1003-94-971 **Vassil Y Yorgov*** (`vyorgov@uncfsu.edu`), Department of Mathematics & Computer Science, Fayetteville State University, 1200 Murchison Rd, Fayetteville, NC 28301. *On the Automorphism Group of a [72, 36, 16] Self-Dual Code.*

A long standing open problem in coding theory is weather a self-dual binary [72, 36, 16] code exists. It is known that if such code exists its automorphism group order is of the form $2^s 3^t 35$, $2^s 3^t 7$, $2^s 3^t 5$, or $2^s 3^t$ where s and t are non negative integers. We prove that in the first case the group order must be 210 and reduce the total number of possible group orders to 5 in the second case, to 6 in the third case, and to 12 in the last case. (Received October 01, 2004)