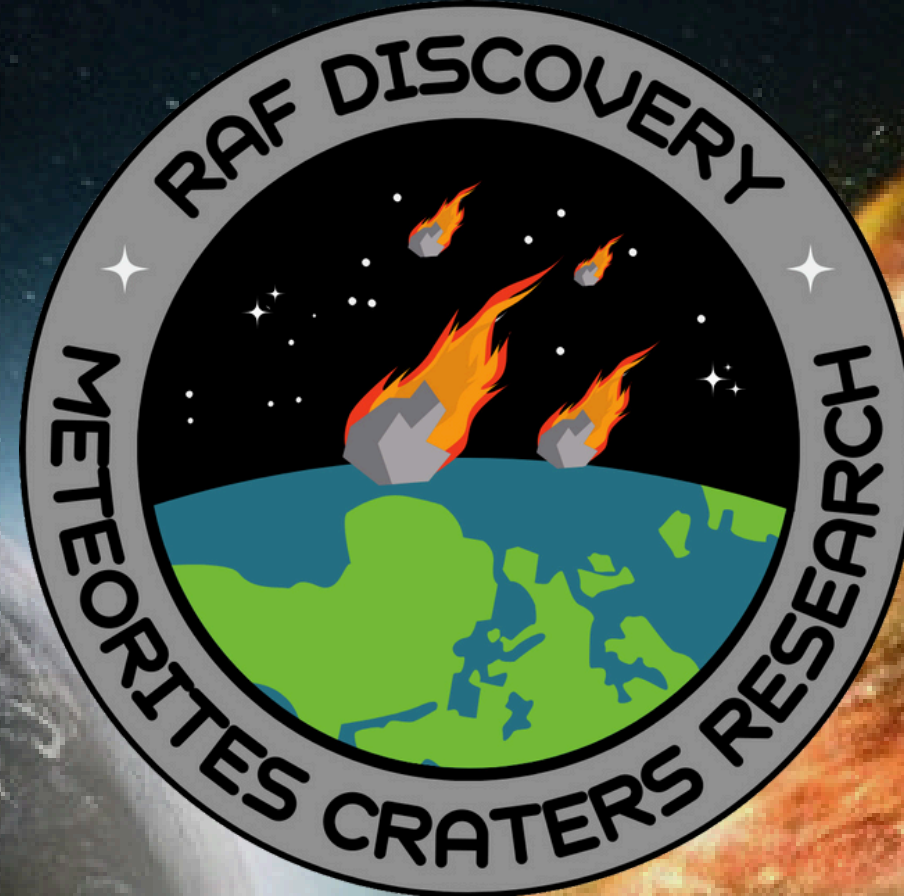




UNIVERSITY
OF WARSAW



MEASUREMENTS OF EARTH'S MAGNETIC FIELD ANOMALIES CAUSED BY METEORITE IMPACTS

M I K O Ł A J Z A W A D Z K I, M S C ; N A T A L I A
G O D L E W S K A ; S Z Y M O N O R Y Ń S K I , P H D

F A C U L T Y O F P H Y S I C S
U N I V E R S I T Y O F W A R S A W



Minister of Science
Republic of Poland



GOAL OF THE PROJECT

The goal of the project is to identify and analyze magnetic anomalies resulting from meteorite impacts in Central and Northern Europe.

