

## BOUNDEDNESS FOR A CLASS OF FRACTIONAL CARLESON TYPE MAXIMAL OPERATOR

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*Abstract.* In this paper, the authors study the fractional Carleson type maximal operators  $\mathcal{T}_\beta^*$  which is defined by

$$\mathcal{T}_\beta^* f(x) = \sup_\lambda \left| \int_{\mathbb{R}^n} e^{iP_\lambda(y)} \frac{\Omega(y)}{|y|^{n-\beta}} f(x-y) dy \right|,$$

where  $0 < \beta < n$  and  $\Omega$  satisfies the  $L^q$ -Dini conditions with  $1 < q < \infty$ . The authors prove the  $L^p \rightarrow L^p$  boundedness of  $\mathcal{T}_\beta^*$  under certain conditions.

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