

The best known (n, r)-arcs in PG(2, 17)

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After the absurd death of Axel Kohnert in 2013 several hardware errors on the site of the University of Bayreuth have occurred and the database for (n, r)-arcs is no longer available. For that reason we decided to reconstruct the database.

r=2	r = 3	r = 4	r = 5	r = 6	r = 7	r = 8	r = 9
18	28 - 33	48 - 52	61 - 69	79–86	95 - 103	114 - 120	137
r = 10	r = 11	r = 12	r = 13	r = 14	r = 15	r = 16	r = 17
154	166 - 171	183–189	205-207	221 - 225	239-243	256-261	

Lower and upper bounds on $m_r(2, 17)$ [1]

1. A (28,3)-arc [2]

The arc is found by prescribing the group generated by

$$\left\langle \begin{pmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 1 & 0 & 0 \end{pmatrix} \right\rangle.$$

The order of the group is 3.

2. A (48,4)-arc [2]

The points in the arc are as follows (1,1,3), (1,2,7), (1,6,8), (1,7,2), (1,4,5), (1,8,6), (1,12,13), (1,14,16), (1,5,4), (1,16,14), (1,13,12), (1,11,9), (1,10,15), (1,15,10), (1,9,11), (1,1,4), (1,4,1), (1,2,15), (1,8,8), (1,15,2), (1,16,13), (1,13,16), (1,9,9), (1,1,13), (1,13,1), (1,2,2), (1,9,8), (1,4,16), (1,8,9), (1,16,4), (1,15,15), (1,1,14), (1,14,1), (1,2,10), (1,11,8), (1,10,2), (1,4,12), (1,8,11), (1,5,13), (1,3,16), (1,12,4), (1,16,3), (1,13,5), (1,6,9), (1,7,15), (1,15,7), (1,9,6)

The arc is found by prescribing the group generated by

$$\left\langle \begin{pmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{pmatrix}, \begin{pmatrix} 9 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 4 \end{pmatrix} \right\rangle.$$

The order of the group is 64.

3. A (61,5)-arc [2]

The points in the arc are as follows

 $\begin{array}{l}(0,1,15),\,(0,1,2),\,(0,1,8),\,(0,1,9),\,(1,0,0),\,(1,0,10),\,(1,0,7),\,(1,12,0),\,(1,0,11),\,(1,5,0),\,(1,0,6),\\(1,14,0),\,\,(1,3,0),\,\,(1,1,7),\,\,(1,16,10),\,\,(1,5,2),\,\,(1,4,6),\,\,(1,12,15),\,\,(1,13,11),\,\,(1,3,9),\,\,(1,14,8),\\(1,1,10),\,\,(1,16,7),\,\,(1,12,2),\,\,(1,4,11),\,\,(1,5,15),\,\,(1,13,6),\,\,(1,14,9),\,\,(1,3,8),\,\,(1,10,16),\,\,(1,7,1),\\(1,9,3),\,\,(1,6,4),\,\,(1,8,14),\,\,(1,11,13),\,\,(1,2,5),\,\,(1,15,12),\,\,(1,10,1),\,\,(1,7,16),\,\,(1,8,3),\,\,(1,6,13),\\(1,9,14),\,\,(1,11,4),\,\,(1,15,5),\,\,(1,2,12),\,\,(1,10,7),\,\,(1,7,10),\,\,(1,5,3),\,\,(1,6,6),\,\,(1,12,14),\,\,(1,11,11),\\(1,3,5),\,\,(1,14,12),\,\,(1,10,10),\,\,(1,7,7),\,\,(1,12,3),\,\,(1,6,11),\,\,(1,5,14),\,\,(1,11,6),\,\,(1,14,5),\,\,(1,3,12)\end{array}$

The arc is found by prescribing the group generated by

/	(1)	0	0)		(9	0	$0 \rangle$		(13	0	$0 \rangle$		/16	0	$0 \rangle$		(1)	0	0	()
\langle	0	16	0	,	0	0	4	,	0	1	0	,	0	1	0	,	0	4	0)
\	$\sqrt{0}$	0	16/		0	1	0/		$\int 0$	0	16/		0	0	1/		0	0	13/	//

The order of the group is 32.

