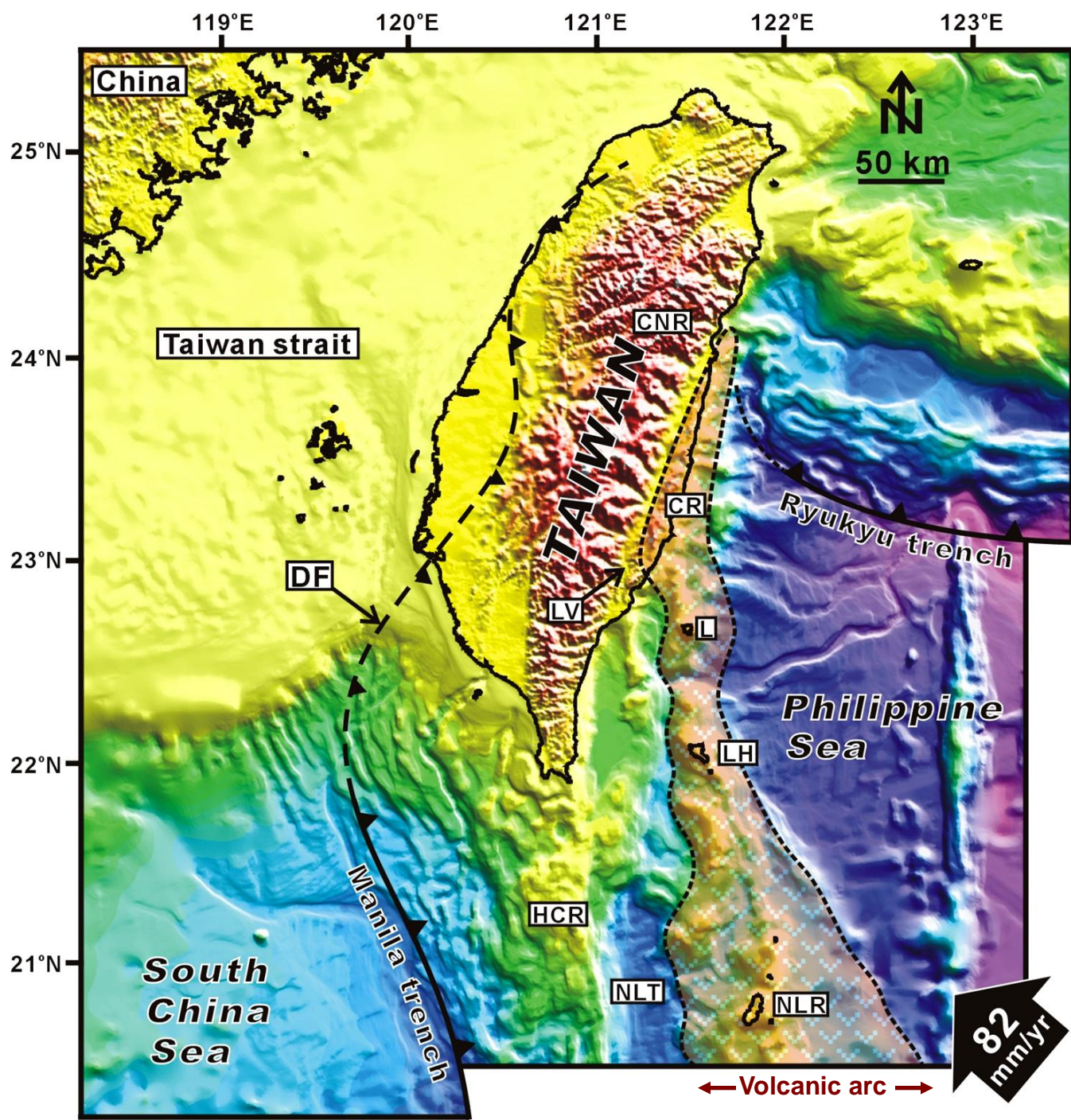
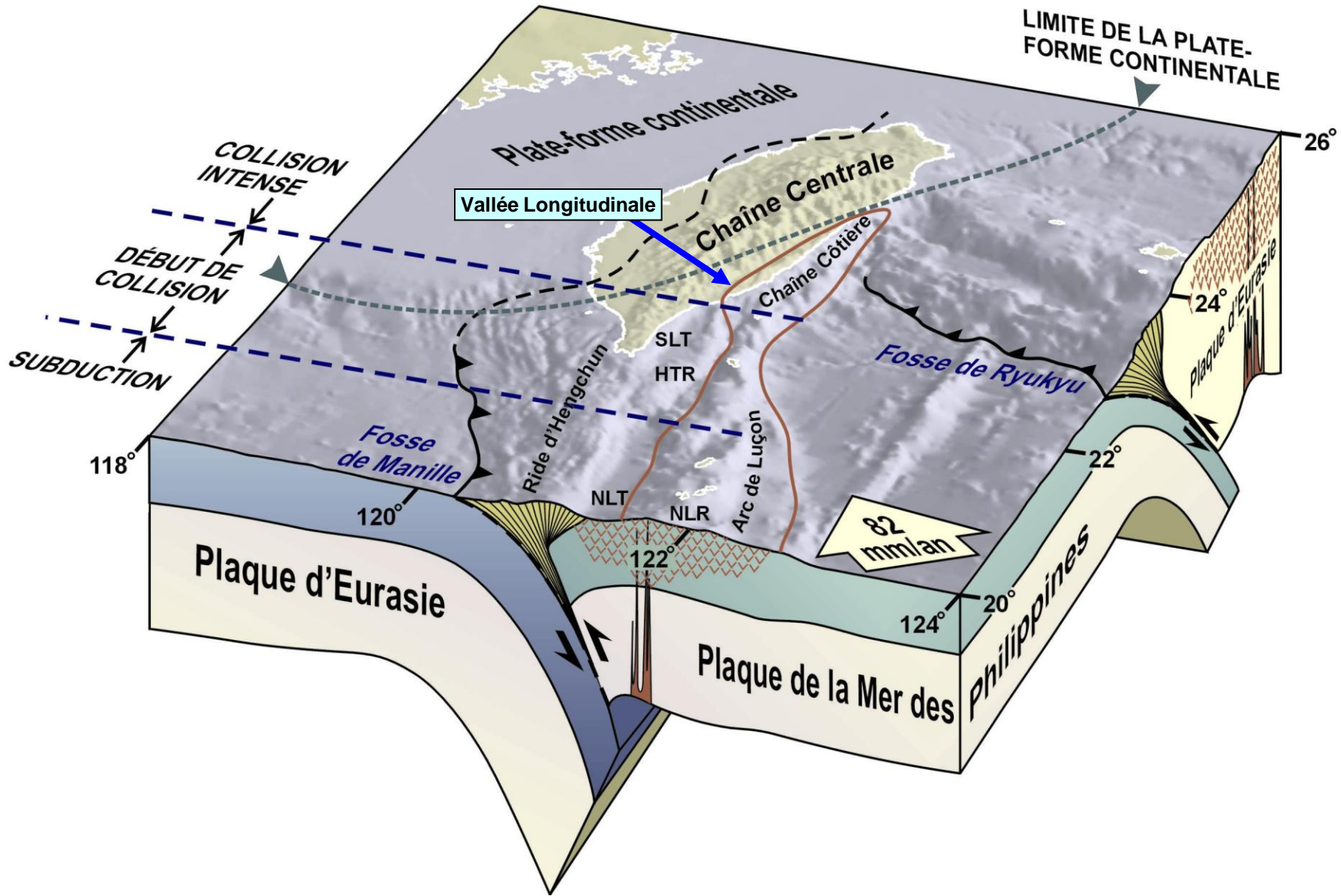


