



UNIVERSITÀ  
DEGLI STUDI  
FIRENZE

**DST**

DIPARTIMENTO DI  
SCIENZE DELLA TERRA  
CENTRO DI COMPETENZA DEL  
SERVIZIO NAZIONALE DELLA  
PROTEZIONE CIVILE

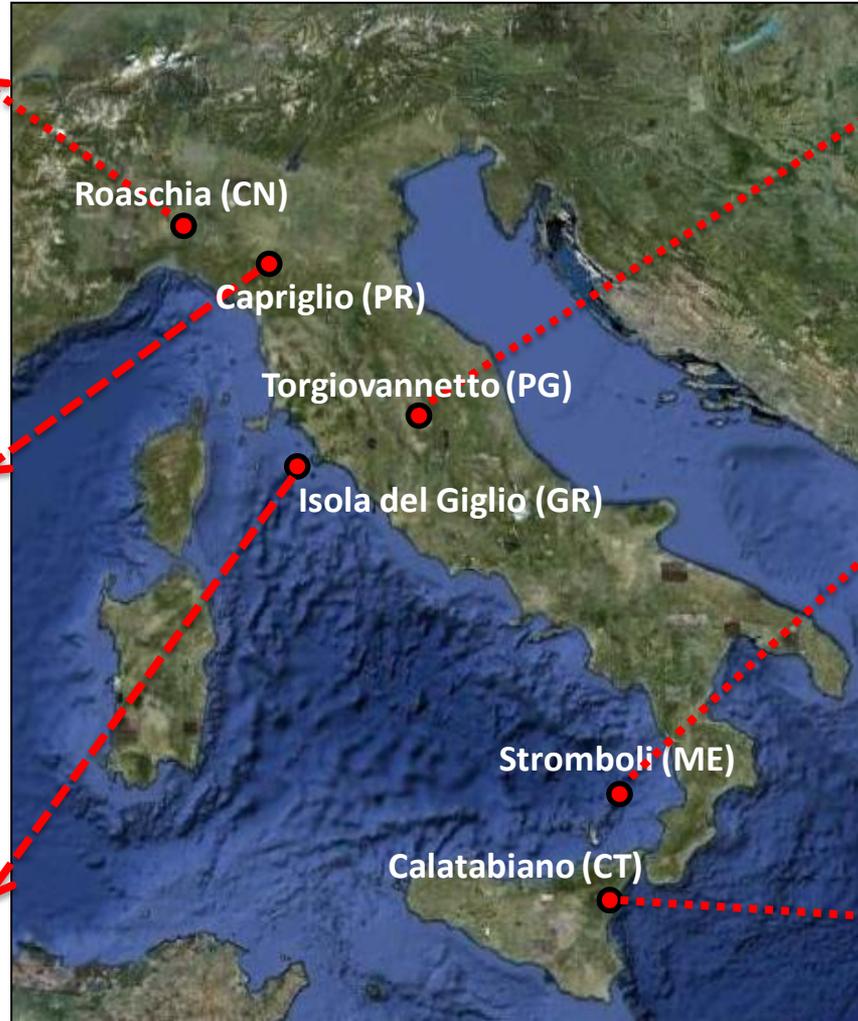


PROTEZIONE CIVILE  
Presidenza del Consiglio dei Ministri  
Dipartimento della Protezione Civile

