

## An algebraic model for rational $SO(3)$ spectra

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**Abstract:** In algebraic topology we consider invariants of spaces with a  $G$  action, such as  $G$ -cohomology theories, which are represented by  $G$ -spectra. Since it is quite difficult to make systematic computations in the category of  $G$ -spectra, it is useful to have an algebraic model of it, i.e. a simpler, algebraic category Quillen equivalent to  $G$ -spectra. The work towards providing an algebraic model has been started by Greenlees with several cases established by Greenlees, Shipley and Barnes, including results for finite groups, tori and  $O(2)$ .

In this talk I will present an overview of an algebraic model for rational  $SO(3)$ -spectra. I will describe the general idea of a proof and concentrate on the main new ingredient, namely the interaction of the left Bousfield localisation and two adjunctions: induction – restriction and restriction – coinduction. I will justify why this approach will be useful in considering algebraic models for further groups.