

Paper Number: 5424

The Ribeira belt in the Context of Supercontinent Cycles

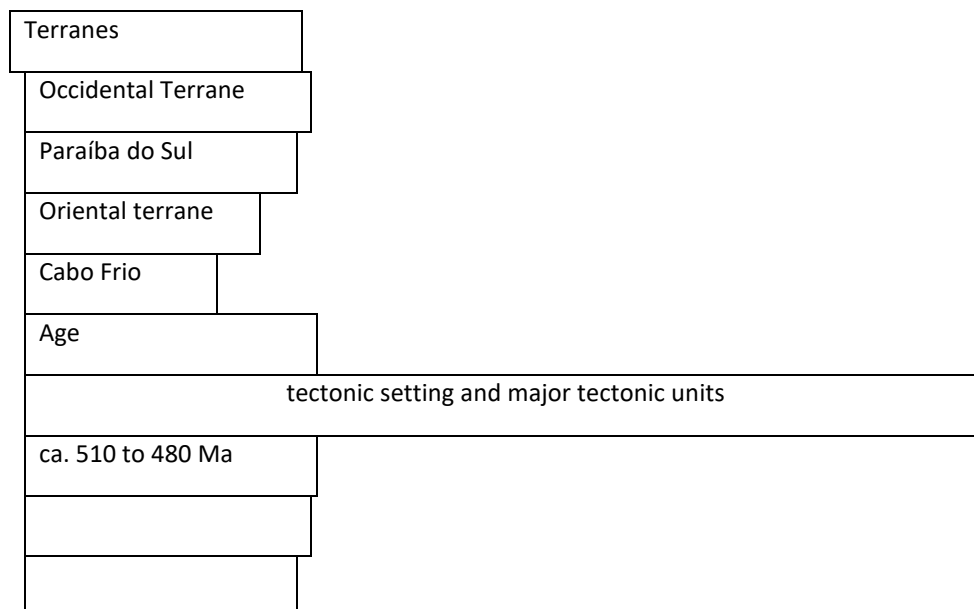
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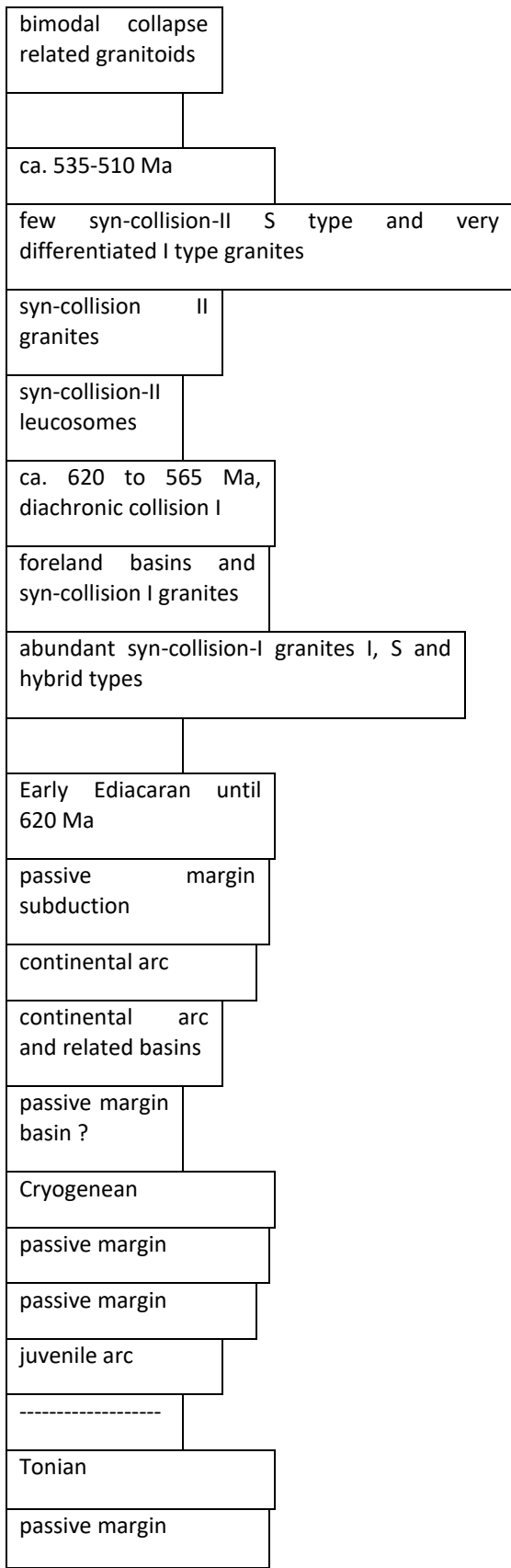
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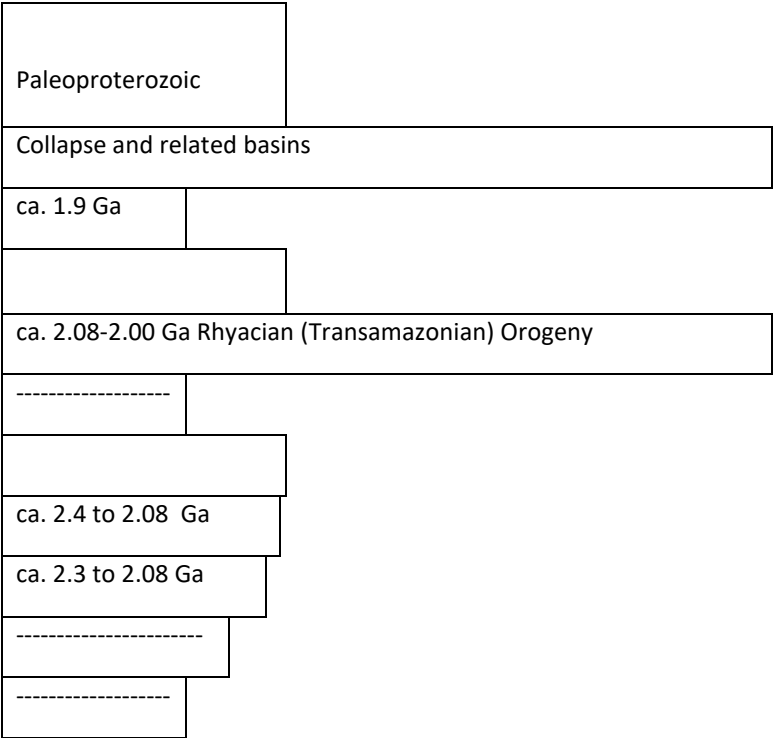
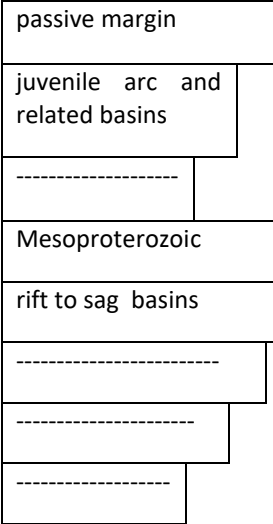
The Ribeira belt, SE Brazil, is one the Neoproterozoic belts related to Gondwana amalgamation. Due to its central position on the Western Gondwana puzzle, many discussions about the intervenient oceans between the cratonic blocks of São Francisco-Congo, Angola and Parapanema, besides micro-continents, are until now a matter of hot debate

Usually, the identification of magmatic arcs and related basins, ophiolite sutures and high pressure metamorphic rocks, together with paleomagnetic data are key points to better understand the paleogeography prior to Gondwana amalgamation during Neoproterozoic to Cambrian times. However, most of the belts that made up the Western Side of the Gondwana Collage are deeply eroded and the finding of magmatic arcs bracket the polarity and duration of the subduction process that took place before the final amalgamation of the supercontinent. Also the juvenile contribution to these magmatic arcs and the presence, composition and robust geochronology of older (Pre-1.0 Ga) basement rocks are helpful tools to complete the puzzle.

After three decades of combined geological mapping, structural analysis, geochronology and geochemistry studies, we proposed the following tectonic periods within the different terranes that made up the Ribeira belt in table below, compatible with a very accretionary and dynamic scenario that resulted on the Western Gondwana amalgamation. Data and scenario are compatible with paleomagnetic data.







Synthetic Chart for the major tectonic events of the Ribeira belt, SE Brazil

