

**Meeting:** 998, Houston, Texas, SS 7A, Special Session on Low Dimensional Topology

998-57-397      **Cameron McA Gordon\*** ([gordon@math.utexas.edu](mailto:gordon@math.utexas.edu)), University of Texas at Austin, Department of Mathematics, 1 University Station, C1200, Austin, TX 78712, and **John E Luecke** ([luecke@math.utexas.edu](mailto:luecke@math.utexas.edu)), University of Texas at Austin, Department of Mathematics, 1 University Station, C1200, Austin, TX 78712. *Doubly composite knots with unknotting number 1*. Preliminary report.

We show that if  $K$  is a knot with unknotting number 1 and  $S$  is an essential toric 2-suborbifold of  $K$ , then, generically, any unknotting arc for  $K$  can be moved off  $S$ . The examples for which this is not possible are precisely the doubly composite knots with unknotting number 1 constructed by Eudave-Munoz, and certain other closely related knots. In particular, combining this with earlier results, and the recent work of Ozsvath and Szabo, the knots with unknotting number 1 and at most 10 crossings are completely determined. (Received March 02, 2004)