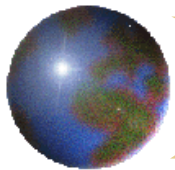


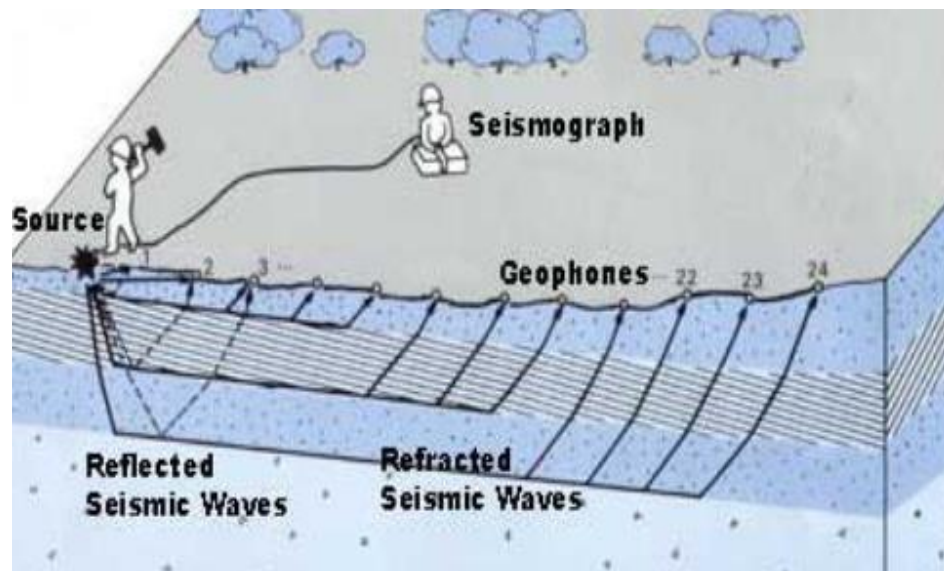
Metódy archeo-geofyzikálneho výskumu (príklady): seizmické metódy

doc. Ing. RNDr. Bibiana Brixová, PhD., prof. RNDr. Roman Pašteka, PhD.
Univerzita Komenského Bratislava, Prírodovedecká fakulta
(s použitím viacerých materiálov od kolegov z CAU Kiel, Nemecko)



