VIRTUAL GEORADAR MODEL OF ARCHAEOLOGICAL MEMORIALS

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Abstract:

3-D modeling of archaeological memorial and objects of historical territories based on study data of recent unrestrictive methods of shallow-depth geophysics. The* methods allow a projected study of these objects as well as to develop approach fir their preservation in the museums or in natural buried state for the future generation* r-f investigators. Observations, approach to the model development incudbf geophysical is considered in this paper. The principal parameters of georadiolocation model such as stratification, details and other that allow a possibility of its application for archaeological reconstruction arc considered at the basis of detailed georadar investigation of Central Egypt (Aamrt and Kharga Oasis). The details of the historical area georadar model are correlate level-by-level to the data of archeological excavations of past years and data of the historical documents. Development of 3-D model of an archeological monument, as well as any buried object within the limits of the historical and cultural areas is clearly the most recent approach to detection, analysis and preservation of heritage objects. Degree of approximation of such model to actual appearance of the buried renovated object is determined by data quality of non-destructive remote examination. Georadiolocation approach of shallow depth geophysics provides high detail and accuracy of examination outcome, precise three-dimensional spatial localization of objects, and integrated reflection of the characteristics of subsurface area -archeological stratification, geologic features and etc. Historical site study by GPR-model development is particularly effective at the solution of following problems: multilayer and composite design of an archeological monument, special status of protected territories of historical significance, complex and heterogeneous geological environment and development of hazardous geological processes, small visibility of archeological features and absence of reflecting objects in the sectional view (Klochko, Shishkov, 2005; Klochko, Shishkov, 2006).

Keywords:

Geo radar, Archaeological, subsurface, Environment

Published In:

Fifth International Conference on the Geology of Africa, NULL, NULL