

The Study of the Anisotropy of the Cosmic Infrared Background
at Sub-MM Wavelengths: The EDGE Project

Stephan S. Meyer, Edward S. Cheng, David Cottingham, Dale Fixsen,
Peter Timbie, Robert Silverberg, Grant Wilson

Abstract

The Cosmic Infrared Background (CIB) is likely to be the integrated emission from stars and galaxies. In the sub-mm the emission comes from galaxies at redshift from 0.5 to 2 and above. Spatial variation in the CIB surface brightness at large angular scales are sourced by variations in the galaxy density which in turn responds to large-scale matter density variations. The CIB anisotropy is thus sensitive to the history of structure growth and galaxy bias at high redshift. The EDGE instrument measures the spatial variation at low angular resolution and can sample much larger volumes than galaxy counting experiments. Redshift determination of structure is obtained at low resolution using submillimeter color information. We discuss the nature of the measurement, the instrumentation and the astrophysical goals of the experiment.

SMEYER @