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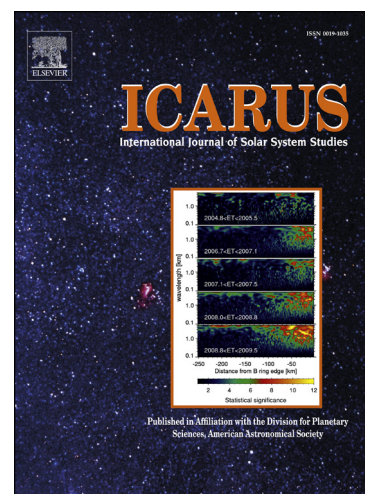
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Temperatures and aerosol opacities of the Mars atmosphere at aphelion:
Validation and inter-comparison of limb sounding profiles from MRO/MCS and
MGS/TES

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Abstract:

We exploit the relative stability and repeatability of the Mars atmosphere at aphelion for an inter-comparison of Mars Global Surveyor/Thermal Emission Spectrometer (MGS/TES) and Mars Reconnaissance Orbiter/Mars Climate Sounder (MRO/MCS) nighttime temperature profiles and aerosol opacity profiles in Mars years 25, 26, 29, 30, and 31. Cross-calibration of these datasets is important, as they together provide an extended climatology for this planetary atmosphere. As a standard of comparison we employ temperature profiles obtained by radio occultation methods during the MGS mission in Mars years 24, 25, and 26. We first compare both zonal mean TES limb sounding profiles and

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