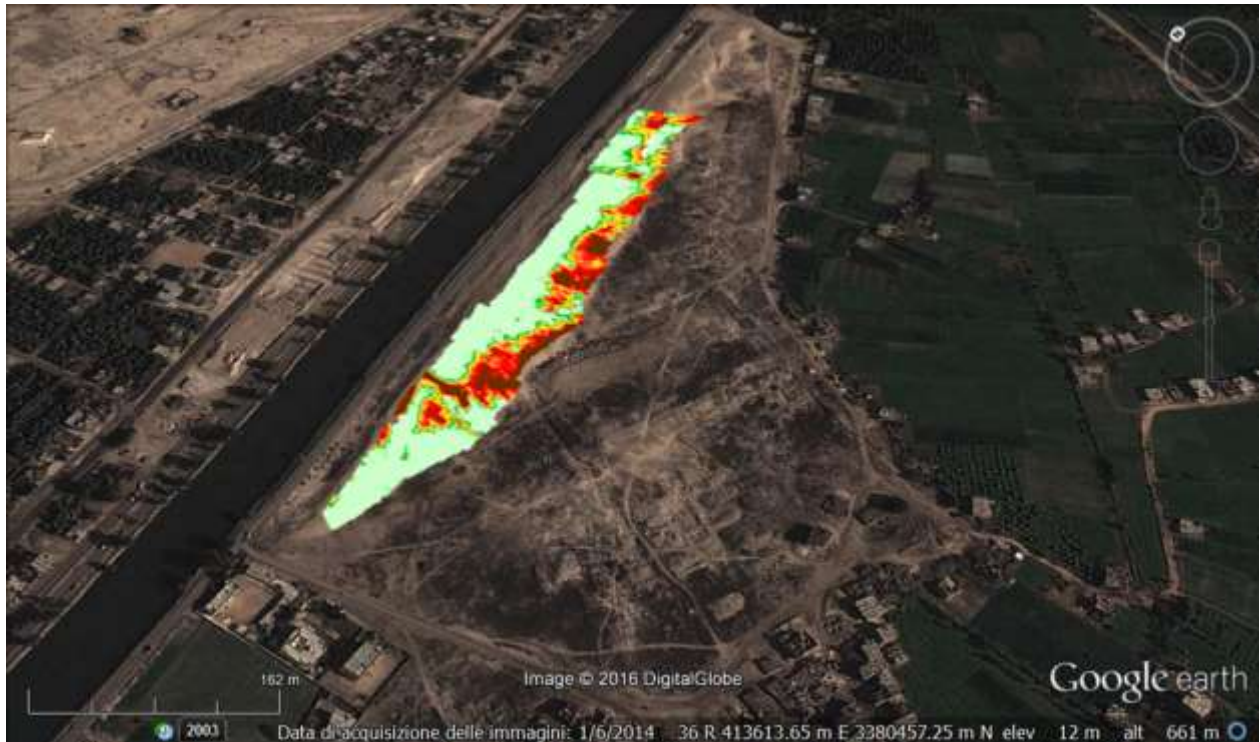


TELL EL-MASKHUTA PROJECT

REPORT OF THE II SEASON

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II SEASON

CNR – Italian Multidisciplinary Egyptological Mission

20th January – 4th February, 2016

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1. Introduction

Tell el-Maskhuta is an important archaeological site along the Wadi Tumilat (**fig. 1a**). It was the door-lock of a very important route between Egypt and the Levant and an international crossroad. In ancient times a canal was dug along the Wadi Tumilat to provide a water route between the Mediterranean Sea and the Red Sea. Also in ancient times Egypt achieved a navigable channel between the two seas, as well today the Suez Canal.

The area of Tell-el Makhuta is about 900 m in length and 600 m in width and it is divided by the Ismailia water channel. The site was partially explored by E. Naville in 1883 and by the Canadian mission led by Holladay in the 1978/1982.

Due to the size of the tell and thanks to innovative technologies applied to cultural heritage, the aim of the mission is the integration of technologies in order to document the whole area and in the first step to individuate and define clearly the areas where carrying out archaeological excavations.

