

Stadt, Land und Kanäle: Magnetometer Prospektion von Städten im Vorderen Orient

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Ref. ZII Archaeological Prospection

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Arial Archaeology	⇒ large-area	passive
LIDAR	⇒ large-area	active
magnetometer-prospecting	⇒ large-area	passive
Resistivity prospecting	⇒ small area	active
Radar prospecting	⇒ small area	active
Sonar prospecting	⇒ small area	active
Special application		
Earth Resistivity Tomography (ERT)	⇒ profiles	active
Electromagnetic methods (VLFR)	⇒ small area	active
Magnetic susceptibility measurement	⇒ single samples	active

Commercial fluxgate Magnetometers

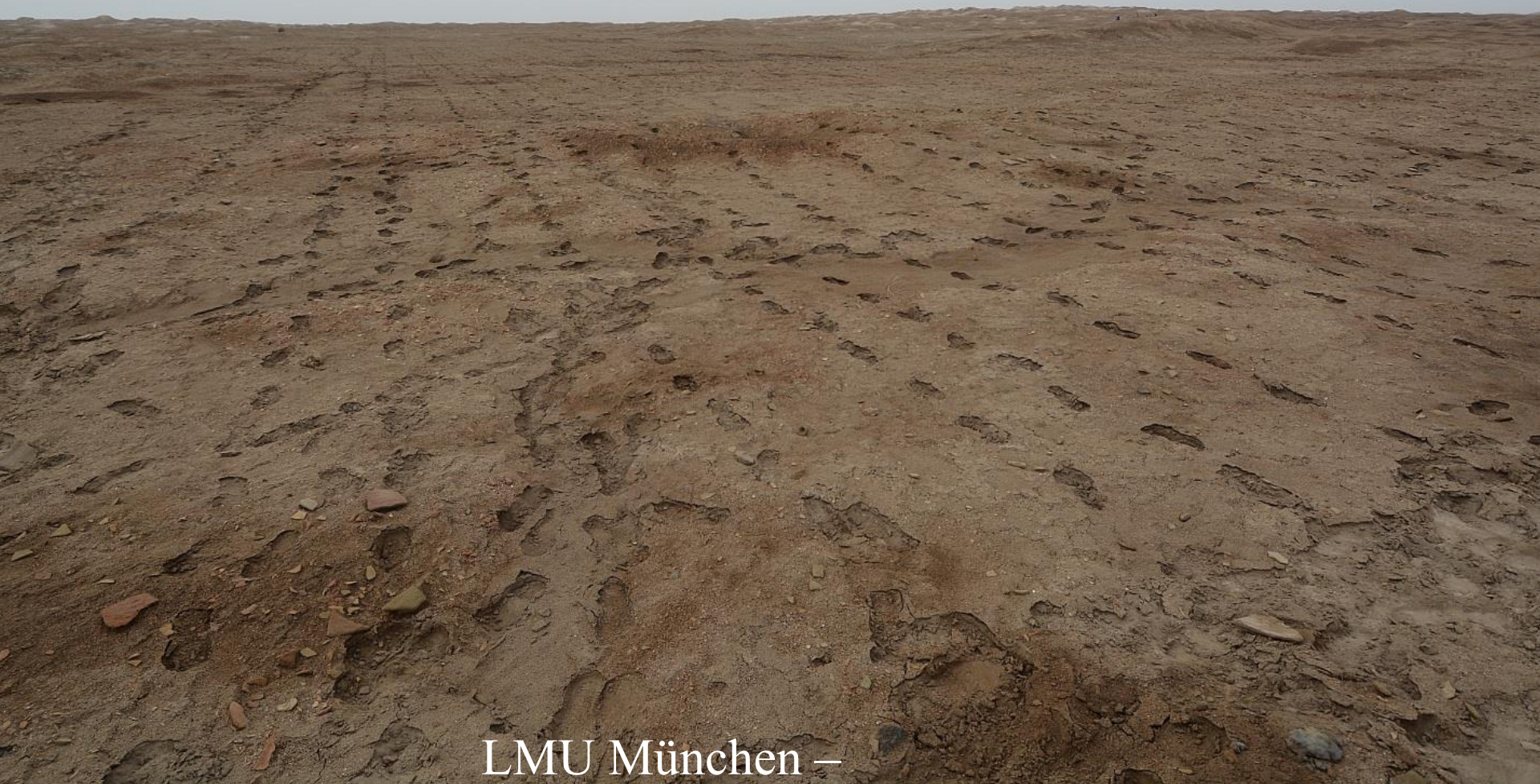


Motorized Magnetometers

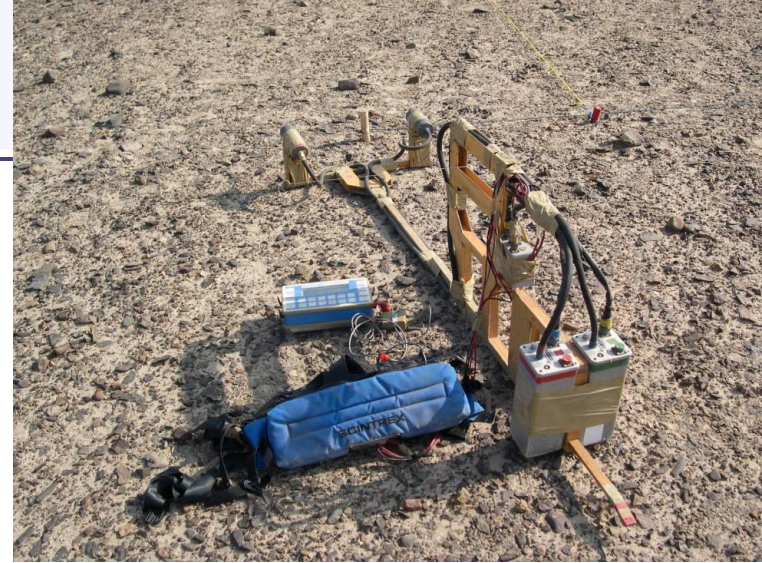




Reality in the Near-East







Modified total field Cesium Magnetometers

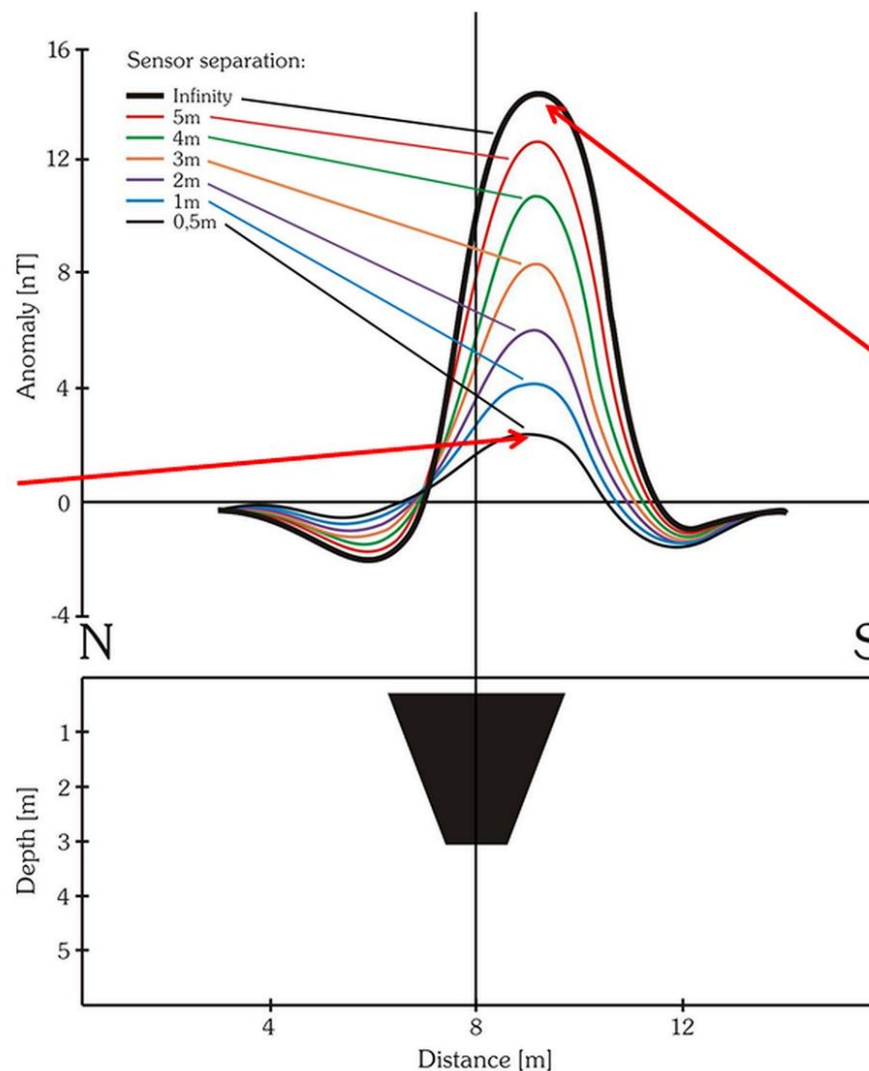


Intensity and sensitivity of magnetometer measurements depends:

depends:

- 1) on the configuration
- 2) on the type of magnetometers
- 3) data processing

Commercial
Fluxgate
gradiometer



Modified total
field Cesium
magnetometer
Scintrex Smartmag
SMG-4 special and
Geometrics G858

