

Abstract Submitted
for the APR05 Meeting of
The American Physical Society

Search for Correlated High Energy Cosmic Ray Events with CHICOS B. E. CARLSON, E. BROBECK, C. J. JILLINGS, M. B. LARSON, T. W. LYNN, R. D. MCKEOWN, California Institute of Technology, JAMES E. HILL, California State University, Dominguez Hills, B. J. FALKOWSKI, R. SEKI, California State University, Northridge, J. SEPIKAS, Pasadena City College, G. B. YODH, University of California, Irvine, CHICOS COLLABORATION — We present the results of a search for time correlations in high energy cosmic ray data (primary $E > 10^{14}$ eV) collected by the California High school Cosmic ray Observatory (CHICOS) array. Data from 60 detector sites spread over an area of 400 km^2 were studied for evidence of isolated events separated by more than 1 km with coincidence times ranging from $1 \mu\text{sec}$ up to 1 second. The results are consistent with the absence of excess coincidences except for a 2.9σ excess observed for coincidence times less than $10 \mu\text{sec}$. We report upper limits for the coincidence probability as a function of coincidence time.

Robert McKeown
Caltech

Date submitted: 13 Jan 2005

Electronic form version 1.4