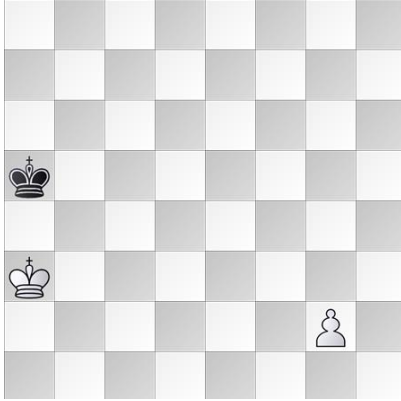


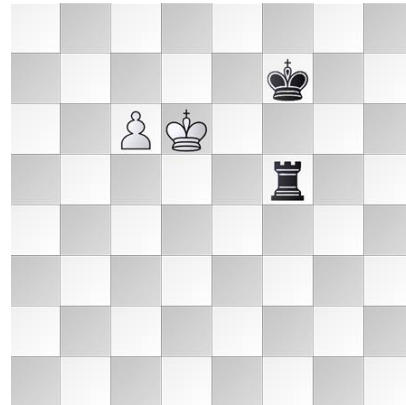
# Chess Endgame Records

Guy Haworth

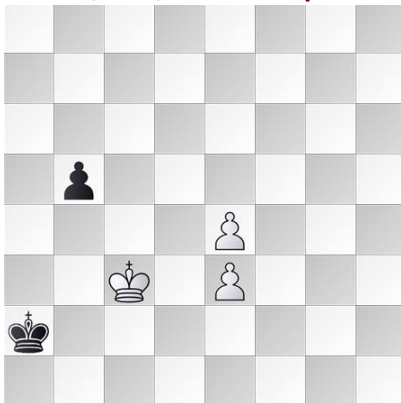
KPK, btm, dtm = -56p



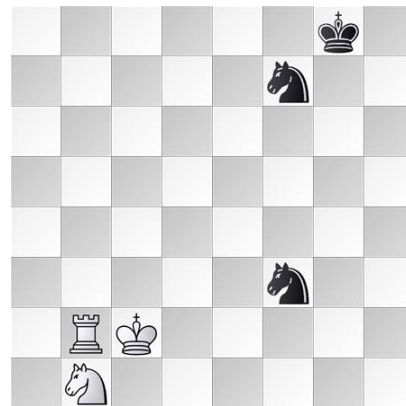
KPKR, wtm, dtm = 85p



KPPKP, btm, dtm = -254p



KRNKNN, wtm, dtm = 523p



KQPKRBN, wtm, dtm = 1,097p



The Horsehead Nebula



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## Acknowledgments

My respect and grateful thanks go to those who created and/or promulgated the EGTs which provided these results. They include Thomas Ströhlein, Ken Thompson, Jaap van den Herik, Sito Dekker, Bob Herschberg, Eugene Nalimov, Bob Hyatt, Lewis Stiller, Eiko Bleicher, Marc Bourzutschky, John Tamplin, Yakov Konoval, the Lomonosov team, Convecta, Ronald de Man and Grant Huntington. Andrew Kadatch provided compression software to Eugene Nalimov. The majority of the lines here were (re)generated via Marc's Nalimov-format DTC/M/Z EGTs, from the Konoval-Bourzutschky 6-man DTC EGTs or via the Convecta AQUARIUM interface to the Lomonosov 7-man DTM EGTs made available in 2013.

The authors of the EGTs used were no doubt inspired by the achievements of previous chess endgame table authors including Steven Edwards, Lars Rasmussen, Christoph Wirth, Ren Wu and Peter Karrer.

The long-exposure photograph of the Horsehead Nebula in Orion is courtesy of John Nunn who has done as much as anyone to translate the raw data of the EGTs into higher-level information. Early versions of this dataset have been reviewed by several chess endgame colleagues and my thanks also go to them, including Thomine Stolberg-Rohr who gave the name *Haworth's Law* to my conjecture about the observed exponential trend in maxDTM.

