

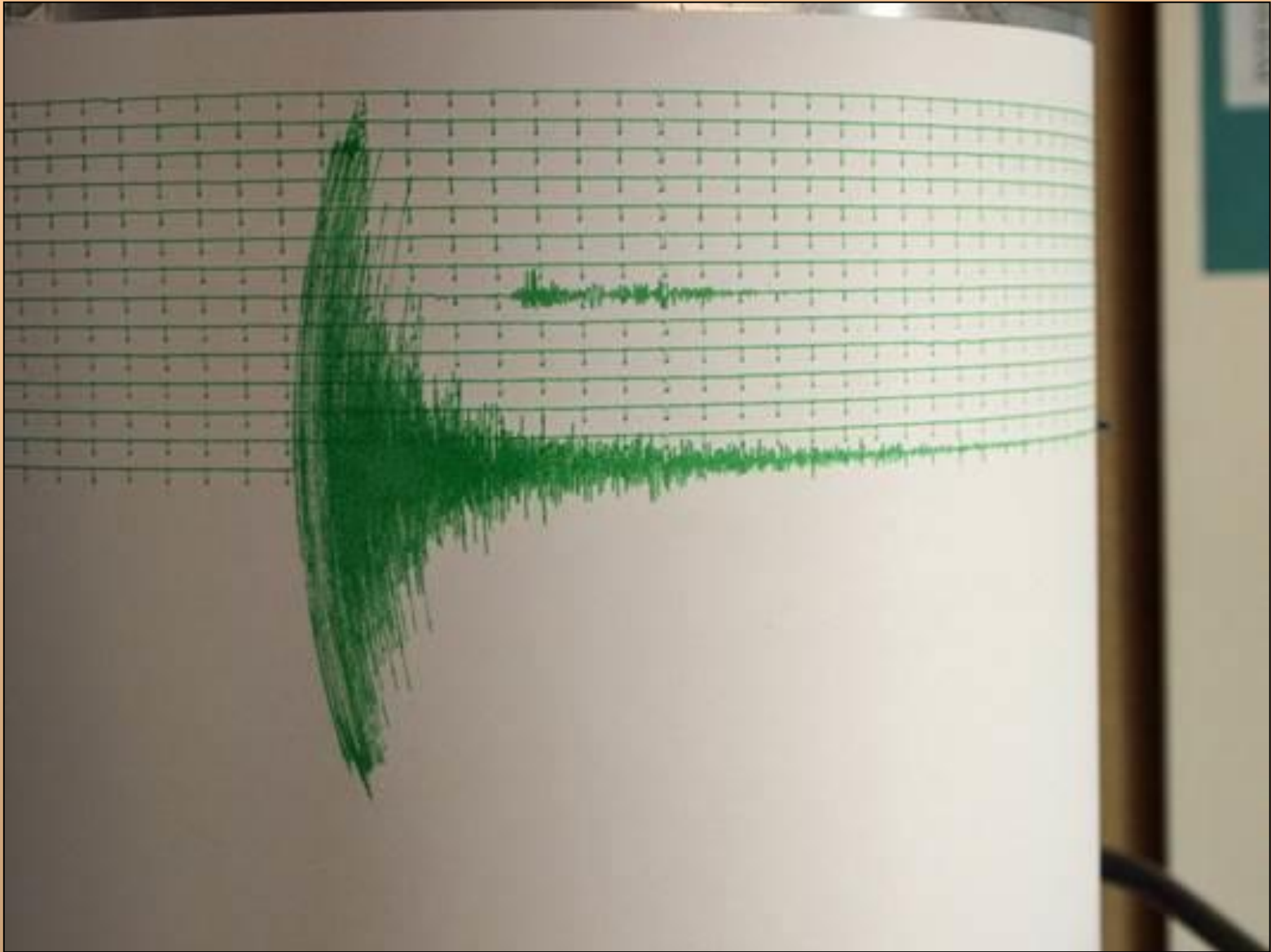
Geomorphic markers of active deformation

M2R TS 2015-2016
Dynamics of mountain belts
Tectonics and topography

Riccardo Vassallo

Characterisation
Measure
Dating
How to use them

Earthquake for a seismologist...

