

**A COMPLETE SURVEY OF THE ROCK ART ON  
EASTER ISLAND AS SOLAR-EARTH MHD  
INSTABILITIES RECORDED BY MANKIND IN  
ANTIQUITY**

W. F. Yao, *Member, IEEE*  
*Library and Technology Division, Albuquerque Public  
Schools, Albuquerque, NM 87122*

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

P. Bustamante  
*UC en Conservación*  
*Santiago, Chile*

R. Tuki  
*National Council for Indigenous Development*  
*Easter Island, Chile*

Fine detail comparisons of experimental and high fidelity computer simulations of MHD Z-pinch column instabilities; show that these configurations were carved by mankind on rock in antiquity. This recognition has led to a global survey of these objects in 139 countries, from 70°N to 48°S.<sup>1,2,3,4</sup> In all cases, after a survey of fields of several million petroglyphs, the field-of-view (FOV) alignment is found to be within 1° of true south. A complete survey of the rock art on Easter Island, especially from caves in the vast braided lava tube system validated an earlier study: that the artists had a narrow field-of-view of synchrotron light within half-a-degree of true south and an inclination between 22 – 31 degrees above the horizon.

<sup>1</sup>A. L. Peratt, Characteristics for the occurrence of a high-current z-pinch aurora as recorded in antiquity. *IEEE Trans. Plasma Sci.* v.31, pp.1192-1214, 2003.

<sup>2</sup>A. L. Peratt, J. McGovern, A. H. Qöyawayma, M.A. Van der Sluijs, and M. G. Peratt, Characteristics for the occurrence of a high-current z-pinch aurora as recorded in antiquity Part II: Directionality and source. *IEEE Trans. Plasma Sci.* v.35, pp.778-807, 2007.

<sup>3</sup>A. L. Peratt and W. F. Yao, Evidence for an intense solar outburst in prehistory, *Physica Scripta*, T131, October 2008.

<sup>4</sup>P. Bustamante, Probable ocurrencia en la antigüedad de aurora boreal de alta intensidad y su posible registro en obras rupestres <http://www.rupestreweb.info/auroras.html> ,

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