1100-11-27 **Ivan Horozov*** (`horozov@math.wustl.edu`), Washington University in t. Louis, Department of Mathematics, One Brookings Dr, Campus Box 1146, Saint Louis, MO 63130. *Cohomology of $GL(4, Z)$ with non-trivial coefficients.*

I compute the cohomology groups of $GL(4, Z)$ with coefficients in symmetric powers of the standard representation twisted by the determinant. This problem arises in Goncharov's approach to the study of motivic multiple zeta values of depth 4. I use Borel-Serre compactification, a result of Harder on Eisenstein cohomology and a computationally effective version for the homological Euler characteristic of arithmetic groups from my thesis. (Received January 14, 2014)