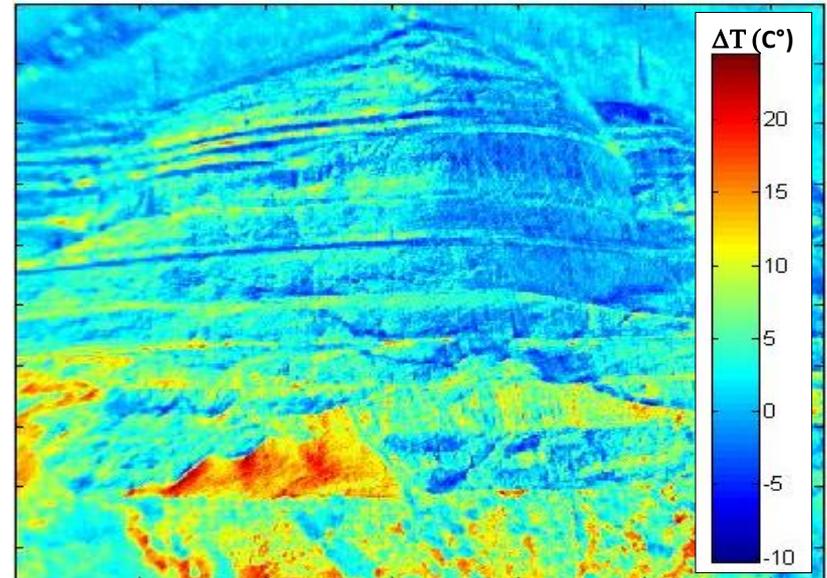
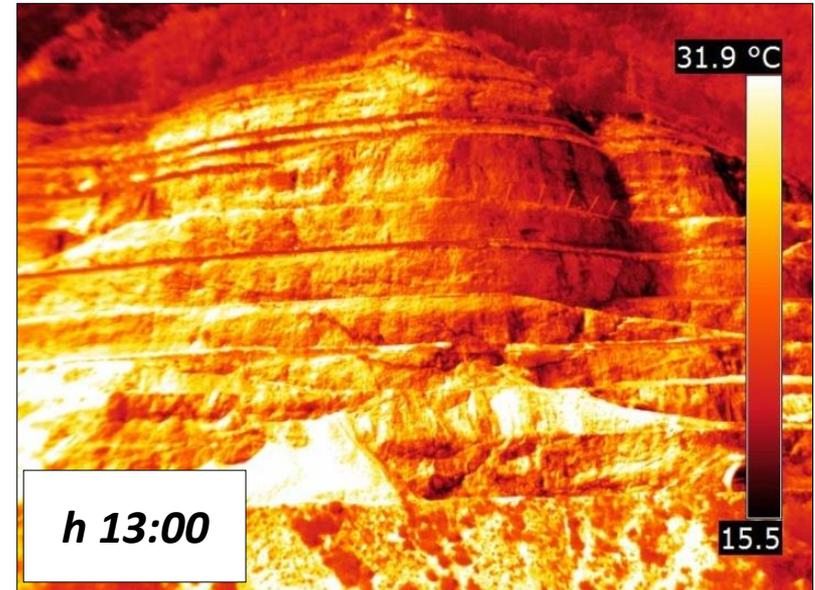
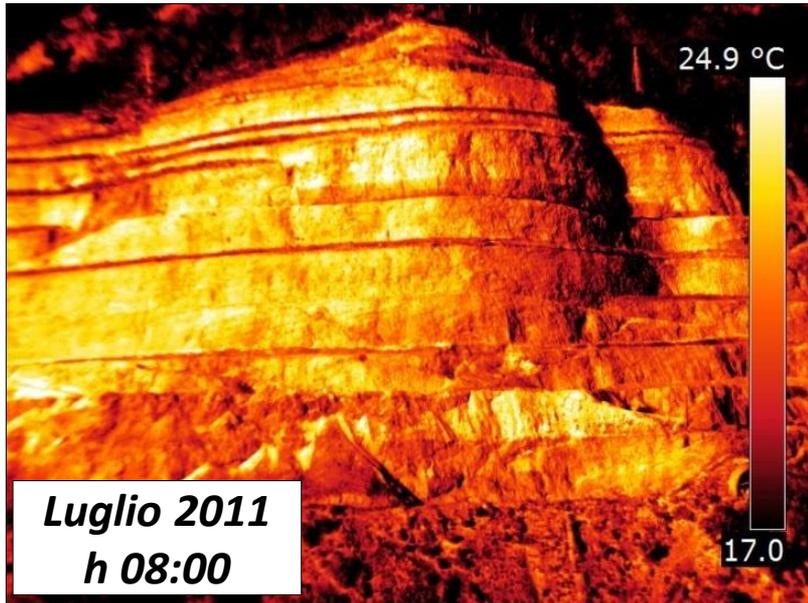
# La termografia ad infrarossi (IRT) applicata ai rischi naturali ed antropici: casi di studio del DST-UNIFI

