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Lev Rozansky\* (rozansky@math.unc.edu), Department of Mathematics, CB #3250, Phillips Hall, Chapel Hill, NC 275999, and Mikhail Khovanov. A categorification of the SU(2) Reshetikhin-Turaev invariant of links in  $S^2 \times S^1$ .

The SU(2) Reshetikhin-Turaev invariant of a link in  $S^2 \times S^1$  has a stable polynomial limit at large level r. We categorify this polynomial by using the Hochschild homology of the  $H_n$  algebra. We relate the resulting homology of a tangle closed in  $S^2 \times S^1$  to Khovanov's SU(2) homology of a link constructed by inserting a tangle into a torus link with high twist. (Received February 10, 2009)