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**D. Katz\*** (dlk@math.ku.edu), Department of Mathematics, University of Kansas, Lawrence, KS 66045, and **J. Validashti**, Department of Mathematics, University of Kansas, Lawrence, KS 66045. *Multiplicities and Rees valuations.*

Let  $(R, \mathfrak{m})$  be a local ring and  $I \subseteq R$  be an ideal with maximal analytic spread. We show that the  $j$ -multiplicity of  $I$  is determined by the Rees valuations of  $I$  that are  $\mathfrak{m}$ -valuations. We also discuss a multiplicity that is the limsup of a sequence of lengths that grow at an  $O(n^d)$  rate. (Received February 09, 2010)