Contribution ID: **18** Type: **Contributed talk**

Measuring Light from the Epoch of Reionization with CIBER, the Cosmic Infrared Background Experiment

Friday 12 November 2010 11:50 (20 minutes)

Ultraviolet emission from the first generation of stars in the Universe ionized the intergalactic medium in a process which was completed by z~6; the wavelength of these photons has been redshifted by (1+z) into the near infrared today and can be measured using instruments situated above the Earth's atmosphere. First flying in February 2009, the Cosmic Infrared Background Experiment (CIBER) comprises four instruments housed in a single reusable sounding rocket borne payload. CIBER will measure spatial anisotropies in the extragalactic IR background caused by cosmological structure from the epoch of reionization using two broadband imaging instruments, make a detailed characterization of the spectral shape of the IR background using a low resolution spectrometer, and measure the absolute brightness of the Zodical light foreground with a high resolution spectrometer in each of our six science fields. This talk will present the scientific motivation for CIBER and details of its first two flights, including a discussion of the scientific results from the
first flight and an outlook for future reionization science with CIBER data.

Primary author: Dr ZEMCOV, Michael (California Institute of Technology/Jet Propulsion Laboratory)

Co-authors: Prof. COORAY, A. (University of California, Irvine); Prof. KEATING, B. (University of California, San Diego); Dr LEE, D. H. (Korea Astronomy and Space Science Institute); Dr SULLIVAN, I. (University of Washington); Mr BATTLE, J. (Jet Propulsion Laboratory); Dr BOCK, J. (Jet Propulsion Laboratory/California Insitute of Technology); Dr TSUMURA, K. (Japan Aerospace Exploration Agency); Dr LEVENSON, L. (California Institute of Technology); Mr KIM, M. G. (Seoul National University); Dr MASON, P. (California Institute of Technology); Dr MATSUURA, S. (Japan Aerospace Exploration Agency); Mr ARAI, T (University of Tokyo); Prof. MATSUMOTO, T. (Seoul National University); Dr RENBARGER, T. (University of California, San Diego); Dr WADA, T. (Japan Aerospace Exploration Agency); Dr NAM, U.W. (Korea Astronomy and Space Science Institute); Mr HRISTOV, V. (California Institute of Technology)

Presenter: Dr ZEMCOV, Michael (California Institute of Technology/Jet Propulsion Laboratory)

Session Classification: Session 10

Track Classification: Reionization