



FSE FONDO SOCIALE EUROPEO
SICILIA 2020
PROGRAMMA OPERATIVO



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**PROGETTO “STBIC” (SCIENZA E
TECNOLOGIA PER IL RECUPERO E LA
FRUIZIONE DI BENI DI INTERESSE
CULTURALE)**

POSIZIONE N. 7
*“GEORADAR PER LA DIAGNOSI NEL
CAMPO DEI BENI CULTURALI”*

DIRETTORE: DOTT. CIRINO VASI

RESPONSABILE SCIENTIFICO: DOTT.SSA ROSINA CELESTE PONTERIO

TUTOR: DOTT. SEBASTIANO TRUSSO

BORSISTA: FRANCESCO PARROTTA

Messina,
01 marzo 2019



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GEORADAR PER LA DIAGNOSI NEL CAMPO DEI BENI CULTURALI

ATTIVITA' SVOLTE:

PRIMA FASE: AMPIA RICERCA BIBLIOGRAFICA

**SECONDA FASE: ANALISI DELLE POSSIBILITA' DI
UTILIZZO DELLA STRUMENTAZIONE**

**TERZA FASE: ATTIVITA' PRATICHE DI PROSPEZIONI
GEOFISICHE**

QUARTA FASE: ELABORAZIONE DATI

PRIMA FASE: AMPIA RICERCA BIBLIOGRAFICA

VIA BRISA, MILANO



Fig. 1. Acquisizione dei dati con sistema radar IDS Stream-X a 8 canali (200 MHz) all'interno dell'ambiente corrispondente alla "grande sala absidata"

Fig. 2. Vista aerea dell'area archeologica di via Brisa (fonte: Google Earth) e ubicazione dei settori interessati dai rilievi radar (retinature azzurre)

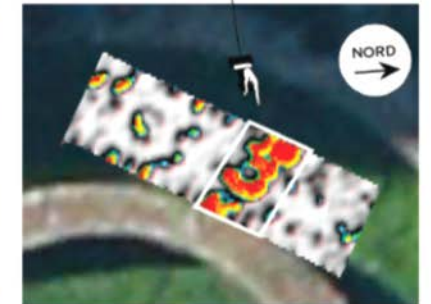
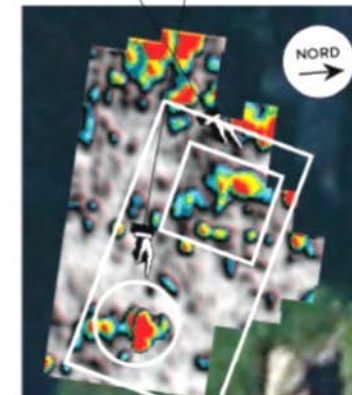
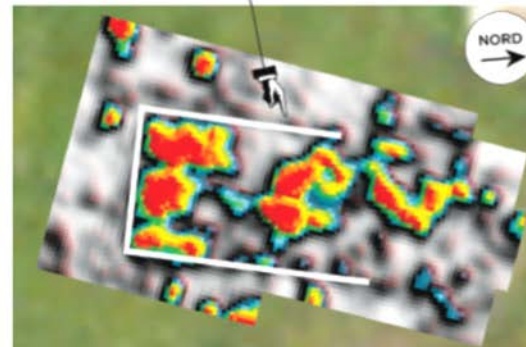
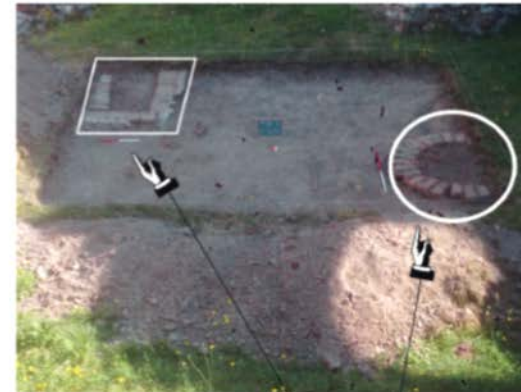
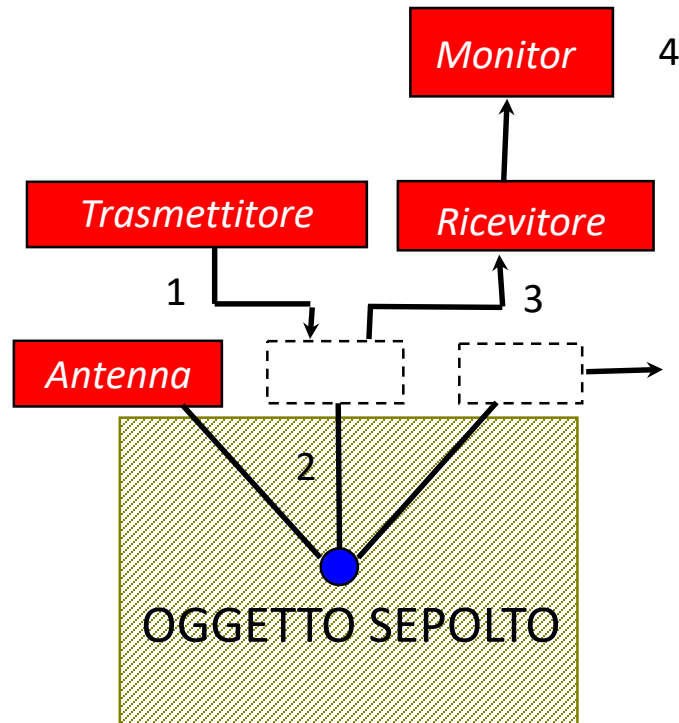
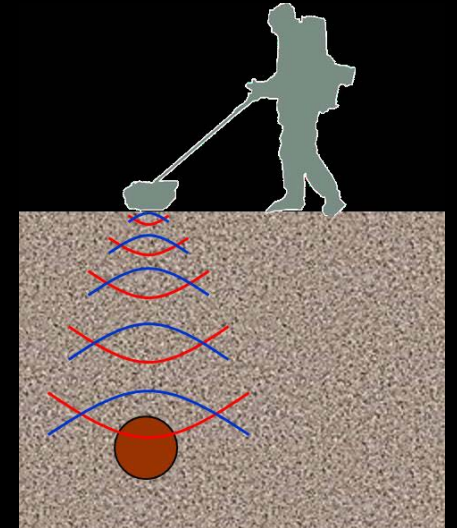


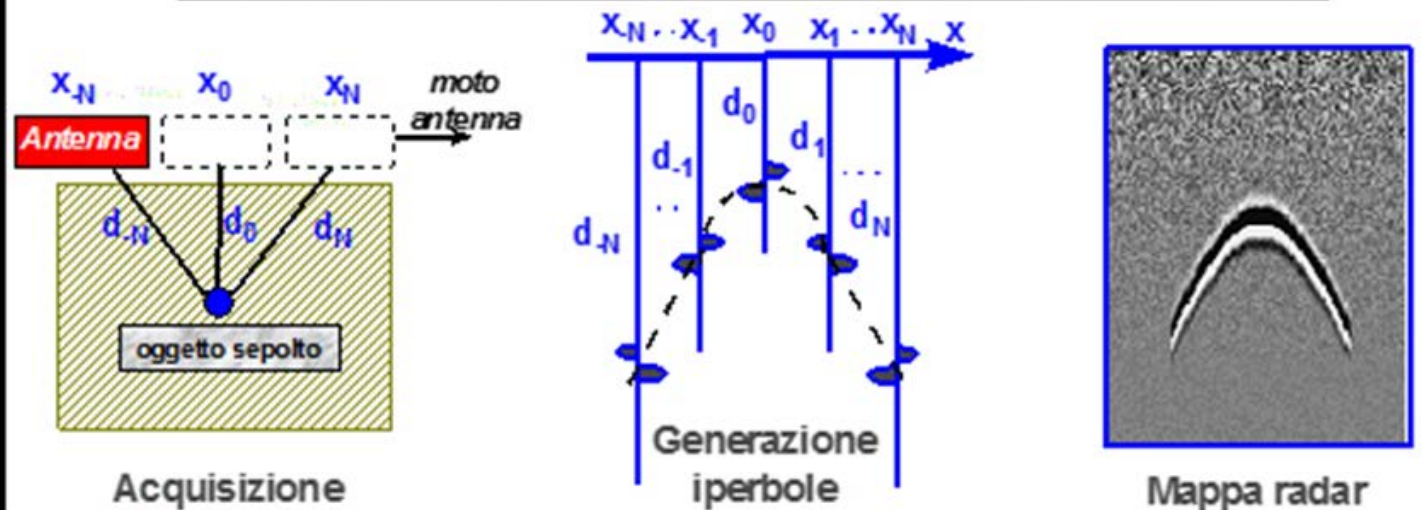
Fig. 5. Confronto tra anomalie radar e determinazioni dirette risultanti dai saggi archeologici

