

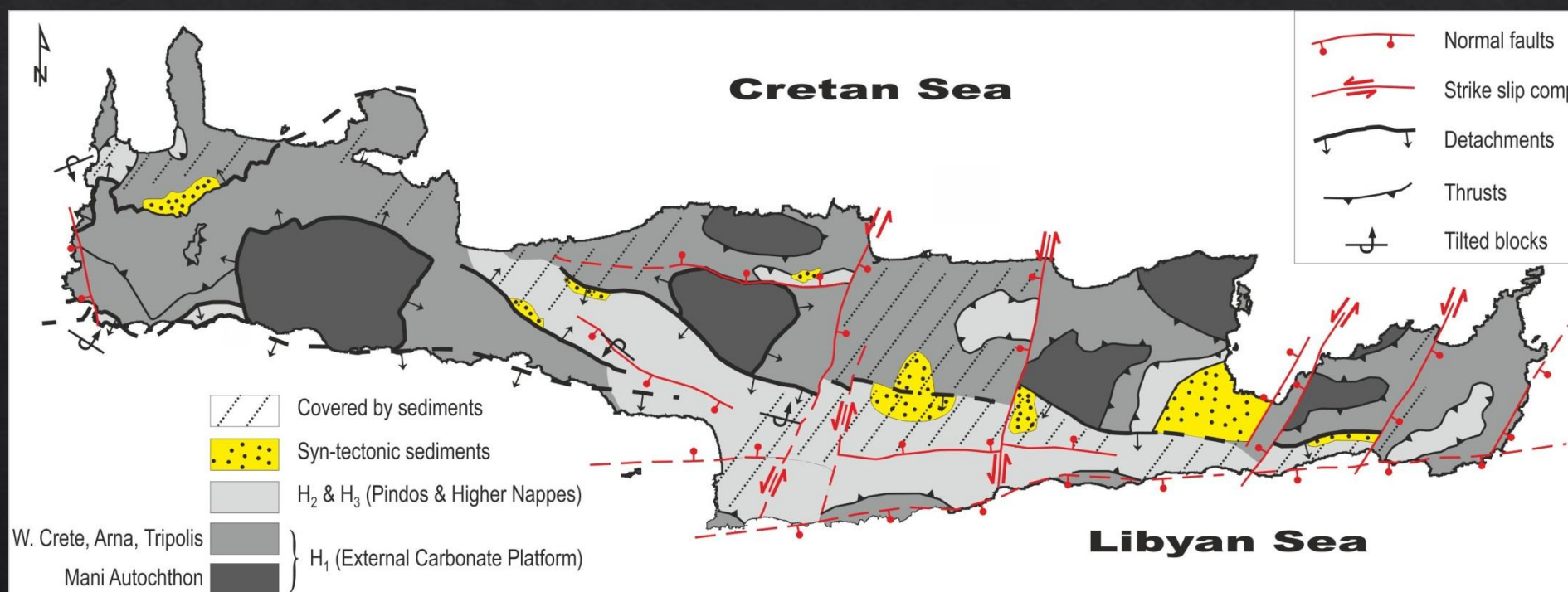


Combination of Earth Observation and Seismic Reflection Data Analysis for the Definition of Strike Slip Fault Zones in Central Crete

