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Katherine Vance* (kvance@rice.edu). *Tau invariants for balanced spatial graphs.* Preliminary report.

Recently Harvey and O'Donnol defined a combinatorial Heegaard Floer homology theory \widehat{HFG} for spatial graphs. Their theory is relatively bigraded, with an integer-valued Maslov grading and a relative Alexander grading, which takes values in the first homology of the spatial graph exterior. We define a \mathbb{Z} -filtered chain complex \widehat{CG} for balanced spatial graphs whose associated graded chain complex has homology determined by \widehat{HFG} . We use this to show that there is a well-defined τ invariant for balanced spatial graphs generalizing the τ knot concordance homomorphism defined by Ozsvath-Szabo and Rasmussen. One step in showing there is a filtration is to lift the relative Alexander grading to an absolute grading. (Received September 11, 2014)