

${}^6\text{He}$ Transfer and Breakup Reactions near the Coulomb Barrier....a Status Report.

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The yield of alpha particles from transfer/breakup reactions of ${}^6\text{He}$ on high-Z targets near the Coulomb barrier is astonishingly large. We have shown that about 70% of this yield comes from 1n and especially 2n transfer reactions, and are now investigating breakup processes. In a recent experiment, alpha-n and alpha-n-n coincidences from ${}^6\text{He}$ breakup have been measured. In the latter case, the ${}^6\text{He}^*$ excited state leading to breakup can be reconstructed and "direct" breakup to the alpha-n-n channel, as well as "resonant" Breakup through the (neutron unbound) first excited state of ${}^6\text{He}$, can be distinguished. Preliminary cross sections for these breakup channels will be given, and compared with a theoretical calculation.