UR *SOUTH IRAQ*

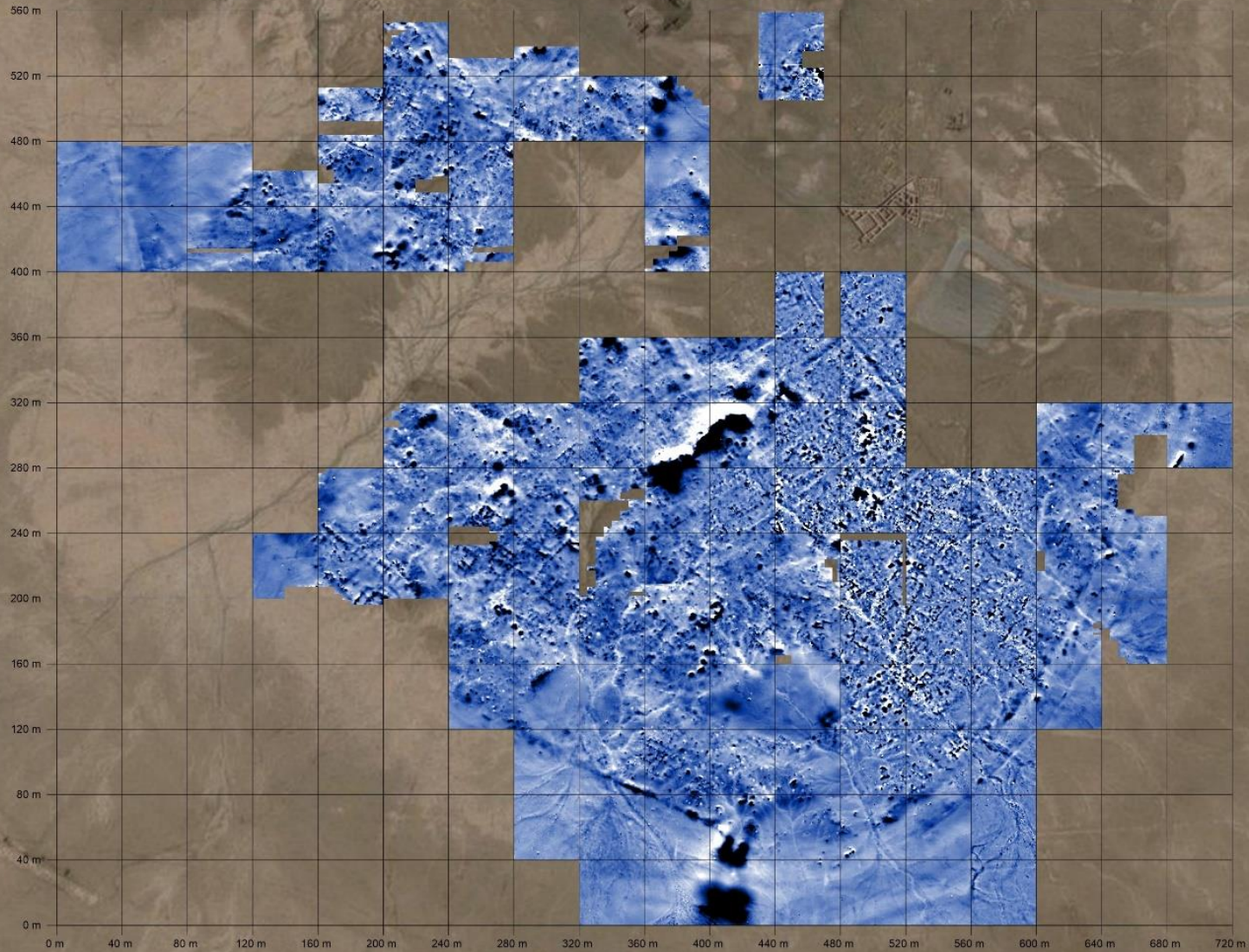


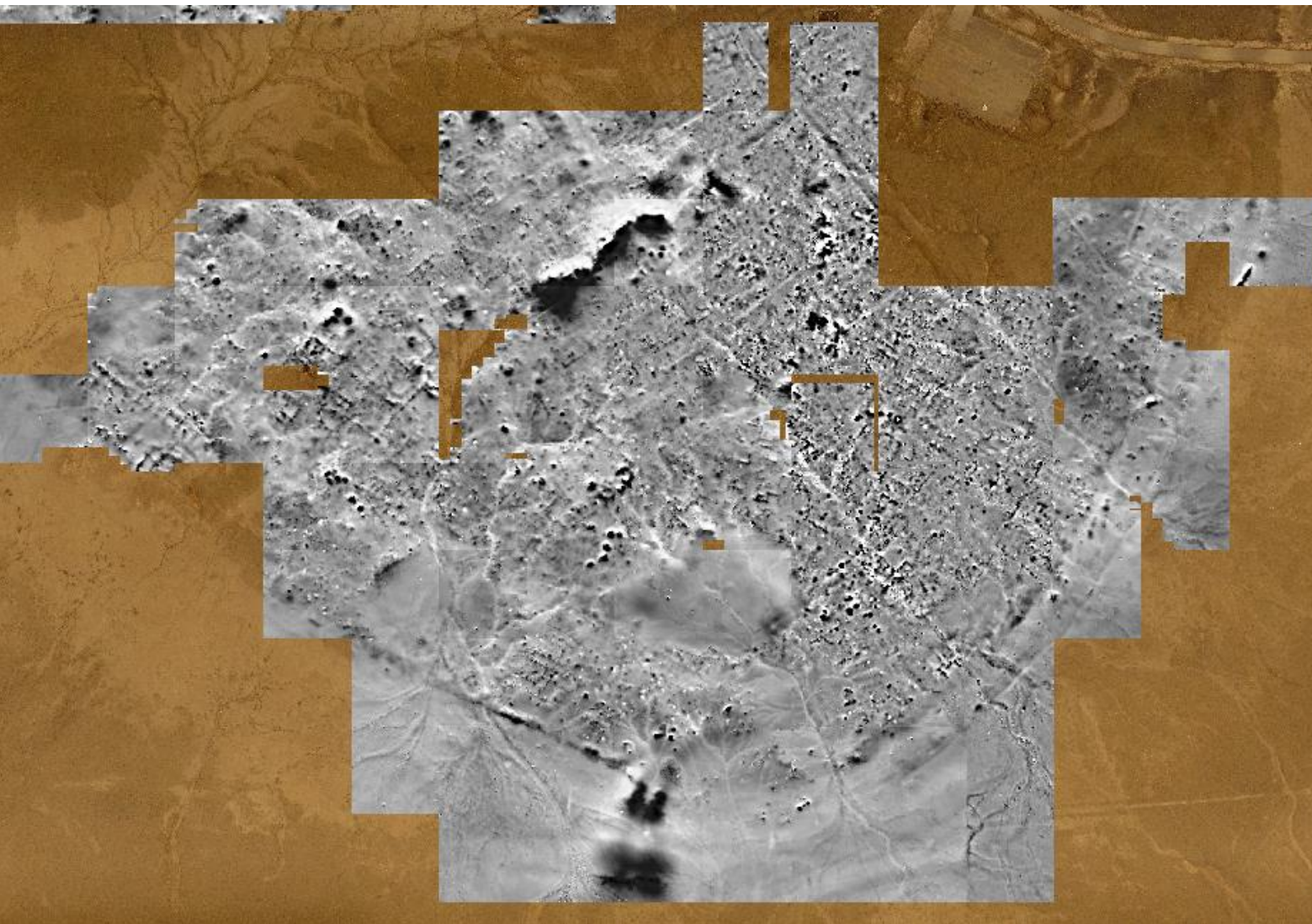






Ur 2019





city wall

architecture

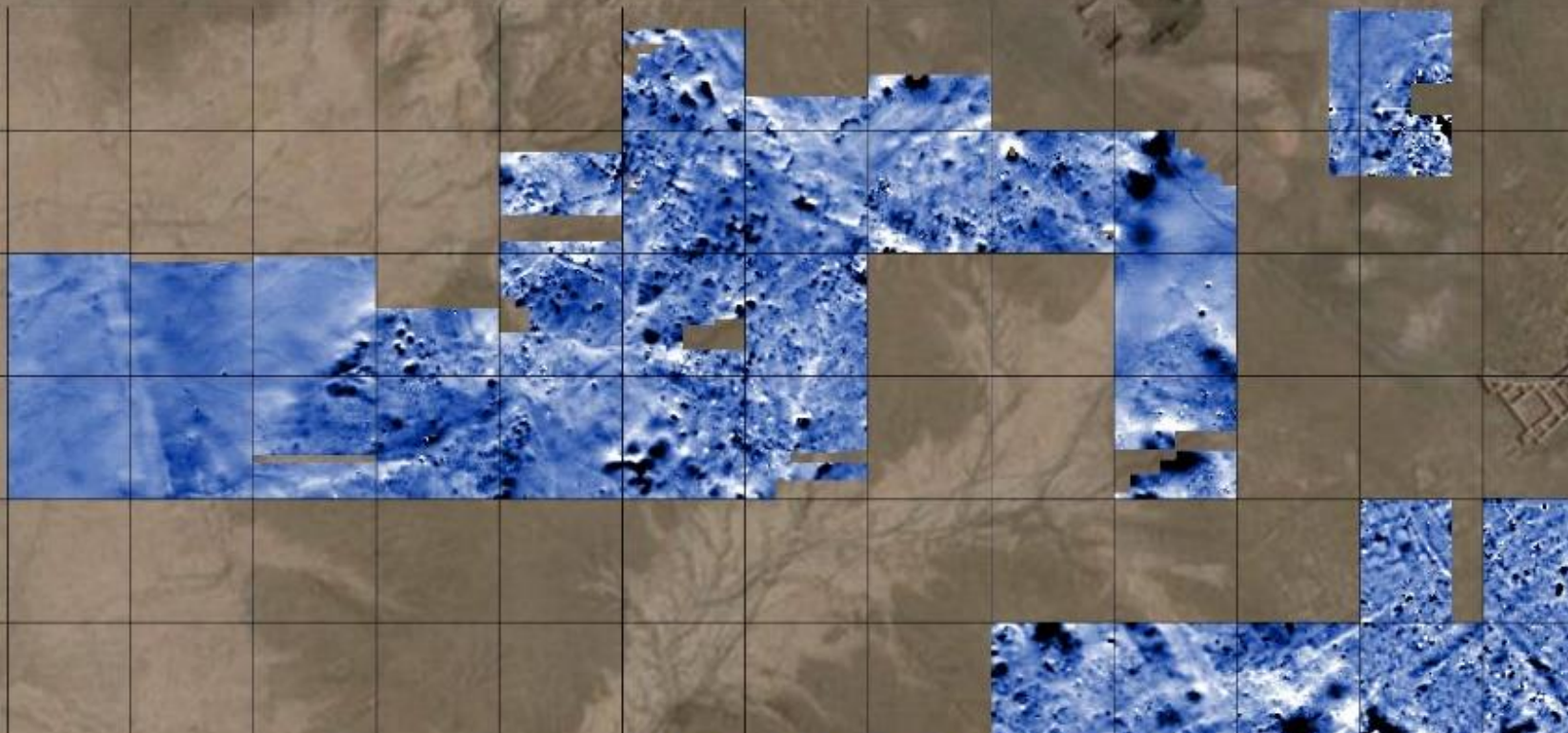
streets

free areas

**market
places**

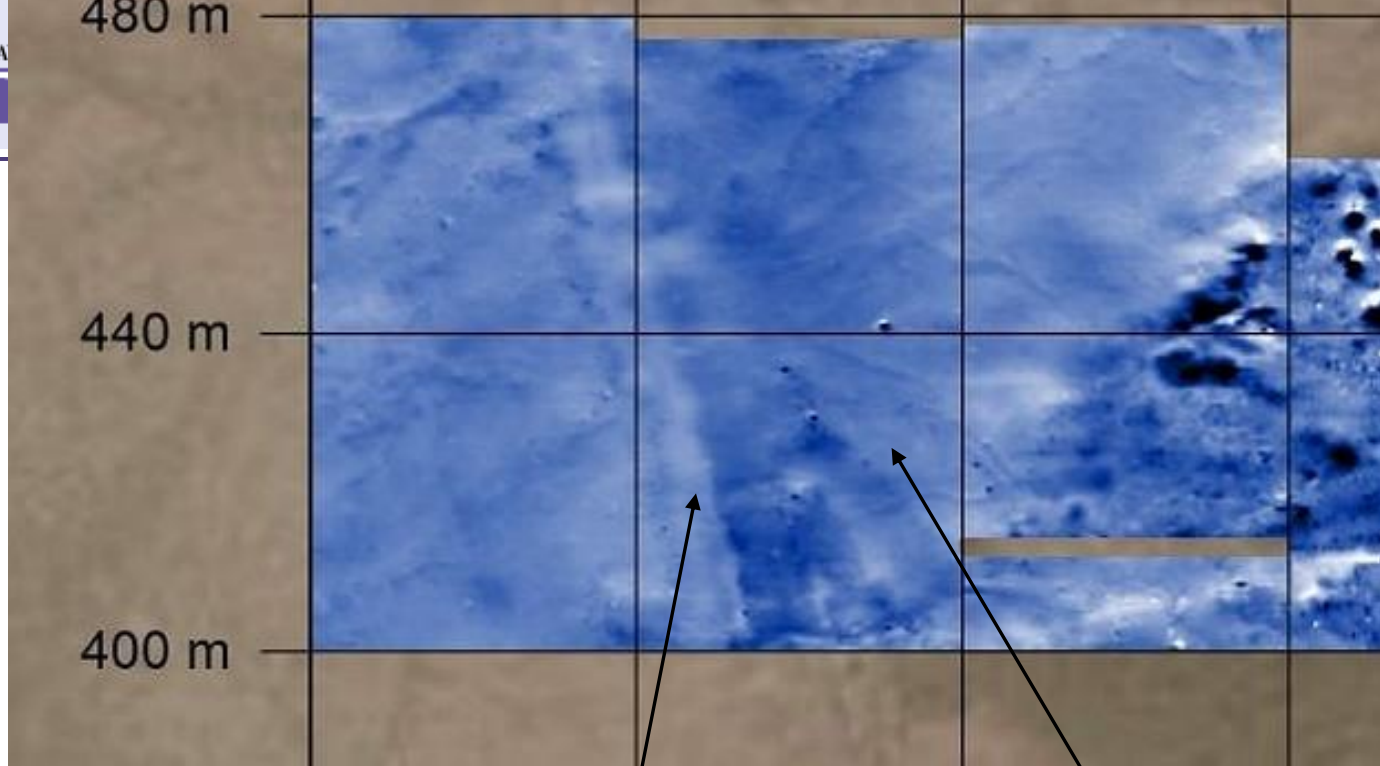
Ur harbour

560 m
520 m
480 m
440 m
400 m
360 m



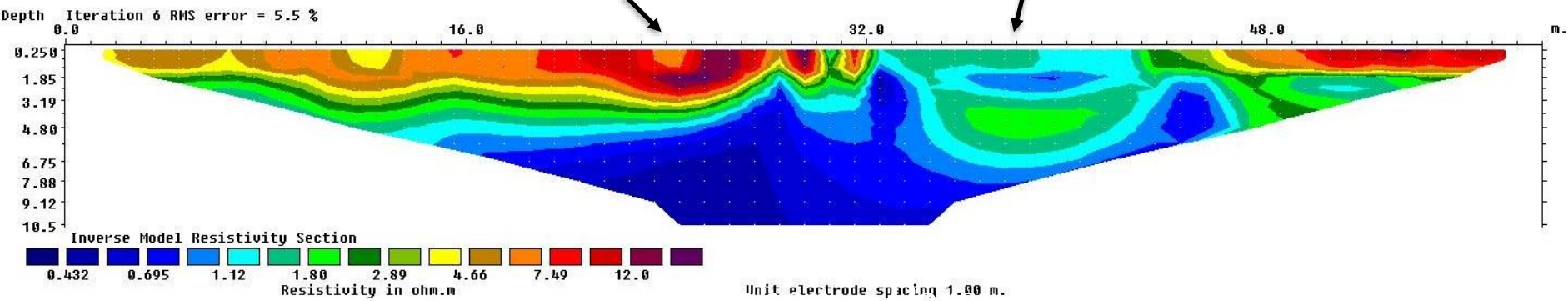
Some examples about our ERT profiles in Ur





