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The SASKTRAN Radiative Transfer Framework Version 2

For over twenty years the SASKTRAN radiative transfer model has been used in the inversion of limb radiance observations from the OSIRIS instrument. SASKTRAN has since seen numerous upgrades that make it ideal for use in a variety of measurement scenarios across the UV, visible, and infrared spectral regimes. The next generation of the model, SASKTRAN2, is now available and has been completely rewritten with significant performance improvements and a simple yet powerful user interface. Here, we describe the main features of SASKTRAN2, such as the ability to model radiances in spherical or plane-parallel model geometries, and the inclusion of analytic weighting function calculations. We highlight the easy installation process and provide an overview of the user interface. Additionally, we discuss recent developments and applications of SASKTRAN2, including an investigation into the modelling of upwelling radiative fluxes at the top of the atmosphere.

Topic

Current and past limb and occultation instruments: algorithms, products, validation

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