



## A Comparison between Channel Selections in Heavy Ion Reactions

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The gamma rays de-exciting the yrast and near yrast states in neutron deficient as well as neutron rich nuclei from fusion-evaporation and deep-inelastic reactions and other emission particles have been recorded using an array of escape suppressed germanium detectors, a BGO ball, a recoil separator, silicon charge particle detectors and an ionization chamber. For each reaction type, we used different combinations of detectors with increasing gamma ray detectors from fusion-evaporation experiments to deep-inelastic experiments to separate

different channels. In two experiments related to fusion-evaporation reactions, additional mass and charge particle detectors showed better resolution of spectra with lower statistics and some ambiguities. In the third experiment, which we used only an array of germanium detectors and a BGO ball, the statistics of spectra are relatively good but not sufficient, which means that we must use additional channel separators.

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