A Hardy type inequality on fractional order Sobolev spaces on the Heisenberg group

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Abstract. In this paper, we derive a non linear Hardy type inequality on certain fractional order Sobolev spaces on the Heisenberg group. Our inequality is an analogous version of an inequality of the same name on weighted Folland-Stein spaces which had been derived in [3]. We also derive Sobolev type and Morrey type embedding to make that abstract fractional order Sobolev spaces on the Heisenberg group more familiar.

Mathematics Subject Classification (2010): 46E35 (primary); 26D15, 43A80 (secondary).