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Piotr Pstragowski* (pstragowski.piotr@gmail.com). *Synthetic spectra and the cellular motivic category.*

To any Adams-type homology theory we associate a notion of a synthetic spectrum, this is a spherical sheaf on the site of finite spectra with projective E -homology. We show that the ∞ -category $\mathcal{S}yn_E$ of synthetic spectra based on E is symmetric monoidal, stable, and that it is in a precise sense a deformation of Hovey's stable homotopy theory of E_*E -comodules whose generic fibre is the ∞ -category of spectra. It follows that the Adams spectral sequence in $\mathcal{S}yn_E$ interpolates between the topological and algebraic Adams spectral sequences.

We then describe a symmetric monoidal functor $\Theta_* : \mathcal{S}p_{\mathbb{C}} \rightarrow \mathcal{S}yn_{MU}^{ev}$ from the ∞ -category of cellular motivic spectra over $\text{Spec}(\mathbb{C})$ into an even variant of synthetic spectra based on MU and show that Θ induces an equivalence between the ∞ -categories of p -complete objects for all primes p . This establishes a purely topological model for the p -complete cellular motivic category and gives a conceptual explanation of the "C τ -philosophy" of Gheorghe, Isaksen, Wang and Xu. (Received August 06, 2018)