Wall of the harbor

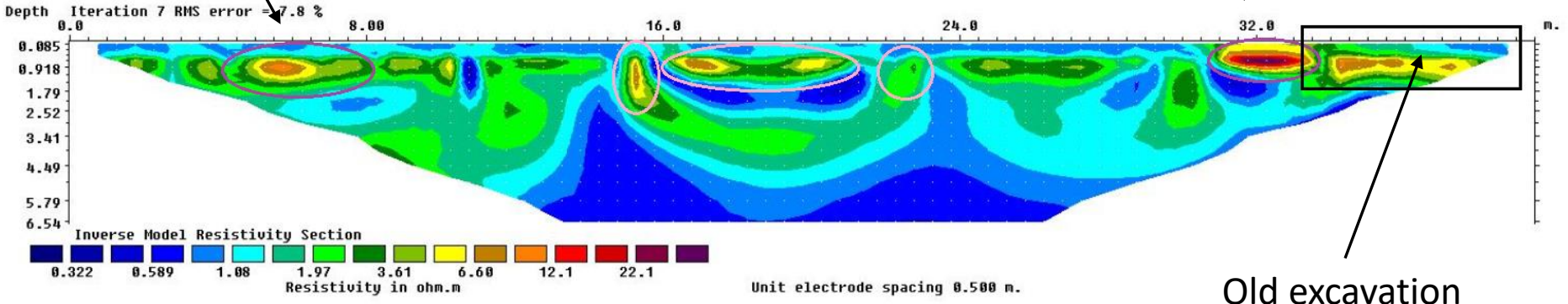
Harbor





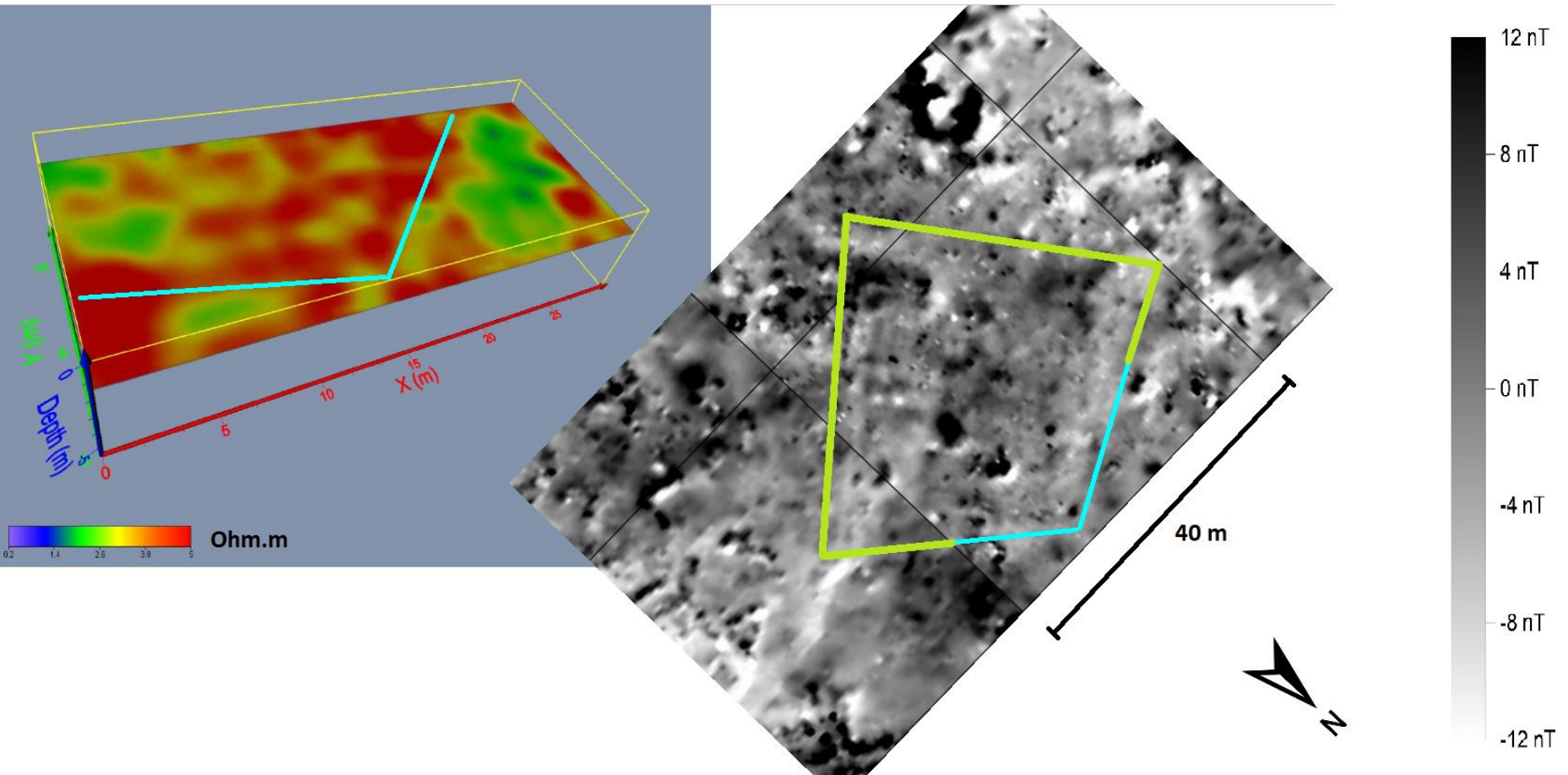
Inner city wall

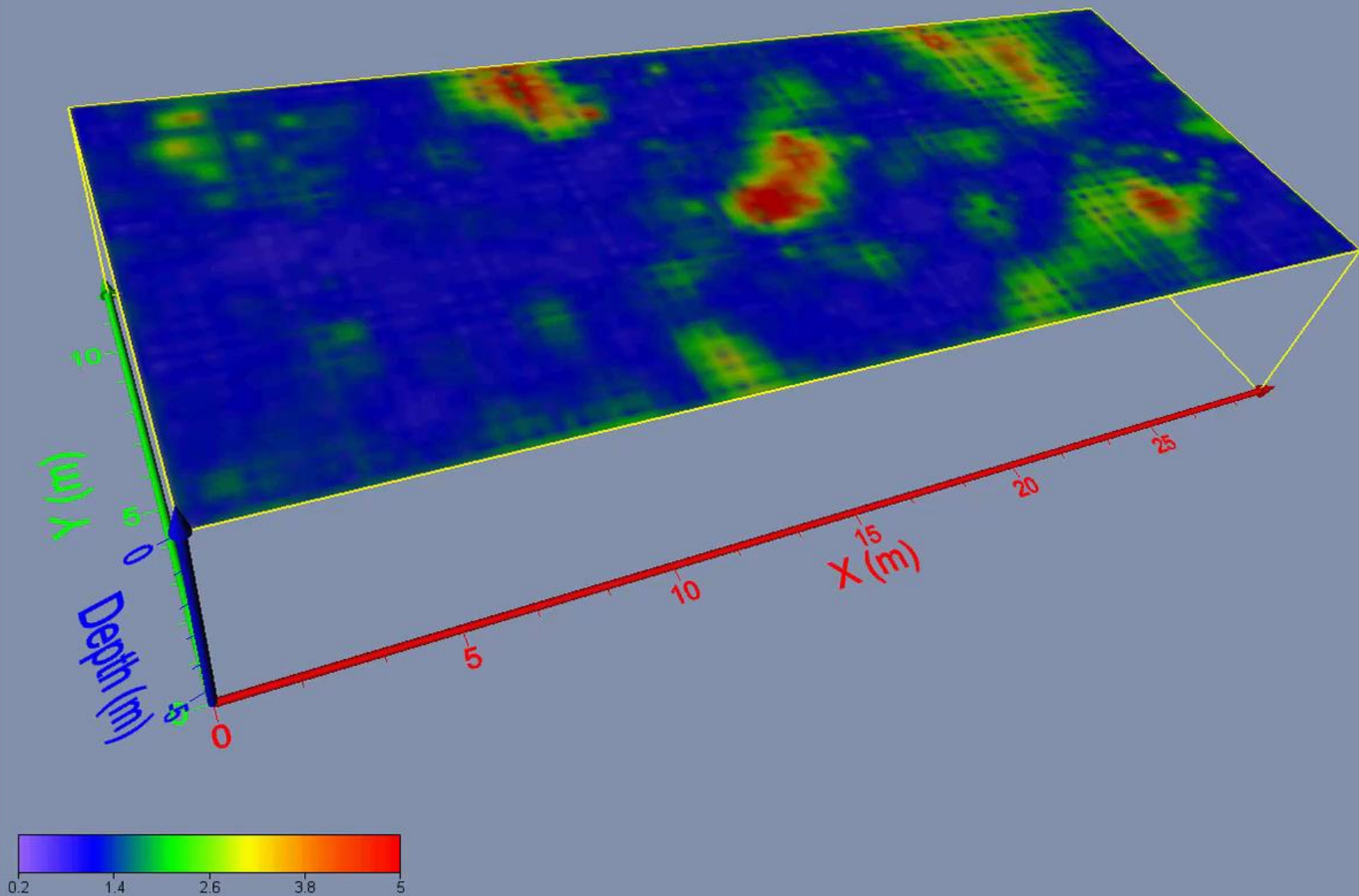
Outer city wall



Old excavation

The new Babylonian House





magnetic susceptibility



Lehmziegel, Grabung



Oberfläche außerhalb Stadtmauer



Ziegel, Grabung



Zikkurrat

URUK

SOUTH IRAQ

Uruk-Warka