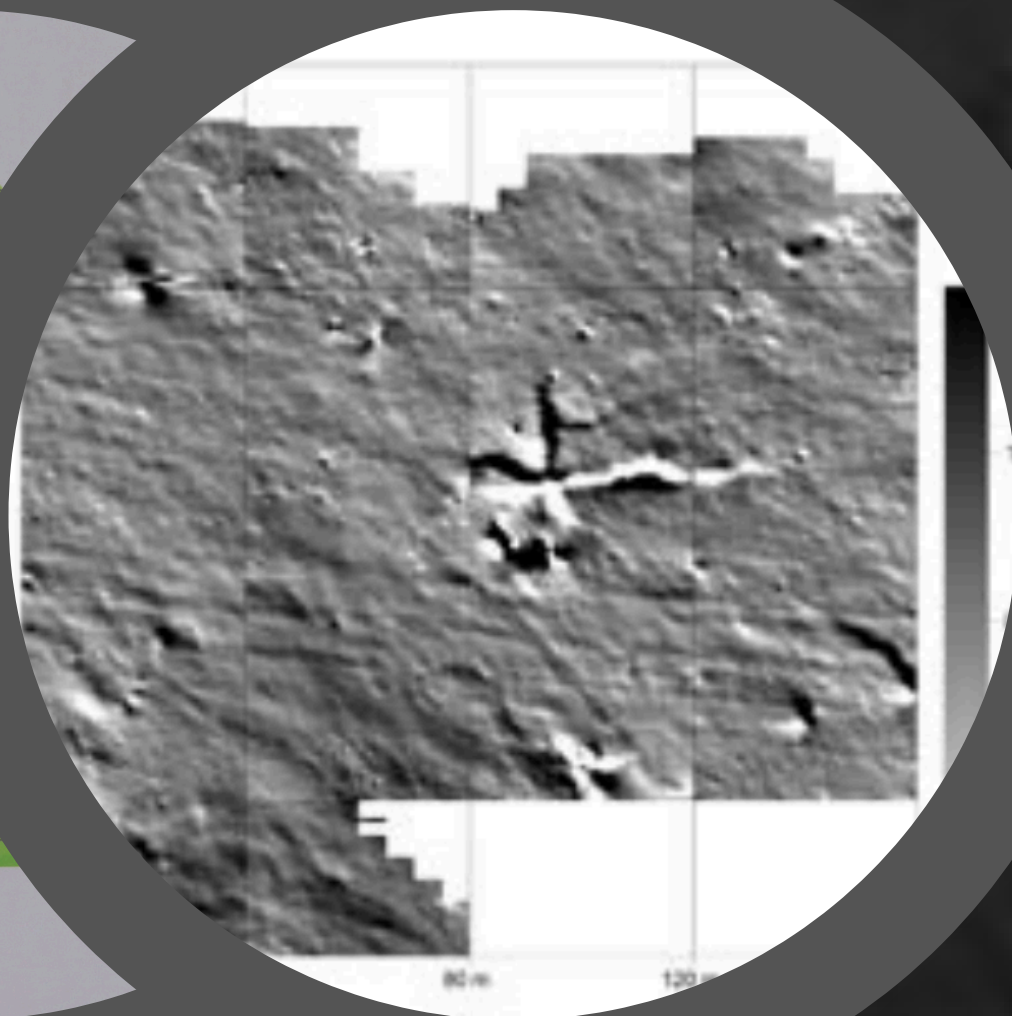
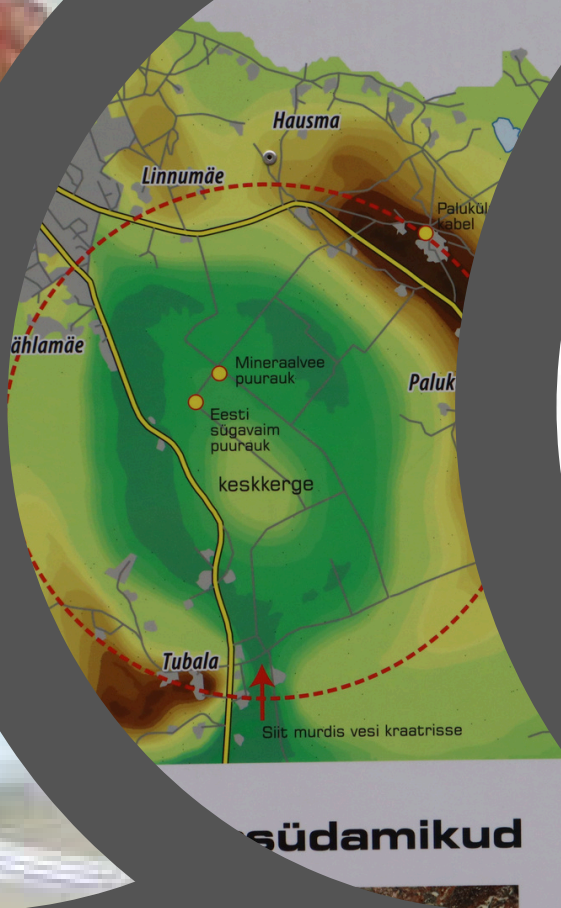
Research has been conducted so far on craters in Poland, Lithuania, Latvia, Estonia and Germany. Studies are planned to be carried out in Sweden, Norway and Italy.



