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**Christopher Jankowski\*** (cjankows@math.bgu.ac.il), Ben-Gurion University of the Negev,  
P.O. Box 653, 84105 Be'er Sheva, Israel. *A family of non-cocycle conjugate  $E_0$ -semigroups obtained from boundary weight doubles.*

An  $E_0$ -semigroup  $\alpha = \{\alpha_t\}_{t \geq 0}$  is a semigroup of unital  $*$ -endomorphisms of  $B(H)$  which is weakly continuous in  $t$ . Previous work has shown how to induce  $E_0$ -semigroups of type  $\text{II}_0$  using boundary weight doubles  $(\phi, \nu)$ , where  $\phi : M_n(\mathbb{C}) \rightarrow M_n(\mathbb{C})$  is a unital  $q$ -positive map and  $\nu$  is a type II Powers weight. We present cocycle conjugacy results for  $E_0$ -semigroups induced by  $(\phi, \nu)$  and  $(\psi, \eta)$  in the case that  $\phi : M_n(\mathbb{C}) \rightarrow M_n(\mathbb{C})$  and  $\psi : M_{n'}(\mathbb{C}) \rightarrow M_{n'}(\mathbb{C})$  both have rank one. In particular, we find that if  $\nu$  is a type II Powers weight of the form  $\nu(\sqrt{I - \Lambda(1)}A\sqrt{I - \Lambda(1)}) = (f, Af)$ , then  $(\phi, \nu)$  and  $(\psi, \nu)$  induce cocycle conjugate  $E_0$ -semigroups if and only if  $n = n'$  and  $\phi$  is conjugate to  $\psi$ . (Received September 09, 2010)