

Fundamental physics in the cosmos: The early, the large and the dark Universe



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Quantum Groups behind the AdS/CFT S-Matrix

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Beisert's S-matrix was fixed by centrally extended $sl(2|2)$ symmetry. Here we examine q -deformed centrally extended $sl(2|2)$ and its $sl(2)$ automorphisms for which we obtain the Hopf structure and the universal R-matrix. In addition, we consider this algebra as a contraction limit of the exceptional Lie superalgebra $d(2,1,\alpha)$. This is closely related to 3D kappa-Poincaré for which we find a new free parameter of the Hopf algebra.

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