海岸山脈

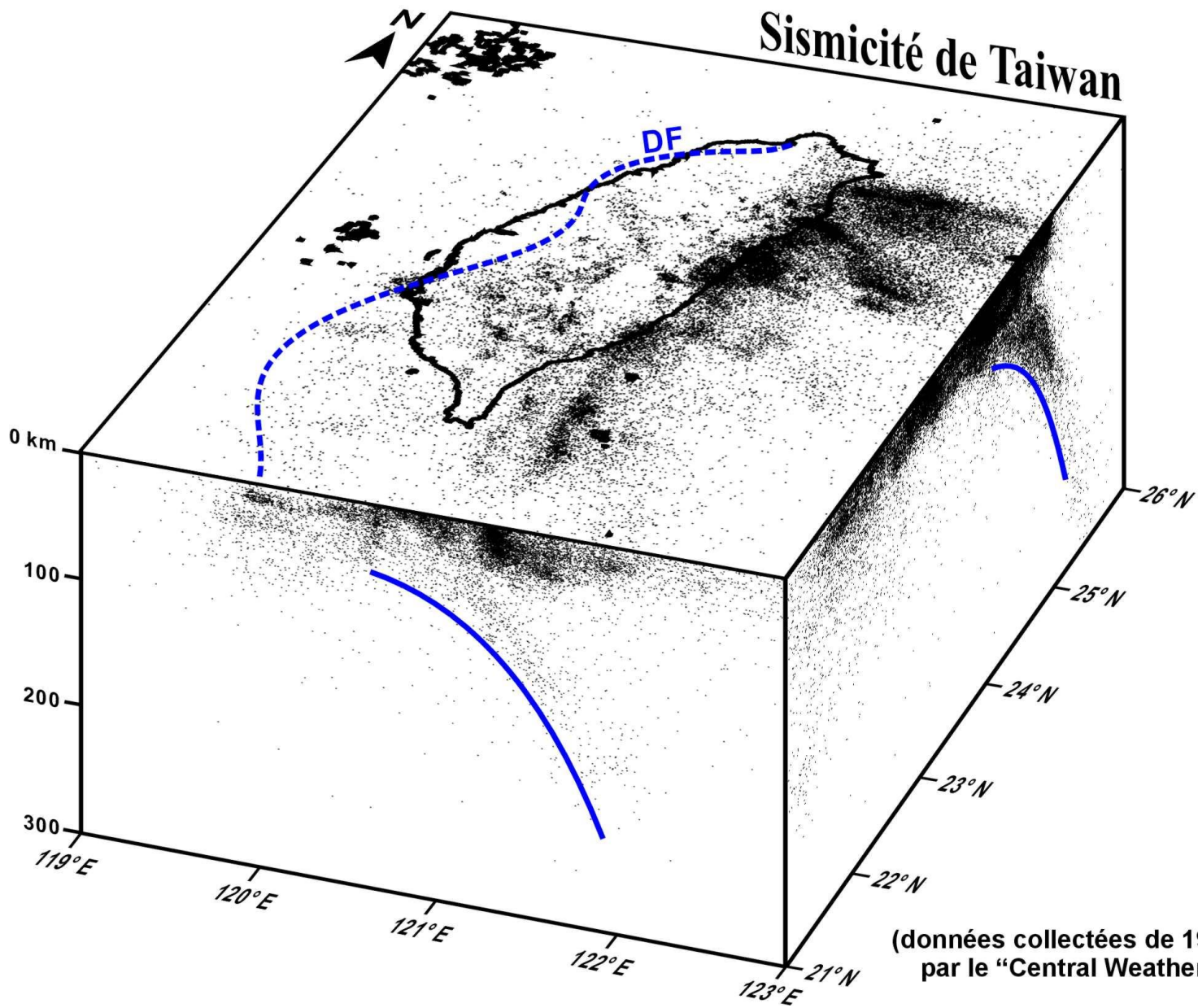
張中白

2007/11/13



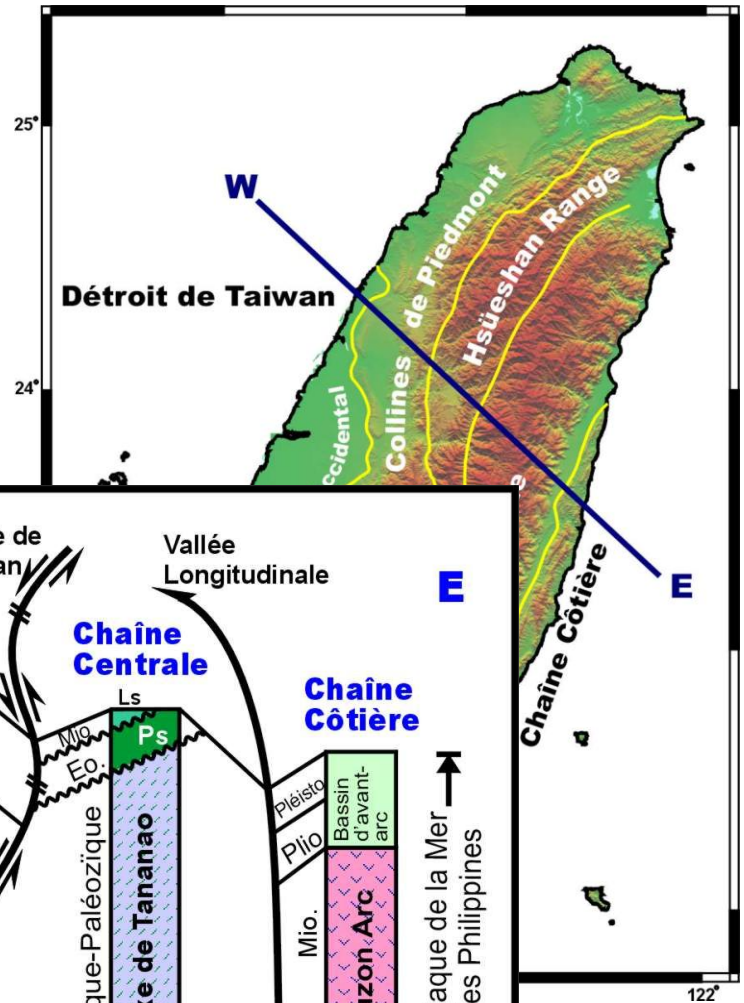


Sismicité de Taiwan

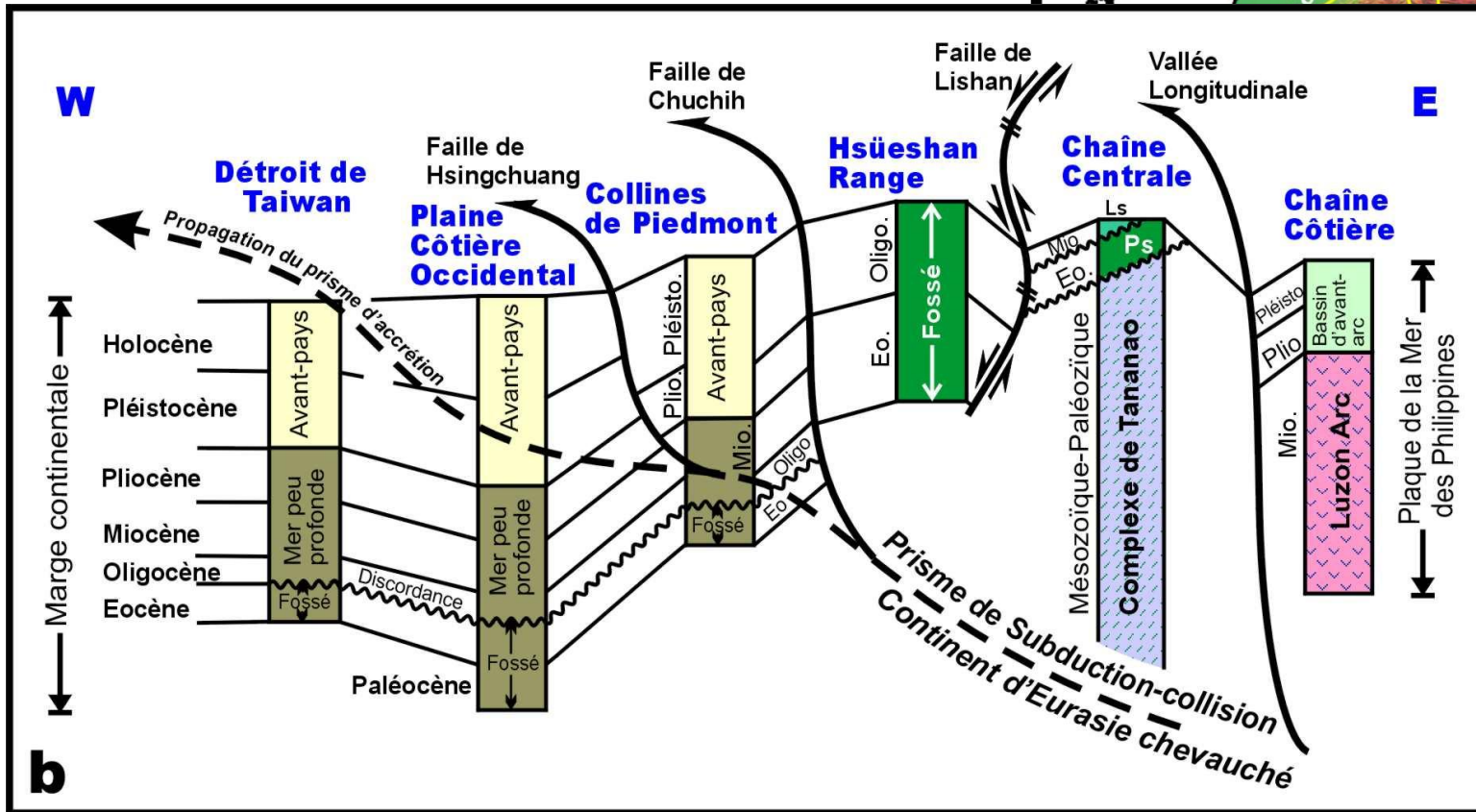


(données collectées de 1973 à 1998
par le "Central Weather Bureau")

Principales provinces morphotectoniques de Taiwan



Stratigraphie générale de Taiwan



台東地質

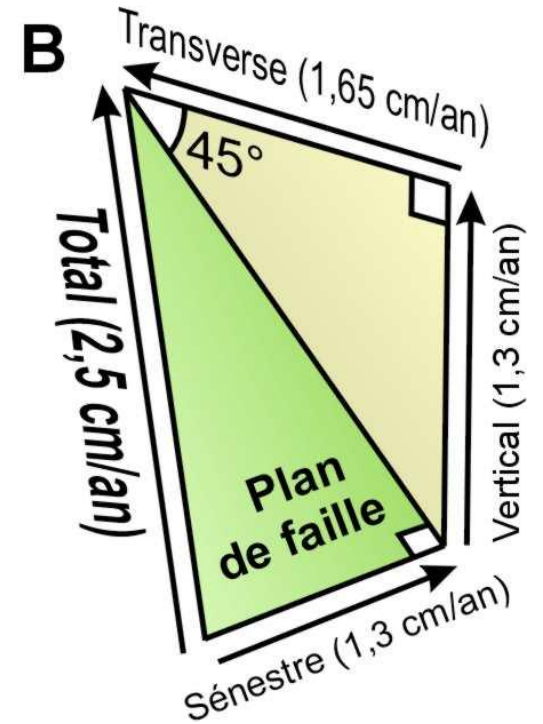
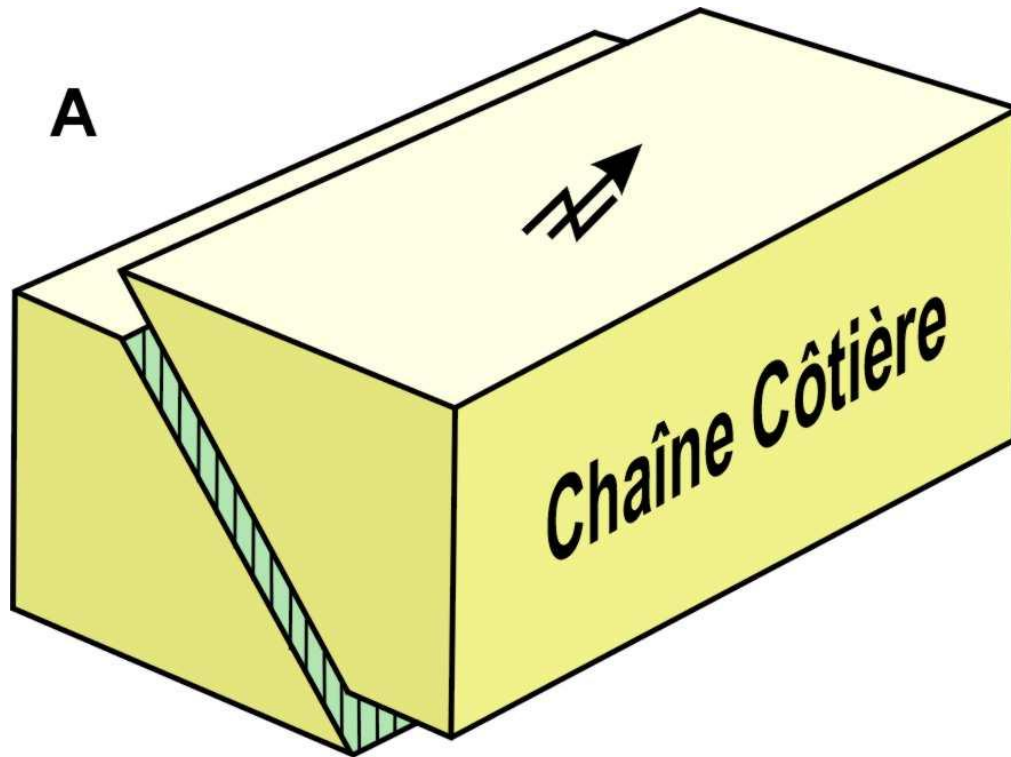


海岸山脈

火山島弧 – 都巒山
弧前盆地 – 泰源盆地
構造混同層 – 利吉層
第四紀沖積層 – 卑南山

中央山脈

變質基盤雜岩
第三系大陸邊緣沉積物

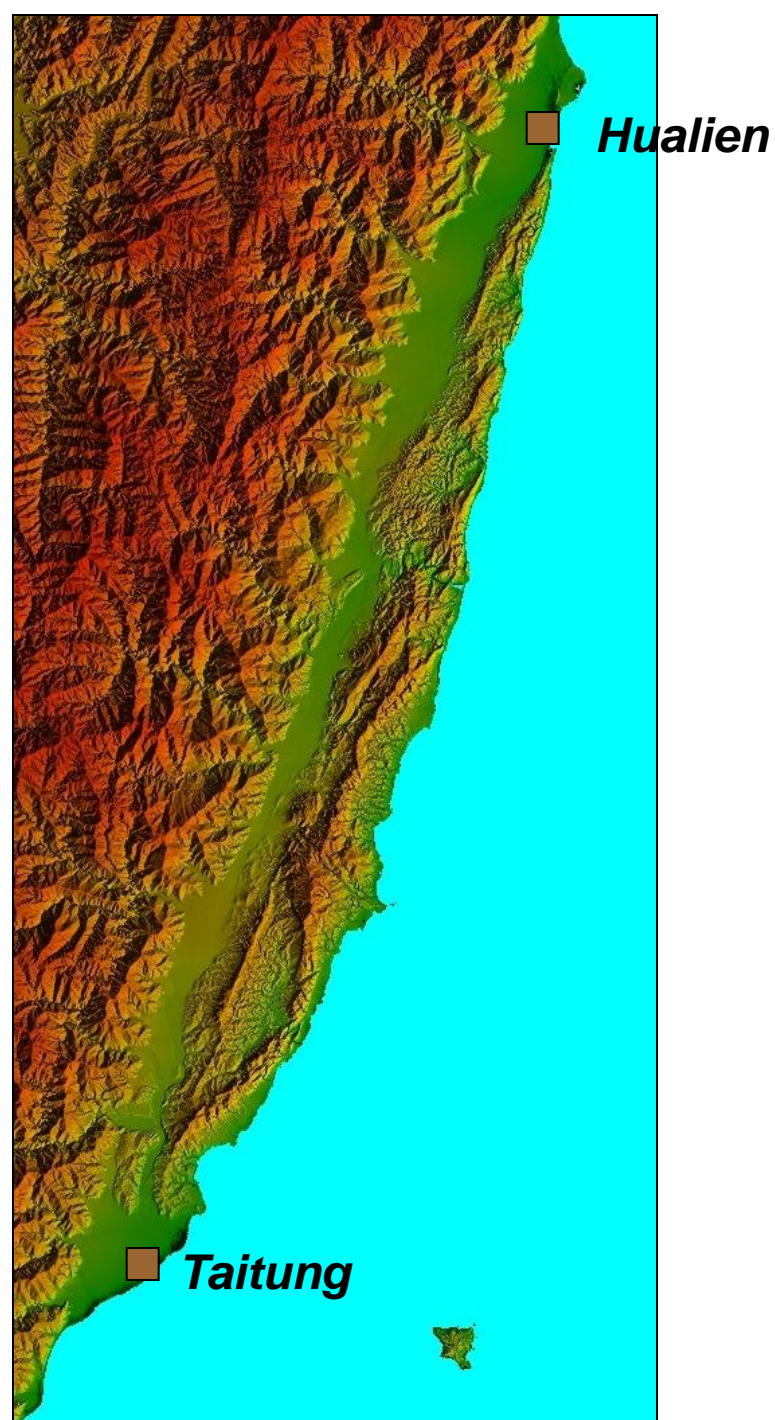


Mouvement oblique actuel de la faille de la Vallée Longitudinale

(d'après Angelier et al., 2000)

