1012-43-120　　　　**Eric Weber*** (`esweber@iastate.edu`), Department of Mathematics, Iowa State University, 396 Carver Hall, Ames, IA 50011, and **Wai Shing Tang** (`mattws@nus.edu.sg`), Department of Mathematics, National University of Singapore, Singapore, Singapore. *Frame Vectors for Representations of Abelian Groups.*

Frames that arise from the action of an abelian group of unitary operators are called harmonic or geometrically uniform frames and have many nice properties. We present some characterization and structure theorems regarding these frames. In particular, we are motivated by 1) the theory of filter banks, and 2) orthogonality of pairs of such frames. (Received September 15, 2005)