

**Yanzheng Duan, Bor-Luh Lin**

***Characterizations of  $L^1$ -predual spaces by centerable subsets***

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**Abstract:** In this note, we prove that a real or complex Banach space  $X$  is an  $L^1$ -predual space if and only if every four-point subset of  $X$  is centerable. The real case sharpens Rao's result in [Chebyshev centers and centerable sets, Proc. Amer. Math. Soc. 130 (2002), no. 9, 2593–2598] and the complex case is closely related to the characterizations of  $L^1$ -predual spaces by Lima [Complex Banach spaces whose duals are  $L_1$ -spaces, Israel J. Math. 24 (1976), no. 1, 59–72].

**Keywords:** Chebyshev radius, centerable subsets and  $L^1$ -predual spaces

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