

## REVERSE ORDER LAW FOR THE MOORE-PENROSE INVERSE IN $C^*$ -ALGEBRAS\*

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**Abstract.** In this paper, several equivalent conditions related to the reverse order law for the Moore-Penrose inverse in  $C^*$ -algebras are studied. Some well-known results are extended to more general settings. Then this result is applied to obtain the reverse order rule for the weighted Moore-Penrose inverse in  $C^*$ -algebras.

**Key words.** Moore-Penrose inverse, Reverse order law,  $C^*$ -algebras.

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

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\*Received by the editors on July 24, 2010. Accepted for publication on January 31, 2011. Handling Editor: Michael Tsatsomeros.

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