

**Abujabal, Hamza A. S.**

**On commutativity of left  $s$ -unital rings.** (English) Zbl 0806.16034

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Let  $R$  be an associative ring such that: 1) for each  $x \in R$ ,  $x \in Rx$ ; 2)  $R$  satisfies the identity  $x^t[x^n, y] = \pm y^r[x, y^m]y^s$ . The author proves that each of the following extra conditions implies the commutativity of  $R$ : i)  $n > 1$  and if  $n[a, b] = 0$ ,  $a, b \in R$ , then  $[a, b] = 0$ ; ii)  $R$  is a semiprime ring and  $n > 0$ ; iii)  $m > 1$ ,  $n > 1$  and  $(m, n) = 1$ ; iv)  $n = 1$  and  $(t, m, r, s) \neq (0, 1, 0, 0)$ .

Reviewer: Yu.N.Mal'tsev (Barnaul)

**MSC:**

- 16U70 Center, normalizer (invariant elements) (associative rings and algebras)
- 16R50 Other kinds of identities (generalized polynomial, rational, involution)
- 16N60 Prime and semiprime associative rings
- 16U80 Generalizations of commutativity (associative rings and algebras)

**Keywords:**

identity; commutativity; semiprime ring