



## **The Earth's Far Infrared Spectrum**

J E Harries

Imperial College, London

The Earth is a far IR planet, in that it is a cool object in space, with a considerable amount of energy being emitted at wavelengths longer than 10 microns. This has a number of consequences, some of which are discussed in the paper. Amongst other things, we discuss the water vapour feedback in climate, which operates principally via the FIR pure rotation band, and measurements of net flux spectra from aircraft, which may be used to deduce the in-situ cooling rates of the atmosphere in the FIR. The paper ends with a consideration of future requirements for FIR measurements, including the prospects for a satellite-borne FIR monitor of climate.