

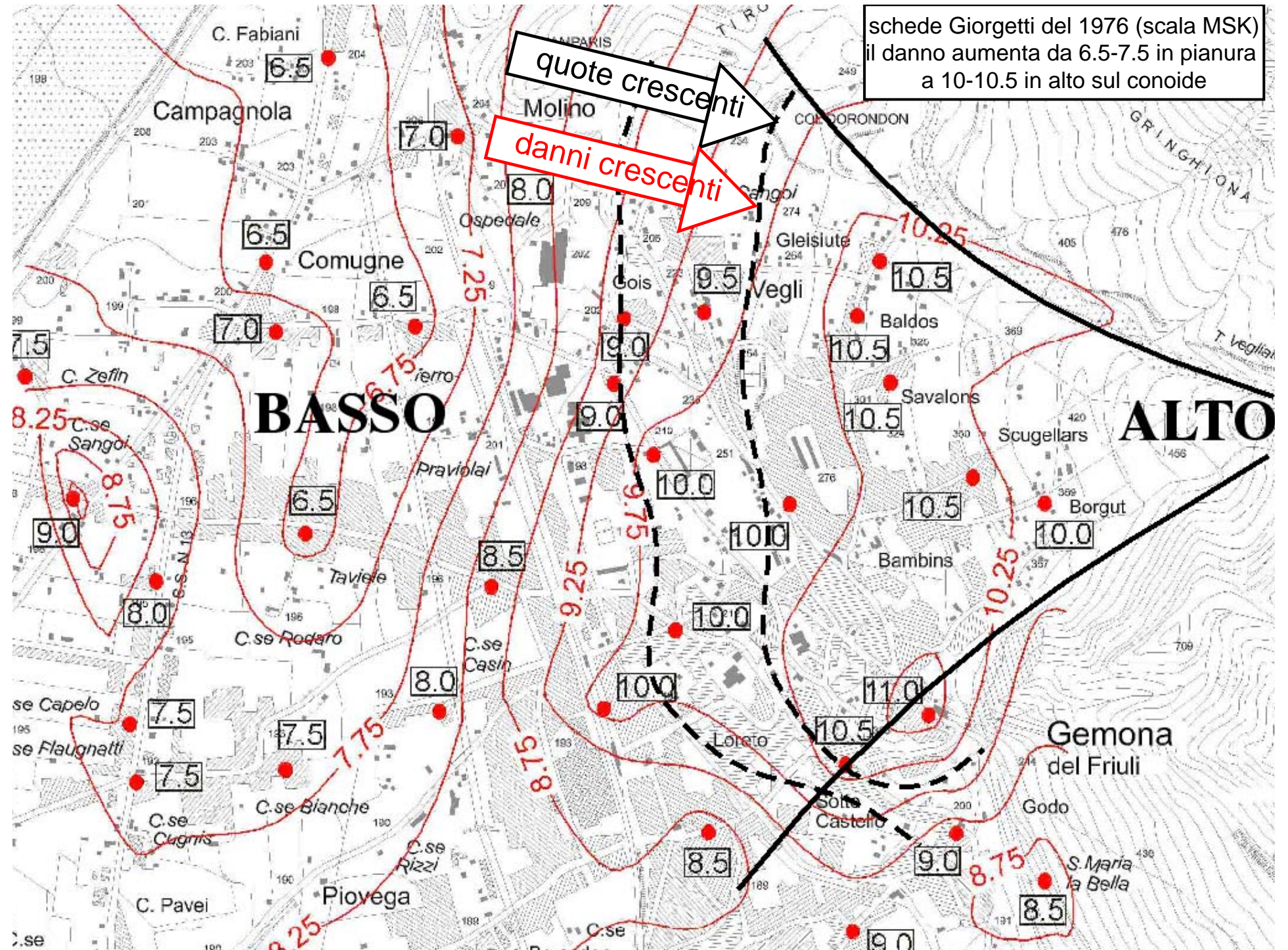
*Sono passati 30 anni . . .*

LIMITS OF THE GEMONA (NE ITALY) ALLUVIAL FAN



Progetto PRIN chiusi un mese fa





## -Terreni stabili / instabili OK

(per le amplificazioni, si guardava soprattutto la natura dei terreni)

