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Electron-Deuteron Tensor Polarization and D-State Probability

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Abstract: Electron-deuteron tensor polarization $T_{21}(q)$ is calculated for thirty-three N-N local potential models. New relations have been found between the peak value of $T_{21}(q)$ and some of the deuteron properties. An experimental value of deuteron D-state probability $P_D = 5.9861\% \pm 0.2687\%$ is deduced.

Key Words: ed scattering, tensor polarization, deuteron D-state probability, deuteron quadrupole moment, deuteron form factors.



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