DEHN SURGERIES ON MIDDLE/HYPER DOUBLY SEIFERT TWISTED TORUS KNOTS

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In this paper, we classify all twisted torus knots which are middle/hyper doubly Seifert. By the definition of middle/hyper doubly Seifert knots, these knots admit Dehn surgery of either Seifert fibered manifolds or graph manifolds at a surface slope. We show that the middle/hyper doubly Seifert twisted torus knots admit the latter, that is, non-Seifert-fibered graph manifolds whose decomposing pieces consist of two Seifert-fibered manifolds over the disk with two exceptional fibers.

References