2. The 2nd Season

Aim of this season has been to carry out geophysical prospections. These are important as preliminary work before archaeological excavations.

2.1 Methodology: The Inductive Electromagnetic Methods

The collaboration of the Institute for Ancient Mediterranean Studies of the National Research Council of Italy and the University of Molise allowed the campaign of geomagnetic prospections with an advanced instrument for underground investigations. The GSSI Profiler EMP-400 allows to reach good results in a fast way.

The large category of the inductive Electromagnetic (IEM) methods can give a notable contribution to the knowledge of the resistivity distributions in the subsoil, through the measurements of the components of a suitable IEM field on the ground surface. The scope of the IEM methods in archaeology is to give a representation of the electric geometry of any buried man-made ambient, by mapping variations in the electrical conductivity. This is obtained by a very detailed reconstruction of the pattern of the electric current paths induced by natural or artificial time-varying EM sources.

2.2 Archaeological analysis

In the northern part, along the Ismailia canal, the site is delimited by a high tell of 900 m in length and max 70 m in width. It has never been excavated. On the contrary, the low part of the site has been investigated by old excavations not well documented. In the latter, it is impossible to do geophysical prospections except in some little parts. This situation encouraged us to investigate especially the high tell. This is usually considered as composed only by the sand accumulated during the excavation of the Ismailia Canal. During her preliminary studies on Tell el Maskhuta and the first season, G. Capriotti supposed that some structures stand under a layer of sand. In fact, the eastern part of the tell shows a section where it is possible to see terraced alluvial deposits (carved by more recent alluvial processes), which are partially cemented at the top because of the precipitation of chemical carbonates in continental environments. These deposits constitutes a high terrace in the northern part of the site.

On the other part of the canal, we can see the same geologic situation where tombs were excavated. On the other hand, we know that close to the high tell, tombs were discovered during the works to open the road. These findings and the preference of ancient Egyptians to excavate tombs in the rock or at least in hard elevated grounds, suggests that also the high tell was used as necropolis.

During the second season, we started the prospections on the high tell and we could collect very good data for over half of it (**fig. 1b**).

The preliminary elaborations allow us to see huge structures under the sand, may be built in a late period, probably characterized by a good elevation. We don't know, at this moment, if there are more ancient layers below, but it seems probable and we hope that more specialized elaborations will be able to help us under this point of view.

We did also some attempts in little areas of the low part of the site (**fig. 1b**), but the most important results come from the high tell.

The survey on the site allowed us to gather and understand some new data about the enclosure of the fortress, that is the more important archaeological structure visible on the site. We have noticed that there are three big walls:

- 1) The first one, documented by Naville and Cledat, now visible in the northern and western part (**fig. 2a-b**).
- 2) Another big wall, that extended the area of the fortress at least in the northern part. This is visible through google earth (**fig. 1**). Today this big wall is only a fable track on the ground without elevation (**fig. 3**). The existence of this wall in the southern part is not clear because of the village, but the data collected during the topographical survey will be able to help us to understand the ancient situation.
- 3) Very close to this second wall, another bigger enclosure was built. It is now visible thank to a long heap, parallel to the other two northern walls and it was already noticed during the last season. It is linked to the high tell and it is clear (also from the prospections) that this wall continues under it (**fig. 4a-b**).

Another little heap close to the high tell and more or less perpendicular to the other just described, has been noticed. It represents the remains of the western side of this big wall and the corner between the two sides is visible through the prospections under the sand of the tell (**fig. 5**).

Actually only two walls were known until now.

3. Conclusions

The instrument allowed us to get a lot of data within a relatively short time and to have very good results. The data collected during the season will be elaborated after the first preliminary work made during the mission. Now we know that under the sand of the high tell there are huge structures and maybe several archaeological layers. We hope that in the next season we will be able to start excavations.