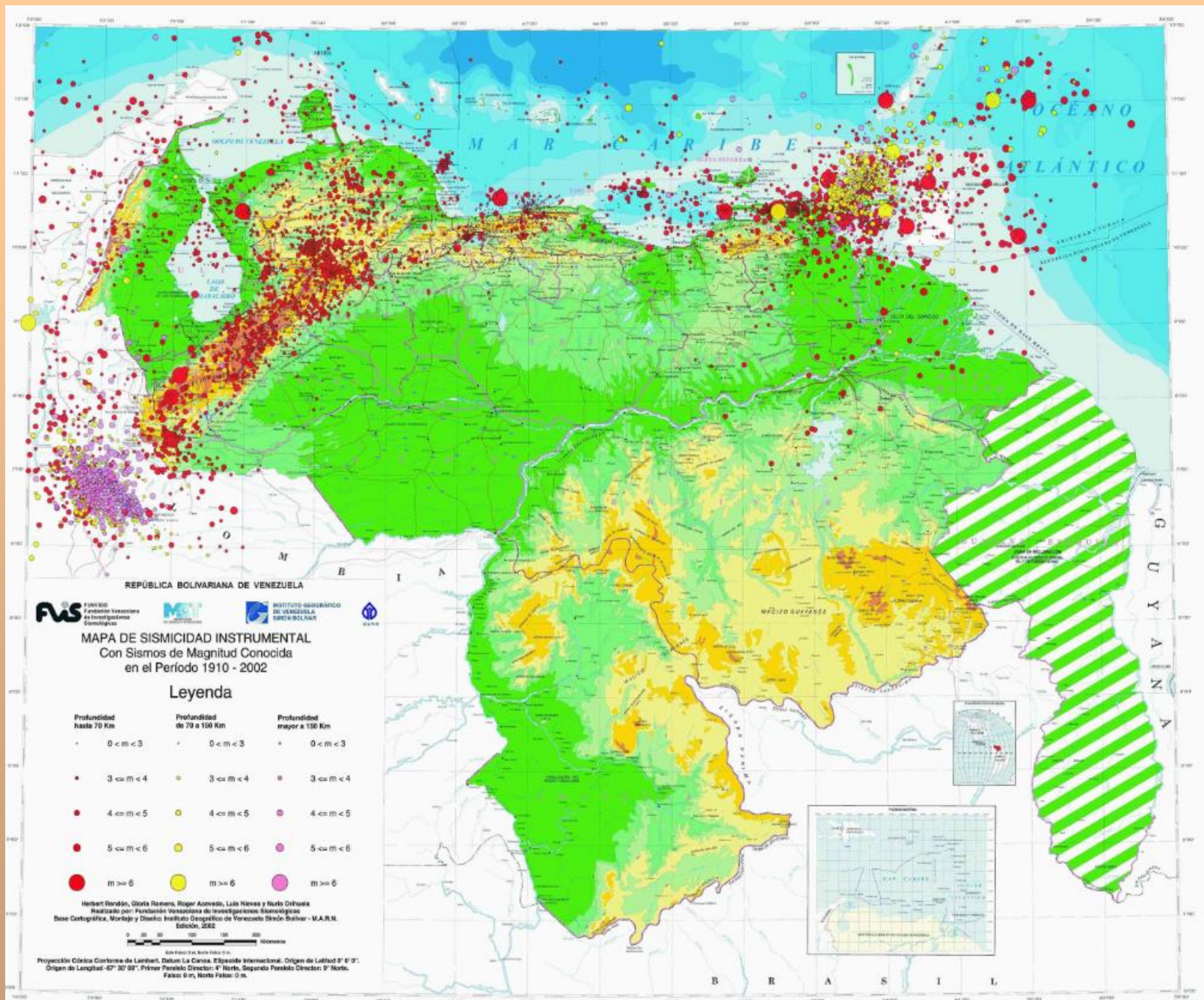


... and earthquake for a geologist!



