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Title:	Cohomology algebra of orbit spaces of free involutions on lens spaces
Authors:	Singh, Mahender (/jspui/browse?type=author&value=Singh%2C+Mahender)
Keywords:	Index of involution Cohomology algebra Leray spectral sequence Finitistic space
Issue Date:	2013
Publisher:	Project Euclid
Citation:	Journal of the Mathematical Society of Japan, 65(4), pp.1055-1078.
Abstract:	Let G be a group acting continuously on a space X and let X/G be its orbit space. Determining the topological or cohomological type of the orbit space X/G is a classical problem in the theory of transformation groups. In this paper, we consider this problem for cohomology lens spaces. Let X be a finitistic space having the mod 2 cohomology algebra of the lens space $L^{2m-1}p$ $(q_1,\ldots,q_m)$. Then we classify completely the possible mod 2 cohomology algebra of orbit spaces of arbitrary free involutions on X. We also give examples of spaces realizing the possible cohomology algebras. In the end, we give an application of our results to non-existence of Z2-equivariant maps $S^n \rightarrow X$.
URI:	https://projecteuclid.org/euclid.jmsj/1382620185 (https://projecteuclid.org/euclid.jmsj/1382620185) http://hdl.handle.net/123456789/2716 (http://hdl.handle.net/123456789/2716)
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