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Parangama Sarkar*, 810 E. Rollins Street, 202 Math Sciences Building, University of Missouri, Columbia, MO 65211, and **Jugal Verma**, 101-C, Department of Mathematics, Indian Institute of Technology Bombay, Mumbai, India. *Local cohomology of multi-Rees algebras, joint reduction vectors and product of complete ideals.*

We find conditions on the local cohomology modules of multi-Rees algebras of admissible filtrations which enable us to predict joint reduction vectors. As a consequence we are able to prove a generalization of a result of Reid-Roberts-Vitulli in the setting of analytically unramified local rings for completeness of power products of complete ideals. (Received February 01, 2018)