

A CLASS OF MODULES CHARACTERIZED BY WEAKLY
ASSOCIATED PRIME IDEALS

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Abstract. Let R be a commutative ring with non-zero identity. For a non-empty set \mathcal{P}_R of prime ideals of R , we study the class \mathcal{C}_R of R -modules A with the property that each weakly associated prime ideal of A belongs to \mathcal{P}_R . We show that \mathcal{C}_R is a torsion class for a hereditary torsion theory if and only if $\mathcal{C}_R = R\text{-Mod}$. Also, we prove that \mathcal{C}_R is a torsionfree class for some hereditary torsion theory, provided R is Artinian.

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Key words. Associated prime ideal, weakly associated prime ideal.

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