

L'extension (2)



Faille normale de Campo Felice (Italie)

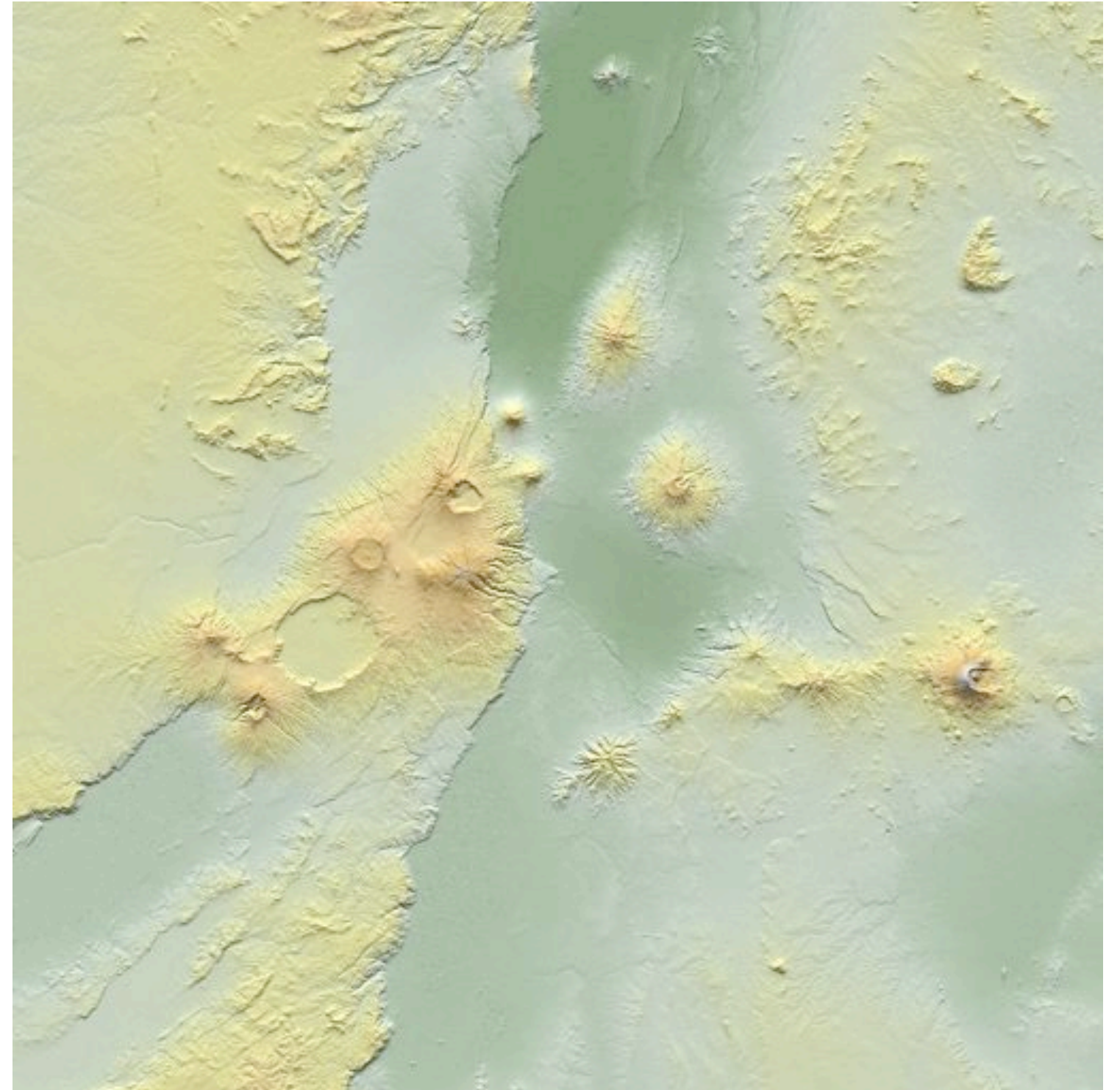
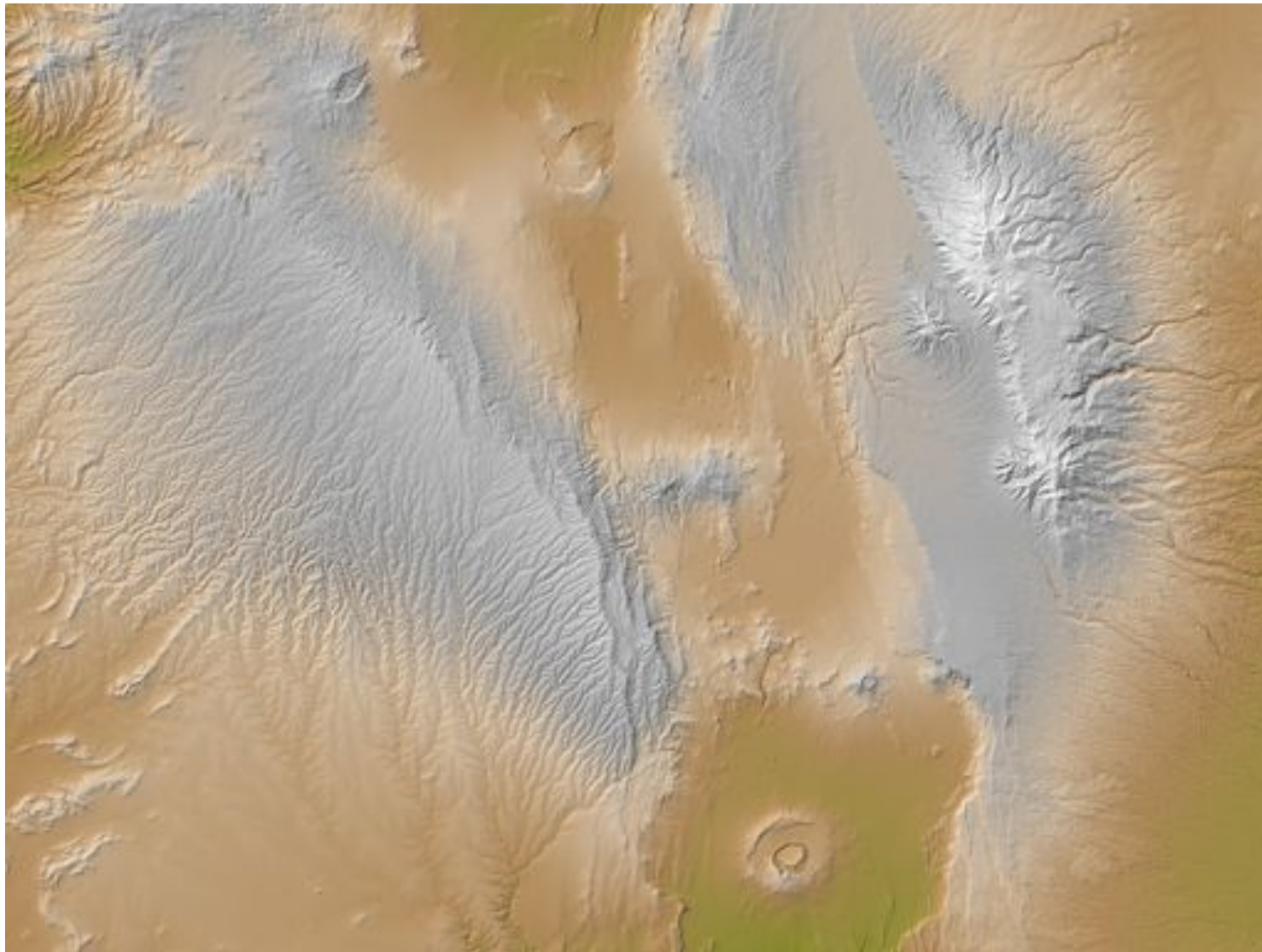
Photo : Y. Gaudemer 2007



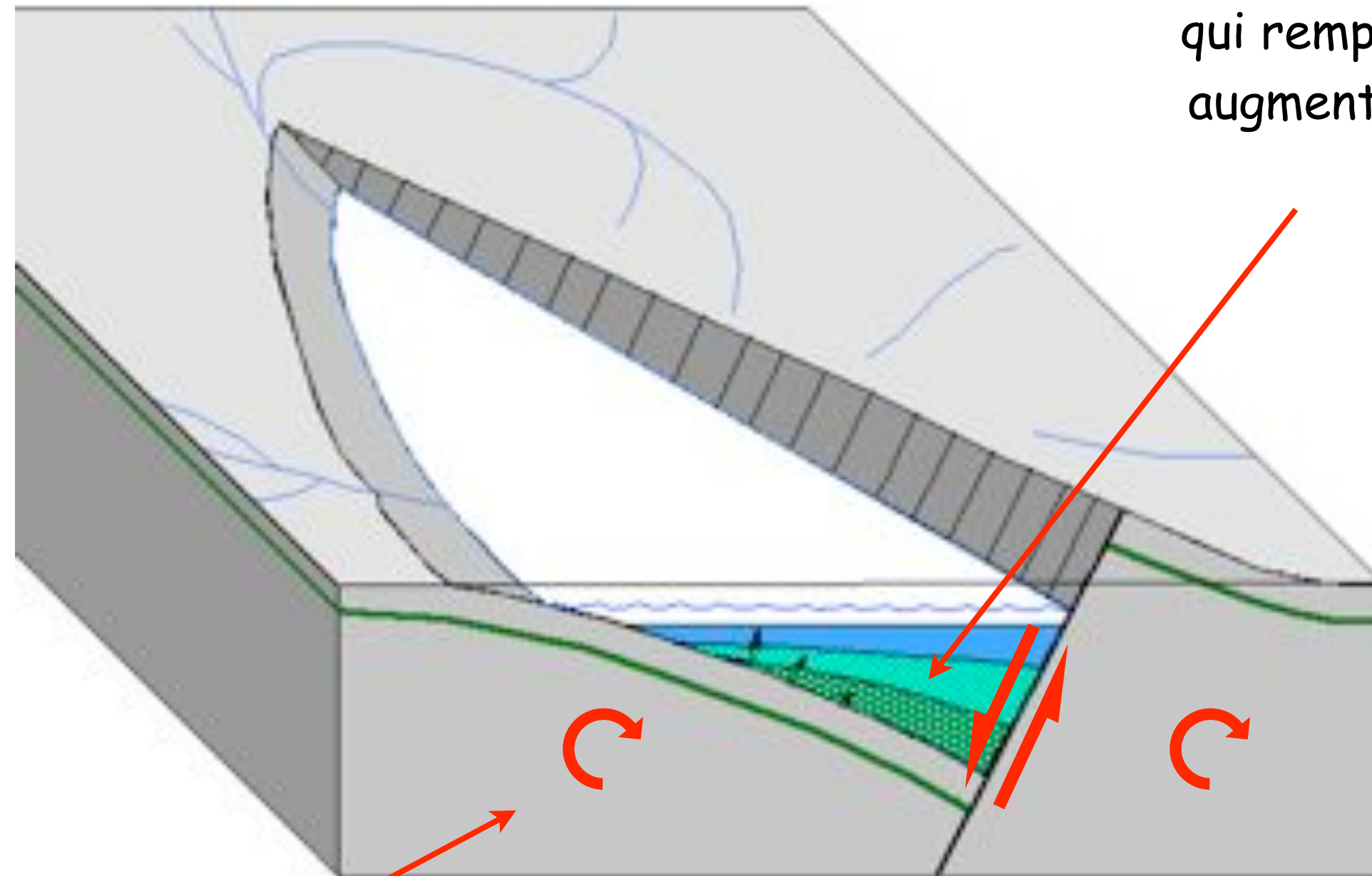
Failles conjuguées
(à toutes les échelles)



