

THE PIRINEUS SYNTAXIS: AN EXAMPLE OF TWO SEPARATE NON-COAXIAL BRASILANO BELTS IN CENTRAL BRAZIL

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The Pirineus Syntaxis is a pronounced concave-to-the-foreland curve in the otherwise north-south structural grain of the Brasília orogenic belt, along the western margin of the São Francisco craton in central Brazil. Deformation in the Brasília belt has been attributed to the Neoproterozoic Brasiliano orogeny. The Pirineus Syntaxis represents the overlap of two distinct fold-thrust belts. The southern limb of the syntaxis consists of an east-verging fold-thrust belt in which spoon-shaped thrust sheets, bordered by lateral ramps, are arrayed in an imbricate fan. These thrust sheets consist of continental margin strata of the Araxá, Canastra and Paranoá Groups. Metamorphic conditions range from lower greenschist to upper amphibolite facies from E to W. The northern limb of the syntaxis consists of a SE-verging fold-thrust belt. This belt consists of retrograded basement slices interleaved with basement derived psammitic/pelitic schist. Structures of the northern limb cross-cut E-verging structures of the southern limb. Because the two limbs of the syntaxis have different structural and metamorphic histories, and because the northern limb cross-cut the southern limb, I conclude that the two limbs formed during separate, non-coaxial deformational events. This interpretation implies that the Brasília belt itself formed as a result of two non-coaxial episodes. These episodes may reflect sequential collision of microcontinents with the western margin of the São Francisco craton during the Neoproterozoic assembly of Gondwana.