

Modelling the Cosmic Infrared Background

Invited Review Paper at the workshop "UNVEILING THE COSMIC INFRARED BACKGROUND", Goddard Space Flight Center, April 23-25.

The contribution to the cosmic infrared background from various non-exotic extragalactic sources, including normal and active galaxies and protogalaxies, will be discussed from the context of various modelling techniques and their observational constraints. The reliability with which we can extrapolate the contribution of these various types of extragalactic discrete sources will be discussed, and it will be shown that the COBE FIRAS deviation limits rule out several classes of evolving model, and limit the amount of starbursting that can have occurred during a Hubble time. The background limits do, however, permit a substantial fraction of protogalaxy light to emerge in the far-infrared, but not the sub-mm range.