

## PARTIAL ISOMETRIES AND EP ELEMENTS IN RINGS WITH INVOLUTION\*

DIJANA MOSIĆ<sup>†</sup> AND DRAGAN S. DJORDJEVIĆ<sup>†</sup>

**Abstract.** If  $\mathcal{R}$  is a ring with involution, and  $a^\dagger$  is the Moore-Penrose inverse of  $a \in \mathcal{R}$ , then the element  $a$  is called: EP, if  $aa^\dagger = a^\dagger a$ ; partial isometry, if  $a^* = a^\dagger$ ; star-dagger, if  $a^*a^\dagger = a^\dagger a^*$ . In this paper, characterizations of partial isometries, EP elements and star-dagger elements in rings with involution are given. Thus, some well-known results are extended to more general settings.

**Key words.** Partial isometry, Moore-Penrose inverse, Group inverse, EP elements, Star-dagger elements, Ring with involution.

**AMS subject classifications.** 16B99, 16W10, 15A09, 46L05.

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<sup>†</sup>Faculty of Sciences and Mathematics, University of Niš, P.O. Box 224, 18000 Niš, Serbia (sknme@ptt.rs, ganedj@eunet.rs). Supported by the Ministry of Science, Republic of Serbia, grant no. 144003.