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Symmetries and hidden symmetries of (ϵ, d_L) -twisted knot complements.

It is a longstanding conjecture of Neumann and Reid that exactly three knot complements can irregularly cover a hyperbolic orbifold—the figure-8 knot and the two Aitchison–Rubinstein dodecahedral knots. This conjecture, when combined with work of Boileau–Boyer–Walsh, implies a more recent conjecture of Reid and Walsh, which states that there are at most 3 knot complements in the commensurability class of any hyperbolic knot complement. We give a Dehn filling criterion that is useful for producing large families of knot complements that satisfy both conjectures. This work is joint with Hoffman and Millichap. (Received September 12, 2020)