

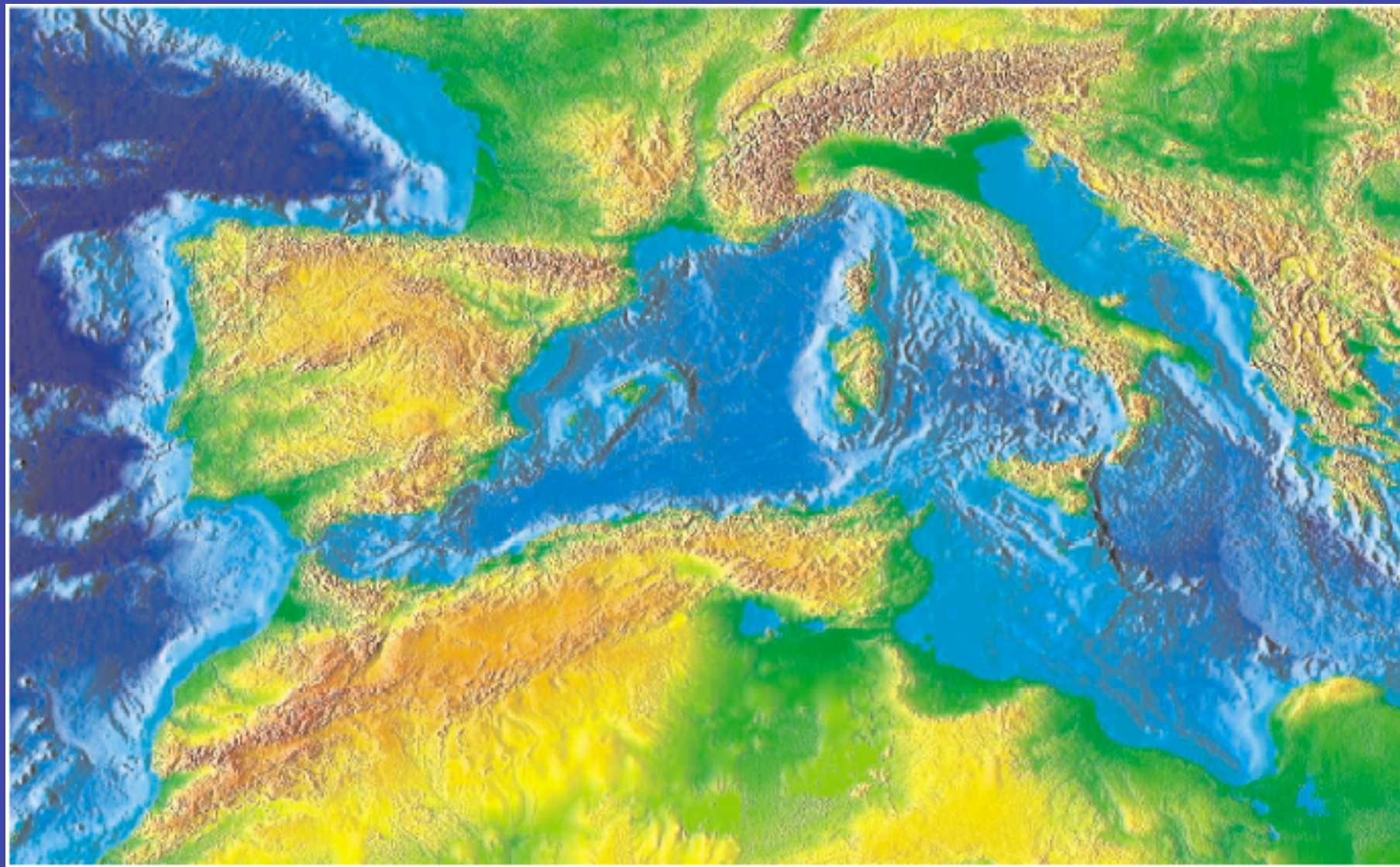
15-16. November 2013

Freie Universität



Berlin

Geodynamics of the Mediterranean-Tethyan-Alpine Realm



Mark Handy & Ferenc Horvath

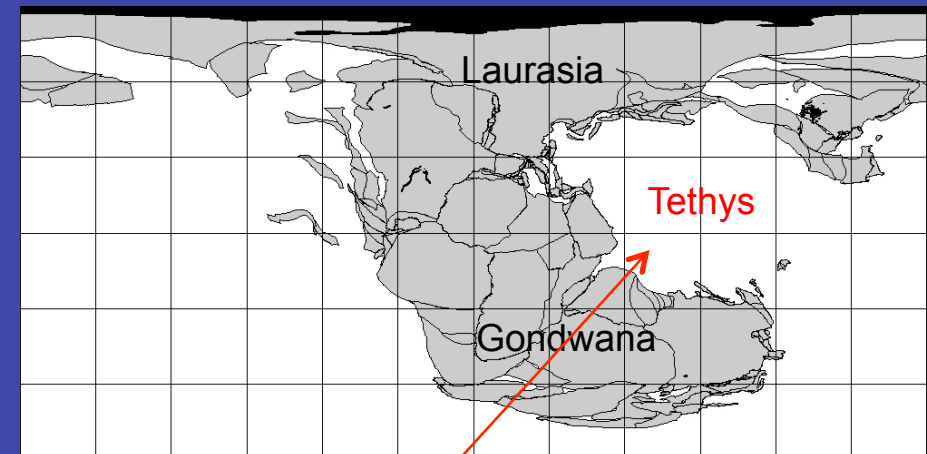
Tethys



http://AntakyaMuseum_Turkey.jpg

Tethys: goddess of the seas, sister & wife of Oceanus, mother of Achilles and of all rivers

