

Paleosecular variation in Mexico during Tertiary and Quaternary

H Böhnel Centro de Geociencias, UNAM-Campus Juriquilla, Queretaro 79230, Mexico; ph. 52-442-2381106, ext. 109; fax 52-442-23801105; e-mail: hboehnel@geociencias.unam.mx); R S Molina Garza (Centro de Geociencias, UNAM-Campus Juriquilla, Queretaro 79230, Mexico; ph. 52-442-2381106, ext. 126; fax 52-442-23801105; e-mail: rmolina@geociencias.unam.mx

Volcanism as a consequence of prolonged subduction of oceanic plates in the Pacific Basin is ubiquitous in Central Mexico. More than 100 paleomagnetic site-mean directions are available for the last 10 Ma. These data were pre-selected according to geological-tectonic reliability criteria and most also comply with modern quality standards as number of samples, demagnetization treatment, within-site dispersion. We analyzed the VGP dispersion using different time-windows, to obtain the angular standard deviation (ASD) and revised its time variability. The ASD values vary largely when different cut-off limits or outlier criteria are used to eliminate sites with intermediate VGP positions. Therefore, the analysis method is critical in establishing comparable ASD values, which may then be used as observational data for paleosecular variation models.

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2. Contributed 3. (a) H Böhnel Centro de Geociencias UNAM Campus Juriquilla Queretaro, 76230 (b) 52-442-2381106 ext. 109 (c) 52-442-2381105 (d) hboehnel@geociencias.unam.mx 4. No