1046-13-1344   **Muhammad Zafrullah*** (`mzafrullah@usa.net`), Department of Mathematics, Idaho State
University, Pocatello, ID 83209. *Splitting sets and weakly Matlis domains.* Preliminary report.

Call an integral domain D a weakly Matlis domain if D is of finite t-character and if no two (distinct) maximal t-ideals of D contain a nonzero prime (t-)ideal. Recently Gabelli, Houston and Picozza, in [w-Divisoriality in polynomial rings, to appear in Comm. Algebra], have studied polynomial rings over weakly Matlis domains and have shown that in some cases a polynomial ring over a weakly Matlis domain may not be weakly Matlis. The purpose of this talk is to indicate the use of splitting sets and t-splitting sets in the study of polynomial rings over weakly Matlis domains. We show for instance that if $K \subseteq L$ is an extension of fields and X an indeterminate over L then the polynomial ring over $K + XL[X]$ is a weakly Matlis domain. (Received September 15, 2008)