GROUND PENETRATING RADAR



Schema a blocchi di principio

L'oggetto sepolto viene 'visto' dal georadar in modo deformato





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GROUND PENETRATING RADAR

bassa frequenza
(100-200MHz)



indagine nel range 0-3m
a media risoluzione

media frequenza
(400-600MHz)



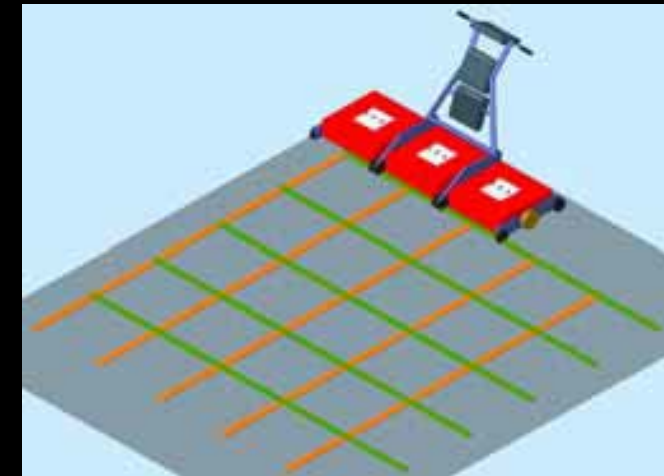
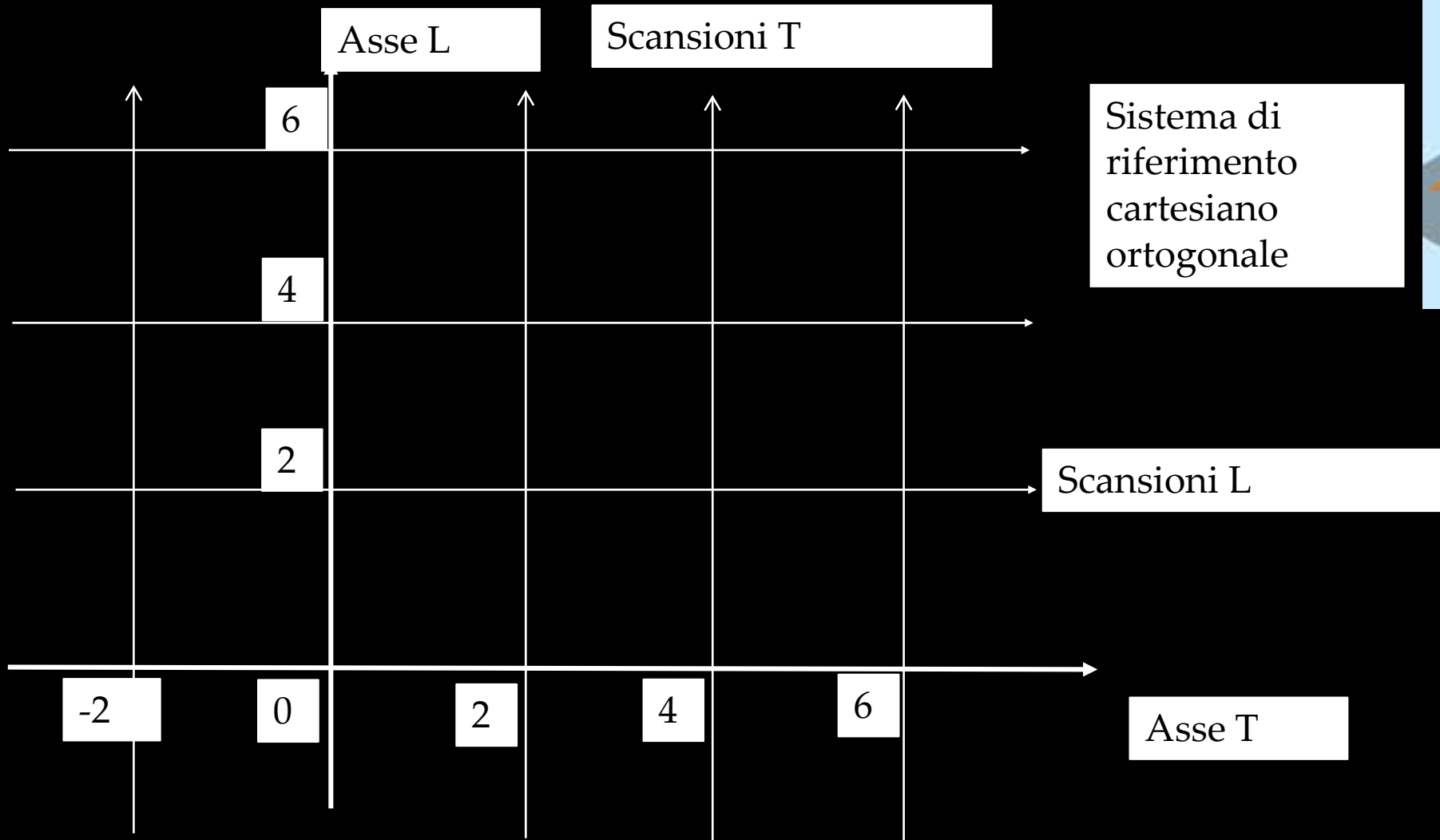
indagine nel range 0-2m
ad elevata risoluzione

elevata frequenza
(1600 MHz)