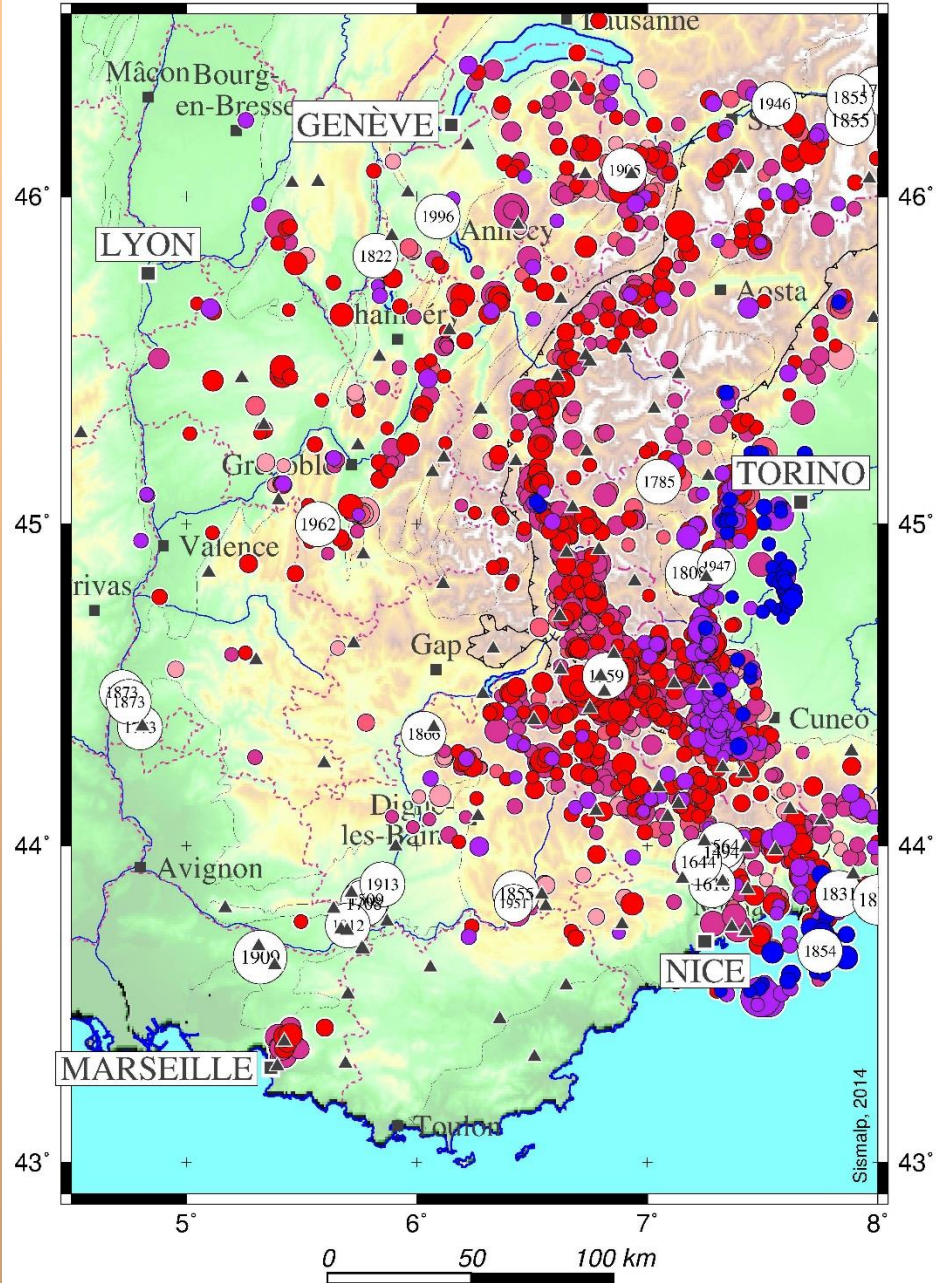
Gobi-Altay, Mongolia

Instrumental seismicity 1910-2002 in Venezuela



● < 2 km ● 2-5 km ● 5-10 km ● 10-15 km ● 15-20 km ● > 20 km

▲ Station sismologique ○ 5 ○ 4 ○ 3 ○ 2 ○ 1
5° 6° 7° 8°

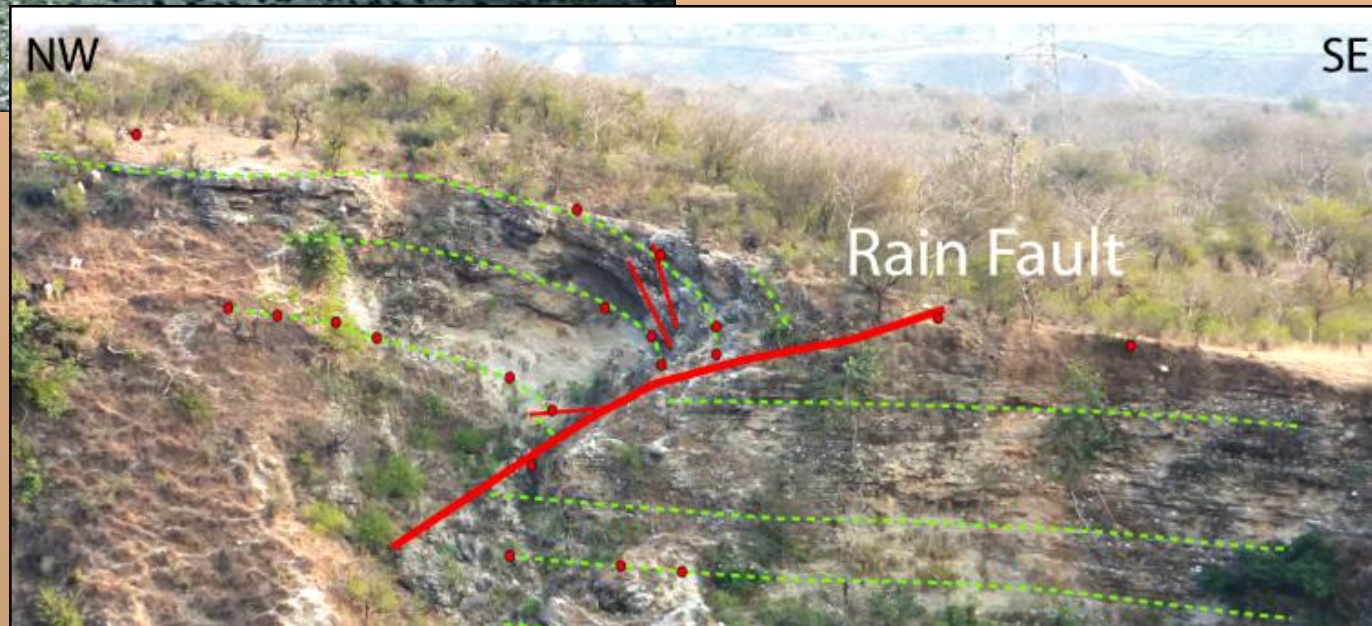


