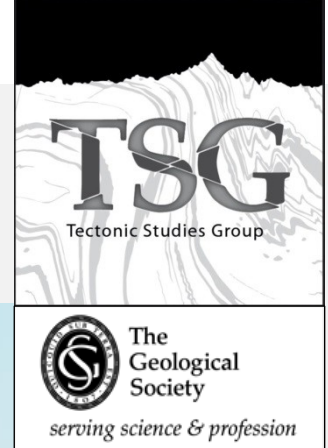


Field Trip to the Betic Zone and the Carboneras Fault System (SE Spain)



Ernest H. Rutter – *Professor of Structural Geology, School of Earth, Atmospheric and Environmental Sciences – University of Manchester*
Lorenzo Valetti – *PhD Student at the School of Earth, Atmospheric and Environmental Sciences – University of Manchester*

The Trip

Took place between the **7th and the 11th of September 2014** and the participants were based in the lively **town of Carboneras**, by the sea.

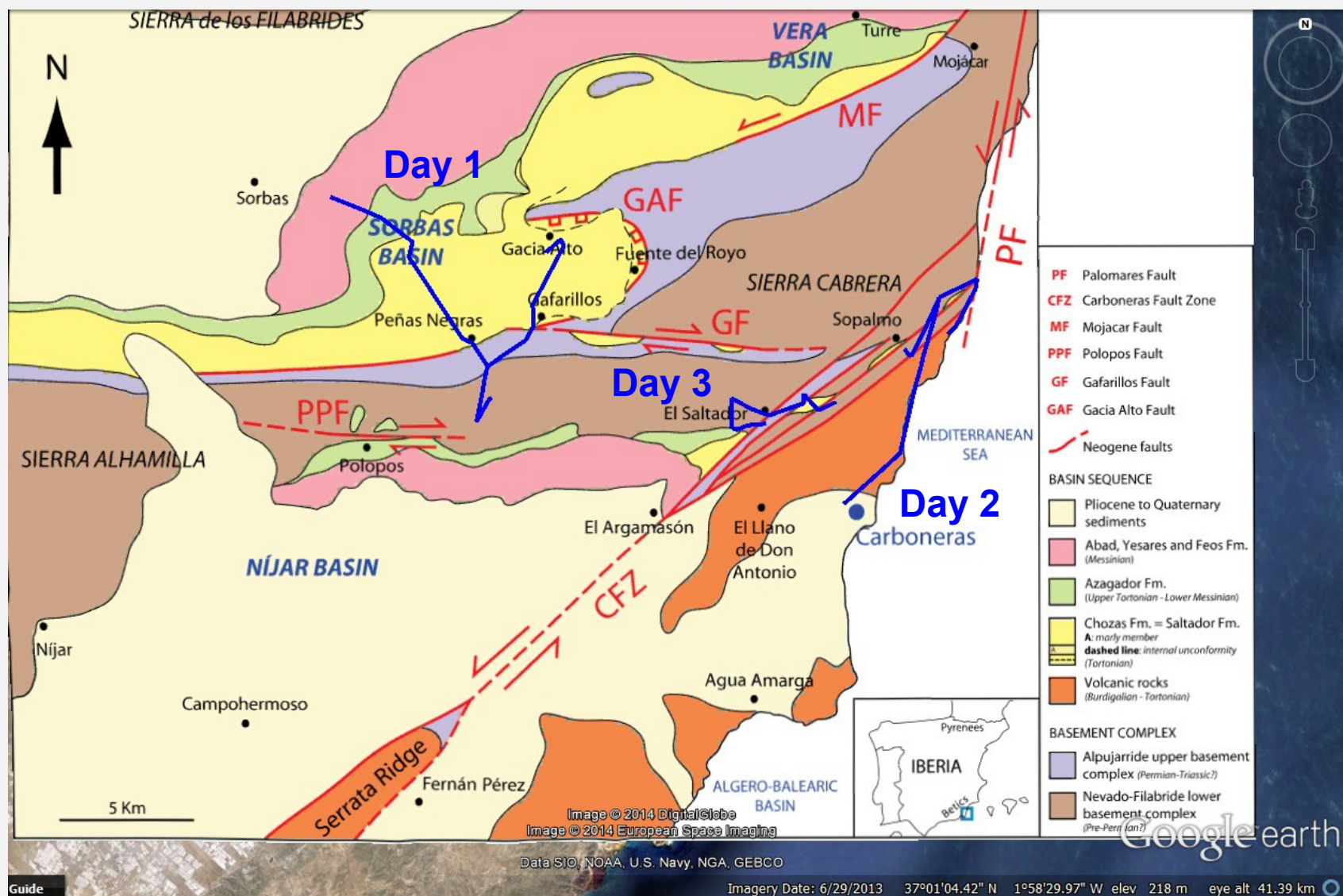
Transportation was arranged on hired cars.
(Also useful as map stand ...)

