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Michael Brannan*, Texas A&M University, College Station, TX 77843, and **Benoit Collins**, **Hun-Hee Lee** and **Sang-Gyun Youn**. *Quantum groups, quantum channels, and the quantum 6j-symbols.*

I will discuss an application of the representation theory of a class of free orthogonal quantum groups to the construction and analysis of interesting examples of quantum channels. I will explain how the (planar) structure of their representation categories can be used to gain a great deal of insight into the algebraic and geometric properties of the channels under consideration. I will, in particular, highlight how the quantum 6j-symbols come into play in the analysis. (Received January 22, 2018)