# The electromagnetic disturbance generated by moving plasma area in an ionosphere

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As a result of three-dimensional calculations it is shown, that at explosions in the top ionosphere the stage of intensive scattering of plasma continuously passes in ascending plasma current with the certain inclination to a gradient of density and a geomagnetic field. Movement of ionized area across power lines of a geomagnetic field results in its polarization and occurrence of an electric field. Under this field in the indignant area and surrounding ionosphere the current system of complex topology, which is the reason of generation of longtime electromagnetic disturbance, is formed. The uniform 3D procedure of dynamics of plasma and electromagnetic indignations calculation is developed, parameters of these disturbance are determined. It is shown, that the topology and a role of some components of current system in generation of electromagnetic disturbance varies depending on latitude and height of a point of explosion, and also in time. It is explained by the change of a direction of movement of plasma and change of various components of unisotropic conductivity of ionosphere. It is shown, that the researched mechanism is capable to generate disturbance only in the near connected area.