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THE ALGORITHM FOR COMPUTING THE ELECTRICAL RESISTANCE IN THE GPR DATA

P.N. Aleksandrov¹, V.N. Kryz'ke², S.V. Sirotin³

¹*IPE RAS, Troitsk, Russia*

²*Bashkir state University, Sterlitamak, Russia*

³*Institute of archaeology, RAS, Moscow, Russia*

Abstract. Currently, the processing of GPR data is carried out on the basis of seismic methods. However, due to fundamental differences equations Lama from Maxwell's equations, requires the application of algorithms based on the latter. As you know, a significant role in the interaction of high frequency electromagnetic fields with the continuous medium plays a conductivity. As a consequence, the locus of the electromagnetic waves, in General, does not describe the equation eikonal, as the locus of the diffusion part of the electromagnetic field obeys the Poisson equation with constant right-hand side. This allows you to set the task about determination of the electrical resistance in the GPR data. Based on the developed theoretical bases of the GPR method [1] materials are processed GPR field data for the study of barrow cemeteries in the South-East of Bashkiria. For the first time in world practice, the GPR data obtained values of apparent electrical resistance. Subsequent archaeological excavations confirmed the possibility of using the algorithm of processing of the GPR data with the aim of obtaining not only the dielectric permittivity, and the electric resistance of geoelectric objects of research.

Keywords: GPR, apparent resistivity, archaeology, burial mound cemeteries.

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