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Julia Collins, Paul Kirk and Charles Livingston* (livingst@indiana.edu). *The concordance classification of low crossing number knots.*

The classification of the subgroup of the knot concordance group generated by prime knots of eight or fewer crossings has been completed. There are 36 such knots; the subgroup they generate has a free summand of rank 23 and a two-torsion summand of rank 7. The full result is placed in the context of the homomorphism of the concordance group to the algebraic concordance group. A simple algorithm that permits one to determine the order, and in particular the triviality, of any given linear combination of low crossing number knots is given.

With the exception of a small subgroup, Collins has classified the larger subgroup generated by nine crossing knots (of which there are 87 to consider) has been similarly classified. (Received July 26, 2014)