WIGNER–ECKART THEOREM FOR AN ALGEBRA RELATED TO QUANTUM GRAVITY

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The tensor product of vector and arbitrary representations of the nonstandard q-deformation $U_q'(\mathrm{so}_n)$ of the universal enveloping algebra $U(\mathrm{so}_n)$ of the Lie algebra so_n is defined. This algebra is known to be related to (2+1)-dimensional quantum gravity. The Clebsch–Gordan coefficients of tensor product of vector and arbitrary representations of the classical or nonclassical type of the q-algebra $U_q'(\mathrm{so}_n)$ are found in an explicit form. The Wigner–Eckart theorem for vector operators is proved.