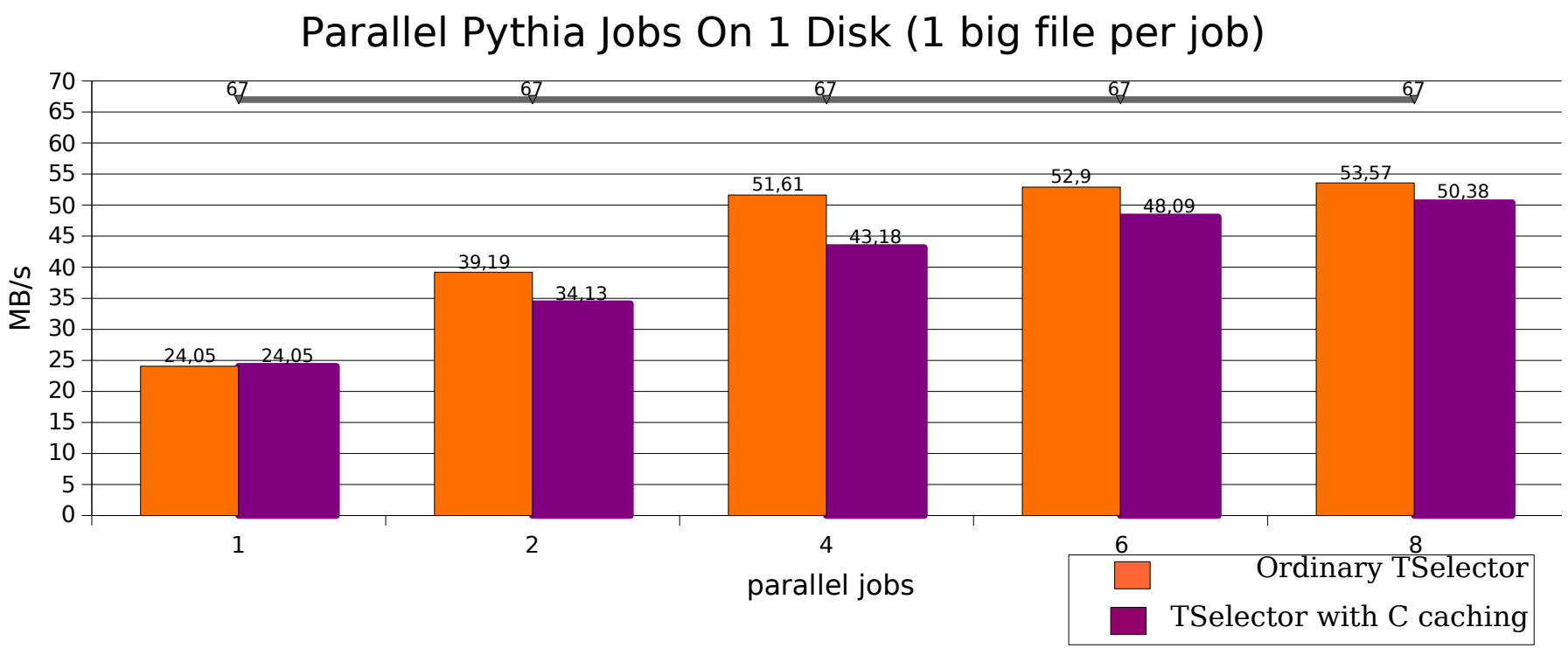
Pythia 1 file per job all files on the same disk

jobs	events	files	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	30000	1	529	22	14	24,05	1363,64	67
2	60000	2	1058	27	14	39,19	2222,22	67
4	120000	4	2116	41	14	51,61	2926,83	67
6	180000	6	3174	60	14	52,9	3000	67
8	240000	8	4232	79	14	53,57	3037,97	67