4. A (79,6)-arc (Kohnert, 2008)

The points in the arc are

 $(0,1,2), (0,1,4), (0,1,9), (0,1,11), (0,1,13), (0,1,14), (1,0,2), (1,0,4), (1,0,9), (1,0,11), (1,0,13), \\ (1,0,14), (1,1,1), (1,1,8), (1,1,12), (1,1,14), (1,1,16), (1,2,0), (1,2,4), (1,2,9), (1,2,13), (1,2,16), \\ (1,3,11), (1,3,13), (1,4,0), (1,4,2), (1,4,8), (1,4,12), (1,4,14), (1,5,12), (1,6,10), (1,6,15), \\ (1,7,16), (1,8,1), (1,8,4), (1,8,9), (1,8,10), (1,8,14), (1,9,0), (1,9,2), (1,9,8), (1,9,13), (1,9,15), \\ (1,10,6), (1,10,8), (1,10,10), (1,10,11), (1,10,16), (1,11,0), (1,11,3), (1,11,10), (1,11,11), (1,11,12), \\ (1,12,1), (1,12,4), (1,12,5), (1,12,11), (1,12,13), (1,13,0), (1,13,2), (1,13,3), (1,13,9), (1,13,12), \\ (1,14,0), (1,14,1), (1,14,4), (1,14,8), (1,14,15), (1,15,6), (1,15,9), (1,15,14), (1,15,15), (1,15,16), \\ (1,16,1), (1,16,2), (1,16,7), (1,16,10), (1,16,15), (1,16,16)$

The secant distribution of the arc is $\tau = (21, 9, 18, 9, 36, 78, 136, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0)$

5. A (95,7)-arc (Daskalov, 2010)

The points in the arc are

(1,1,3), (1,1,6), (1,1,8), (1,1,11), (1,1,14), (1,1,15), (1,2,2), (1,2,3), (1,2,5), (1,2,12), (1,2,15), (1,3,0), (1,3,3), (1,3,5), (1,3,6), (1,3,11), (1,3,14), (1,3,15), (1,4,1), (1,4,4), (1,4,6), (1,4,11), (1,4,12), (1,4,13), (1,4,16), (1,5,0), (1,5,1), (1,5,3), (1,5,6), (1,5,7), (1,5,14), (1,5,16), (1,6,1), (1,6,2), (1,6,4), (1,6,5), (1,6,13), (1,6,15), (1,6,16), (1,7,2), (1,7,4), (1,7,7), (1,7,8), (1,7,9), (1,7,10), (1,7,13), (1,8,6), (1,8,7), (1,8,11), (1,8,13), (1,9,5), (1,9,6), (1,9,7), (1,9,9), (1,9,10), (1,9,11), (1,9,16), (1,10,0), (1,10,2), (1,10,6), (1,10,8), (1,10,11), (1,10,15), (1,10,16), (1,11,0), (1,11,3), (1,11,4), (1,11,16), (1,12,0), (1,12,4), (1,12,5), (1,12,7), (1,12,11), (1,12,12), (1,13,3), (1,13,4), (1,13,4), (1,13,6), (1,14,0), (1,14,3), (1,14,5),

The secant distribution of the arc is $\tau = (21, 1, 3, 9, 23, 43, 80, 127, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0)$

6. A (114,8)-arc [2]

The points in the arc are

 $(0,0,1), (0,1,0), (1,1,1), (1,15,8), (1,8,15), (1,4,13), (1,13,4), (1,9,2), (1,2,9), (1,16,16), (1,1,4), \\ (1,4,1), (1,15,15), (1,9,8), (1,8,9), (1,16,13), (1,13,16), (1,2,2), (1,1,5), (1,5,1), (1,15,6), \\ (1,7,8), (1,6,15), (1,4,14), (1,8,7), (1,3,13), (1,14,4), (1,9,10), (1,13,3), (1,11,2), (1,10,9), \\ (1,16,12), (1,2,11), (1,12,16), (1,1,7), (1,7,1), (1,15,5), (1,3,8), (1,5,15), (1,4,6), (1,8,3), \\ (1,11,13), (1,6,4), (1,9,14), (1,13,11), (1,12,2), (1,14,9), (1,16,10), (1,2,12), (1,10,16), (1,1,11), \\ (1,11,1), (1,15,3), (1,12,8), (1,3,15), (1,4,7), (1,8,12), (1,10,13), (1,7,4), (1,9,5), (1,13,10), \\ (1,14,2), (1,5,9), (1,16,6), (1,2,14), (1,6,16), (1,1,12), (1,12,1), (1,15,11), (1,10,8), (1,11,15), \\ (1,4,3), (1,8,10), (1,14,13), (1,3,4), (1,9,7), (1,13,14), (1,6,2), (1,7,9), (1,16,5), (1,2,6), (1,5,16), \\ (1,1,16), (1,16,1), (1,15,9), (1,2,8), (1,9,15), (1,4,4), (1,8,2), (1,13,13), (1,10,12), (1,12,10), \\ (1,14,11), (1,11,14), (1,6,3), (1,3,6), (1,5,7), (1,7,5), (1,10,14), (1,14,10), (1,6,12), (1,12,6), \\ (1,5,11), (1,11,5), (1,7,3), (1,3,7), (1,10,7), (1,7,10), (1,14,5), (1,3,12), (1,5,14), (1,6,6), \\ (1,12,3), (1,11,11)$

