1139-42-389 **Vasileios Chousionis*** (`vasileios.chousionis@uconn.edu`), Department of Mathematics, University of Connecticut, 341 Mansfield Road U1009, Storrs, CT 06269-3. *Singular integrals on $C^{1,\alpha}$ intrinsic graphs in the Heisenberg group.*

We study singular integral operators induced by 3-dimensional Calderón-Zygmund kernels in the Heisenberg group. We show that if such an operator is L^2 bounded on vertical planes, with uniform constants, then it is also L^2 bounded on all intrinsic graphs of compactly supported $C^{1,\alpha}$ functions over vertical planes. In particular our result applies to the singular integral associated to the horizontal gradient of the fundamental solution of the sub-Laplacian. We show that, as in the Euclidean setting, the L^2 boundedness of this operator is connected with the question of removability for Lipschitz harmonic functions. As a corollary of our result, we infer that the intrinsic graphs mentioned above are non-removable, providing the first known examples of non-removable sets with positive and locally finite 3-dimensional measure. Joint work with K. Fassler and T. Orponen. (Received February 17, 2018)