Erratum

On the Uniqueness of Weak Weyl Representations of the Canonical Commutation Relation

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The statement on the complete reducibility of the $*$ -algebra $\mathcal{W}_+$ generated by $\{U(\alpha), V(\beta) | \alpha \geq 0, \beta \in \mathbb{R}\}$ in Remark 2.1 is inconclusive. Hence Remark 2.1 should be deleted. Corresponding to this change, the following corrections must be made (only essential points are indicated): (1) In Theorems 1.2, 1.3, 4.3 and Corollary 4.4, the irreducibility of the set $\mathcal{A} := \{\overline{T}, T^*, H\}$, i.e., $\mathcal{A}'$ (the strong commutant of $\mathcal{A}$) $= \{cI | c \in \mathbb{C}\}$ should be assumed. (2) In Theorems 1.2 and 1.3, N should be 1. (3) In Lemmas 2.4 and 2.5, the irreducibility of $\mathcal{W}_+$ should be assumed and N should be 1. (4) In Examples 3.1 and 3.2, d should be 1. (5) p. 23, $\uparrow 1$: “ $a \leq 0$ ” $\rightarrow$ “ $a = 0$ ” (the proof of Lemma 4.2 is not correct: one can show that $\dim \ker(d_a^* - i) = 1$ for all $a < 0$). (6) In Theorem 4.3 and in its proof, “ $\varepsilon_0 \leq 0$ ” should be “ $\varepsilon_0 = 0$ ”. (7) In Corollary 4.4, “ $\mu \geq 0$ ” should be “ $\mu = 0$ ”.

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