Mais il n'y a pas toujours symétrie



Demi-graben



Le pendage des sédiments
qui remplissent le bassin
augmente avec le temps

Basculement des blocs

<http://geology.rutgers.edu/103web/Newarkbasin/halfgraben.html>

Versant à pente faible contrôlé par l'érosion et la sédimentation



Death Valley



Versant abrupt contrôlé par une faille normale active

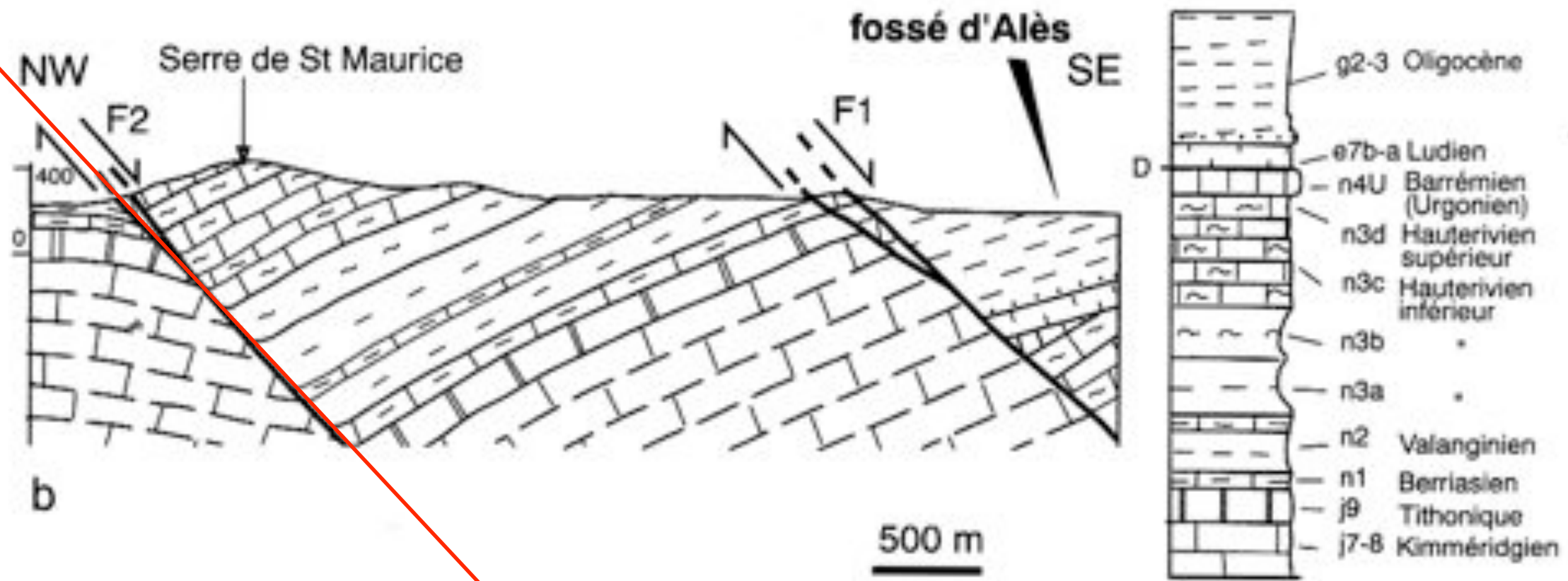
Fissures verticales en surface



<http://www.raunvis.hi.is/Jardfr/thingvellir.jpg>

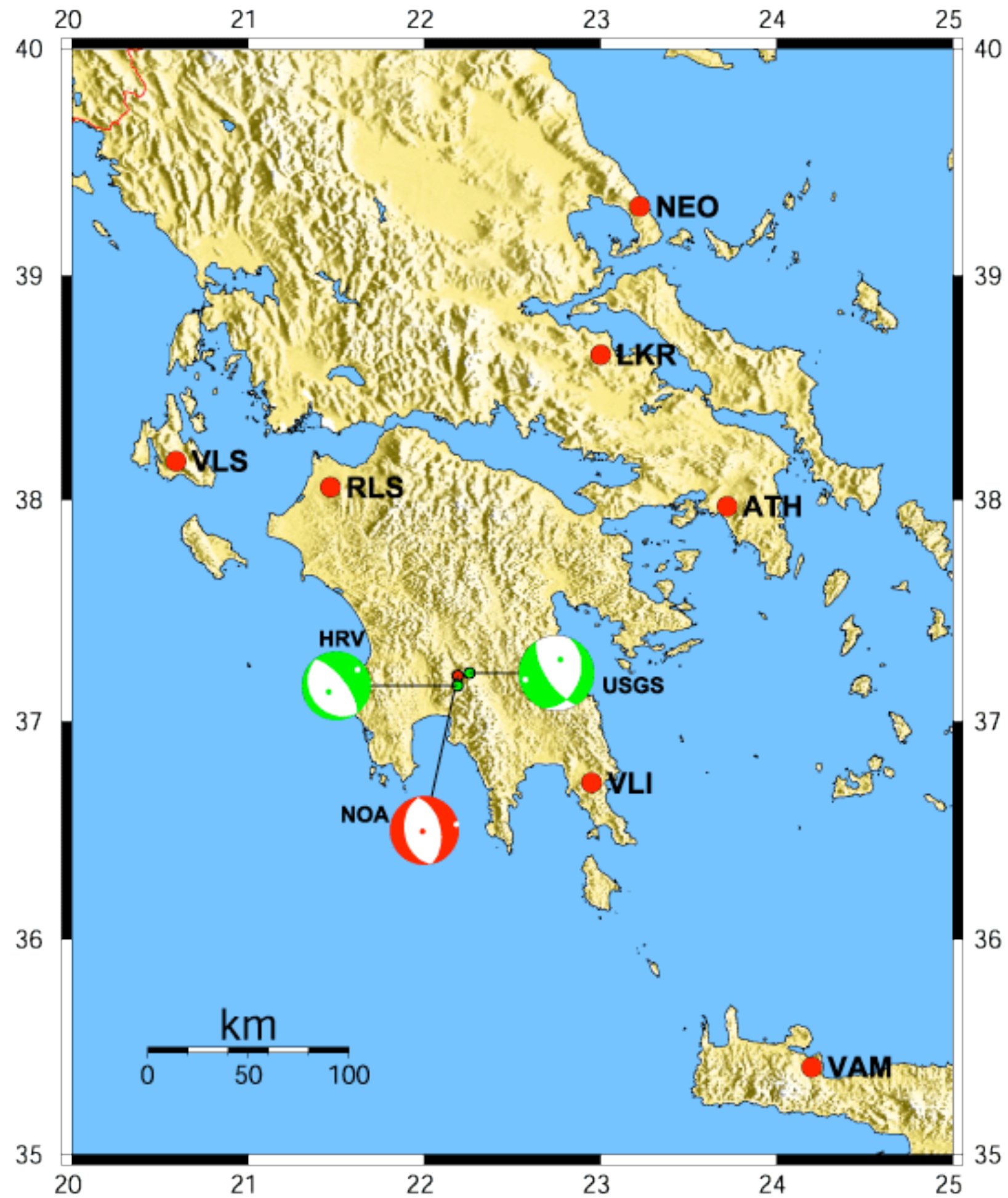
Failles normales à pendage fort dans la croûte superficielle



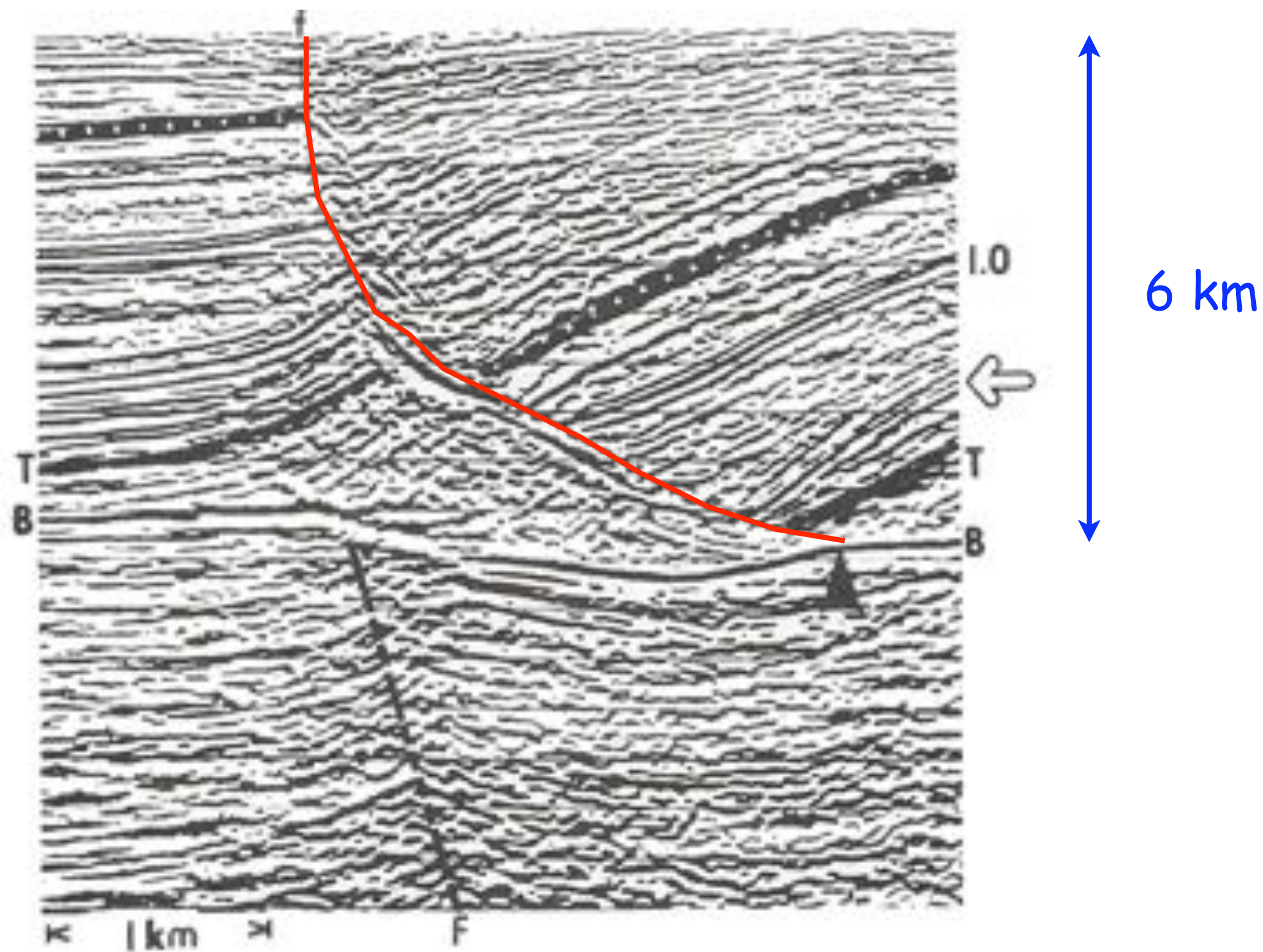


$$\delta \approx 45^\circ$$

Séisme de Kalamata



Et en profondeur ?

