



# The History of the Universe from Beginning to End and Observing with the James Webb Space Telescope

Department of Physics

A presentation by:

**Nobel Laureate, John C. Mather, Ph.D.**

*Senior Astrophysicist, NASA's Goddard Space Flight Center, Greenbelt, MD*

*Senior Project Scientist, James Webb Space Telescope*



The history of the universe in a nutshell, from the Big Bang to now, and on to the future – 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. Mather was Project Scientist for NASA's Cosmic Background Explorer (COBE) satellite, which measured the spectrum (the color) of the heat radiation from the Big Bang, discovered hot and cold spots in that radiation, and hunted for the first objects

that formed after the great explosion. He will explain Einstein's biggest mistake, how Edwin Hubble discovered the expansion of the universe, how the COBE mission was built, and how the COBE 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 (JWST) which 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. The JWST will be capable of examining Earth-like planets around other stars using the transit technique and may one day find signs of life.

**Tuesday,  
November 12, 2013**  
3:30 p.m.

AHC-3, Room 110

*This event is free  
and open to the public.  
Refreshments will be provided.*

*Co-sponsored by the College of Arts & Sciences, the School of Integrated Science and Humanity  
and the Stocker AstroScience Center.*

**Department of Physics**

Modesto A. Maidique Campus | 11200 SW 8th St., CP 204

Miami, FL 33199 | 305-348-2605 | [physics.fiu.edu](http://physics.fiu.edu)

**FIU** | **Arts &  
Sciences**  
*School of Integrated Science and Humanity*