Lee Klingler, Warren McGovern and Madhav P Sharma* (msharma2@fau.edu), Florida Atlantic University, Department of Mathematical Sciences, 777 Glades Rd, Boca Raton, FL 33431.

Gaussian Property of the rings \( R(X) \) and \( R(X) \). Preliminary report.

The content of a polynomial \( f \) over a commutative ring \( R \) is the ideal \( c(f) \) of \( R \) generated by the coefficients of \( f \). A commutative ring \( R \) is said to be Gaussian if \( c(fg) = c(f)c(g) \) for all polynomials \( f \) and \( g \) over \( R \). A number of authors have formulated necessary and sufficient conditions for \( R(X) \) (respectively \( R(X) \)) to be semihereditary, w. dim \( \leq 1 \), Arithmetical, and Prüfer. An open problem has been for the Gaussian Property. We give a necessary and sufficient condition for \( R(X) \) and \( R(X) \) to be Gaussian for a commutative ring \( R \) whose the square of the nilradical is zero. (Received January 17, 2014)