



→ **Project INGV-DPC S5**

“Test-sites” per il monitoraggio multidisciplinare di dettaglio”

Workshop 4 Luglio, 2008 INGV, via Nizza, 128 00198 Roma

Task 1. Test site “Alto-Tiberina Fault”**-> WP1.4 Upper crust structure and tectonic evolution of the ATF**

Resp. Francesco Mirabella

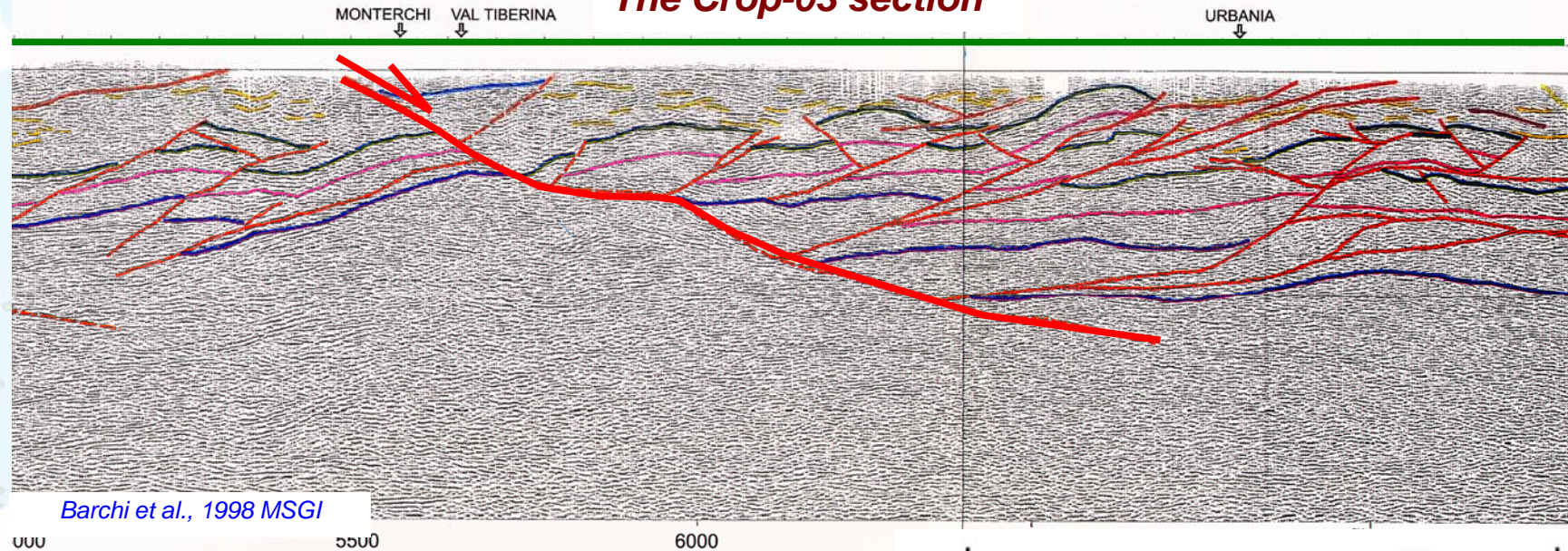


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Obiettivi del WP 1.4

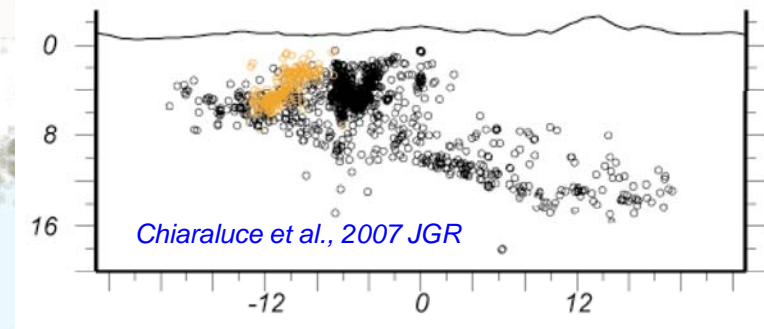
- > Reconstruction of the subsurface setting of the Tiber Valley
- > Implementation of a transversal balanced cross-section
- > Geometry at depth of the Alto-Tiberina normal fault reflector
- > Mapping of the top-of-the-basement reflector (base of the sedimentary cover)
- > Depth conversion of the mapped surfaces
- > Comparison with the results of the other WPs in order to interact on:
 - . long-term slip-rates
 - . subsidence and uplift rates
 - . short term deformations (GPS)
 - . seismology
 - . others ...