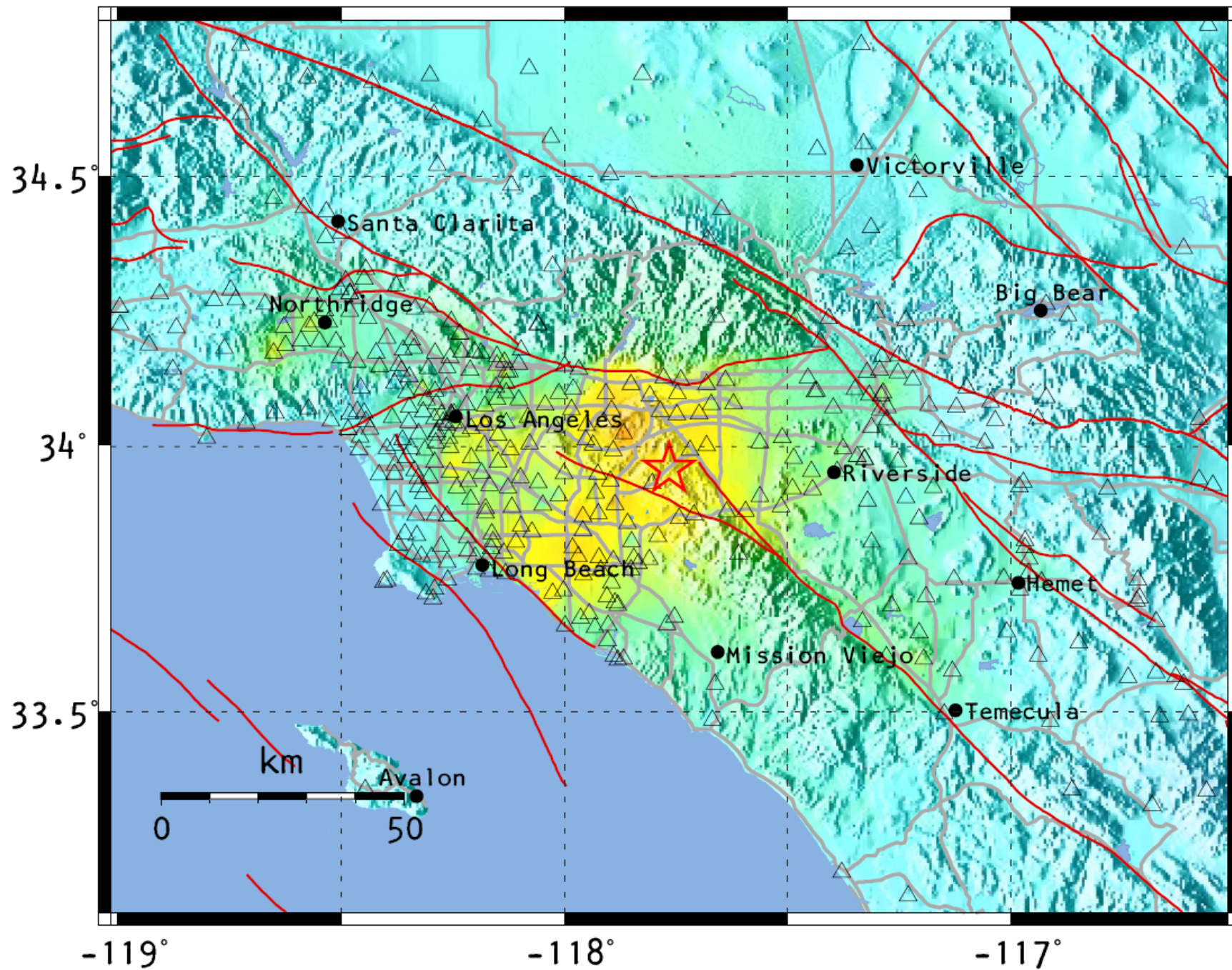
- Importanza della sorgente

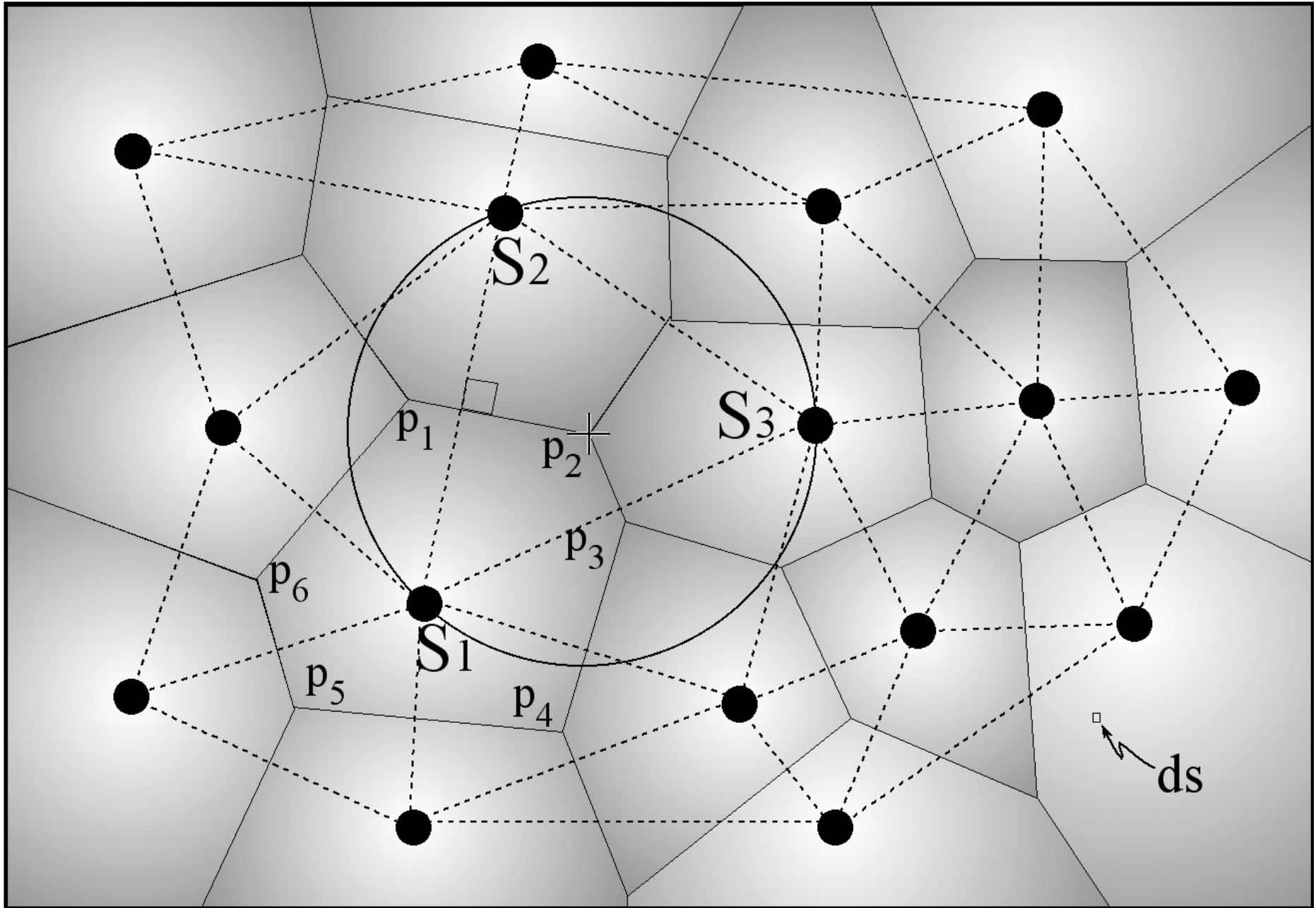
- Amplificazioni 1D-3D

- Microtremori

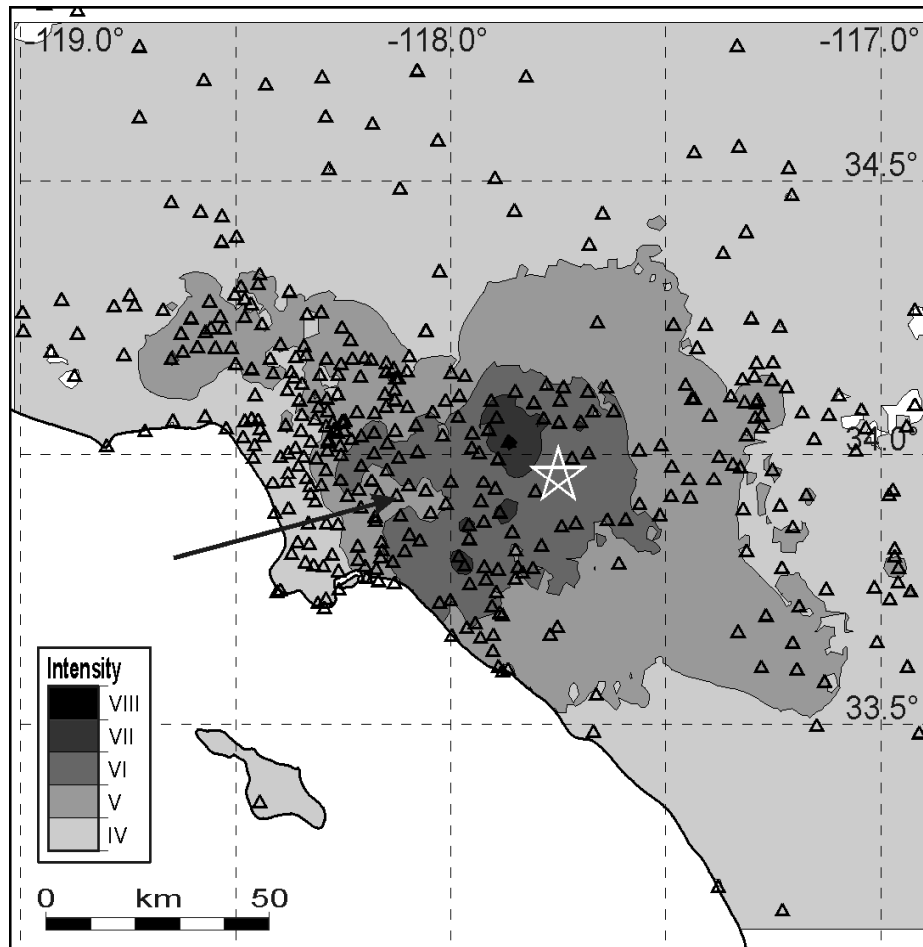