Focus and goal

- The evolution of the Internal Betic Zone characterized by Miocene regional extensional and strike-slip tectonics, that continues today.
- To showcase a good example of non rigid plate-tectonics



What we've seen



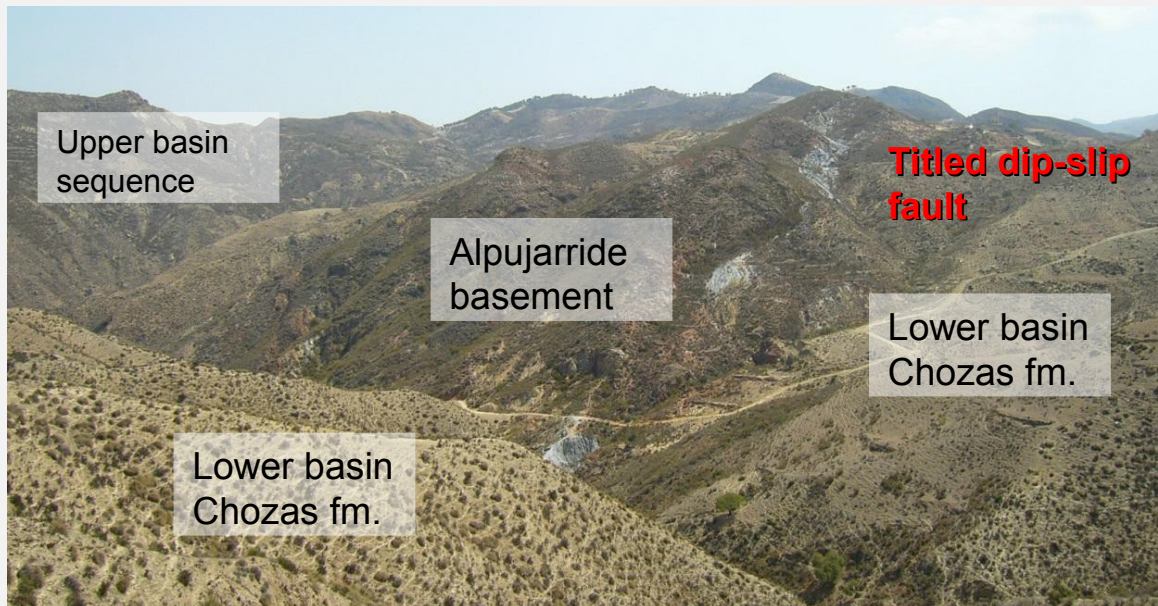
DAY 1 – SORBAS BASIN and its FAULTS



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Gafarillos Fault plane at the contact between the lower basin (Chozas fm.) and the top of the basement