Sismalp net

FLUVIAL MARKERS



Altay, Mongolia



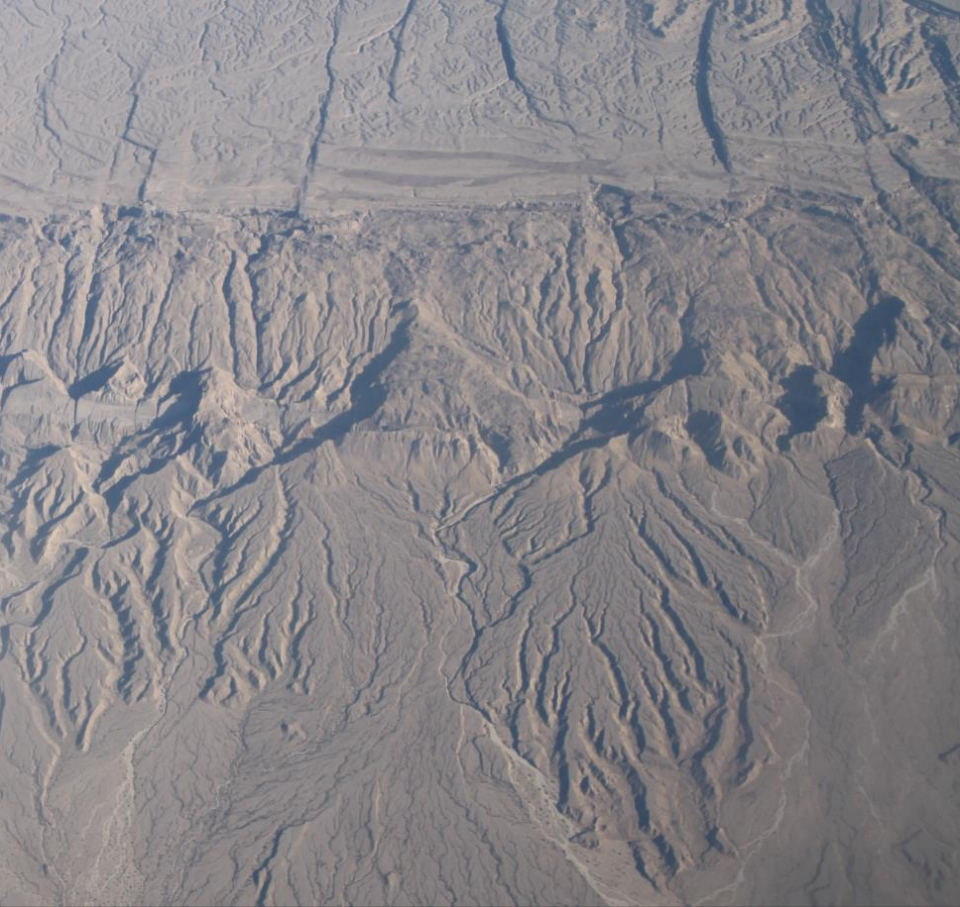
Himalaya, India



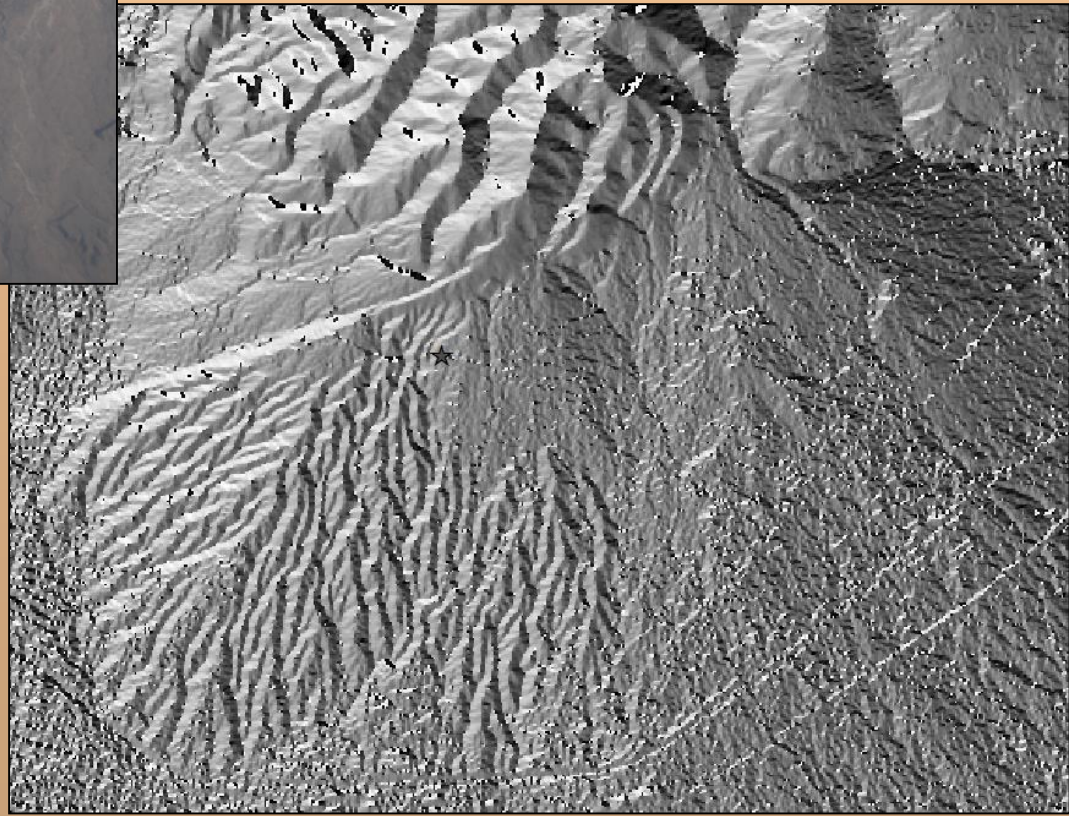
Hangai, Mongolia

Gobi-Altay, Mongolia





Himalaya,
Pakistan



Yaracui,
Venezuela

GLACIAL MARKERS