- VS30 (in Italia stiamo utilizzando valori su griglia di: 1,9 x 1,4 km)

... dicevamo sorgente

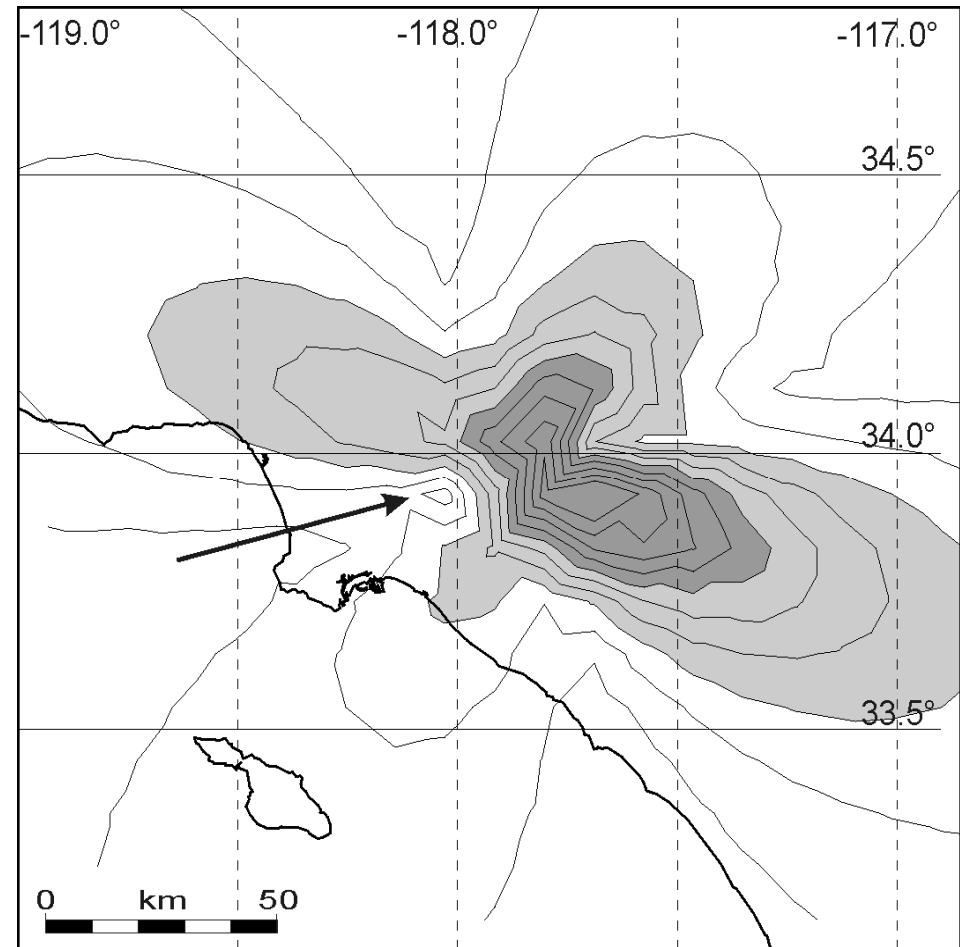




Sirovich et al. (2002). Natural-Neighbor Isoseismals. *BSSA*, 92, 1933-1940.



