

On some resolutions in the category $(H^\bullet V)_{\text{fg}} - \mathcal{U}$

Let V be an elementary abelian 2-group and X be a finite V -CW-complex. Using results of H.-W. Henn, we will show that if the equivariant cohomology $H_V^\bullet(X; \mathbb{F}_2)$ is free as a module over $H^\bullet(V; \mathbb{F}_2)$ then this equivariant cohomology admits a canonical resolution, of length $\dim V$, in the category $(H^\bullet V)_{\text{fg}} - \mathcal{U}$ whose objects are the $H^\bullet(V; \mathbb{F}_2)$ - A -modules (A denoting the Steenrod algebra) which are finitely generated as $H^\bullet(V; \mathbb{F}_2)$ -modules.

This is joint work with D. Bourguiba, L. Schwartz and S. Zarati.