Nicola Casagli e Filippo Catani

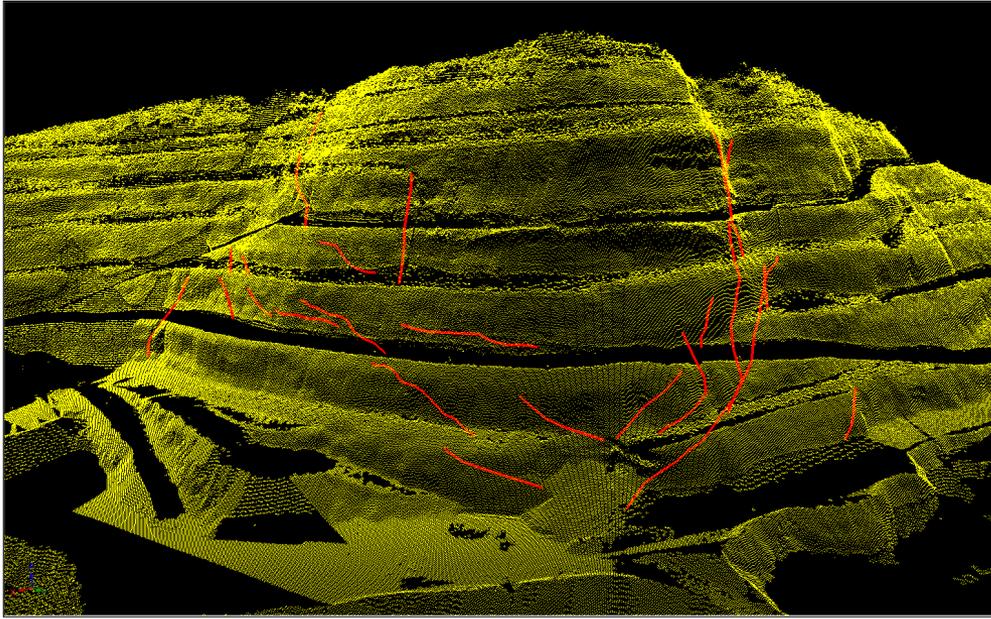
# Aree di studio



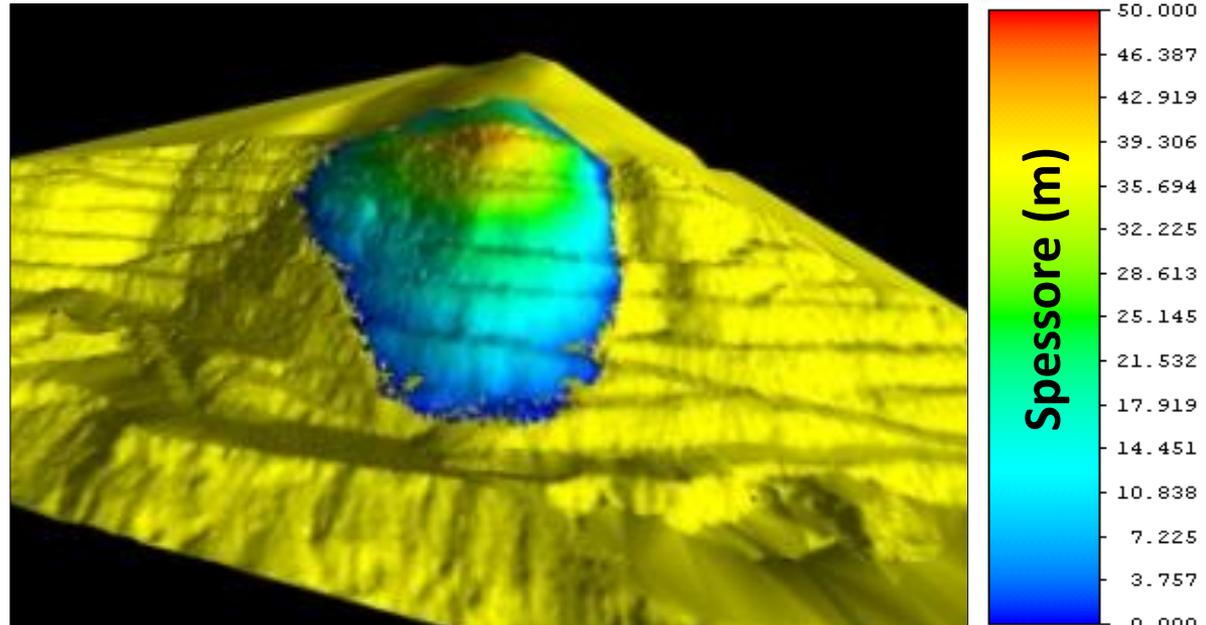
# Mappatura fratture in versanti di cava in roccia: Roaschia (CN)