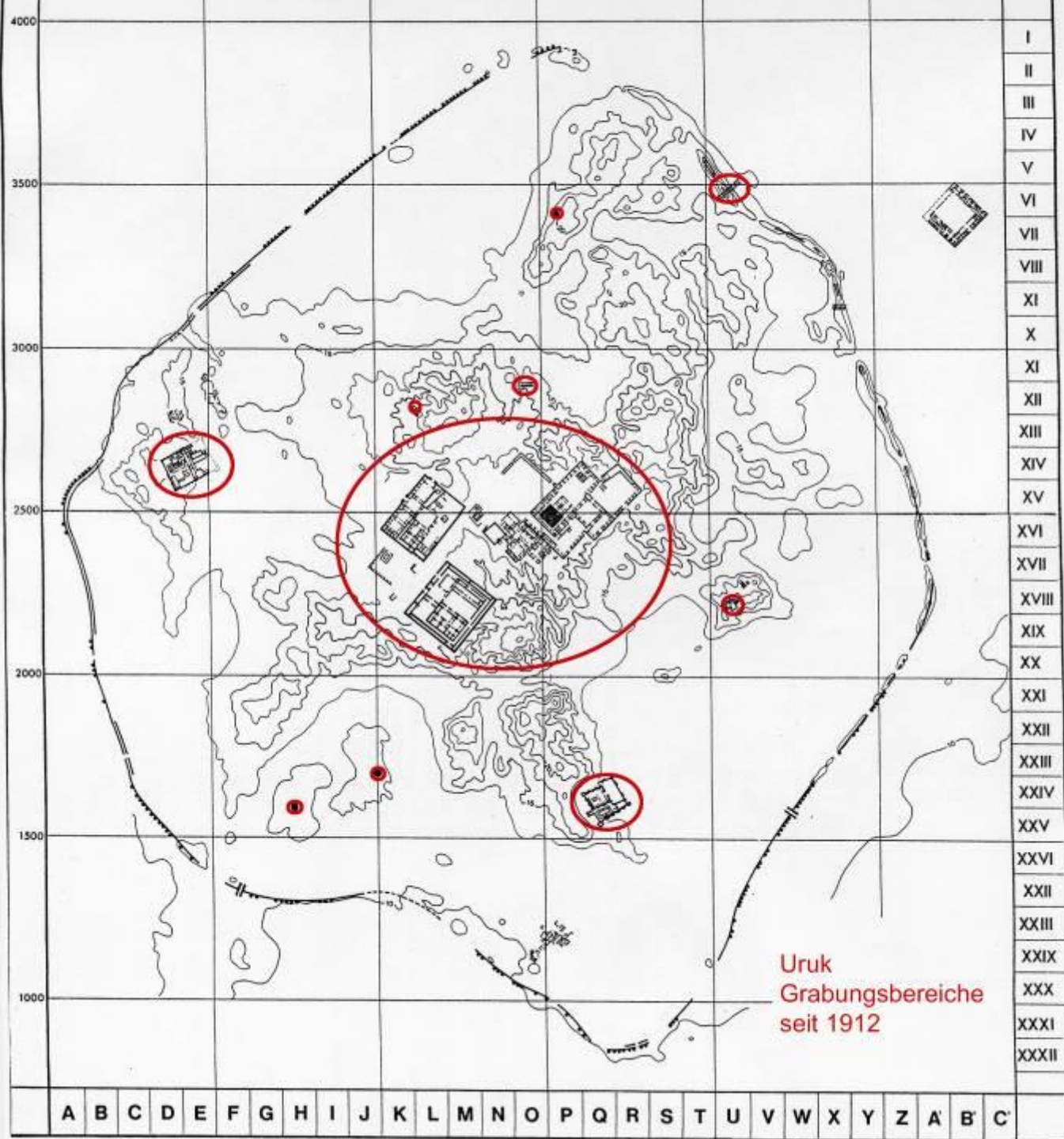
1939

W. E.

1939

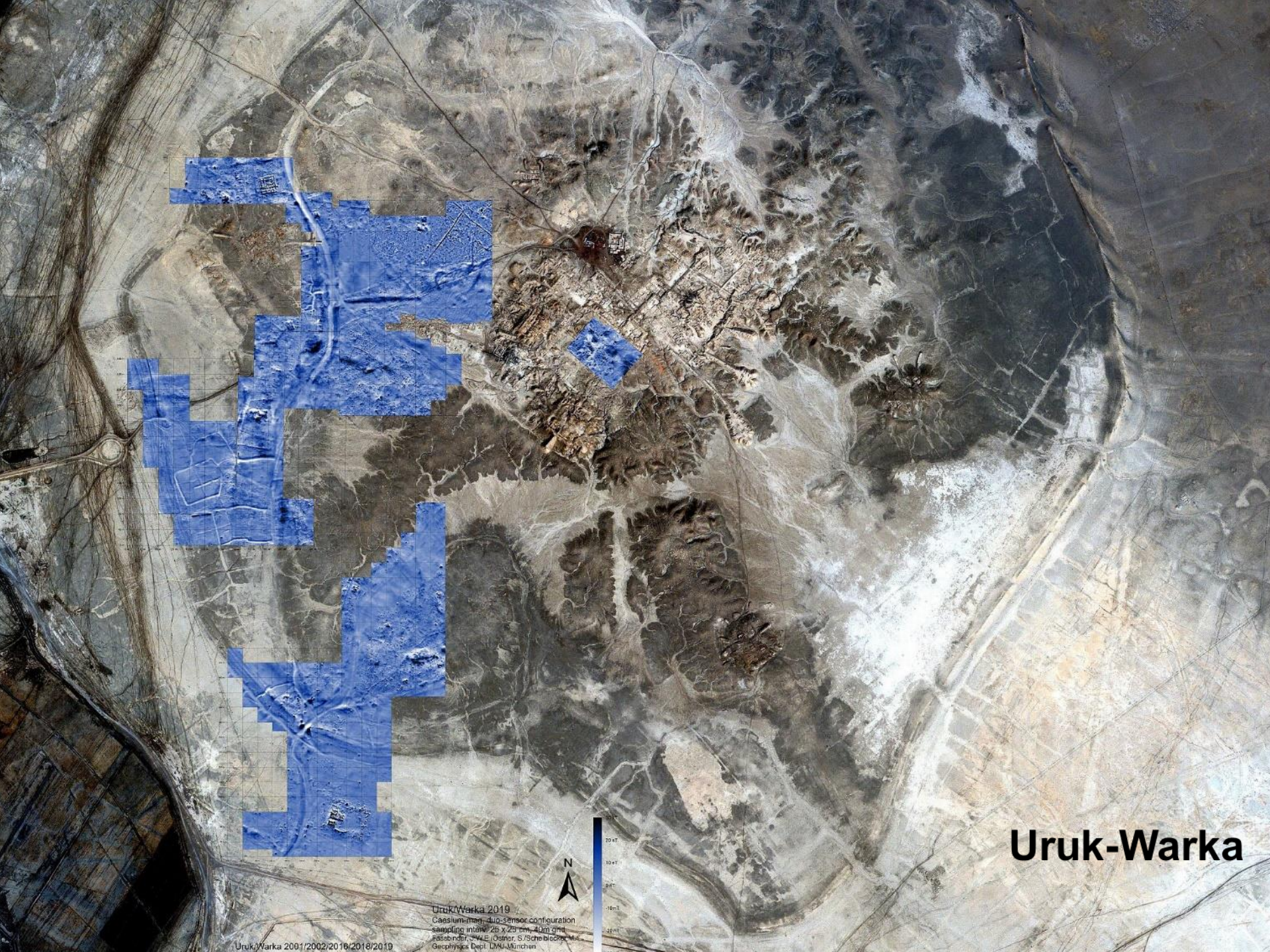


Uruk-Warka



Uruk-Warka



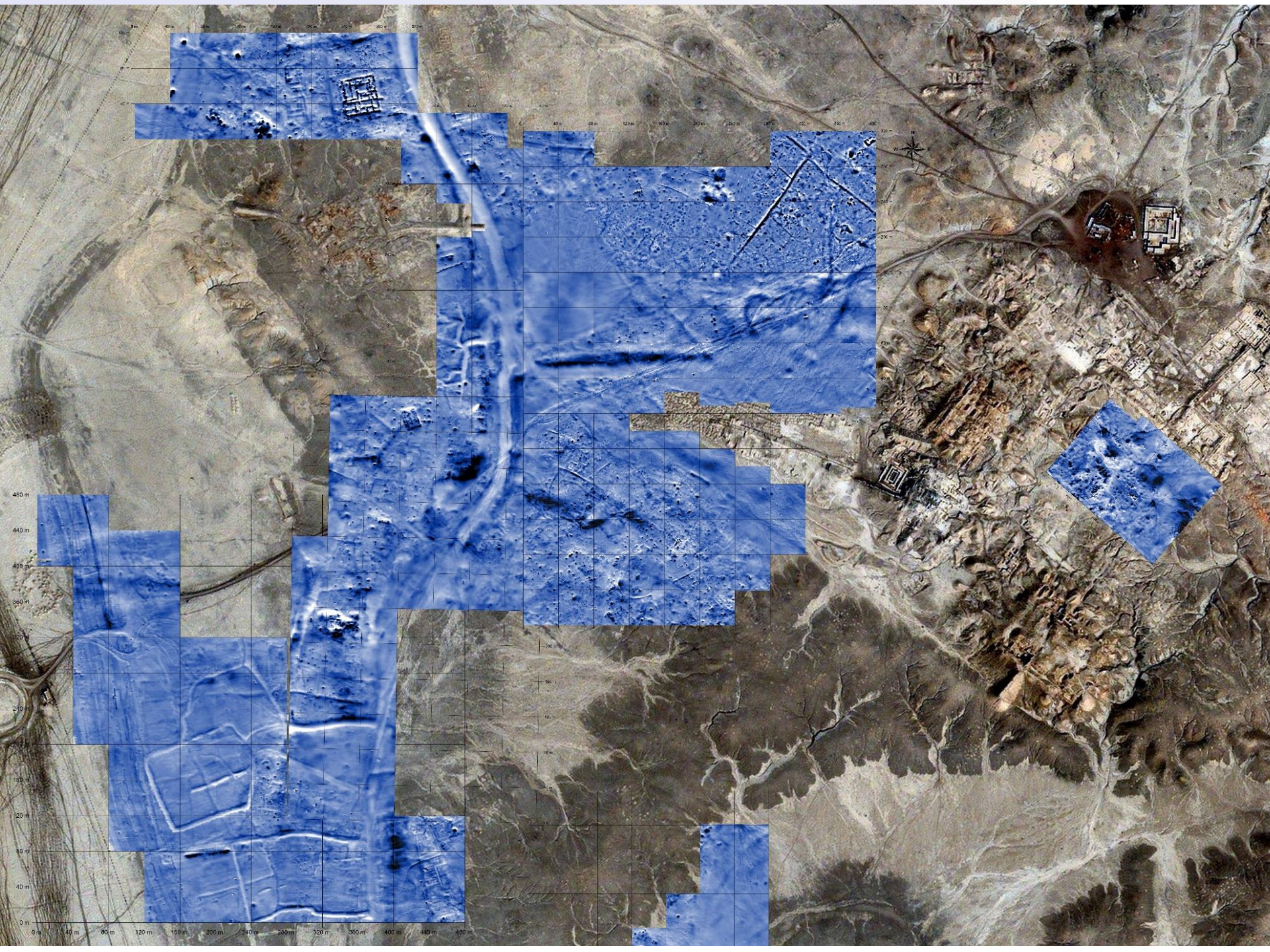


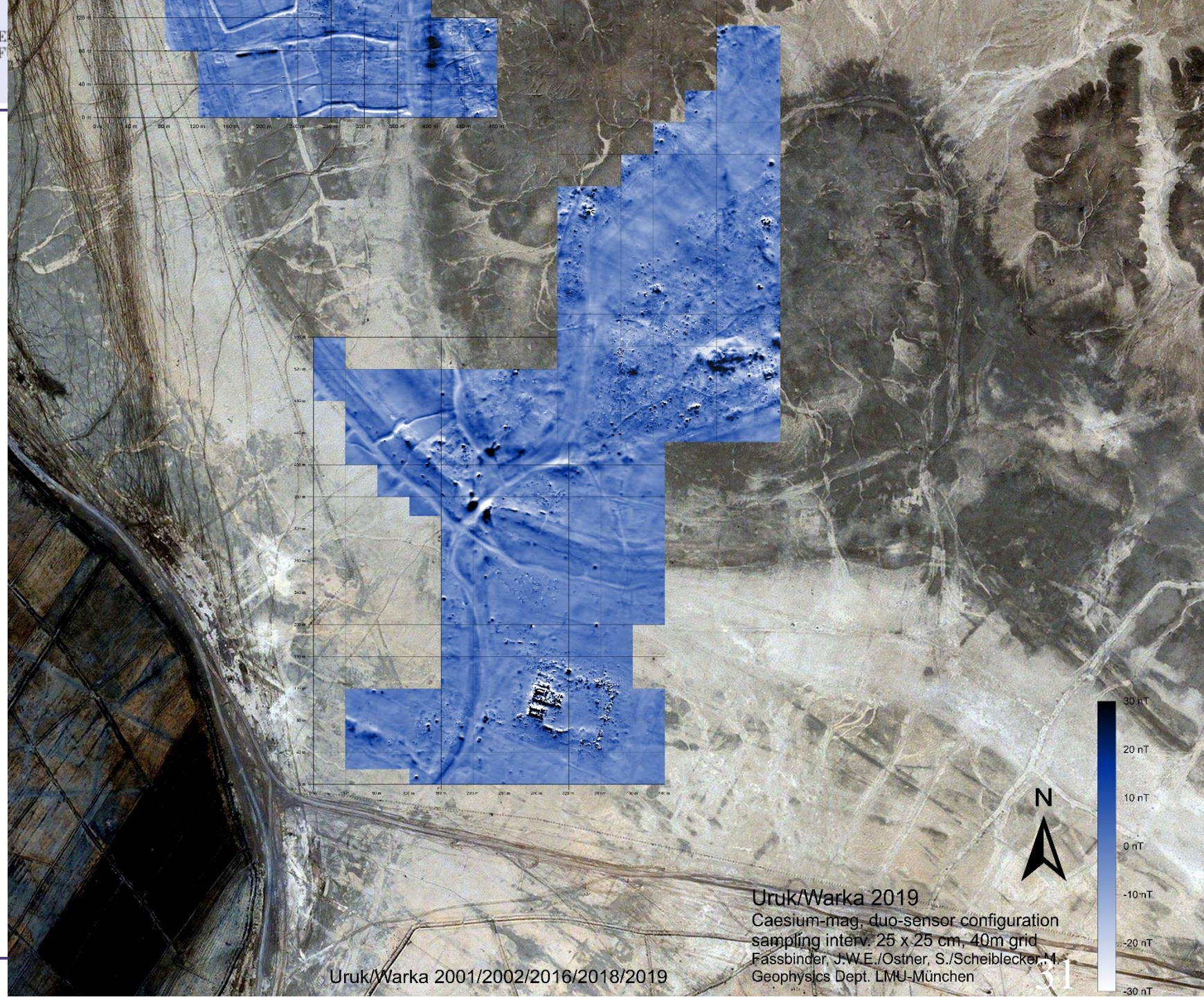
Uruk-Warka



Uruk-Warka 2019
Capslum/inter-dip-sensor configuration
sampling interval: 25 x 25 cm, 40m grid
Pfeßhöfer, S.W.E./Oester, S./Scheiblock, M.
Geophysics Dept. LMU-München