**LV:
Remarkable
Linear
Topographic
Feature**

- 150 km long
- 5-10 km wide

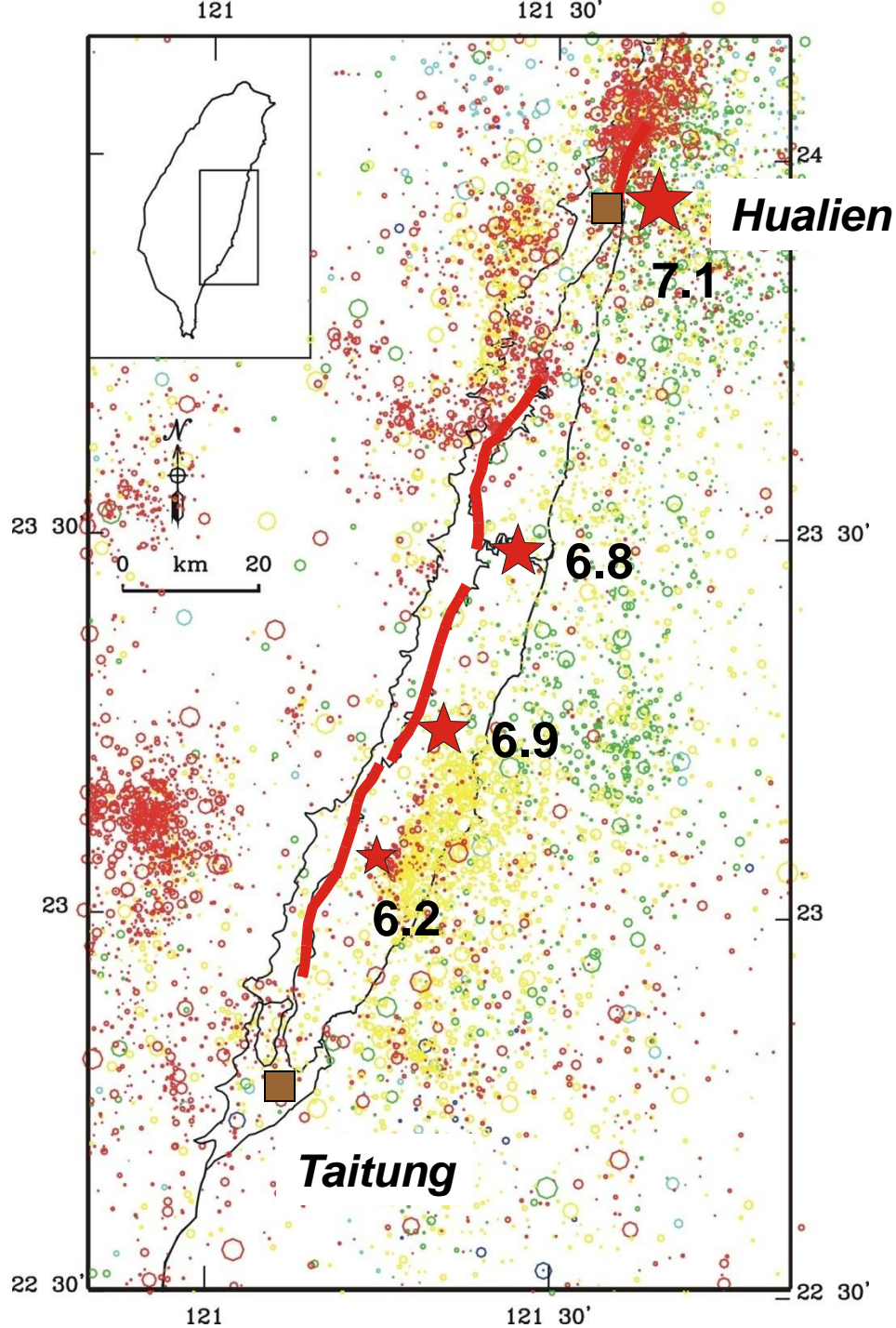


Recent Seismicity (1991-1996)

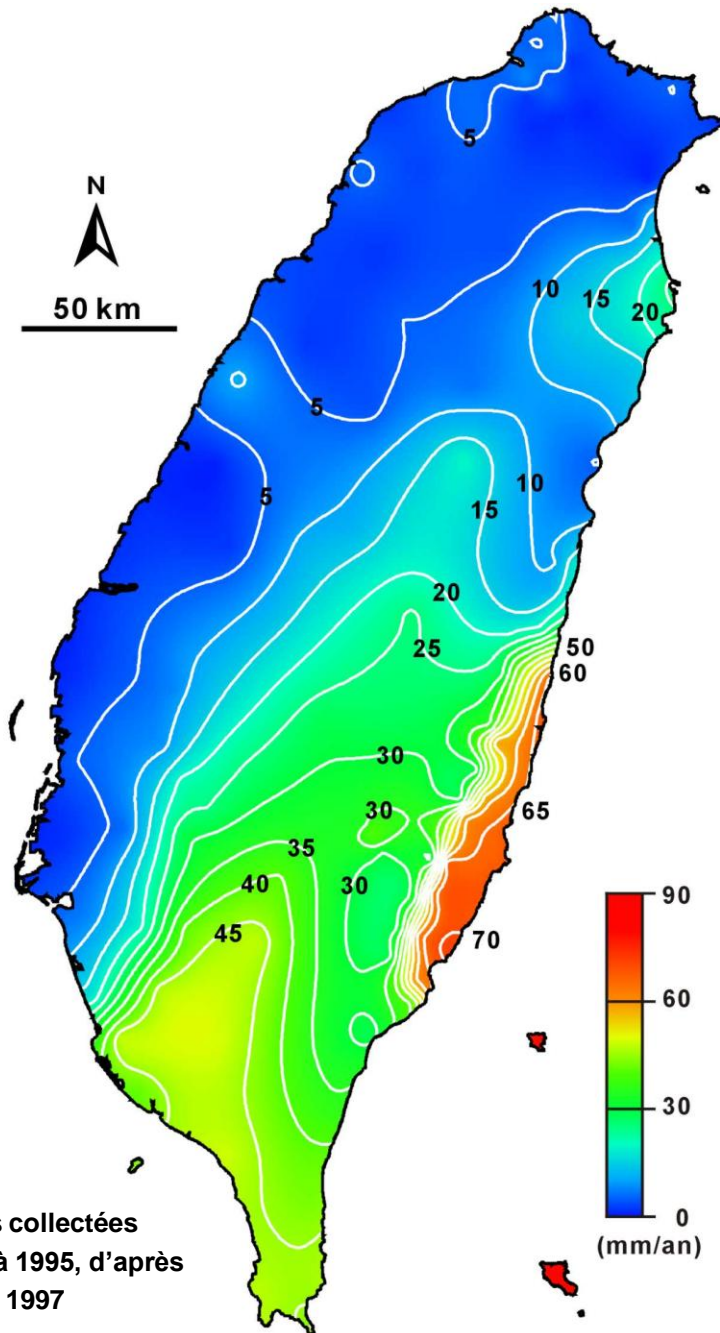
Historic Major Earthquakes (1951 and 1972)

