


# Separation of Atmospheric and Surface Spectral Features in Mars Global Surveyor Thermal Emission Spectrometer (Tes) Spectra

By Michael D. Smith

Bibliogov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 36 pages. Dimensions: 9.7in. x 7.4in. x 0.1in.We present two algorithms for the separation of spectral features caused by atmospheric and surface components in Thermal Emission Spectrometer (TES) data. One algorithm uses radiative transfer and successive least squares fitting to find spectral shapes first for atmospheric dust, then for water-ice aerosols, and then, finally, for surface emissivity. A second independent algorithm uses a combination of factor analysis, target transformation, and deconvolution to simultaneously find dust, water ice, and surface emissivity spectral shapes. Both algorithms have been applied to TES spectra, and both find very similar atmospheric and surface spectral shapes. For TES spectra taken during aerobraking and science phasing periods in nadir-geometry these two algorithms give meaningful and usable surface emissivity spectra that can be used for mineralogical identification. This item ships from La Vergne,TN. Paperback.



### Reviews

*This pdf is wonderful. It is definitely simplified but excitement from the 50 percent in the ebook. You wont sense monotony at at any time of your time (that's what catalogues are for relating to should you request me).*

-- ***Jaqueline Kerluke***

*I just started looking at this pdf. It can be rally fascinating throgh studying period of time. Its been printed in an extremely basic way and is particularly only following i finished reading through this publication where in fact altered me, change the way i really believe.*

-- ***Mr. Stephan McKenzie***