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Kathryn Haymaker*, kathryn.haymaker@villanova.edu. *Absorbing sets of codes from incidence graphs.*

An absorbing set is a graph substructure that can impact iterative decoding algorithms for codes on graphs. We examine the presence of absorbing sets, fully absorbing sets, and elementary absorbing sets in low-density parity-check codes arising from certain classes of finite geometries. In particular, we prove the parameters of the smallest absorbing sets for finite geometry codes using a tree-based argument. Moreover, we obtain the parameters of the smallest absorbing sets for a special class of codes whose graphs are d -left-regular with girth g . (Received July 30, 2018)