



Nobel Laureate in Physics **John C. Mather**

From the Big Bang to the Nobel Prize and on to the James Webb Space Telescope and the Discovery of Alien Life

The history of the universe in a nutshell, from the Big Bang to now, and on to the future—John Mather will tell the story of how we got here, how the Universe began with a Big Bang, how it could have produced an Earth where sentient beings can live, and how those beings are discovering their history. He will explain Einstein's biggest mistake, show how Edwin Hubble discovered the expansion of the universe, how the Cosmic Background Explorer (COBE) mission was built, and how its data support the Big Bang theory. He will also show NASA's plans for the next great telescope in space, the James Webb Space Telescope. It will look even farther back in time than the Hubble Space Telescope, and will peer inside the dusty cocoons where stars and planets are being born today. Using the stellar transit technique, the JWST is capable of examining Earth-like exoplanets, where follow-on missions may find signs of life. Currently planned for launch in 2014, the JWST may lead to another Nobel Prize for some lucky observer.

Dr. John C. Mather is a Senior Astrophysicist in the Observational Cosmology Laboratory at NASA's Goddard Space Flight Center. His research centers on infrared astronomy and cosmology. As a National Research Council postdoctoral fellow at the Goddard Institute for Space Studies, Mather led the proposal efforts for COBE (1974-76), and came to GSFC

to be Study Scientist (1976-88), Project Scientist (1988-98), and also the Principal Investigator for COBE's Far Infrared Absolute Spectrophotometer (FIRAS). Presently he is Senior Project Scientist for the JWST. Mather earned his B.A. in Physics from Swarthmore College and his Ph.D. from the University of California, Berkeley. In 2006, Mather shared the Nobel Prize for Physics with George F. Smoot of the University of California, Berkeley for their discovery of the blackbody form and anisotropy of the cosmic microwave background radiation.

Saturday, Nov 20, 2010
1:30 pm
National Science Foundation, Room 110
4201 Wilson Boulevard, Arlington, VA
FREE admission – Everyone welcome,
members and non-members

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