

THE PARANAIBA (CACILANDIA) FIREBALL, MS, BRAZIL. M. E. Zucolotto¹ and W. P. Carvalho². ¹Museu Nacional/UFRJ. E-mail: mezucolotto@globocom.com.br. ²Univers. Federal da Bahia.

Here is investigated a bright fireball of June 3rd, 1956 [1] which lingered long enough in the atmosphere to be shot from many cities about almost 800 km. It received the name MIGOMASPA (an acronym meaning the Brazilian states of Minas Gerais, Goiás, Mato Grosso and São Paulo where it was observed) and it was here associated with the fall of the Paranaíba. In this present work, it is also considered a correlation between the chondrites Paranaíba (L6) and Cacilândia (H6).

On the attempt to find out facts related to Brazilian Meteorites we follow the notes from Rubinger [1] (an amateur astronomer, who recovered the Ibitira achondrite). He estimated the site of the Migomaspa fall somewhere near Cassilândia and Paranaíba. In spite of many investigations we got none information about the Cacilândia, otherwise we realized that the Fazenda Cancan, where Paranaíba fell [2], is just 20 km from the Cassilândia city and realized that the Migomaspa bolide was related to this fall.

The British Museum Catalogue lists three samples of Cacilândia held by Museu Nacional (Rio de Janeiro), Smithsonian Institution (Washington) and Max Planck (Mainz). Indeed there is no sample of such a meteorite in the Museu Nacional collection, so a comparative study between those meteorites cannot be performed. Contacting the other museums, Dr. McCoy pers. com. informed that Cacilândia is a shock-veined chondrite in accord to Paranaíba. Dr. Wasson pers. com. obtained the olivine composition published in his book [3] leading the H6 classification from Dr. Wlotzka pers. com., which is in agreement to Fredriksson [4]. Indeed in a previously paper Hintenberger [5] classified it as L. On finishing this article I receive a picture of the Cacilândia from Dr. Jutta Zipfel (Mainz) which is very similar to Paranaíba

Considering the following facts: 1) At the Museu Nacional where the Cacilândia was supposed to be, there is none information regarding this meteorite, except some letters from Prof. Curvello to Smithsonian Institution referring to them as the same meteorite "Paranaíba (Cacilândia)"; 2) Paranaíba fell very close to Cassilândia; 3) there is no city with the name Cacilândia (GO) the correct name is Cassilândia (MS) which is situated in the frontier land of these two states; 4) Both meteorites have been a shock veined chondrites; 5) Cassilândia was a district of Paranaíba till 1954; 6) Since 1972 Dr. Hutchison asked informations of Cacilândia for the supplement of British Museum Catalogue; 7) Paranaíba and also Cacilândia are veined Breccia composed of light and dark areas what can lead differences in the analysis.

Therefore, although the composition of those meteorites was regarded as too distinct to be consistent with the same meteorite, being Paranaíba a L6 and Cacilândia a H6, in our view the historical records point that both names should be interpreted as related to the same meteorite, and it related with the Migomaspa fireball.

References: [1] Rubinger, M.M.1957. *Boletim Mineiro de Geografia*,1: 81-93. [2] Amaral, S.E.1962. *Bol. Soc. Bras. Geol.*11,2: 5-19. [3] Wasson, J.T. 1974. *Meteorites*, Springer-Verlag. [4] Fredriksson, K. 1997. *Meteoritics & Planetary Science* 32:55-60. [5] Hintenberger, H. et al. 1965. *Z. Natur.* 20A: 983-989.

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