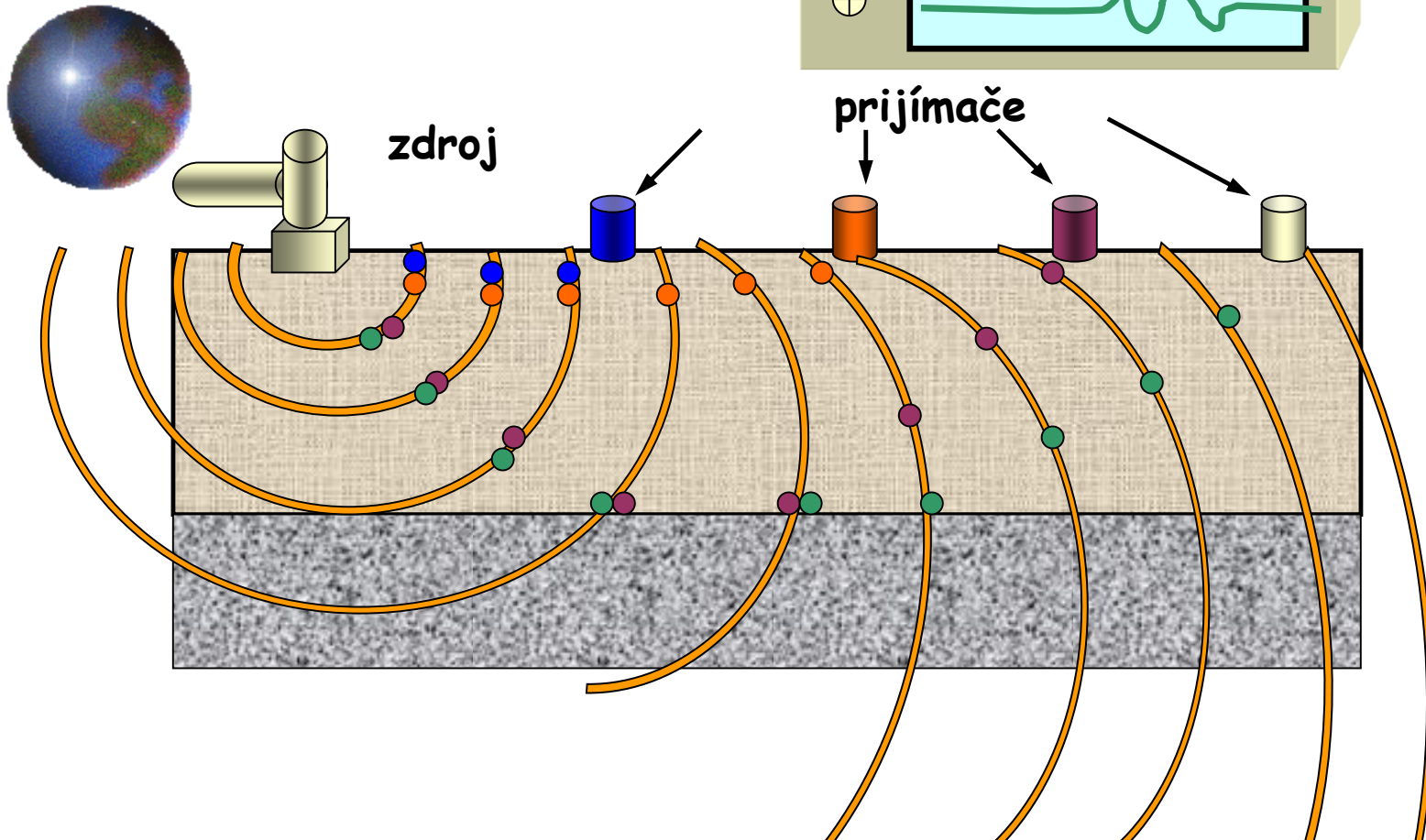
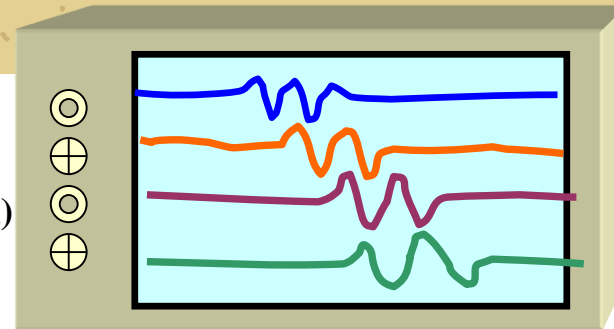
Seizmické metody používané v archeologii

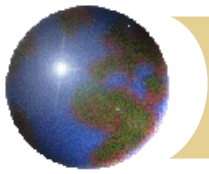
- ⊕ refrakční seizmika
- ⊕ reflexní seizmika
- ⊕ metody povrchových vln



