1 BLT set 2 over GF(47)

Points on the quadric $x_0^2 + x_1x_2 + x_3x_4$:

$P_1 = (0, 1, 0, 0, 0)$

$P_2 = (0, 0, 1, 0, 0)$

$P_3 = (0, 1, 28, 46, 28)$

$P_4 = (0, 1, 7, 23, 14)$

$P_5 = (0, 1, 24, 31, 25)$

$P_6 = (0, 1, 2, 15, 3)$

$P_7 = (0, 1, 25, 43, 18)$

$P_8 = (0, 1, 16, 25, 5)$

$P_9 = (0, 1, 42, 42, 46)$

$P_{10} = (0, 1, 18, 45, 9)$

$P_{11} = (0, 1, 1, 18, 13)$

$P_{12} = (0, 1, 42, 5, 1)$

$P_{13} = (0, 1, 3, 28, 15)$

$P_{14} = (0, 1, 4, 36, 26)$

$P_{15} = (0, 1, 21, 41, 27)$

$P_{16} = (1, 26, 45, 8, 24)$

$P_{17} = (1, 11, 10, 14, 29)$

$P_{18} = (1, 35, 19, 43, 2)$

$P_{19} = (1, 38, 26, 35, 8)$

$P_{20} = (0, 1, 34, 21, 23)$

$P_{21} = (1, 9, 21, 7, 40)$

$P_{22} = (1, 21, 2, 21, 36)$

$P_{23} = (0, 1, 37, 35, 7)$

$P_{24} = (1, 12, 28, 37, 29)$

$P_{25} = (0, 1, 14, 27, 43)$

$P_{26} = (1, 36, 37, 43, 16)$

$P_{27} = (0, 1, 32, 34, 35)$

$P_{28} = (0, 1, 6, 8, 11)$

$P_{29} = (0, 1, 6, 39, 36)$

$P_{30} = (1, 27, 16, 39, 13)$

$P_{31} = (1, 42, 4, 2, 33)$

$P_{32} = (1, 4, 25, 5, 8)$

$P_{33} = (1, 46, 29, 10, 31)$

$P_{34} = (1, 40, 15, 2, 5)$

$P_{35} = (1, 6, 14, 18, 24)$

$P_{36} = (1, 34, 1, 35, 46)$

$P_{37} = (1, 45, 11, 25, 14)$

$P_{38} = (1, 2, 36, 24, 42)$

$P_{39} = (1, 13, 46, 5, 40)$

$P_{40} = (1, 41, 33, 21, 34)$

$P_{41} = (0, 1, 7, 24, 33)$

$P_{42} = (1, 7, 32, 22, 9)$

$P_{43} = (1, 1, 18, 33, 45)$

$P_{44} = (0, 1, 1, 29, 34)$

$P_{45} = (1, 43, 22, 7, 46)$

$P_{46} = (1, 5, 43, 23, 9)$

$P_{47} = (0, 1, 18, 2, 38)$

$P_{48} = (1, 20, 31, 29, 11)$

Stabilizer of order 4608 is generated by:

$$g_1 = \begin{pmatrix} 37 & 0 & 0 & 42 & 1 \\ 0 & 46 & 0 & 0 & 0 \\ 0 & 0 & 46 & 0 & 0 \\ 24 & 0 & 0 & 28 & 13 \\ 21 & 0 & 0 & 43 & 28 \end{pmatrix}$$

$$g_2 = \begin{pmatrix} 9 & 0 & 0 & 27 & 4 \\ 0 & 46 & 0 & 0 & 0 \\ 0 & 0 & 46 & 0 & 0 \\ 2 & 0 & 0 & 42 & 29 \\ 37 & 0 & 0 & 20 & 42 \end{pmatrix}$$

$$g_3 = \begin{pmatrix} 41 & 0 & 0 & 9 & 17 \\ 0 & 0 & 18 & 0 & 0 \\ 0 & 34 & 3 & 30 & 6 \\ 15 & 0 & 14 & 20 & 24 \\ 19 & 0 & 23 & 36 & 20 \end{pmatrix}$$

$$g_4 = \begin{pmatrix} 36 & 0 & 0 & 41 & 20 \\ 0 & 46 & 0 & 0 & 0 \\ 0 & 39 & 46 & 17 & 41 \\ 37 & 41 & 0 & 42 & 20 \\ 3 & 17 & 0 & 30 & 42 \end{pmatrix}$$

$$g_5 = \begin{pmatrix} 11 & 0 & 0 & 41 & 20 \\ 0 & 34 & 16 & 37 & 45 \\ 0 & 25 & 42 & 22 & 42 \\ 37 & 26 & 4 & 26 & 3 \\ 3 & 36 & 20 & 28 & 26 \end{pmatrix}$$

$$g_6 = \begin{pmatrix} 0 & 42 & 36 & 24 & 33 \\ 31 & 45 & 11 & 41 & 39 \\ 21 & 26 & 45 & 22 & 40 \\ 19 & 40 & 9 & 7 & 38 \\ 1 & 22 & 3 & 5 & 43 \end{pmatrix}$$

The induced group has order 4608 and is generated by:

g_1 =(16, 26)(17, 22)(18, 19)(21, 24)(30, 34)(31, 38)(32, 43)(33, 45)(35, 36)(37, 46)(39, 40)(42, 48)

g_2 =(16, 40)(17, 37)(18, 36)(22, 35)(24, 39)(26, 38)(30, 46)(31, 48)(32, 42)(33, 43)(34, 45)

g_3 =(1, 2, 4, 5, 23, 29)(3, 25, 9, 12, 15, 28)(6, 44, 11, 13, 7, 41)(8, 14, 47, 20, 27, 10)(16, 48, 33, 46, 35, 19, 22, 30, 43, 31, 40, 21)(17, 18, 36, 37, 45, 42, 26, 24, 39, 38, 32, 34)

g_4 =(2, 29)(3, 13)(4, 23)(6, 12)(7, 28)(8, 20)(9, 44)(10, 27)(11, 25)(14, 47)(15, 41)(16, 26, 30, 18, 33, 39, 31, 37, 35, 32, 21, 42, 22, 17, 48, 24, 43, 36, 46, 38, 40, 45, 19, 34)

g_5 =(1, 28, 14, 13, 29, 15, 8, 11, 23, 12, 10, 44, 5, 9, 27, 6, 4, 25, 20, 41, 2, 3, 47, 7)(16, 34, 19, 45, 40, 38, 46, 36, 43, 24, 48, 17, 22, 42, 21, 32, 35, 37, 31, 39, 33, 18, 30, 26)

g_6 =(1, 35, 4, 16)(2, 33)(3, 39, 41, 18)(5, 40, 29, 22)(6, 34, 28, 32)(7, 37, 25, 26)(8, 48, 10, 46)(9, 45, 13, 42)(11, 24, 12, 36)(14, 21, 27, 19)(15, 17, 44, 38)(20, 30, 47, 31)(23, 43)

Kernel has order 1 and is generated by:

There are 1 orbits on the BLT set.

The orbit length are [48]

The orbits are:

$O_0 = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34,$

(length 48)