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Groups of Ree type in characteristic 3 acting on polytopes *

Dimitri Leemans

*Université Libre de Bruxelles, Département de Mathématique,
C.P.216 - Algèbre et Combinatoire, Boulevard du Triomphe, 1050 Brussels, Belgium*

Egon Schulte

*Northeastern University, Department of Mathematics,
360 Huntington Avenue, Boston, MA 02115, USA*

Hendrik Van Maldeghem

*Vakgroep Wiskunde, Universiteit Gent,
Krijgslaan 281, S22, 9000 Gent, Belgium*

Abstract: Every Ree group $R(q)$, with $q \neq 3$ an odd power of 3, is the automorphism group of an abstract regular polytope, and any such polytope is necessarily a regular polyhedron (a map on a surface). However, an almost simple group G with $R(q) < G \leq \text{Aut}((q))$ is not a C-group and therefore not the automorphism group of an abstract regular polytope of any rank.

Keywords: Abstract regular polytopes, string C-groups, small Ree groups, permutation groups.

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E-mail addresses: dleemans@ulb.ac.be (Artūras Dubickas), dleemans@ulb.ac.be (Dimitri Leemans), schulte@neu.edu (Egon Schulte), hendrik.vanmaldeghem@ugent.be (Hendrik Van Maldeghem).

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Grupe Reejevega tipa s karakteristiko 3, delujoče na politopih *

Dimitri Leemans

*Université Libre de Bruxelles, Département de Mathématique,
C.P.216 - Algèbre et Combinatoire, Boulevard du Triomphe, 1050 Brussels, Belgium*

Egon Schulte

*Northeastern University, Department of Mathematics,
360 Huntington Avenue, Boston, MA 02115, USA*

Hendrik Van Maldeghem

*Vakgroep Wiskunde, Universiteit Gent,
Krijgslaan 281, S22, 9000 Gent, Belgium*

Povzetek: Vsaka Reejeva grupa $R(q)$, kjer je $q \neq 3$ liha potenca števila 3, je grupa avtomorfizmov abstraktnega regularnega politopa, vsak tak politop pa je regularen polieder (zemljevid na ploskvi). Vendar pa skoraj enostavna grupa G , kjer je $R(q) < G \leq \text{Aut}((q))$, ni C-grupa in zato ni grupa avtomorfizmov abstraktnega regularnega politopa nobenega ranga.

Ključne besede: Abstraktni regularni politopi, strunske C-grupe, majhne Reejeve grupe, permutacijske grupe.

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e-poštni naslovi: dleemans@ulb.ac.be (Artūras Dubickasdleemans@ulb.ac.be), schulte@neu.edu (Egon Schulte), hendrik.vanmaldeghem@ugent.be (Hendrik Van Maldeghem).