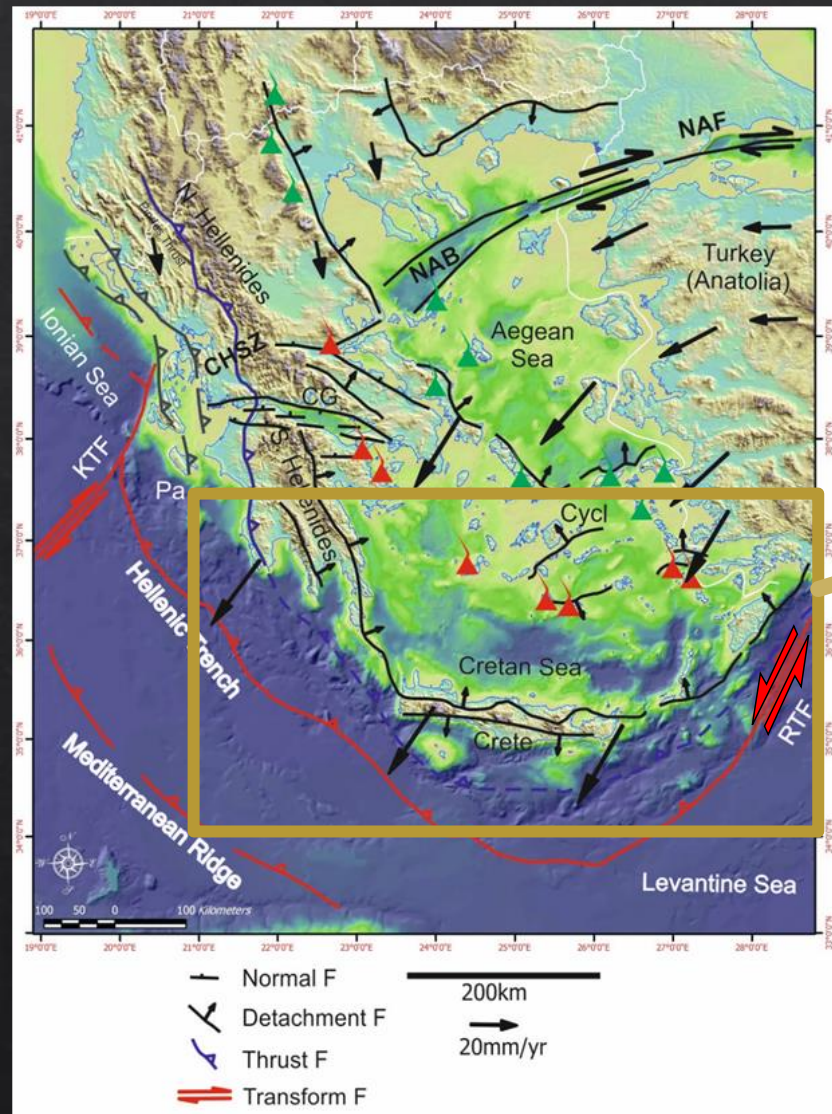
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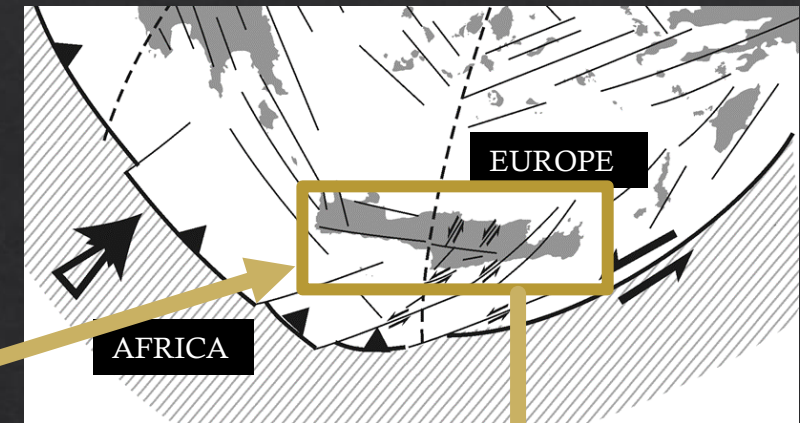
