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*Star operations induced by saturations.*

Let  $R \subseteq S$  be a ring extension, and let  $A$  be an  $R$ -submodule of  $S$ . The saturation of  $A$  (in  $S$ ) by  $\tau$  is the set  $A_{[\tau]} = \{x \in S : tx \in A \text{ for some } t \in \tau\}$ , where  $\tau$  is a multiplicative subset of  $R$ . We use the notion of saturation to define and study properties of star operations on ring extensions. In particular, we characterize star operations  $\star$  on ring extensions  $R \subseteq S$  satisfying the relation  $(A \cap B)^\star = A^\star \cap B^\star$  whenever  $A$  and  $B$  are two  $R$ -submodules of  $S$  such that  $AS = BS = S$ . (Received September 06, 2016)