

Abstract Submitted  
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**Total Absorption Measurement of the Beta Decay of  $^{104}\text{Mo}$** <sup>1</sup>  
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PENG SHUAI, Oak Ridge National Lab, ORNL MTAS GROUP TEAM — With  
the discovery of the pandemonium effect, the necessity of total absorption measure-  
ments of beta decay quickly became apparent. Of particular interest in the field of  
nuclear energy are accurate measurements of the beta feeding intensities of fission  
products. To this end, the beta feeding intensities of  $^{104}\text{Mo}$  were measured using  
the Modular Total Absorption Spectrometer (MTAS) at Argonne National Labo-  
ratory (ANL). Due to a complicated level scheme of the daughter nucleus,  $^{104}\text{Tc}$ ,  
this isotope reveals a unique need to study low lying states populated by beta de-  
cay. This presentation will present the difference between existing high precision  
measurements and our total absorption measurements. Additional attention will  
be given to the gamma spectrum at low lying levels including a discussion of the  
challenges of disentangling multi-gamma cascades with individual gamma energies  
less than 150 keV and the presence of conversion electrons.

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