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**Deguang Han\*** ([ghan@pegasus.cc.ucf.edu](mailto:ghan@pegasus.cc.ucf.edu)), Department of Mathematics, University of Central Florida, Orlando, FL 32816. *Lattice Tilings, Operator Algebras and Gabor Frames*.

We will review and generalize a lattice tiling result obtained jointly with Y. Wang, and then discuss how to use this generalized lattice tiling result together with some von Neumann algebra techniques to obtain an necessary and sufficient condition on the time-frequency lattice for which every Gabor frame admits a tight dual of the Gabor form. (Received September 15, 2005)