indagine nel range 0-1m
ad elevatissima risoluzione

GROUND PENETRATING RADAR



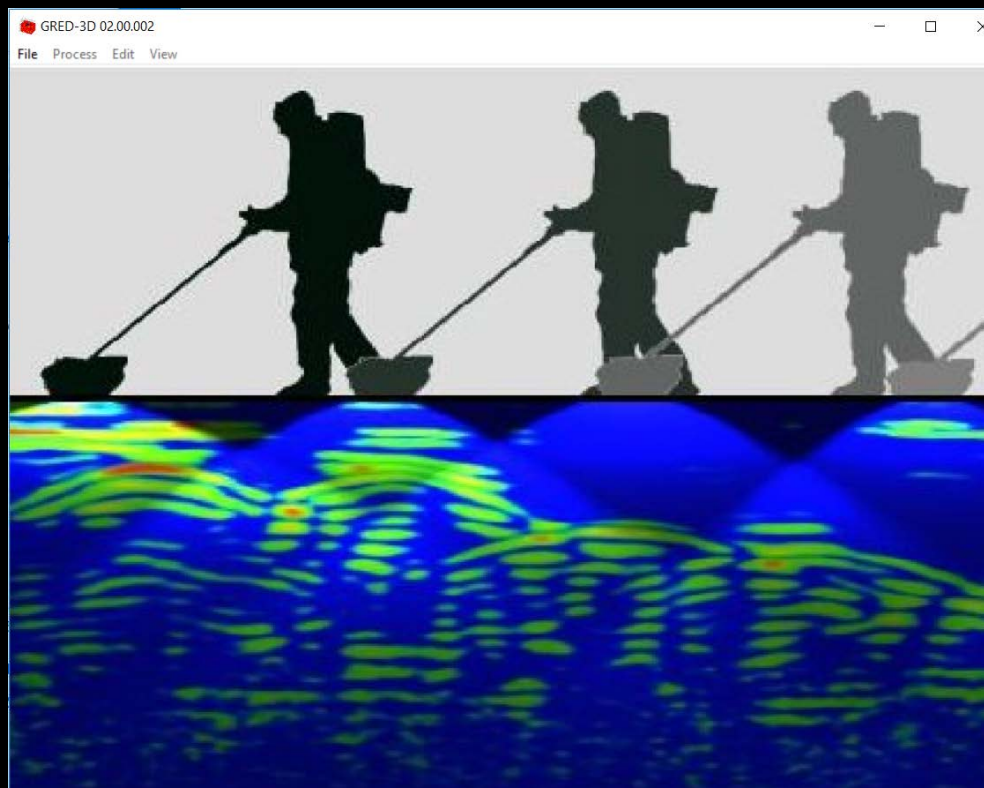
GROUND PENETRATING RADAR



GROUND PENETRATING RADAR

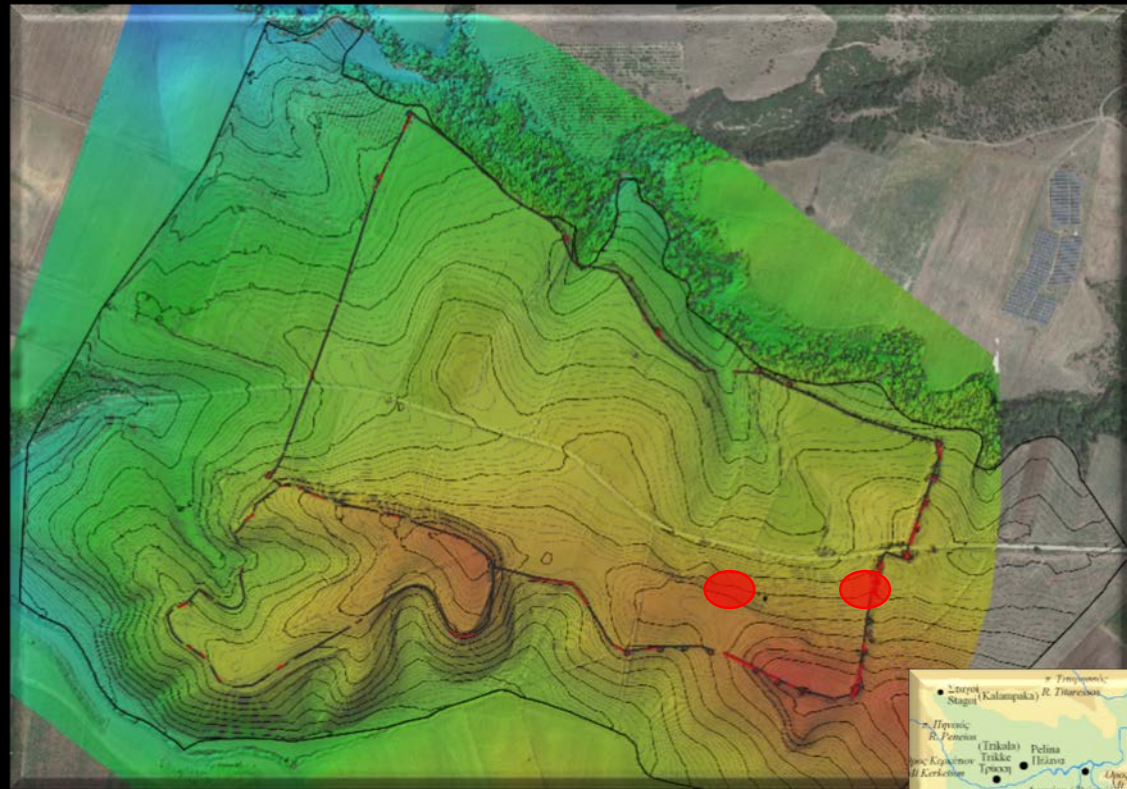
SOFTWARE DI
 ELABORAZIONE
 DATI

**GRED 3D
 HD**



FILTRAGGIO IN SEDE DI
 ELABORAZIONE DATI:

- **VERTICAL BANDPASS FILTER**
 - **MOVE START TIME**
- **HORIZONTAL BANDPASS FILTER**
- **SMOOTHED GAIN**



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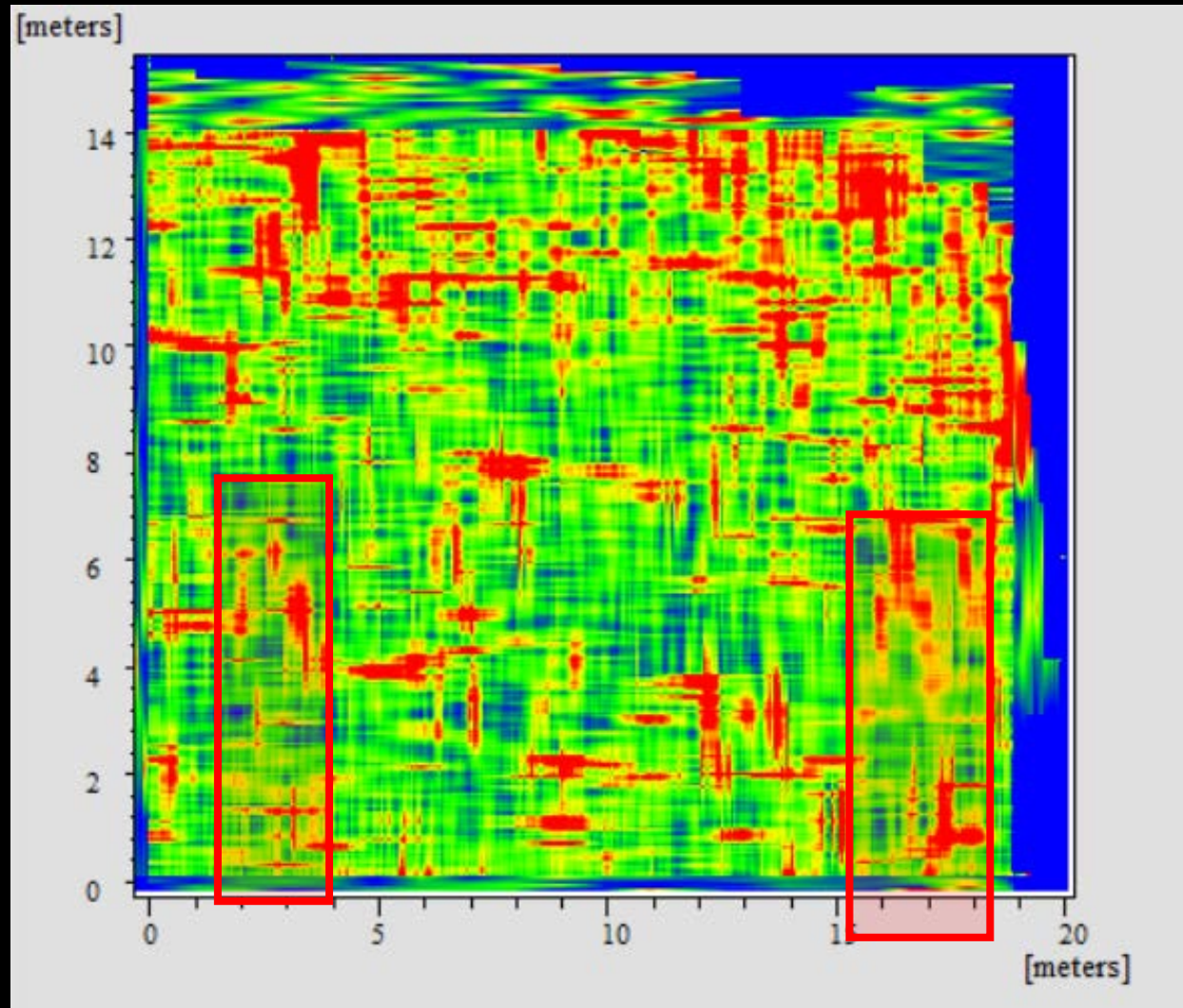
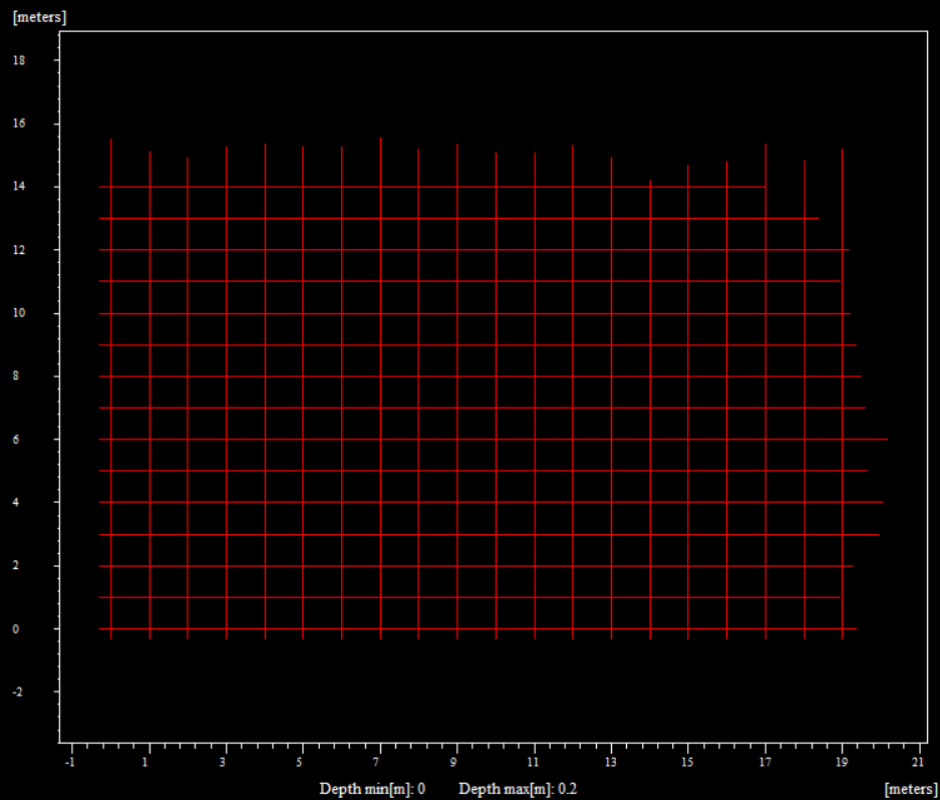




