



The spectroscopic search for the trace aerosols in the planetary atmospheres - the results of numerical simulations

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The passive remote spectrometric methods are important in examinations the atmospheres of planets. The radiance spectra inform us about values of thermodynamical parameters and composition of the atmospheres and surfaces. The spectral technology can be useful in detection of the trace aerosols like biological substances (if present) in the environments of the planets. We discuss here some of the aspects related to the spectroscopic search for the aerosols and dust in planetary atmospheres. Possibility of detection and identifications of biological aerosols with a passive InfraRed spectrometer in an open-air environment is discussed. We present numerically simulated, based on radiative transfer theory, spectroscopic observations of the Earth atmosphere. Laboratory measurements of transmittance of various kinds of aerosols, pollens and bacterias were used in modeling.