1172-46-12Sudeshna Basu* (sudeshnamelody@gmail.com), Department of Mathematics, Howrah, India,
and Susmita Seal. Small Combination of Slices and ideals in Banach Spaces.

In this work we study three different versions of small diameter properties of the unit ball in a Banach space and its dual. The related concepts for all closed bounded convex sets of a Banach space was initiated and developed was extensively studied in the context of dentability, huskability, Radon Nikodym Property and Krein Milman Property. We prove that all these properties are stable under l_p sum for $1 \le p \le \infty, c_0$ sum and Lebesgue Bochner spaces. These stability results lead to a discussion in the context of ideals of Banach spaces. We prove that BSCSP (respectively BHP, BDP) can be lifted from an M-Ideal to the whole space. We also show similar results for strict ideals. Using this, we show that the space $C(K, X)^*$ has $w^*-BSCSP$ (respectively w^*-BHP , w^*-BDP) when K is dispersed and X^* has the $w^*-BSCSP$ (respectively w^*-BHP , w^*-BDP). We further show that small diameter properties BDP, BHP and BSCSP can be lifted from an almost isometric ideal to the whole space. (Received July 20, 2021)