

1067-13-879

**Gyu Whan Chang, Byung Gyun Kang and Jung Wook Lim\*** (lovemath@postech.ac.kr),  
Department of Mathematics POSTECH, San 31 Hyoja-Dong Nam-Gu, Pohang, Kyungpook  
790-784, South Korea. *Characterizations of various integral domains of the form*  
 $A + B[\Gamma^*]$ . Preliminary report.

Let  $A \subseteq B$  be an extension of integral domains,  $S$  be a (saturated) multiplicative subset of  $A$  and  $\Gamma$  be a nonzero torsion-free (additive) grading monoid. In this talk, we characterize Prüfer  $v$ -multiplication domains and related domains of the form  $R = A + B[\Gamma^*]$ . In particular, we study the domain  $R$  when  $B = A_S$ .

This is a joint work with Chang and Kang. (Received September 15, 2010)