To read 1 file with C program takes 7,8 s



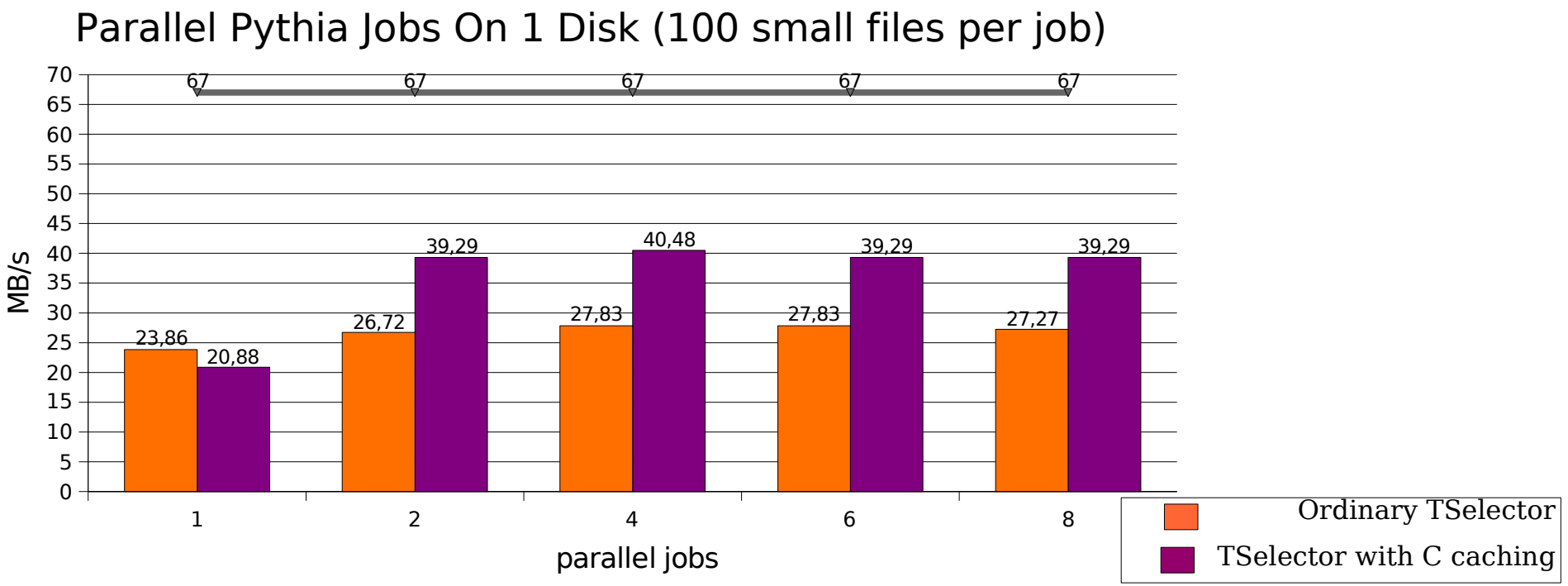
file is cached with C function first Pythia 1 file per job all files on the same disk

jobs	MB read	real time, s	cpu time, s	MB/s	hdparm MB/s
1	529	22	15	24,05	67
2	1058	31	15	34,13	67
4	2116	49	15	43,18	67
6	3174	66	15	48,09	67
8	4232	84	15	50,38	67

To read 1 file with C program takes less than 0,1 s

Pythia 100 files per job all files on the same disk

jobs	events	files	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	19000	100	334	14	09	23,86	1357,14	67
2	38000	200	668	25	09	26,72	1520	67
4	76000	400	1336	48	09	27,83	1583,33	67
6	114000	600	2004	72	09	27,83	1583,33	67
8	152000	800	2672	98	09	27,27	1551,02	67