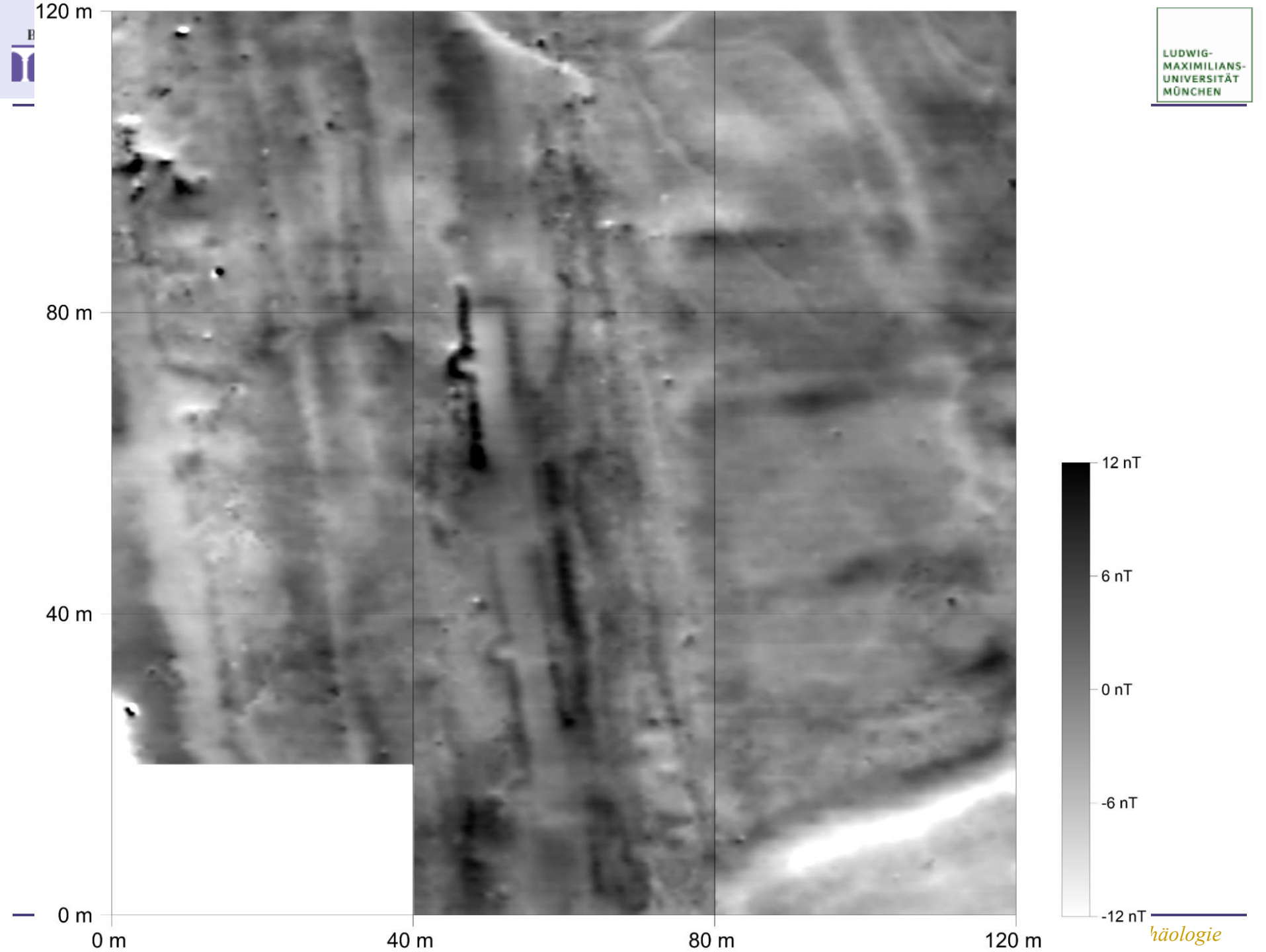
Uruk-Warka 2001/2002/2016/2018/2019

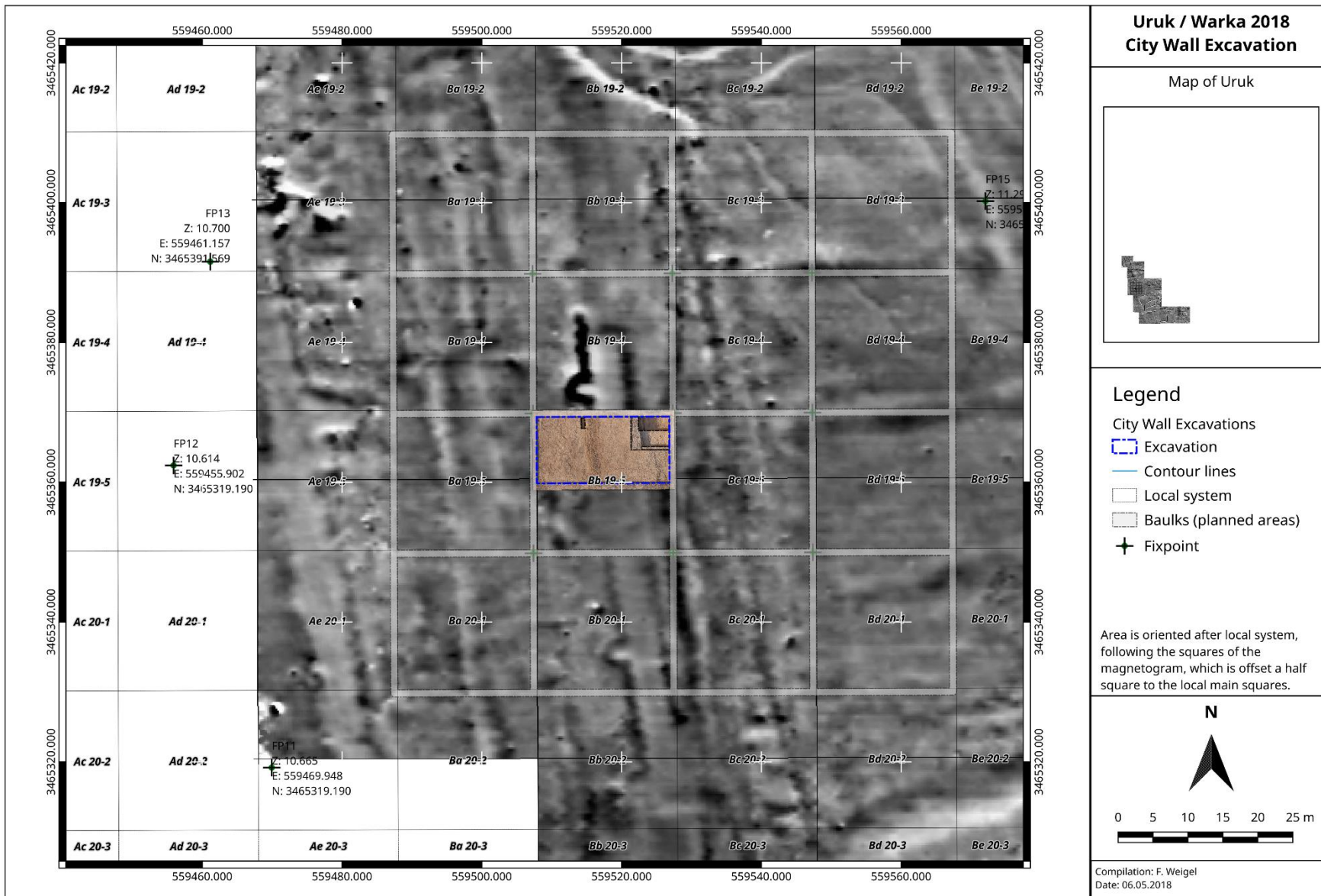




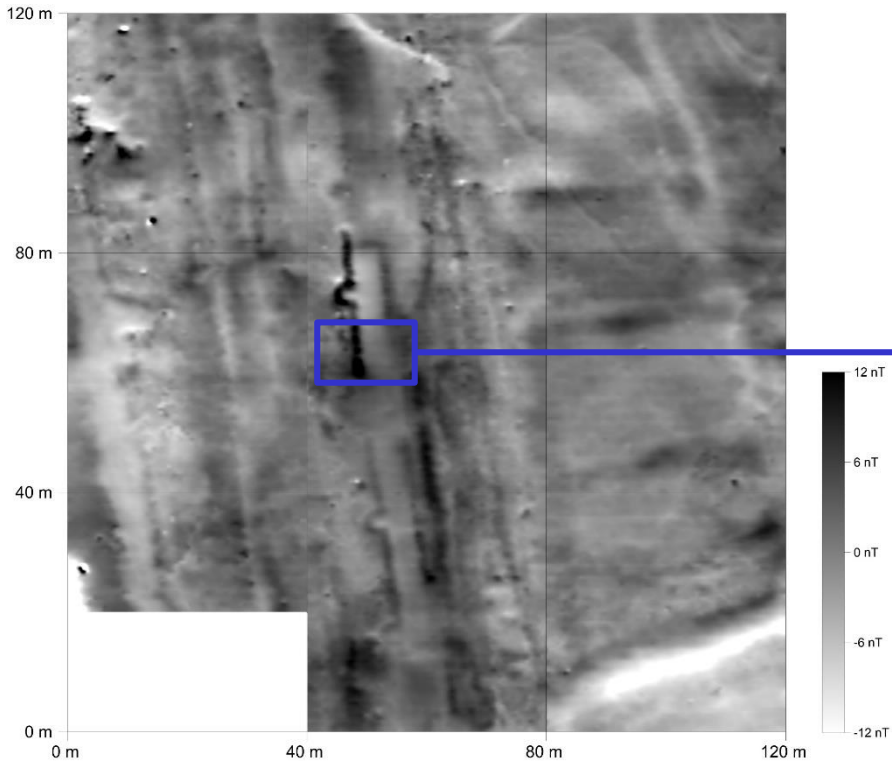
Uruk/Warka 2001/2002/2016/2018/2019

Uruk/Warka 2019
Caesium-mag, duo-sensor configuration
sampling interv. 25 x 25 cm, 40m grid
Fassbinder, J.W.E./Ostner, S./Scheiblecker, M.
Geophysics Dept. LMU-München



