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The lattice of integer flows of a regular matroid

For a finite multigraph G, let $\Lambda(G)$ denote the lattice of integer flows of G—this is a finitely generated free abelian group with an integer-valued positive definite bilinear form. Bacher, de la Harpe, and Nagnibeda show that if G and H are 2-isomorphic graphs then $\Lambda(G)$ and $\Lambda(H)$ are isometric, and remark that they were unable to find a pair of nonisomorphic 3-connected graphs for which the corresponding lattices are isometric. We explain this by examining the lattice $\Lambda(M)$ of integer flows of any regular matroid M. Let $M_\bullet$ be the minor of M obtained by contracting all co-loops. We show that $\Lambda(M)$ and $\Lambda(N)$ are isometric if and only if $M_\bullet$ and $N_\bullet$ are isomorphic.