My thanks to the University of Reading which hosts this dataset item at <http://centaur.reading.ac.uk/34268/>. The dataset is evolving and I thank in advance those who will contribute their feedback and suggestions about past history or future records.

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**Evolution** ... in addition to the occasional correction of an error/omission and improvement of the text:

- v5 KBBKN, KBNKB, KNPK(B/P), KQ(B/N/R)KQ, KR(B/N)KR, KRNKP, KPPKPP, KQRNKQN, KRBKNN, KRNPKPP, KRNPKRB and KBNNKQ
- v6 Positions (and lines) from early work by Ströhlein, Thompson and others: K(Q/R)K, KBBKN, KQPKQ etc. Estimation of 10m maxDTM based on a least-square linear fit to the data for sub-8-man chess. Completion of the 6-man maxDTC records from Konoval data. Further annotation of some DTC lines. Addition of the 'EGT timeline'.
- v7 First DTM<sub>50</sub> data: KQKR(B/P), KBNKN, KNNKP, KPPKP, KQPKQ, KBBKNN.  
First DTZ<sub>50</sub>' data: KQKBBP, KBBKNN, KNNKNP, KQPKRB, KRRPKQ.  
Annotation of 5-1m lines. Further 6/7m DTM and timeline data.

## Current aims and goals ...

maxDTZ 6m P-ful wins/losses, maxDTC 7m positions/lines, and evolution of bibliography and timeline.

## Introduction

This document contains a list of positions which were or are record wins or losses in some sense. The lines of play from those positions show the two sides choosing moves according to defined strategies appropriate for the metrics cited. These strategies identify the candidate moves from the available moves using two or more filters, usually one for value then another for depth. As is currently the norm, depth is measured in winner's moves although depth in ply is symmetric and necessary for best precision. For ease of reference and following the convention of the Chess Study community, the role of the winner is played by 'White'. There is a bibliography of relevant publications, most of which are cross-referenced from the text. A pgn file accompanies this document.

The extreme positions are the outposts, the Everests or Mariana Trenches of chess' state space: they should be recognised, visited and contemplated not only because they are there but because the lines from them exhibit the deepest mysteries of chess. They push the boundaries, the eventual winner sometimes having only one move to avoid a loss. They sometimes demonstrate rare phenomena including underpromotions and extraneous force after P=N or P=B (Chessgames, 2013). They are the greatest challenge to explain in chess terms.

The notation used is as follows:

Miscellaneous notation:

AUMS	Absolutely Unique Move Sequence
btm	Black to move (and similarly, <i>wtm</i> , White to move)
<i>k</i> mr	<i>k</i> -move rule, e.g., 50-move rule (enabling a draw claim when ply count 'is' 100)
l&w	loss and win (and similarly, <i>w&amp;l</i> , win and loss)
MB, YK	Marc Bourzutschky, Yakov Konoval
pc	ply count, zeroed after each pawn-push and/or capture
stm	side to move (and similarly, <i>sntm</i> , side not to move)
s4m	sub-4-man, and similarly for s5m, s6m, s7m and s8m
WDL	3-valued (stm) win/draw/loss EGTs
WDL'	5-valued (stm) 50mr-win/win/draw/loss/50mr-loss EGTs (de Man, 2013)

Metrics:

$DTM_{(50, pc)}$	Depth To Mate (in the context of a 50mr and given that the ply count is <i>pc</i> )
dtm	a depth in the DTM metric
DTC	Depth To Conversion (i.e., change of force) and/or mate
DTZ	Depth To Zeroing of the ply-count (i.e., to conversion and/or pawn-push)
$DTZ_{50}$	DTZ, given that 'winning lines' with phases of more than 100 plies are rated 'draw'
$DTZ_{50}'$	as for $DTZ_{50}$ plus depths for non 50mr-wins/losses which are $\infty$ mr-wins/losses
DTR	Depth by The Rule (i.e., the minimum length of a winning line's longest phase)
DTx	any or all of DTC/M/R/Z/ZR (and similarly, <i>dtx</i> is any of <i>dtc/m</i> <sub>(50)/<i>r/z/z</i><sub>50</sub>(<i>'</i>)/<i>zr</i>)</sub>
DTZR	Depth to Zeroing of the ply-count, given that minimaxing DTR is the priority.