200 Ma

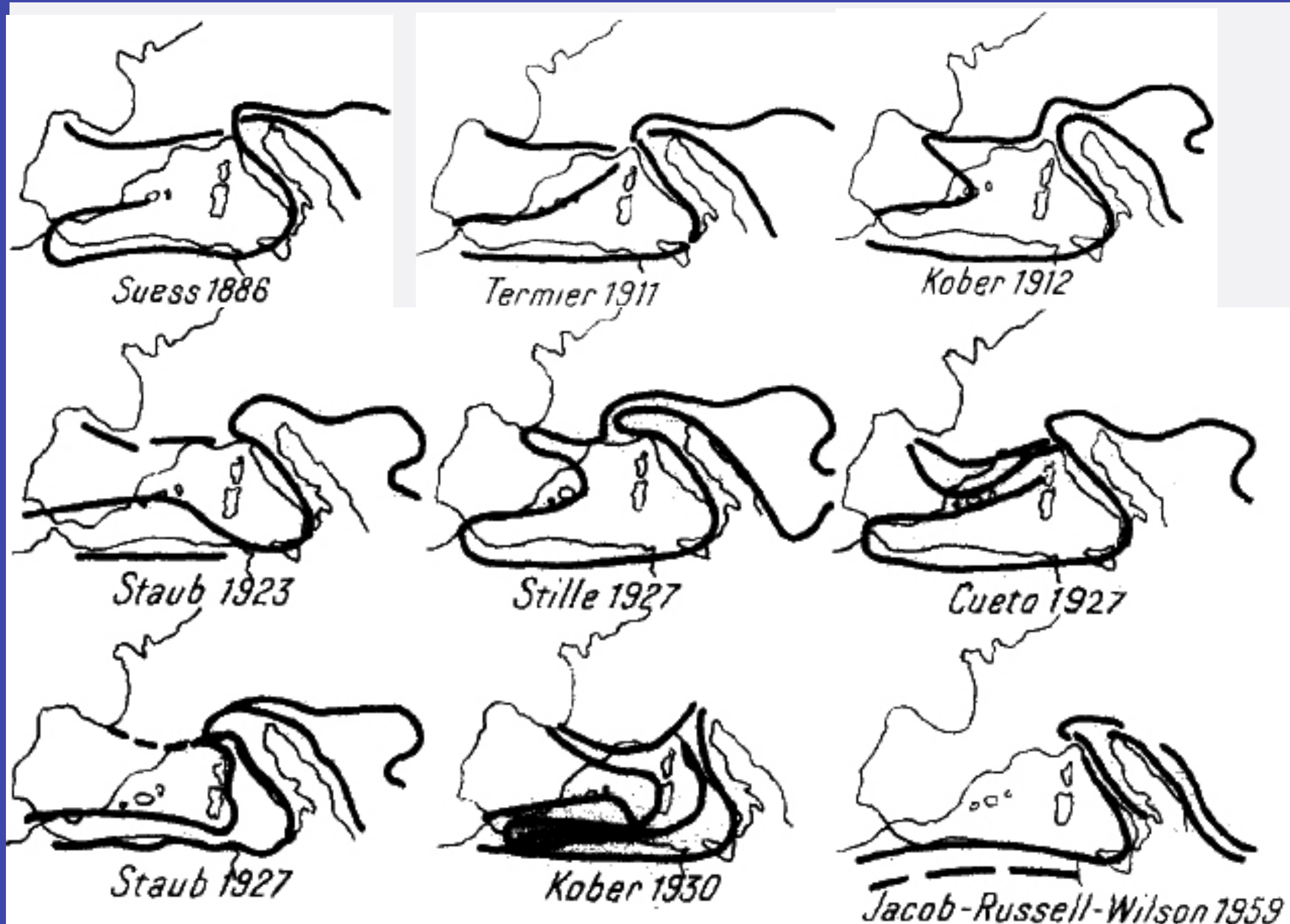


<http://www.serg.unlcam.it/Reconstructions.htm>

“....the great ocean that once stretched across Eurasia” whose “folded and crumpled deposits stand forth to heaven in Tibet, Himalaya and the Alps”

(Suess 1893)

The circum-Mediterranean mountain belts - a playground for tectonics



Mediterranean, Tethys & the Alpine Chains

Triassic-Cretaceous ophiolites = Alpine Tethys & Northern Neotethys



Western Mediterranean:
Miocene-Present back-arc basins

Eastern Mediterranean:
Cretaceous (Southern Neotethys)

Friday's Program

Morning:

- Fodor & Horvath: Pannonian Basin
- Matenco: Dinarides & Pannonian Basin

Lunch 12:00-14:00

Afternoon:

- Schmid: Rhodopes
- van Hinsbergen: Mediterranean since the Triassic
- Kissling: Western Alps

Coffee

- Ustaszewski & Handy: AlCaDi evolution, subduction polarity switches since 84 Ma

Saturday's Program

- Jolivet: Aegean & Middle East
- Spakman: Modelling of Western Mediterranean

Coffee

- Faccenna: Mantle Flow, Mediterranean
- Wortel: Plate Reorganizations in the Western & Central Mediterranean

Brief break for picture & pdf exchange

- Summary Discussion

Remarks

- People you should know
- PPT presentations => Eline Le Breton
- Coffee breaks => here
- Lunch => Campus Mensa
- Dinner => 19:00, Restaurant „Brauhaus Mitte“
