

# On the smallest point on a diagonal quartic threefold

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**Abstract.** For the family  $a_0x^4 = a_1y^4 + a_2z^4 + a_3v^4 + a_4w^4$ ,  $a_0, \dots, a_4 > 0$ , of diagonal quartic threefolds, we study the behaviour of the height of the smallest rational point versus the Tamagawa type number introduced by E. Peyre.