Sierra Nevada, California

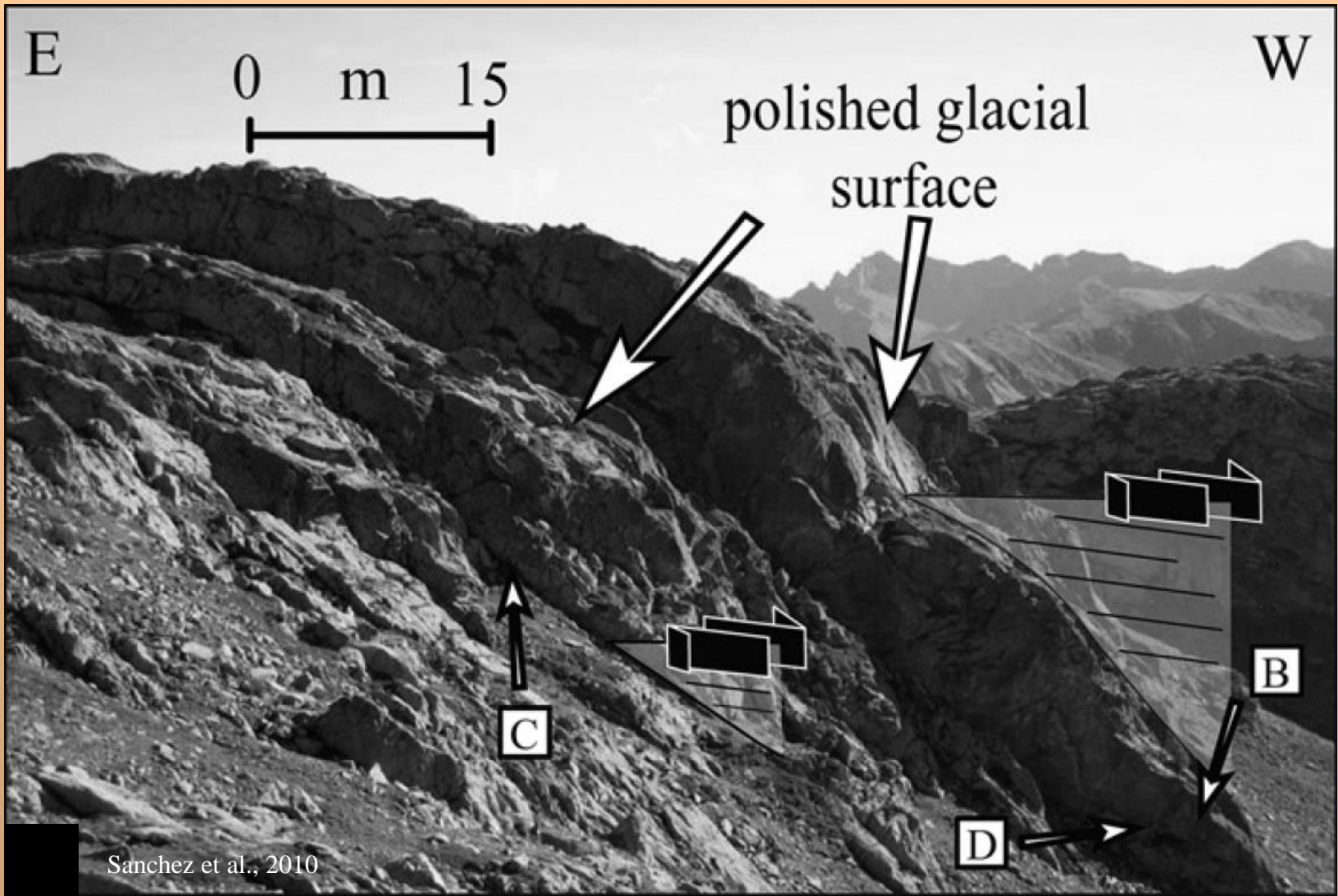


Denver University



Andes de Merida,
Venezuela

Photo: J. Carcaillet

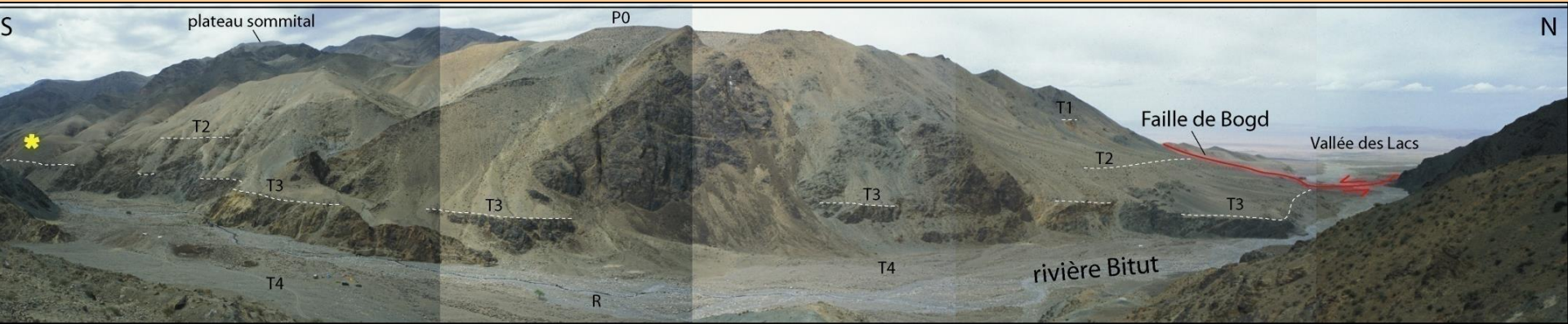


Argentera Massif, Western Alps

Strath terraces







Strath or not strath...