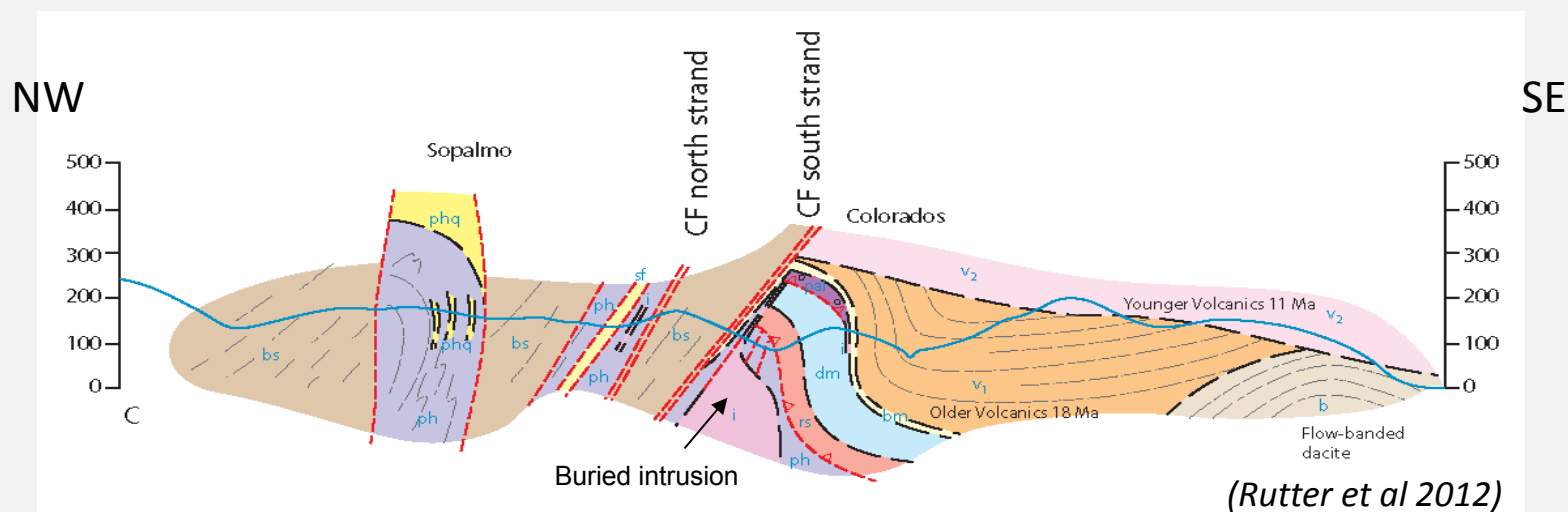


Gacia Alto fault, western segment

DAY 2 & 3 – CFZ and volcanics

Carboneras Fault Zone – Granatilla valley section

(from Rutter et al 2012)



DAY 2 & 3 – CFZ and volcanics



**Carboneras fault's best gouge
example**



DAY 2 & 3 – CFZ and volcanics

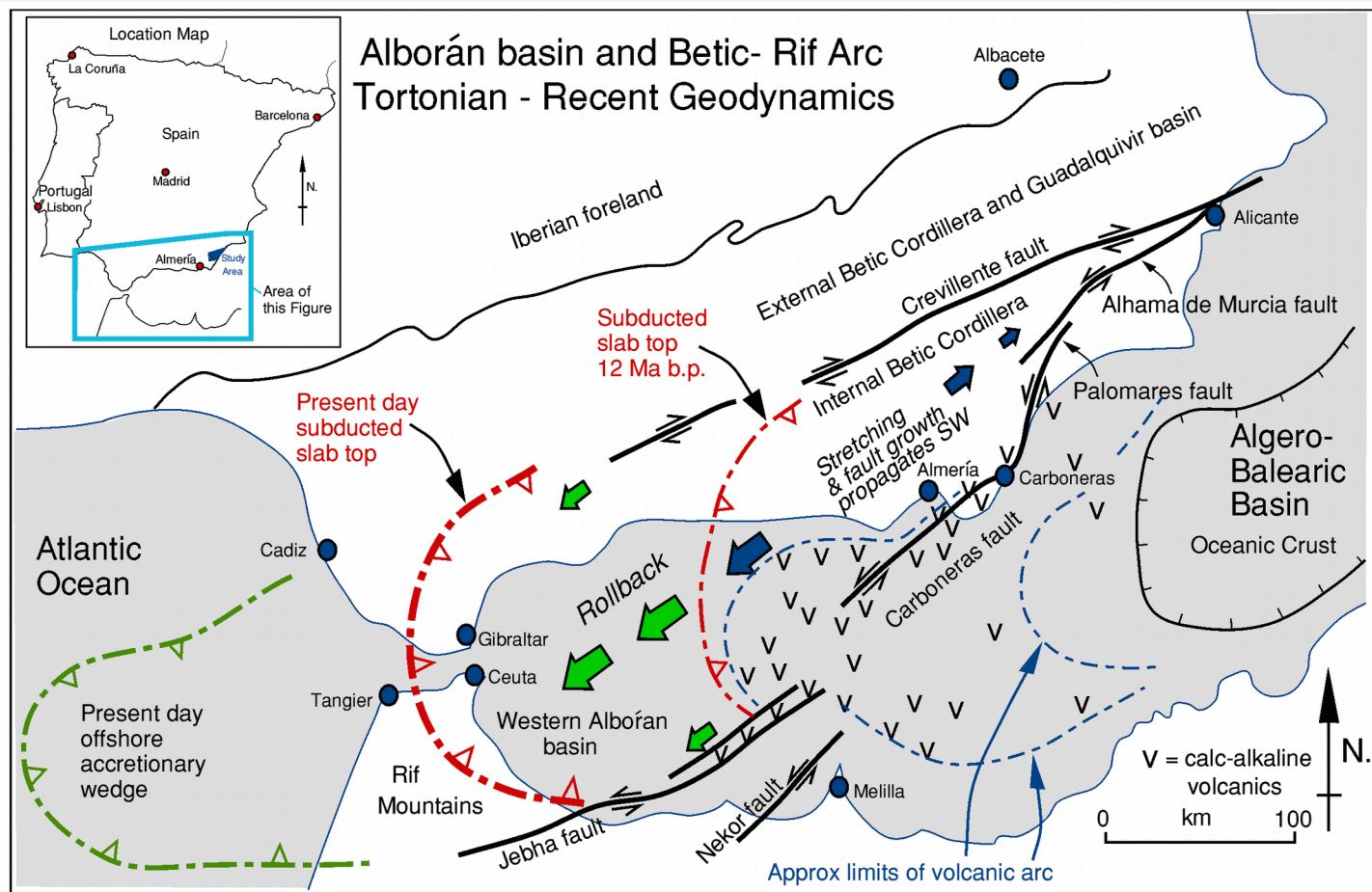
View of the volcanic complex. Looking south to Carboneras in the distance



