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Kurzweil integral on BV sets.

It is by no means clear what should be the right multidimensional version of Kurzweil integral. There are a variety of non-equivalent definitions in literature. From the point of view of stability (e.g. with respect to lipeomorphic change of variables), it seems that Pfeffer's definition is most successful. However, this definition does not return the Kurzweil integral when applied to the onedimensional case. We modify the original Pfeffer definition of BV integral and obtain a new one which gives a wider class of integrable functions. In particular, its one-dimensional version is exactly the Kurzweil integral. The new integral shares all pleasant properties with previous ones and some of them can be obtained easier. This is a joint work with Washek F. Pfeffer.