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**J. A. Ball, G. Marx\*** (marxg@vt.edu) and **V. Vinnikov**. *Completely Bounded Noncommutative Kernels*.

We introduce completely bounded noncommutative kernels and investigate when completely bounded noncommutative kernels can be decomposed as a sum of completely positive noncommutative kernels. In the process, we develop an analogue to the Arveson-Wittstock extension theorem. This work extends the theory of noncommutative kernels found in [1], and its development is motivated by the completely bounded kernels found in [2].

[1] J. A. Ball, G. Marx, and V. Vinnikov, *Noncommutative reproducing kernel Hilbert spaces*, to appear.

[2] T. Bhattacharyya, M. A. Dritschel, and C. S. Todd. *Completely bounded kernels*, Acta Sci. Math. (Szeged) **79** (2013), 191-217. (Received September 22, 2015)