

The final version of this article appeared in: J. Math. Anal. Appl. Vol 435, No 1 (2016), pp. 425--439.

doi: 10.1016/j.jmaa.2015.10.031

Available at: <http://www.sciencedirect.com/science/article/pii/S0022247X15009610>

NONLOCAL SCHRÖDINGER EQUATIONS IN METRIC MEASURE SPACES

MARCELO ACTIS, HUGO AIMAR, BRUNO BONGIOANNI, AND IVANA GÓMEZ

ABSTRACT. In this note we consider the pointwise convergence to the initial data for the solutions of some nonlocal dyadic Schrödinger equations on spaces of homogeneous type. We prove the a.e. convergence when the initial data belongs to a dyadic version of an L^2 based Besov space. In particular we give a Haar wavelet characterization of these dyadic Besov spaces.