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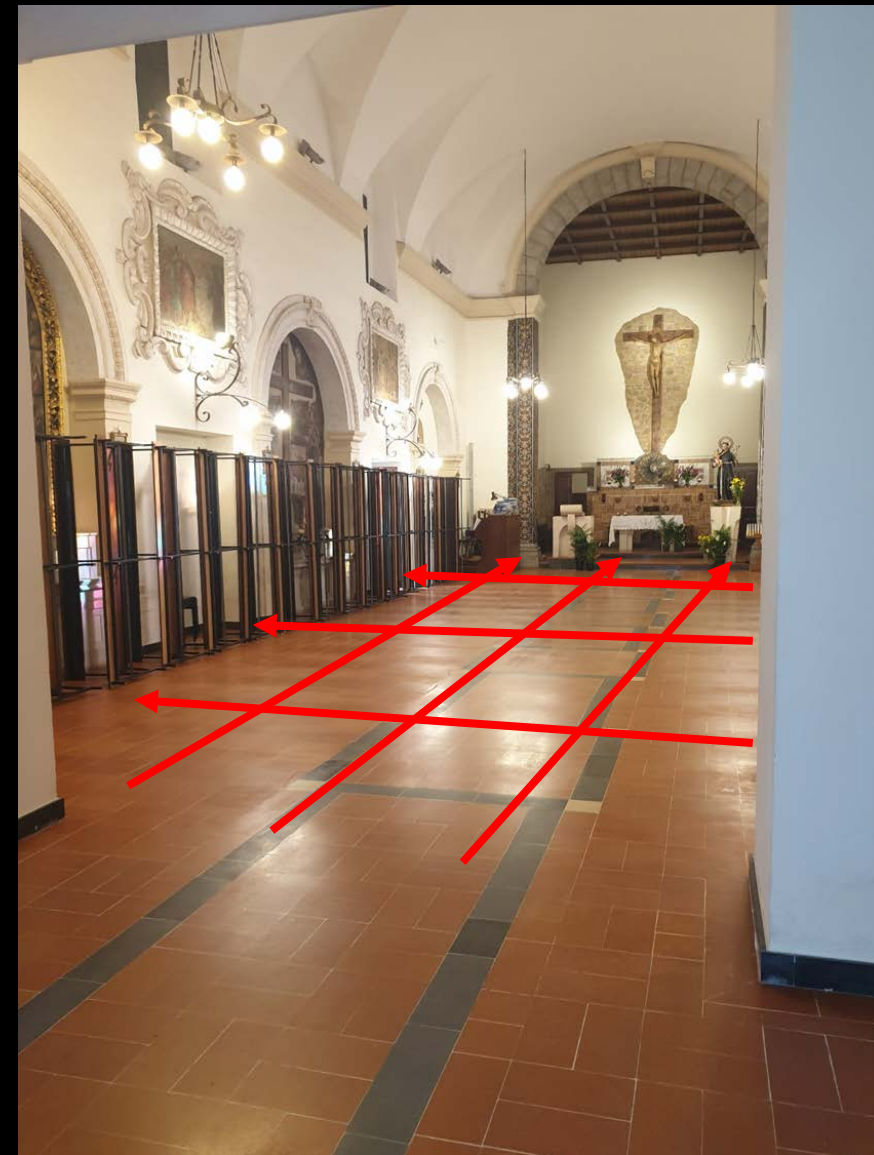
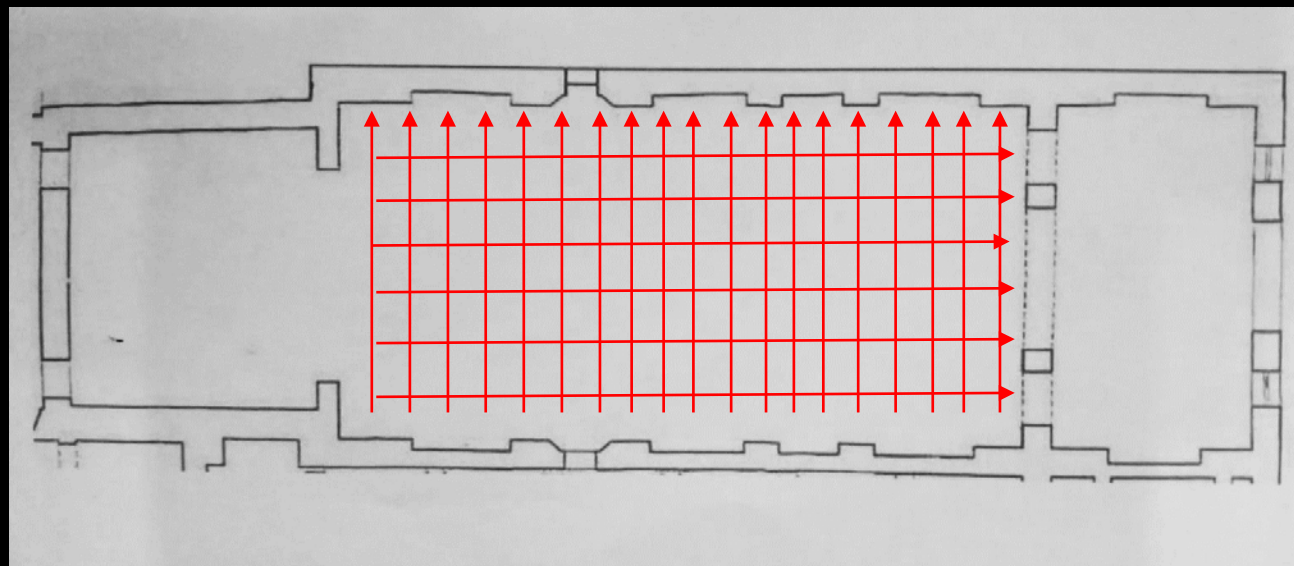


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ANTONIO DI PADOVA,
BARCELLONA P.G. (ME)





