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GPR Investigations in the Port of Erythrai (İzmir) Archaeological Site

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Archaeology and the cultural heritage field can greatly benefit from reliable and non-destructive geophysical methods to map areas and structures present in the subsoil without the need for excavation. The GPR method provides coherent and interpretable images of the subsurface structures due to good signal penetration. Erythrai archaeological site is located in Çeşme district of city of İzmir (Turkey). The site has been excavated since 1960's and a great demand appeared nowadays for exploring unexcavated parts, according to improving touristic potential. Ground Penetrating Radar (GPR) measurements were carried out at the ancient port of the site. Study area was splitted into 4 parts and data were collected along 130 profiles with a profile interval of 1 m and varying lengths between 20 and 30 m. Data were interpreted and presented as 2-D vertical radargrams, horizontal time slices and 3-D models. As a result, possible ruins of shipment or fisherman shelters were determined and excavation areas were recommended.