---

**Zbl pre05226925**

Cabello, J.C.; Cabrera, M.; Nieto, E.

**Closed prime ideals in algebras with semiprime multiplication algebra.** (English)

Let $A$ be a non (necessary) associative algebra and let $M(A)$ denote its multiplication algebra ($M(A)$ is the subalgebra of $End(A)$ generated by the identity and all left and right multiplication operators). In the complete lattice $L(A)$ of the ideals of $A$, consider the closure operators $\pi$ defined by the double annihilator ($\pi(U) = Ann(Ann(U))$ for any ideal $U$ of $A$), and the closure operator $\epsilon$ obtained by regarding $A$ as a left $M(A)$-module.

In the paper under review the authors prove that if $M(A)$ is semiprime, except in the exceptional case that $\epsilon(A^2) \neq A$, the proper closed prime ideals of A are the maximal closed ideals of A, for the closure operations $\pi$ and $\epsilon$. In fact, they proved that these sets agree for both closures. The same can be said in the multiplication algebra $M(A)$ for its closure operations $\pi$ and $\epsilon'$.

*Miguel Angel Gomez Lozano (Malaga, Spain)*

*Keywords* : closure operations; multiplication algebra; prime ideals; semiprime algebras

*Classification* :

∗17A60 Structure theory of general nonassociative rings and algebras
17A65 Radical theory