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Raul E Curto* (rcurto@math.uiowa.edu), Department of Mathematics, The University of Iowa, Iowa City, IA 52242. *Algebraic Solution of the Lifting Problem for Commuting Subnormals.*

In joint work with Sang Hoon Lee and Jasang Yoon, we characterize joint k -hyponormality for 2-variable weighted shifts. Using this characterization we construct a family of examples which establishes and illustrates the gap between k -hyponormality and $(k+1)$ -hyponormality for each $k \geq 1$. As a consequence, we obtain an abstract solution to the Lifting Problem for Commuting Subnormals. (Received August 17, 2005)