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Coproduct of $SU_q(2)$, Coherent States and Four Point Function with Logarithmic Regge Trajectories

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Abstract: The representation of the operators belonging to a 2×2 $SU_q(2)$ matrix yield a Hilbert space H . The coproducts of these operators define a Hilbert space $H^{(2)}$ isomorphic to H and canonically embedded in $H \otimes H$. The four-point function obtained by taking the scalar product of the ground state of $H^{(2)}$ with the coherent states in $H \otimes H$ is uniquely defined, is meromorphic and has Regge behaviour.

Key Words: Dual amplitudes, Quantum groups, Regge behaviour, Hopf algebras, Coherent states.

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