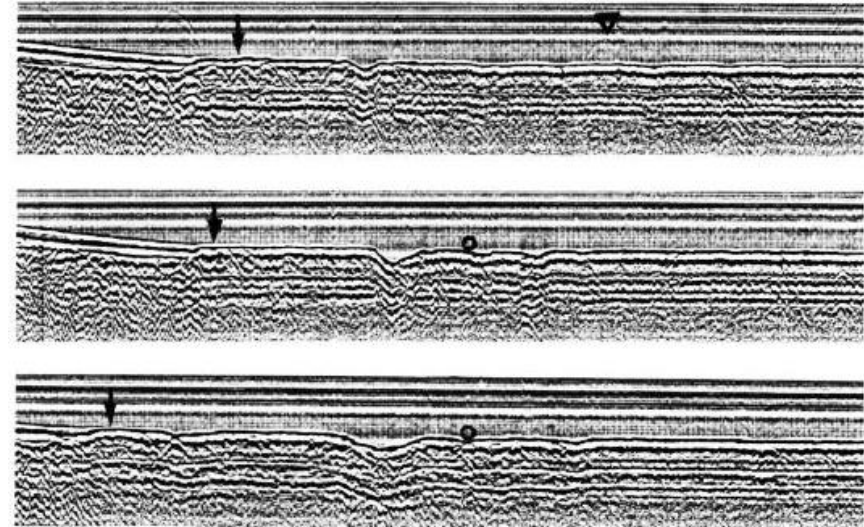
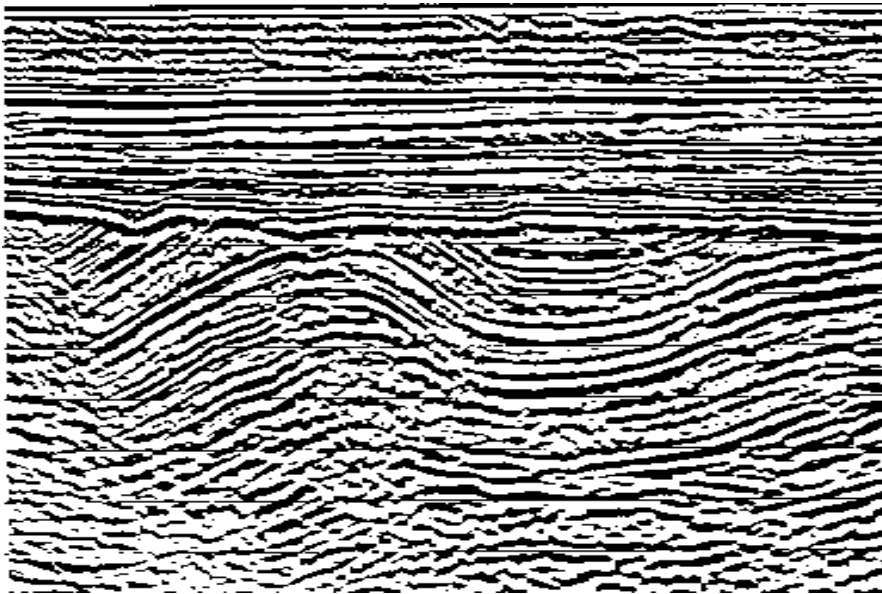
seizmické metody

- založená na vybudení mechanických vln a registrácii ich odrazov od podpovrchových štruktúr,
- hĺbkový dosah až do niekoľko km (podľa intenzity zdroja)

