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Nicola Arcozzi* (arcozzi@dm.unibo.it), Dipartimento di Matematica, dell'Universit di Bologna, Piazza di Porta San Donato 7, 40127 Bologna, BO, Italy, and **Fausto Ferrari**. *The Hessian of the distance function in the Heisenberg group.*

We introduce the notion of "metric normal" to a surface in the Heisenberg group \mathbb{H} , which extends in a metric way the notion of segment normal to a surface in Euclidean space. We use this notion to prove regularity results for the function d_S measuring the Carnot distance from a surface S in \mathbb{H} . An explicit expression for the horizontal Hessian of d_S and of the Carnot distance itself is computed. (Received September 11, 2006)