intensità ShakeMap (USGS),  
 terremoto 29/7/2008 (M5.4) a Los Angeles  
 (ridisegnato per gradi interi)

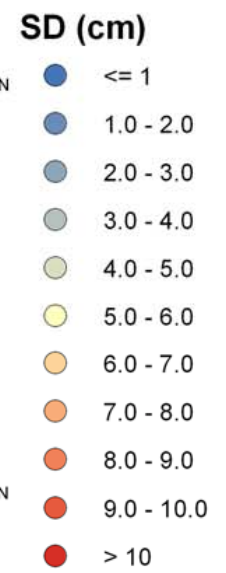
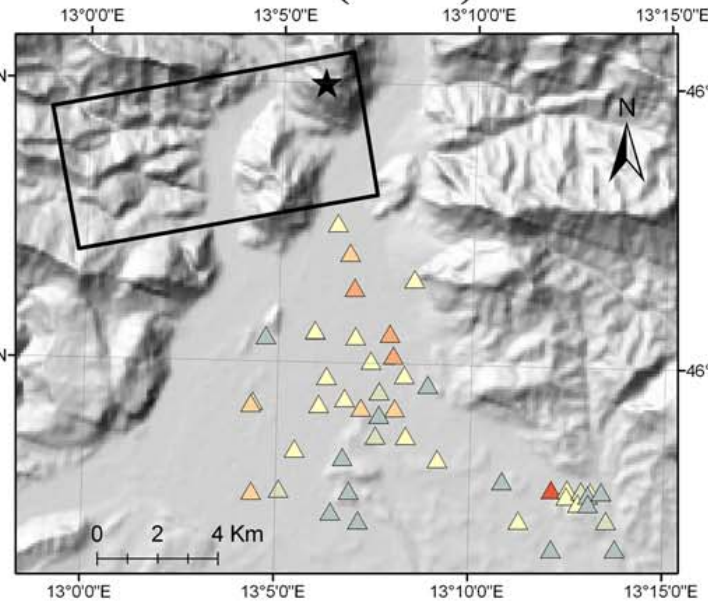
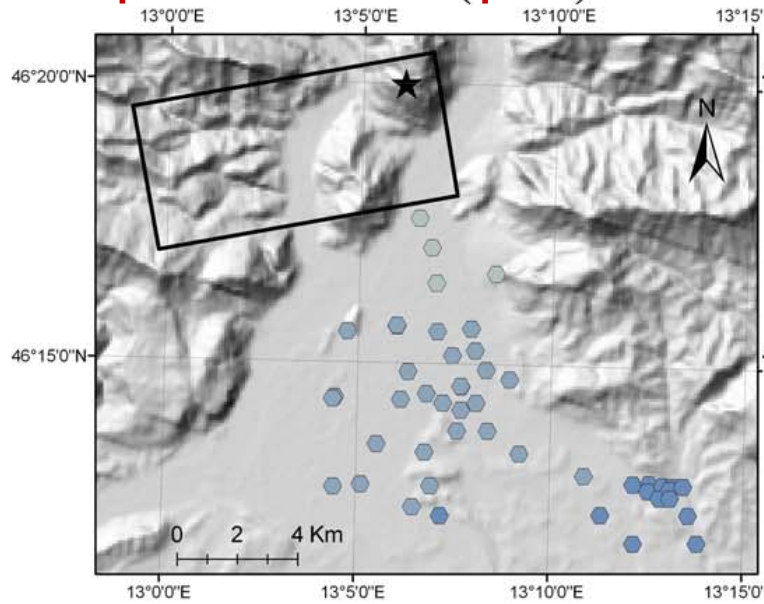


la radiazione da una sorgente di scenario OGS  
 con i parametri disponibili subito dopo l'evento  
 (qui SENZA EFFETTI DI SITO)

Sirovich, Pettenati e Sandron (2009). Source- and site-effects in the intensities of the M5.4 July 29, 2008 Earthquake in South Los Angeles. *Seismological Research Letters*, 80, 6, 936-945.