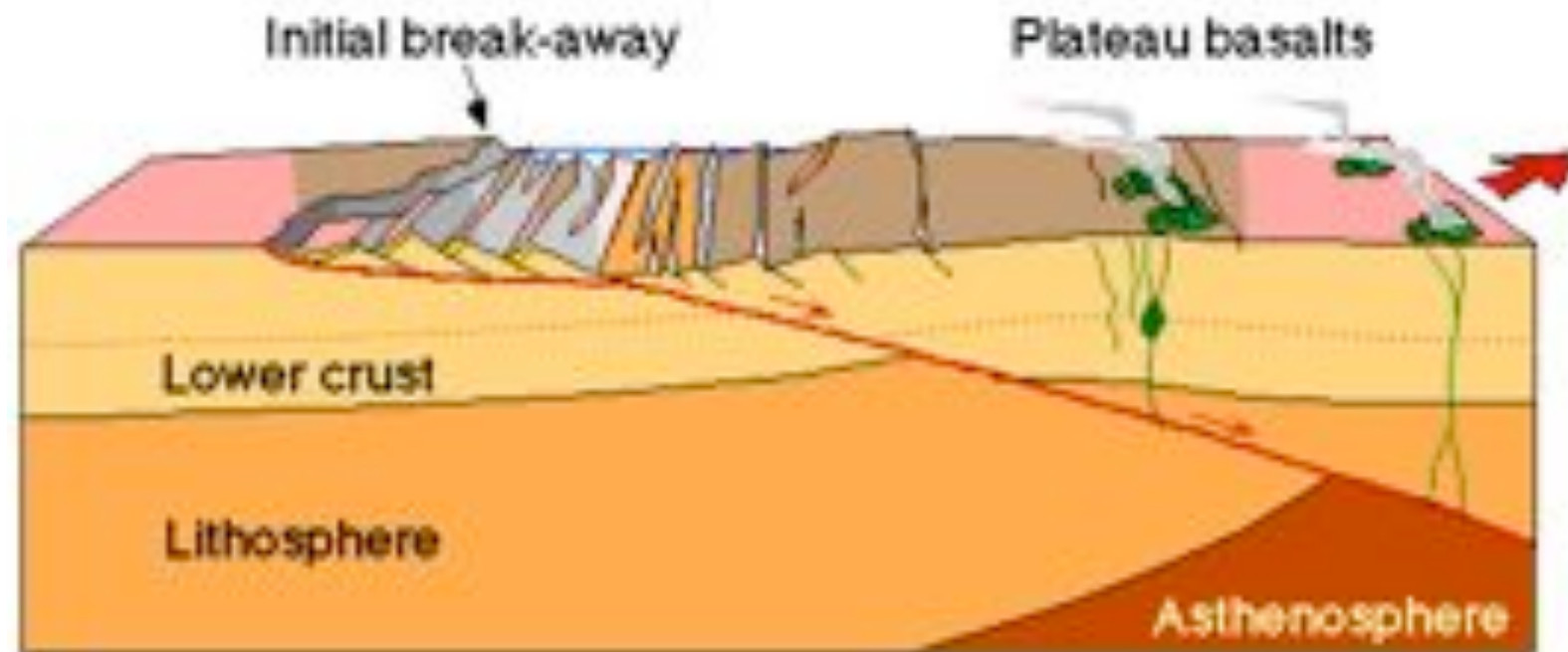


Profil sismique

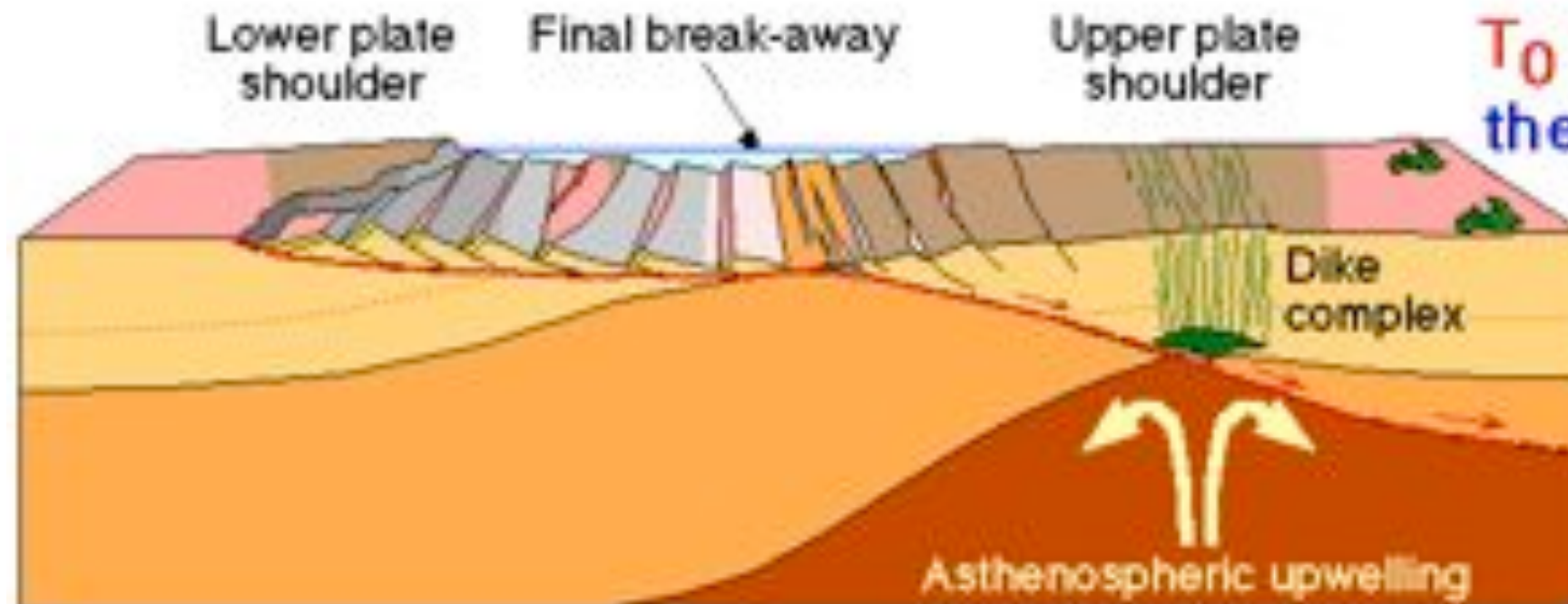
T_0 = Transtensive phase

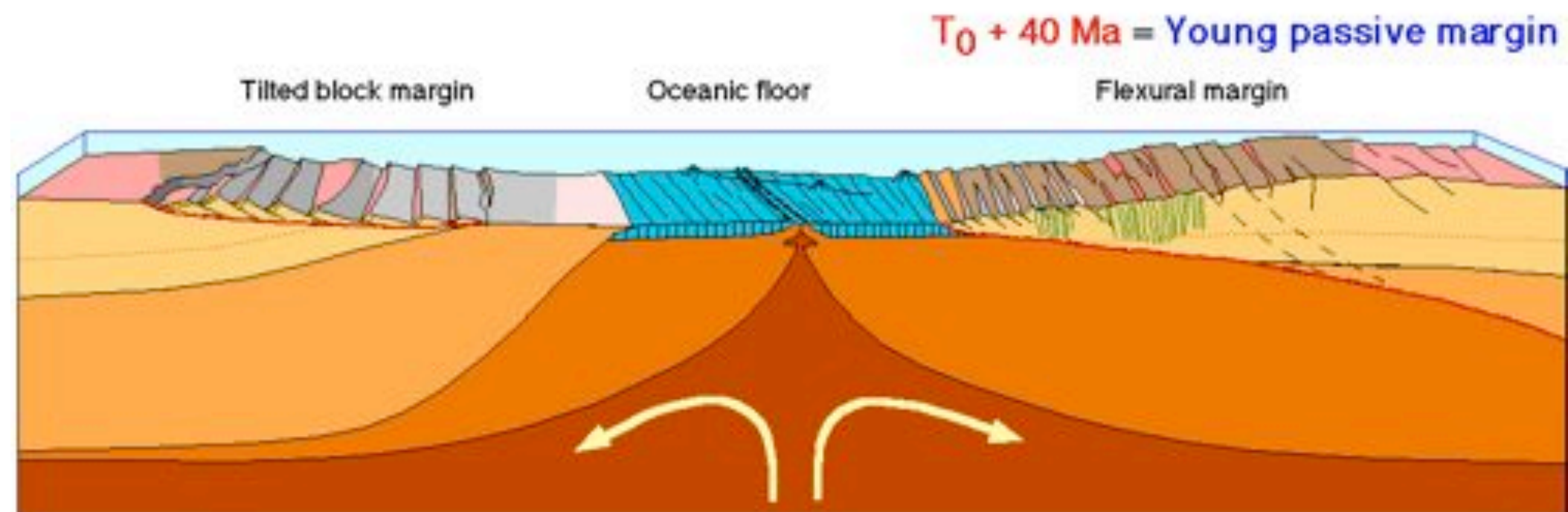
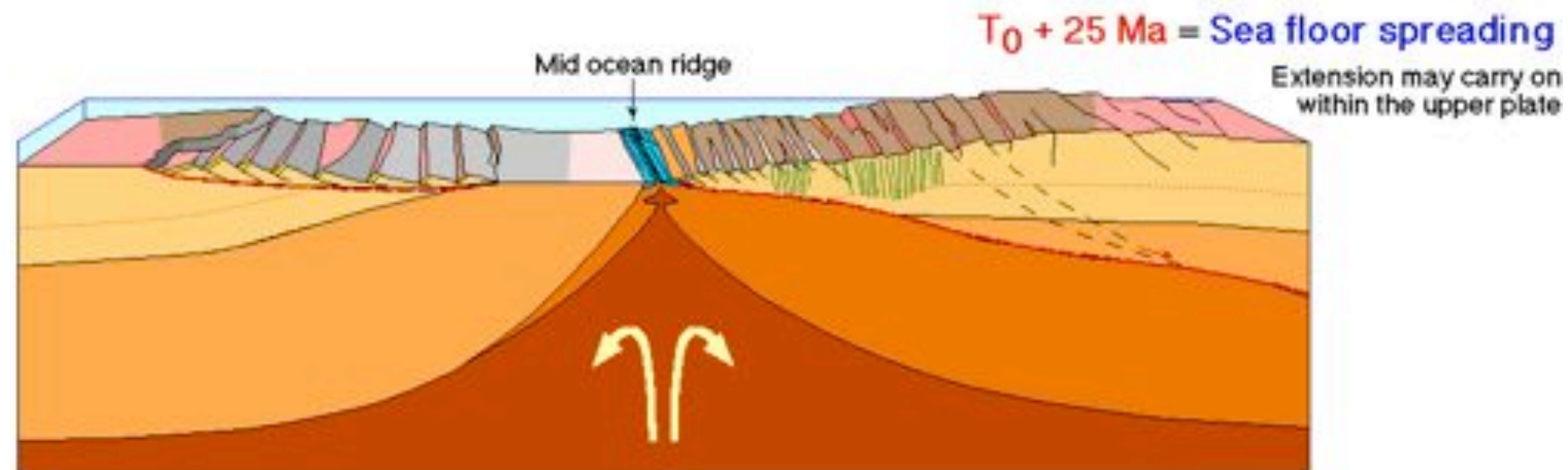
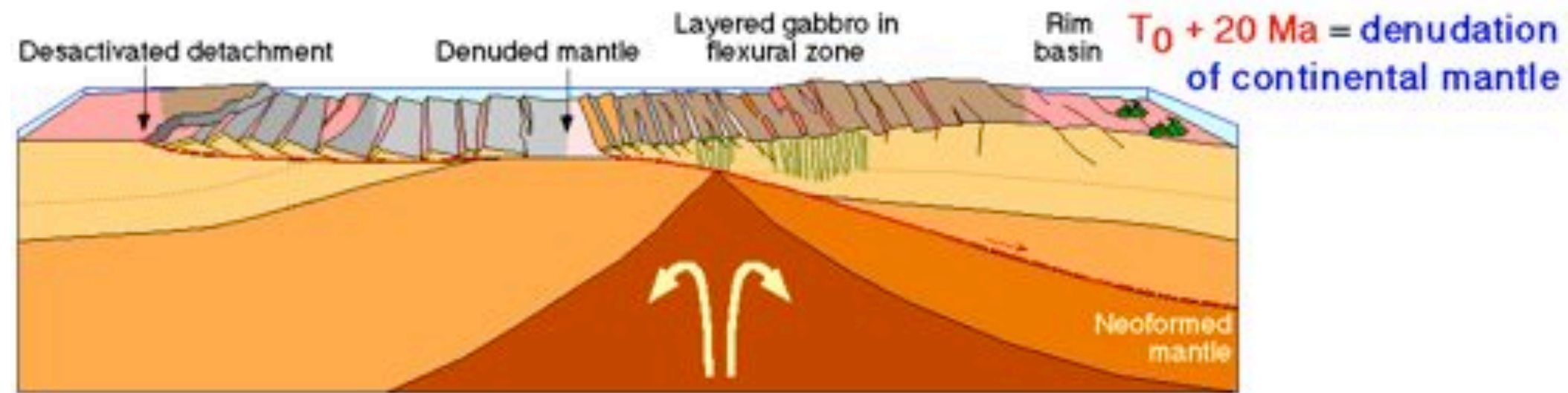