Kick-off meeting - Rome, 4 July 2008

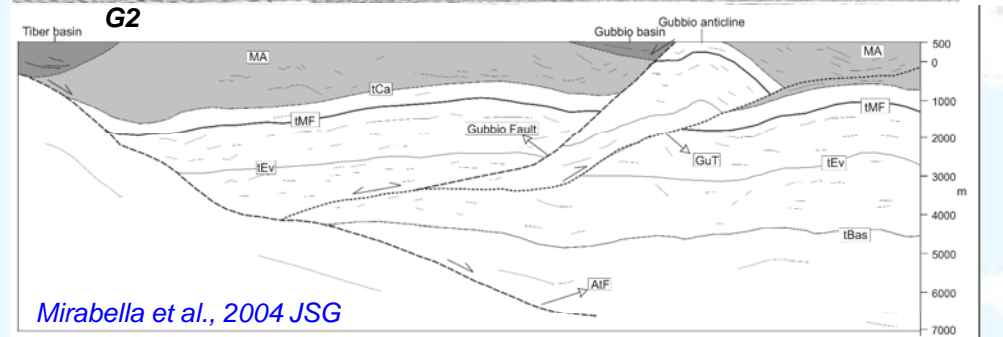
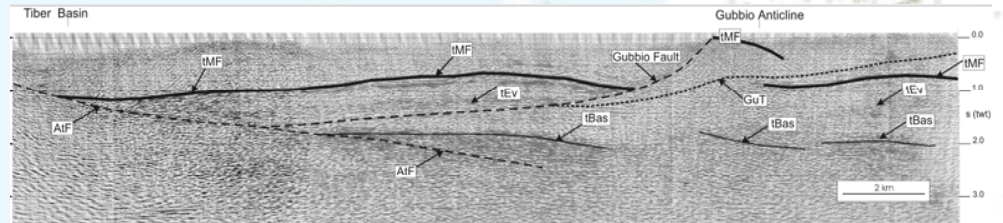
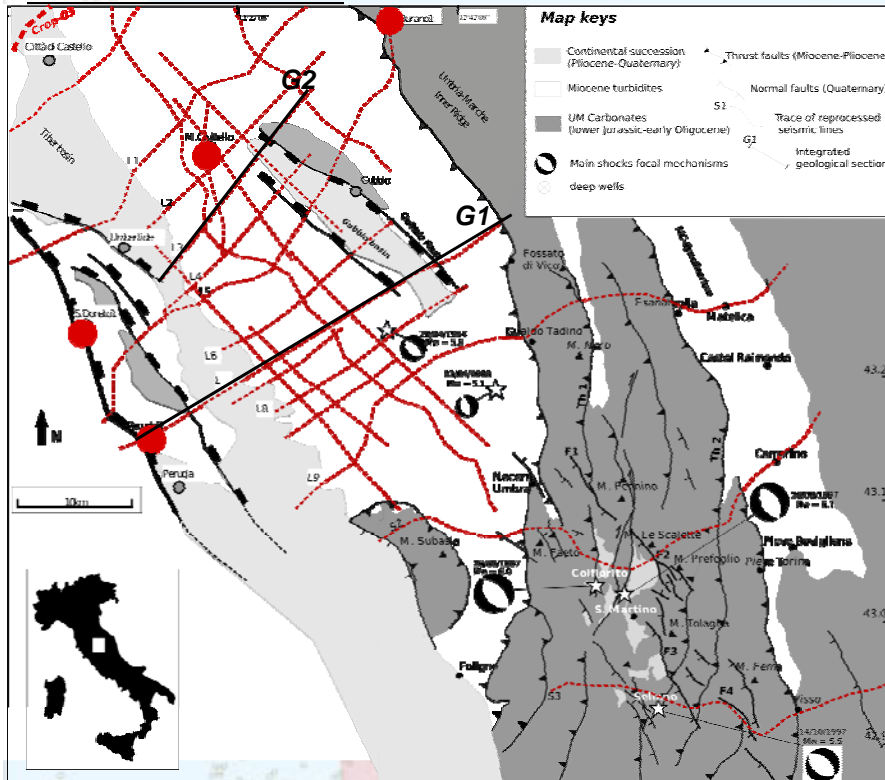
Stato dell'arte 1**The Crop-03 section**

-> The Crop-03 section shows the ATF detachment and its staircase trajectory below the Northern Apennines