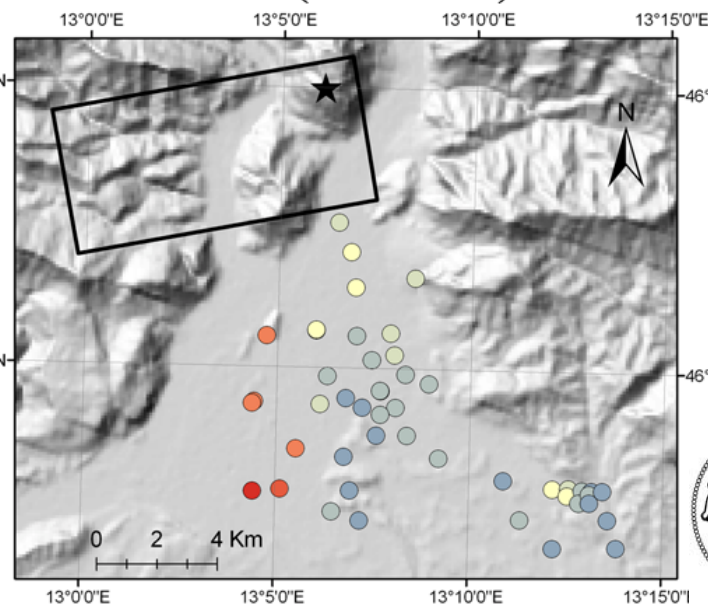
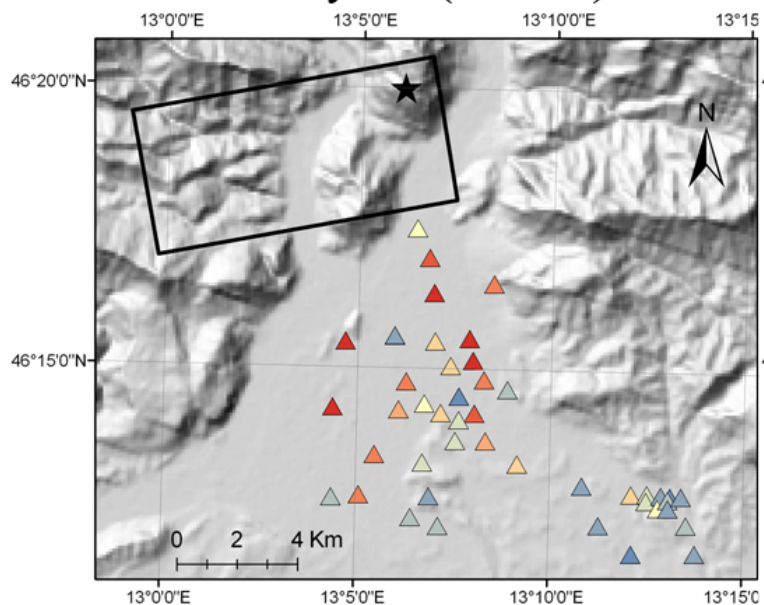
# Spostamenti spettrali T = 1s

15 settembre 1976 ore 09:21 p.m.