RESEARCH METHOD

The study utilized a proton magnetometer from GEM Systems. Two magnetometers were employed: one for recording data on the local geomagnetic field and the other for continuous measurement of the magnetic field at a fixed location, serving as a reference station.





TRM ANOMALY

Thermoremanent magnetization (TRM) is a phenomenon where rocks affected by a meteorite impact acquire a magnetic signature as they cool in the presence of a magnetic field. This process occurs in impact-generated materials, such as melt rocks, and preserves information about the Earth's magnetic field at the time of the impact.





MORASKO CRATER

AGE: APPROXIMATELY 5000 YEARS OLD
LOCATION: POZNAŃ, POLAND
TYPE: EXPOSED





VEPRIAI CRATER



AGE: APPROXIMATELY 160 MILLION YEARS OLD
LOCATION: VEPRIAI, CENTRAL LITHUANIA
TYPE: NOT EXPOSED



DOBELE CRATER

AGE: APPROXIMATELY 290 MILLION YEARS OLD
LOCATION: DOBELE, LATVIA
TYPE: NOT EXPOSED





TSÕÕRIKMÄE CRATER

AGE: APROXIMATELY 9000 YEARS OLD
LOCATION: EASTERN ESTONIA
TYPE: EXPOSED





SIMUNA CRATER



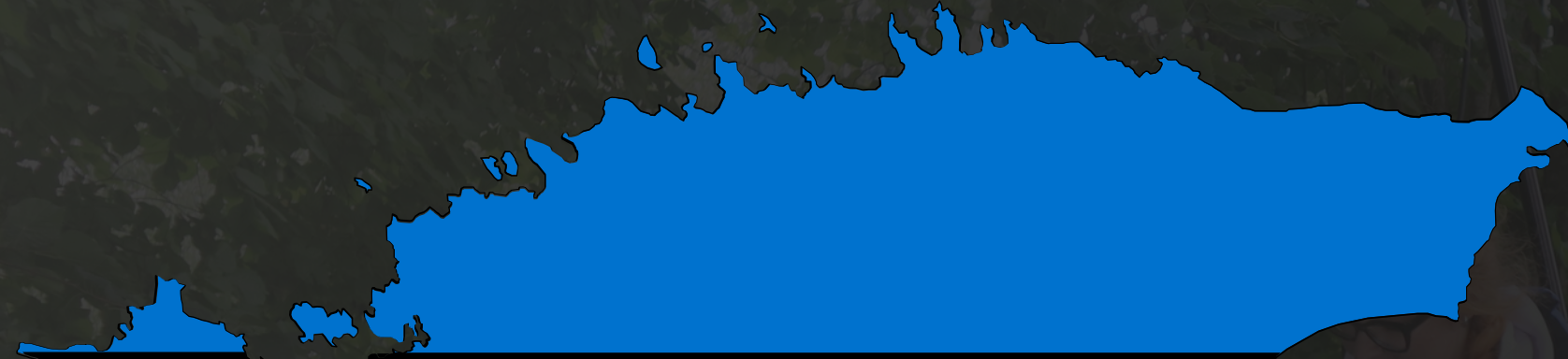
AGE: FORMED IN 1937
LOCATION: CENTRAL ESTONIA
TYPE: HYPOTHETICAL



KäRDLA CRATER

AGE: APROXIMATELY 455 MILLION YEARS OLD
LOCATION: HIIUMAA ISLAND, ESTONIA
TYPE: EXPOSED





KAALI CRATER

AGE: APROXIMATELY 4000 YEARS OLD
LOCATION: SAAREEMA ISLAND
TYPE: EXPOSED





NÖRDLINGER RIES

AGE: APPROXIMATELY 14 MILLION YEARS OLD
LOCATION: BAVARIA, GERMANY
TYPE: EXPOSED





AGE: APROXIMATELY 15 MILLION YEARS OLD
LOCATION: BAVARIA, GERMANY
TYPE: EXPOSED



WHICH CRATERS WILL BE STUDIED?



