

IDENTIFICATION OF LIGHT FRAGMENTS FROM TERNARY EVENTS
PRODUCED IN THE INTERACTION OF 12.7 GeV
 α -PARTICLES WITH Au TARGET

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Determination of charge and energy of light fragments from ternary events has been made by using 4 μ polycarbonate track detector (macrofol). In our experiment single sheet method was used for fragment identification. Following a two stage process consisting of initial chemical etch plus final chemical etch, we measured two parameters for each fragment that can be related to its charge and energy. Tracks of heavy fragments reach nearly their end already after initial etch so that this method is not applicable for identification of such fragments. For light fragments the length at of the conical pit produced in the initial etch gives the etch rate; the length produced in the final etch gives the range of the fragment.

Results show that ternary events production probability increases if light fragments masses decrease. There is small probability to find three fragments of nearly equal masses.