

A uniform bound for Brauer groups of certain log K3 surfaces

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This talk is based on joint work with dr. Martin Bright. It is known that the Brauer group modulo constants of a del Pezzo surface over a number field is one of only 25 possible finite groups. However if one removes a hyperplane section one gets a log K3 surface for which the Brauer group can be more complicated. We will consider the Brauer group modulo constants of such surfaces U and show that the algebraic part of this Brauer group is one of these same 25 possible groups as above and that the size of the transcendental part is bounded in terms of the degree of the number field over which U is defined. Combining these two results gives us the following uniform bound for the Brauer group of such log K3 surfaces.