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GRANITE MAGNETIC FABRIC AND THE BRASILIANO STRAIN PARTITIONING IN THE SERIDO BELT (NE BRAZIL)

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Brasiliano-age (~580 Ma) granitoids of the Serido belt (SB) has shown to be sensitive markers of the orogen deformation pattern. The internal structure of nine plutons located at the central and western portions of the SB has been investigated by means of anisotropy of magnetic susceptibility (AMS). These plutons are mainly K-rich calc-alkalic porphyritic magnetite-bearing monzogranites. The presence of primary coarse-grained magnetite as the main magnetic mineral is indicated by optical and electronic microscopy, magnetic susceptibilities, hysteresis ratios and thermomagnetic curves. The plutons show a strong internal coherence of magnetic fabric, with foliation poles distributed around a zone axis parallel to the gently plunging mean lineation. The shape of the plutons and the trend of their magnetic lineations suggest a complex partitioning of strain along the SB. In the central transpressive shear belt the magnetic lineations are parallel to the strike-slip shear zones and fold axis. On the other hand, in the western shear belt a voluminous granitic magmatism was emplaced along a N-trending axis as a consequence of a transtensional/extensional deformation. Magnetic lineations in these granites trend in a E to ENE direction which is parallel to the transport inferred from kinematic indicators along the shear zones. A major E-trending shear zone connect both the transtensional and transpressional shear belts.

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