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Yuri Sulyma* (ysulyma@math.utexas.edu). *Stable module categories as categorified Tate cohomology*. Preliminary report.

The stable category of modules $\text{stmod}(kG)$ is a useful construction in modular representation theory, quantifying the failure of coherent kG -modules to be perfect in positive characteristic. It is closely related to Tate cohomology: for example, Tate cohomology becomes corepresentable in $\text{stmod}(kG)$. We give a conceptual explanation for this by identifying $\text{stmod}(kG)$ itself as a form of categorified Tate cohomology, for the action of G on the category of perfect complexes of k -modules. We also study the relation to genuine equivariant homotopy theory. This is joint work with Aaron Royer. (Received August 14, 2019)