest.

In his lecture, Carlstrom will discuss how scientists have arrived at these conclusions. Much has been provided through measurements of cosmic microwave background radiation ó the fossil light from the Big Bang ó that provide a direct view of the universe as it was 14 billion years ago. Carlstrom will focus on new measurements being carried out with the 10-meter precision South Pole Telescope to test the inflation theory of the origin of the universe, and to investigate the nature of dark energy.

Carlstrom is the Subramanyan Chandrasekhar Distinguished Service Professor at the University of Chicago, and deputy director of the Kavli Institute for Cosmological Physics. A member of the American Academy of Arts and Sciences and the National Academy of Sciences, he received his Ph.D. in physics from UC Berkeley in 1988, and has since received several awards, including a MacArthur Fellowship. He leads the South Pole Telescope project at the NSF Amundsen-Scott South Pole Research Station.

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† Top image: The National Science Foundation's Amundsen-Scott South Pole Research Station, home to the 10-meter South Pole precision telescope.

Credit: Daniel Luong-Van

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South Pole Telescope

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