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## Measuring the nuclear masses of transuranium isotopes in the vicinity of the $N=152$ deformed neutron shell-closure

We have re-visited the region of actinides in the vicinity of the  $N=152$  deformed neutron shell-closure, and repeated high-precision mass measurements using the newly implemented Phase Imaging Ion Cyclotron Resonance (PI-ICR) technique [1].

With our greatly improved apparatus we have measured the masses of  $^{244}\text{Pu}$ ,  $^{241}\text{Am}$ ,  $^{243}\text{Am}$ ,  $^{248}\text{Cm}$ ,  $^{249}\text{Cf}$ , taking  $^{208}\text{Pb}$  and  $^{238}\text{U}$  as mass references. The masses of these reference ions were recently determined with ultra-high-precision at PENTATRAP [2, 3]. We have implemented a simultaneous polynomial-fit method to evaluate the data.

Our results were implemented in the latest Atomic Mass Evaluation. The recent mass measurements as well as their comparison to the literature values will be presented and discussed.

[1] Chenmarev, S., *et al.* Eur. Phys. J. A **59.2** (2023): 29.

[2] Kromer, K., *et al.* Eur. Phys. J. A **58.10** (2022): 202.

[3] Kromer, K., *et al.* Phys. Rev C **109.2** (2024): L021301.

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