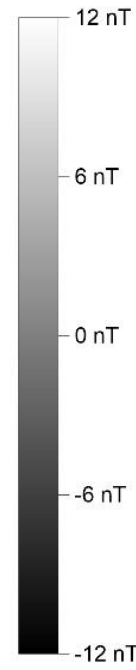
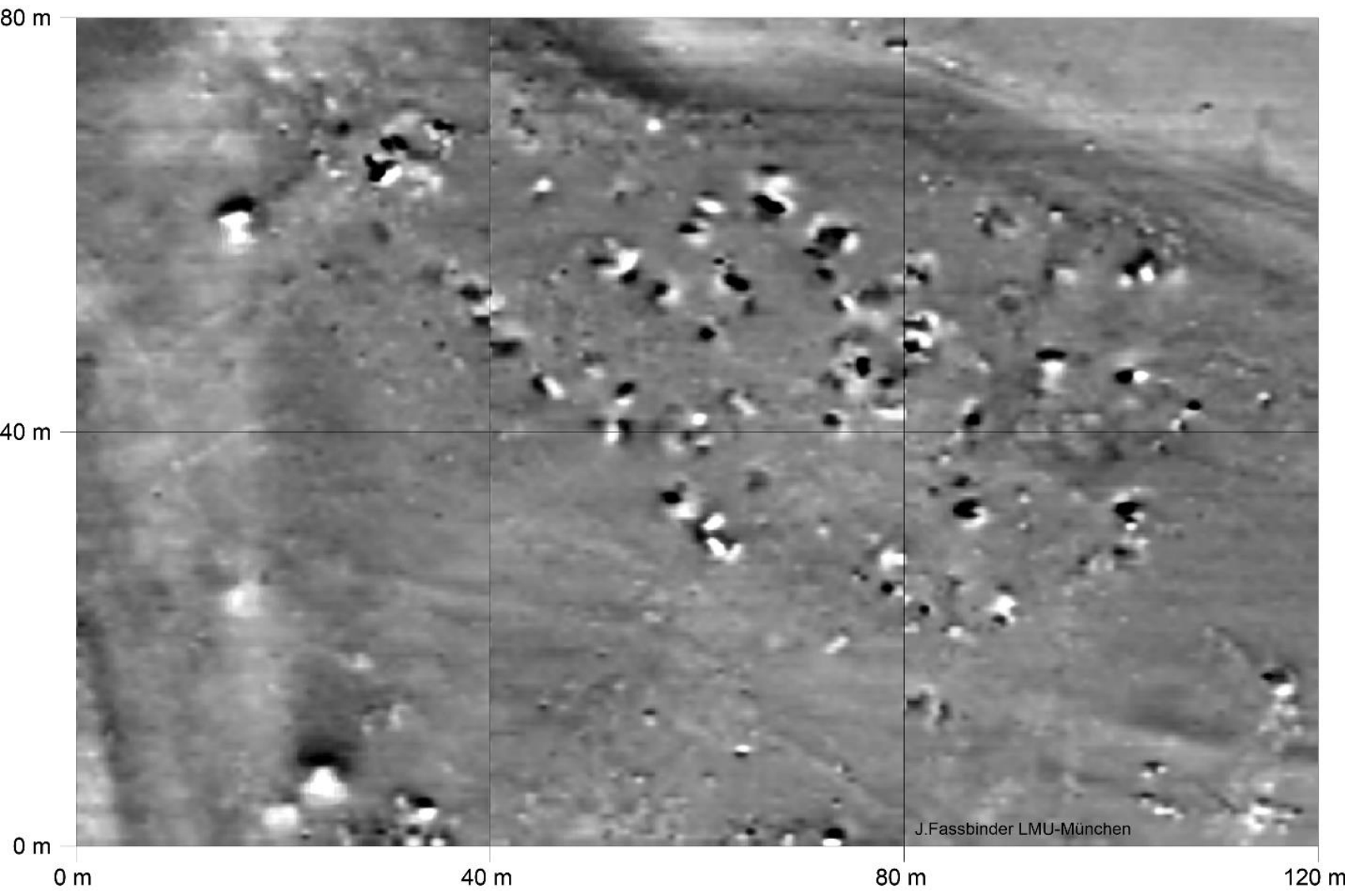


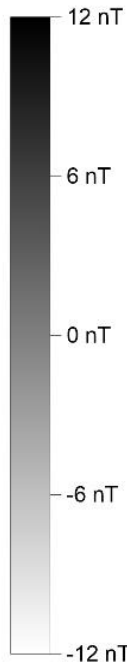
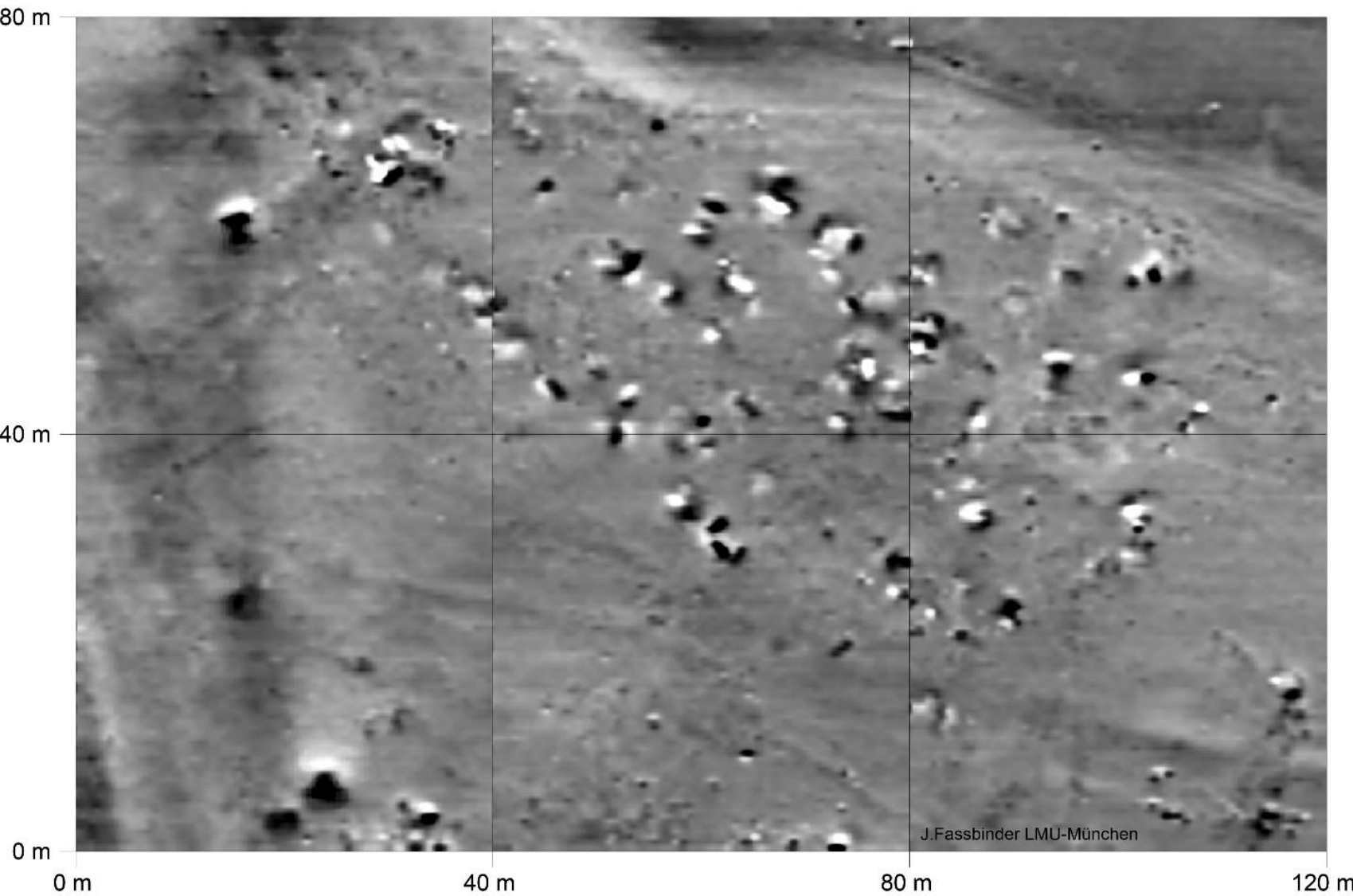
Uruk city wall



