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Every CBER is smooth below the Carlson-Simpson generic partition

One difficulty that arises in studying the class of countable Borel equivalence relations (CBERs) is that in many cases, the complexity of a CBER lies on a "small" set. For instance, a result of Hjorth and Kechris states that every CBER on a Polish space is hyperfinite when restricted to some comeager set. Another result, due to Mathias, shows that every CBER on the Ellentuck Ramsey space is hyperfinite when restricted to some pure Ellentuck cube. In this talk, we will show that every CBER on the space of all infinite partitions of the natural numbers coincides with equality below a Carlson-Simpson generic element. This is joint work with Aristotelis Panagiotopoulos.