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COMPACTNESS FOR THE COMMUTATOR OF THE PARAMETERIZED AREA INTEGRAL IN THE MORREY SPACE

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Abstract. In this paper the authors prove that the commutator $[b, \mu_S^\rho]$ is a compact operator in the Morrey space $L^{p,\lambda}(\mathbb{R}^n)$ for $1 < p < \infty$ and $0 < \lambda < n$, if and only if $b \in VMO(\mathbb{R}^n)$, the $\mathrm{BMO}(\mathbb{R}^n)$-closure of $C_c^\infty(\mathbb{R}^n)$, where μ_S^ρ denotes the parameterized area integral.

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