The secant distribution of the arc is $\tau = (16, 2, 1, 0, 12, 24, 24, 88, 140, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0)$

The arc is found by prescribing the group generated by

$$\left\langle \begin{pmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{pmatrix}, \begin{pmatrix} 13 & 0 & 0 \\ 0 & 8 & 0 \\ 0 & 0 & 2 \end{pmatrix} \right\rangle.$$

The order of the group is 32.

7. A (137,9)-arc (Barlotti's construction)

The points in the arc are

(0,1,0), (1,1,2), (1,1,3), (1,1,6), (1,1,8), (1,1,9), (1,1,11), (1,1,14), (1,1,15), (1,2,1), (1,2,2), (1,2,3), (1,2,5), (1,2,12), (1,2,14), (1,2,15), (1,2,16), (1,3,0), (1,3,2), (1,3,3), (1,3,5), (1,3,6), (1,3,11), (1,3,12), (1,3,14), (1,3,15), (1,4,1), (1,4,4), (1,4,5), (1,4,6), (1,4,11), (1,4,12), (1,4,13), (1,4,16), (1,5,0), (1,5,1), (1,5,3), (1,5,6), (1,5,7), (1,5,10), (1,5,11), (1,5,14), (1,5,16), (1,6,0), (1,6,1), (1,6,2), (1,6,4), (1,6,5), (1,6,12), (1,6,13), (1,6,15), (1,6,16), (1,7,0), (1,7,2), (1,7,4), (1,7,7), (1,7,8), (1,7,9), (1,7,10), (1,7,13), (1,7,15), (1,8,2), (1,8,4), (1,8,6), (1,8,7), (1,8,10), (1,8,11), (1,8,13), (1,8,15), (1,9,1), (1,9,6), (1,9,7), (1,9,8), (1,9,9), (1,9,10), (1,9,11), (1,9,16), (1,10,0), (1,10,1), (1,10,2), (1,10,6), (1,10,8), (1,10,9), (1,10,15), (1,10,16), (1,11,0), (1,11,1), (1,11,3), (1,11,4), (1,11,16), (1,12,0), (1,12,4), (1,12,5), (1,12,6), (1,12,7), (1,12,10), (1,12,11), (1,12,12), (1,12,13), (1,13,1), (1,13,3), (1,13,4), (1,13,7), (1,13,10), (1,13,13), (1,13,14), (1,13,16), (1,14,0), (1,14,3), (1,14,5), (1,14,7), (1,14,8), (1,14,9), (1,14,10), (1,14,12), (1,14,14), (1,15,3), (1,15,4), (1,15,5), (1,15,8), (1,15,9), (1,15,12), (1,15,13), (1,15,14), (1,16,2), (1,16,5), (1,10,11)

The secant distribution of the arc is $\tau = (17, 1, 0, 0, 0, 0, 0, 0, 136, 153, 0, 0, 0, 0, 0, 0, 0, 0, 0)$

8. A (154,10)-arc (Barlotti's construction)

The points in the arc are (0,1,0), (1,1,2), (1,1,3), (1,1,6), (1,1,8), (1,1,9), (1,1,11), (1,1,14), (1,1,15), (1,2,1), (1,2,2), (1,2,3), (1,2,5), (1,2,12), (1,2,14), (1,2,15), (1,2,16), (1,3,0), (1,3,2), (1,3,3), (1,3,5), (1,3,6),

