ON A q-ANALOGUE OF THE PENROSE TRANSFORM

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In the framework of the theory of quantum groups and their homogeneous spaces we consider two geometric realizations for the ladder representation of the quantum group $SU(2,2)$ and their intertwining linear transformation which is a q-analogue of the Penrose transform. Our results hint that a great deal of constructions specific for the theory of quasi-coherent G-sheaves admit non-commutative analogues.