1009-13-41 **Srikanth Iyengar*** (iyengar@math.unl.edu), 305 Avery Hall, Department of Mathematics, University of Nebraska, Lincoln, NE 68588, and **Henning Krause**. *Acyclicity versus total acyclicity for complexes over noetherian rings.*

It is well-known that for a commutative algebra finite dimensional over a field, the category of projective modules is equivalent to the category of injective modules. Recently, Henning Krause and I found that this result extends to any commutative noetherian ring with a dualizing complex: there is an equivalence of triangulated categories between the homotopy category of projective modules and the homotopy category of injective modules.

In my talk, I will discuss this result and some of its ramifications pertaining to the distinction between acyclicity and total acyclicity for complexes over commutative rings. (Received July 25, 2005)