 $(1,3,11), (1,3,12), (1,3,14), (1,3,15), (1,4,1), (1,4,4), (1,4,5), (1,4,6), (1,4,11), (1,4,12), (1,4,13), \\ (1,4,16), (1,5,0), (1,5,1), (1,5,3), (1,5,6), (1,5,7), (1,5,10), (1,5,11), (1,5,14), (1,5,16), (1,6,0), \\ (1,6,1), (1,6,2), (1,6,4), (1,6,5), (1,6,12), (1,6,13), (1,6,15), (1,6,16), (1,7,0), (1,7,2), (1,7,4), \\ (1,7,7), (1,7,8), (1,7,9), (1,7,10), (1,7,13), (1,7,15), (1,8,2), (1,8,4), (1,8,6), (1,8,7), (1,8,10), \\ (1,8,11), (1,8,13), (1,8,15), (1,9,1), (1,9,6), (1,9,7), (1,9,8), (1,9,9), (1,9,10), (1,9,11), (1,9,16), \\ (1,10,0), (1,10,1), (1,10,2), (1,10,6), (1,10,8), (1,10,9), (1,10,15), (1,10,16), (1,11,0), (1,11,1), \\ (1,11,3), (1,11,4), (1,11,8), (1,11,9), (1,11,13), (1,11,14), (1,11,16), (1,12,0), (1,12,4), (1,12,5), \\ (1,12,6), (1,12,7), (1,12,10), (1,12,11), (1,12,12), (1,12,13), (1,13,1), (1,13,3), (1,13,4), (1,13,7), \\ (1,13,10), (1,13,13), (1,13,14), (1,13,16), (1,14,0), (1,14,3), (1,14,5), (1,14,7), (1,14,8), (1,14,9), \\ (1,14,10), (1,14,12), (1,14,14), (1,15,3), (1,15,4), (1,15,5), (1,15,8), (1,15,9), (1,15,12), (1,15,13), \\ (1,15,14), (1,16,2), (1,16,5), (1,16,7), (1,16,8), (1,16,9), (1,16,10), (1,16,12), (1,16,15), (1,10,11), \\ (0,1,0), (1,0,0), (1,1,4), (1,1,13), (1,2,7), (1,2,10), (1,4,8), (1,4,9), (1,8,3), (1,8,14), (1,9,5), \\ (1,9,12), (1,13,2), (1,13,15), (1,15,6), (1,15,11), (1,16,1)$

The secant distribution of the arc is $\tau = (1, 16, 1, 0, 0, 0, 0, 0, 0, 152, 121, 16, 0, 0, 0, 0, 0, 0, 0)$