hybrid (3D+1D)

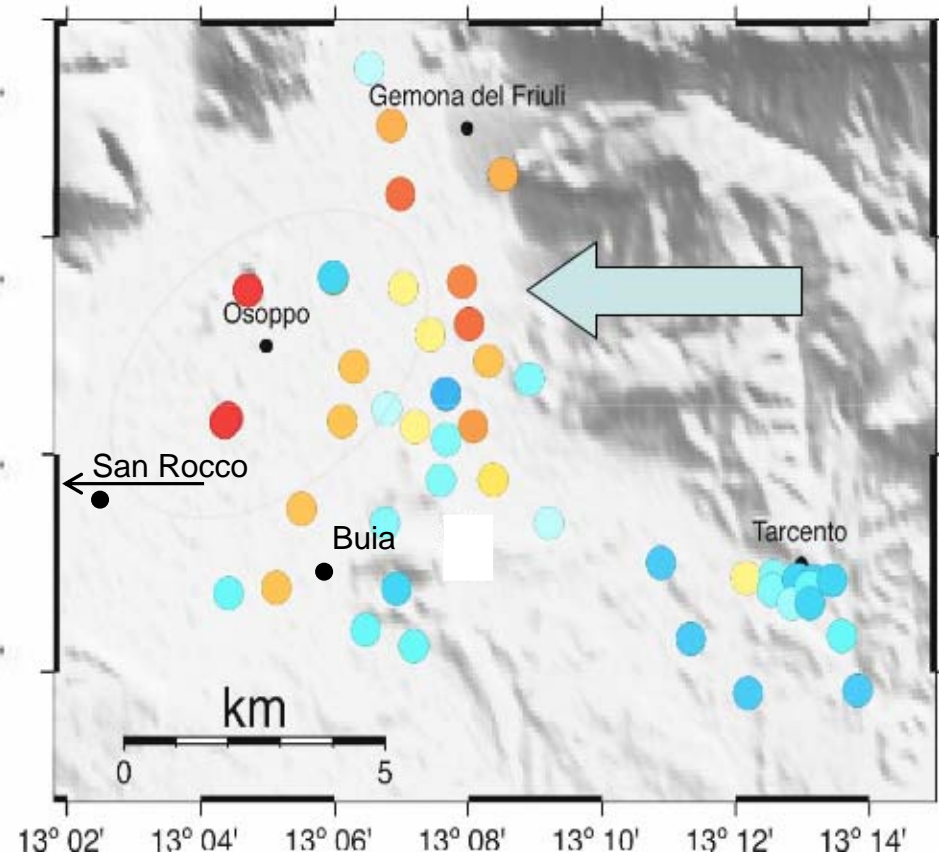
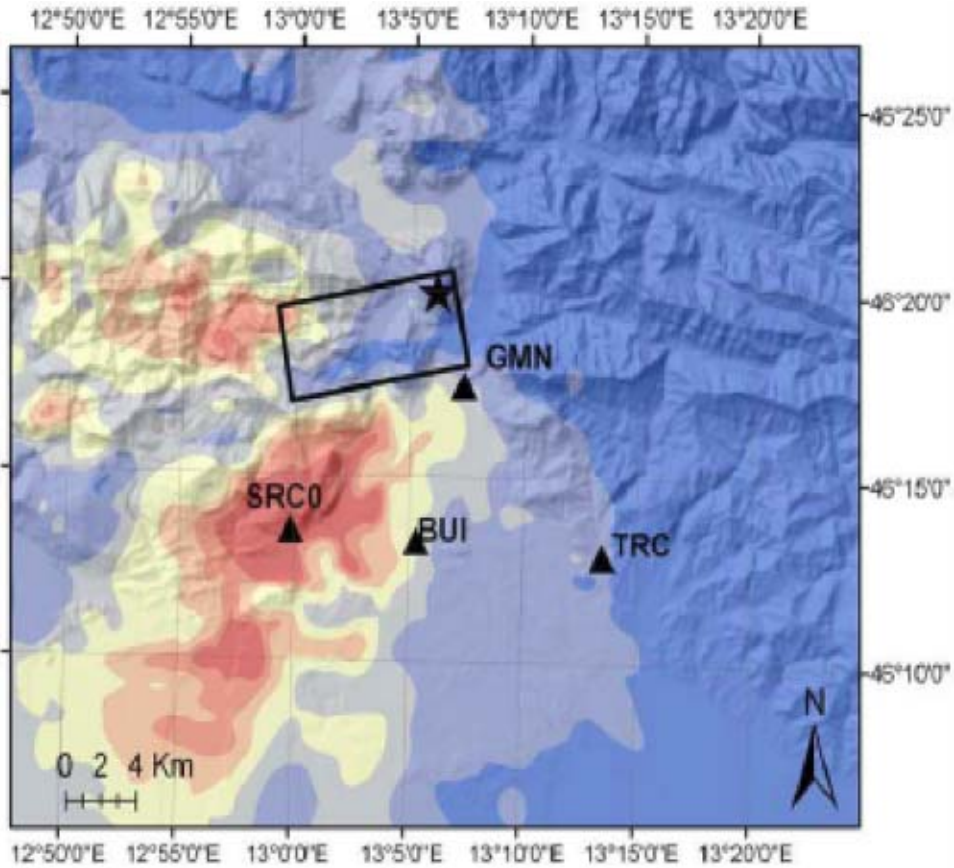
3D (GeoELSE)





