



Contribution ID: 167

Type: Oral

## Exploring the limits of existence of heavy neutron-deficient nuclei in the $Z=70-82$ region

Alpha-, beta-, and proton-decay energies have been combined with TITAN mass values for  $^{150-157}\text{Yb}$  to expand and refine the mass surface in the proton-rich  $Z = 70 - 82$  region. The calculations were performed using the Atomic Mass Evaluation (AME) algorithm. As a result, a total of 11 new ground state masses were accordingly determined while the uncertainties were reduced by more than a factor of two for 9 previously determined ground-state masses. The new information allows the determination of the two-proton drip line for elements between Ir and Pb and provides predictions of new candidates for two-proton emission. In addition, we examine binding energies in this region for Thomas-Ehrman shifts, so far only visible for light nuclides.

**Primary author:** LYKIARDOPOULOU, Marilena (TRIUMF)

**Presenter:** LYKIARDOPOULOU, Marilena (TRIUMF)

**Session Classification:** Poster Session

**Track Classification:** Poster Presentations