9. A (166,11)-arc [2]

The points in the arc are

(0, 1, 15), (1, 15, 0), (0, 1, 2), (1, 0, 8), (1, 2, 0), (1, 0, 9), (0, 1, 14), (1, 14, 0), (0, 1, 3), (1, 0, 11), (1, 3, 0), (1, 0, 11), (1, 1, 0), (1, 0, 11), (1, 1, 0), (1, 0, 11), (1, 1, 0), (1, 0, 11), (1, 1, 0), (1, 0, 11), (1, 1, 0), (1, 0, 11), (1,(1,0,6), (0,1,13), (1,13,0), (0,1,4), (1,0,4), (1,4,0), (1,0,13), (0,1,12), (1,12,0), (0,1,5), (1,0,10), (0,1,12), (1,12,0), (0,1,12), (1,0,10),(1, 5, 0), (1, 0, 7), (0, 1, 10), (1, 10, 0), (0, 1, 7), (1, 0, 12), (1, 7, 0), (1, 0, 5), (1, 1, 1), (1, 1, 16), (1, 16, 1), (1, 10, 10), (1, 10,(1, 16, 16), (1, 1, 13), (1, 13, 1), (1, 1, 4), (1, 4, 4), (1, 13, 16), (1, 4, 1), (1, 4, 13), (1, 13, 4), (1, 13, 13), (1, 13, 14),(1, 4, 16), (1, 16, 13), (1, 16, 4), (1, 1, 12), (1, 12, 1), (1, 1, 5), (1, 10, 10), (1, 12, 16), (1, 5, 1), (1, 10, 7),(1, 7, 10), (1, 7, 7), (1, 5, 16), (1, 16, 12), (1, 16, 5), (1, 1, 10), (1, 10, 1), (1, 1, 7), (1, 12, 12), (1, 10, 16), (1, 10, 10),(1, 7, 1), (1, 12, 5), (1, 5, 12), (1, 5, 5), (1, 7, 16), (1, 16, 10), (1, 16, 7), (1, 1, 8), (1, 8, 1), (1, 1, 9), (1, 15, 15), (1, 10, 10), (1,(1, 8, 16), (1, 9, 1), (1, 15, 2), (1, 2, 15), (1, 2, 2), (1, 9, 16), (1, 16, 8), (1, 16, 9), (1, 13, 8), (1, 15, 4), (1, 15(1, 13, 9), (1, 15, 8), (1, 15, 13), (1, 2, 4), (1, 15, 9), (1, 2, 8), (1, 2, 9), (1, 2, 13), (1, 4, 8), (1, 4, 9), (1, 10, 14), (1, 13, 9), (1, 10, 14), (1, 1(1, 15, 12), (1, 10, 3), (1, 11, 8), (1, 15, 5), (1, 2, 12), (1, 11, 9), (1, 6, 8), (1, 6, 9), (1, 2, 5), (1, 7, 14), (1, 15, 12), (1, 12, 12), (1, 11, 9), (1, 12, 12), (1,(1,7,3), (1,12,10), (1,15,10), (1,12,7), (1,12,8), (1,15,7), (1,2,10), (1,12,9), (1,5,8), (1,5,9), (1,5,9), (1,12,10),(1, 2, 7), (1, 5, 10), (1, 5, 7), (1, 13, 15), (1, 9, 4), (1, 13, 2), (1, 8, 2), (1, 9, 13), (1, 8, 4), (1, 8, 15), (1, 9, 2), (1, 13, 15), (1, 9, 13), (1, 13, 15), (1, 9, 13), (1, 13, 15), (1, 13,(1, 9, 15), (1, 8, 13), (1, 4, 15), (1, 4, 2), (1, 11, 13), (1, 12, 14), (1, 11, 4), (1, 4, 10), (1, 12, 3), (1, 5, 14), (1, 12, 14),(1,4,7), (1,13,10), (1,13,7), (1,5,3), (1,6,13), (1,6,4), (1,11,14), (1,9,14), (1,11,3), (1,11,2), (1,11(1,9,3), (1,8,14), (1,11,15), (1,6,2), (1,6,15), (1,8,3), (1,6,14), (1,6,3), (1,10,12), (1,8,12), (1,8,12), (1,8,14), (1,10,12), ((1, 10, 5), (1, 10, 15), (1, 8, 5), (1, 9, 12), (1, 10, 2), (1, 7, 15), (1, 7, 2), (1, 9, 5), (1, 7, 12), (1, 7, 5)

The secant distribution of the arc is $\tau = (4, 6, 0, 0, 0, 0, 0, 12, 42, 12, 87, 144, 0, 0, 0, 0, 0, 0, 0)$

The arc is found by prescribing the group generated by

$$\left\langle \begin{pmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 1 & 0 & 0 \end{pmatrix}, \begin{pmatrix} 2 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 15 \end{pmatrix} \right\rangle.$$

The order of the group is 96.

10. A (183,12)-arc (Daskalov, 2010)

The complement of the (124, 6)-blocking set

 $\begin{array}{l}(0,0,1),\,(0,1,1),\,(0,1,2),\,(0,1,7),\,(0,1,10),\,(0,1,16),\,(1,0,1),\,(1,0,5),\,(1,0,7),\,(1,0,10),\,(1,0,16),\,(1,1,6),\,(1,1,7),\,(1,1,8),\,(1,1,9),\,(1,1,11),\,(1,2,5),\,(1,2,8),\,(1,2,9),\,(1,2,12),\,(1,2,13),\,(1,2,15),\,(1,3,3),\,(1,3,4),\,(1,3,5),\,(1,3,7),\,(1,3,10),\,(1,3,11),\,(1,3,13),\,(1,3,14),\,(1,4,0),\,(1,4,1),\,(1,4,3),\,(1,4,6),\,(1,4,7),\,(1,4,8),\,(1,4,10),\,(1,4,11),\,(1,4,12),\,(1,4,13),\,(1,4,14),\,(1,5,0),\,(1,5,2),\,(1,5,5),\,(1,5,5),\,(1,5,6)$