1951 earthquake sequence

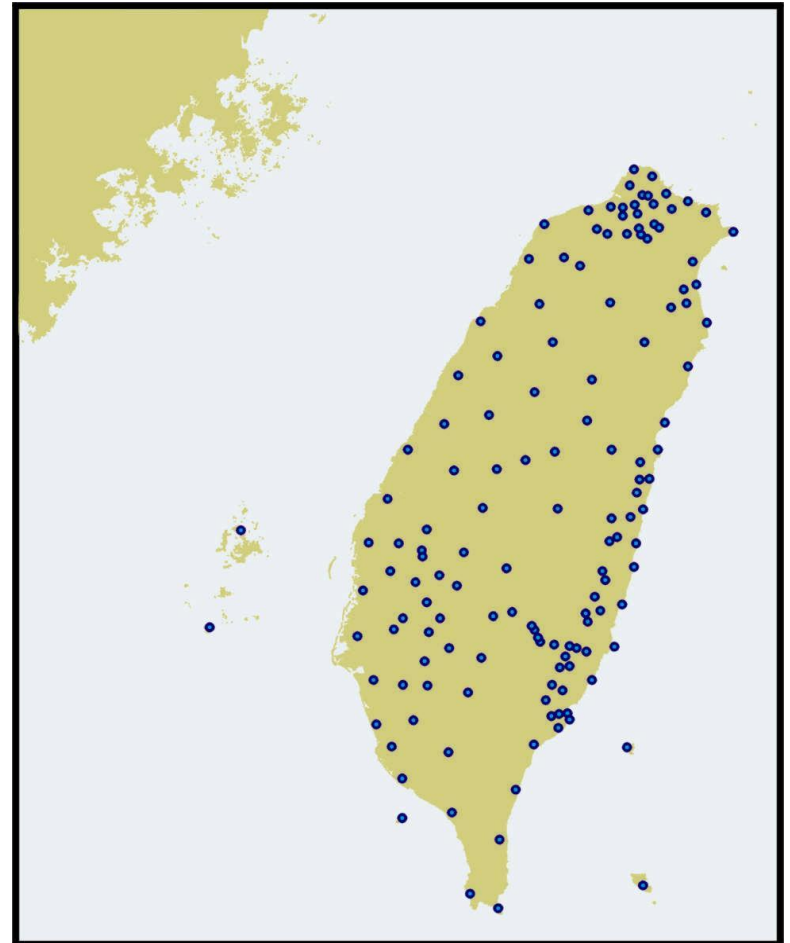
1972 M6.8 earthquake



Vitesse horizontale de stations GPS



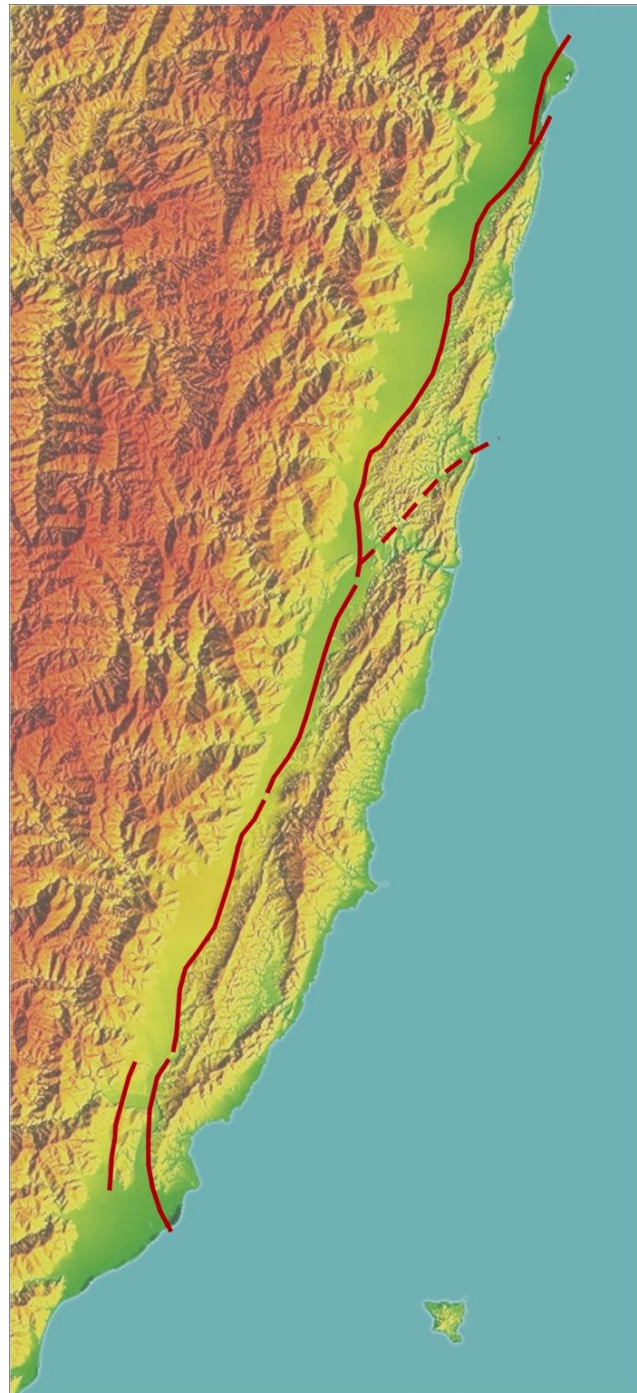
Réseau de stations GPS à Taiwan



Source of Active Deformation: *Kinematics, Dynamics, Evolution*

Where

Geometry



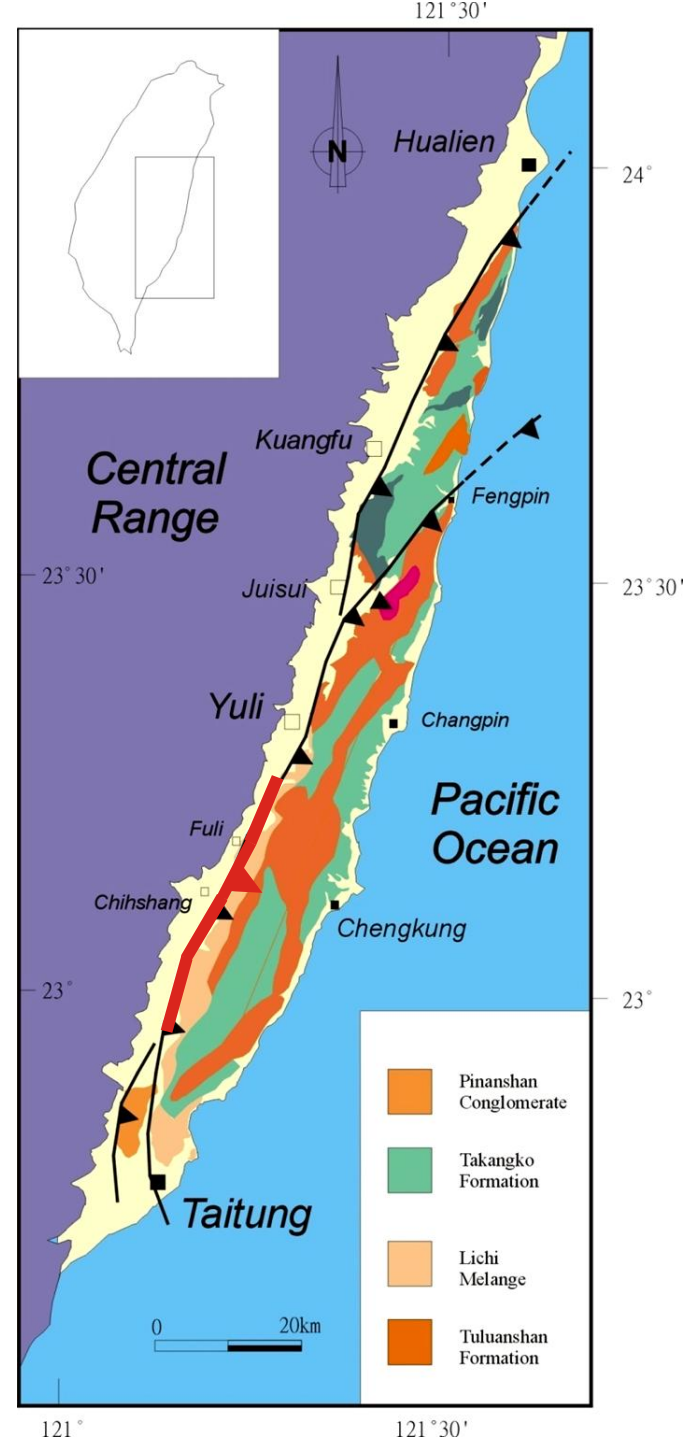
When

Rate

*Short-term
Slip rate*

*Long-term
Slip rate*

The Chihshang fault: the most active segment of the LVF

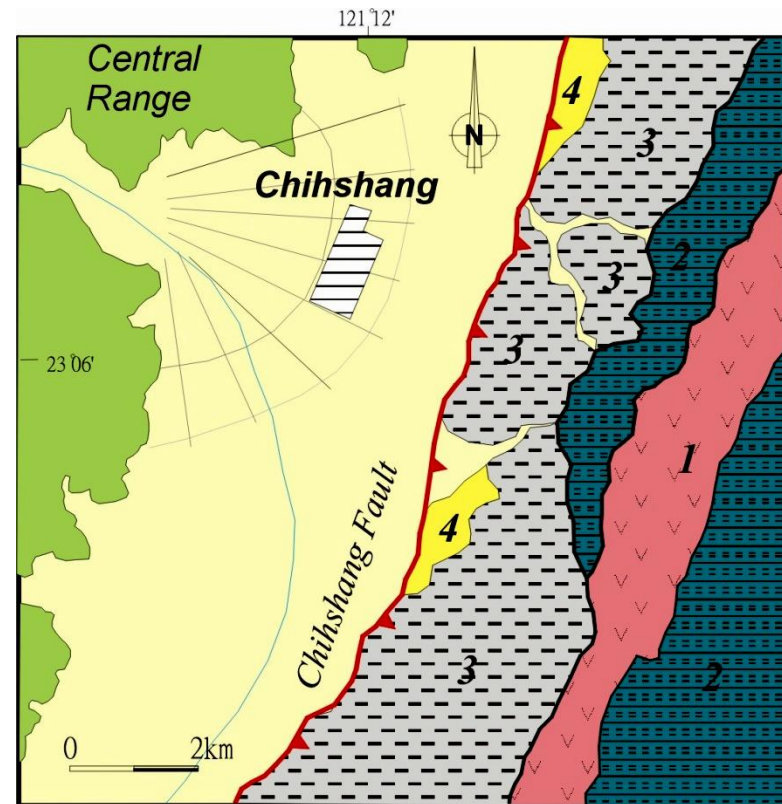
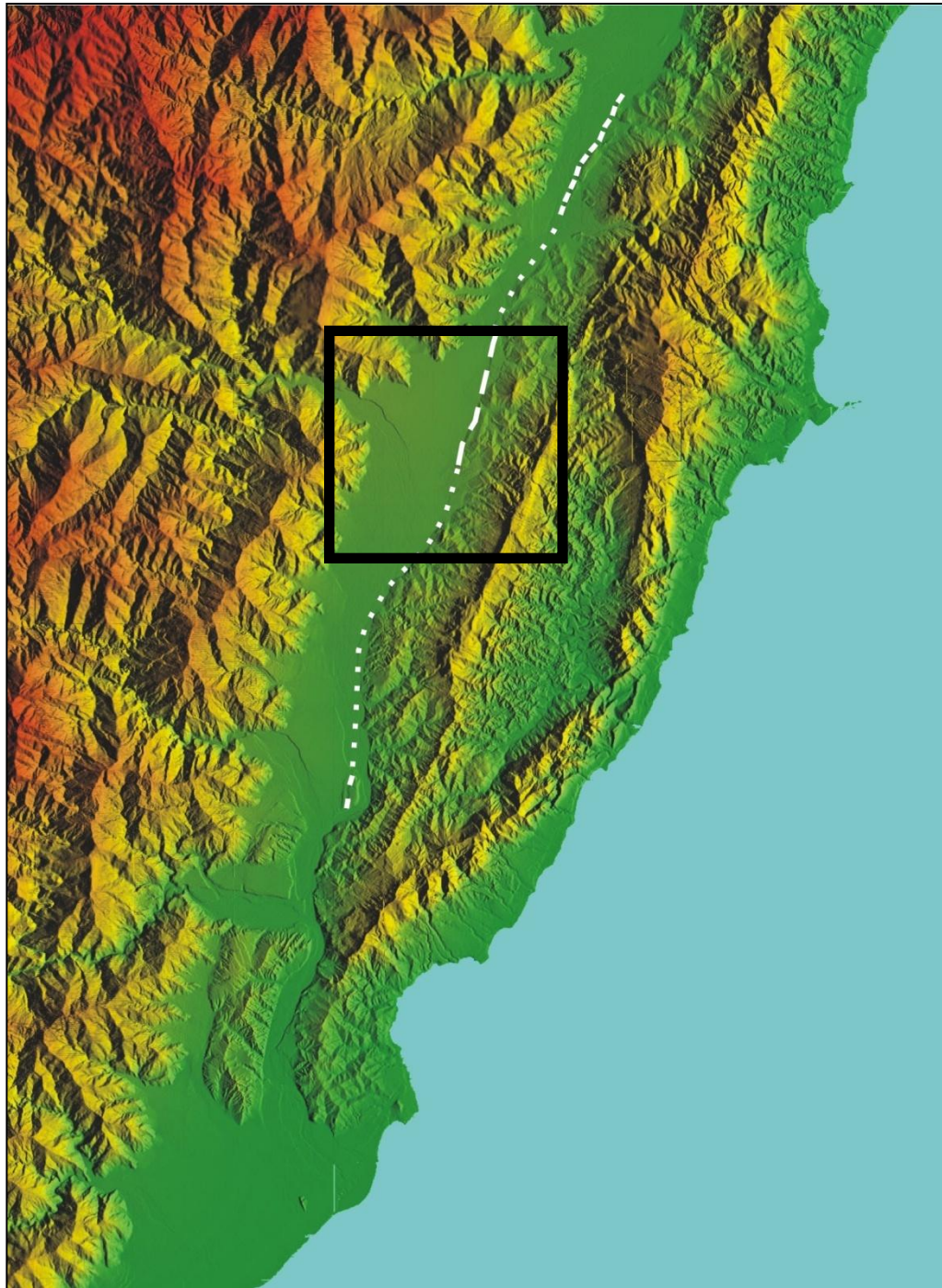


