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Corrigendum to : "Some embeddings into the total Morrey spaces associated with the Dunkl operator on $\mathbb{R}^d$"

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Abstract. *The purpose of this note is to correct an error in an earlier paper by the authors : Some embeddings into the total Morrey spaces associated with the Dunkl operator on* $\mathbb{R}^d$*, Trans. Natl. Acad. Sci. Azerb. Ser. Phys.-Tech. Math. Sci., Issue Mathematics.*

Keywords. Dunkl operator, generalized translation operator, total D_k-Morrey space.

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In [1] we study some embeddings into the total Morrey space (D_k-total Morrey space) $L_{p,\lambda,\mu}(\mu_k)$, $0 \le \lambda, \mu < d+2\gamma_k$ associated with the Dunkl operator on $\mathbb{R}^d$. These spaces generalize the Morrey spaces associated with the Dunkl operator on $\mathbb{R}^d$ (D_k-Morrey space) so that $L_{p,\lambda}(\mu_k) \equiv L_{p,\lambda,\lambda}(\mu_k)$ and the modified Morrey spaces associated with the Dunkl operator on $\mathbb{R}^d$ (modified D_k-Morrey space) so that $\widetilde{L}_{p,\lambda}(\mu_k) \equiv L_{p,\lambda,0}(\mu_k)$.

We assume that the reader is familiar with the contents and notation in the aforementioned paper [1].

In the paper [1] the author omitted the condition $\mu \le \lambda$ in inequalities (3.1), (3.2) and in Lemmas 3.2, 3.3. Otherwise, inequalities (3.1), (3.2) and the statements of Lemmas 3.2, 3.3 are false. Therefore, the correct form of inequalities (3.1), (3.2) and Lemmas 3.2, 3.3 must be the following form.

$$L_{p,\lambda,\mu}(\mu_k) \subset\!\succ L_{p,\lambda}(\mu_k),\ \mu \le \lambda \quad \text{and} \quad \|f\|_{L_{p,\lambda}(\mu_k)} \le \|f\|_{L_{p,\lambda,\mu}(\mu_k)},$$

$$L_{p,\lambda,\mu}(\mu_k) \subset\!\succ L_{p,\mu}(\mu_k),\ \mu \le \lambda \quad \text{and} \quad \|f\|_{L_{p,\mu}(\mu_k)} \le \|f\|_{L_{p,\lambda,\mu}(\mu_k)}.$$

Lemma 0.1 *Let* $1 \le p < \infty$, $0 \le \mu \le \lambda \le d+2\gamma_k$. *Then* $L_{p,\lambda,\mu}(\mu_k) = L_{p,\lambda}(\mu_k) \cap L_{p,\mu}(\mu_k)$ *and*

$$\|f\|_{L_{p,\lambda,\mu}(\mu_k)} = \max\left\{\|f\|_{L_{p,\lambda}(\mu_k)}, \|f\|_{L_{p,\mu}(\mu_k)}\right\}.$$

Lemma 0.2 *Let* $0 < p < \infty$, $0 \le \mu \le \lambda \le d+2\gamma_k$. *Then* $WL_{p,\lambda,\mu}(\mu_k) = WL_{p,\lambda}(\mu_k) \cap WL_{p,\mu}(\mu_k)$ *and*

$$\|f\|_{WL_{p,\lambda,\mu}(\mu_k)} = \max\left\{\|f\|_{WL_{p,\lambda}(\mu_k)}, \|f\|_{WL_{p,\mu}(\mu_k)}\right\}.$$

References

1. Muslumova, F.A.: *Some embeddings into the total Morrey spaces associated with the Dunkl operator on* $\mathbb{R}^d$, Trans. Natl. Acad. Sci. Azerb. Ser. Phys.-Tech. Math. Sci. **43** (1) (2023), Mathematics, 94-102.

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