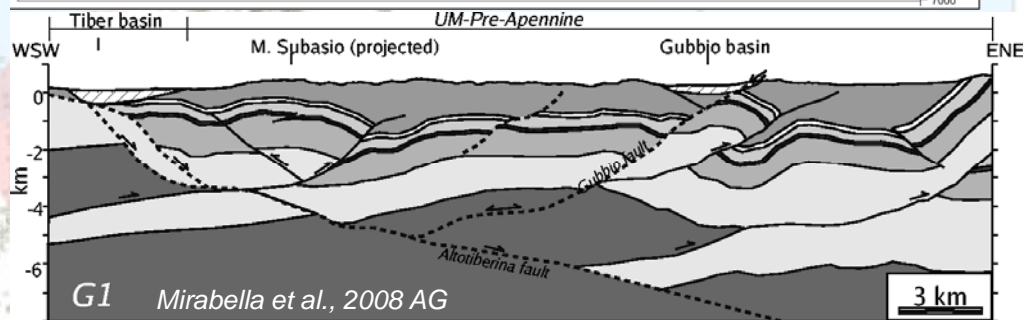
-> Recent microseismic surveys have shown that this detachment is active and releases microseismicity



Stato dell'arte 2



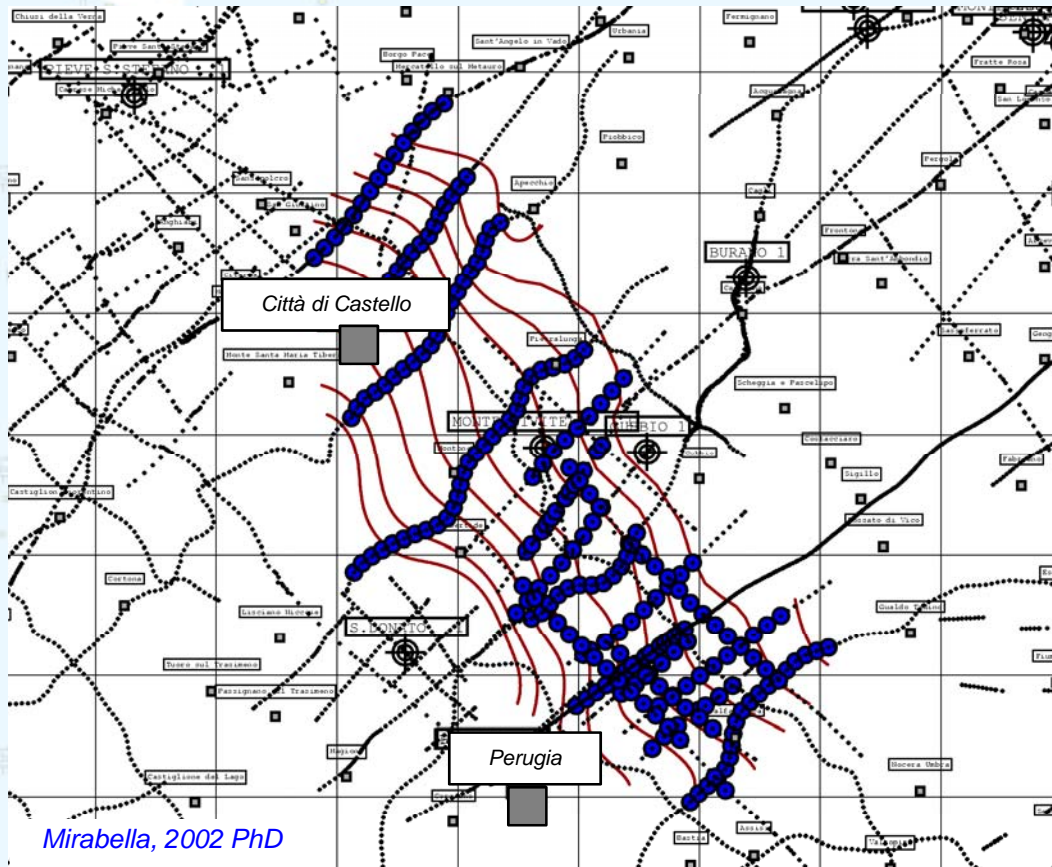
Mirabella et al., 2004 JSG



G1 Mirabella et al., 2008 AG

. The ATF is the regional extensional detachment to which the SW-dipping normal faults are antithetic

Stato dell'arte 3



. Along strike the ATF has been traced in the seismic sections for about 55 km of length from Città di Castello to Perugia

. The data indicate that the fault plane is affected by bands and transfer zones

 Contours of the AtF

 Sampled points

Programma di lavoro l'anno

- . Review of existing data and literature
- . All available **data are integrated** into a GIS
 - .. Geological maps .> 1:100.000
 - .> 1:50.000
 - .> 1:10.000
 - .. Seismic lines
 - .. Boreholes
- . A cross-section and longitudinal section will be build. The **cross section will be balanced also in extension.**
- . The data from the seismic sections will be refined and depth converted with an **updated velocity model.**
- . The existing information will be thickened in order to build a **new contour map of the fault plane**

People:

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