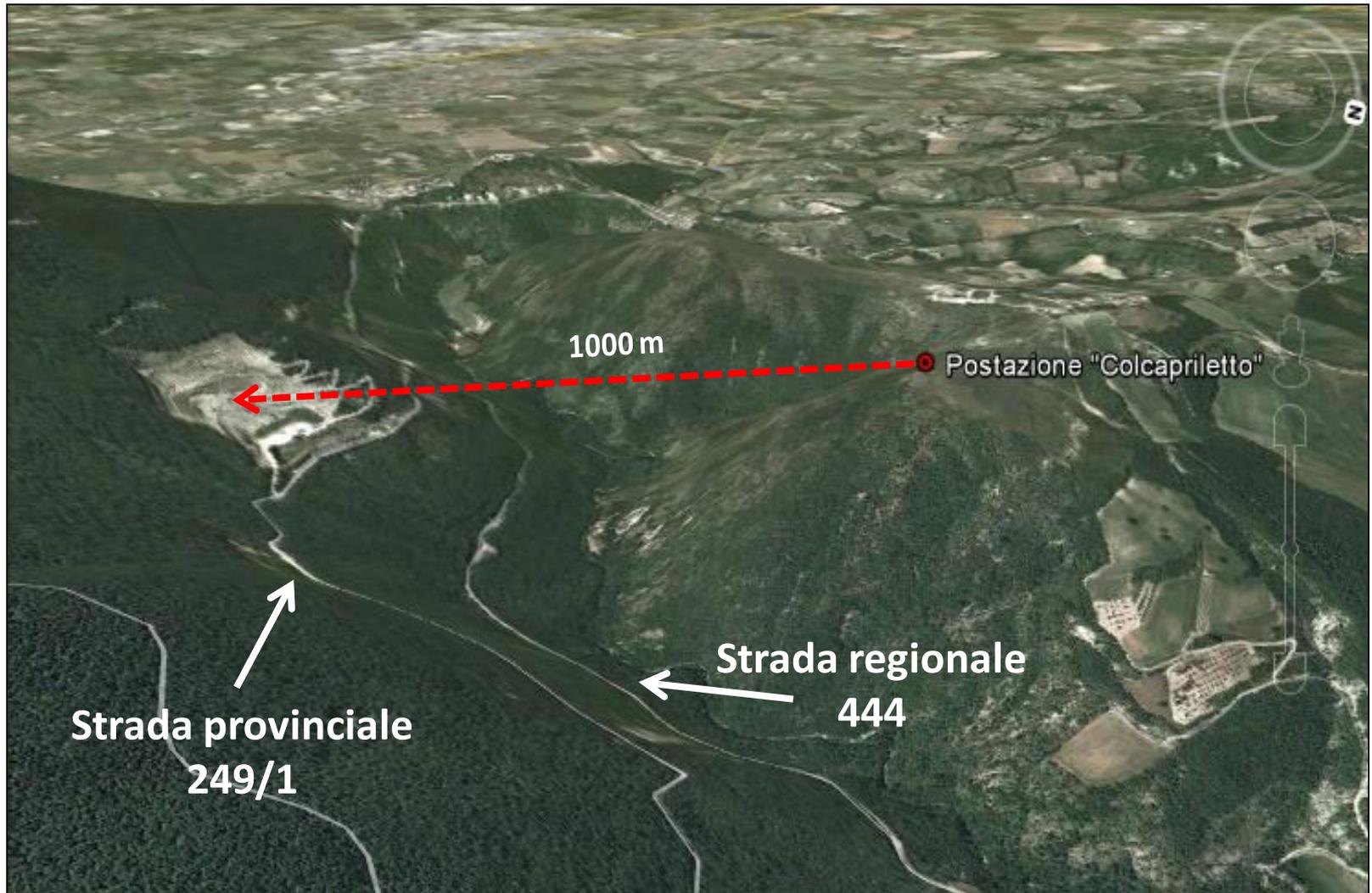
# Confronto IRT-TLS: calcolo dei volumi



**Volume cuneo  
instabile  
