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ON THE BANG-BANG PRINCIPLE FOR DIFFERENTIAL INCLUSIONS IN A REFLEXIVE SEPARABLE BNANACH SPACE

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Abstract. In this paper, we consider the relation existing between the solutions of the following differential inclusions: (I) $\dot{x} \in \Gamma(t,x), x(0) = 0$ and (II) $\dot{x} \in \operatorname{ext}\Gamma(t,x), x(0) = 0$ defined on a reflexive separable Banach space. In particular, we establish the sufficient conditions which guarantee the set of solutions of (II) is dense in the set of solutions of (I) with respect to the (weak) uniformly continuous topology.

Key words and phrases. bang-bang principle, differential inclusion, reflexive separable Banach space, weak topology.