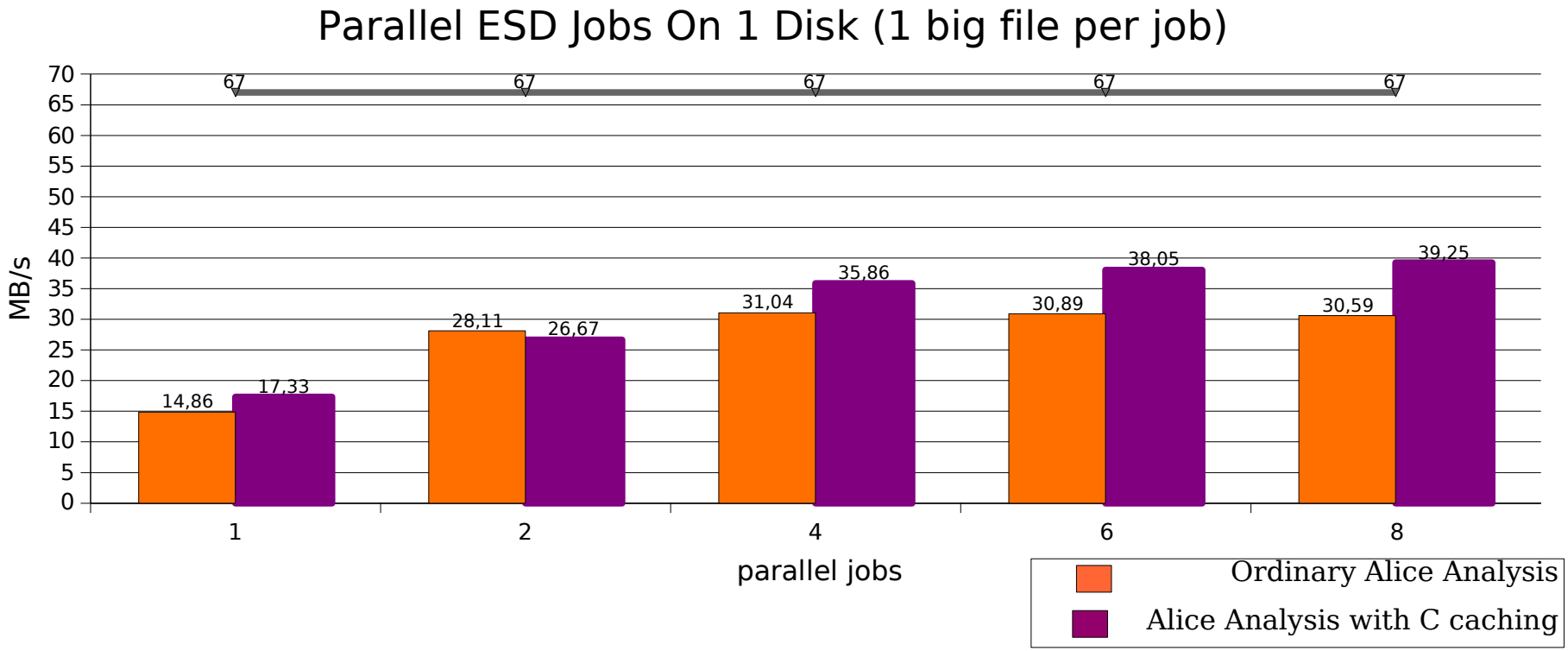


file is cached with C function first

jobs	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	334	16	09	20,88	1187,5	67
2	668	17	09	39,29	2235,29	67
4	1336	33	09	40,48	2303,03	67
6	2004	51	09	39,29	2235,29	67
8	2672	68	09	39,29	2235,29	67

			ESD	1 file per job		all files on the same disk		
jobs	events	files	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	20000	1	520	35	21	14,86	571,43	67
2	40000	2	1040	37	21	28,11	1081,08	67
4	80000	4	2080	67	22	31,04	1194,03	67
6	120000	6	3120	101	22	30,89	1188,12	67
8	160000	8	4160	136	23	30,59	1176,47	67

