Course Outline SIO 87
Freshman Seminar on New Cosmology
Fall Quarter 2014: October 8, 15, 22, 29

Time and place: Wednesdays at 8:00-9:50 am, EBU2 479.

Course Code: Section ID 819654

Instructor: Carl H. Gibson, Professor of Engineering Physics and Oceanography, Center for Astrophysics and Space Sciences, 575 EBU2, 534-3184, cgibson@ucsd.edu.

http://sdcc3.ucsd.edu/~ir118. Office hours after class.

Teaching Assistant: none

Textbook: Book and reading lists. Exploration of internet resources.

Course description: Discussions with freshmen (and other) UCSD students about conventional cosmology and new cosmology. Observations from a variety of new space and earth telescopes are discussed along with some introductory astronomy and astrophysics. Substantial revisions to standard models are required to explain the observations. Conflicts occur particularly when modern fluid mechanics and turbulence theory are applied to the primordial fluids produced by the big bang. New cosmology explains how the universe appeared in the first place, and how gravitational structures like galaxies, stars and planets formed. It predicts that most ordinary matter exists in small frozen hydrogen and helium planets condensed when the universe was 0.0025% of its present age. Only a small number of these dark matter planets have been detected even though there are 30 million per star. All larger planets and the stars were formed by merging such primordial planets. Each planet has collected and processed the chemicals of stardust for more than thirteen billion years and is therefore a candidate for possible biological activity.

Grading: One unit. Pass not pass.