$T_0 + 10 \text{ Ma}$ = Lithospheric break-up dominated by simple shear



$T_0 + 15 \text{ Ma}$ = Asthenospheric diapir and thermal uplift, dominated by pure shear





Les décrochements



epod.usra.edu/archive/images/carrizoplain.jpg

San Andreas

La faille de San Andreas (Californie)



La Méditerranée orientale

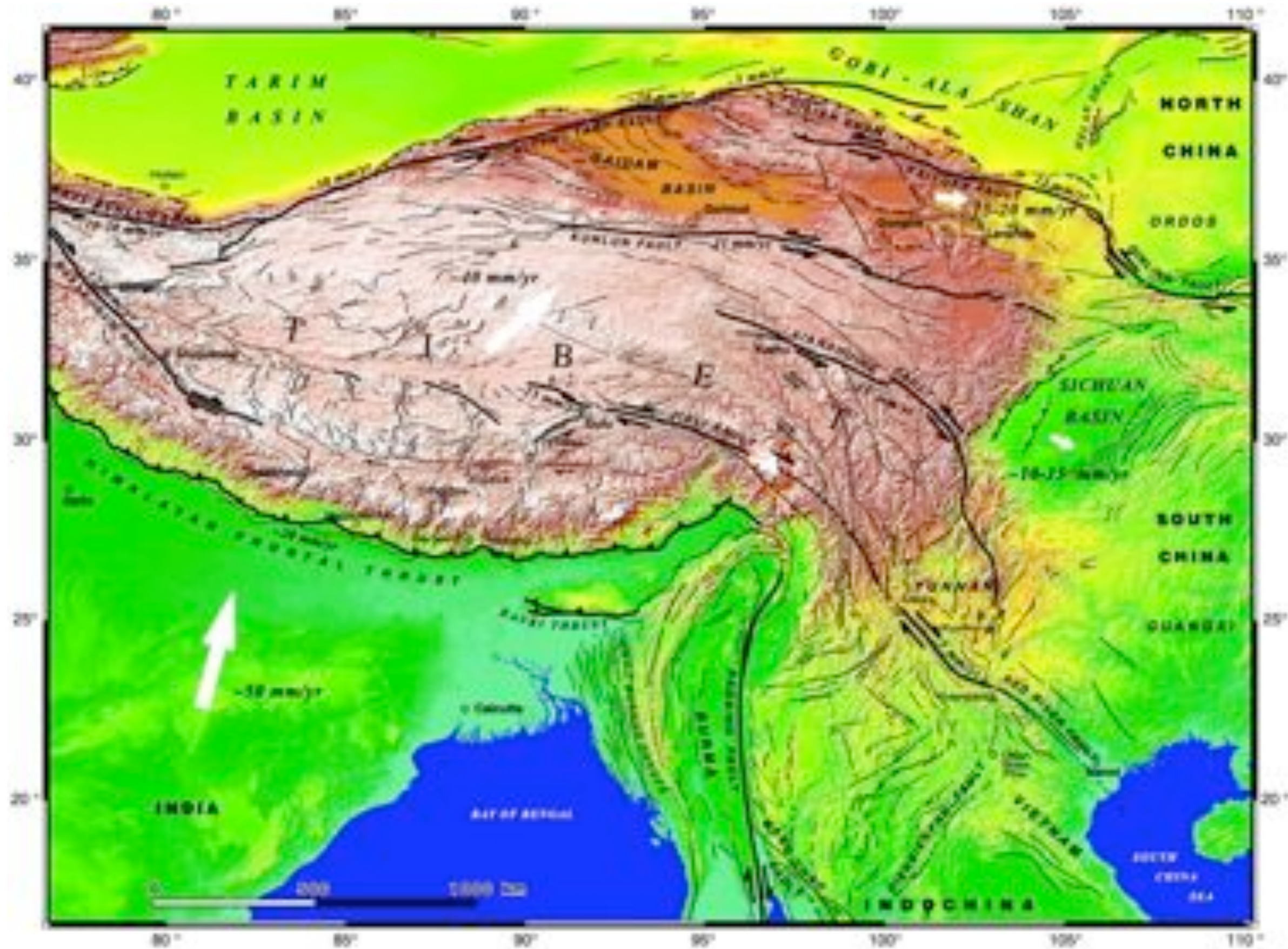


www.khas.edu.tr/kinto/earth2005/pic/ege_topo2.jpg

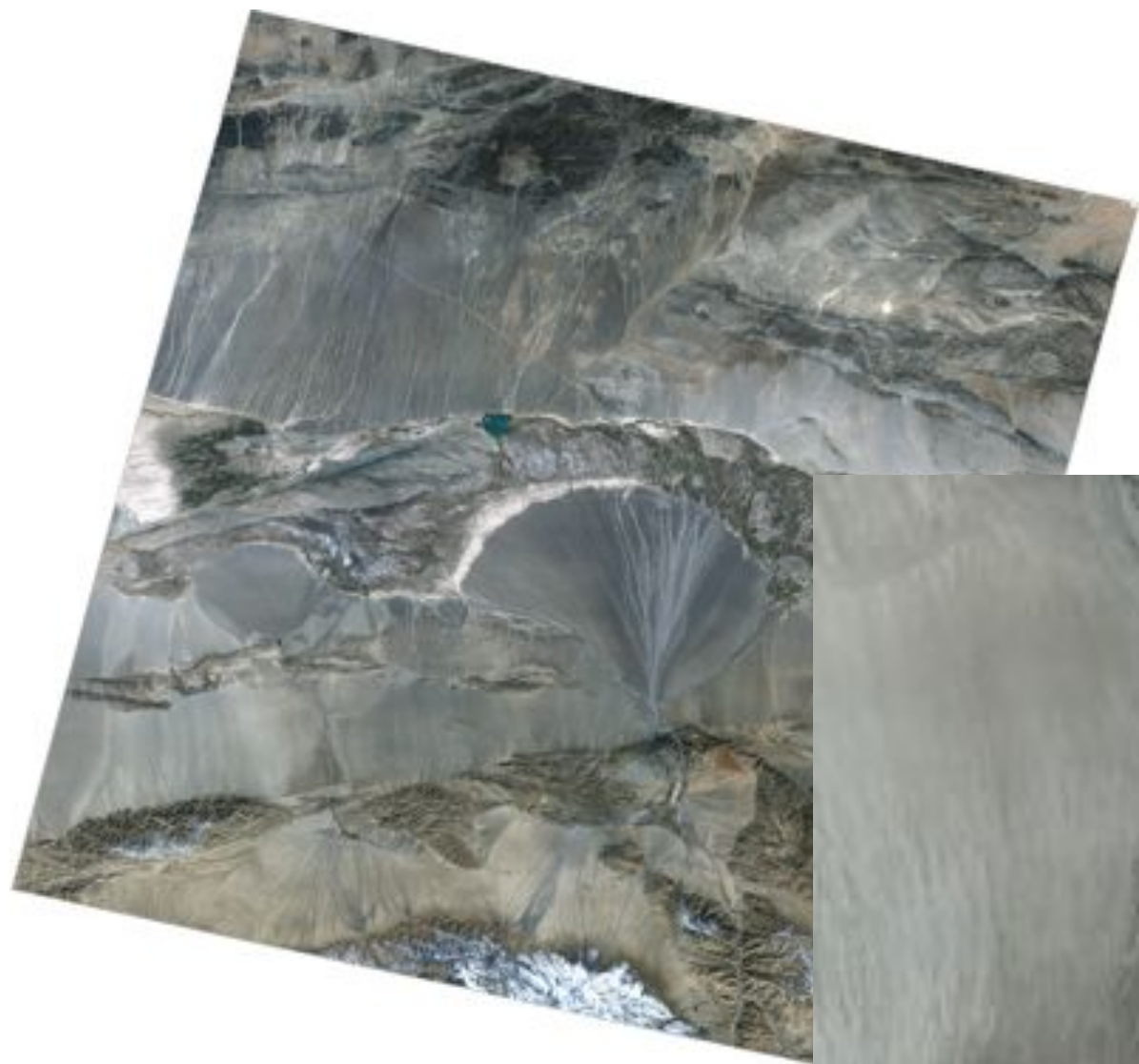
Faille du Levant



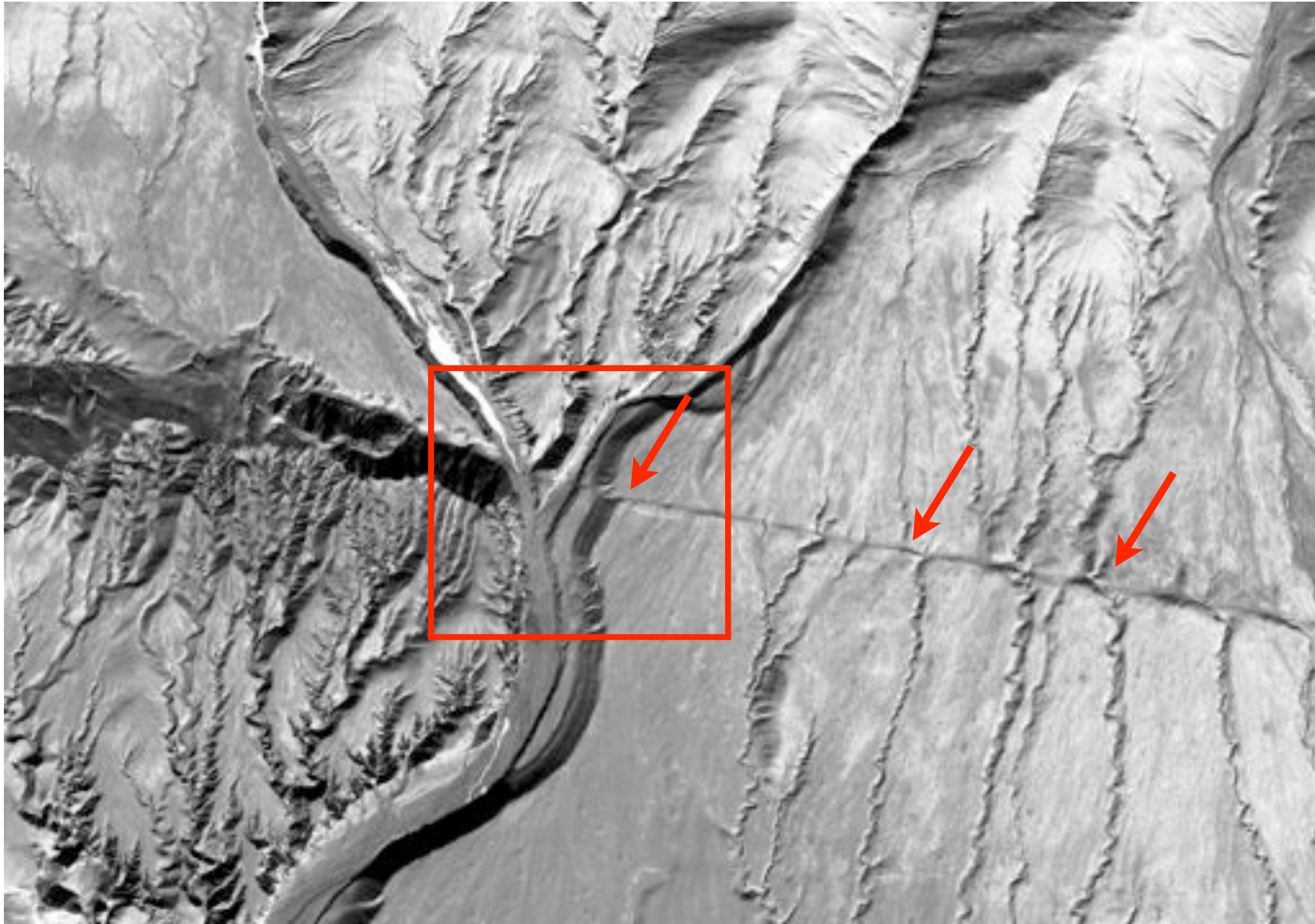
Les décrochements en Asie



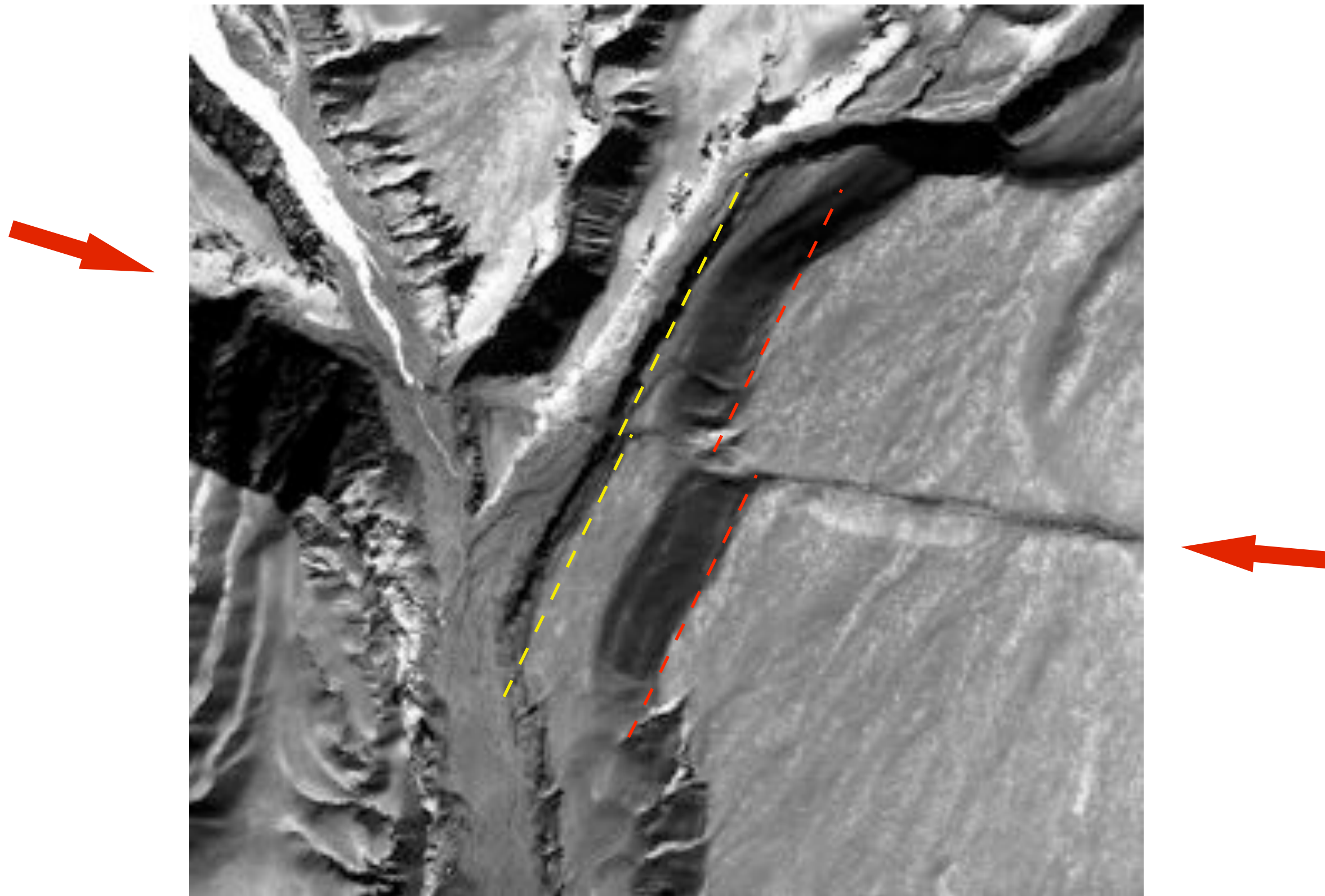
Faïlle de l'Altyn Tagh



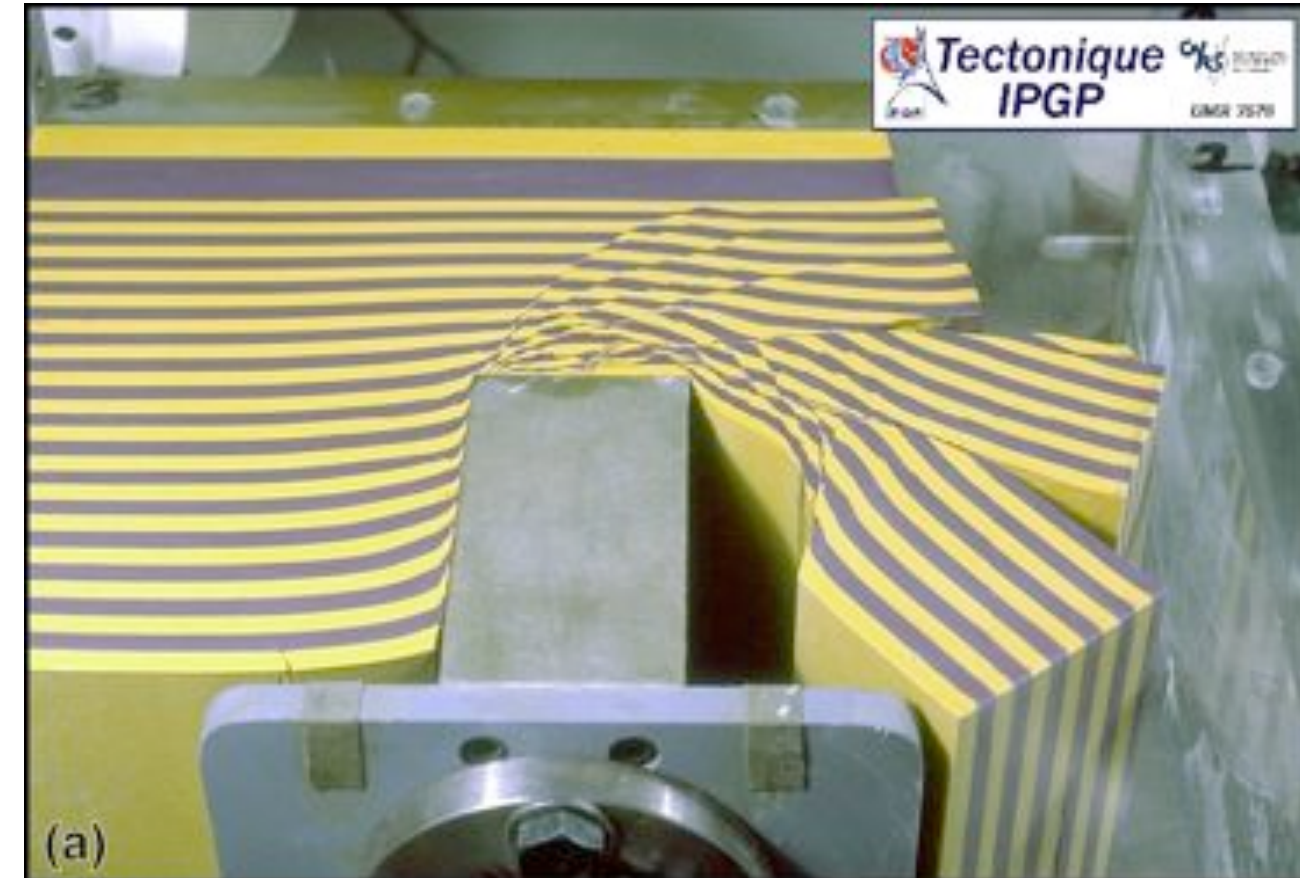
