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Marius Huber* (marius.huber@bc.edu). *Ribbon cobordisms between lens spaces.*

The question of when there exists a rational homology cobordism between two lens spaces was completely answered by Lisca. Lisca's proof relies on a combinatorial analysis of embeddings of certain intersection lattices into the standard unimodular lattice. A refinement of the above question is to ask when there exists a ribbon rational homology cobordism from one lens space to another, i.e. one that can be built using just 1- and 2-handles. In this talk, I will show how the absence of 3-handles in a rational homology cobordism translates into a condition on the embeddings of intersection lattices, and, moreover, I will illustrate how this obstruction together with Lisca's machinery can be used to completely determine when there exists a ribbon rational homology cobordism from a lens space to another. (Received January 16, 2021)