Move-selection strategies:

S...	a move-filtering strategy
$U^m$	challenge the opponent to find the unique value-preserving move
$V^+$	retain the theoretical-value of the next position
$M^-$	filter to moves which minimise DTM, and similarly for DTC/Z/Z <sub>50</sub> /R and DTZR
$M^+$	filter to moves which maximise DTM, and similarly for DTC/Z/Z <sub>50</sub> /R and DTZR

Move uniqueness:

°	the only move available,
'''	the only value-preserving move available (considering also ply-count re $DTx_{50}$ metrics),
''	the only move which does not allow a repetition or otherwise waste time awarded here usually after ignoring only the reversal of the previous move, Nunn (1992, 1994, 1995) uses '!' for both '''' and ''''.
"	(most common) the unique optimal move selected by the defined strategy, and
'	an optimal but not uniquely optimal move.

Note that:

the strategies for a DTM-minimaxing White win are  $SV^+M^- \alpha / SV^+M^+ \beta$  where  $\alpha/\beta$  are any other strategies: increasingly defined  $\alpha$  and  $\beta$  can decrease the choice of moves available, see e.g. KPK, and the sets of moves available under different strategies can be identical, different or completely disjoint.

m	w-b	DTC: depth in plies			DTM: depth in plies			DTZ: depth in plies		
		P-less	all	P-ful	P-less	all	P-ful	P-less	all	P-ful
3	2-1	KRK -32	KPK -38	KPK -38	KRK -32	KPK -56	KPK -56	KRK -32	KRK -32	KPK -20
4	2-2	KQKR -62	KQKR -62	KQKP -53	KRKN -80	KPKR 85	KPKR 85	KQKR -62	KQKR -62	KQKP -53
	3-1	KBNK -66	KBNK -66	KNPK -44	KBNK -66	KBNK -66	KPPK -64	KBNK -66	KBNK -66	KNPK -26
	all	KBNK -66	KBNK -66	KQKP -53	KRKN -80	KPKR 85	KPKR 85	KBNK -66	KBNK -66	KQKP -53
5	2-3	KQKBB -142	KQKRP 157	KQKRP 157	KQKBB -162	KQKRP 207	KQKRP 207	KQKBB -142	KQKRP 151	KQKRP 151
	3-2	KBNKN 153	KNNKP 228	KNNKP 228	KBNKN 213	KPPKP -254	KPPKP -254	KBNKN 153	KNNKP 164	KNNKP 164
	4-1	KNNNK -42	KNNNK -42	KBBPK -32	KBNNK -68	KBNNK -68	KPPK -66	KNNNK -42	KNNNK -42	KBBPK -24
	all	KBNKN 153	KNNKP 228	KNNKP 228	KBNKN 213	KPPKP -254	KPPKP -254	KBNKN 153	KNNKP 164	KNNKP 164
6	2-4	KQKBBN 125	KQKBNP -384	KQKBNP -384	KQKBBN -228	KPKBNP 447	KPKBNP 447	KQKBBN 125	? KQKBNP -335	? KQKBNP -335
	3-3	KRNKNN 485	KRNKNN 485	KQPKRB -272	KRNKNN 523	KRNKNN 523	KRPKNN 505	KRNKNN 485	KRNKNN 485	? KQPKRB -262
	4-2	KRRNKQ -202	KRRPKQ -486	KRRPKQ -486	KRBKNQ 241	KRRPKQ -506	KRRPKQ -506	KRRNKQ -202	? KRRPKQ 383	? KRRPKQ 383
	5-1	KBBBNK -27	KBBBPK -31	KBBBPK -31	KBNNNK -68	KBNN(N/P)K -68	KBNNPK -68	KBBBNK -27	KBBBNK -27	KBBBPK -24
	all	KRNKNN 485	KRRPKQ -486	KRRPKQ -486	KRNKNN 523	KRNKNN 523	KRRPKQ -506	KRNKNN 485	KRNKNN 485	? KRRPKQ 383
7	2-5	KQKBBBB 131	? KQKBNPP -202	? KQKBNPP -202	KQKRBNN 239	KQKBBNP -486	KQKBBNP -486	KQKBBBB 131		
	3-4	KQNKRBN -1,034	? KQNKRBN -1,034	? KRBKBNP -412	KQNKRBN -1,090	KQPKRBN 1,097	KQPKRBN 1,097	KQNKRBN -1,034	? KQNKRBN -1,034	
	4-3	KQBNKQB -660	? KQBNKQB -660	? KRNPkRB 529	KQBNKQB -690	KBNPKBP 691	KBNPKBP 691	KQBNKQB -660	? KQBNKQB -660	? KRNPkRB 519
	5-2	KBNNNKQ -448	? KNNNPKQ 461	? KNNNPKQ 461	KBNNNKQ -464	KRBBPKQ 799	KRBBPKQ 799	KBNNNKQ -448		
	all	KQNKRBN -1,034	? KQNKRBN -1,034	? KRNPkRB 529	KQNKRBN -1,090	KQPKRBN 1,097	KQPKRBN 1,097	KQNKRBN -1,034	? KQNKRBN -1,034	? KRNPkRB 519