Détail de la faille du Kunlun



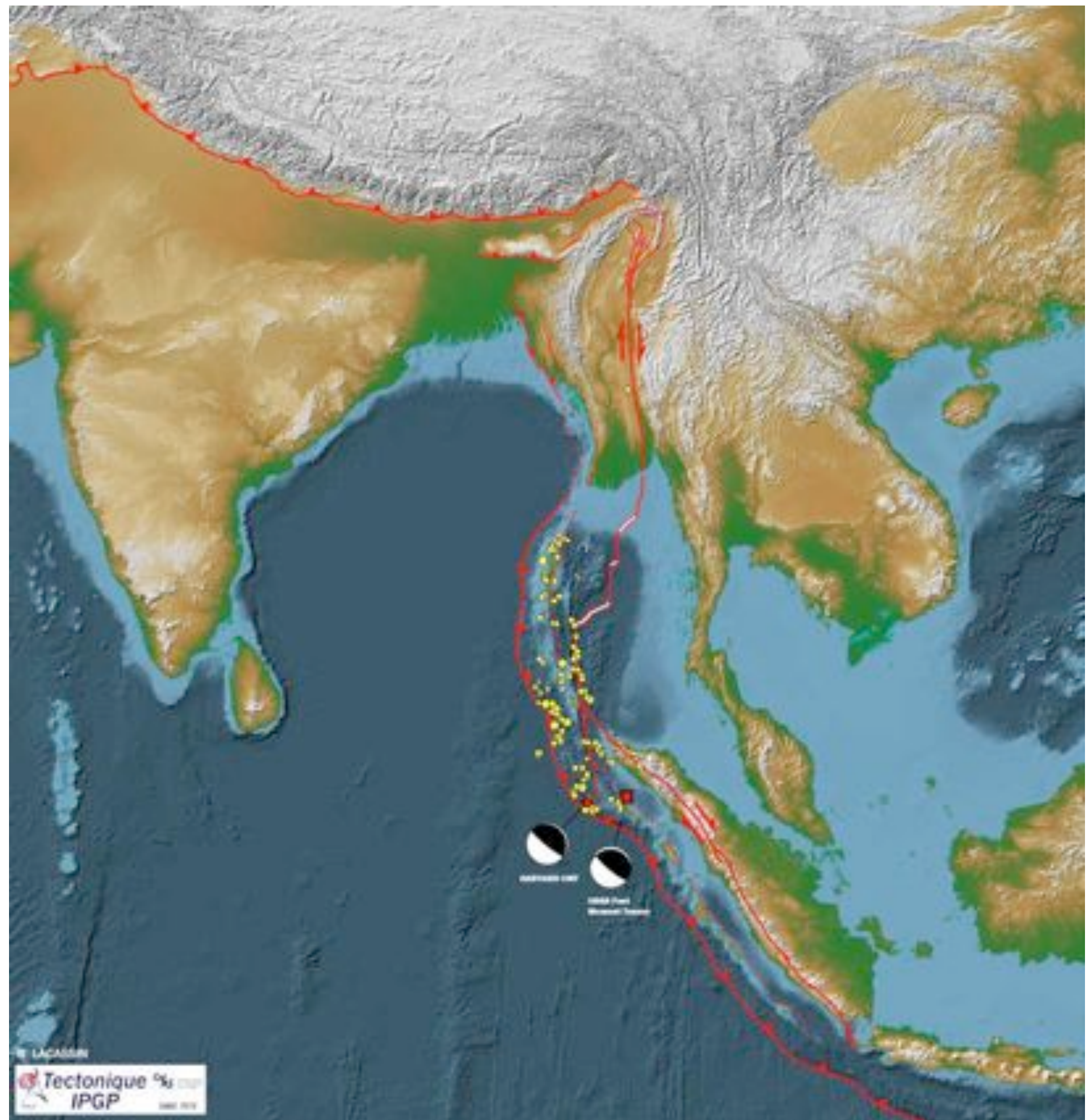
Détail de la faille du Kunlun



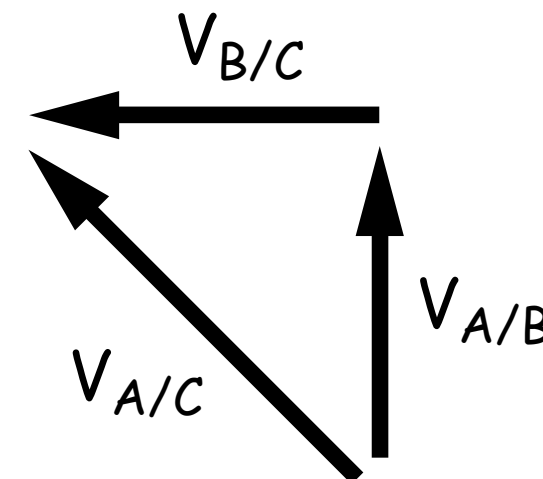
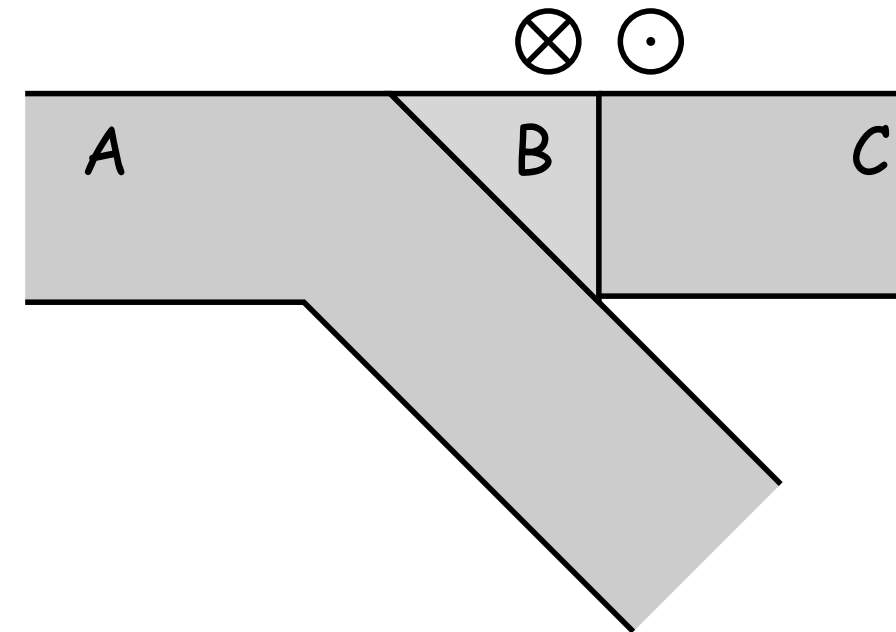
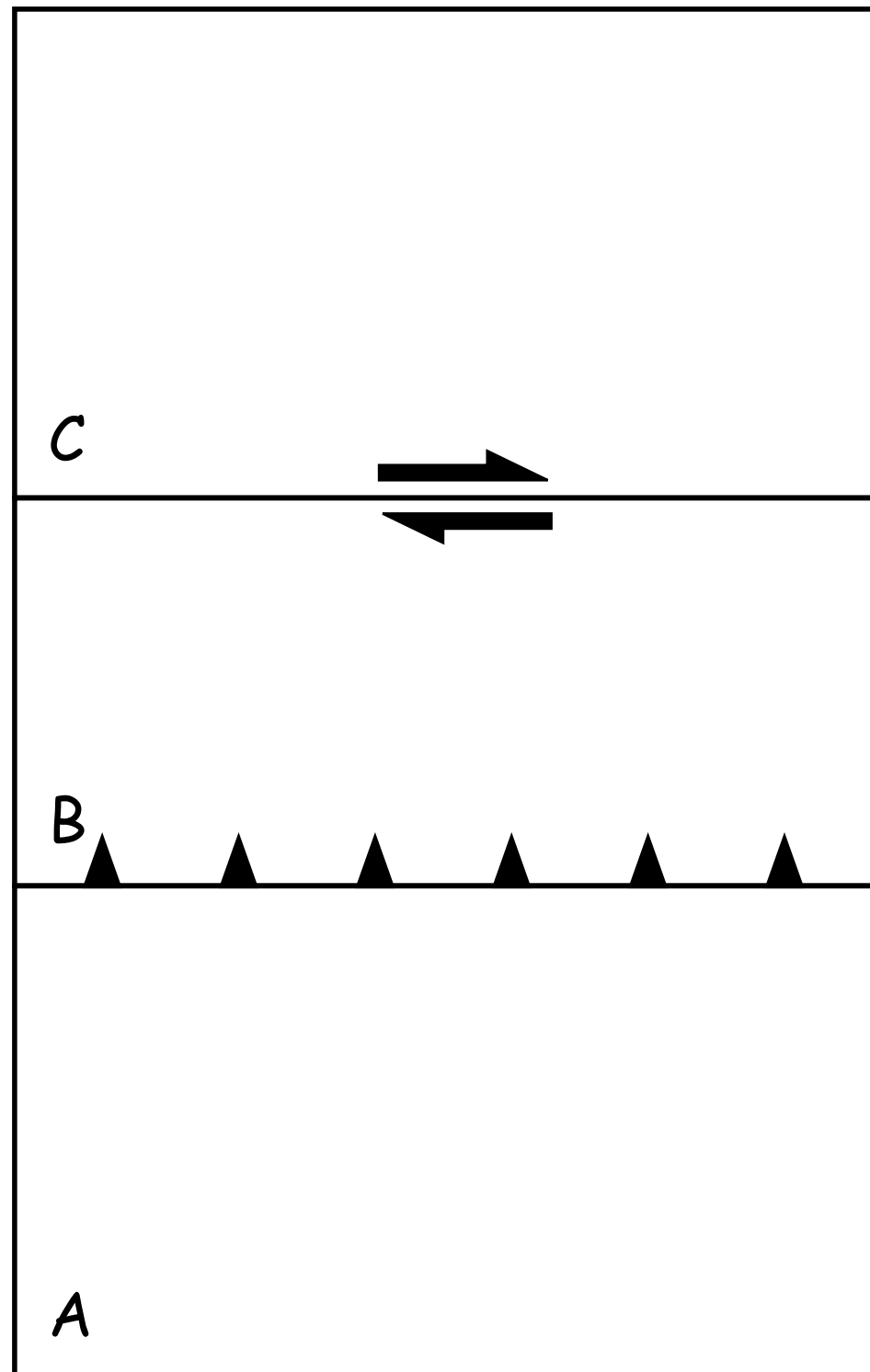
Les décrochements en Asie permettent le déplacement de grands blocs continentaux



