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Maximilien Péroux* (mholmb2@uic.edu). *Coalgebras and comodules in stable homotopy theory.*

We present recent progress on the study of coalgebras and comodules in spectra. In particular, we show that, unlike the case of algebras, strict coassociative (or cocommutative) coalgebras in the current model categories of spectra do not represent \mathbb{A}_∞ -coalgebras (nor \mathbb{E}_∞ -coalgebras) (joint work with Brooke Shipley). However in the dg-context, there are rectifications results for coalgebras and comodules in the derived category of a field. (Received July 10, 2019)