340000 m<sup>3</sup>**

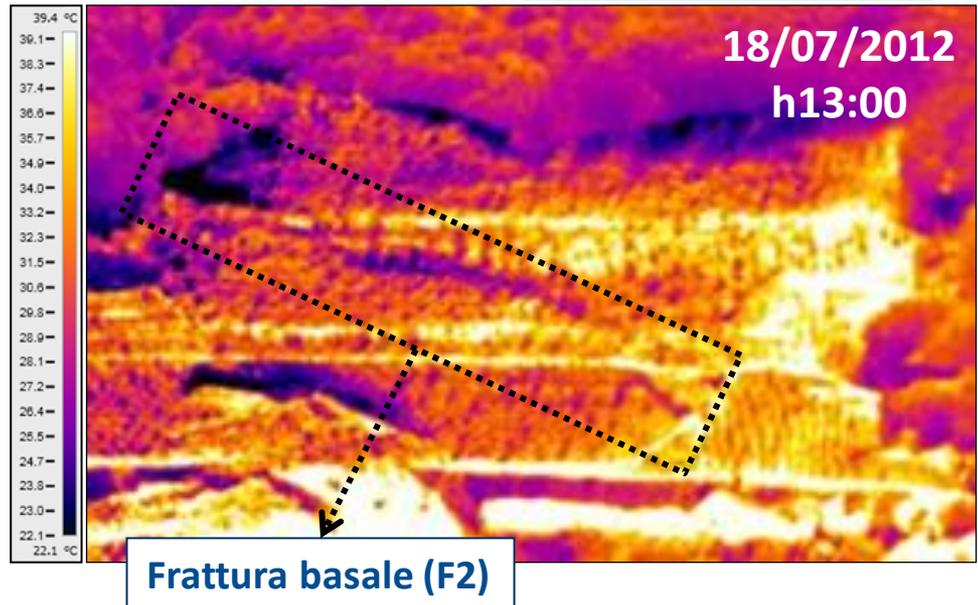
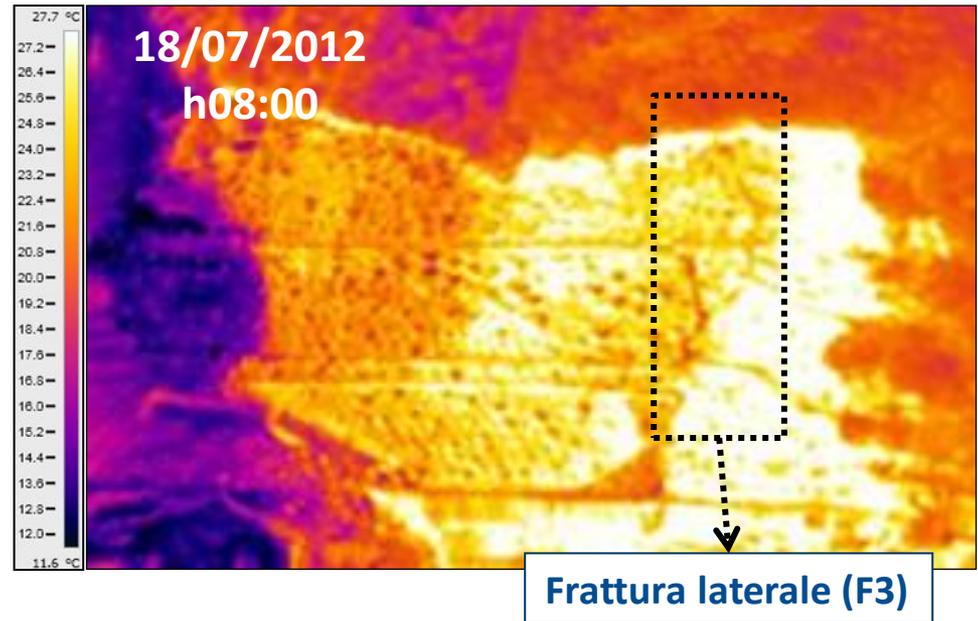


