

OBSERVATIONS OF A QUADRUPOLE FROM RECORDINGS OF AN INTENSE AURORA IN PREHISTORY: THREE RIVERS PETROGLYPHS

W. Fay Yao, *Member IEEE*
Albuquerque Public Schools System
State of New Mexico
Albuquerque, New Mexico 87110 USA

Anthony L. Peratt*, *Fellow IEEE*
Los Alamos National Laboratory
Los Alamos, NM 87545 USA

In previous publications^{1,2}, the reconstruction of a virtual image of an intense auroral storm recorded in prehistory from a worldwide logging of petroglyphs (GPS, orientation, and inclination) is showing plasma sheath filamentation into 56 currents at the south polar horn. Below the horn, a convergence via Ampere's law to 28 filaments is seen at a pinch plasmoid, followed by lesser numbers of merged filaments at a second plasmoid. Near Earth, the filaments merge to four in a magnetic fusion confinement quadrupole before spreading out to 56 currents that then flow over and around the Earth. The self magnetic field trap follows the analysis given by Akasofu³ and the picture, as seen from about 45°N-25°S, well-documented in Mesoamerica and the Middle-East, is that of an 'quincunx', the outer objects being the four currents while the inner object is trapped thermonuclear plasma. All objects were seen in synchrotron light. Three-dimensional particle-in-cell simulations are replicating a great number of petroglyphs from the rapidity of the plasma within the quadrupole. For example, the right frame shows a typical quincunx pattern of 'four birds' as depicted on a clay tablet unearthed in the Midwestern U.S. On the left is one of many Three Rivers 'bird figures', a single part of a quadrupole representative of the numerous complete quincunx's carved at this site.



¹A. L. Peratt, IEEE Trans. Plasma Sci. Vol.31, N.6, 2003.

²A. L. Peratt, et. al., Int. Conf. Pulsed Power and Plasma Science, Conf. Rec., Albuquerque, June 17-22, 2007.

³S.-I. Akasofu, IEEE Trans. Plasma Sci, August 2007.

*University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia PA 19104, USA.