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W. Cary Huffman* (whuffma@luc.edu), Department of Mathematics and Statistics, Loyola University, 6525 N. Sheridan Road, Chicago, IL 60626. *Additive Self-Dual Codes over $GF(4)$ with an Odd Order Automorphism*. Preliminary report.

We will examine the structure of additive self-dual codes over $GF(4)$ that possess an odd prime order automorphism. Such codes can be broken into two parts. One part is represented by a shorter additive self-dual code. The other part can be represented as a sum of shorter “additive” codes over either a larger field or a sum of two larger fields; these codes are either self-dual or dual in pairs under a trace-like inner product. (Received August 25, 2006)