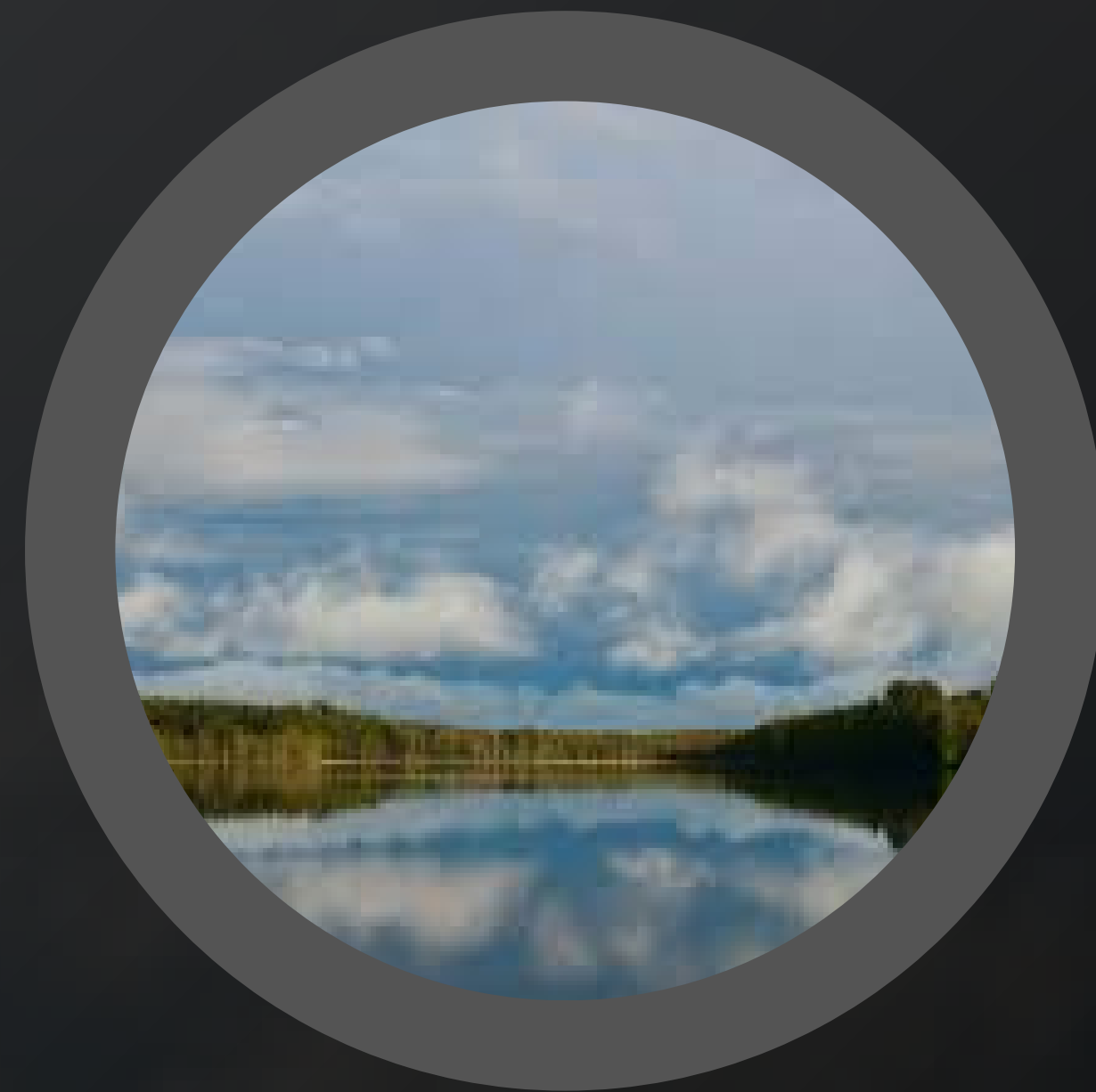


SILJAN RING

AGE: APROXIMATELY 376 MILLION YEARS OLD

LOCATION: CENTRAL SWEDEN

TYPE: NOT EXPOSED





GRANBY



AGE: APROXIMATELY 470 MILLION YEARS OLD
LOCATION: CENTRAL SWEDEN
TYPE: NOT EXPOSED



GARDNOS

