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THE BOUNDARY OF RANK-ONE DIVISIBLE CONVEX SETS

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ABSTRACT. — We prove that for any non-symmetric irreducible divisible convex set, the proximal limit set is the full projective boundary.

RÉSUMÉ (*Le bord des convexes divisibles de rang un*). — Nous démontrons que pour tout convexe divisible irréductible non symétrique, l'ensemble limite proximal est le bord projectif tout entier.

1. Introduction

This note concerns the rich topic of divisible convex sets, which began more than 60 years ago with the work of Kuiper [17] and Benzécri [8] and is today very active. We refer to Benoist's survey [6], which presents many interesting results and shows how diverse the mathematics interacting with this topic are. Let us fix for the whole paper a finite-dimensional real vector space V. A subset of the projective space $\mathrm{P}(V)$ is *properly convex* if it is convex and bounded in some affine chart. A properly convex open subset $\Omega \subset \mathrm{P}(V)$ is *divisible* if it is *divided* by some discrete subgroup of $\Gamma \subset \mathrm{PGL}(V)$, i.e. Γ acts cocompactly

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