

β -PRIME SPECTRUM OF STONE ALMOST DISTRIBUTIVE LATTICES

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Abstract

The notion of boosters and β -filters in stone Almost Distributive Lattices are introduced and their properties are studied, utilizing boosters to characterize the β -filters. It has been derived that every proper β -filter is the intersection of all prime β -filters containing it, and it has also been proved that the set $\mathcal{F}_\beta(L)$ of all β -filters is isomorphic to the set of all ideals of $\mathcal{B}_0(L)$. A set of equivalent conditions is derived for $\mathcal{B}_0(L)$ to become a relatively complemented Almost Distributive Lattice. Later, some properties of the space of all prime β -filters are derived topologically. Finally, necessary and sufficient conditions are derived for the space of all prime β -filters to be a Hausdorff space.

Keywords: Almost Distributive Lattice (ADL), stone ADL, relatively complemented ADL, ideal, filter, booster, β -filters, isomorphism, compact set, Hausdorff space.

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