(1,5,12), (1,5,14), (1,5,15), (1,6,0), (1,6,1), (1,6,4), (1,6,7), (1,6,9), (1,6,10), (1,6,11), (1,6,12), (1,6,13), (1,6,16), (1,7,0), (1,7,2), (1,7,3), (1,7,14), (1,7,16), (1,8,1), (1,8,2), (1,8,4), (1,8,6), (1,8,13), (1,8,15), (1,8,16), (1,9,1), (1,9,2), (1,9,6), (1,9,10), (1,9,11), (1,9,13), (1,9,15), (1,9,16), (1,10,0), (1,10,1), (1,10,3), (1,10,14), (1,10,16), (1,11,1), (1,11,4), (1,11,5), (1,11,6), (1,11,8), (1,11,9), (1,11,10), (1,11,13), (1,11,16), (1,12,0), (1,12,2), (1,12,5), (1,12,12), (1,12,15), (1,13,3), (1,13,5), (1,13,6), (1,13,7), (1,13,11), (1,13,12), (1,13,14), (1,14,4), (1,14,5), (1,14,7), (1,14,10), (1,14,12), (1,14,13), (1,14,14), (1,14,16), (1,15,1), (1,15,2), (1,15,4), (1,15,5), (1,15,8), (1,15,9), (1,15,12), (1,15,15), (1,16,3), (1,16,6), (1,16,8), (1,16,9), (1,16,11)

The secant distribution of the blocking set is $\tau = (0, 0, 0, 0, 0, 0, 124, 93, 53, 23, 3, 2, 1, 0, 0, 0, 0, 2, 6)$

11. A (205,13)-arc (Daskalov)

The complement of the (102, 5)-blocking set

(0,0,1), (0,1,0), (0,1,1), (0,1,4), (0,1,13), (0,1,16), (1,0,0), (1,0,1), (1,0,4), (1,0,13), (1,0,16), (1,1,0), (1,1,1), (1,1,4), (1,1,13), (1,2,4), (1,2,8), (1,2,9), (1,2,13), (1,3,4), (1,3,5), (1,3,12), (1,3,13), (1,4,0), (1,4,1), (1,4,2), (1,4,3), (1,4,4), (1,4,5), (1,4,6), (1,4,7), (1,4,8), (1,4,9), (1,4,10), (1,4,11), (1,4,12), (1,4,13), (1,4,14), (1,4,15), (1,4,16), (1,5,3), (1,5,4), (1,5,13), (1,5,14), (1,6,7), (1,6,10), (1,6,13), (1,7,4), (1,7,6), (1,7,11), (1,7,13), (1,8,2), (1,8,4), (1,8,13), (1,8,15), (1,9,2), (1,9,4), (1,9,13), (1,9,15), (1,10,4), (1,10,6), (1,10,11), (1,10,13), (1,11,4), (1,11,7), (1,11,10), (1,11,13), (1,12,3), (1,12,4), (1,12,13), (1,12,14), (1,13,0), (1,13,1), (1,13,2), (1,13,3), (1,13,4), (1,13,5), (1,13,6), (1,13,7), (1,13,8), (1,13,9), (1,13,10), (1,13,11), (1,15,4), (1,15,8), (1,15,9), (1,15,13), (1,16,0), (1,16,1), (1,16,4), (1,16,13), (1,16,16)

The secant distribution of the blocking set is $\tau = (0, 0, 0, 0, 0, 169, 65, 51, 10, 4, 2, 0, 0, 0, 0, 0, 0, 0, 0)$

