

COSMIC RAY OBSERVATIONS AT CHACALTAYA AND CERRO LA NEGRA COMBINED WITH THE PIERRE AUGER AND MILAGRO OBSERVATORIES: GRBS AND SEARCH FOR COSMIC RAY CORRELATIONS

O. Saavedra (1), O. Martinez, H. Salazar (2), A. Velarde (3), L. Villaseñor (4) and A. Zepeda (5)

(1) Dipartimento di Fisica Generale and INFN, Torino, Italy, (2) Facultad de Ciencias, BUAP, 72000 Puebla, Pue., Mexico, (3) Instituto de Investigaciones Físicas, UMSA, La Paz, Bolivia, (4) Instituto de Física y Matemáticas, University of Michoacan, Apdo. Postal 2-82, Morelia, Mich., 58040, Mexico, (5) Departamento de Física, Cinvestav, Mexico D.F., Mexico.

We consider the possibility to search for cosmic ray phenomena time correlated among distant experiments that are currently running in the world. In particular we consider the correlations of events detected by four experiments: between Milagro, operating in USA, and Cerro la Negra Cosmic Ray Laboratory, under construction in Mexico, and between Chacaltaya, in Bolivia, and Auger Observatory, under construction in Argentina. Almost complete sky coverage with fairly uniform celestial exposure of the northern and the southern hemispheres by the above four experiments at the same time could provide important information on astrophysical phenomena. Search for Gamma Ray Bursts and search for non random coincidence between these experiments seem to be feasible under an international extensive air shower joint experiment with the main goal to watch GRBs and other astrophysical phenomena.