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A METHOD FOR THE DETERMINATION OF SURFACE EMISSIVITIES OF MULTISPECTRAL DATA IN THE 8 μm - 13 μm REGION

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The authors have developed a method to determine emissivities and kinetic temperatures of land cover materials through analysis of multispectral remote sensor measurements in the 8 - 13 µm spectral regions. Simultaneous measurements from two spectral regions of the 8 - 13 µm thermal infrared spectral region are ratioed to determine surface emissivities following the method proposed by Vincent and Thomson1. Assuming that emissivity is constant in the 8 - 13 µm region, surface emissivities and kinetic temperatures may be computed. A zero band width approximation of the integrated graybody radiance is evaluated to facilitate computer processing. The authors discuss the method and demonstrate its application to aircraft scanner data for the study of heat radiation from urban buildings.

¹R. K. Vincent and Fred Thomson, Journal Geophy. Res. <u>77</u>, 14, 1972.