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Lawrence Man Hou Ein*, Department of Mathematics, University of Illinois at Chicago, Chicago, IL 60607-7045, and **Tomaso de Fernex**. *A vanishing theorem for log-canonical pairs*. Preliminary report.

Using inversion of adjunction, we deduce from Nadel's theorem a vanishing property for ideals sheaves on projective varieties, a special case of which recovers a result due to Bertram–Ein–Lazarsfeld. This enables us to generalize to a large class of projective schemes certain bounds on Castelnuovo–Mumford regularity previously obtained by Bertram–Ein–Lazarsfeld in the smooth case and then extended to locally complete intersection varieties with rational singularities by Chardin–Ulrich. (Received January 29, 2008)