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Lokendra Paudel and **Simplice Tchamna*** (simplice.tchamna@gcsu.edu), Milledgeville, GA 31061. *Some properties of saturations of submodules.*

Let R be a subring of a ring S , and let A be an R -submodule of S . The saturation of A (in S) by τ is set $A_{[\tau]} = \{x \in S : tx \in A \text{ for some } t \in \tau\}$, where τ is a multiplicative subset of R . We study properties of saturations of R -submodules of S . In particular, we investigate conditions under which the equality $AR_{[\mathfrak{p}]} = A_{[\mathfrak{p}]}$ is satisfied. We construct an example of ring extension for which the relation $AR_{[\mathfrak{p}]} = A_{[\mathfrak{p}]}$ is not always true. (Received September 06, 2016)