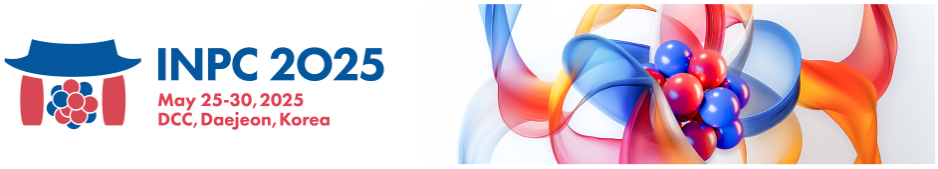

Contribution ID: **268** Type: **Contributed Oral Presentation**

Probing the evolution of transitional structure in 158Er via β-decay of Tm isotope

Tuesday, 27 May 2025 09:10 (15 minutes)

Nuclei around the rare earth transitional region (N ~ 90) present a variety of interesting nuclear features ranging from triaxiality, octupoles and shape coexistence. The proton rich nucleus 158Er (N = 90) lies at the boundary of the phase-transitional region, hence, it is likely to display of both transitional and deformed characteristics [1]. Properties of the low-lying states play a vital role in probing the structure of nuclei. However, the interpretation of the structure of the low-lying states in the rare earth, N ~ 90 region from previous studies was predominantly based on level spacing [1-5]. Although, it has been shown that energy spacings alone can be misleading [6]. Therefore, it has become evident that a larger set of precise experimental data for a variety of model-independent observables is necessary to constrain the interpretation of these excitations [7].
We shall report on the internal conversion coefficients, branching, and mixing ratios deduced from γ-e-, γ-γ coincident and, γ-γ angular correlation measurements following the β-decay of 158Tm using the GRIFFIN set up with its arsenal of ancillary detectors.

Primary author: Dr AVAA, Abraham (TRIUMF)

Co-authors: Dr CHESTER, Aaron (TRIUMF/FRIB); Dr GARNSWORTHY, Adam (TRIUMF); Dr BABU, Aditya (TRIUMF); MURPHY, Alice (TRIUMF/UWaterloo); Dr RADICH, Allison (UoGuelph); Dr MACLEAN, Andrew (UoGuelph); Dr OLAIZOLA, Bruno (TRIUMF/IEM); Prof. SVENSSON, Carl (UoGuelph); Dr BARTON, Charles (University of York); BURBADGE, Christina (UoGuelph); Dr YATES, Daniel (TRIUMF/UBC); Dr GARCIA, Fatima (SFU); Dr BALL, Gordon (TRIUMF); Dr HACKMAN, Greg (TRIUMF/SFU); DILLMANN, Iris (TRIUMF/UVic); Dr SMITH, J (TRIUMF/Reed); ALLMOND, J. M. (ORNL); HENDERSON, Jack (TRIUMF); Dr WILLIAMS, Jonathan (TRIUMF/SFU); Dr WHITMORE, Kenneth (SFU); Dr LEACH, Kyle (TRIUMF); Dr ATAR, Leyla (UoGuelph); Dr WINOKAN, Max (TRIUMF/USurrey); Prof. BOWRY, Michael (TRIUMF/UWS); Dr BERNIER, Nikita (TRIUMF/UBC); Prof. GARRETT, Paul (UoGuelph); Dr ŠIURYTĖ, Paulina (TRIUMF/USurrey); Prof. KRUCKEN, R (TRIUMF/LBL); Ms UMASHANKAR, Rashmi (TRIUMF/UBC); Dr CABALLERO-FOLCH, Roger (TRIUMF); BHATTACHARJEE, S. S (TRIUMF); VALBUENA, Sally (UoGuelph); Prof. LESHER, Shelly (NCAT); Dr JAMES, Smallcombe (JAEA); Dr BILDSTEIN, Vinzenz (UoGuelph); KORTEN, Wolfram (CEA); SAITO, Yukiya (TRIUMF)

Presenter: Dr AVAA, Abraham (TRIUMF)

Session Classification: Parallel Session

Track Classification: Nuclear Structure