# GeoELSE (Politecnico MI)

# Modello ibrido (3D+1D)

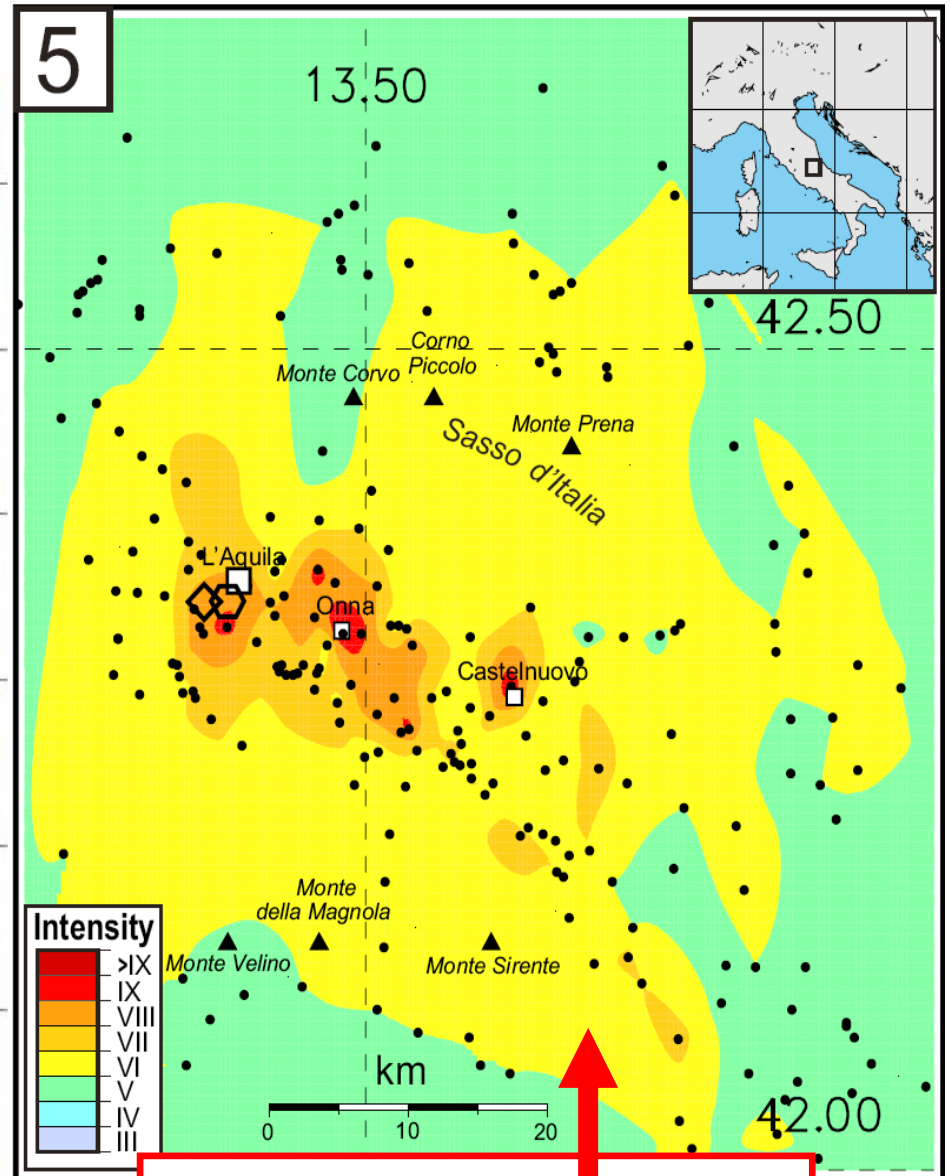
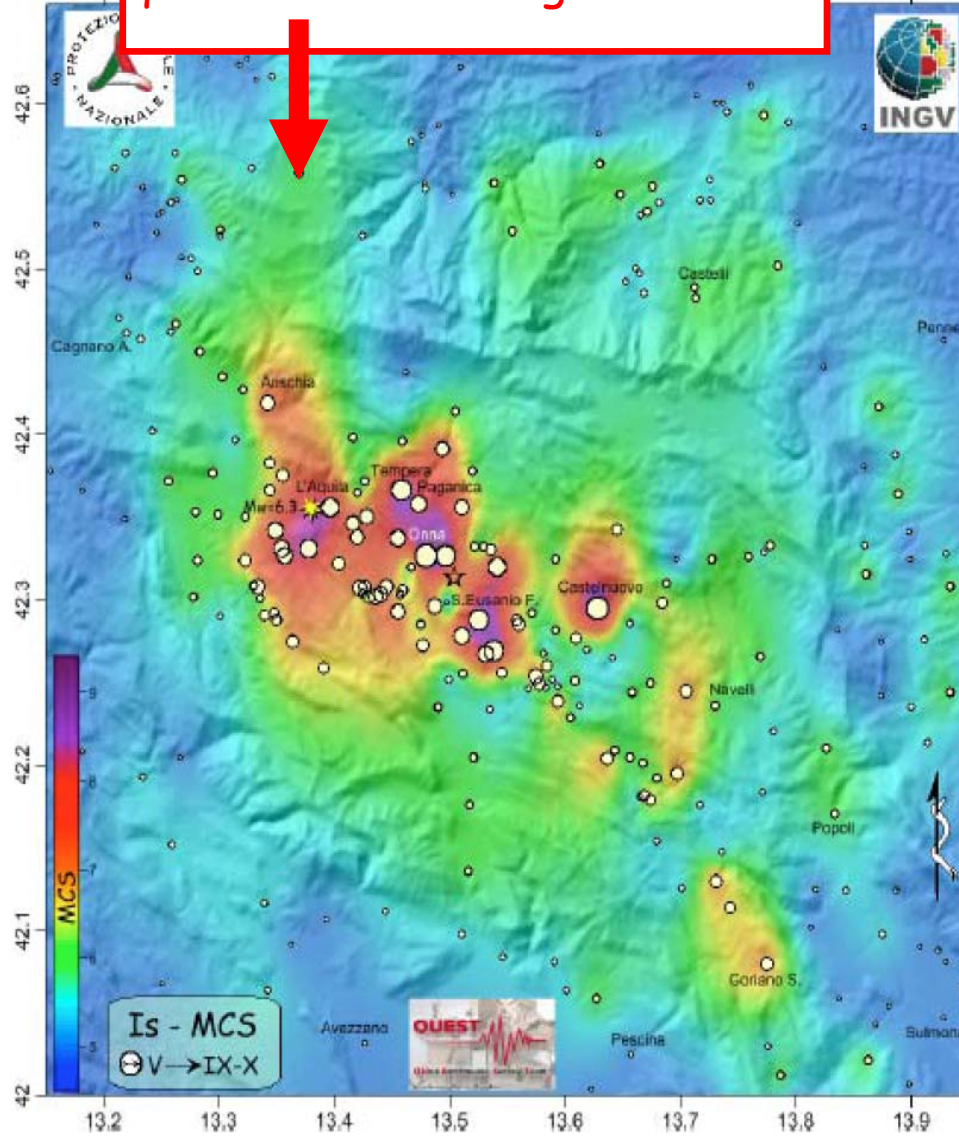