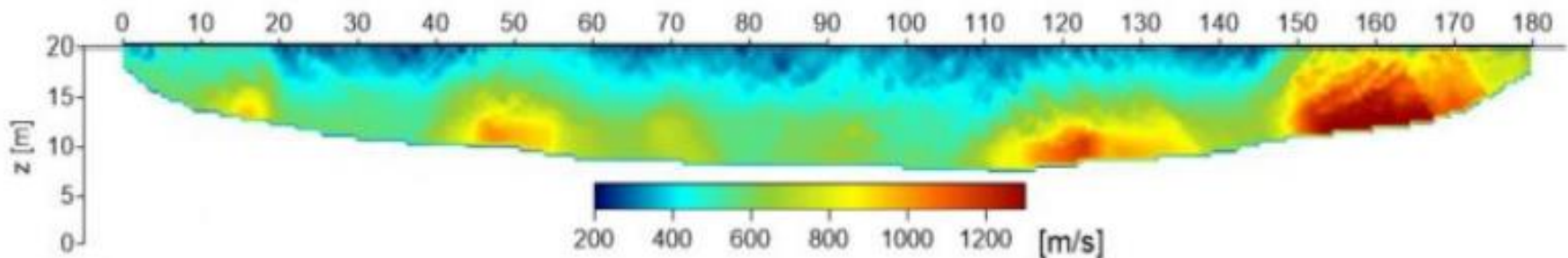




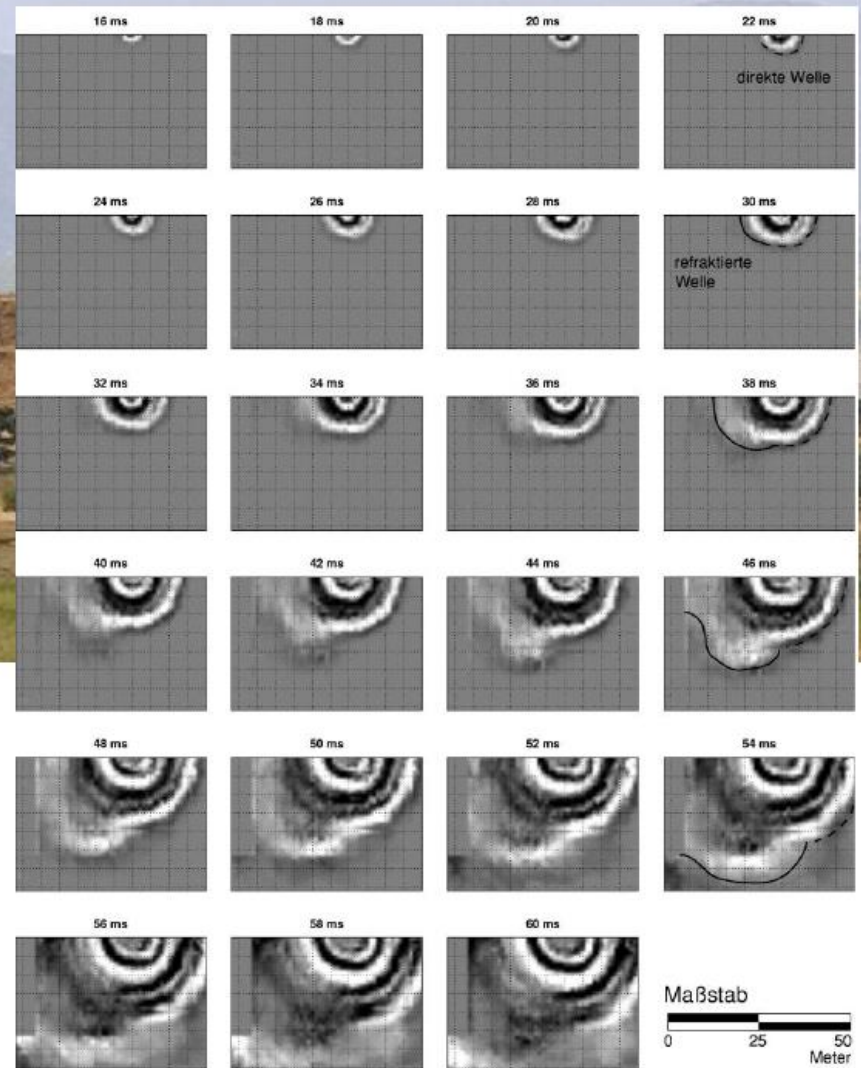
typický výstup pre reflexnú seizmiku (reflexný rez – amplitúdy reflexov, podobné GPR):



typický výstup pre refrakčnú seizmiku (rýchlostný rez):



