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Geometric realizations of Lusztig's symmetries

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ACCEPTED MANUSCRIPT

Geometric realizations of Lusztig's symmetries

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In memory of the late Professor J. A. Green.

Abstract

In this paper, we give geometric realizations of Lusztig's symmetries. We also give projective resolutions of a kind of standard modules. By using the geometric realizations and the projective resolutions, we obtain the categorification of the formulas of Lusztig's symmetries.

 $Keywords:\;$ Lusztig's symmetries, Standard modules, Projective resolutions 2010 MSC: 16G20, 17B37

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