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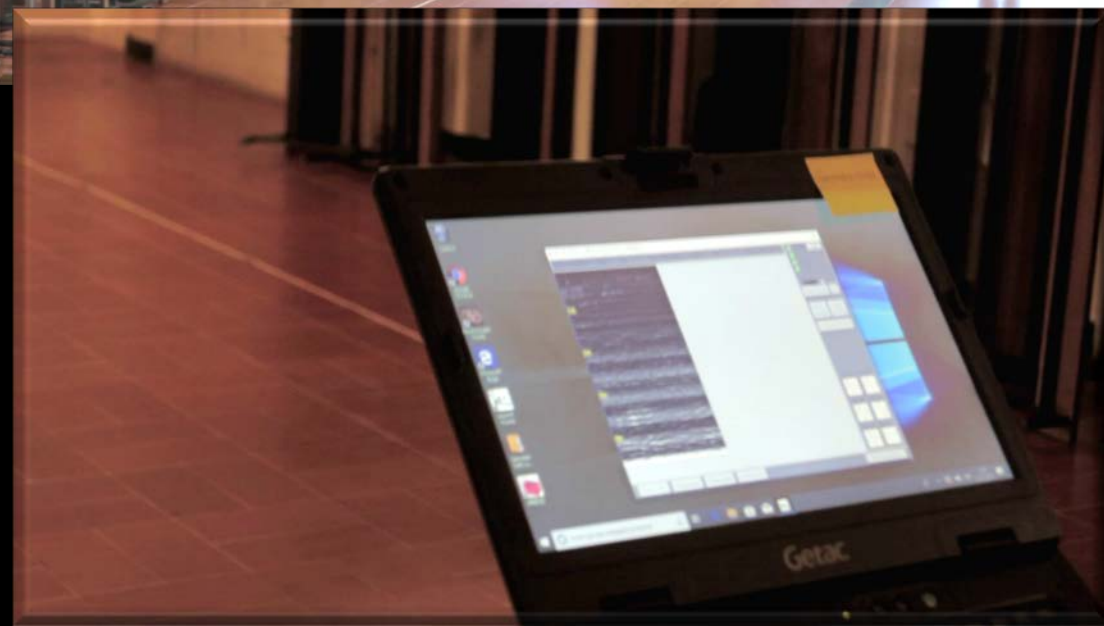


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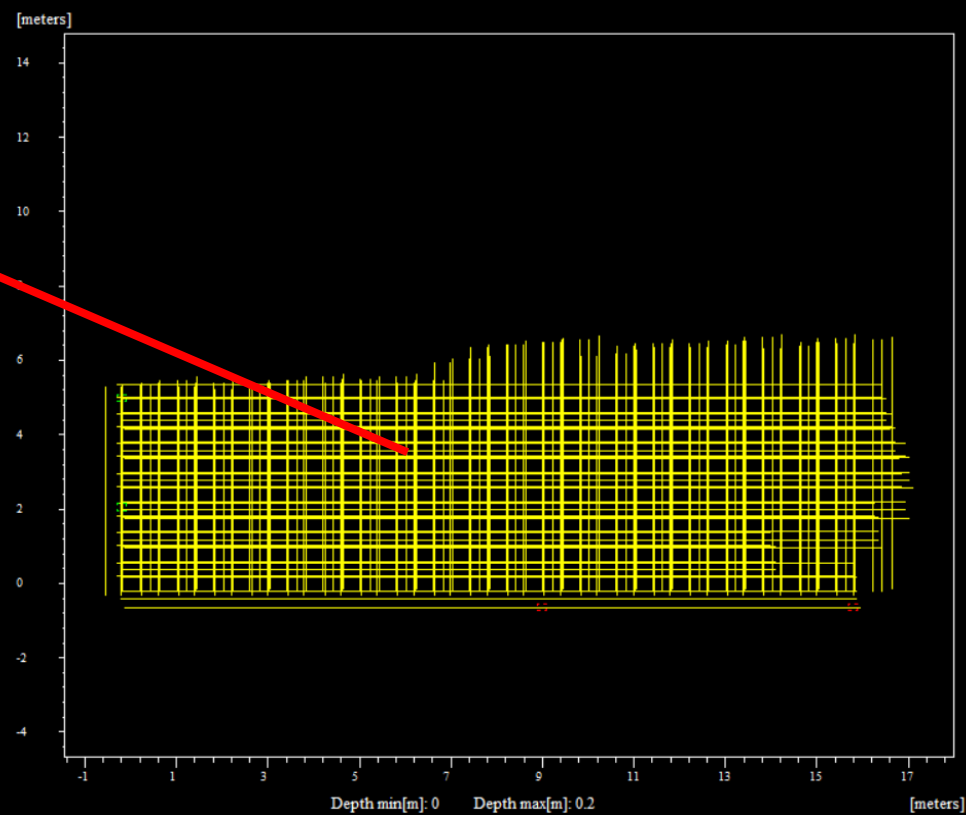
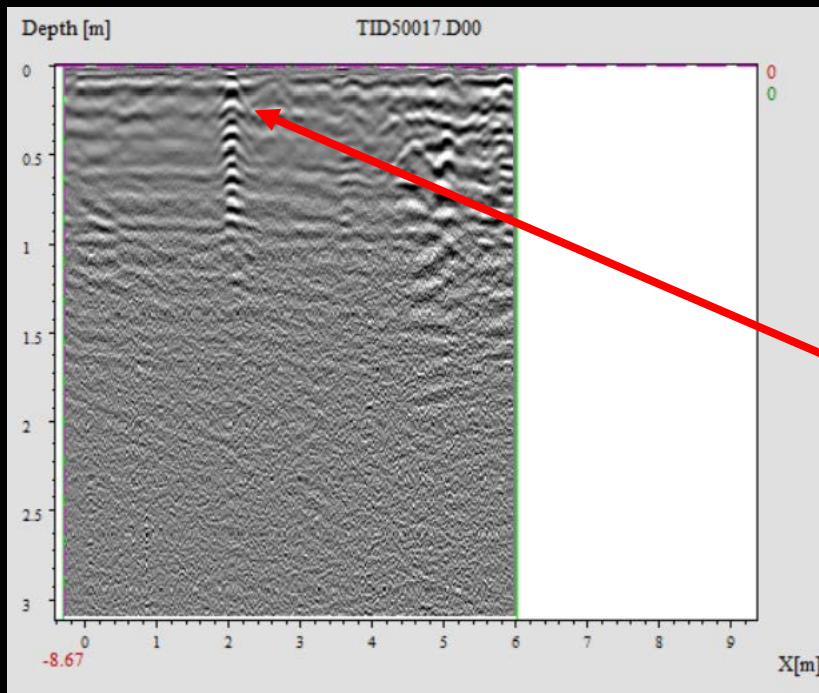
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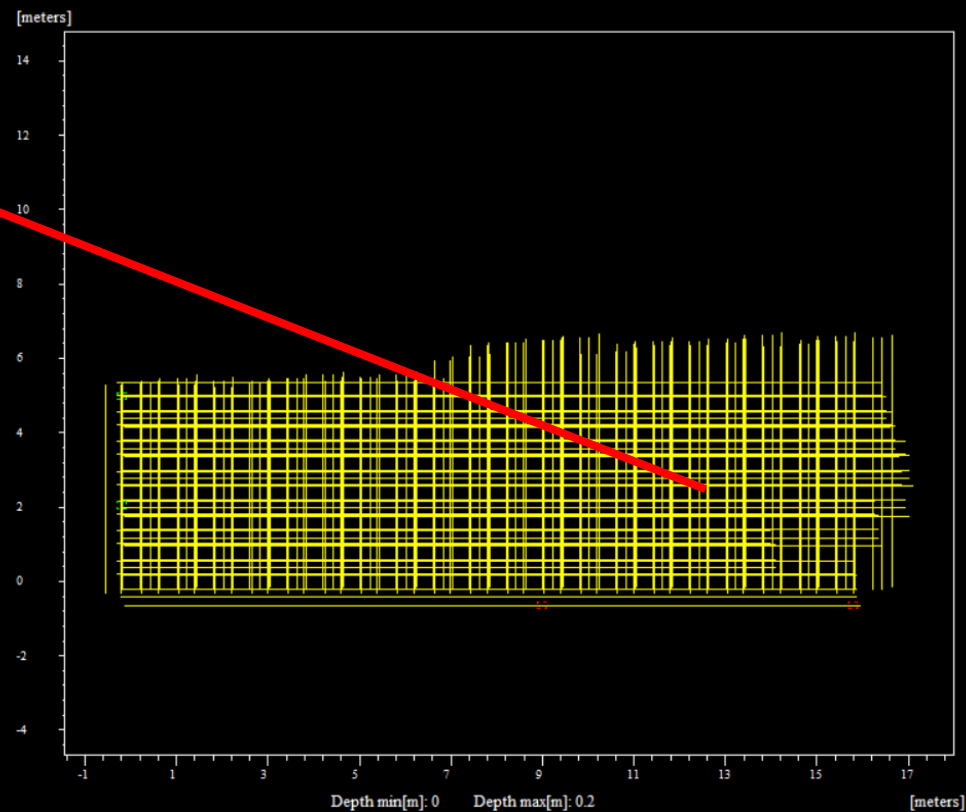
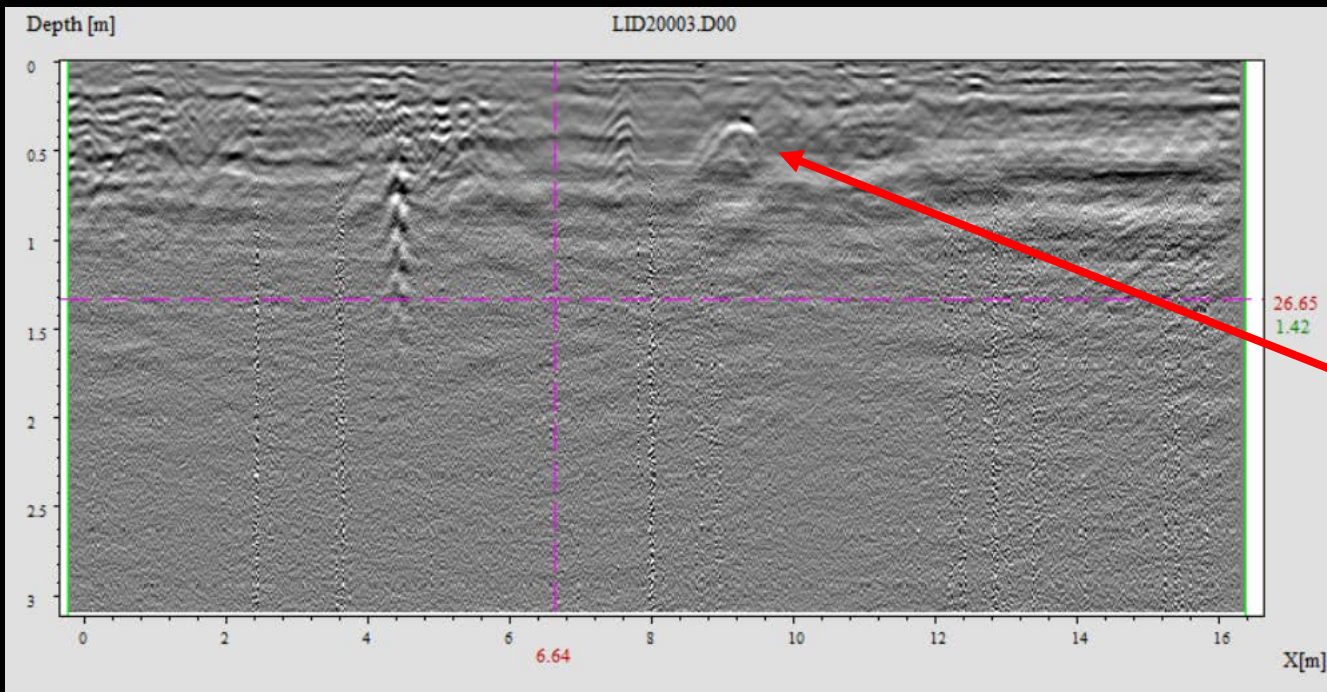


