On Brunn-Minkowski type inequalities for polar bodies

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In this talk we will discuss about some Brunn-Minkowski type inequalities involving the notion of polarity (for convex bodies). More precisely, we will show a generalization of previous results by Firey for the polar set of the so-called p-sum of convex bodies, as well as an equivalent multiplicative version of it, which also provides an alternative proof for Firey's results.

On the other hand, we will define a new operation between convex bodies for which also a Brunn-Minkowski type inequality for polarity can be obtained. Finally we will make some considerations for the polar set of the so-called difference body with respect to both, the Minkowski addition and the new sum.