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Alin A. Stancu* (aastancu@acsu.buffalo.edu), Drexel University, Department of Mathematics, 206 Korman Center, Philadelphia, PA 19104. *Hochschild Cohomology and Derived Categories*.

A relative derived category for the category of modules over a presheaf of algebras is constructed to identify its morphism groups with the relative Yoneda and Hochschild cohomologies. The properties of a functor between this category and the relative derived category of modules over the algebra associated to the presheaf are studied. We obtain a generalization, for presheaves, of the Cohomology Comparison Theorem due to Murray Gerstenhaber and Samuel D. Schack. (Received July 30, 2006)