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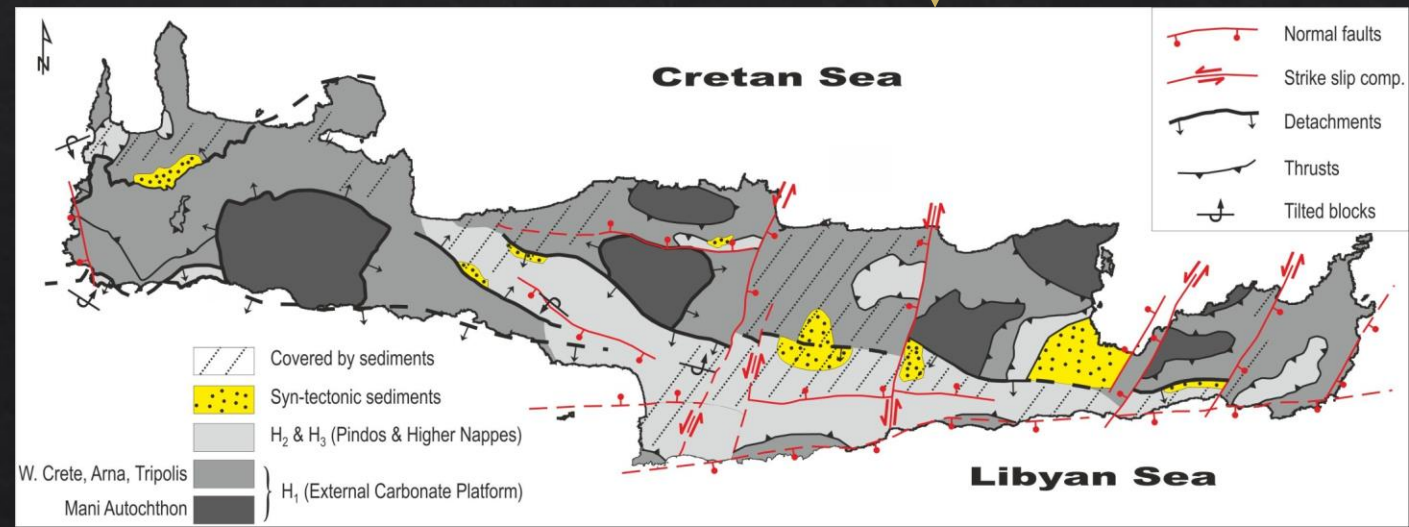
Geological background & rationale



