Geophysical Research Abstracts, Vol. 7, 09755, 2005
SRef-ID: 1607-7962/gra/EGU05-A-09755

Evaluation of peak current polarity retrieved by the Zeus long-range lightning monitoring system

C.A. Morales (1), **E.N. Anagnostou** (2), O. Pinto (3)

(1) Universidade de São Paulo, (2) University of Connecticut, USA, (3) Instituto Nacional de Pesquisas Espaciais, Brazil.

This paper evaluates the peak current polarity retrieved by the global VLF lightning detection network, named ZEUS, over Brazil based on a comparison with the Brazilian lightning detection network, RINDAT. In order to make this evaluation, we have constrained the intercomparison over the South and Southeast Brazil, where we expect to have 80-90% detection efficiency and 0.5-2 km location accuracy for RINDAT, which will be used as our “ground truth”. The coincident measurements are matched in a time window of 0.0001 seconds, mainly because each system measures in different frequency and consequently they can observe distinct lightning process, and also to account for timing errors in the solution. The analyses are performed during the months of November and December of 2004, where we have available RINDAT and ZEUS data. During the conference we will present some analyses to depict the dependence of polarity as a function of distance, time of the day and peak current strength.