**Figure 1.** Endgames containing record-depth decisive positions, ‘-’ indicating ‘loser to move’.

The maxDTx loss is usually one ply more or less than the maxDTx win, but there are exceptions.<sup>1</sup>The following are also amongst those included in addition to the record-holders above:

interim record-holders and positions/lines of historical or game significance, requested positions/lines, and ‘*n*-2, like-man’ reductions of *n*-man force (e.g., KRNKR re KRRNKRR), maxDTM<sub>50,pc</sub> and maxDTZ<sub>50</sub>(‘) positions (e.g., for KNNKP, KQPKQ and KBBKNN; *pc* = 0 or *some pc*) a (KQPKQ) position with the greatest known dtz<sub>50</sub>-dtz (= 49m/98p): dtz<sub>50</sub> = 100p is however possible, a (KRKNP) position won only by executing the longest AUMS known to the author, and best known and credible candidates for other maxDTx records.

DTM ≥ DTC ≥ DTZ; DTZ<sub>50</sub> can be ‘draw’, equal to or greater than DTZ; DTZ<sub>50</sub>’ >=/< DTZ<sub>50</sub>.

There are endgames with maxDTZ less than some successor phase’s maxDTZ:

KBBKNN (maxDTC/Z = 38m) usually leads to KBBKN (maxDTC/Z = 66m)

it may be sensible for the winner, ‘White’ here, to maximise rather than minimise in some metric,

e.g., in KBBKNN, SV<sup>+</sup>M<sup>+</sup>C<sup>+</sup>/SV<sup>+</sup>M<sup>+</sup>C<sup>+</sup> given that in KBBKN, maxDTZ > 50

Endgames with maxDTZ<sub>50</sub> < maxDTZ ≤ 50: KBBKNN (maxDTZ<sub>50</sub> = 29m, maxDTZ = 38m).

DTM ≥ DTR ≥ DTZR ≥ DTZ but the creation of DTR/DTZR EGTs remains a challenge for the future:

the positions with maxDTZR need not be the position with maxDTR because ...

the maxDTZR position has the longest 1<sup>st</sup>-phase but perhaps not the longest 2<sup>nd</sup>-phase

the DTR/DTZR EGTs do not necessarily define the winning route as they give values for only *pc* = 0.

<sup>1</sup> The maxDTM 3-3m\_P-ful btm loss (KRPKNN), the maxDTM 2-5m\_P-less btm loss (KRBBBKQ).



Figure 2. The 3- to 6-man maxDTC positions.



Figure 3. The 3- to 6-man maxDTZ positions.