Change in convergence vectors between Mid-Miocene – present leads to segmentation of the Hellenic Trench

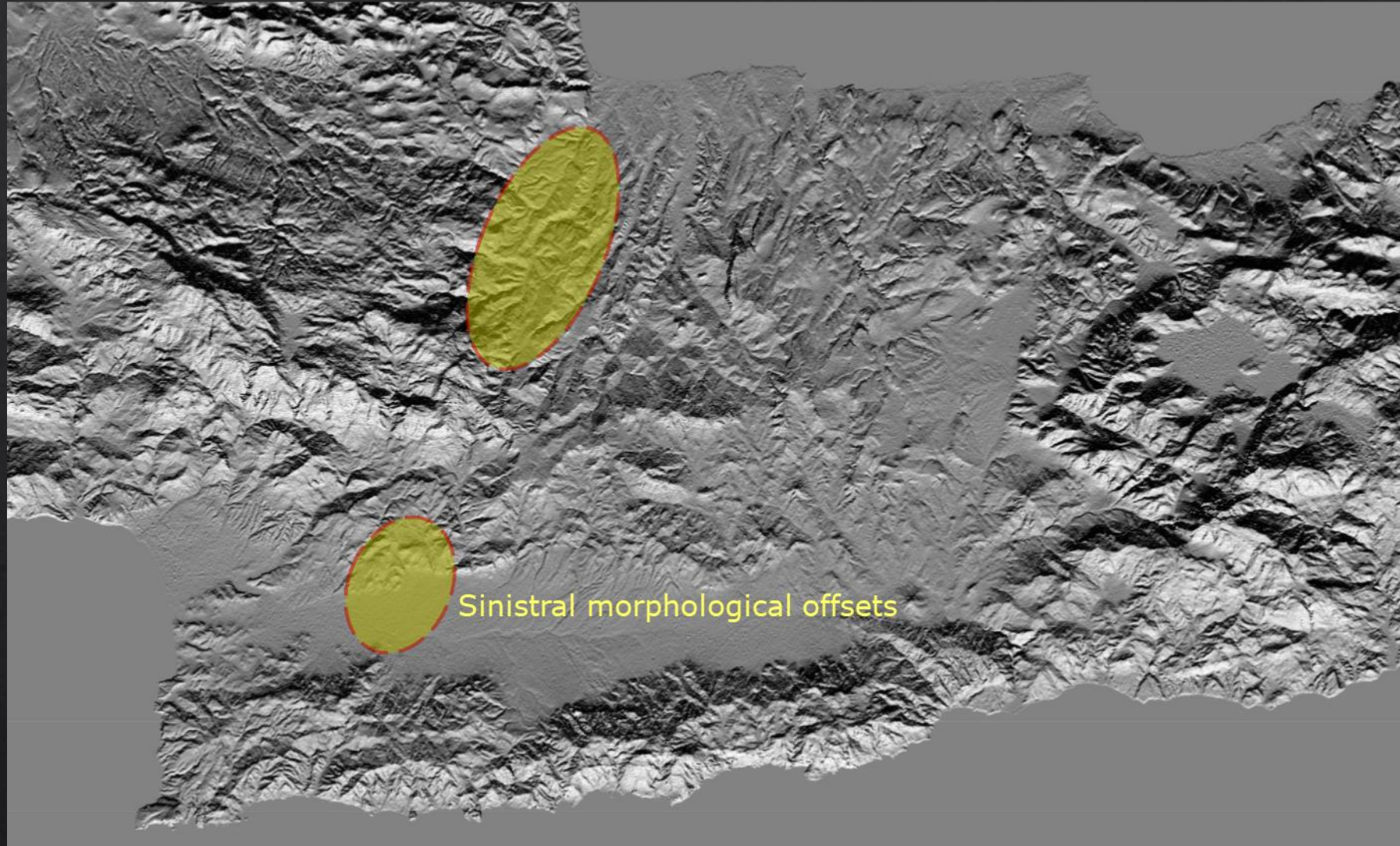


Segmentation imprinted on the island of Crete in the form of sinistral strike-slips



