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Mustafa Hajij* (mhajij1@math.lsu.edu), Baton Rouge, LA 70808. *Quantum spin networks and q -Series.*

We use the skein theory associated with the Kauffman bracket skein module to study the tail of the colored Jones polynomial of alternating links. we generalize this study further to quantum spin networks and study their tail using skein theory. In most cases, it turns out that the tail these trivalent graphs are interesting number-theoretic q -series. In particular, certain trivalent graphs give a skein theoretic proof for the Andrews-Gordon identities for the two variable Ramanujan theta function as well to corresponding identities for the false theta function. Finally, we give a product formula that the tail of such graphs satisfies. (Received August 01, 2014)