

# COHOMOLOGIES OF REGULAR LATTICES OVER THE KLEINIAN 4-GROUP

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It is a joint work with Yu. Drozd. The results are published in [2].

The aim of our work is to apply the results on cohomologies of the Kleinian 4-group [1] to the classification of crystallographic and Chernikov groups. For this purpose it is important to have an explicit presentation of 2-cocycles. We find such presentation for a special class of lattices, called regular, and for their dual modules. Moreover, we describe the orbits of the action of automorphisms of modules on cohomologies. From this results we obtain a complete description of crystallographic and Chernikov groups with the Kleinian top and regular base.

1. Drozd Y. A., Plakosh A. I. Cohomologies of the Kleinian 4-group. Arch. Math., 2020, 15, 2, 139-145.
2. Drozd Y. A., Plakosh A. I. Cohomologies of regular lattices over the Kleinian 4-group. J. Pure Appl. Algebra, 2023, 227, 2, 107178.