

VERTICAL AXIS ROTATIONS ALONG THE CENTRAL ANDES: NEW DATA FROM THE NORTHERN ARGENTINE PUNA.

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Along the Central Andes a pattern of vertical axis tectonic rotations has been identified. These rotations are counterclockwise north of Arica elbow and clockwise to the south. Different models have been proposed to explain the origin of this pattern, but it still remains controversial. One of the problems to deal with when analysing the rotation pattern is the scarcity of paleomagnetic data for the region of the Argentine Puna. With the aim of obtaining new paleomagnetic data, 92 oriented cores from 9 sites were drilled in the region of Rinconada in the Northern Argentine Puna (22°25'S - 66°10'W). Middle Miocene ignimbrites (Chinchillas, Cerro Redondo and Pan de Azúcar) and dacite domes: Casa Colorada (17.3 ± 0.7 My); Pan de Azúcar (12 ± 2 My); Cerro Redondo (12.54 ± 1.1 My); Cerro León Chico and Cerro León, were sampled. An end mean direction (EMD) for each sampling site was calculated. EMDs obtained for dacite domes located a couple of kilometers apart showed normal and reverse polarities, suggesting that they would represent different magmatic events. The EMDs calculated for Chinchillas ignimbrites and Cerro León dacite were discarded because of anomalous inclination and declination values. The remaining EMDs were combined to obtain a single EMD. This EMD coincides with the present dipolar direction of the geomagnetic field, suggesting that the studied region did not undergo statistically significant vertical axes rotations, at least from the Middle Miocene onward.