S-Bahnhof Alexanderplatz
- Saturday => Register with the Campus gatekeeper

Saturday

- PDFs of all talks (coffee time)
- Summary discussion
- Group Photo
- Lunch

Summary of Themes

Plate reorganization events:

- E.- m. Cretaceous events – How did they affect Late K to Present tectonics? (Schmid, Jolivet)
- Switches in subduction polarity – L. Eocene to E. Oligocene in W. Med, E. Miocene in E. Alps-Dinarides, Miocene-Recent in Kabilies (Handy, Ustaszewski, Wortel)

Slab tearing & its geological footprint:

- Alps (topography, Kissling)
- Aegean (hi-T domes, mineralization, Jolivet)
- Gibraltar-Alboran (mantle structure, rheology, Spakman)
- Mantle flow (Aegean, E. Anatolia, Calabria-W. Med, Faccenna)

Nature of extension & its relation to convergence:

- Pannonia-Carpathians – What triggered extension and roll-back? (Fodor, Horvath)
- Dinarides – Was the extension due to roll-back? (Matenco)
- Aegean – hi-P vs. hi-T domes (Jolivet)

Kinematic reconstructions – The “rubbish bin” problem:

- Alps – unfolding the W. Alps, the transition C. to E. Alps
- Ionian Sea – age of extensions, shortening? (van Hinsbergen, Handy, Ustaszewski)
- E. Balkan-Aegean – orogenic vergence, history of subduction (Schmid, Matenco, Jolivet)

Tectonic Map of the W. Mediterranean Area

Handy et al. 2010