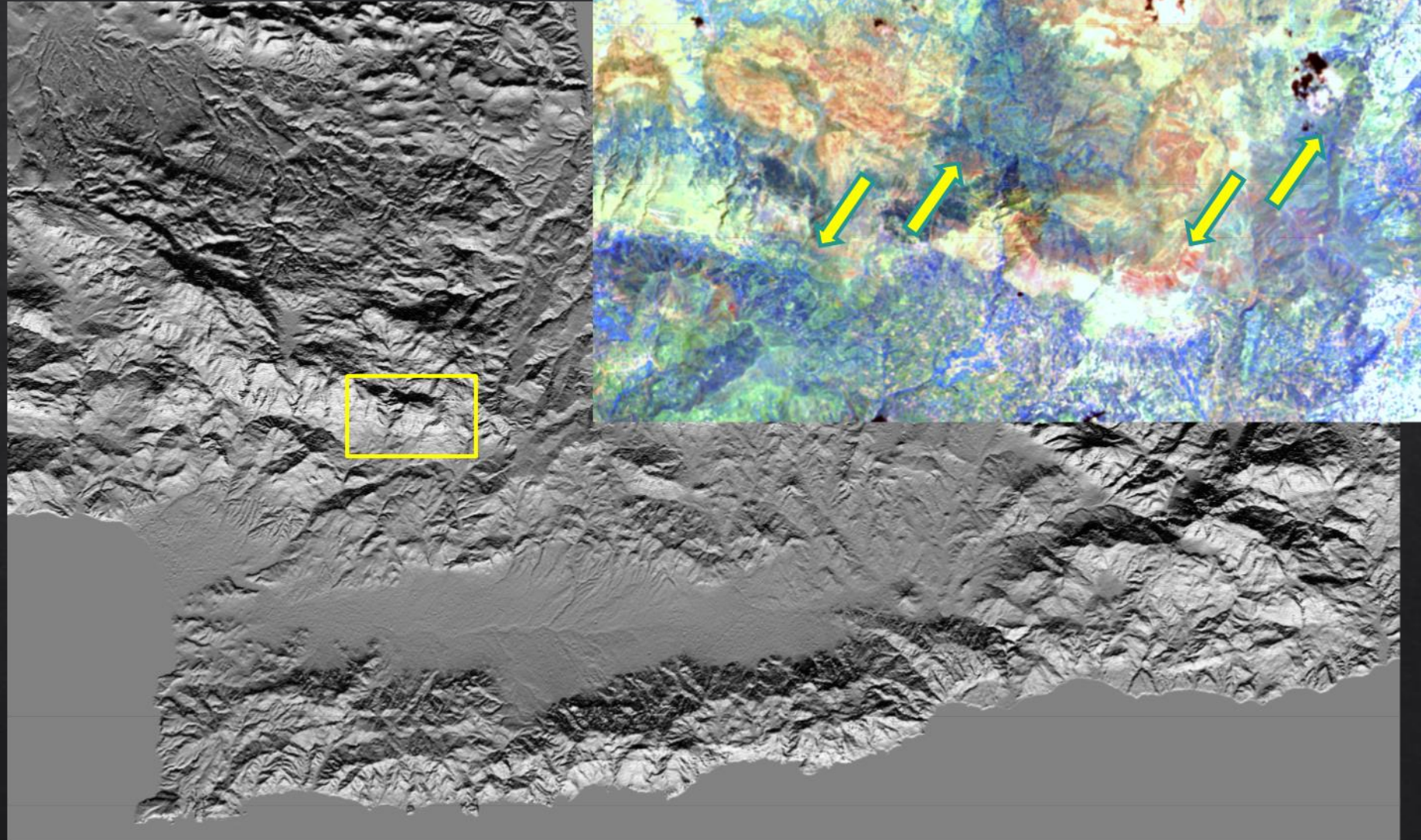
Morphological evidence

Sinistrally displaced shutter ridges

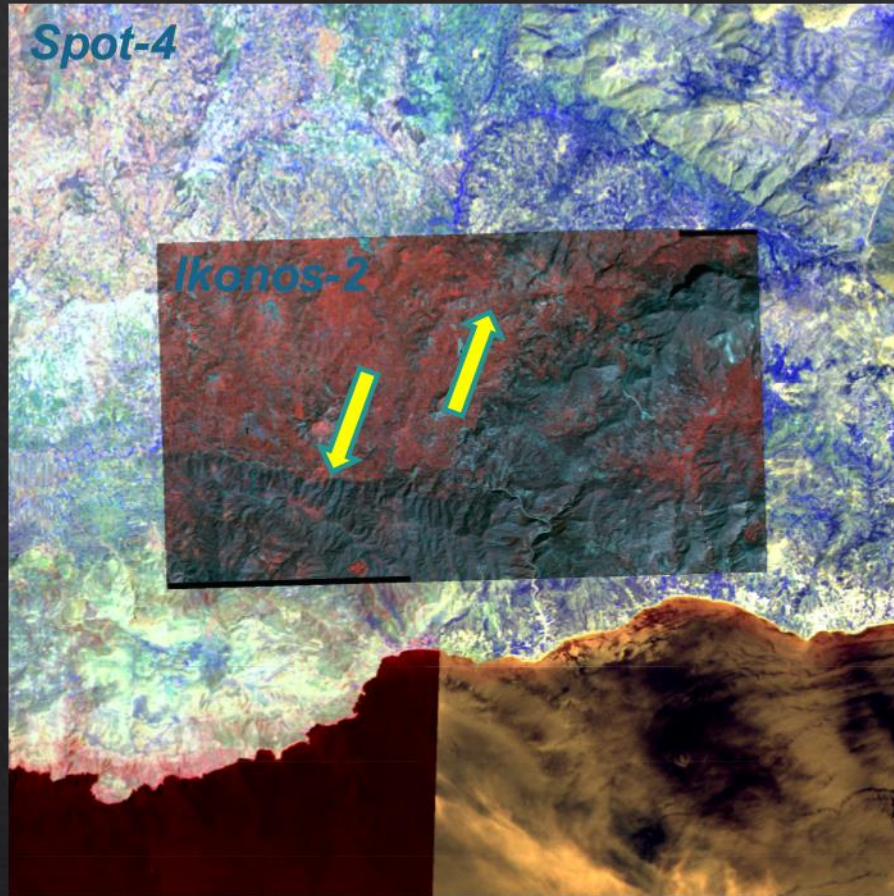


Morphological evidence

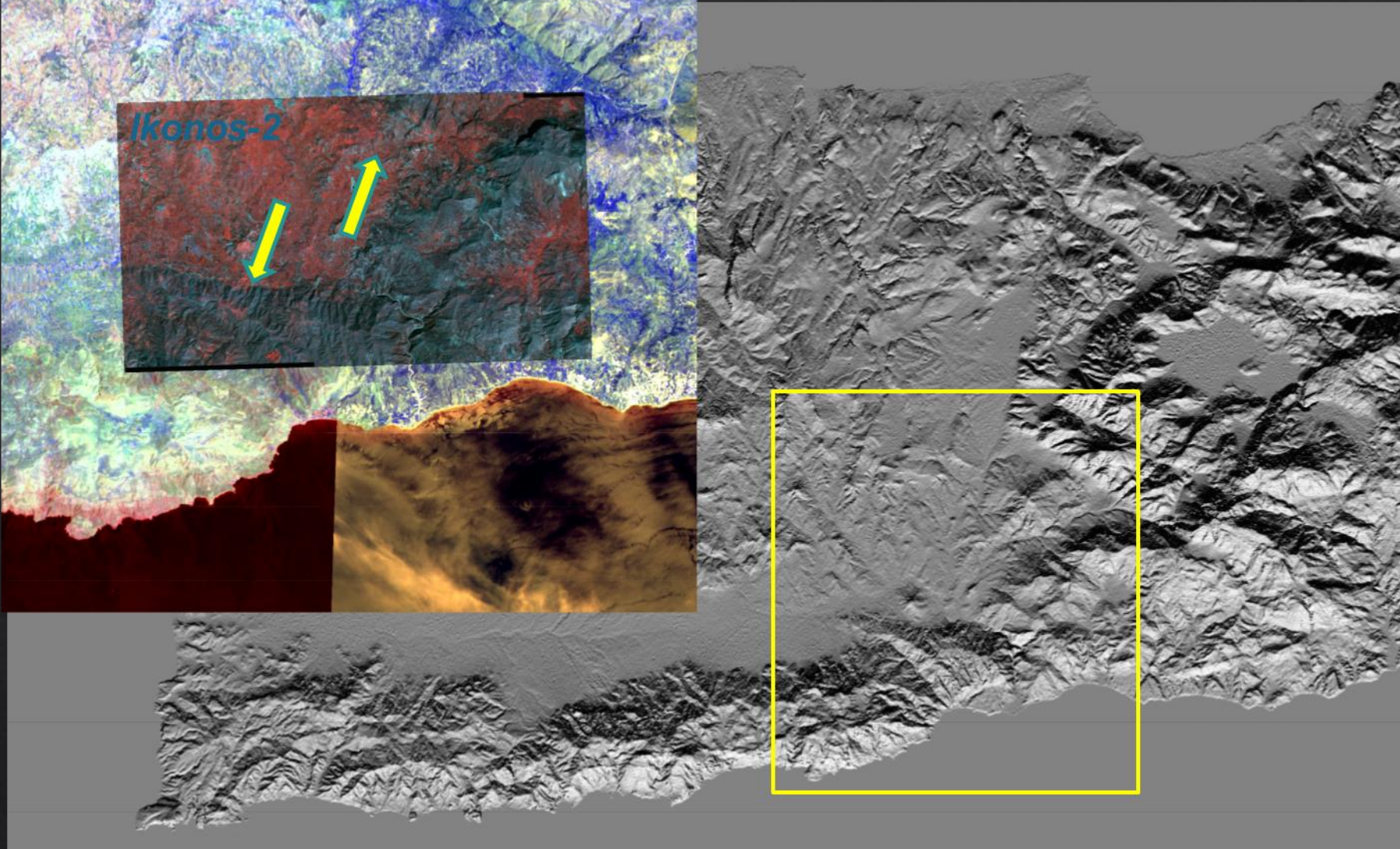
Sinistral lithological offsets



