COMPLETE MATRIX SOLUTION OF RADIATIVE TRANSFER EQUATION FOR HORIZONTALY HOMOGENEOUS SLABS

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ABSTRACT. The paper deals with the solution of radiative transfer equation that takes into account a high degree of scattering anisotropy. The solution is built upon the representation of the light field inside a scattering medium as a superposition of the most anisotropic part and a smooth regular part. The first of them is calculated analytically using the smoothness of the solution angular spectrum. The regular part is obtained from a radiative transfer equation boundary problem with the anisotropic part as a source function by discrete ordinates method with a scaling transformation and a matrix-operator method applied.