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# Statistical quantities of atmospheric UV/vis radiation derived from Monte Carlo Modelling

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A three-dimensional atmospheric radiative transport (TRACY) model based on the Monte Carlo method was developed at our institute. It is mainly dedicated to the modeling of air mass factors and intensities necessary for the interpretation of trace gas remote sensing from various platforms like satellites, aircrafts, balloons or from ground. A Monte Carlo model is also well suited for the calculation of statistical quantities of the radiation field, like the spatial distribution of scattering events. Such quantities are not only interesting for a better understanding of remote sensing results. They also provide interesting information on photolysis rates and atmospheric energy deposition. We present results for various atmospheric conditions in particular including cloudy scenes.