Studies on the Active Chihshang Fault

Geodetic measurement

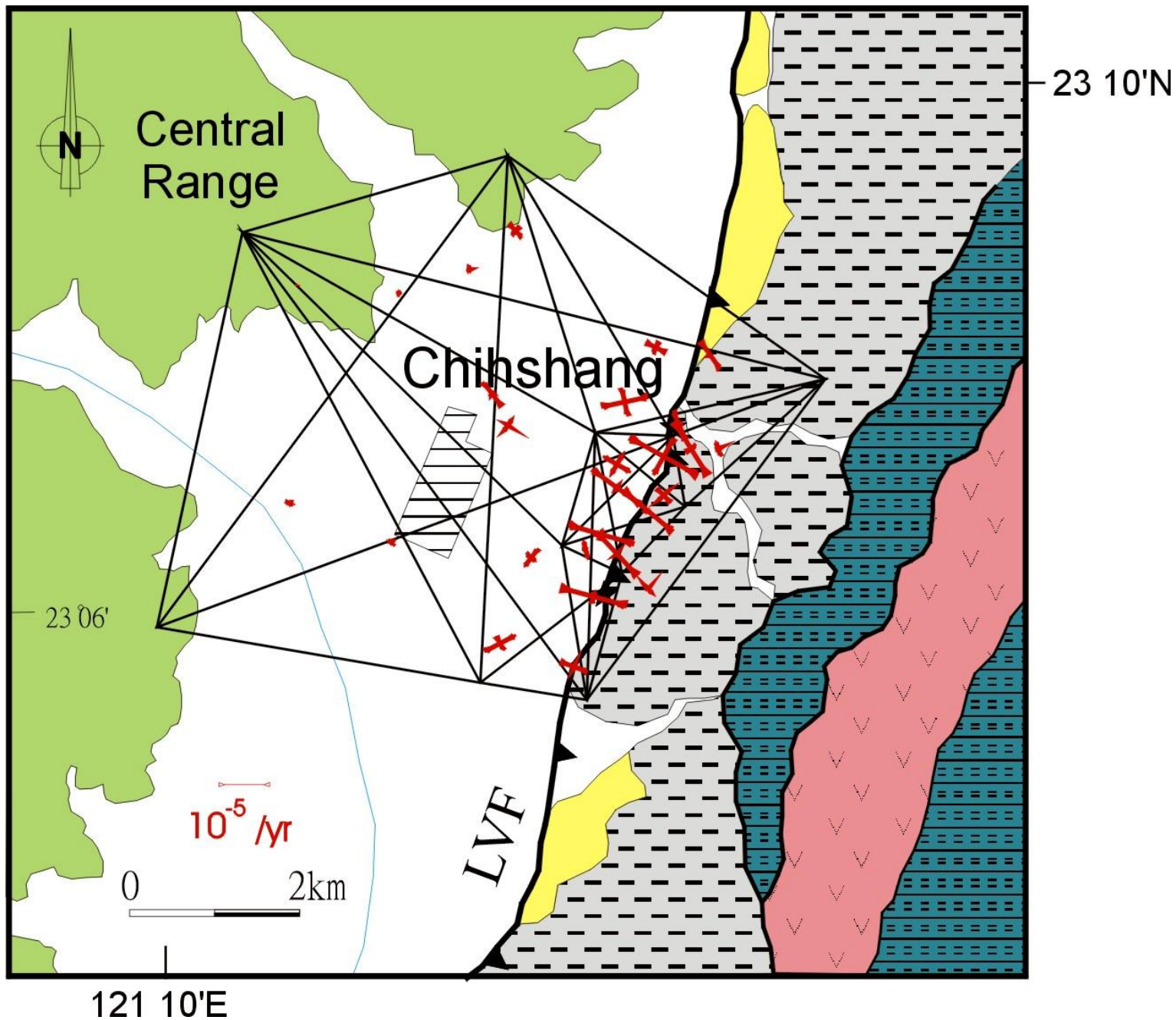
Creepmeter

GPS





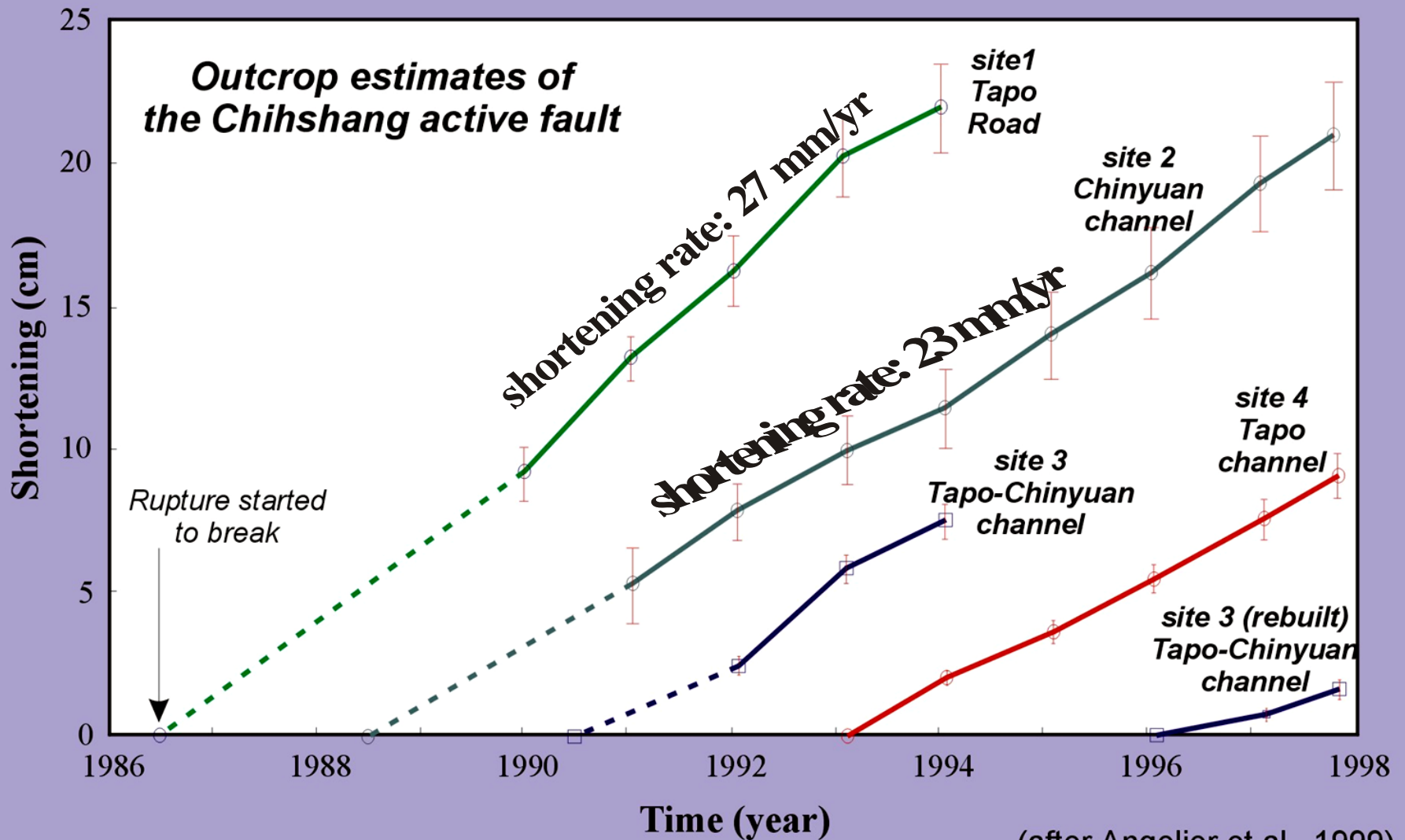
Trilateration Distance Measurement (1983-1985)



Surface Ruptures and Cultural Feature Measurement



Slip Rate from Cultural Feature Measurement



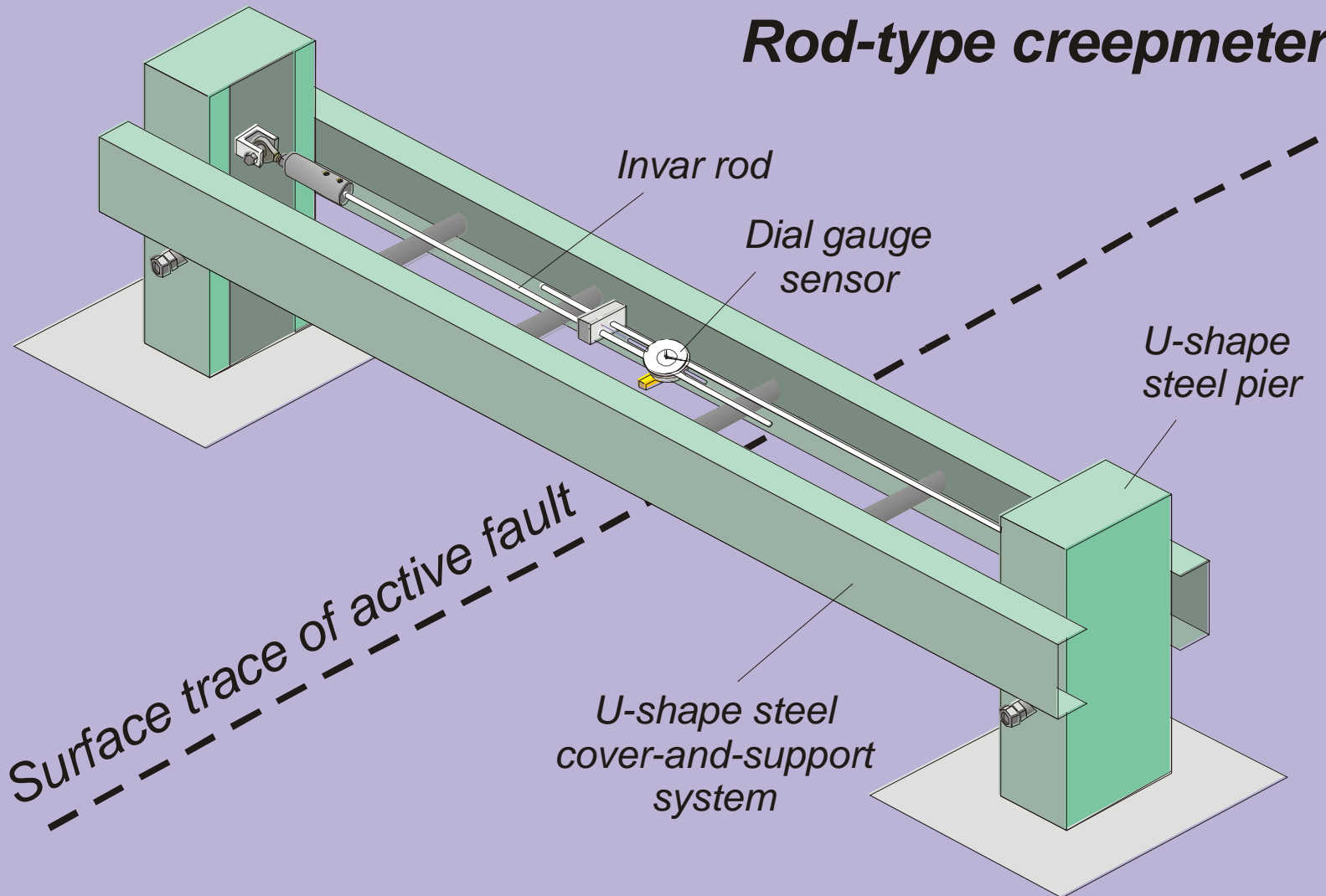
(after Angelier et al., 1999)

