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Unit shapes of totally imaginary sextic D_6 fields

The *log unit lattice* of a number field is the image of its unit group under the logarithmic Minkowski embedding. The *unit shape* is the shape (i.e. the homothety class) of this lattice. In contrast to shapes of rings of integers, little is generally known about unit shapes and their properties; they have only been explored for certain specific families of fields. We present an in-depth analysis of the unit shapes of totally imaginary sextic number fields whose Galois closure has Galois group D_6, the dihedral group of order 12. This is joint work with Jose Cruz, Erik Holmes, Fatemeh Jalalvand, Enrique Nunez Lon-Wo and Ha T. N. Tran.