

# Claude R. Canizares

## “High-Resolution Spectroscopy with the Chandra X-ray Observatory”

**Claude Canizares** earned his Ph.D. in physics from Harvard University. He is the Bruno Rossi Professor of Physics and Vice President for Research and Associate Provost at MIT, and Associate Director of the Chandra X-ray Observatory Center and a principal investigator on NASA's Chandra X-ray Observatory. Prof. Canizares's main research interests are high-resolution x-ray spectroscopy and plasma diagnostics of supernova remnants and clusters of galaxies, x-ray studies of dark matter, x-ray properties of quasars and active galactic nuclei, and observational cosmology. He serves on the Council of the National Academy of Sciences; National Research Council committees on Science Engineering and Public Policy, Science Communication, and National Security; and the Board of Directors of L-3 Communications, Inc. He is a member of the National Academy of Sciences and the International Academy of Astronautics and is a Fellow of the American Academy of Arts and Sciences, the American Physical Society, and the American Association for the Advancement of Science. He has received several awards, including decoration for Meritorious Civilian Service to the United States Air Force, two NASA Public Service Medals, and the Goddard Medal of the American Astronautical Society, and is author or co-author on over 200 scientific papers.



The capabilities of the Chandra X-ray Observatory and XMM-Newton for high-resolution spectroscopy have brought traditional plasma diagnostic techniques to the study of cosmic plasma. Observations have probed nearly every class of astronomical object, from young proto-stars through massive O stars and black hole binaries, supernova remnants, active galactic nuclei and the intergalactic medium. Many of these sources show remarkably rich spectra that reveal new physical information, such as emission measure distributions, elemental abundances, accretion disk and wind signatures, and time variability. This talk will present an overview of the Chandra instrumentation and selected examples of spectral observations of astrophysical and cosmological importance.

**Wednesday, August 1, 2007**

**3:00 p.m.**

**Bldg. 402, APS Auditorium • Argonne National Laboratory**

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