Publicacions Matemàtiques, Vol **41** (1997), 455–465.

MOLECULES AND LINEARLY ORDERED IDEALS OF MV-ALGEBRAS

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Abstract

We show that an ideal I of an MV-algebra A is linearly ordered if and only if every non-zero element of I is a molecule. The set of molecules of A is contained in $\mathrm{Inf}(A) \cup B_2(A)$ where $B_2(A)$ is the set of all elements $x \in A$ such that $2x$ is idempotent. It is shown that $I \neq \{0\}$ is weakly essential if and only if $B^{\perp} \subset B(A)$. Connections are shown among the classes of ideals that have various combinations of the properties of being implicative, essential, weakly essential, maximal or prime.

1991 *Mathematics subject classifications*: 06F35, 03G25.