

O13-6**GEOPHYSICAL SURVEY CARRIED OUT IN
ARCHAEOLOGICAL SITE OF APOLLONIA
DURING 1992-1994 YEARS****IGLI NAKUCI**

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Apollonia has been one of the most famous ancient city in east coast of Adriatic sea. With more than 80 ha inside the old surroundings walls and about 60000 habitants in the best period of its prosperity, Apollonia was one of the biggest city in Antiquity. Here, roman emperor Octavian August has made his studies and the famous Ciceron called it is a big and imposing city. The archaeological research has known an important development in this site during the last century but geophysical studies firstly are used after 90'. Despite of the great work carried out by archaeologist, only a small part if these site has been discovered.

In this framework, exploration for archaeological buried structures using geophysical methods is necessary. It has recently recognized a remarkable progress. About 11 ha are covered by the geophysical surveys.

In this paper are presented some of the most interesting geophysical results during the period of 1993-1995.

So, firstly, there are presented the results of geophysical surveys in an area located near by the well-known discovered monument called "walking place". These surveys were necessary because of defective work of archaeologists, which put the soil after digging in the neighbor area, causing an "local pollution" and creating difficulty during the archaeological investigations.

The apparent resistivity method (asymmetric three electrodes array AMN, B ∞ and Wenner array) accompanied to electrical soundings (Wenner and Schlumberger electrical soundings) and resistivity cross-sections are used.

The results of geophysical surveys in this area has clearly shown that in the uppermost part of topsoil there are some archaeological fragments and under them different archaeological targets indicated by the geophysical anomalies.

Also, in this paper are presented the result of geophysical surveys in another area of this archaeological site when after interpretation of geophysical data the archaeological targets are clearly indicated.

As primary and faster method than the others the magnetic survey was used. That consisted in the measurement of the total magnetic field carried out by means of MP-2 proton magnetometers. High effectiveness of this method, clearly shown in the archaeological site of Apollonia, has led to the detection of archaeological targets such as wall remains ditches, kilns and metal objects.

The apparent resistivity method accompanied to electrical sounding and resistivity cross-sections are used. Traditional Wenner array and others was used to measure apparent resistivity by DC techniques. These measurements were accompanied by short-array sounding. The resistivity data have led to a better and more detailed explanation of magnetic results and have assisted, in some cases, to exclude unsirable topographic effects.

Also are discussed field procedures, data processing and their interpretation accompanied by archaeological data. The softs used for the data processing are the SURFER, GRAPHER (by Microsoft) and TGV, PPSELV (by C.R.G. Garchy, France).

Abstract is accompanied by a map of total magnetic field which include an area of 3ha in this archaeological sites.

As conclusions in his paper we would say that the excavations out in particular sectors of the archaeological site of Apollonia have clearly shown the great contribution of geophysical prospecting methods. Consequently one have to include them in archaeological programs of all stages, from first reconnaissance through to escavation activity of every area.