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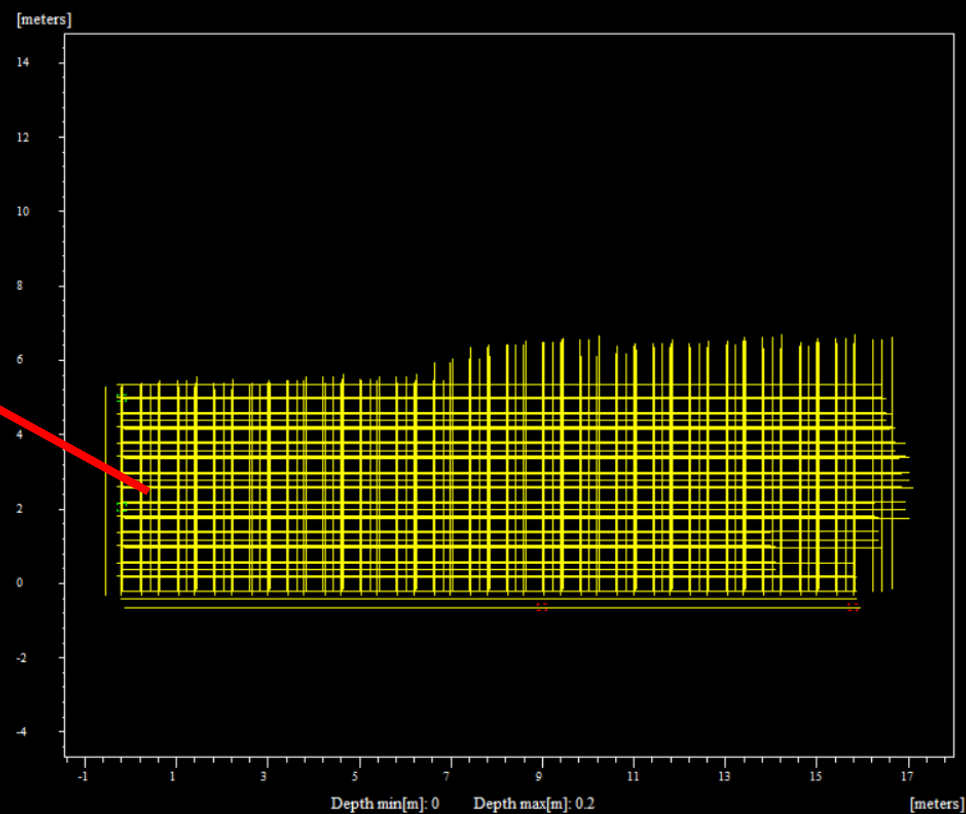
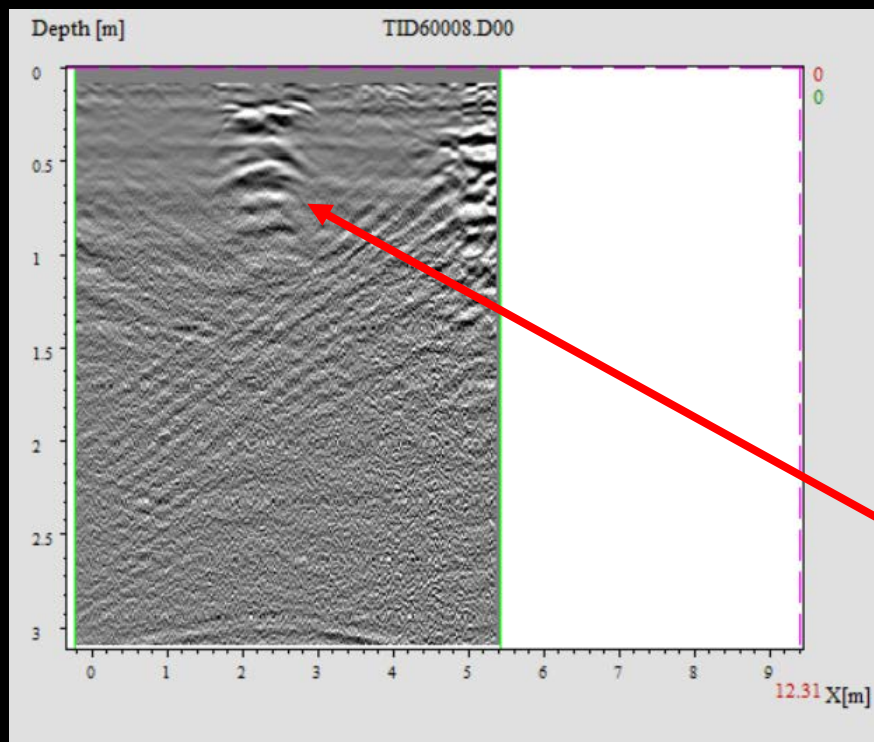