To read 1 file with C program takes 8,5 s



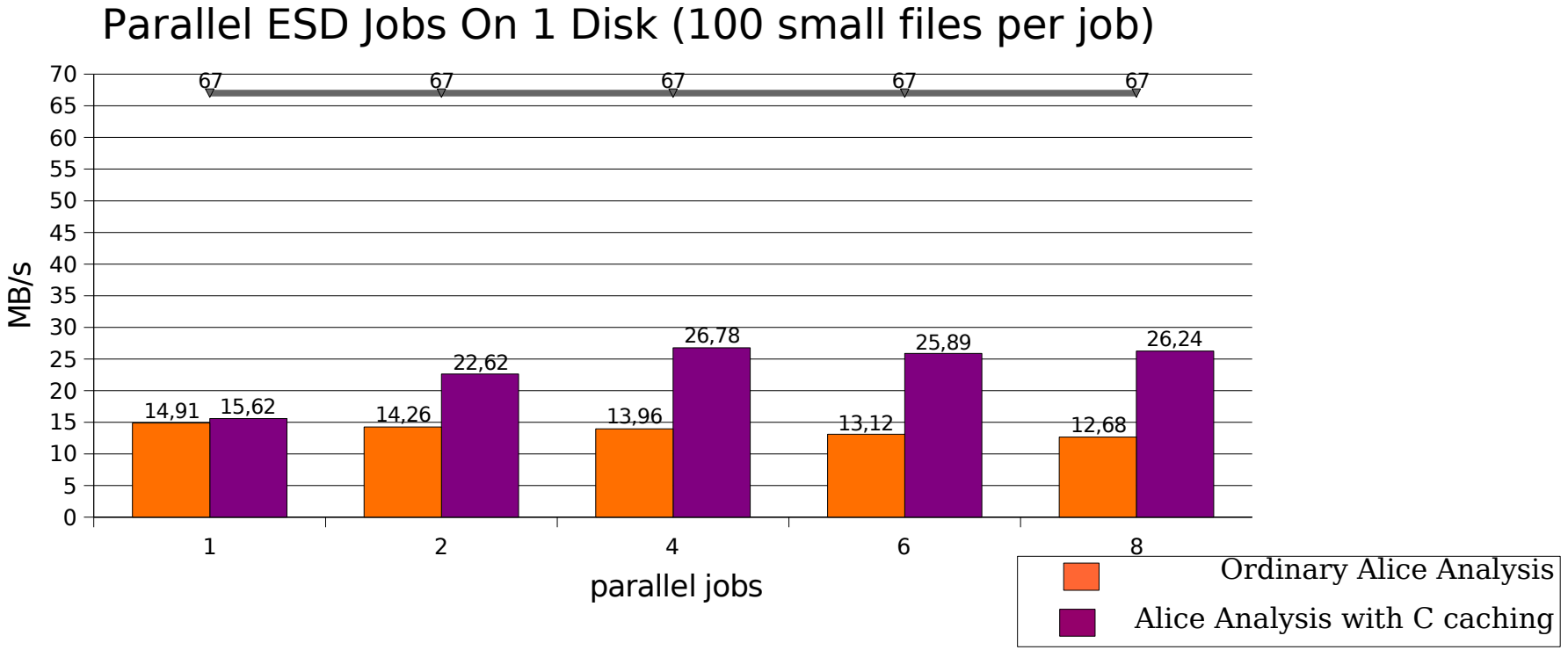
file is cached with C function first | ESD | 1 file per job | all files on the same disk

jobs	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	520	30	21	17,33	666,67	67
2	1040	39	21	26,67	1025,64	67
4	2080	58	23	35,86	1379,31	67
6	3120	82	28	38,05	1463,41	67
8	4160	106	33	39,25	1509,43	67

To read 1 file with C program takes less than 0.1 s

ESD 100 files per job all files on the same disk

jobs	events	files	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	10000	100	328	22	12	14,91	454,55	67
2	20000	200	656	46	13	14,26	434,78	67
4	40000	400	1312	94	13	13,96	425,53	67
6	60000	600	1968	150	13	13,12	400	67
8	80000	800	2624	207	13	12,68	386,47	67



file is cached with C function first

jobs	MB read	real time, s	cpu time, s	MB/s	ev/s	hdparm MB/s
1	328	21	12	15,62	476,19	67
2	656	29	13	22,62	689,66	67
4	1312	49	13	26,78	816,33	67
6	1968	76	13	25,89	789,47	67
8	2624	100	13	26,24	800	67