Creepmeter Record

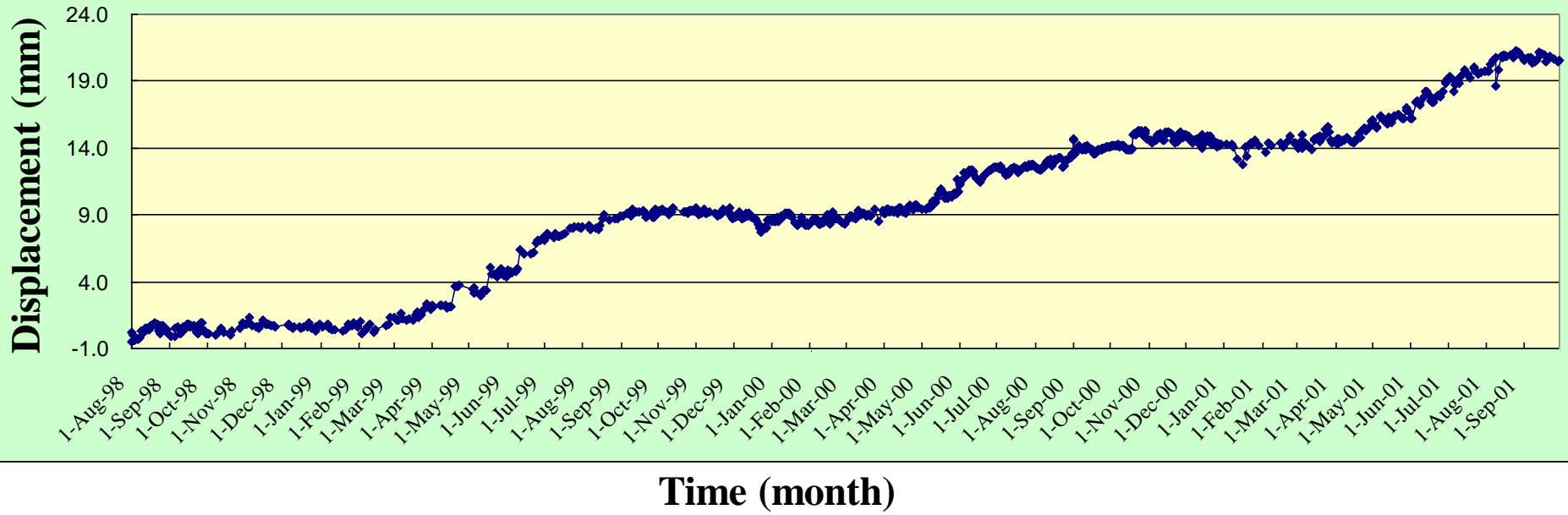


a

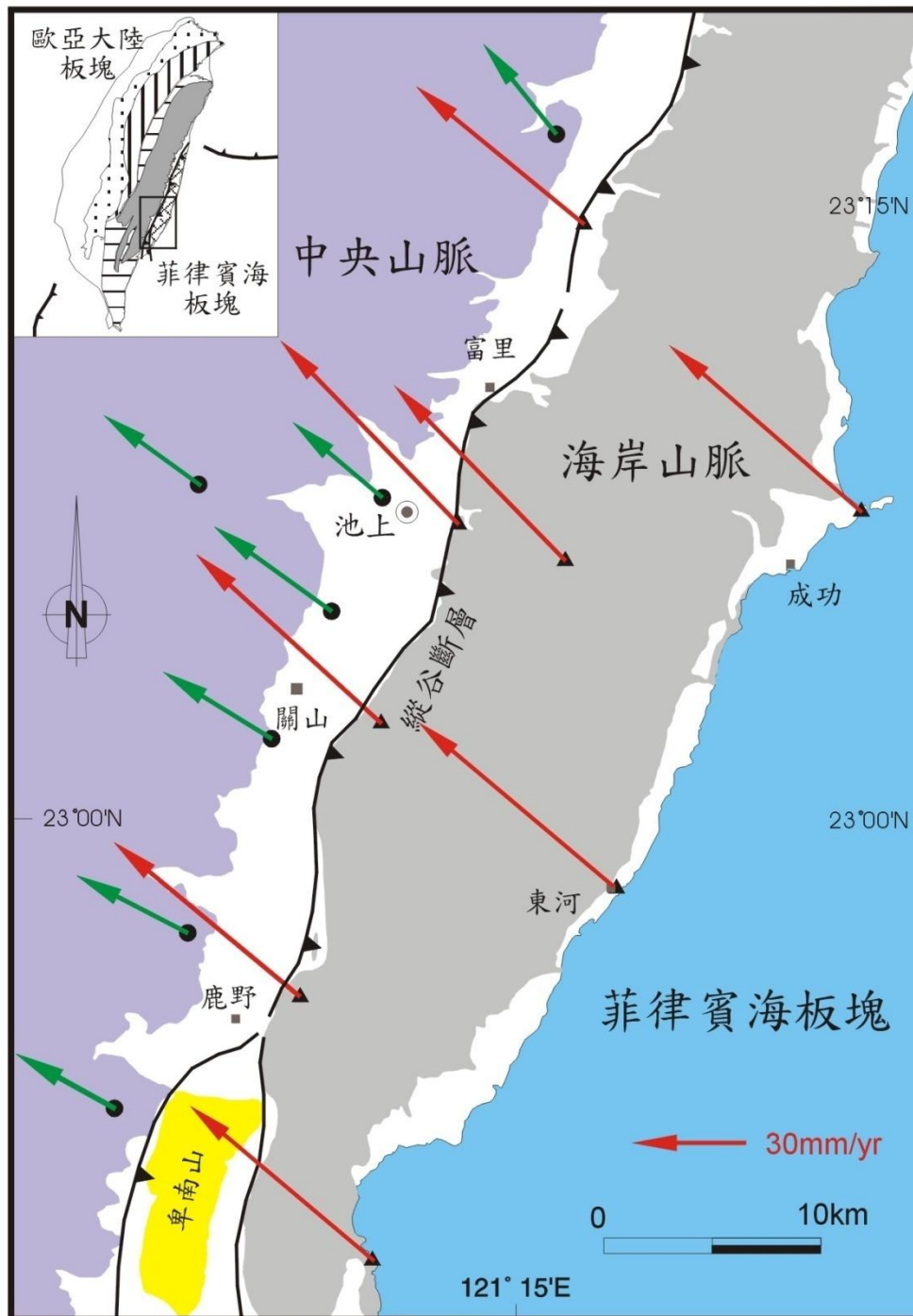
Rod-type creepmeter



Chinyuan CHIH005

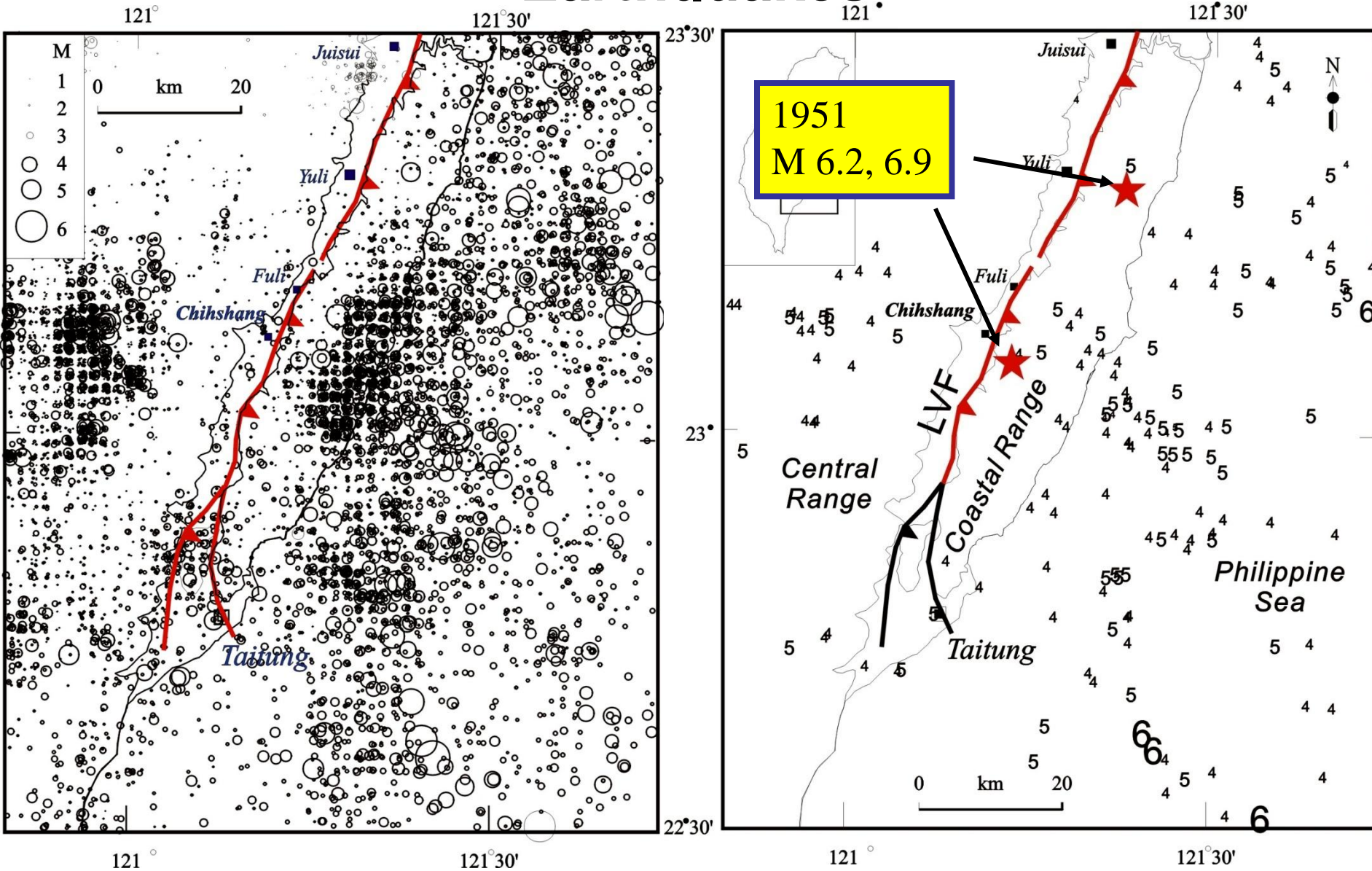


Recent GPS measurement (1991-1996)

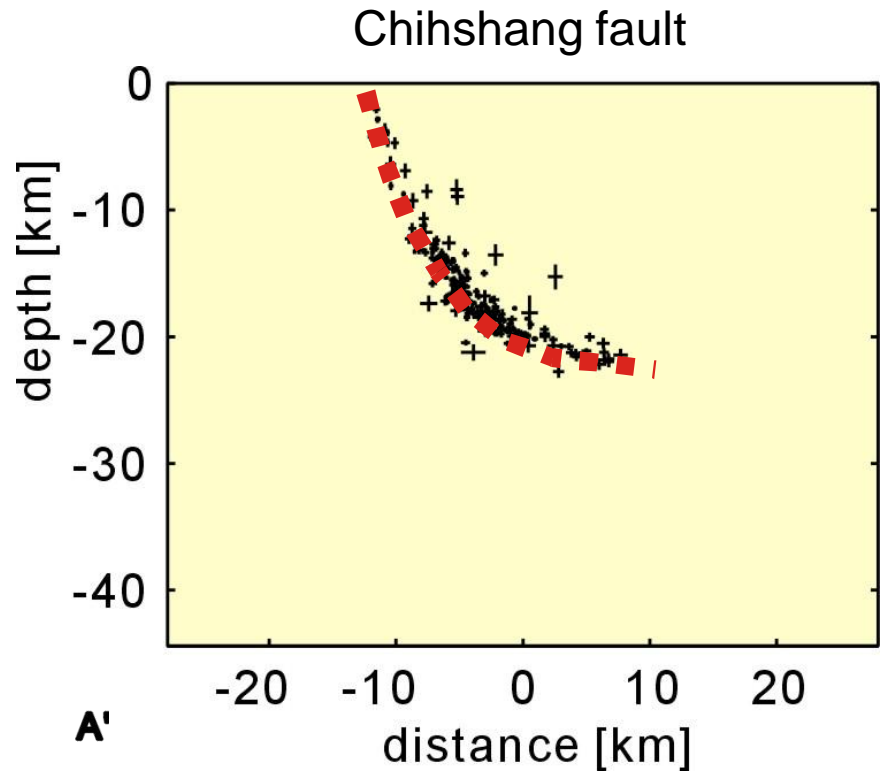
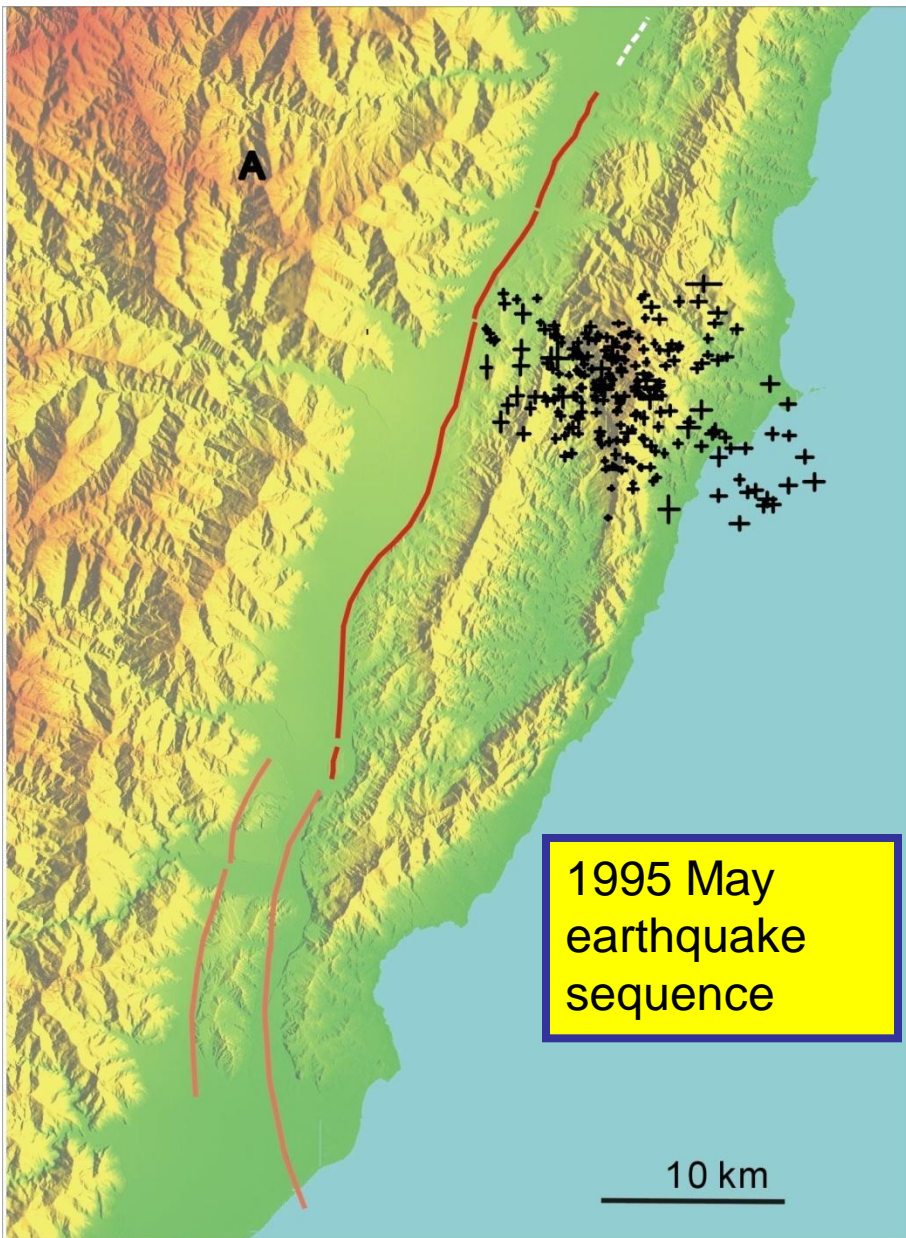


(after Yu et al., 1997)

Recent Seismicity and Historic Earthquakes

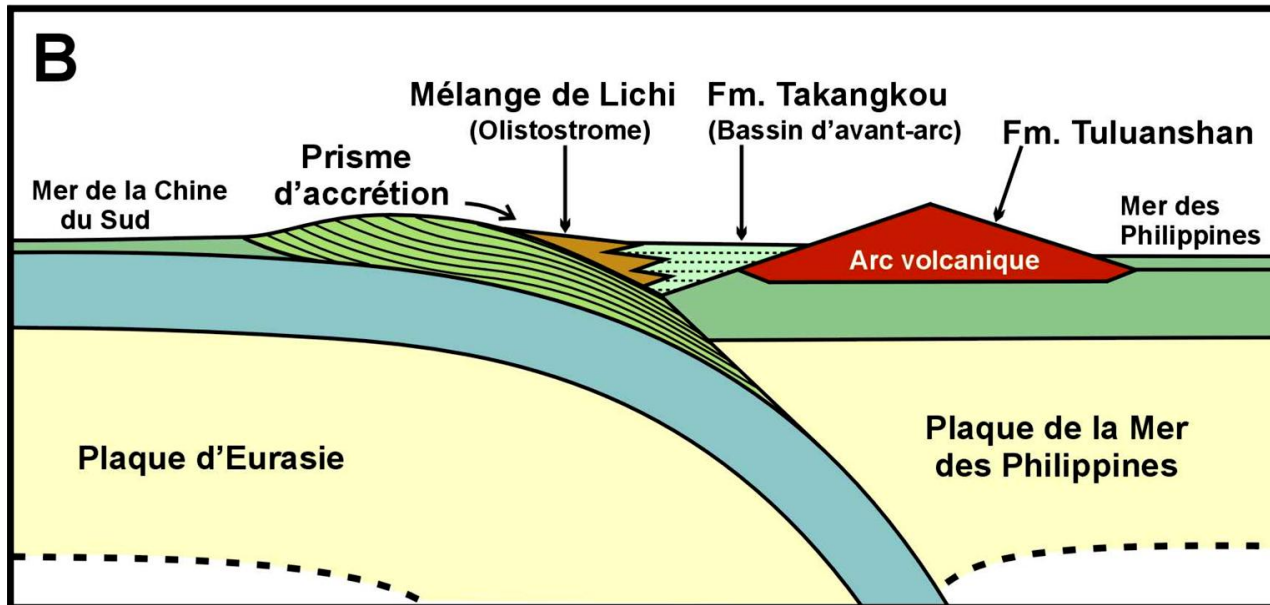
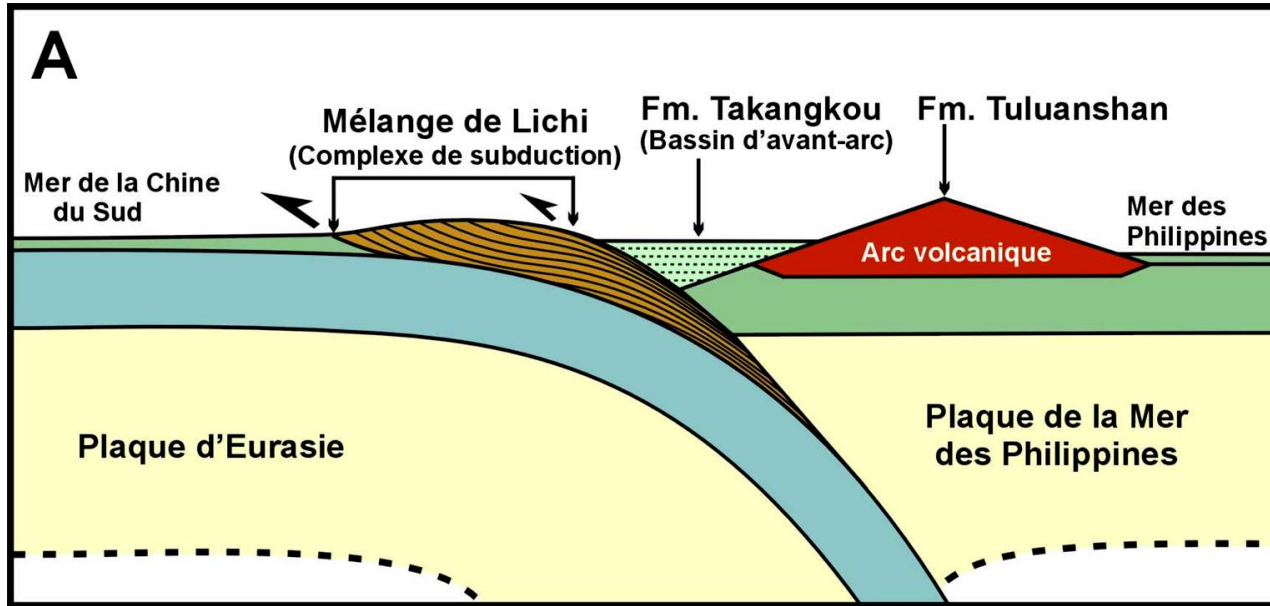


