Highly detailed records - including processing of hundreds of samples - have been obtained from red beds in southern France, in the Dôme de Barrot and Lodève basins. The main purpose was to sample and determine paleosecular variation (PSV) - over sufficient time - during the Permian Superchron. We compared our records with older and earlier published literature data, and generally find good agreement. Since (hematite bearing) red beds are famous for their inclination error, we tried to correct our distributions using two independent methods. One method is using a PSV model (TK03.GAD; Tauxe and Kent, 2004) which - not surprisingly for such low latitudes - gives no significant correction on the distributions that sufficiently sample PSV. In addition, our data are in very good agreement with published APWP data, giving confidence in the recording qualities of these red beds, at least at paleoequatorial latitudes. Another method is to correct the inclination via an approach (the "a-factor" of Tan and Kodama, 2002) that uses the anisotropies of the magnetic susceptibility and of laboratory acquired (anhysteretic or isothermal) remanence. To this end, we sampled single layers, that we assumed to record - approximately - one single occurrence of PSV. A model approach was used to estimate the a-factor, rather than determining this parameter from laboratory experiments. We also used TK03.GAD on a large distribution (N=200) of these single layer samples. This yielded interesting results. In one case a positive inclination was corrected - via the a-factor model - to a negative inclination, and in another case the Permian red beds were corrected - using the TK03.GAD model - to a position at the latitude of the Netherlands, in contrast to their assumed paleo-equatorial position. We discuss the various merits of these different and independent methods for inclination error correction in these (and other) red bed sequences.