# Mappatura fratture in versanti di cava in roccia: Torgiovannetto (PG)

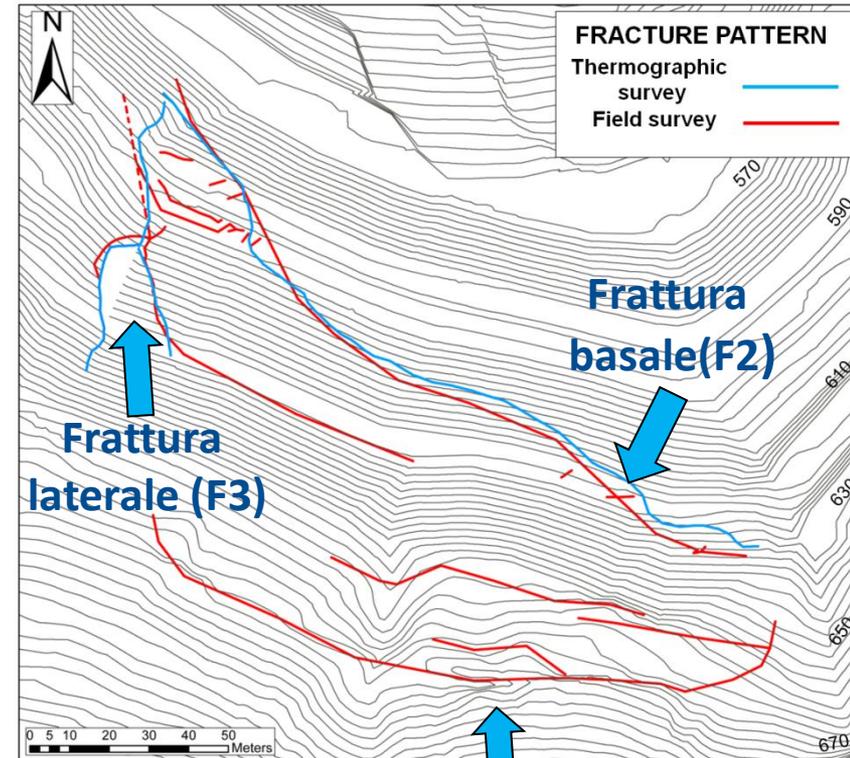
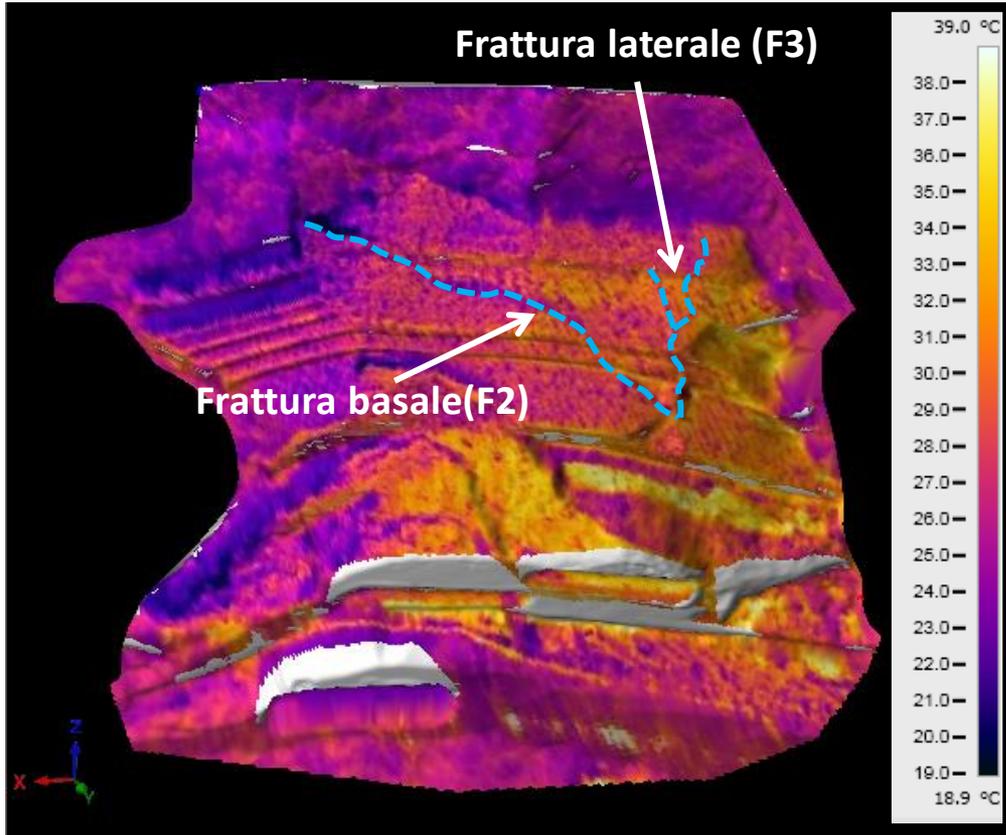


