1100-03-334   **Karl Backs***, University of North Texas, Department of Mathematics, 1155 Union Circle #311430, Denton, TX 76203-5017, and **Steve Jackson** and **R Daniel Mauldin**. *CH, V=L, disintegration of measures and Π_1^1 sets.* Preliminary report.

In 1950 Maharam asked whether every disintegration of a σ-finite measure into σ-finite measures is necessarily uniformly σ-finite. Over the years under special conditions on the disintegration, the answer was shown to be yes. However, we show here that the answer may depend on the axioms of set theory in the following sense. If CH, the continuum hypothesis holds, then the answer is no. One proof of this leads to some interesting problems in infinitary combinatorics. If Gödel's axiom of constructibility $\mathbf{V} = \mathbf{L}$ holds, then not only is the answer no, but, of equal interest is the construction of $\mathbf{\Pi}_1^1$ sets with very special properties.

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