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(sudipta_r@isical.ac.in) Stat-Math Unit, Indian Statistical Institute, Kolkata, 700108, 203, B. T. Road, India, *Weighted Chebyshev Centers and Intersection Properties of Balls in Banach Spaces.*

ABSTRACT. Banach spaces that admit weighted Chebyshev centres for finite sets were studied in [4] and subsequently, in [1], a large class of Banach spaces with this property were exhibited. Extending the notion of central subspaces introduced in [1], we define relative intersection properties for a subspace Y of a Banach space X with the centres of the balls coming from a

given family of subsets of Y , the typical examples being those of finite, compact, bounded or arbitrary sets. We extend and improve upon some results of [1,4] in this general set-up and relate them with a modified notion of minimal points. As in [1], special cases when we consider the family of all finite, or more interestingly, compact subsets lead to characterizations of L_1 -preduals.

The special case when the family is that of all subsets give rise to a notion apparently weaker than 1-complemented subspaces. It is still an open question whether the two notions are equivalent, even in the case of X in X^{**} , which was called the Finite Infinite Intersection Property ($IP_{f,\infty}$) in [2]. Here we obtain some sufficient conditions for the two to be equivalent, improving certain earlier results of [3] in particular.

We also consider some stability results.

[1] Pradipta Bandyopadhyay and T. S. S. R. K. Rao, *Central Subspaces of Banach spaces*, J. Appro. Theory, **103** (2000), 206–222. [2] G. Godefroy, *Isometric preduals: a survey*, Contemp. Math., **85**, Amer. Math. Soc., Providence, R. I. (1989), 131–193. [3] G. Godini *On Minimal Points*, Comment. Math. Univ. Carolin, **21, 3**, (1980), 407–419. [4] L. Veselý, *Generalized centers of finite sets in Banach spaces*, Acta Math. Univ. Comen., **66** (1997), 83–115.