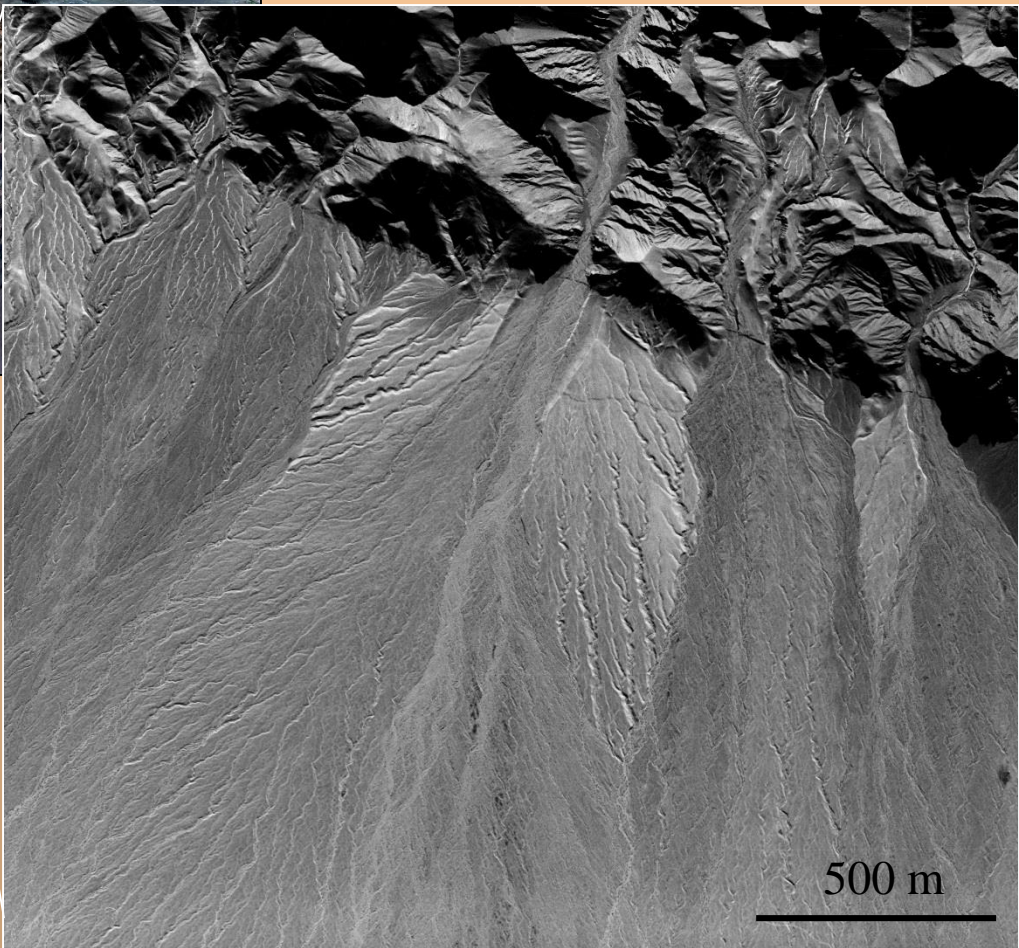




Corona photo



Landsat on 3D topography



500 m

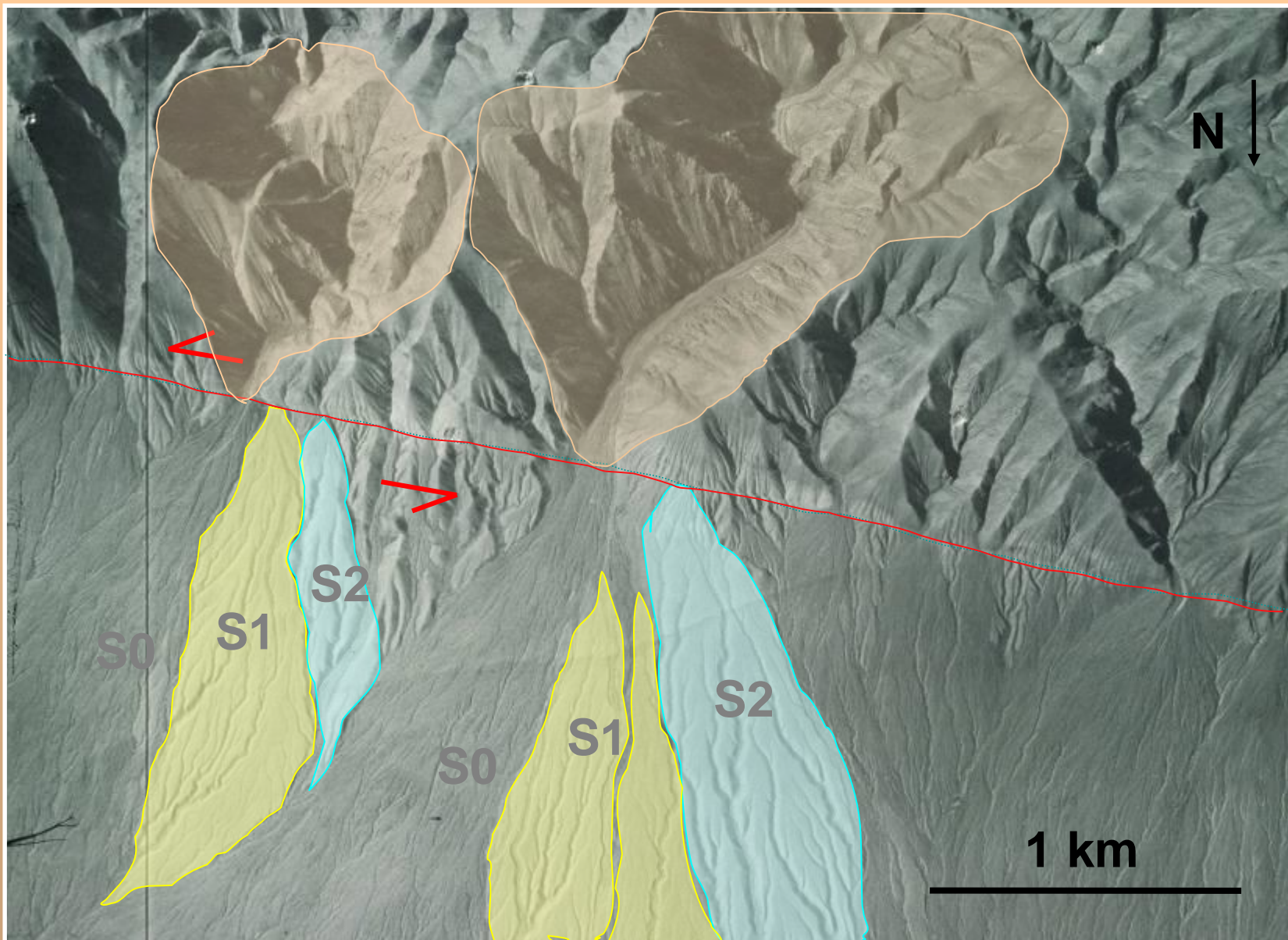
