1138-13-215   **Shuenn Siang Ng*** (`sng4@gsu.edu`), 25 Park Pl Office 1338, Atlanta, GA 30303.
Characterization of F-rationality via Canonical Module.

Let R be a F-finite Cohen Macaulay ring (not necessarily local) of prime characteristic with canonical module ω. We try to characterize F-rationality of R by studying the module structure via the Frobenius homomorphism of ${}^eM$ and homomorphisms from ${}^eM$ to ω, in which M is a finitely generated faithful module. We obtained some conditions involving ${}^eM$ and ω that are equivalent to R being F-rational. For example, one of such equivalent conditions is that R is normal and for every prime ideal P with height at least 2, there exists $e > 0$ such that ω_P is a homomorphic image of a direct sum of ${}^e(P\omega)_P$. (Received February 09, 2018)