

Abstract Submitted
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Fragment yield corrections in tin-tin collisions¹ CHUN YUEN TSANG, The Chinese University of Hong Kong, HIRA COLLABORATION — In nuclear collisions that occur at the NSCL and FRIB, many different species of nuclei are produced. Most of these nuclei are stripped of all the electrons but some still have electrons attached. They will be misidentified in a mass spectrometer and the yield of other fragments will be affected. In my research, we compare the yields of fragments produced in the collisions of different Sn isotopes which have same number of protons but different number of neutrons. Such measurements help us to study the differences in the interactions of neutrons and protons, which is important in our understanding of very neutron rich objects such as the neutron stars. The S800 mass spectrograph is used to identify different fragments produced in these Sn reactions at 70 MeV per nucleon. We show that the hydrogen-like fragments contaminate mainly the yields of isotopes with two extra neutrons. Then we use the algorithm GLOBAL to estimates of the contamination fractions of each fragments to obtain correct yields for fragments we want to measure. Contamination fractions depend on the velocity of the particles but most of them are small values. In this poster, I will present how we estimate the effects of contamination fractions on the fragment yield and the physics results we obtain.

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