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Title: Higher Cyclotomic Extensions.

Abstract: In classical algebra, cyclotomic extensions are among the simplest examples of Galois extensions for fields and rings.

In the theory of higher algebra, one can define the notion of commutative rings in general symmetric monoidal infinity categories. There is also a parallel theory of Galois extensions in this more general context. However, the classical theory of cyclotomic extensions does not work well in many important examples of such infinity categories.

In this talk, I will present a theory of "higher cyclotomic extensions," generalizing the classical cyclotomic extensions in a way visible only by (genuinely) higher categorical examples. This generalization allows the construction of new Galois extensions in some key infinity categories known as the telescopic localizations of spectra.

This is a joint work with Tomer Schlank and Lior Yanovski.