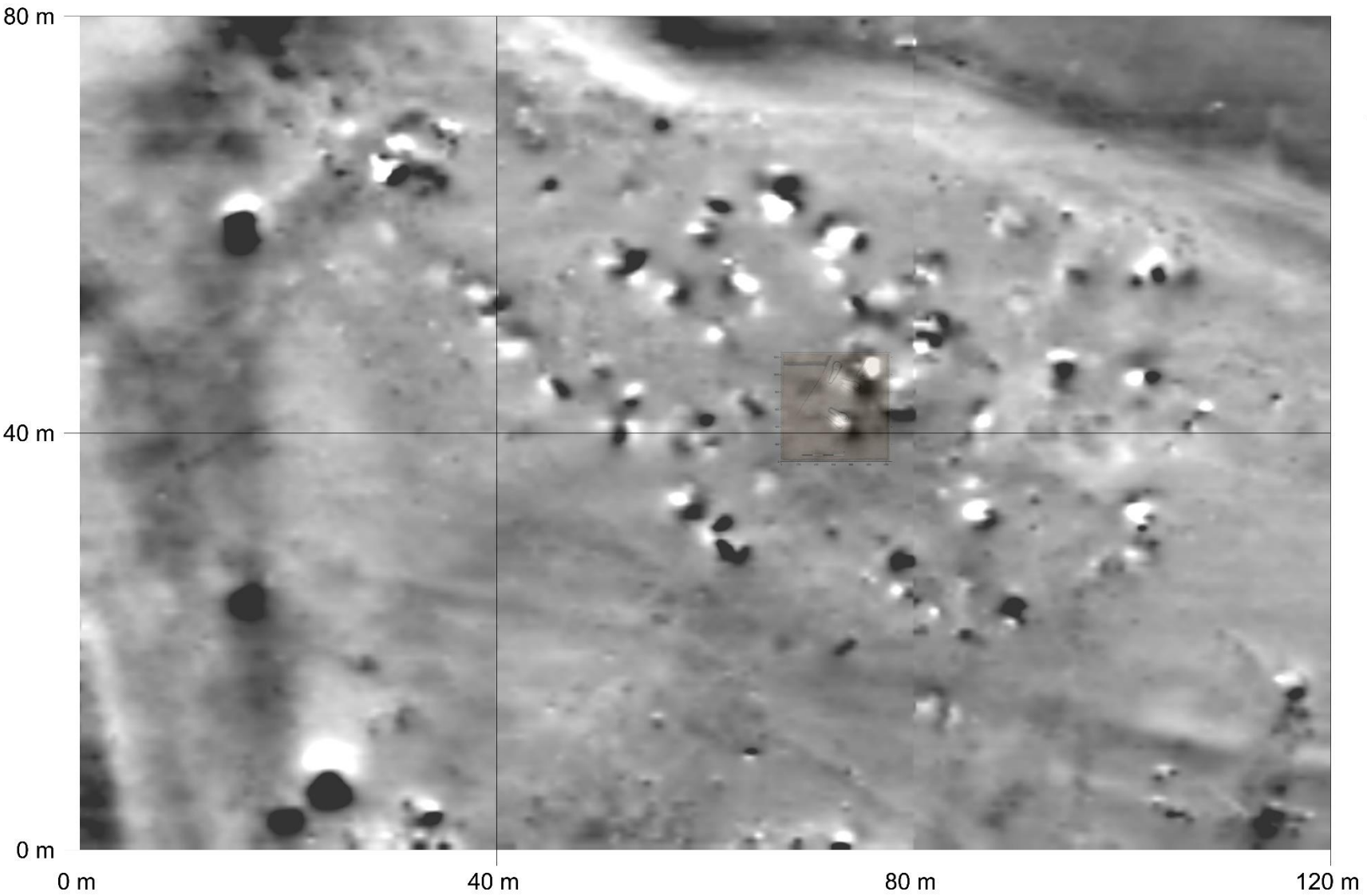
burials







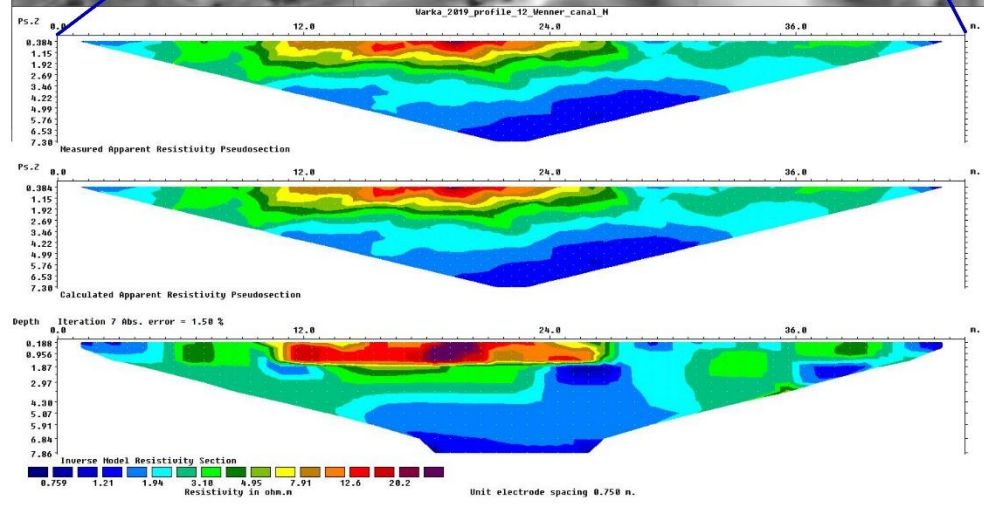
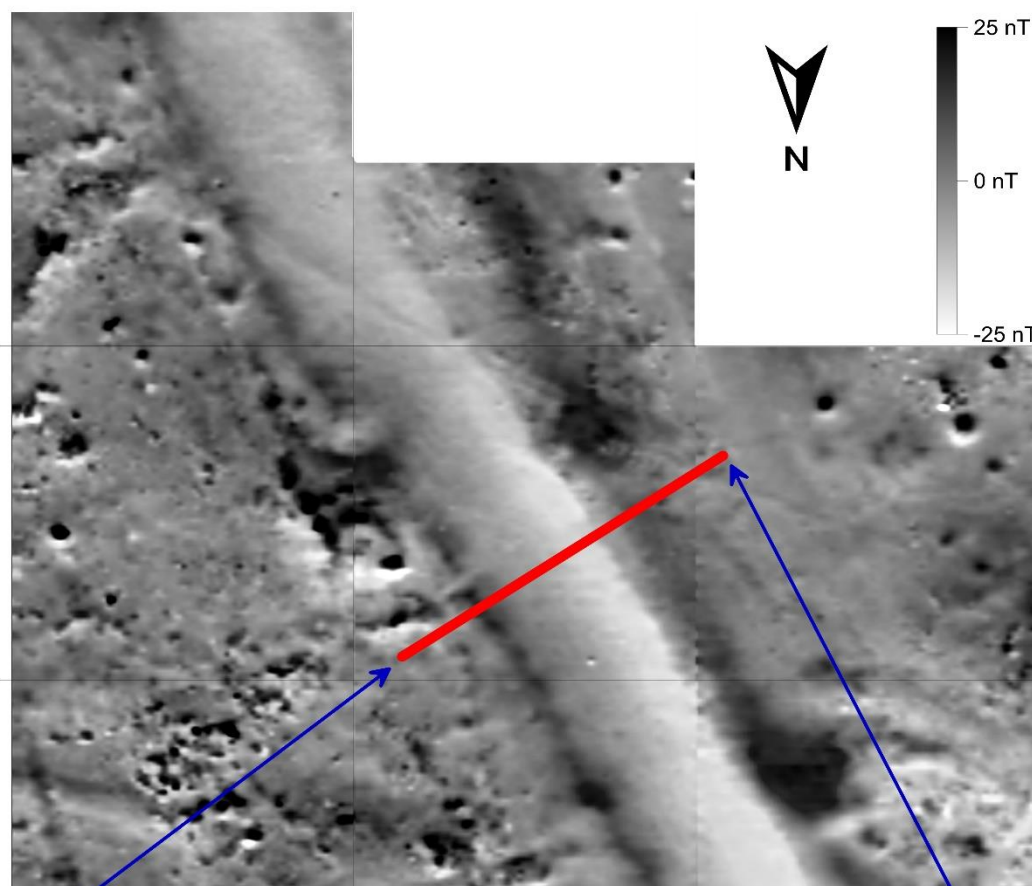




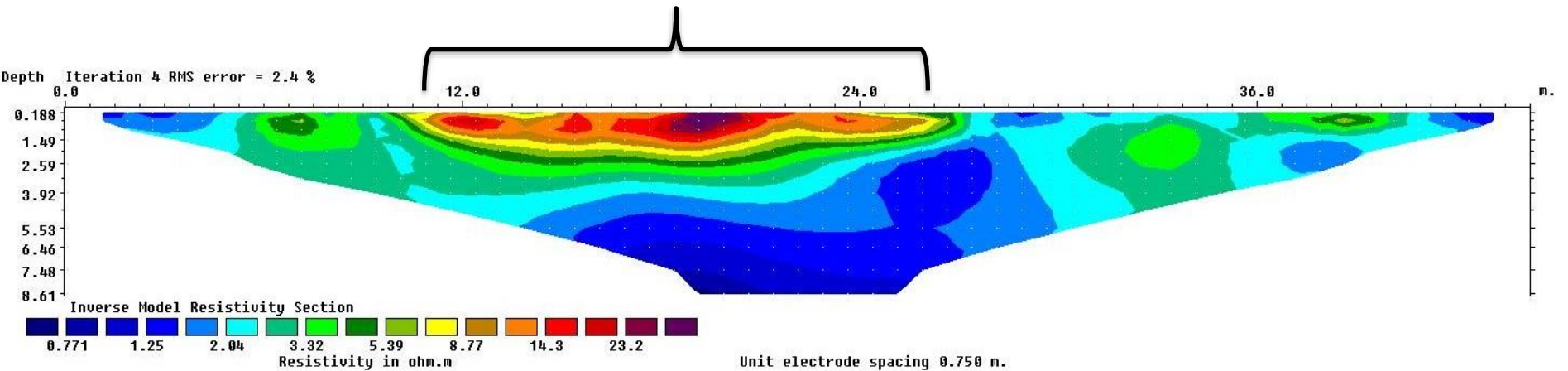
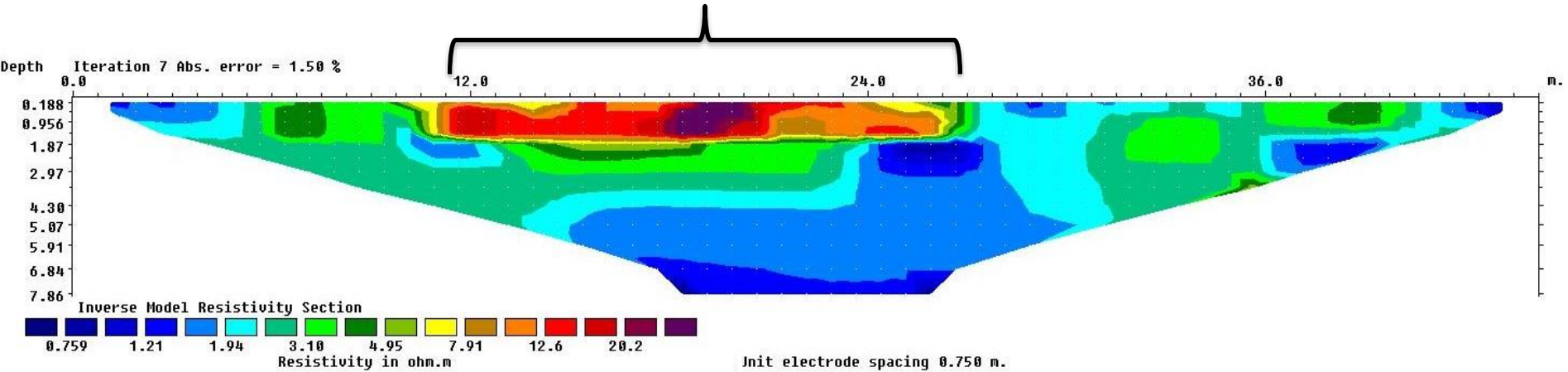
120 m

80 m

40 m



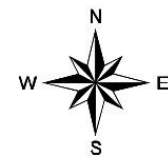
Uruk "Canal Grande"



