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Wesley S. Cross* (crossw@stockton.edu), Richard Stockton College of New Jersey, NAMS
B-108, Pomona, NJ. *Volumes of p -adic Analogues of Rational Polyhedra.*

The lattice points of a rational polyhedron $P \subseteq R^n$ correspond to a semi-algebraic subset of the p -adic space Q_p^n . The principal value volume of the semi-algebraic set is given explicitly in terms of the rational generating function associated to P when P is a rational cone. (Received August 09, 2007)