

1048-13-134

Paul-Jean Cahen* (`paul-jean.cahen@univ-cezanne.fr`), Bâtiment poincaré, Av. Escadrille Normandie-Niemen, 13397 Marseille, France, and **David E. Dobbs** and **Thomas G. Lucas**.

Pointwise minimal extensions. Preliminary report.

A ring extension $R \subsetneq T$ is said to be a *pointwise minimal extension* if for each $t \in T$, either $R = R[t]$ or $R \subsetneq R[t]$ is a minimal extension (that is, there is no proper intermediate ring between R and $R[t]$). As for minimal extensions, if $R \subsetneq T$ is a pointwise minimal extension, we have the following properties: 1) either T is integral over R , or R is integrally closed in T . 2) There exists a maximal ideal M of R , the *crucial maximal ideal*, such that $R_N = T_N := T_{R \setminus N}$ for each maximal ideal $N \neq M$ and $R_M \subsetneq T_M$ is a pointwise minimal extension. 3) If $R \subsetneq T$ is a pointwise minimal integral extension, the crucial maximal ideal is the conductor $M = (R : T)$. (Received February 04, 2009)