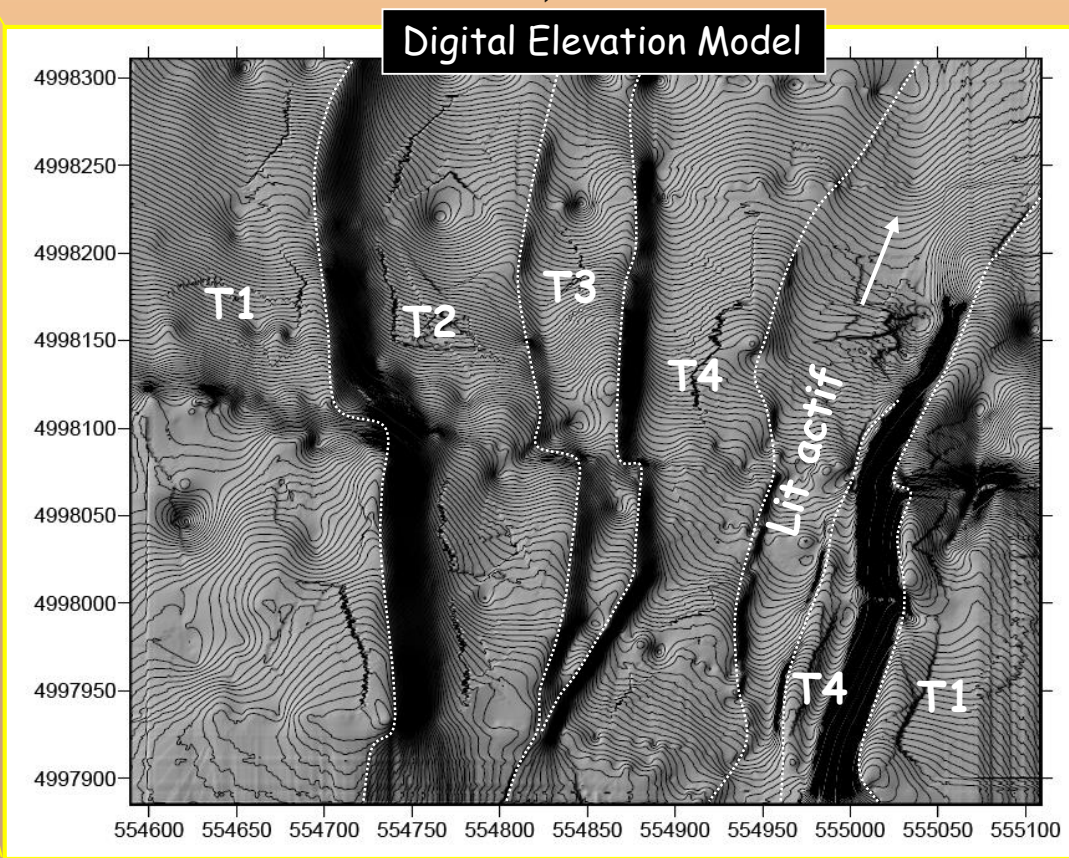
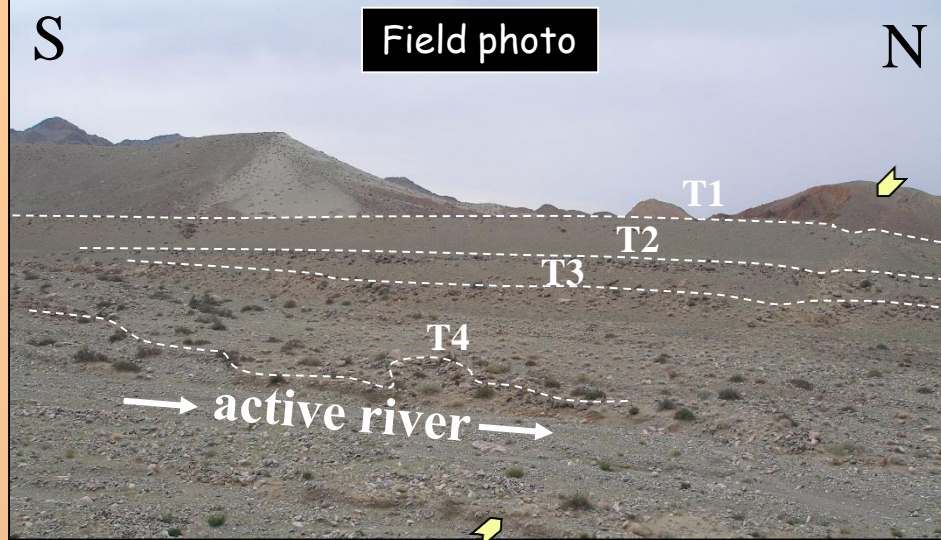
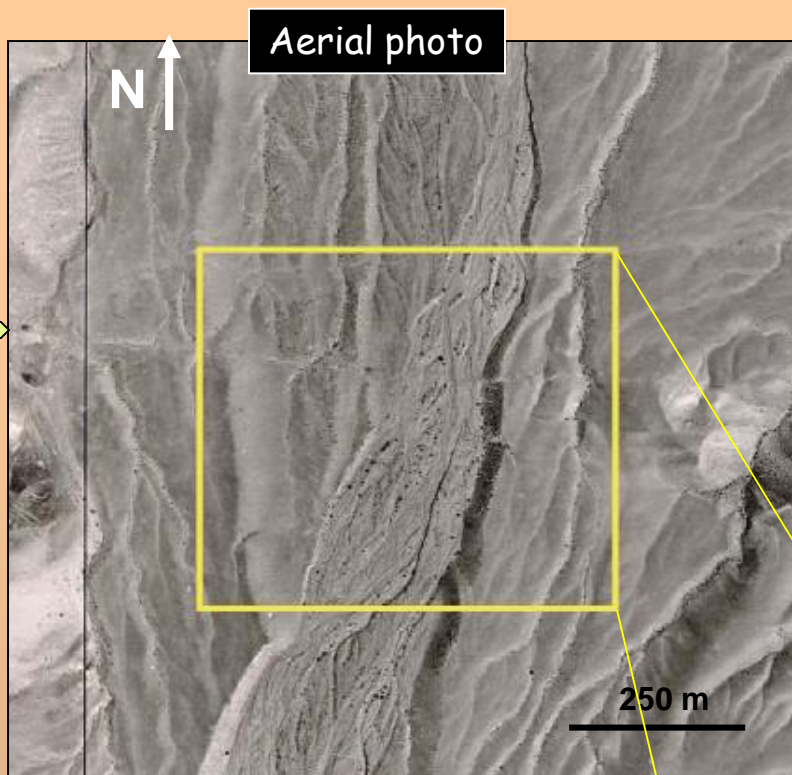




Photo: J-F. Ritz

Gobi-Altay, Mongolia



Other markers...



Photo: V. Davtyan

Caucasus, Armenia