AGE: APROXIMATELY 500 MILLION YEARS OLD
LOCATION: SOUTH NORWAY
TYPE: EXPOSED





RITLAND



AGE: APROXIMATELY 520 MILLION YEARS OLD

LOCATION: SOUTH NORWAY

TYPE: EXPOSED



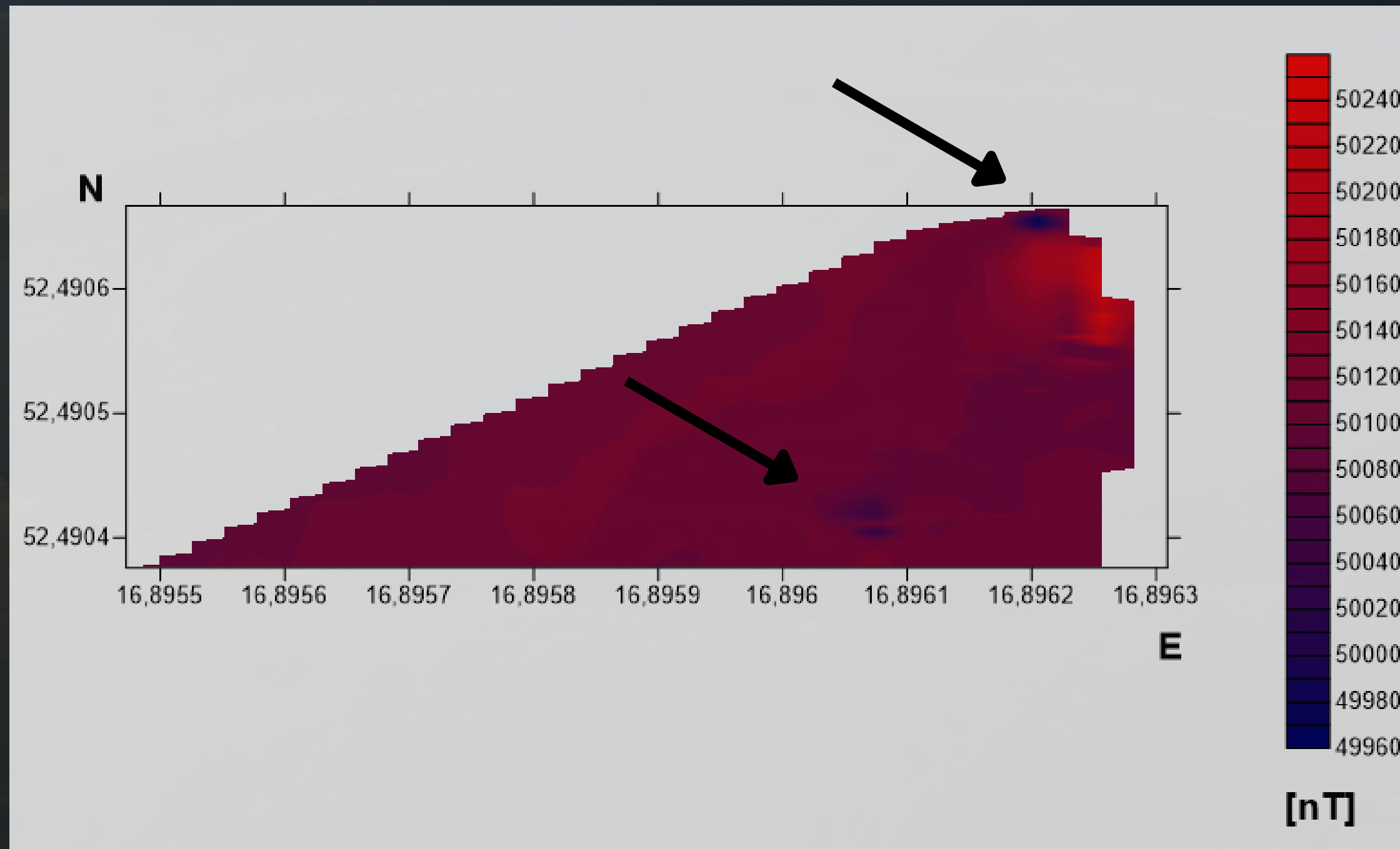
SIRENTE CRATER



AGE: APROXIMATELY 1600 YEARS OLD
