1098-46-79 **Peter G. Casazza*** (casazzap@missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211. *Non-orthogonal Fusion Frames.*

We consider some results of J. Cahill, P.G. Casazza, M. Ehler and S. Li on non-orthogonal fusion frames. Fusion frames are one of the most applied subjects but have the serious drawback that they rarely exist in the form they are needed. Given a self-adjoint operator T, we classify those projections P for which T=P*P. Using this and related results we will see how to construct tight non-orthogonal fusion frames and discover they exist most of the time. This takes care of a critical problem with fusion frames in that we know they very rarely exist if we construct them using orthogonal projections. (Received January 11, 2014)