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*This talk is partially based on a joint work with S. El Baghdadi and M. Zafrullah.*

It is well known that a Prüfer  $v$ -multiplication domain (for short, PvMD) is an essential domain, since each localization at its  $\mathfrak{t}$ -prime ideals is a valuation domain.

M. Griffin in 1967 gave a very simple characterization of PvMDs in case of integral domains with the  $\mathfrak{t}$ -finite character (i.e., satisfying the property that each nonzero element is contained in finitely many  $\mathfrak{t}$ -maximal ideals). In this case, they are exactly the essential domains with the  $\mathfrak{t}$ -finite character. However, in general, an essential domain is not necessarily a PvMD. A very illuminating example was given by Heinzer-Ohm in 1973.

In 2015, Finocchiaro-Tartarone have gone through this construction and one of the main results of their paper describes the class of PvMDs precisely as a subclass of essential domains verifying an additional “topological” condition, regarding ultrafilter limits of suitable families of prime ideals.

In this talk, I will discuss a different and purely algebraic approach for characterizing PvMDs in the class of essential domains. (Received January 20, 2016)