'Breche Rouge' type young volcanics

DISCUSSION

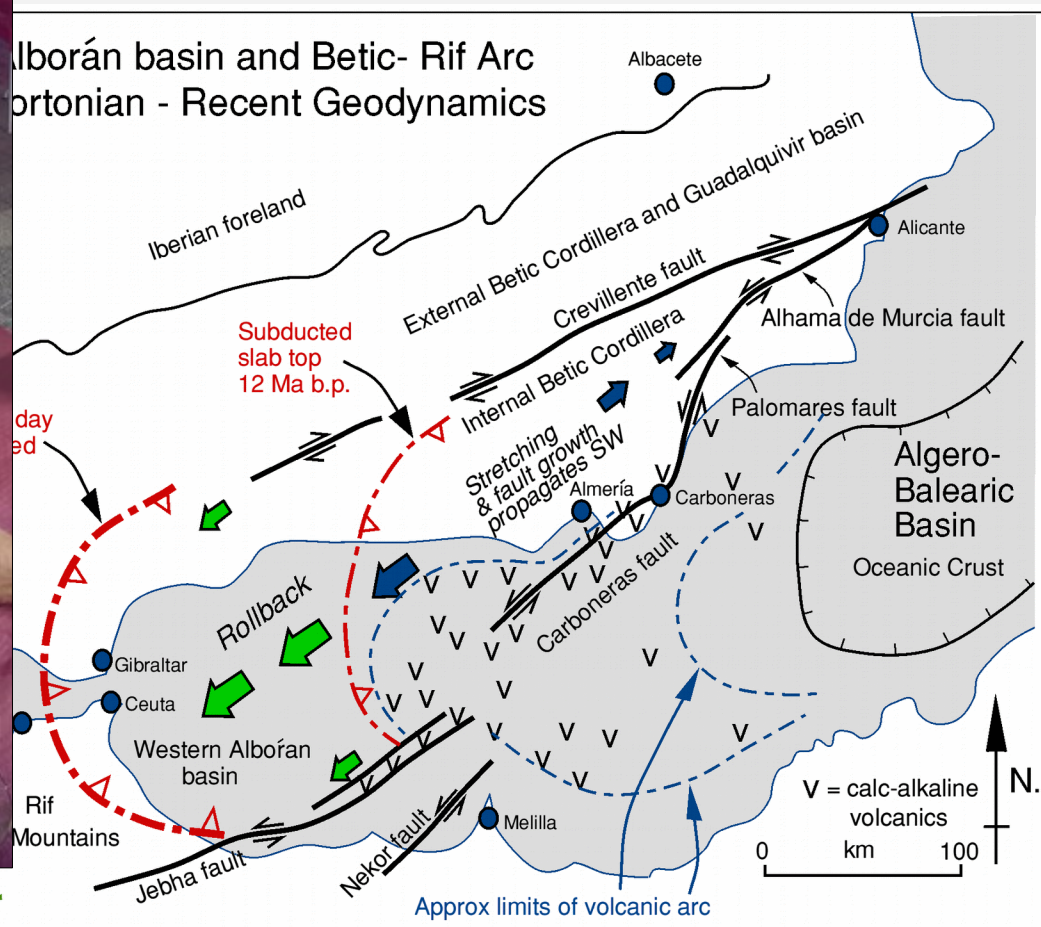
MIOCENE TECTONIC EVOLUTION



Map of S.E. Spain and N.W. Africa, separated by the Alborán sea basin, showing the geodynamic scheme (based on Lonergan & White 1997, Gutscher et al. 2002 and Gutscher 2012) for the Serravallian through Recent evolution.

