Non orientable surfaces in 3-manifolds

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Abstract. (This is a joint work with Nabil Sayari.) By W. Thurston, we know that if M is a hyperbolic 3-manifold with a torus boundary component, then only a finite number of slopes can yield a non-hyperbolic manifold. This talk concerns those slopes which produce a closed non-orientable surface. We discuss about the slopes, the genus of the surface and the distance between such slopes. In particular, we give "optimal" upper bounds for the distance between two slopes which both produce projective planes, or both produce Klein bottles.