# Rilievo multitemporale

Area cuneo instabile

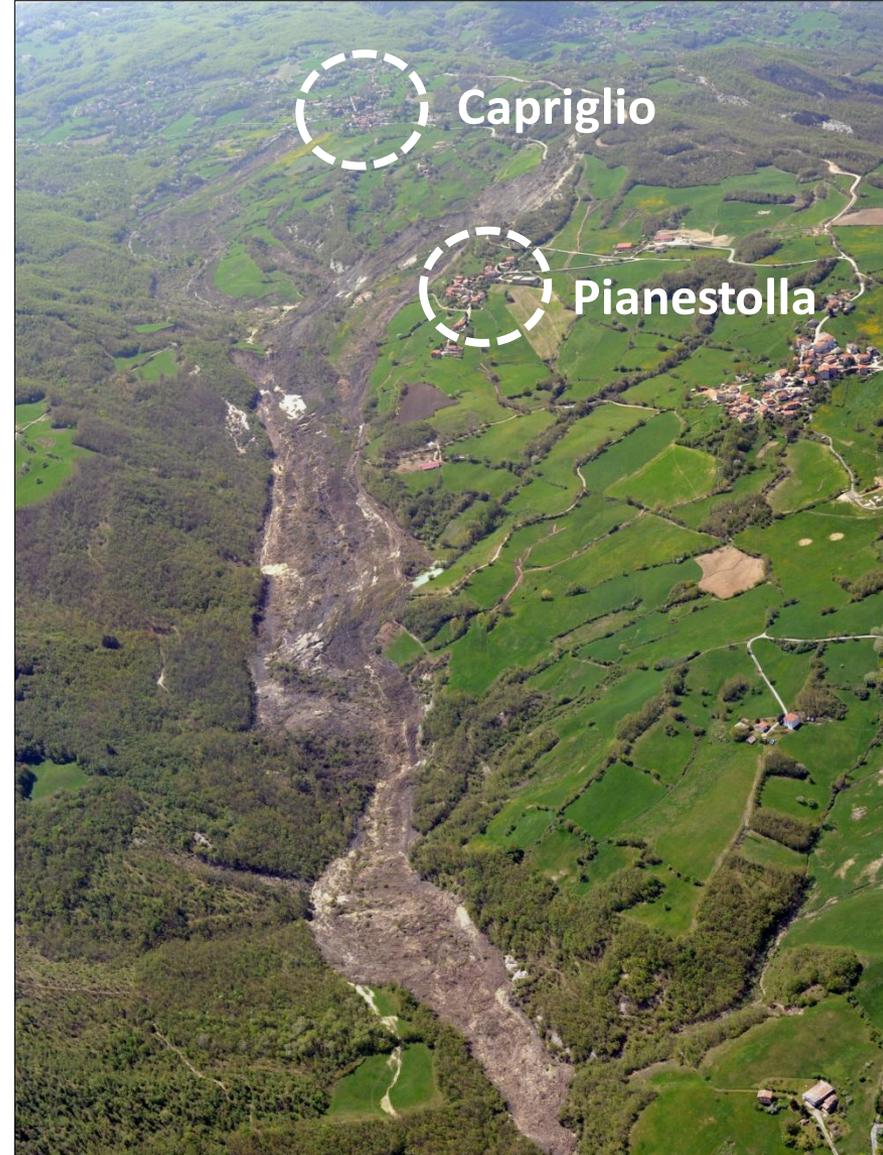


# Integrazione TLS-IRT: Mappa di temperatura superficiale 3D

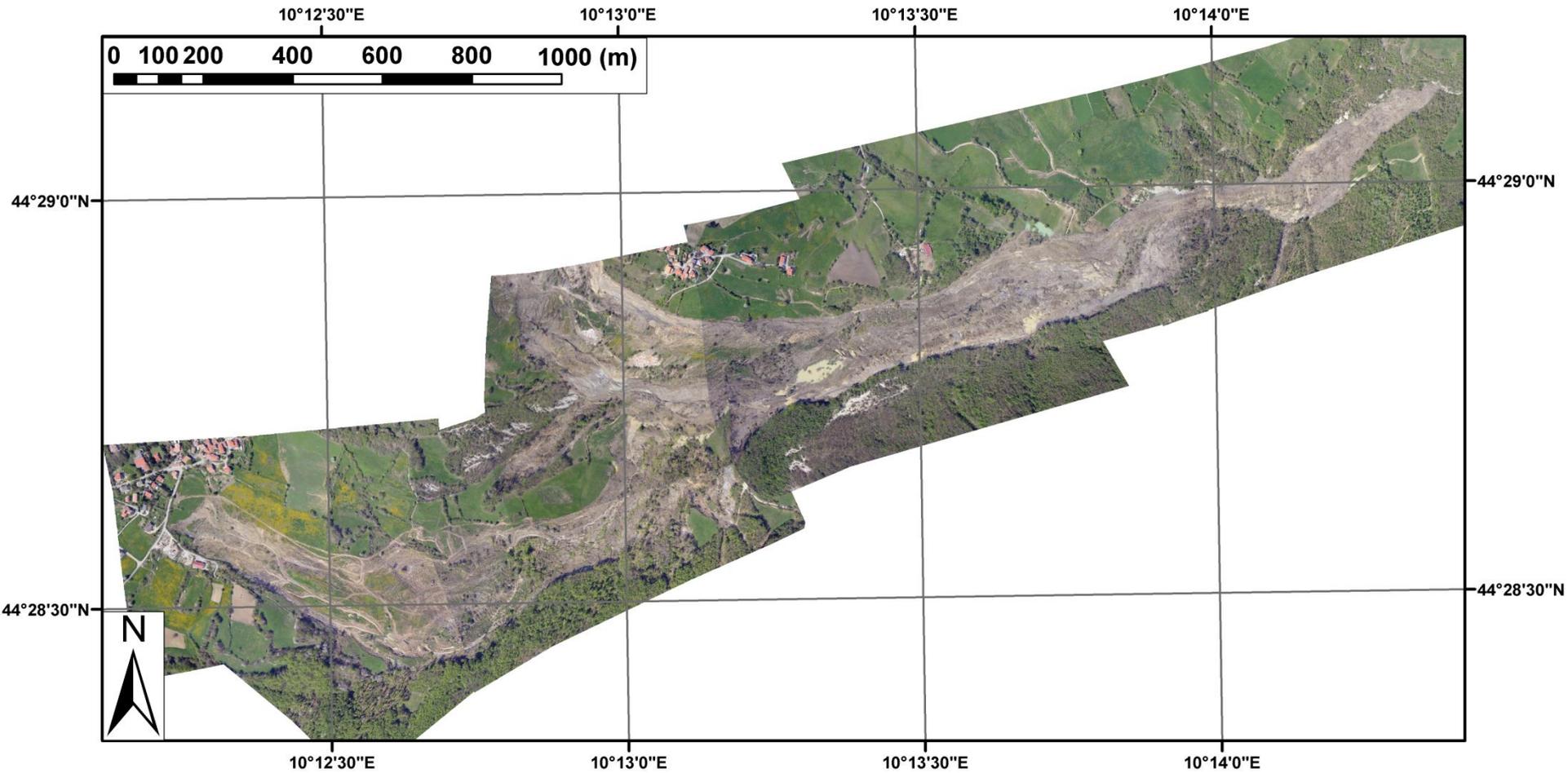


Frattura posteriore (F1; non visibile)