15 settembre 1976 ore 09:21 p.m.

componente normale alla faglia



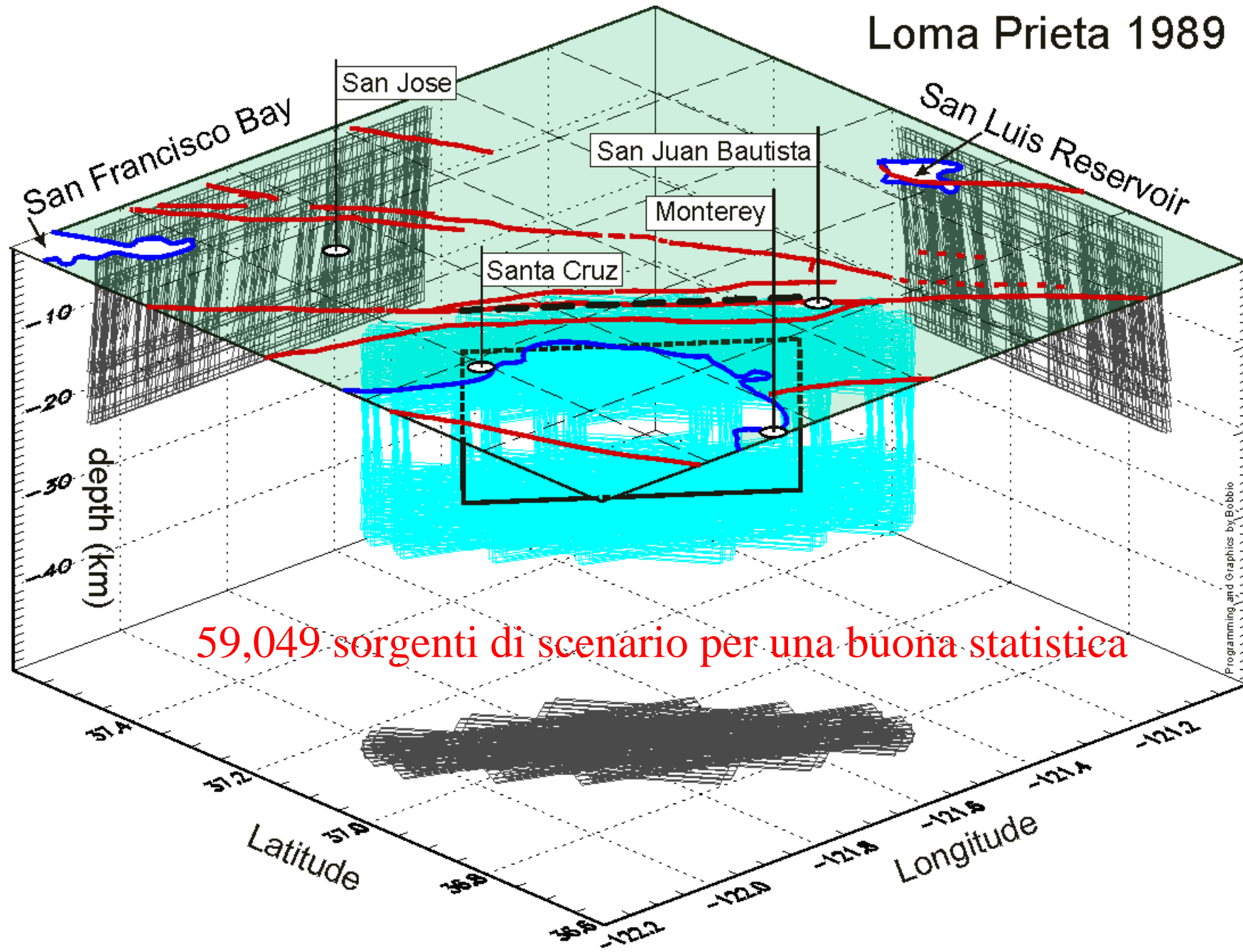
qui scimmiottiamo gli americani



qui tracciamento oggettivo

TECNICA USATA : Sirovich et al. (2002).  
Natural-Neighbor Isoseismals. *BSSA*, 92, 1933-1940.

# Loma Prieta 1989



Sirovich e Pettenati, 2009. Validation of a Kinematic and Parametric Approach to Calculating Intensity Scenarios. *Soil Dynamics and Earthquake Engineering*, **29**, 1113-1122.

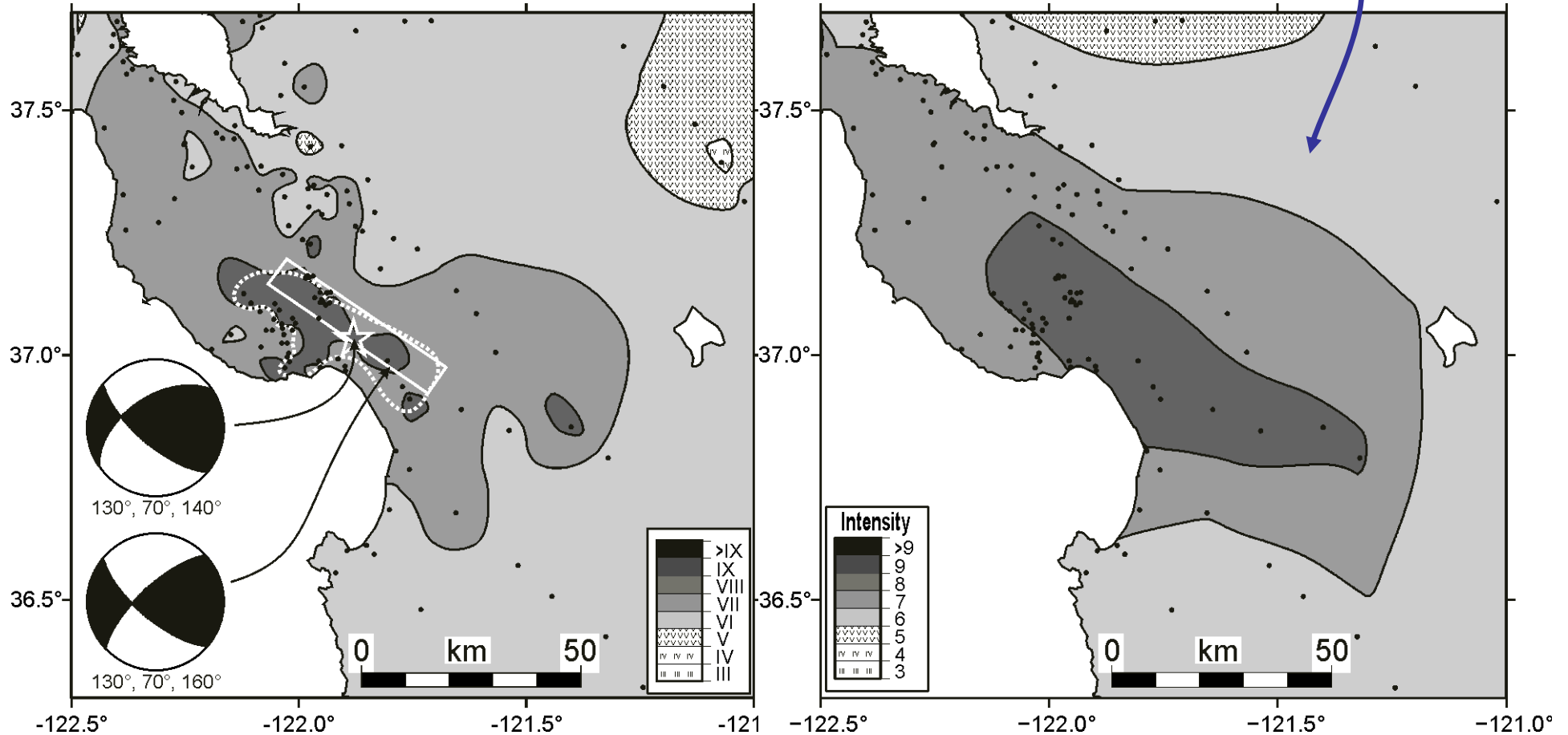
...dalle 59,049 sources

intensità

OSSERVATE nel 1989

Scenario KF

RIPORTATO al 1988



**Scenario medio**

ottenuto con le conoscenze  
sismotettoniche del 1983 - 1988

Grazie

