

Study of Fragmentation Products
from the Reaction 800 GeV p + ^{197}Au

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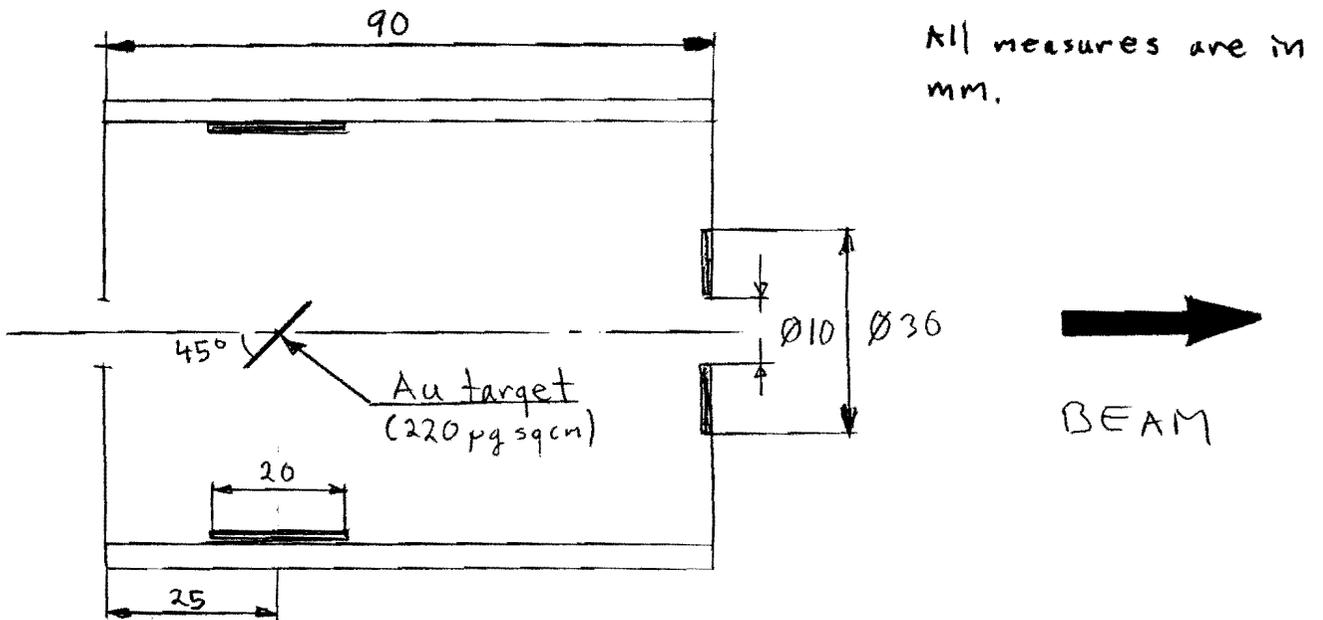
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Scientific Motivation

The group has been involved in extensive experimental studies of mass and angular distributions in proton-nucleus and nucleus-nucleus collisions. Measurements have been focussed on target fragmentation, using well-known inclusive off-line gamma ray spectroscopy. The group has recently done experiments at BNL (14.5 A GeV ^{16}O + ^{197}Au) and CERN (60 and 200 A GeV ^{16}O + ^{238}U). A clear transition from fissionlike processes at low beam energies to multi-fragmentation processes at high beam energies is observed. Also, the concept of limiting fragmentation at high energies has been confirmed in both pA and AA collisions.

This experiment (800 GeV p + ^{197}Au) will help us to try to understand the reaction mechanisms in relativistic pA and AA collisions, and it will give us data to compare with our previous experiments.

Chamber 2 (Energy Spectra)



Inside the chamber are two stacks with mylar catcher foils, ranging from 0.294 mg cm^2 to 2.467 mg cm^2 , in siderange directions, and one stack with mylar catcher foils, ranging from 0.284 mg cm^2 to 2.728 mg cm^2 in forward direction. By help of these mylar stacks it is possible to determine the energy of the fragments.