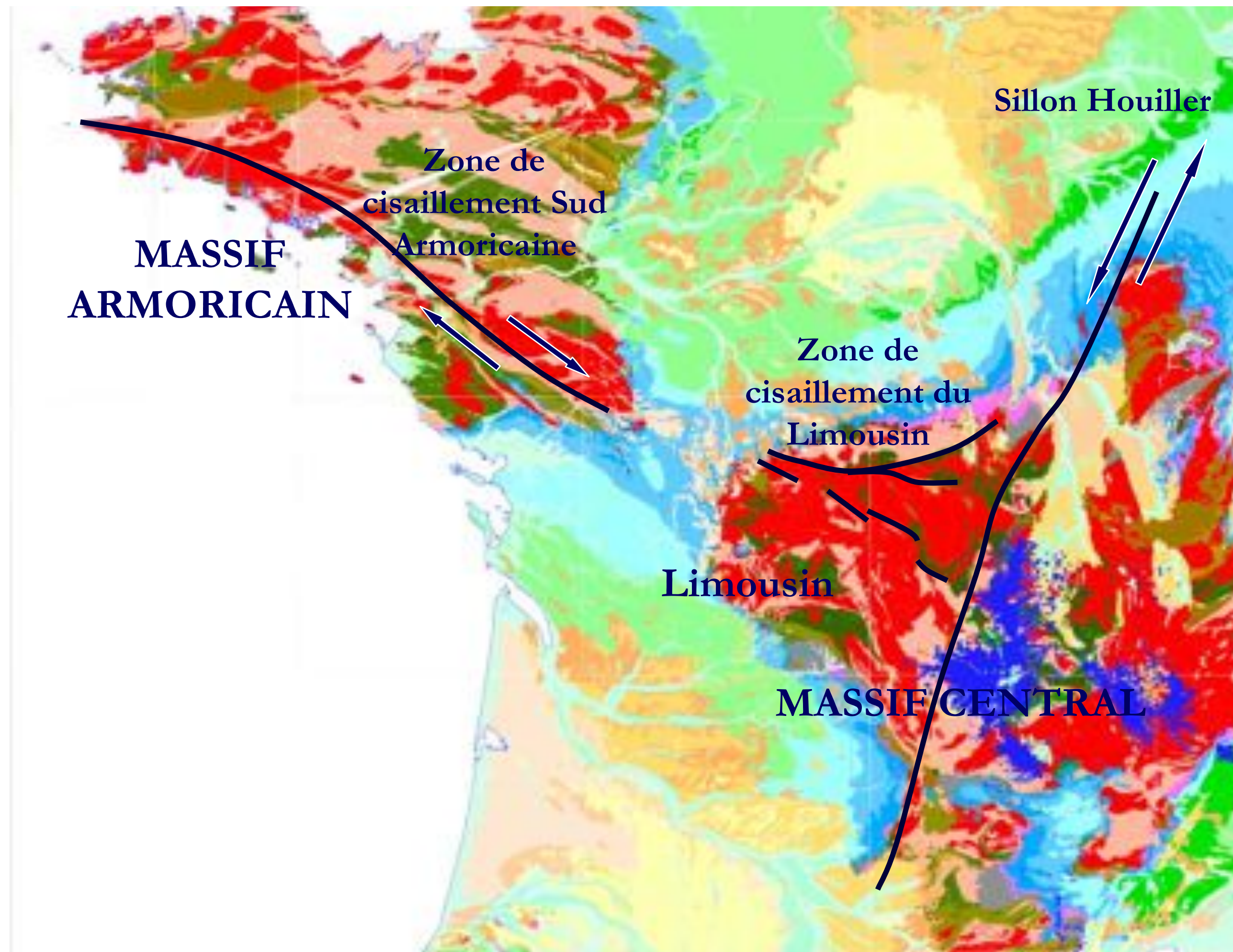
La faille de Sumatra



La convergence oblique entre les plaques Indo-australienne et Eurasiatique se décompose en un mouvement purement chevauchant sur la frontière de subduction et un mouvement décrochant sur la faille de Sumatra



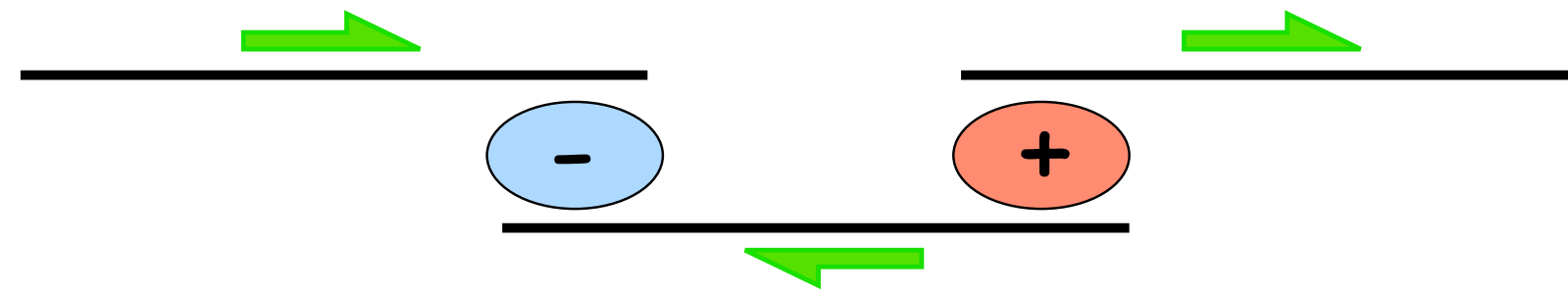
Le cisaillement sud-armoricain et le sillon houillier (tardi-hercyniens ?)



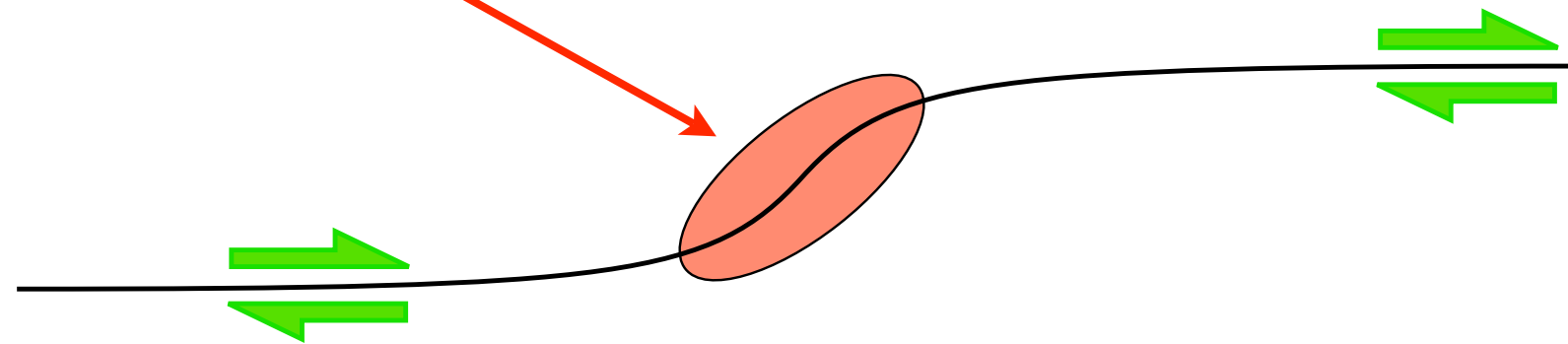
Le tracé des décrochements n'est pas toujours dans la « bonne » direction



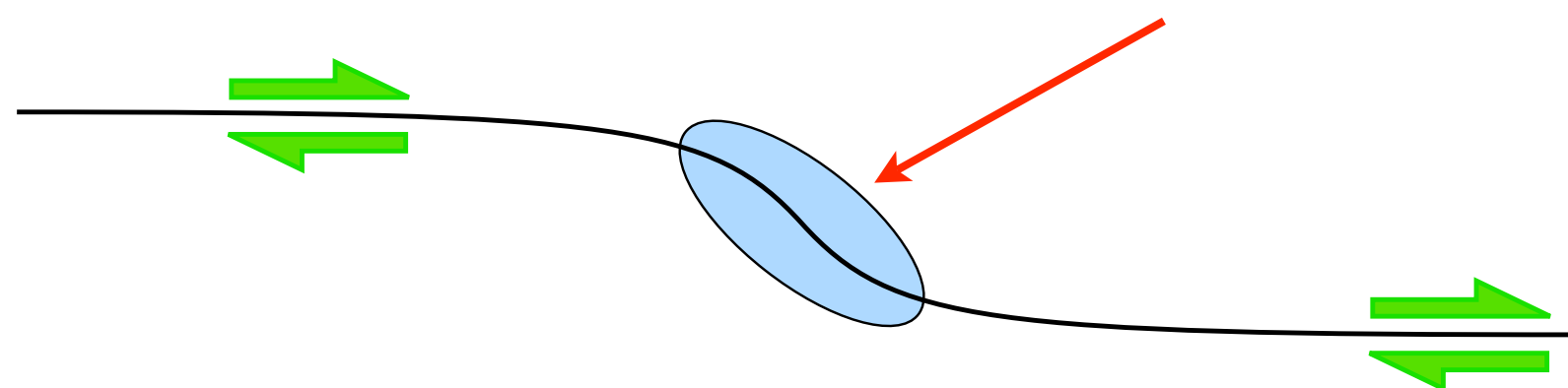
Le mouvement décrochant s'accompagne localement d'une composante normale ou inverse



