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**Aline Hosry, Young Su Kim and Javid Validashti\*** (jvalidas@math.ku.edu). *Equality of Powers and Symbolic Powers of Ideals.*

Let  $R$  be a ring. For a positive integer  $n$ , the  $n$ -th symbolic power of a prime ideal  $P$  is defined as  $P^{(n)} = P^n R_P \cap R$ . It is clear from the definition that  $P^n \subseteq P^{(n)}$ , but they need not be the same in general. Therefore, one would like to have conditions that imply the equality. The following question was posed by Huneke in this regard: Let  $R$  be a regular local ring of dimension  $d$  and  $P$  a prime ideal of height  $d - 1$ . If  $P^n = P^{(n)}$  for all  $n \leq d - 1$ , then is  $P^n = P^{(n)}$  for all  $n$ ? We provide supporting evidences of a positive answer for classes of prime ideals defining monomial curves or having low multiplicities. (Received September 18, 2010)