Miletos, Turkey / Kalabak tepe / seismic survey



Kalabak Tepe ~ „umelá stolová hora“

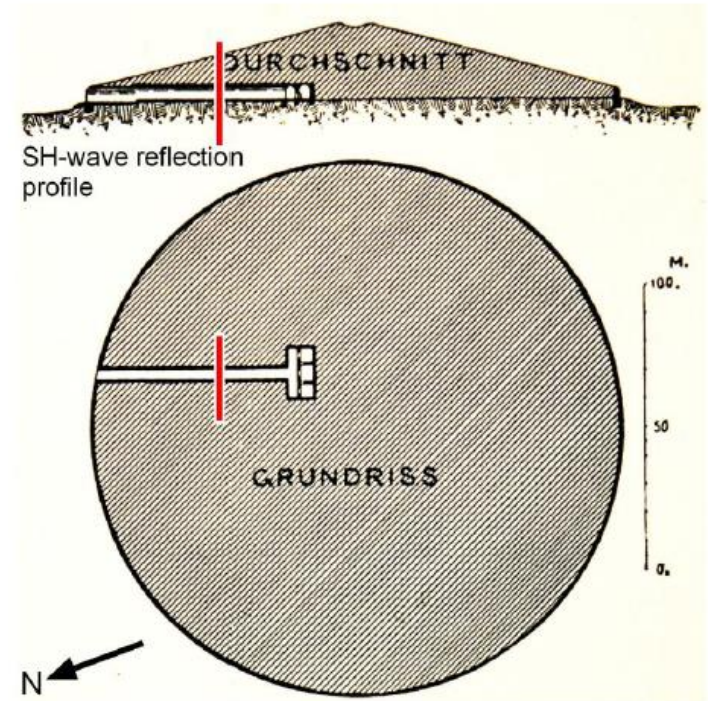
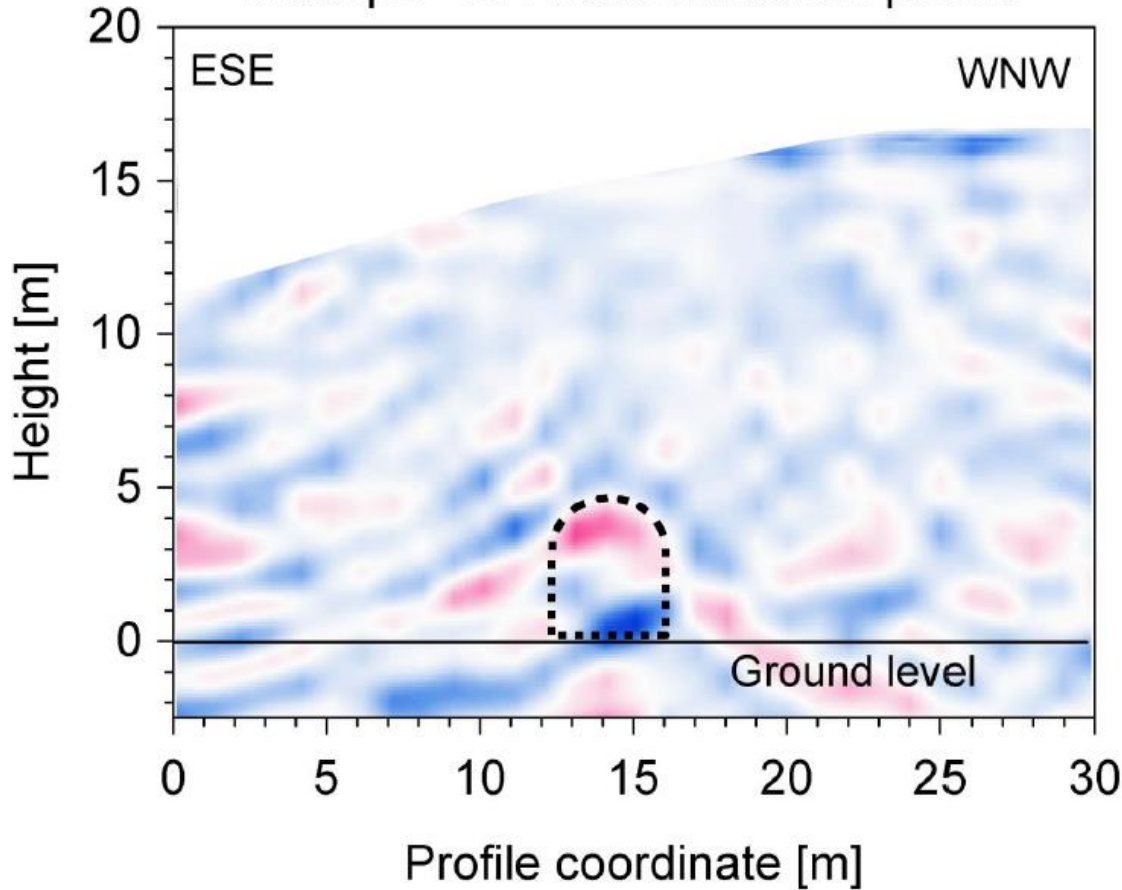
high clay content → GPR, EM ☹