12. A (221,14)-arc (Daskalov)

The complement of the (86, 4)-blocking set

 $(0,1,5), (0,1,12), (1,0,12), (1,1,0), (1,1,7), (1,1,10), (1,2,2), (1,2,5), (1,2,15), (1,3,3), (1,3,10), \\ (1,3,14), (1,4,8), (1,4,9), (1,4,15), (1,5,3), (1,5,4), (1,5,13), (1,6,1), (1,6,8), (1,6,16), (1,7,6), \\ (1,7,11), (1,7,13), (1,8,1), (1,8,6), (1,8,11), (1,9,1), (1,9,6), (1,9,16), (1,10,4), (1,10,11), \\ (1,11,8), (1,11,9), (1,11,16), (1,12,3), (1,12,4), (1,12,14), (1,13,9), (1,13,15), (1,14,7), (1,14,10), \\ (1,14,14), (1,15,0), (1,15,1), (1,15,2), (1,15,3), (1,15,5), (1,15,6), (1,15,9), (1,15,10), (1,15,11), \\ (1,15,12), (1,15,13), (1,15,15), (1,15,16), (1,16,0), (1,16,7), (1,15,8), (1,15,14), (1,15,4), (1,0,15), \\ (1,15,7), (1,10,13), (1,13,2), (1,0,5), (0,0,1), (1,14,1), (1,14,8), (1,14,16), (1,14,5), (1,14,11), \\ (1,14,12), (1,14,13), (1,14,6), (1,14,9), (1,14,3), (1,14,4), (1,14,0), (1,14,15), (1,5,9), (1,16,3), \\ (1,4,2), (1,4,12), (1,6,13), (0,1,9)$

The secant distribution of the blocking set is $\tau = (0, 0, 0, 0, 126, 114, 52, 7, 3, 0, 0, 0, 0, 0, 0, 0, 1, 4)$

13. A (239,15)-arc (Daskalov)

The complement of the (68, 3)-blocking set (0, 0, 1), (0, 1, 5), (0, 1, 12), (1, 0, 5), (1, 0, 12), (1, 1, 0), (1, 1, 6), (1, 1, 7), (1, 1, 10), (1, 2, 2), (1, 2, 5), (1, 2, 10), (1, 2, 15), (1, 3, 3), (1, 3, 10), (1, 3, 13), (1, 3, 14), (1, 4, 8), (1, 4, 9), (1, 4, 15), (1, 5, 3), (1, 5, 4), (1, 5, 13), (1, 6, 1), (1, 6, 8), (1, 6, 16), (1, 7, 6), (1, 7, 11), (1, 7, 13), (1, 8, 1), (1, 8, 6), (1, 8, 11), (1, 9, 1), (1, 9, 6), (1, 9, 16), (1, 10, 4), (1, 10, 11), (1, 10, 12), (1, 10, 13), (1, 11, 8), (1, 11, 9), (1, 11, 16), (1, 12, 3), (1, 12, 4), (1, 12, 14), (1, 13, 2), (1, 13, 4), (1, 13, 9), (1, 13, 15), (1, 14, 7), (1, 14, 10), (1, 14, 14), (1, 15, 0), (1, 15, 1), (1, 15, 2), (1, 15, 3), (1, 15, 4), (1, 15, 5), (1, 15, 6), (1, 15, 9), (1, 15, 10), (1, 15, 11), (1, 15, 12), (1,

The secant distribution of the blocking set is $\tau = (0, 0, 0, 114, 141, 40, 7, 1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 3)$

14. A (256,16)-arc (Daskalov)

The complement of the (51, 2)-blocking set

 $\begin{array}{l}(0,0,1),\,(0,1,0),\,(1,0,13),\,(1,1,13),\,(1,2,13),\,(1,3,13),\,(1,4,0),\,(1,4,1),\,(1,4,2),\,(1,4,3),\,(1,4,4),\,\\(1,4,5),\,(1,4,6),\,(1,4,7),\,(1,4,8),\,(1,4,9),\,(1,4,10),\,(1,4,11),\,(1,4,12),\,(1,4,13),\,(1,4,14),\,(1,4,15),\,\\(1,4,16),\,(1,5,13),\,(1,6,13),\,(1,7,13),\,(1,8,13),\,(1,9,13),\,(1,10,13),\,(1,11,13),\,(1,12,13),\,(1,13,0),\,\\(1,13,1),\,(1,13,2),\,(1,13,3),\,(1,13,4),\,(1,13,5),\,(1,13,6),\,(1,13,7),\,(1,13,8),\,(1,13,9),\,(1,13,10),\,\\(1,13,11),\,(1,13,12),\,(1,13,13),\,(1,13,14),\,(1,13,15),\,(1,13,16),\,(1,14,13),\,(1,15,13),\,(1,16,13)\end{array}$

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