Insights into Nuclear Triaxiality from Interference Effects in $E2$ Matrix Elements$^1$ J.M. ALLMOND, J.L. WOOD, W.D. KULP, Georgia Institute of Technology — Recently, we have introduced [1] a triaxial rotor model with independent inertia and $E2$ tensors. The $E2$ matrix elements [2] of the osmium isotopes (186, 188, 190, and 192) are studied in the framework of this model (59 of 84 $E2$ matrix elements deviate by 30% or less). It is shown that interference effects in the inertia tensor ($K$-mixing) and the $E2$ tensor can lead to significant reductions in the diagonal $E2$ matrix elements. In some instances, the diagonal $E2$ matrix elements may decrease with increasing spin. Additionally, a sum rule for diagonal $E2$ matrix elements is shown and used to explore missing strength from $K$-admixtures.


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