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Methods for Loading Heavy Metals into the Clemson EBIT¹ RICHARD MATTISH, TIMOTHY BURKE, STEVEN BROMLEY, JOAN MARLER, Clemson University — The Clemson University EBIT (CUEBIT) facility allows for the creation and study of highly charged ions (HCIs). Up until now, only elements existing as gases at room temperature have been loaded and studied in the CUEBIT (e.g. Ar, O, C from CO2). However, for studying metal HCIs of interest to astronomers (e.g. Fe, Ag, Au), it is necessary to find a method to load these solids into the CUEBIT. We investigated two methods, laser ablation and thermal evaporation, which allow for the loading of neutral metals into the CUEBIT. A time-of-flight mass spectrometer and a quartz crystal microbalance were used to evaluate the particle yield of each of these methods.

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