BNL Exp 868 Multifragmentation of 10.6 AGeV gold nuclei

U. of Minnesota, LSU, Krakow, Moscow
(The KLMM collaboration)

Co-Spokesperson: C. Jake Waddington
School of Phys. and Astro., Univ. of Minnesota, 116 Church St. S. E.
Minneapolis, MN 55455 USA
E-Mail: waddington@uhn.spa.umn.edu (internet) FAX:(612) 626- 2029

Co-Spokesperson: W. Wolter
Inst. of Nuclear Physics, Kawiory 26A, 30-055 Krakow, Poland
E-Mail: wwolter@chopin.ifj.edu.pl FAX: 48 - 12 - 33 38 84

Physics Goals:	Inclusive study of interactions of gold nuclei in emulsions
Beams:	Au at 10.6 GeV/A
Targets:	Emulsion; H, C, N, Ag, Br

Physics Summary

Exp 868 consisted of the exposure of a number of stacks of nuclear emulsions to the 10.6 AGeV gold beam. The incident nuclei were aligned paralllel to the plane of the emulsions and their tracks were thus confined to a single pellicule. Interactions were located by along the track scanning and a mean free path consistent with that deduced from the results of Exp 869 was determined. The resulting sample of some 1000 interactions has minimal bias and can be compared with similar results obtained at lower energies. For each interation it was possible to determine the number and charge of all the fragments heavier than helium emitted, the numbers of alpha particles, the number of fast singly charged particles, and the number of slow particles emitted from the target. The angles of emission could be measured with high precision and hence the pseudorapidities determined.

Selected Publications

"Interactions of 10.6 GeV/nucleon gold nuclei in nuclear emulsion", M. L. Cherry *et al.*, Z. Phys. C **62**, 25 – 29 (1994)

"Some preliminary results from the new 10.6 GeV/nucleon gold beam at Brookhaven", C. Jake Waddington, Int. J. Mod. Phys. E **2**, 739-766 (1993).

"Particle production and fragmentation processes in heavy ion interactions in emulsion", R. Holynski, Nucl. Phys. A **556**, 191c (1994).

AGS	**Run Completed**	**Emulsion**	**E868**

Related Experiments

EMU-07