1053-13-312       **Jinjia Li\*** (`jinjiali@mtsu.edu`), Departmenet of Mathematical Sciences, Middle Tennessee State Univeristy, Murfreesboro, TN 37132, and **Hailong Dao** and **Claudia Miller**. *On (non)rigidity of Frobenius endomorphism over Gorenstein rings.*

It is well-known that for a big class of local rings of positive characteristic, including complete intersection rings, the Frobenius endomorphism can be used as a test module for finite projective dimension. We exploit this property to study the structure of such rings and to investigate several situations where such a property fails. (Received September 08, 2009)