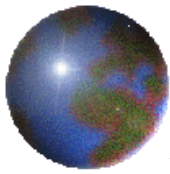
conglomerate, deep → Magnetics ☹

⇒ HR 3D-seismic refraction ☺

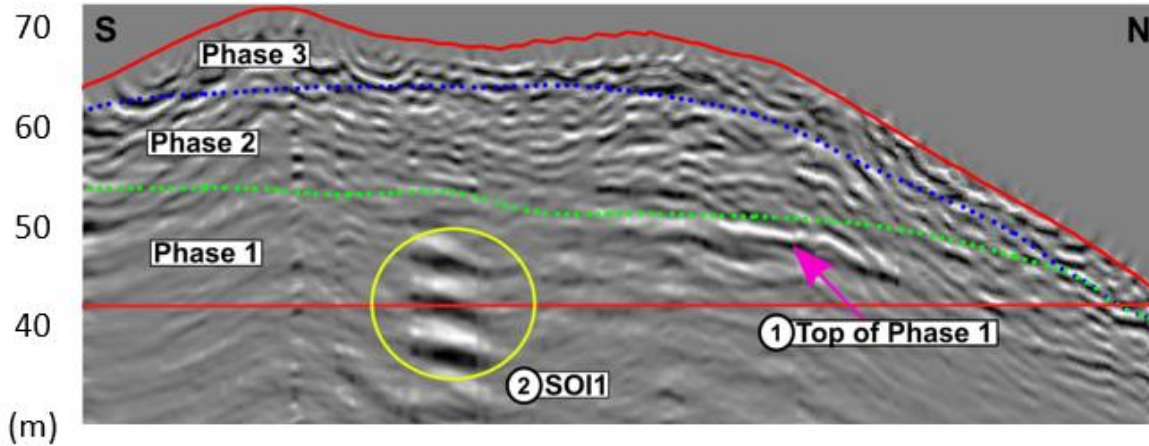
Maltepe, Bergama (Turkey)

Maltepe - SH-wave reflection profile





Pergamon



Hellenistic kingdom
& Roman province

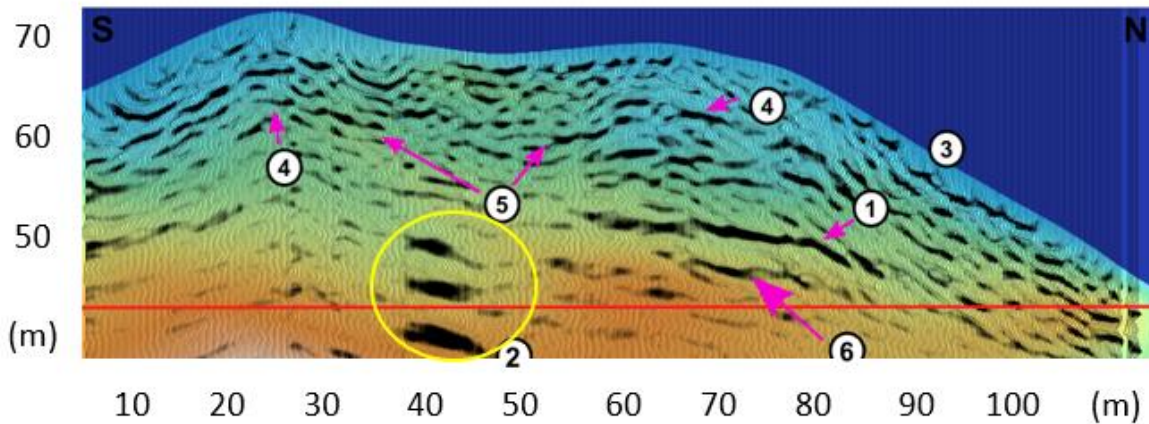
Monumental tumulus

Cooperation:

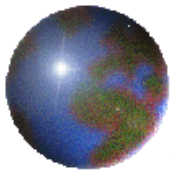
F. Pirson (Istanbul)

U. Kelp (Berlin)

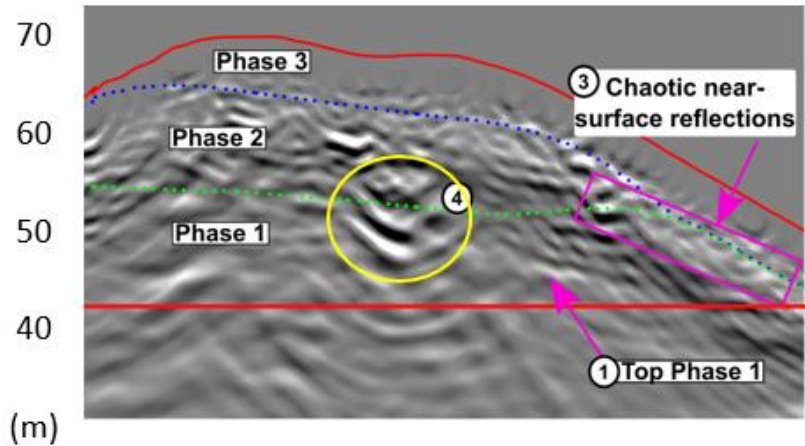
M. Meinecke (Leipzig)



