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**Roberto Barrera\***, Department of Mathematics, Texas A&M University, Mailstop 3368, College Station, TX 77843-3368. *Computing quasidegrees of  $\mathbb{Z}^d$ -graded modules*. Preliminary report.

Inspired by results on  $A$ -hypergeometric systems, we consider  $\mathbb{Z}^d$ -graded  $\mathbb{C}[y]$ -modules  $M$  and compute the Zariski closure in  $\mathbb{C}^d$  of the set  $\{\beta \in \mathbb{Z}^d \mid M_\beta \neq 0\}$ . This is particularly interesting when  $M = H_{\mathfrak{m}}^i(\mathbb{C}[\mathbb{N}A])$ , the local cohomology of a semigroup ring with support in the maximal ideal. This is work in progress. (Received January 30, 2014)