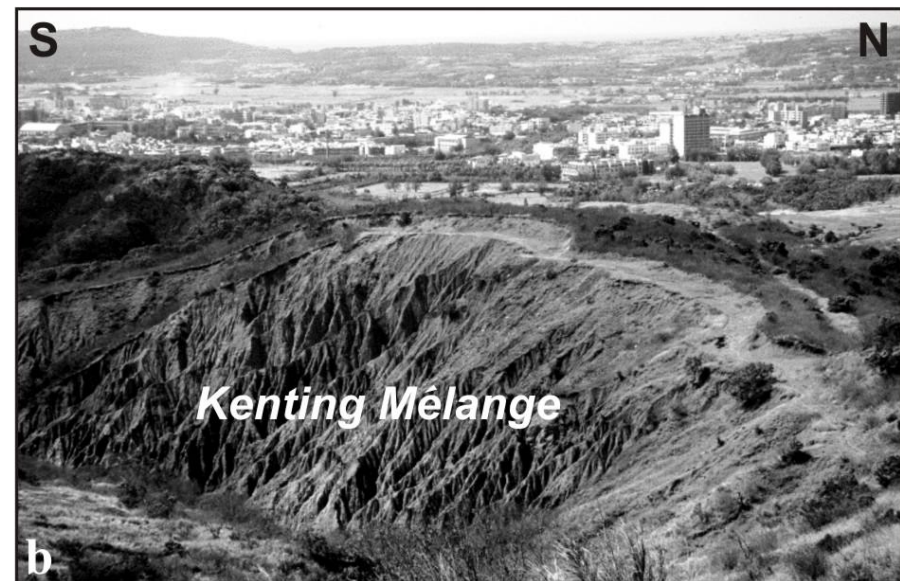
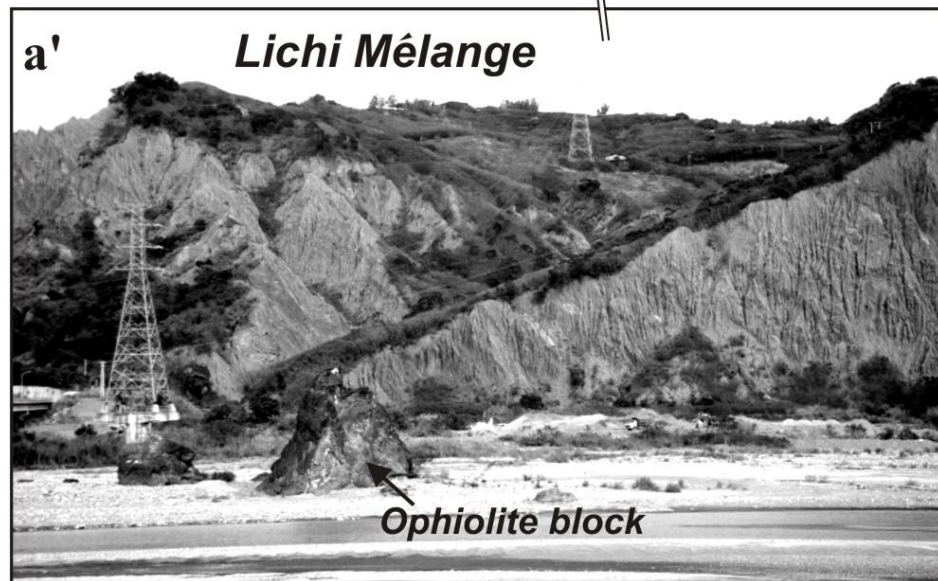
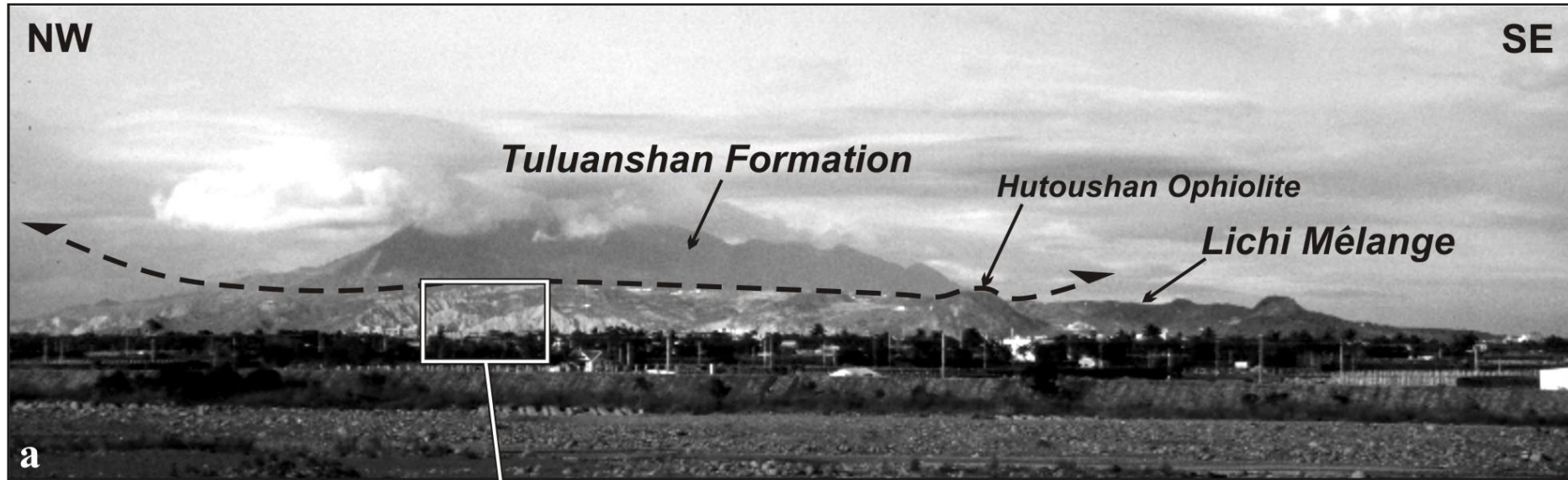
The Chihshang fault and Micro-earthquakes



(Rau et al., person. comm.)

Origin of the Lichi Melange

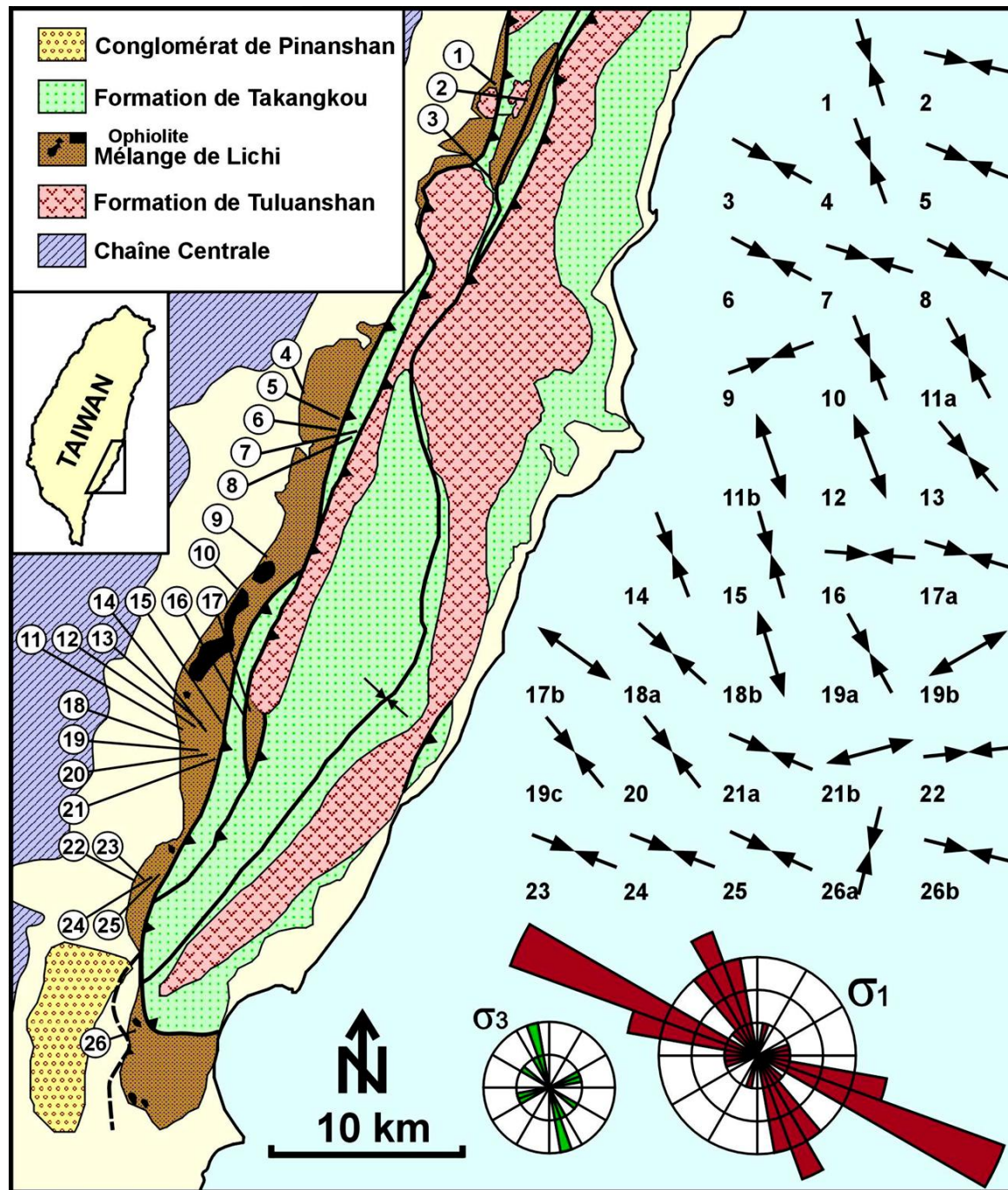




Typical outcrops of the Lichi (a and a') and Kenting Mélanges (b).







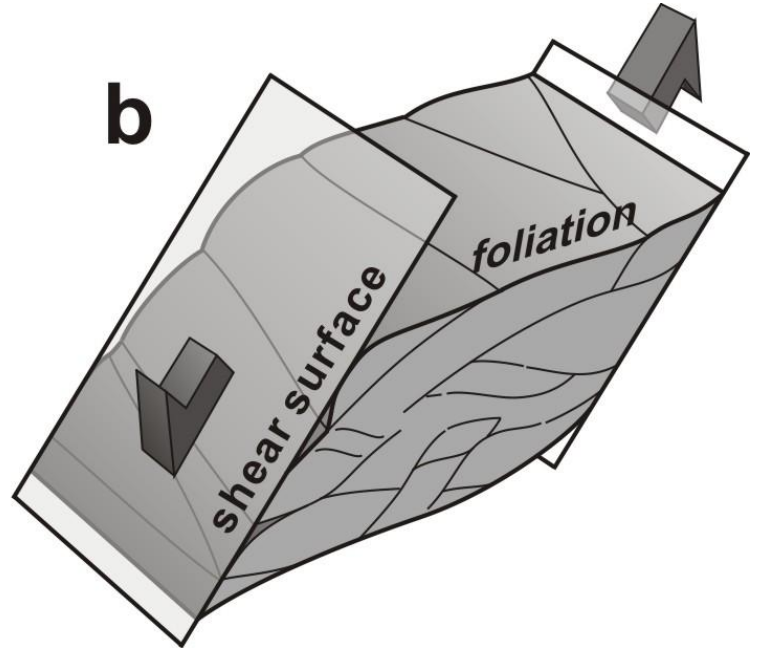
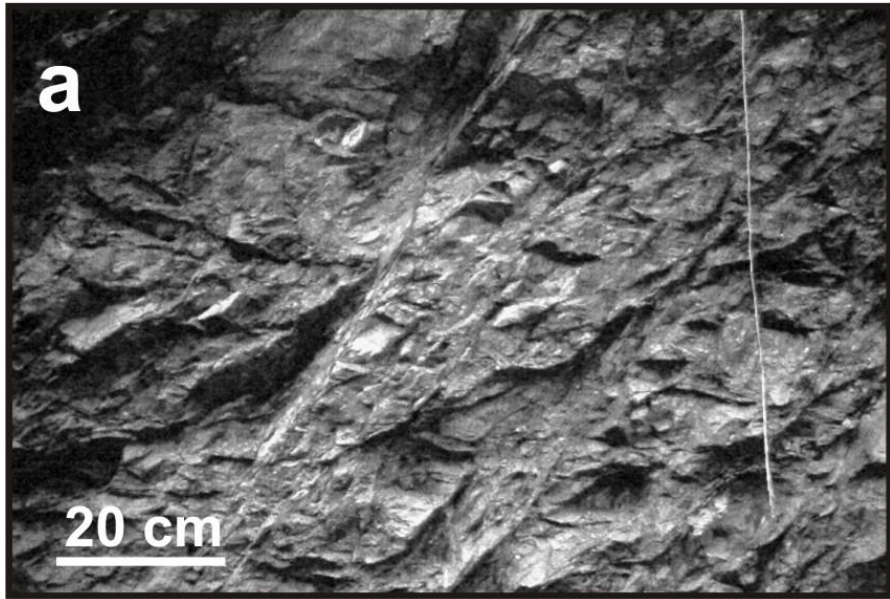
Distribution of paleostress axes reconstructed in the Lichi Melange



