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Some results on spaces with \aleph_1 -calibre

Comment.Math.Univ.Carolin. 57,1 (2016) 131–134.

Abstract: We prove that, assuming *CH*, if X is a space with \aleph_1 -calibre and a zero set diagonal, then X is submetrizable. This gives a consistent positive answer to the question of Buzyakova in *Observations on spaces with zero set or regular G_δ -diagonals*, Comment. Math. Univ. Carolin. **46** (2005), no. 3, 469–473. We also make some observations on spaces with \aleph_1 -calibre.

Keywords: \aleph_1 -calibre; star countable; zero set diagonal

AMS Subject Classification: Primary 54D20; Secondary 54E35

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