ABSORBED ELECTROMAGNETIC RADIATION ENERGY DISTRIBUTON IN THE SYSTEM OF NON-UNIFORM AEROSOL PARTICLES DEPENDING ON PARTICLES STRUCTURE AND EXTERNAL CONDITIONS.

Krivenko I.V., Uvarova L.A.[1], Ivannikov A.F.

Tver State Technical University, Nature Management and Ecology Faculty, Chair of the general physics,
M.Konev's str., 12, Tver, 170000, Russia
Ph.: (4822 44-55-93, E-mail: krivenko-irina@mail.ru

[1]Moscow state technological university "STANKIN", Faculty of Information Technology and Control systems, Chair of applied mathematics,
The Vadkovsky lane, 3a, Moscow, 127055, Russia

In the present work absorption of electromagnetic radiation by the non-uniform on structure aerosol particles weighed in atmosphere is investigated. Properties of environment (atmosphere) depend on height over an earth surface.

Aerosol particles of following structure are considered: on ice "needle" the soot layer (wet coal, a smog, etc.) is formed. Such case can be realized in the layers of the atmosphere which are in areas of megacities and industrial zones with raised concentration of carbonaceous connections. The disperse aerosol system is modelled by us in pair infinite two-layer parallel cylindrical particles. The external layer and internal area of a particle have various optical properties. It is considered three modeling cases of two-layer particles:

a) The External border of the cylinder and internal border of an external layer represent concentric cylindrical surfaces; b) The external border of the cylinder and internal border of an external layer represent not concentric cylindrical surfaces. Thus considered external and internal borders of external layers are coordinate surfaces of one bicylindrical coordinate systems; c) The internal border of an external layer gets out in a random way and is function of angular coordinate in the polar system of coordinates connected with external border of the cylinder.

Influence of an external layer on distribution of heat sources in a particle is investigated. It is found that on distribution essential influence is rendered by the form of internal border of an external layer, and also property of substances of external and internal areas of the cylinder. It has been received that the geometrical place of heat sources approximately represents the cylinder of the small area the sections (thread), parallel to a cylinder axis, is located in a high absorbed external layer.

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