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Fig. 1a: Tell el-Maskhuta

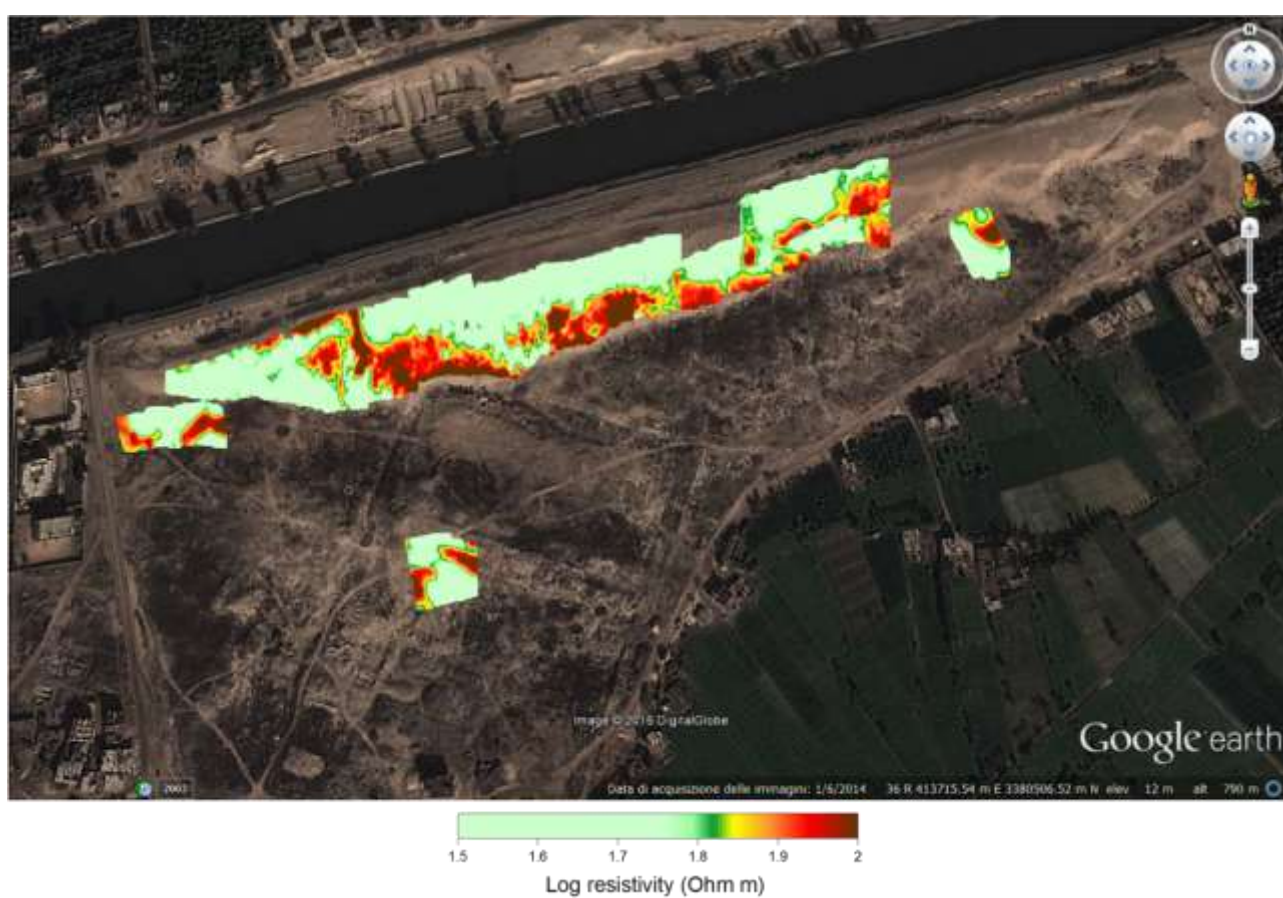


Fig. 1b : Results from the inductive electromagnetic prospections



Fig. 2a: The first enclosure, north side



Fig. 2b: the first enclosure, west side



Fig. 3: The second wall visible thanks to a different vegetation



Fig. 4a: The third largest wall (north side)



Fig. 4b: The third largest wall (northern part) from the high tell.



Fig. 5: The third largest wall (western part) from the high tell.