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**T. Richter**

**Lech Inequalities for Deformations of Singularities Defined by Power Products of Degree**

Using a result from B. Herzog [*Kodaira-Spencer maps in local algebra*, Lect. Notes Mathematics 1597, Springer-Verlag, Berlin et al. 1994] we prove the following. Let  $(B_0, \mathfrak{n}_0)$  be an artinian local algebra of embedding dimension  $v$  over some field  $L$  with tangent cone  $gr(B_0) \cong L[X_1, \dots, X_v]/I_0$ . Suppose the ideal  $I_0$  is generated by power products of degree 2. Then for every residually rational flat local homomorphism  $(A, \mathfrak{m}) \rightarrow (B, r\mathfrak{n})$  of local  $L$ -algebras that has a special fiber isomorphic to  $B_0$  the  $(v + 1)$ th sum transforms of the local Hilbert series of  $A$  and  $B$  satisfy the Lech inequality  $H_A^{v+1} \leq H_B^{v+1}$ .