

EXTENSION AND FORMALLY EXTENSION OF THE IDEALS OF LOCALIZED RINGS

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Let R be an integral domain. We study the rings $R((X)) = R[[X]]_N$ and $R\{\{X\}\} = R[[X]]_{N_t}$ where $N = \{f \in R[[X]]; A_f = R\}$ and $N_t = \{f \in R[[X]]; (A_f)_t = R\}$ related to the t -operation.

We first study in the polynomial case the ideal theory of these rings, the contraction and the extension of their ideals. On the second part, we establish the analog results in the power series case, especially we related the extension of the prime spectrum to the formally integrally closed rings defined by $(A_{fg}) = (A_f A_g)_t$, for all non zero $f, g \in R[[X]]$.