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Characterization of aerosol transport in a recoil transfer chamber for heavy element chemistry GABRIEL LOPEZ MORALES, EVGENY TERESHATOV, CHARLES FOLDEN, Cyclotron Institute — Heavy elements (HE) are elements with Z >103 that can be synthesized via target material bombardment by accelerated charged particles. Production and investigation of properties of new elements result in understanding of upper limit of Periodic Table of Elements. Study of chemical behavior of HE is usually based on comparison with their light homologue properties. Such experiments require transportation of elements of interest from a target chamber to a radiochemical laboratory within several seconds. Aerosol transport is a widely known way to transfer non-volatile elements in on-line experiments. This particular project is devoted to design, characterization and optimization of aerosol transport for implementation in future experiments at Cyclotron Institute, Texas A&M University. Different types of aerosol generators and particle parameters such as: size distribution, concentration and charge have been considered. Results showing procedure development will be presented. *Funded by DOE and NSF-REU Program

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