

SOME EVIDENCES ON NORTHEAST BRAZILIAN IMPACT STRUCTURES (ASTROBLEMES).

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Regional geological cartographic studies achieved in Brazil during these last years permit to call into question the origin of numerous circular structures similar to meteoritic impact or others like astroblemes. The large number and its distribution on the whole of the Brazilian territory is a meaningful fact. According to this study one fact can make himself an idea of the importance of meteoritic impact episodes in the Brazilian craton: the studies by remote sensing and geophysical products carried out in the Parnaíba sedimentary basin, northeastern Brazil. However, researches in this domain are very limited and do not contain all elements to do a correct classification. Among a large number of circular structures found in the Brazilian territory, we placed in evidence those more suitable to be associated to astroblemes: Araguinha (Goiás – 40km of diameter), Cangalha (Goiás - 12km of diameter), Colônia (São Paulo – 3km of diameter), Riachão (Maranhão – 4km of diameter), S.M.Tapuio (Piauí – 25km of diameter), S.Marta (Piauí – 12km of diameter) and Vargeão (S.Catarina 12km of diameter). The evidence of meteoritic impact (morphology, petrology, structural aspect, shatter cones, etc.) have been discovered only in the Araguinha and Cangalha structures and, recently, in the S.M. Tapuio and S. Marta astroblemes. We studied these two astroblemes by remote sensing, geological studies and using geophysical techniques (gravimetric, magnetic and electrical methods). To the Northeast of Brazil other structures can be added: Picos, B.Jesus, S.P. Crentes, A.Turiaçu, A.Araguaia, E.Martins and Bandeira structures.