



Contribution ID: 28

Type: **not specified**

## Evolution of the Octupole collectivity in $^{152}\text{Gd}$

*Friday 11 July 2025 09:40 (20 minutes)*

The observation in the Lanthanides of low-lying states in nuclei with even  $Z, N$  having total angular momentum and parity  $I^\pi = 3^-$  is indicative of their undergoing octupole vibrations about a reflection-symmetric shape. Further evidence is provided by the sizeable value of the electric octupole (E3) moment for the transition to the ground state, indicating collective behaviour of the nucleons. Recently, the systematics of the E3 strength across the Gd isotopic chain has been studied and the results reveal that enhanced octupole collectivity is obtained for  $^{150}\text{Gd}$ . The energy of  $3^-$  state in  $^{152}\text{Gd}$  is similar with  $^{150}\text{Gd}$ . However, the  $B(E3)$  value is missing for  $^{152}\text{Gd}$ . The proposal is to achieve the direct determination of the octupole collectivity in  $^{152}\text{Gd}$  by a Coulomb excitation measurement.

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**Session Classification:** Session 2