

THE RADARSAT DATA CONTRIBUTION FOR INTERPRETING REGIONAL KINEMATICS IN THE CARAJÁS PROVINCE, BRAZIL

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ScanSAR and Standard RADARSAT images (ascending and descending passes) were used for identifying kinematic features in the Carajás Province based on two main attributes: terrain enhancement, and detailed to synoptic viewing. The area is located on the southernmost border of the Amazonic Craton, and is characterized by lithostructural units related to the Itacaiúnas Shear Belt (granulites, type greenstone belt sequence,granitoids,metavolcanic- sedimentary rocks, plataformal cover and anorogenic granites). The rock ages range from 2.86 to 1.6 Ga. Ductile to brittle-ductile transpressive deformations, and brittle transtensive to brittle deformations, due to a generalized distension regime are common, from the oldest to the youngest units. The deformations present a progressive character well depicted in the SAR images. The RADARSAT interpretation, coupled with field and bibliographic data, has allowed to characterize an initial phase, with rocky mass moving from north to south, and has been responsible for the E-W, WNW-ESE trending major structures (a non-coaxial ductile shear with dextral component), followed by an inflection from N-S to NE-SW, with structural transpositions and sinistral movements. Distensive directional duplexes (rhomb-chasm basins), volcanic rocks, granites and sedimentary cover are related to this phase. The limit of the Archean to the Proterozoic is related to a distensive character of old crustal weakness lines responsible for anorogenic granitic manifeststions.