DISCUSSION

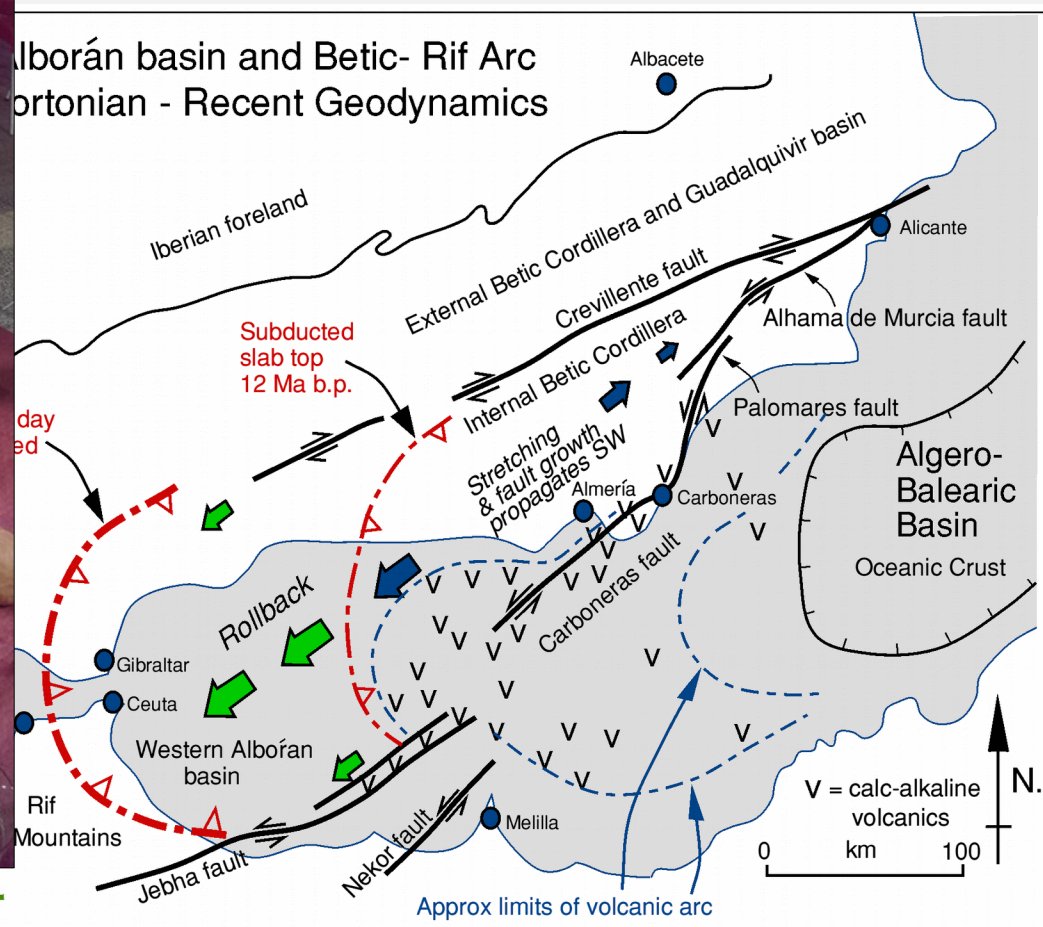
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DISCUSSION

MIOCENE TECTONIC EVOLUTION



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EL DESCANSO



A BIG THANK YOU TO THE PARTICIPANTS AND TSG!

