

The physical properties of an atmosphere influencing distortion of the space information

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The physical properties of an atmosphere influencing distortion of the space information Academician U.M. Sultangazin, V.F. Grishchenko Space Research Institute, Kazakhstan, Almaty, e-mail: eqseq@rambler.ru, fax: 7-3272-918077, ph.: 7-3272-917230 Keywords: atmosphere, remote sensing, density, pressure During shooting of an atmosphere by methods of remote sensing invisible and near infrared band of spectrum there is an overlapping spectral characteristic of an atmosphere, soil - vegetative and natural objects. Thus there is an atmospheric distortion of multi-spectral space images of land cover and natural objects. Therefore the important stage in preliminary processing of space images is the account of all probable factors influencing distortion of the space information. In the given paper results concerning correlation of vertical distribution of density, pressure and the temperatures of air influencing a status of an atmosphere are submitted. The graph's theory for a rating of the factors influencing spectral characteristics of an atmosphere and their correlation is used. In blocks of graph's theory the following processes are reflected: reflection, absorption and dispersion of radiation in an atmosphere, vertical distribution of temperature, pressure of atmospheric gases, reflections from a land cover. Program for reception of graphic representations of vertical distribution of density, pressure and temperatures of air up to height of 12 kms on every month year above five regions of Kazakhstan is developed. In the program sample of the necessary measurements of a database for the set time intervals and regions it was used. During processing and the analysis of the data construction distribution of fields and approximation of numbers has been carried out. The data by stationary ranges are submitted. 432 iso-lines representations the parameters are received. The analysis of the data has shown, that correlation between distributions iso-lines to density and pressure of air in the same month at different heights remains constant. Their irregular density on territory that is unequivocally connected to height of an arrangement of objects above sea level, by a mountain arrangement of regions (Almaty and Semipalatinsk) and a geographical arrangement it (Kustanai, Aktyubinsk, Karaganda) is marked. The basic changes of density iso-lines falls on the March, June and December. It is established, that influence of a geomagnetic field on vertical distribution of density, average pressure and temperature of air depending on height and time is determining.