

# PROJECTIVES AND INJECTIVES OVER COMMUTATIVE RINGS

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Abstract: 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. This result extends to any commutative noetherian ring with a dualizing complex: there is an equivalence 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 applications. This is part of joint work with Henning Krause.