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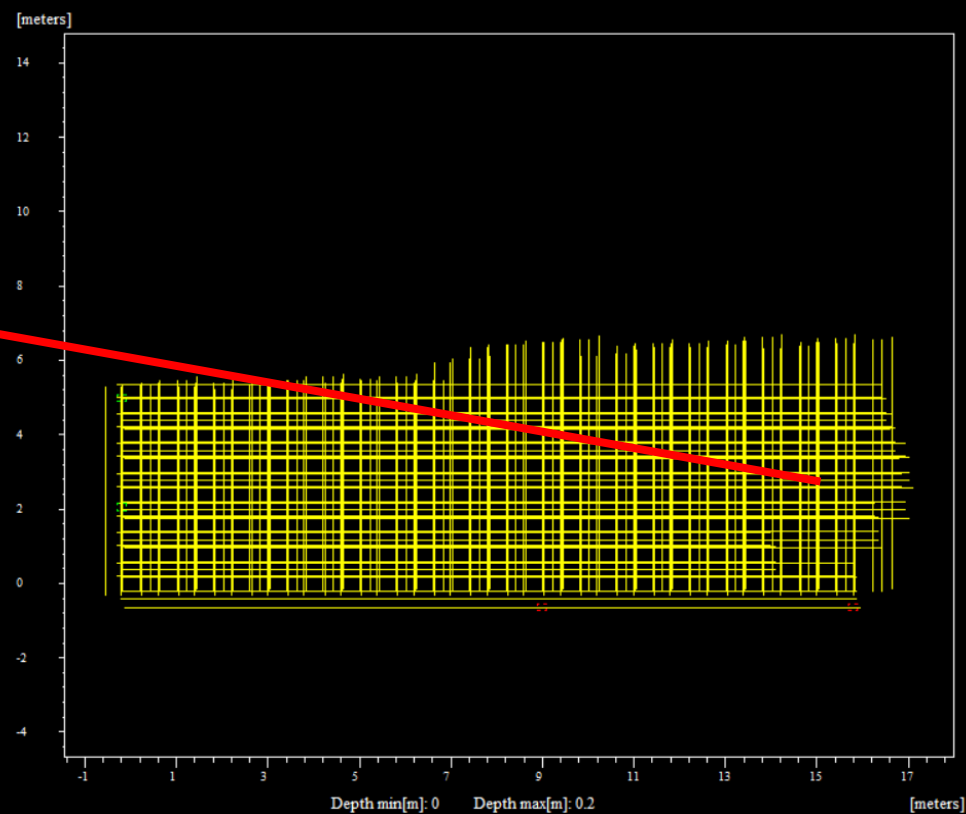
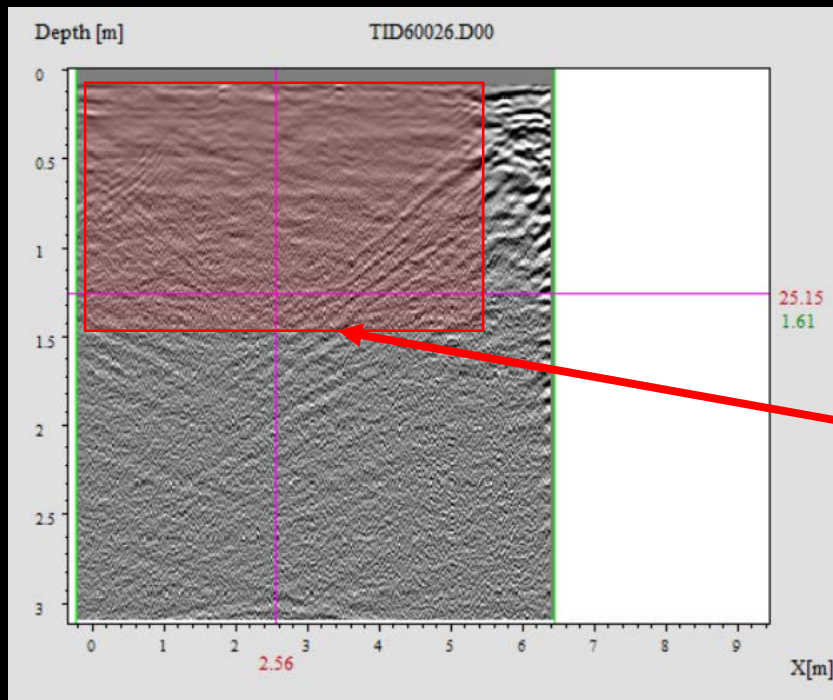




