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The New Heavy Element Program at Texas A&M University¹

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— A new program to study the heaviest elements has begun at the Texas A&M University Cyclotron Institute. As part of a DOE-sponsored upgrade, the existing 88-Inch K150 Cyclotron is being recommissioned and will provide the intense, stable beams at Coulomb barrier energies that are necessary for the production of actinide and transactinide elements. The ECR2 ion source will be moved to the 88-Inch Cyclotron to provide the necessary ion beams. Additional work has focused on modifying the Momentum Achromat Recoil Separator for heavy element studies, and an experiment to study the production of neutron-deficient At isotopes in the $^{40}\text{Ar} + ^{165}\text{Ho}$ reaction will be conducted in Spring 2009. Excitation functions will be measured and compared with existing data; the measured separator transmission will be compared with the results of simulations. This talk will discuss the suitability of available facilities and first experimental results.

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