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Life time measurements in the transitional nucleus 150Sm

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Abstract content
   (Max 300 words)

The high spin states of the nucleus 150Sm were populated via the 4n channel following a fusion evaporation reaction 136Xe(18O, 4n)150Sm. The de-excitation gamma-rays were detected using the AFRODITE spectrometer array at iThemba LABS. Life time measurements were performed using the Doppler shift attenuation method technique (DSAM) [1]. Experimental transition strengths (BE2) obtained using the life times are presented together with the measured angular intensity ratios and linear polarization anisotropy. A new decay scheme of 150Sm with the rearrangements of some mystery decay paths seen from Urban et al. [1] is also presented.

[1] T. K. Alexander, J. S. Foster, M. Baranger, and E. Vogt. Advances in nuclear physics education, Vol. 10, pg. 197. Plenum Press, NY, London, (1978).
[2] W. Urban, J. C. Bacelar, and J. Nyberg. Fast nuclear rotation and octupole deformation. ACTA, Physica Pol. B, 32:2527, (2001) .

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PhD

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