

SEARCH OF CENTAURO LIKE EVENTS

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Chacaltaya Emulsion Chamber Experiment)

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Since 1971, Brazil-Japan Chacaltaya Emulsion Chamber Experiment is observing unusual events interpreted as Multiple Hadron Production without π^0 events. As previously reported, these events are characterized by high hadron content and no π^0 production at the interaction. Two of the five Centauro events have their interaction point determined through microscope measurements in the films of the emulsion chamber exposed at Mount Chacaltaya (5,220 m of altitude). In spite of the fact that exists other Centauro candidates, in this paper we present analysis on the beforehand mentioned 5 events because all have showers observed at both upper and lower chamber exposed at Chacaltaya (5,220 m of altitude) and the total showers energy in the range (200-300) TeV. The comparison was done with 288 events through acceptance analysis of similar to the 5 selected Centauro events, using their physical quantities like: total energy ($\Sigma E_{\text{showers}}$), multiplicity (n_{showers}), emission angle related quantity (r_{showers}) and so on. It results that only 3 other events are comparable with Centauro events but neither of them has high hadron content. Sideways we compared with 9,360 computer simulated events and the result is only 1 compatible, in terms of the same used observables, with the 5 Centauro events.