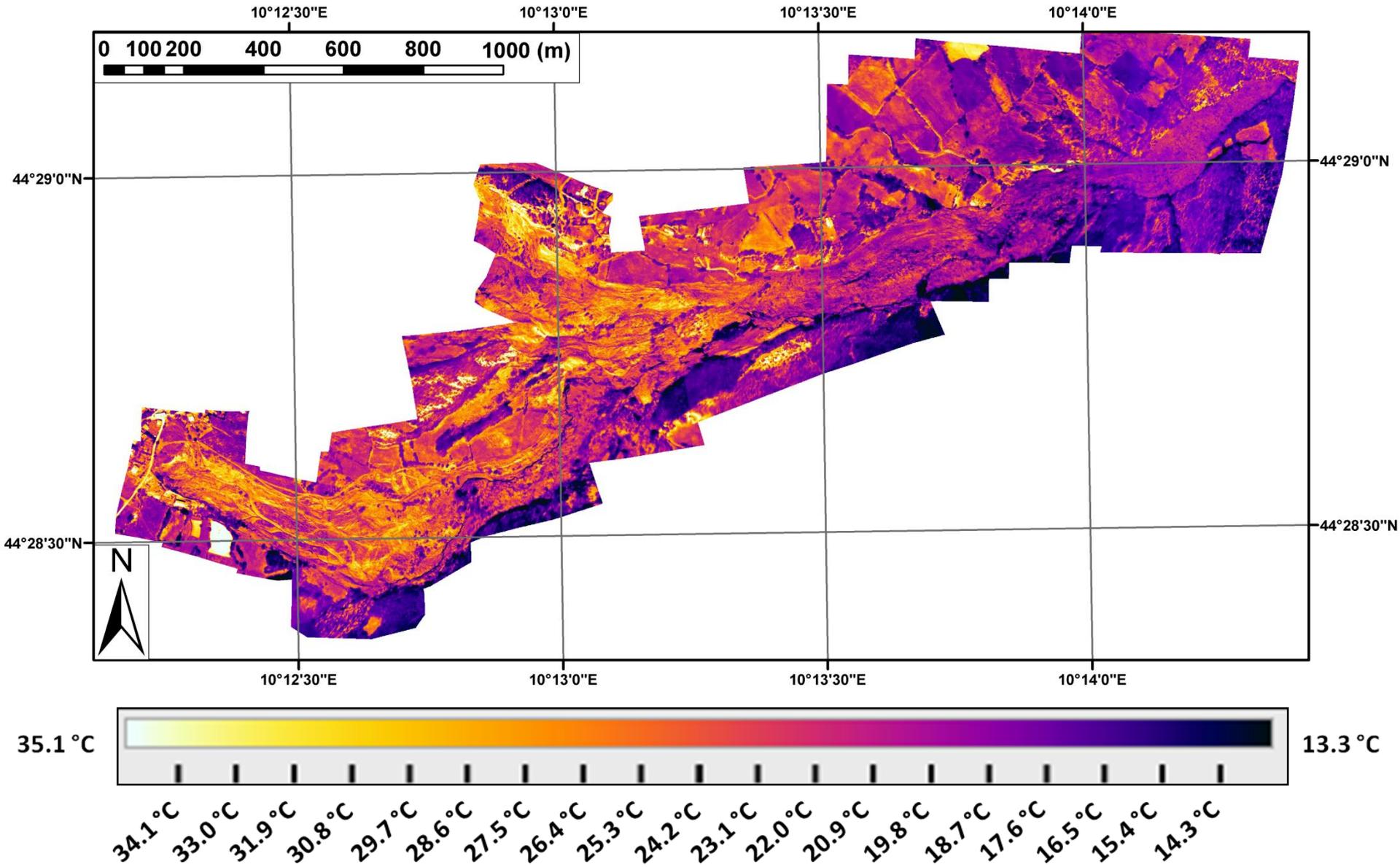
# Gestione emergenza frane 1: la frana di Capriglio (PR) 9/4/2013



# Rilievo aero-fotogrammetrico



# Rilievo aero-termografico



# Mappatura zone di ristagno-reticolo idrografico

