NEW TRENDS IN RINGS AND MODULES I
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ON 2-PRIMAL ORE EXTENSIONS

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Abstract. Let R be a ring with an endomorphism α and an α-derivation δ. In this note we show that if R is a nil-(α,δ)-compatible ring, then R is 2-primal if and only if the Ore extension $R[x;\alpha,\delta]$ is 2-primal if and only if $Nil(R) = Nil_*(R;\alpha,\delta)$ if and only if $Nil_*(R[x;\alpha,\delta]) = Ni(R)[x;\alpha,\delta]$ if and only if every minimal (α,δ)-prime ideal of R is completely prime. The class of nil-(α,δ)-compatible rings contains properly reduced rings and (α,δ)-compatible rings, and contrary to the notion of (α,δ)-compatible 2-primal rings, nil-(α,δ)-compatible 2-primal rings extend to polynomial rings, triangular matrix rings and various ring extensions.

Keywords: Ore extensions; 2-primal rings; nil-(α,δ)-compatible rings.
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