LOCATION: CENTRAL ITALY
TYPE: HYPOTHETICAL

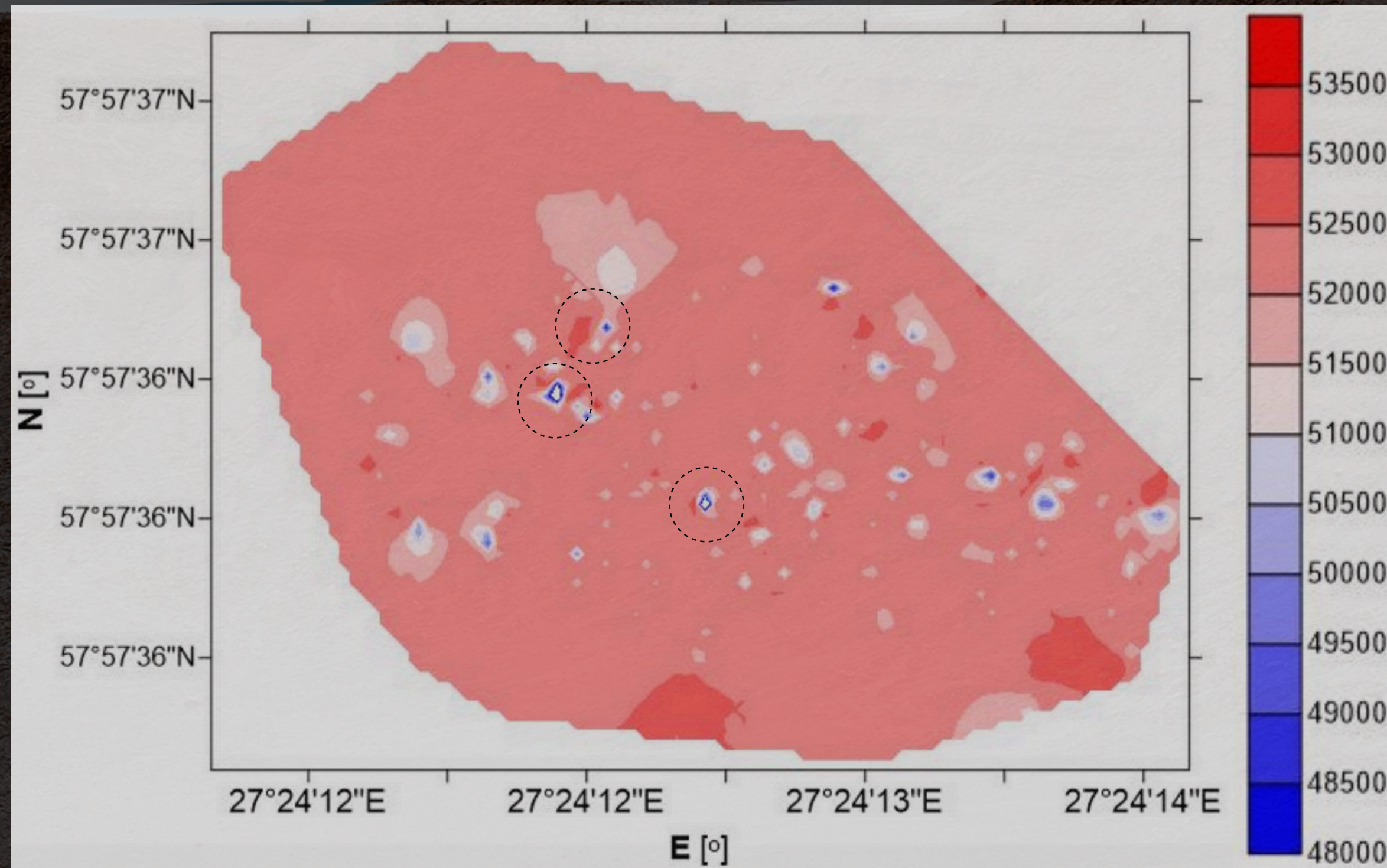


MAGNETIC FIELD RESEARCH RESULTS FROM MORASKO





MAGNETIC FIELD RESEARCH RESULTS FROM ILUMETSA



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