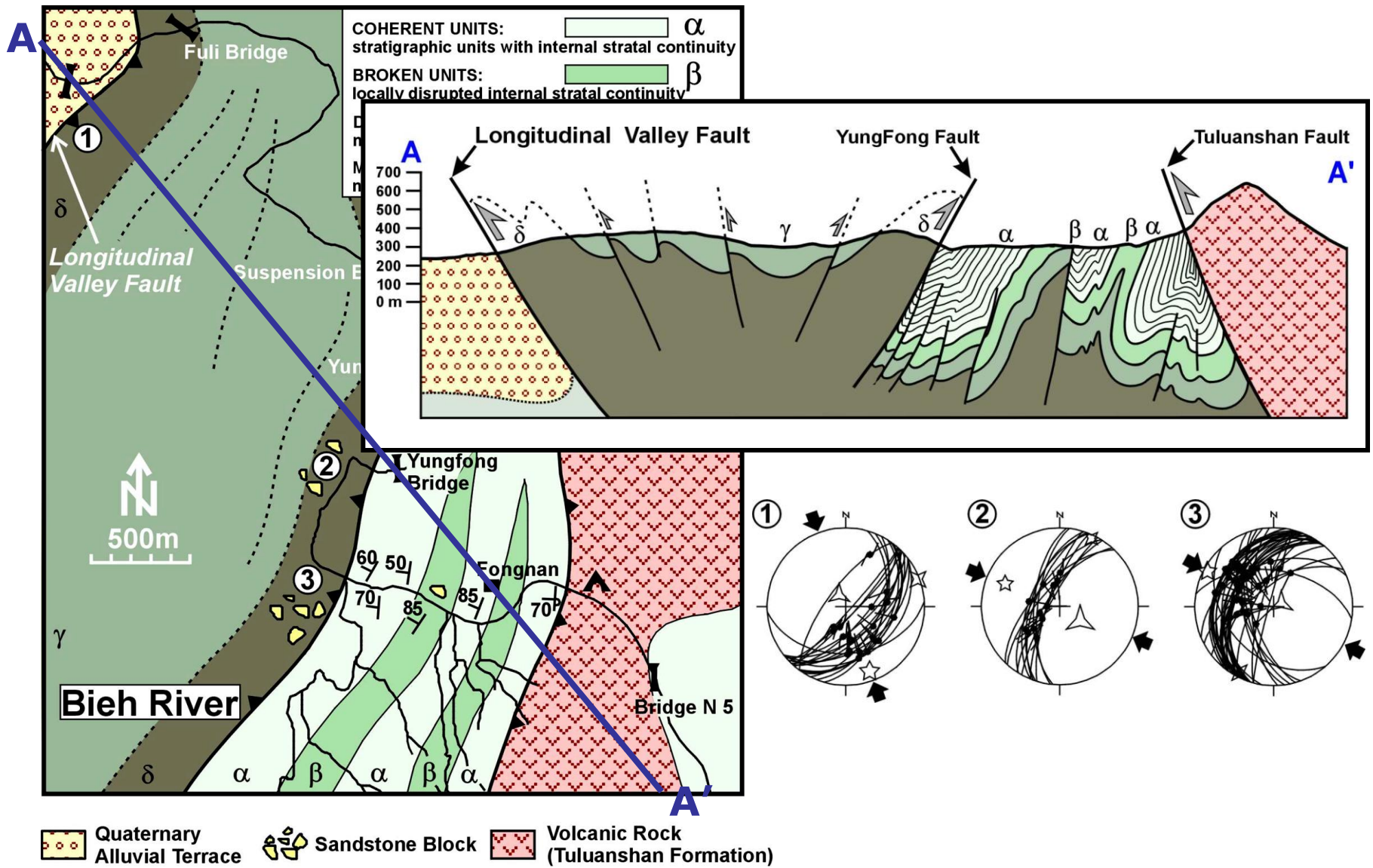






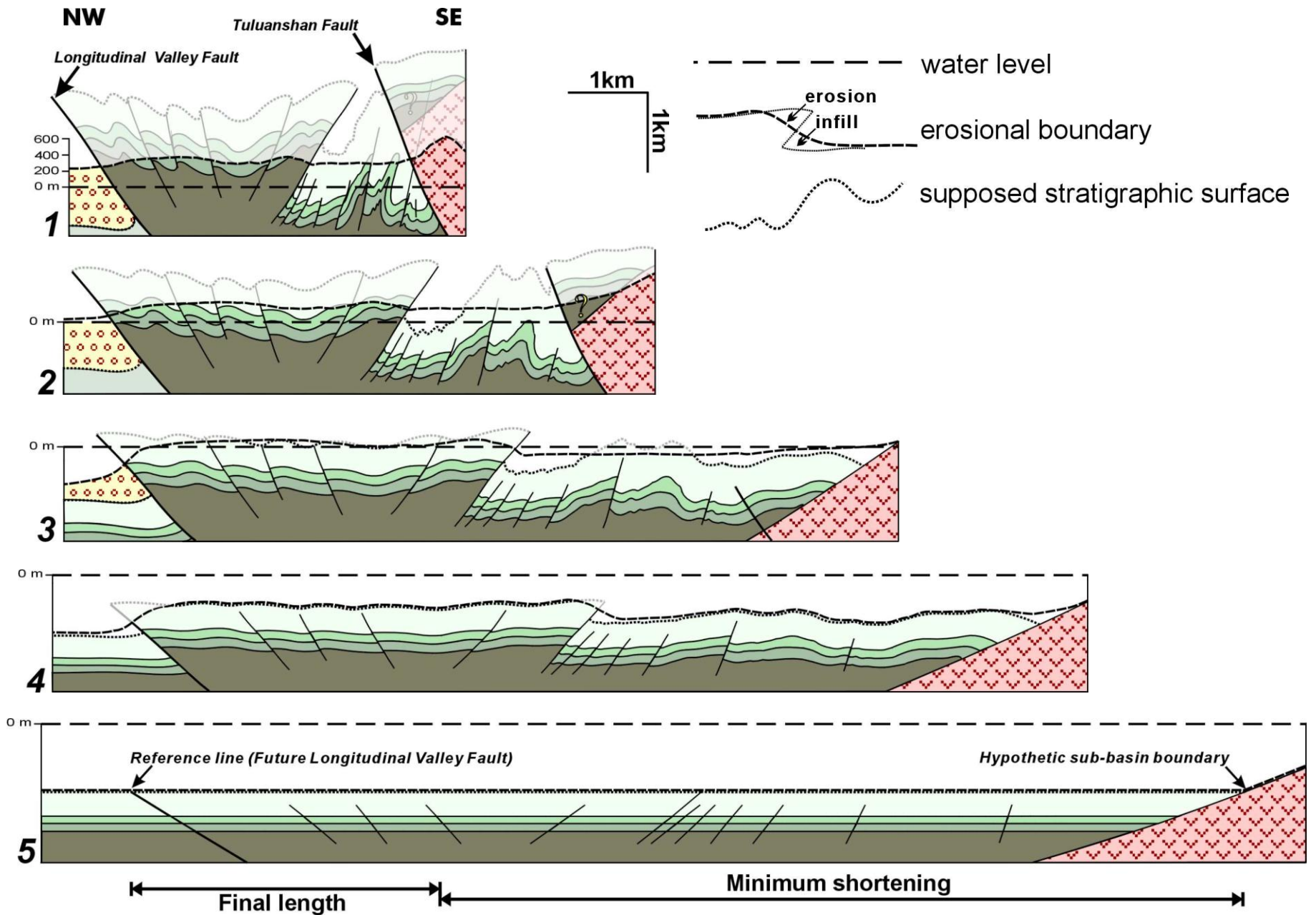


(a) Scaly foliation associated with shear deformation in the argillaceous matrix of mélangé. Note the presence of two main structural orientations that correspond to shear surfaces and foliation. (b) The sigmoid shape of scaly foliation indicates the sense of motion on the shear surfaces.



Detail geologic map of the Biehhsi valley area and geologic cross-section

Chang et al., 2000

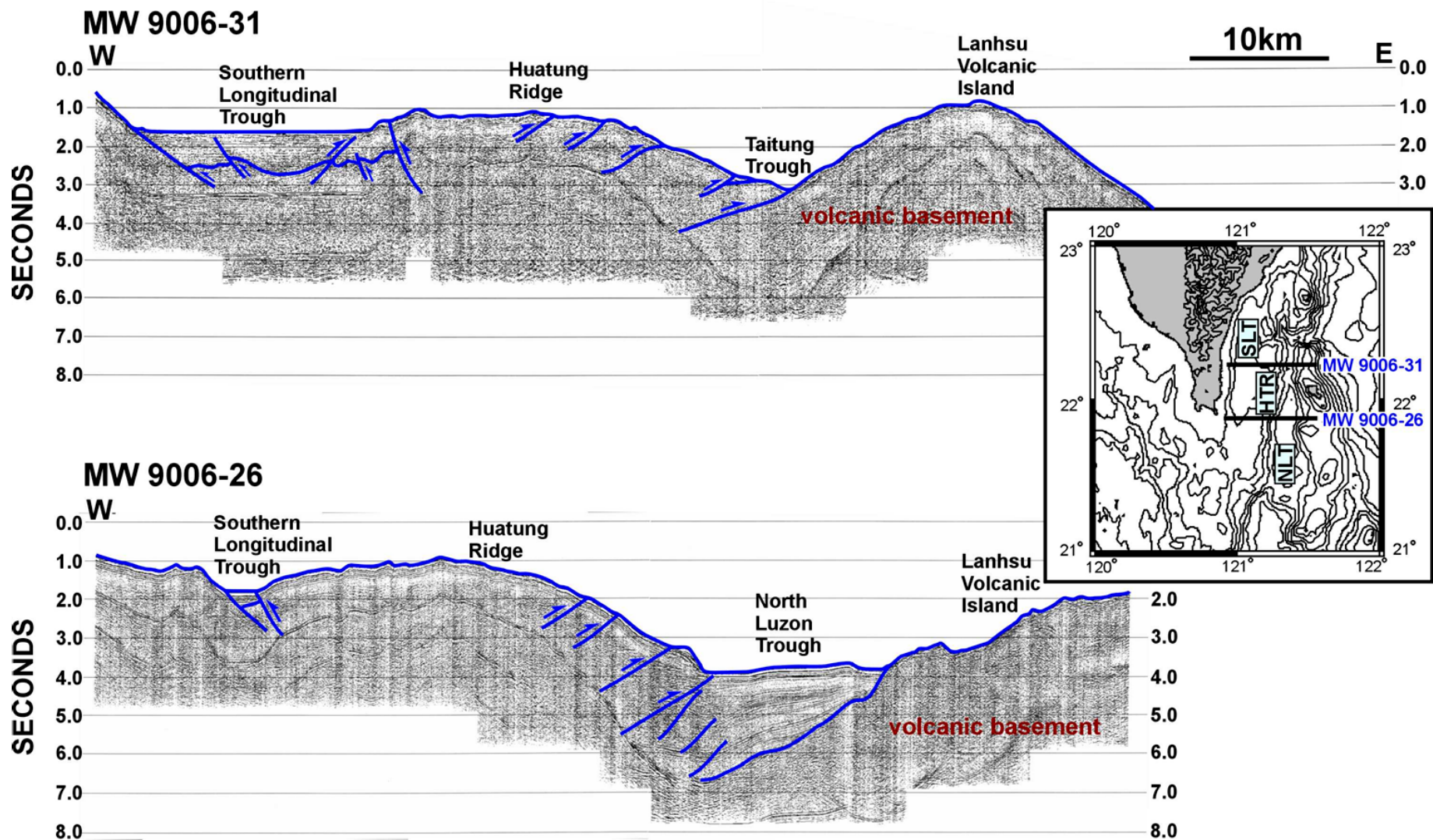


Structural evolution of the Biehhsi profile

Chang et al., 2000

Seismic profiles over the Huatung Ridge

(data collected from cruise MW9006 of the R/V Moana Wave in 1990)



Structural evolution of the Lichi Melange and the Longitudinal Valley Fault

