Representation of Squares by nonsingular Cubic Forms

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Let $n \in \mathbb{Z}$, $C(x_1, \dots x_n)$ a nonsingular cubic form with integral coefficients. Goal is an asympotics for the number of integral solutions of

$$C(x_1, \dots, x_n) = y^2.$$

We apply Heath-Brown's version of the circle method. The case $n \geq 7$ requires analoga of certain exponential sum bounds used by Heath-Brown in his work on non singular cubic forms in 10 variable. They can be proved either by elementary transformation or application of variants of Deligne's bounds with an additional multiplicative character, studied by Katz.

Trying the same approach for the case $n = 6$ requires results similar to those of Hooley's paper on cubic forms in 9 indeterminants, especially one deep algebraic geometric result.