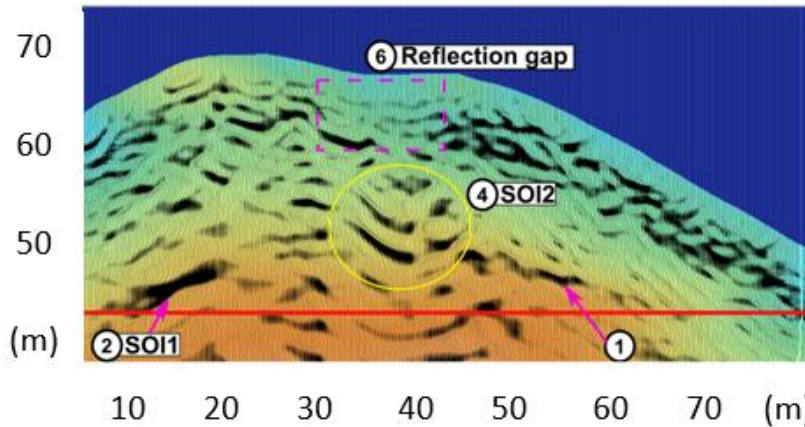
Collapsed 1907 tunnel



Pergamon



migrated
CMP stacks



S-wave
refraction
tomo

Collapsed grave?



Hellenistic kingdom
& Roman province

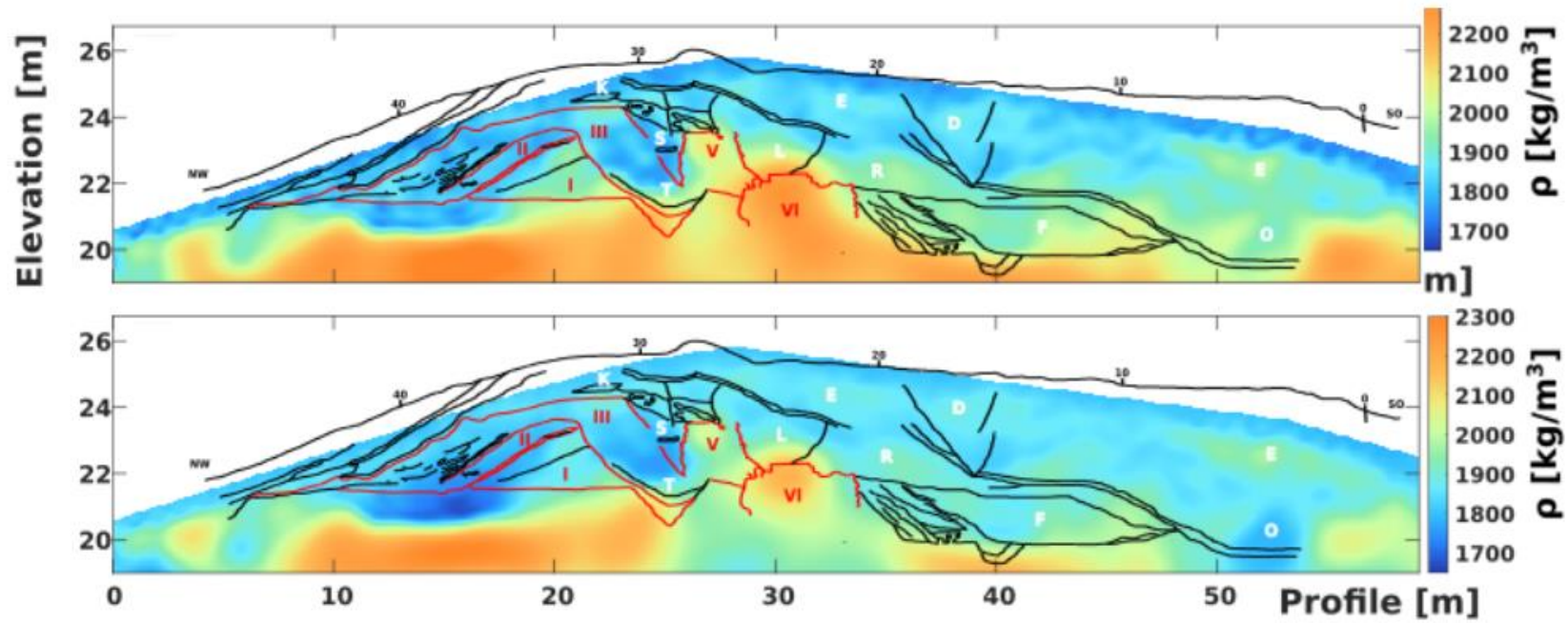
Monumental tumulus

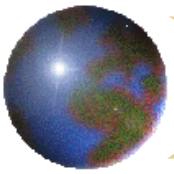
Cooperation:

