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Completely determined Borel sets and measurability

We consider the reverse math strength of the statement CD-M: “Every completely determined Borel set is measurable.” Over WWKL, we obtain the following results analogous to the previously studied category case. First, CD-M lies strictly between ATR_0 and $\text{L}_{\omega_1, \omega}\text{-CA}$. Second, any ω -model of CD-M must be closed under hyperarithmetic reduction. Finally, whenever $M \subseteq 2^\omega$ is the second-order part of an ω -model of CD-M, then for every $Z \in M$, there is a $G \in M$ such that G is Δ_1^1 -random relative to Z .