

# **Features of dusty structures in the upper Earth's atmosphere.**

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The features of the Earth's dusty ionosphere are considered using as an example the summer polar mesosphere. The effect of the optical properties of microparticles on their heating and photoelectron emission under the action of solar radiation is analyzed in detail. Certain photochemical consequences of the presence of dust in the upper atmosphere are studied. In particular, it is shown that microparticles can noticeably reduce the concentration of water vapor in the upper atmosphere and this decrease in turn limits the particle sizes. The influence of the effect under consideration on the behavior of the charged component of the upper atmosphere is discussed.