F. Pirson (Istanbul)

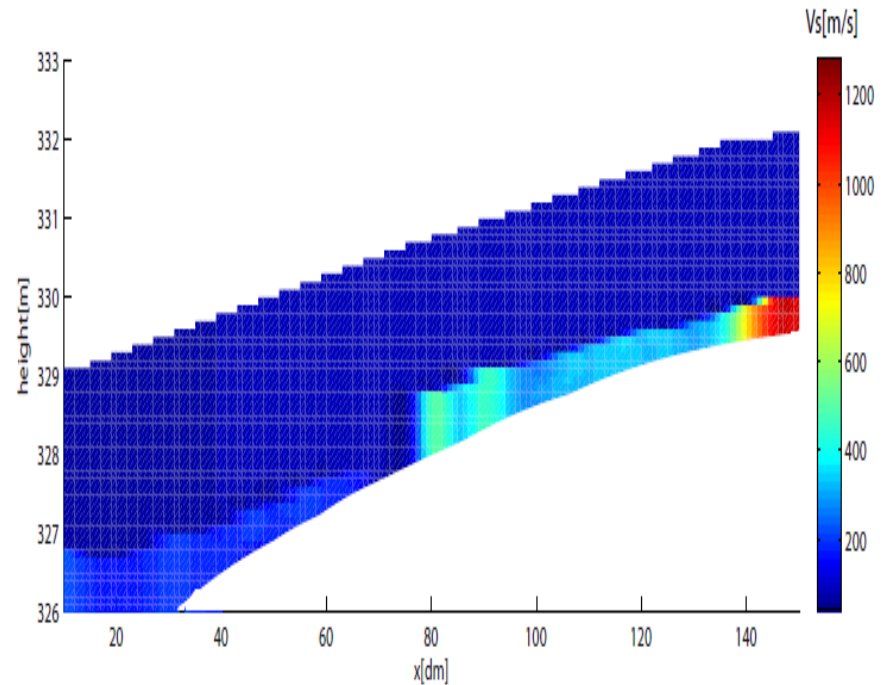
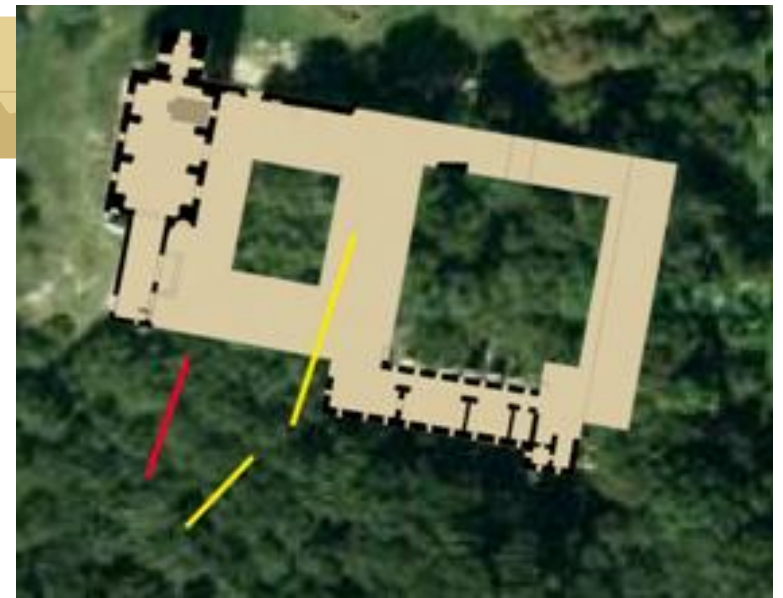
U. Kelp (Berlin)

M. Meinecke (Leipzig)





lokality Katarínka



vymapovanie priebehu karbonatického podložia –
terasovitá stavba bývalej záhrady