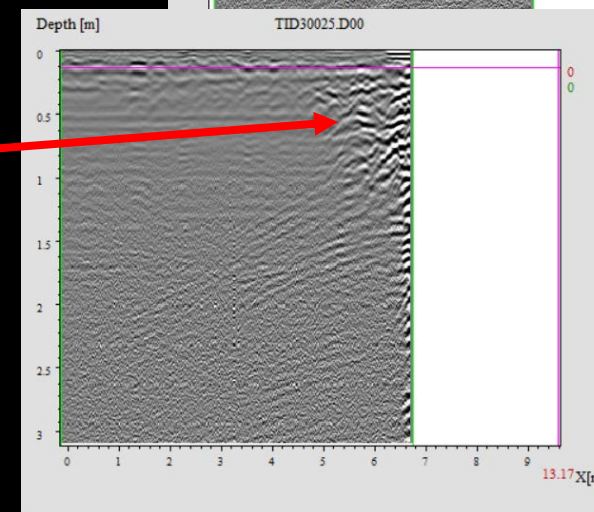
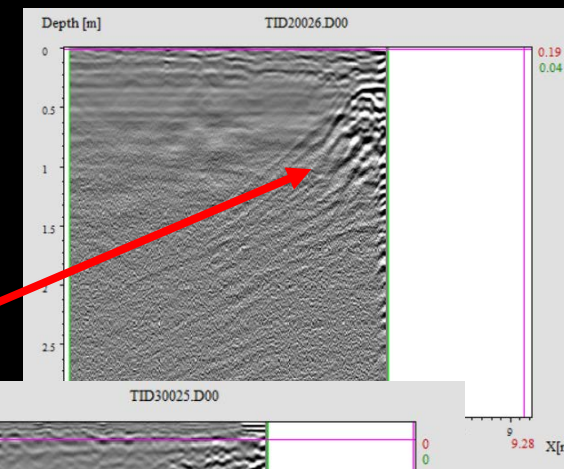
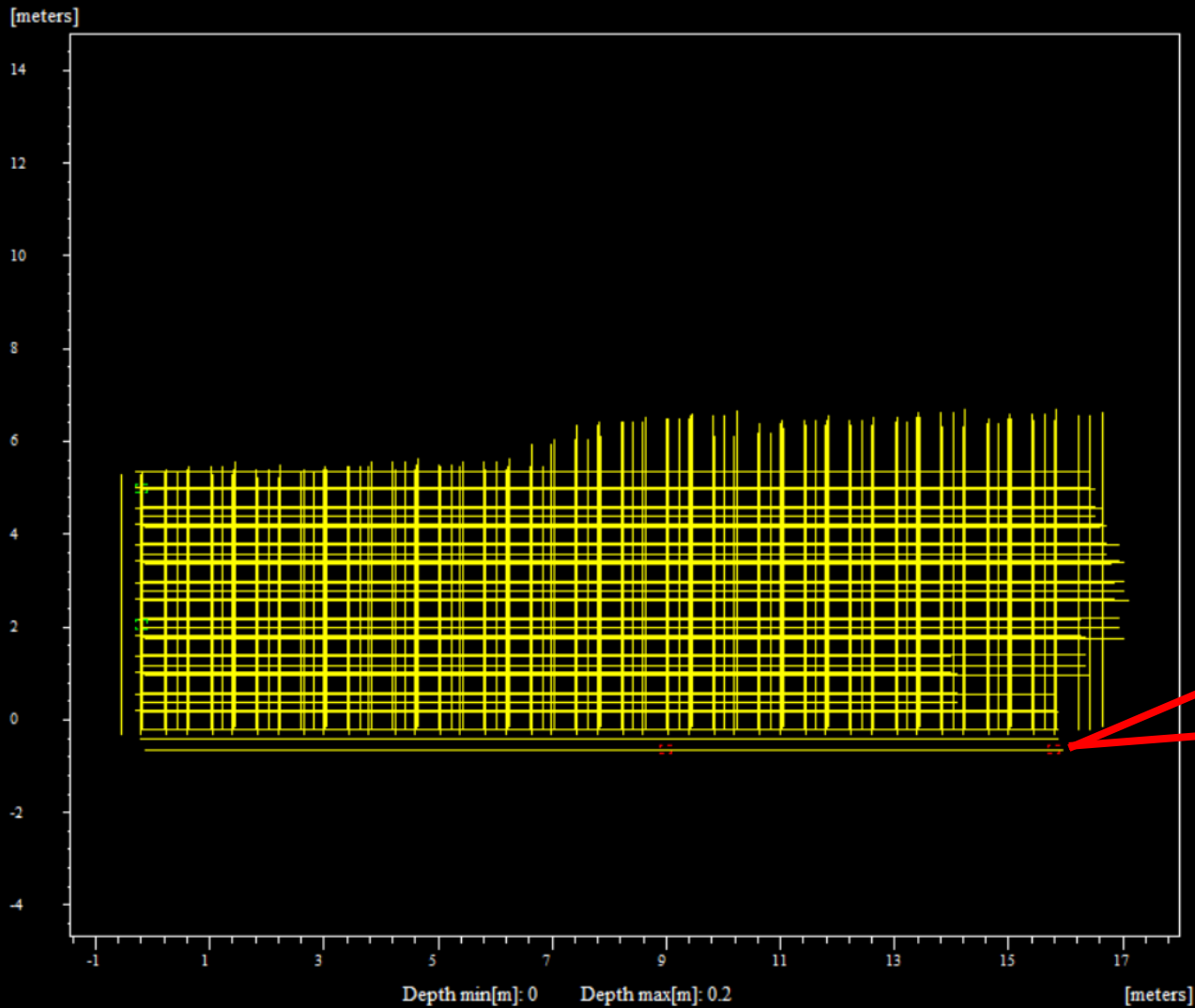
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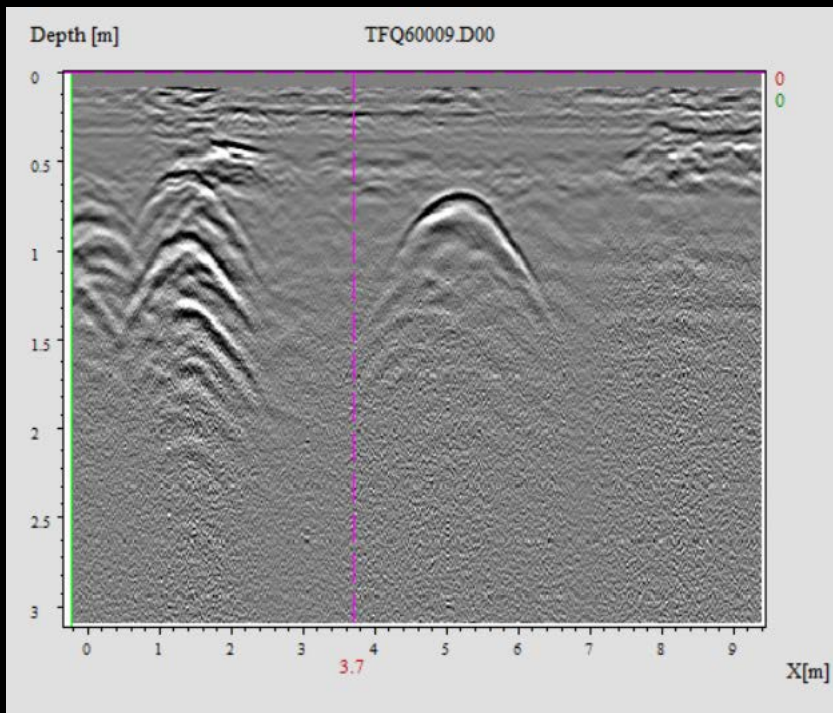
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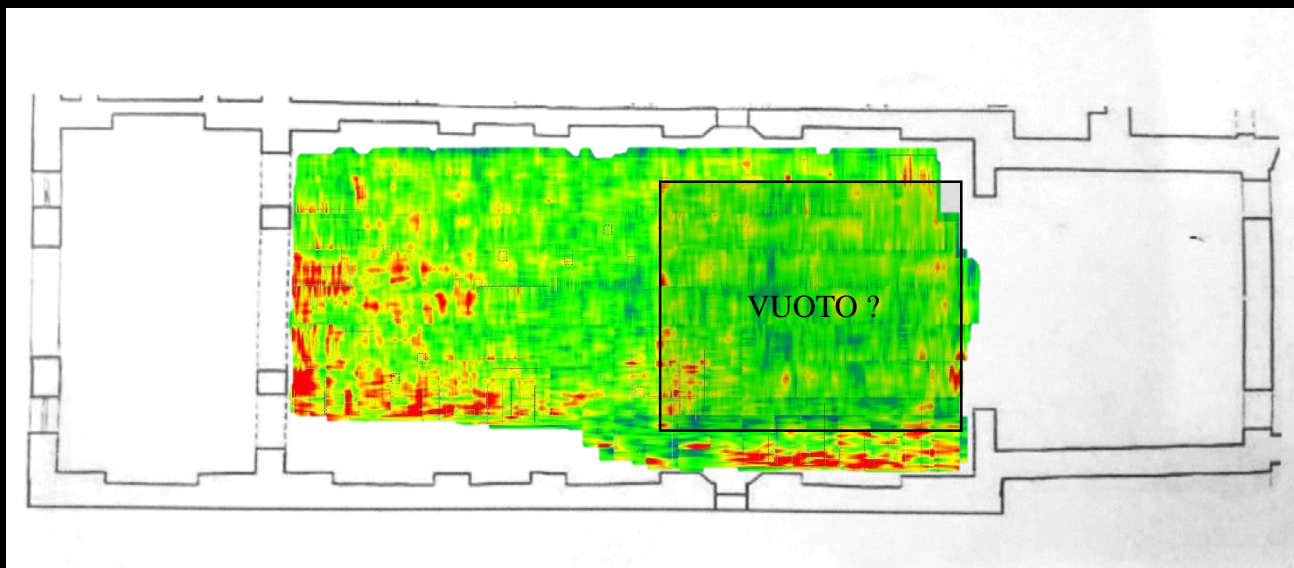
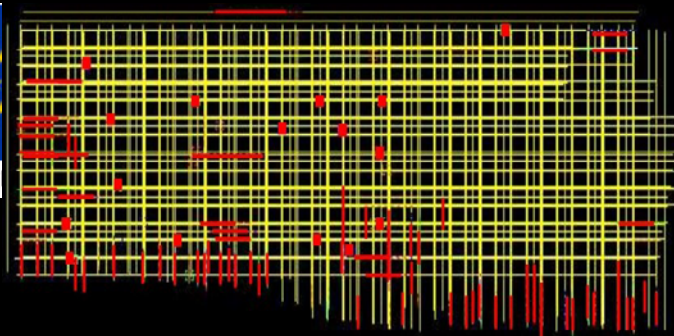
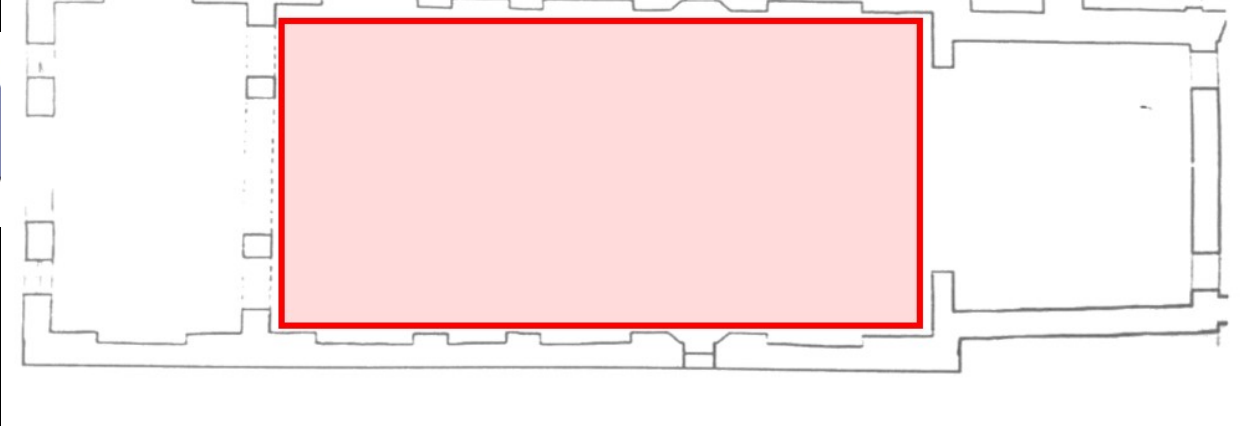


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