Small Zeros of Quadratic Forms Avoiding a Finite Number of Prescribed Hyperplanes

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Abstract. We prove a new upper bound for the smallest zero $x$ of a quadratic form over a number field with the additional restriction that $x$ does not lie in a finite number of $m$ prescribed hyperplanes. Our bound is polynomial in the height of the quadratic form, with an exponent depending only on the number of variables but not on $m$.

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