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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)