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On the mappings \mathcal{Z}_A and \mathfrak{S}_A in intermediate rings of $C(X)$

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Abstract: In this article, we investigate new topological descriptions for two well-known mappings \mathcal{Z}_A and \mathfrak{S}_A defined on intermediate rings $A(X)$ of $C(X)$. Using this, coincidence of each two classes of z -ideals, \mathcal{Z}_A -ideals and \mathfrak{S}_A -ideals of $A(X)$ is studied. Moreover, we answer five questions concerning the mapping \mathfrak{S}_A raised in [J. Sack, S. Watson, *C and C^* among intermediate rings*, Topology Proc. **43** (2014), 69–82].

Keywords: z -ideal; \mathcal{Z}_A -ideal; \mathfrak{S}_A -ideal; z -filter; \mathcal{Z}_A -filter; \mathfrak{S}_A -filter; intermediate ring

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