SOME SUFFICIENT ALGEBRAIC CONDITIONS FROM REPRESENTATION THEORY FOR THE COMPACTNESS OF THE SPHERE SPECTRUM

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In a recent work by Degrijse, Hausmann, Luck, Patchkoria, Schwede, it has been shown that if an infinite discrete group admits a finite model for its classifying space of proper actions, then the sphere spectrum is compact in the equivariant homotopy category. In this talk, I will discuss some simpler algebraic conditions on the group that do/can imply the same conclusion. In that same context, I will mention how my recent work on the behaviour of various cohomological invariants for infinite discrete groups relates to this question.

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