All rings are associative with identity and all modules are unitary. Throughout this corrigendum $R$ denotes a commutative ring with identity $1 \neq 0$. The field of rational numbers is denoted by $\mathbb{Q}$ unless otherwise stated. Let $R$ be a ring. The set of prime ideals of $R$ is denoted by $\text{Spec}(R)$, the set of associated prime ideals of $R$ (viewed as a right $R$-module) is denoted by $\text{Ass}(R_R)$ and the set of minimal prime ideals of $R$ is denoted by $\text{Min.Spec}(R)$. $\text{Assas}(U)$ denotes the assassinator of a uniform $R$-module $U$ and for any subset $J$ of a right $R$-module $M$, the annihilator of $J$ is denoted by $\text{Ann}(J)$. The set of regular elements of $R$ is denoted by $C(0)$ and for any ideal $I$ of $R$, the set of elements regular modulo $I$ is denoted by $C(I)$.

Recall that a prime ideal $P$ of $R$ is said to be strongly prime if and only if for any $a, b \in R$ either $aP \subseteq bR$ or $bR \subseteq aP$. The set of strongly prime ideals of a ring $R$ is denoted by $S\text{.Spec}(R)$.

Let now $\sigma$ be an automorphism of $R$ and $\delta$ a $\sigma$-derivation of $R$. Consider the Ore extension $O(R) = R[x; \sigma, \delta] = \{ \sum_{i=0}^{n} x^i a_i, \ a_i \in R \}$ in which multiplication is subject to the relation $ax = x\sigma(a) + \delta(a)$ for all $a \in R$.

To prove Theorem 2.5 and Corollary 2.6 of [2], the author uses Proposition 2.5 of [1].

**Theorem 1.** (Theorem 2.5 of [2]) Let $R$ be a Noetherian near pseudo-valuation ring which is also an algebra over $\mathbb{Q}$. Let $\sigma$ be an automorphism of $R$ such that $R$ is a $\sigma(\ast)$-ring and $\delta$ a $\sigma$-derivation of $R$. Then $O(R)$ is a Noetherian near pseudo-valuation ring.

**Corollary 2.** (Corollary 2.6 of [2]) Let $R$ be a Noetherian near pseudo-valuation ring which is also an algebra over $\mathbb{Q}$, $\sigma$ and $\delta$ as usual such that $\sigma(U) = U$ for all $U \in \text{Min.Spec}(R)$. Then $O(R)$ is a Noetherian near pseudo-valuation ring.

**Proposition 3.** (Proposition 2.5 of [1]) Let $R$ be a ring, $\sigma$ an automorphism of $R$ and $\delta$ a $\sigma$-derivation of $R$. Then:
(1) For any strongly prime ideal $P$ of $R$ with $\delta(P) \subseteq P$ and $\sigma(P) = P$, $O(P)$ is a strongly prime ideal of $O(R)$.

(2) For any strongly prime ideal $U$ of $O(R)$, $U \cap R$ is a strongly prime ideal of $R$.

Proposition 3 above is false. This mistake was found by Prof. Feran Cedo and communicated to Prof. Dolors Herbera (Editor IEJA).

We note that the hypothesis (used above) that any $U \in S.Spec(R)$ with $\sigma(U) = U$ and $\delta(U) \subseteq U$ implies that $O(U) \in S.Spec(O(R))$ is too restrictive. This leads to the fact that $U = 0$ [Proof: This proof is done and forwarded by Prof. Dolors Herbera to the author : if $U \neq 0$ and $O(U) \in S.Spec(O(R))$ then either $O(U) \subseteq xO(R)$ or $xO(R) \subseteq O(U)$. The first case is not possible because $0 \neq U \subseteq O(U) \cap R \subseteq xO(R) \cap R = 0$ which is a contradiction. Therefore, $xO(R) \subseteq O(U)$ but then $1 \in U$ so that $U = R$ which is impossible with a prime ideal].

Example 4. Let $R = \mathbb{Z}_{(p)}$. This is in fact a discrete valuation domain, and therefore, its maximal ideal $P = pR$ is strongly prime. But $pR[x]$ is not strongly prime in $R[x]$ because it is not comparable with $xR[x]$ (so the condition of being strongly prime in $R[x]$ fails for $a = 1$ and $b = x$).

Consequent upon this, Proposition 2.4, Theorem 2.5 and Corollary 2.6 of [2] must be deleted from the paper.

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References


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