Uruk-Warka

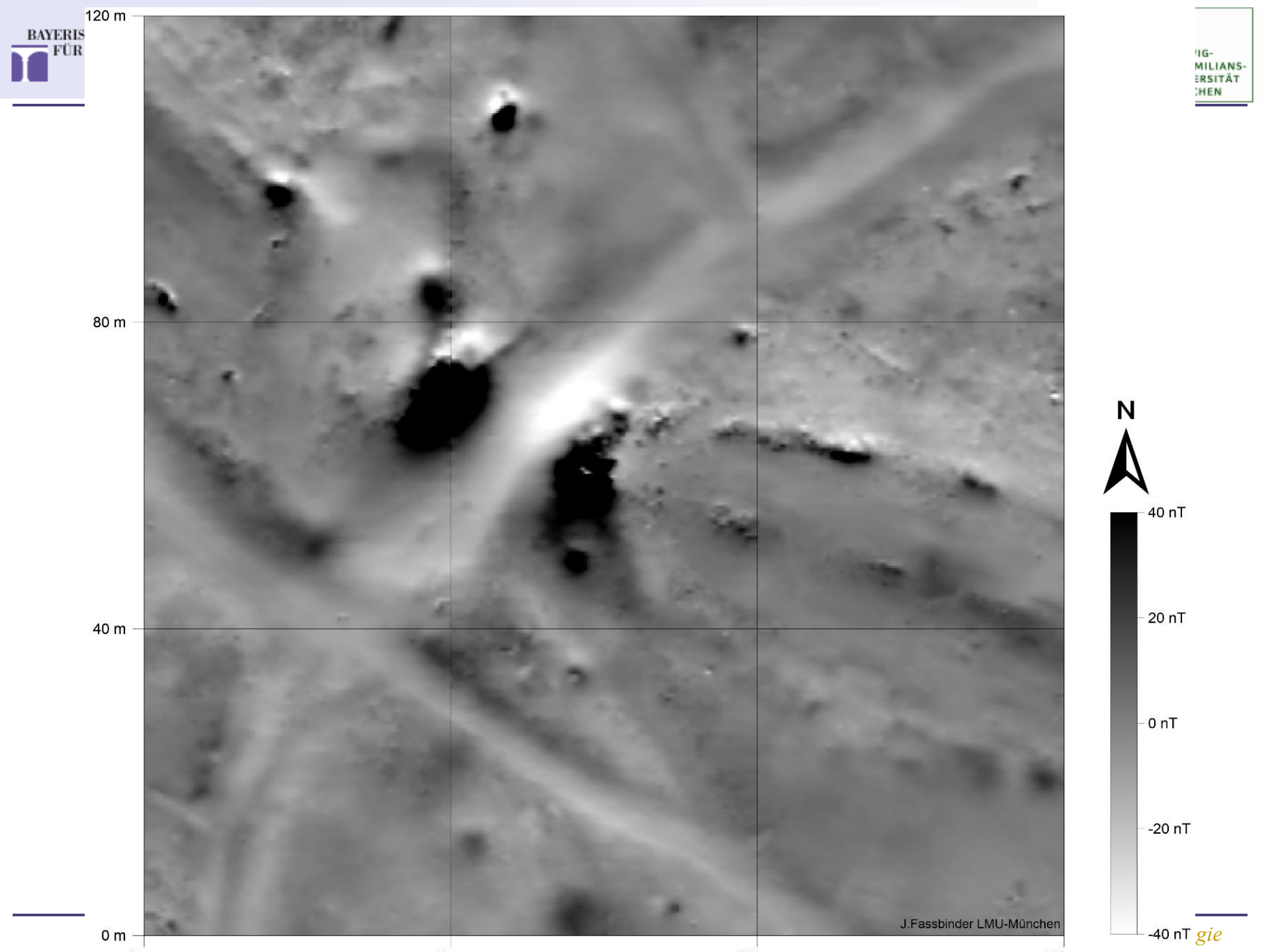


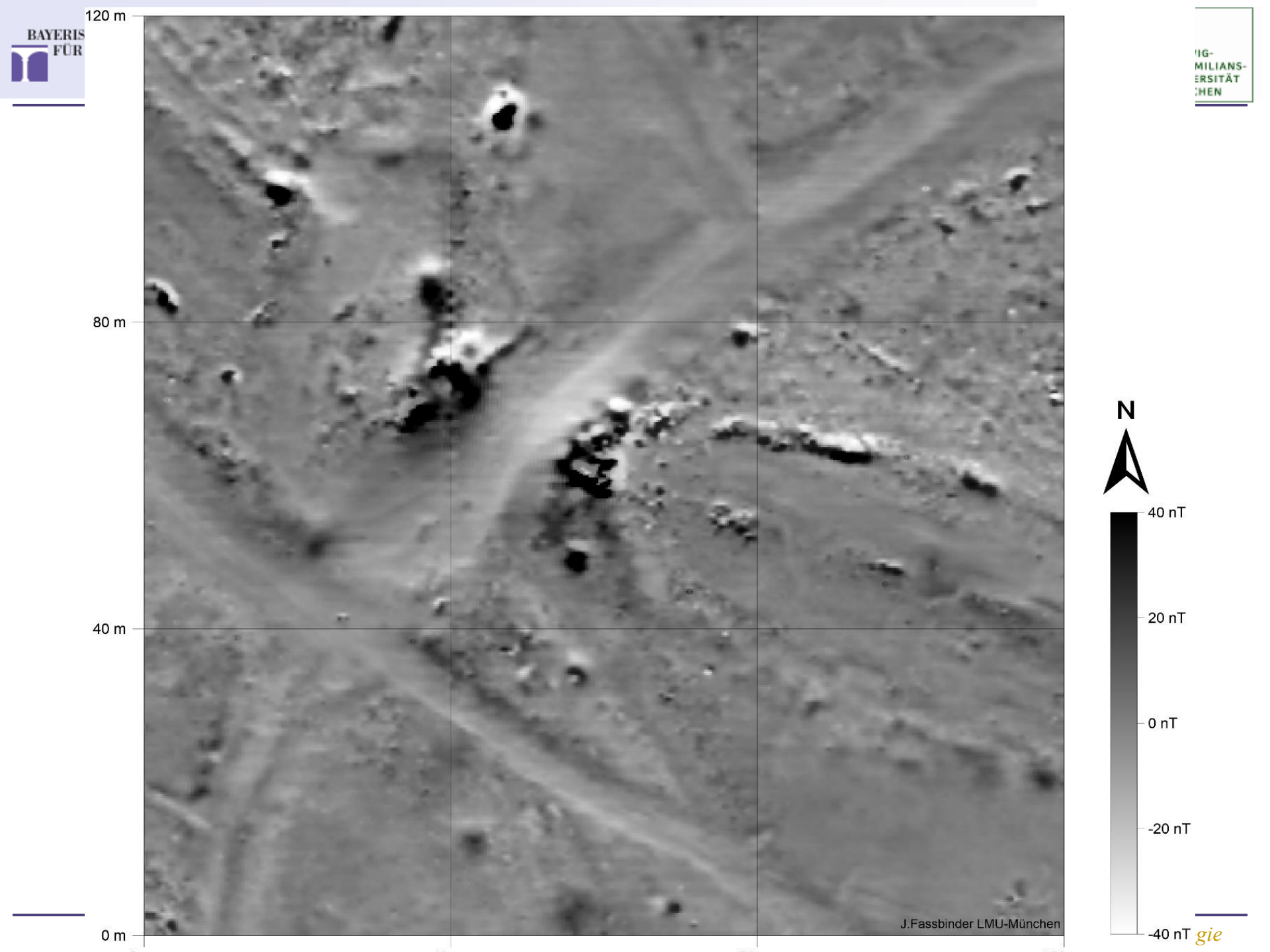


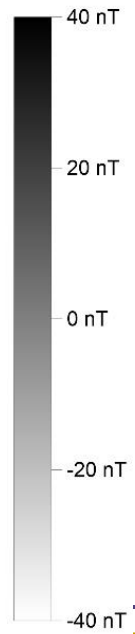
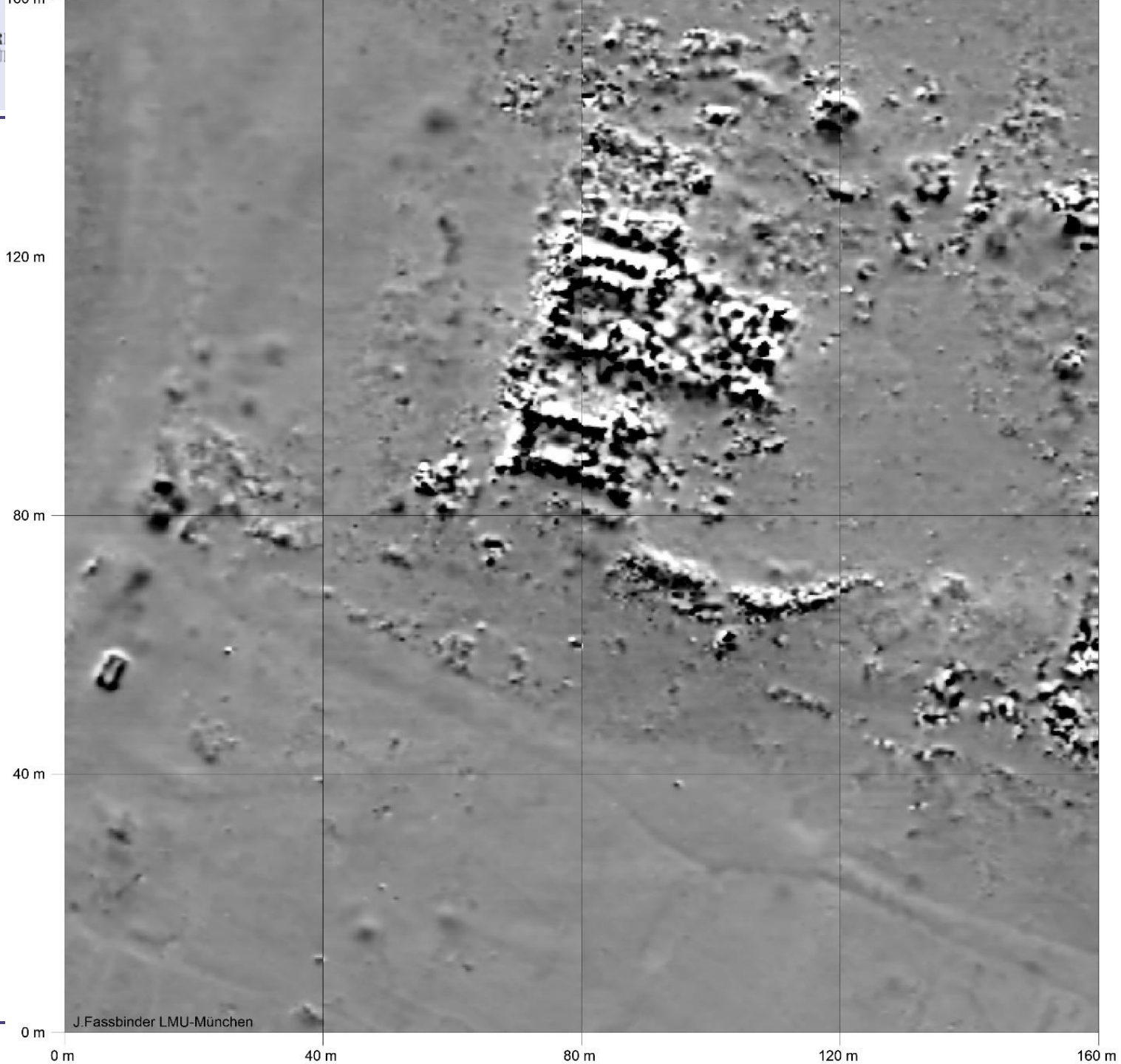


Uruk 2002b

J. Fassbinder, LMU-München







J.Fassbinder LMU-München





Uruk-Warka



Uruk-Wark



Thank you for your attention



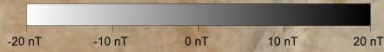
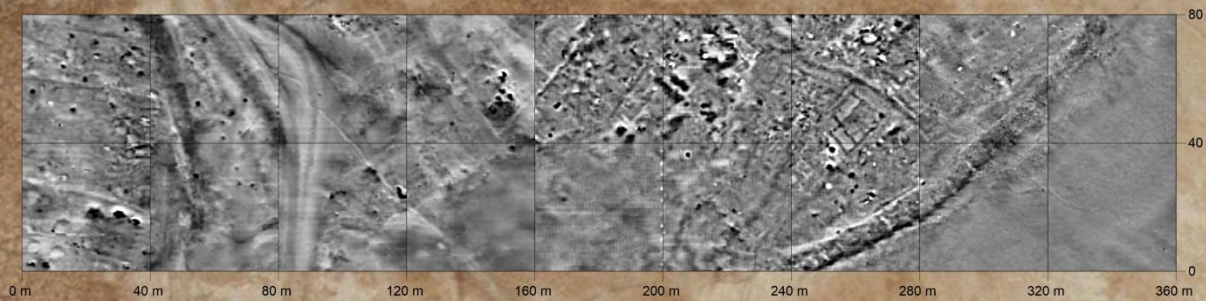


1/5/2018

706 m

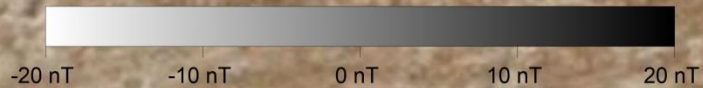
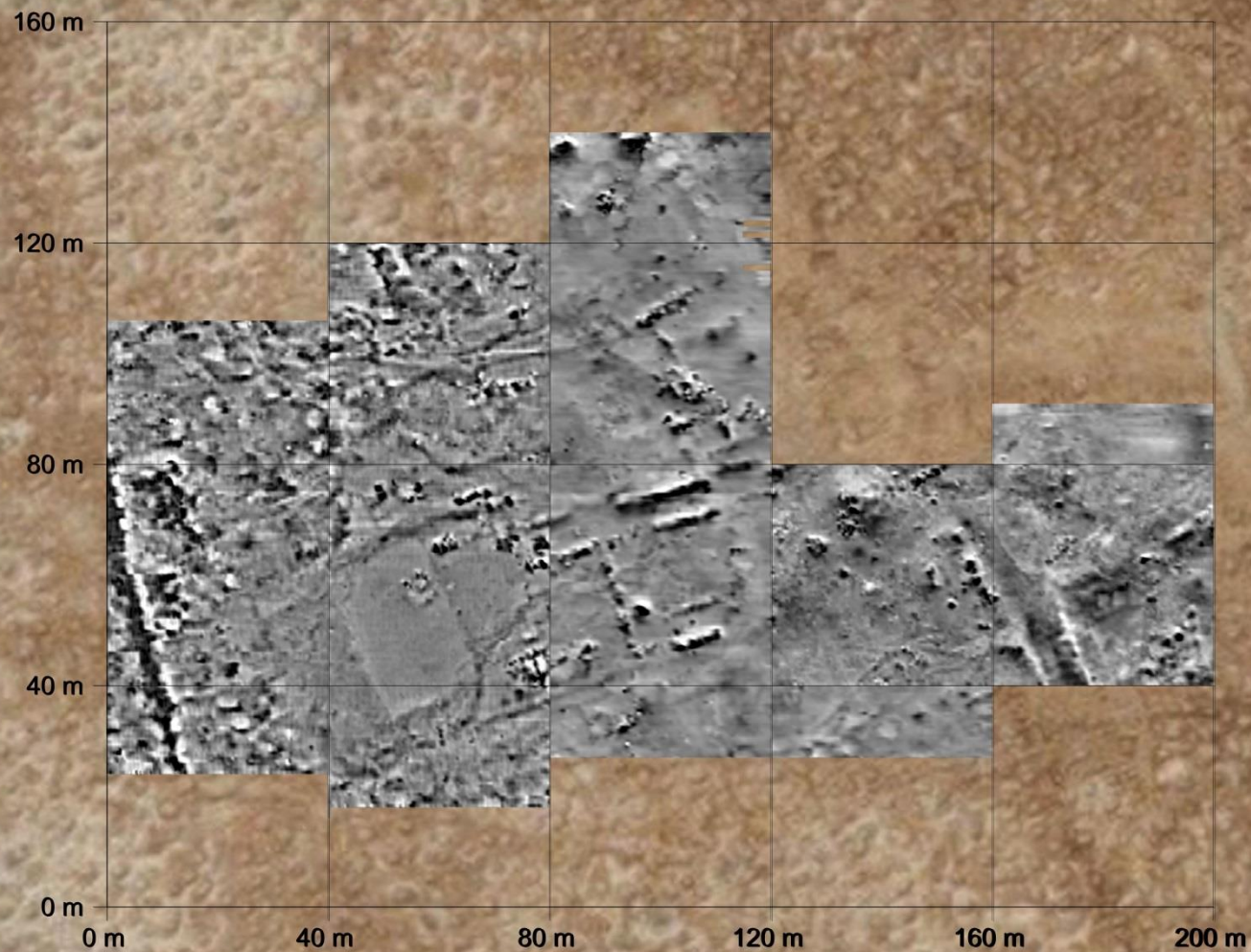
Image © 2018 DigitalGlobe

Fara 2018





Fara 2018



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