Morphological evidence

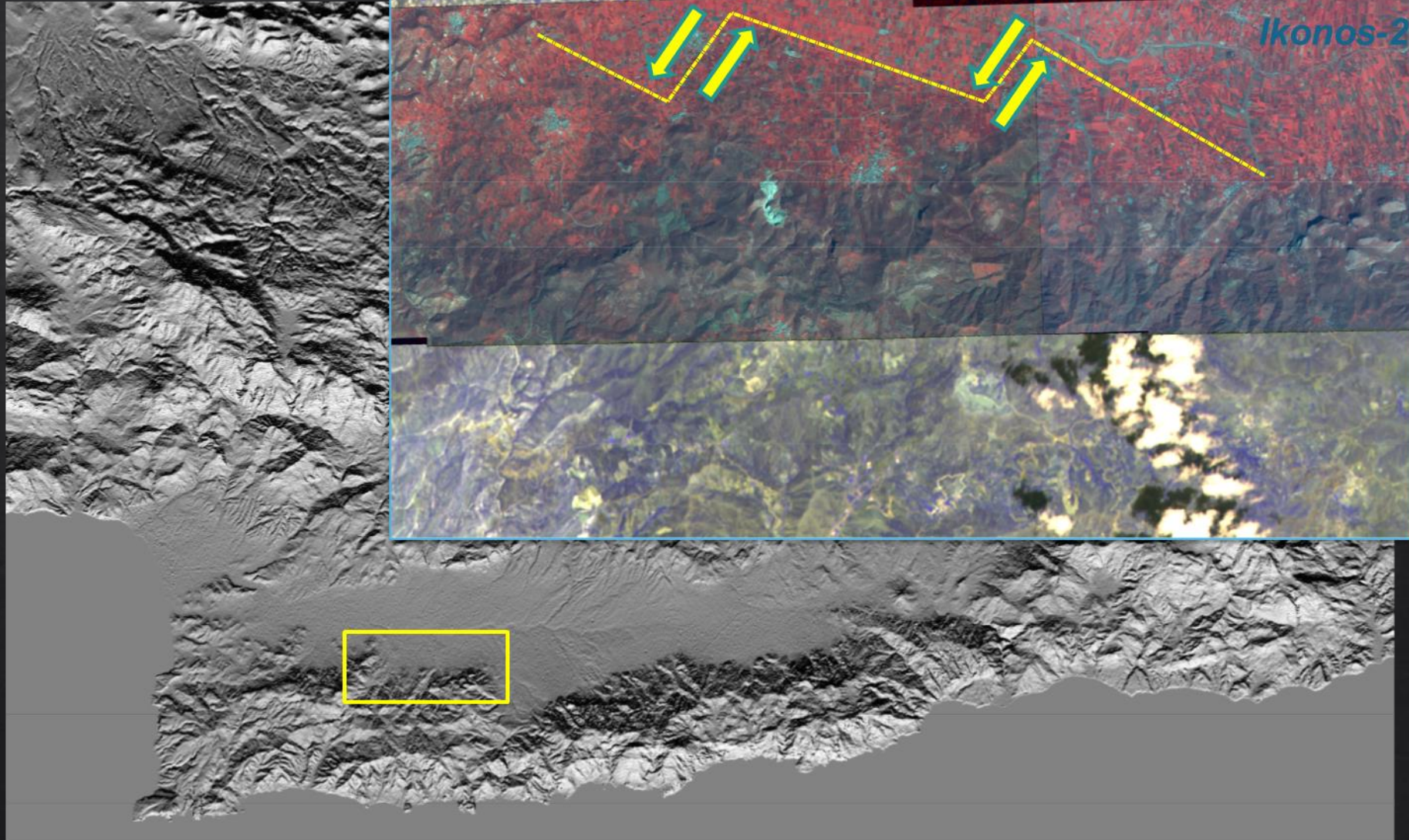


Sinistral lithological offsets



Morphological evidence

Sinistral lithological offsets

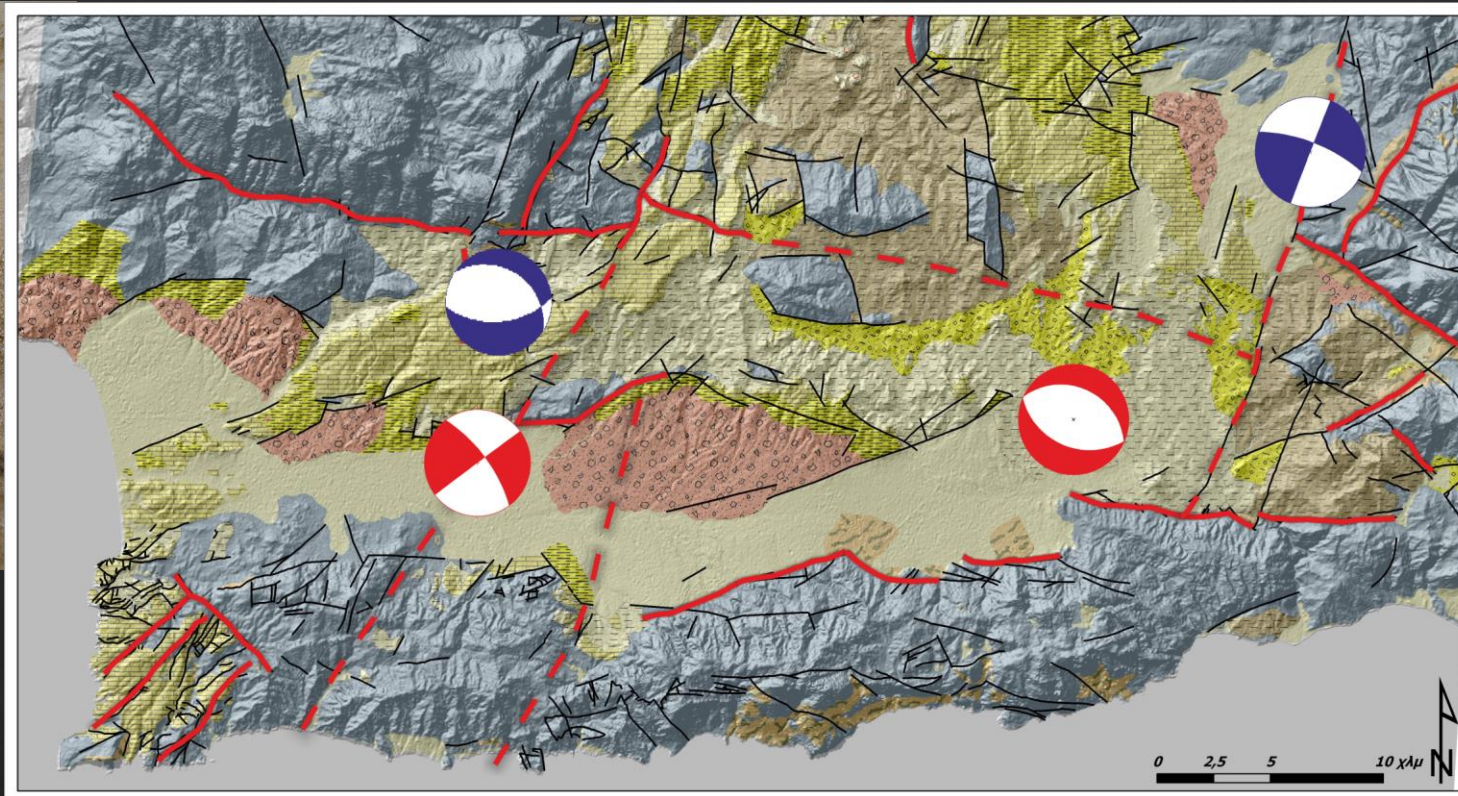


Field evidence and recent stress change

Stress during Late Miocene (blue beach balls) and Pleistocene (red beach balls)



Slickensides



Slickensides



Flower structures



Conclusions

- Segmentation of the Hellenic Trench due to a change in the convergence vectors between the Europe and Africa plates has led to the evolution of strike-slip faulting on Crete Island.
- Strike-slip faulting is visible in high resolution satellite imagery in different spectra, high resolution DEM's, field localities and unpublished seismic lines (not shown in this work).