zone en compression



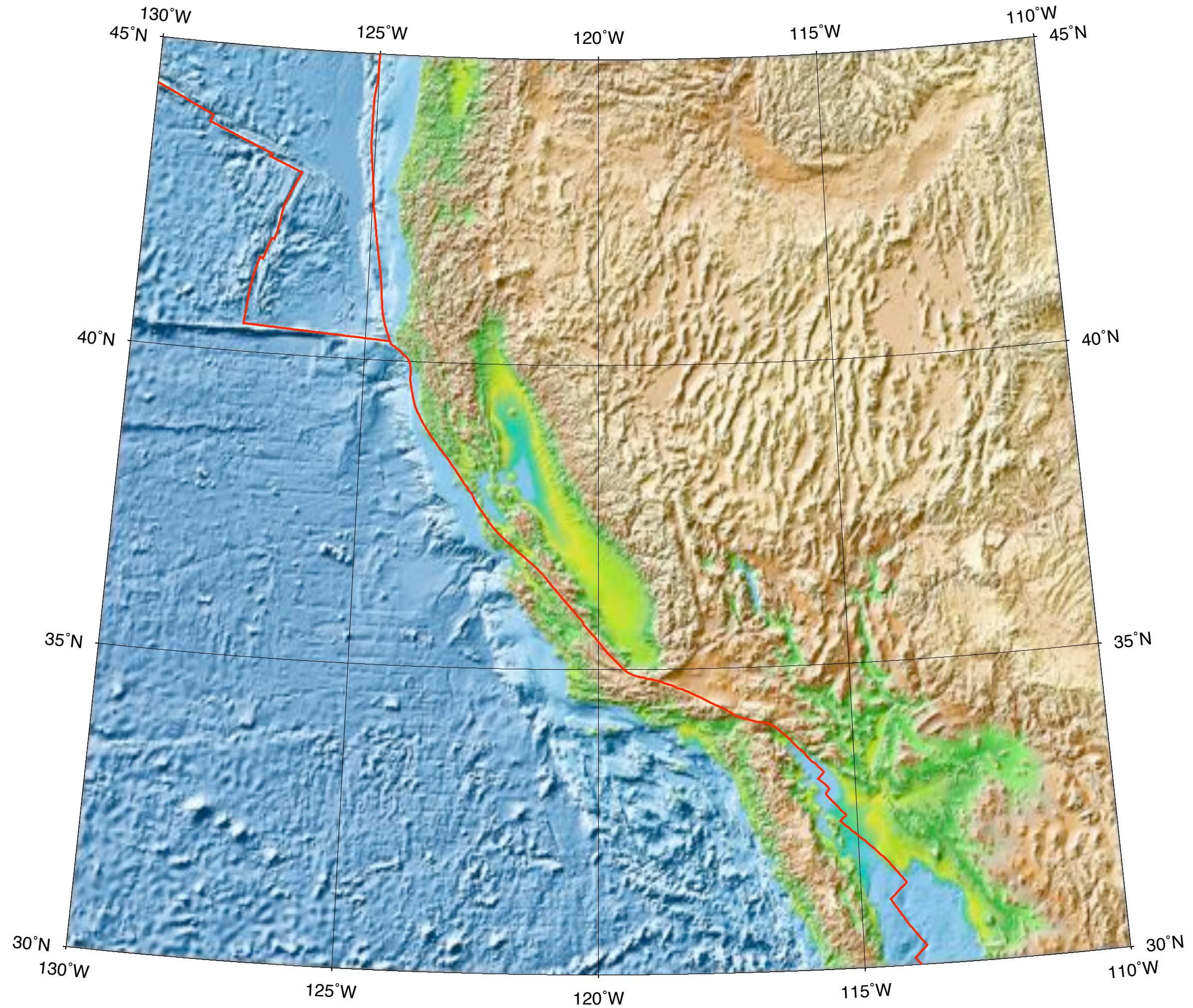
zone en extension



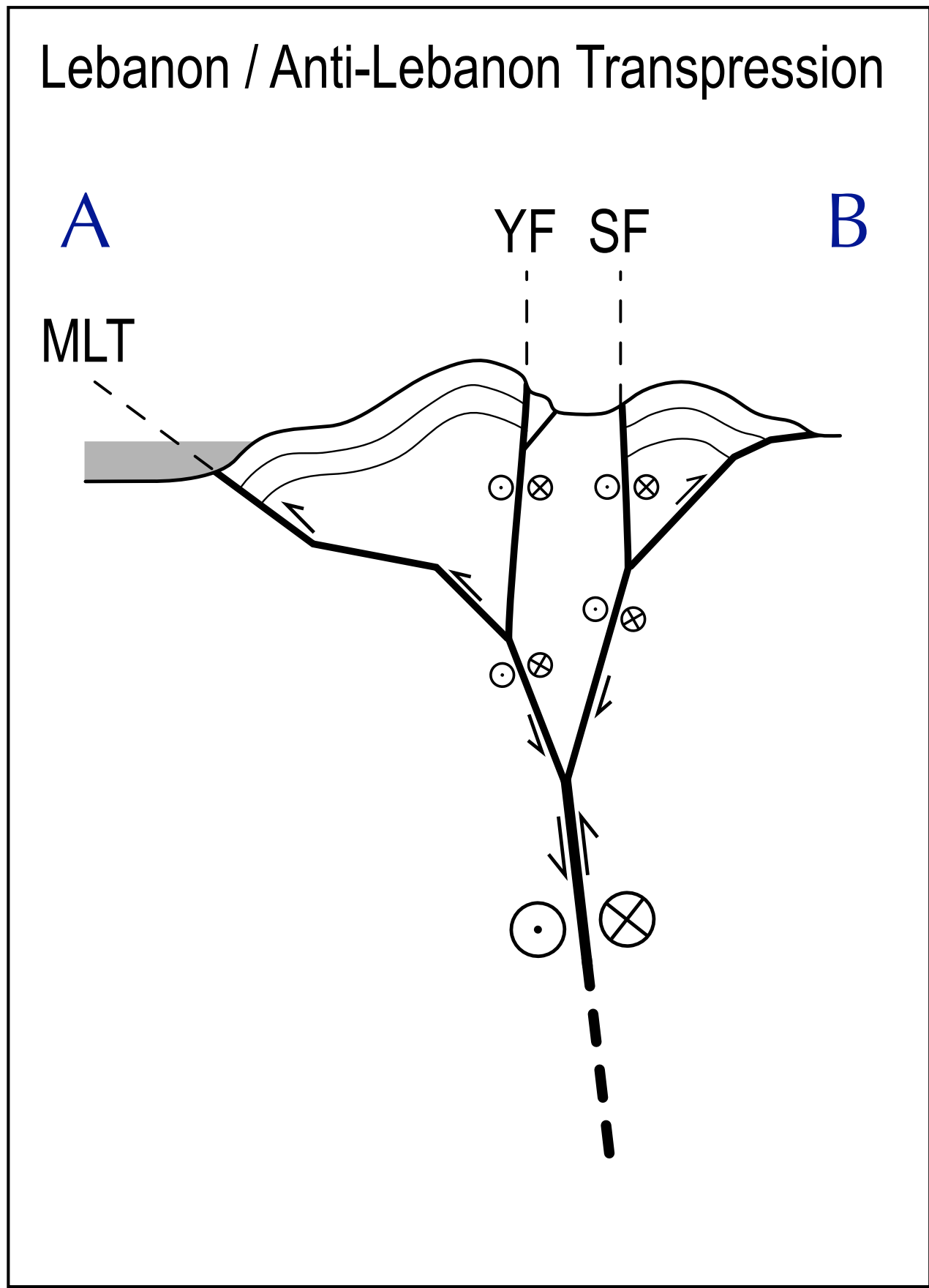
Faïlle du Kunlun (Tibet, Chine)



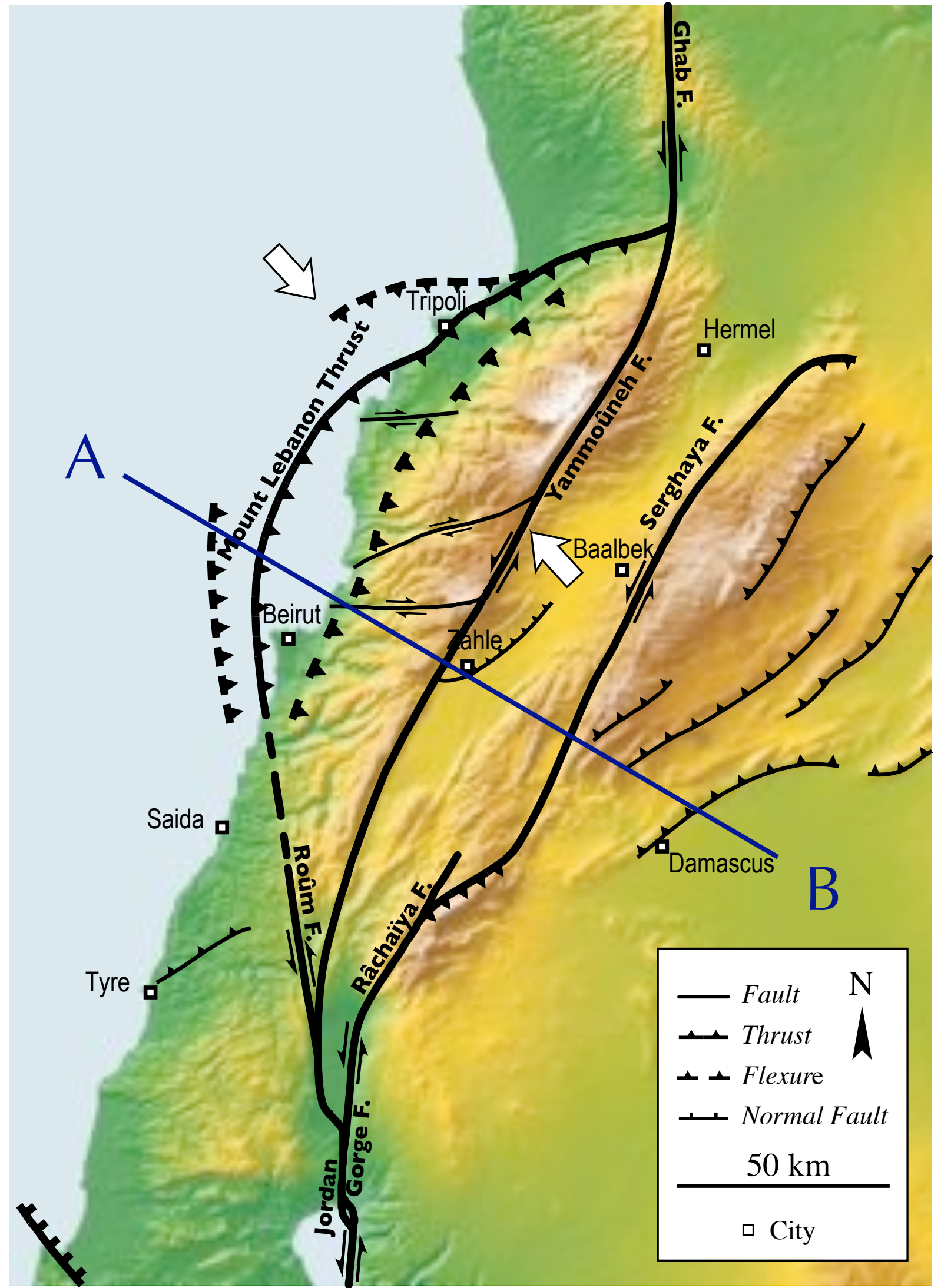
Le Big Bend sur la faille de San Andreas



Coude transpressif du Liban



Daëron (2005)



L'exemple de la mer de Marmara

