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William C Kronholm* (wkronholm@whittier.edu), Department of Mathematics, Whittier College, Whittier, CA 90608. *On the equivariant cohomology of Stiefel manifolds*. Preliminary report.

Let G be a group of order 2. A $\text{Rep}(G)$ -complex structure is put on the special orthogonal group with a particular action of G . This cell structure is then used to put a cell structure on the Stiefel manifold of k -frames in a real representation of G . These structures are then used to investigate the $RO(G)$ -graded cohomology of the special orthogonal groups, Stiefel manifolds, and Grassmann manifolds. (Received July 12, 2011)