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On Metrizable Barreled Spaces, Cardinals and Dimensionality

Some properties in metrizable barreled spaces are accurately defined with the aid of the bounding (Rothberger 1939) and dominating (Katekov 1960) cardinals, for instance the largest cardinal κ which assures inheritance of barrelledness by subspaces of metrizable barrelled spaces of codimension strictly smaller than κ or which is the smallest size that a family of bounded subsets of a metrizable space must have in order to be fundamental. These and related results have been obtained by the author jointly with S. A. Saxon and some of them remind of Mazur's results concerning Fréchet, i. e., complete metrizable locally convex, spaces.