IDEMPOTENT STATES ON SEKINE QUANTUM GROUPS

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Abstract: Idempotent states on quantum groups arise as limits of random walks. Sekine quantum groups $(\mathcal{A}_k, \Delta_k)$, $k \geq 1$ are a family of finite quantum groups. We determine all the idempotent states on Sekine quantum groups $(\mathcal{A}_k, \Delta_k)$ for all k. When k is a prime number, we establish the order structure of idempotent states. This answers a question of Franz and Skalski stated in 2009.