

Search for WWII unexploded aircraft bombs (UXO)

in the Pompeii Archaeological Park

About 160 aircraft bombs were dropped by Allied forces on the Pompeii archaeological site during WWII. Statistically, about 10% of dropped bombs remain unexploded.

Therefore, we estimate that about a dozen unexploded ordnance (UXO) are still lying underground.

The danger of a spontaneous detonation increases with time and these UXO are today more dangerous than ever.

We propose a novel methodology capable of identifying UXOs.

An analysis of reconnaissance historical photographic records, using an imaging technique called "Cluster analysis of stick-of-bomb pattern" (SoB), allows us to concentrate geophysical prospections in limited areas where bomb craters are missing. The combination of SoB and in-depth geophysical prospections will provide an innovative methodology for the search of UXOs, which may prove particularly useful in areas where traditional methods for the search of UXOs are not appropriate.

Given the importance of Pompeii, this research would receive worldwide attention and could be exported to other archeological sites that are current theatres of conflicts and wars.

Because of the economic importance of tourists at the site, it has been impossible to do such a disruptive project as this - until now. We now have a unique window of opportunity to conduct high profile intrusive work in Pompeii due to coronavirus restrictions on visitors.

PROJECT DURATION

From 1 January 2021 to 31 December 2021

12 months

FUNDING PROGRAM

National Geographic Society - Bando Grant National Geographic Society

BUDGET

Funding for Polito € 8.001,03

POLITO and DIATI' role:

PoliTo is partner of the project – DISAT is the coordinator, DIATI is partner

Scientific supervisor for DIATI:
Researcher Chiara Colombo (RTD-b)