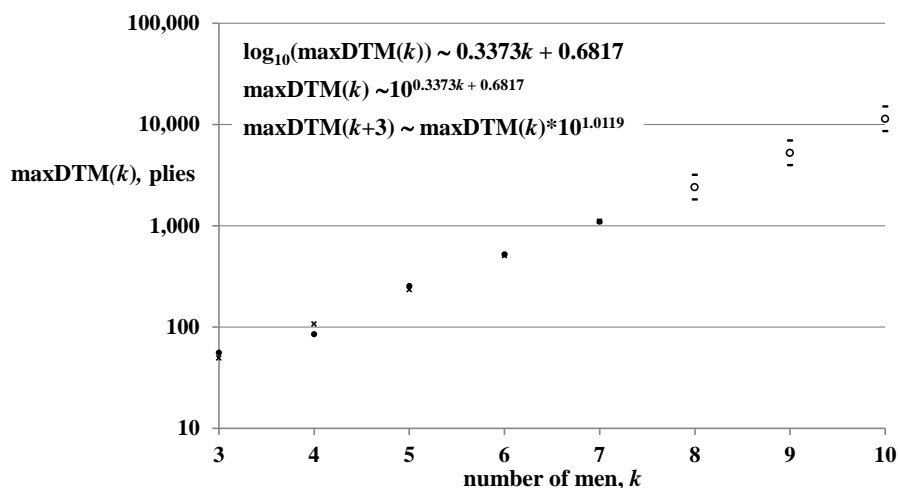


Figure 4. maxDTM v number of men: actuals, least-squares fit, predictions and  $2\sigma$  confidence intervals.

The maxDTM trend from 3-man to 7-man chess suggests a quasi linear model<sup>2</sup> for  $\log_{10}\text{maxDTM}$ . The basic rule<sup>3</sup> appears to be “Three more men: maxMate times ten!” The model gives a 50% probability to 8m, 9m and 10m mates in 2400<sup>+</sup>, 5220<sup>+</sup> and 11340<sup>+</sup> plies respectively. Its ‘ $2\sigma$ ’ 97% probability prediction is of mates in 1810<sup>+</sup>, 3940<sup>+</sup> and 8570<sup>+</sup> plies. It gives a 90% probability of an 8-man mate in 2000<sup>+</sup> plies and an 80% probability of a 10-man win in 10000<sup>+</sup> plies. It will be interesting to see how long this trend continues.

In a survey of the annotated moves, 11.2% were ‘‘‘’, 1.7% were ‘‘’, 70.7% were ‘’, 14.3% were ‘ and 2.1% were ‘. Thus, only 14.3% of the positions provide metrics other than the priority one with an opportunity to filter the set of best moves further. Also, the secondary metrics tend to discriminate between moves only towards the end of game-phases so usually, e.g., the DTC and DTZ EGTs would not improve on the choice of the DTM EGT alone.

<sup>2</sup> The quadratic fit, only 6% better, gives higher predictions. The cubic/quartic fits give inappropriate and/or overfitted models.

<sup>3</sup> Dubbed ‘Haworth’s Law’ *en passant* as it were by a visiting Thomine Stolberg-Rohr WFM.

#	#m	w-b	Endgame	p?	Position	Metric	(Candidate) Maximal ...	Strategies SV+.../SV+...	No. of Positions Res. lost won lost	DTx Moves Plies
01	3	2-1	KPK	p	8/8/8/k7/8/K7/6P1/8 b - - 0 1	DTC	DTC s4m l&w	C/C+	1-0 2 3	-19 -38
02	3	2-1	KPK	p	8/8/8/k7/8/K7/6P1/8 b - - 0 1	DTM	DTM s4m l&w	M/M+	1-0 2 3	-28 -56
03	3	2-1	KPK	p	8/8/8/k7/8/K7/6P1/8 b - - 0 1	DTM	DTM s4m l&w	M/CZ/M+CZ+	1-0 2 3	-28 -56
04	3	2-1	KPK	p	8/8/8/k7/8/K7/6P1/8 b - - 0 1	DTZ	DTZ s4m_P-ful l&w	Z/Z+	1-0 4 8	-10 -20
05	3	2-1	KQK	—	8/8/3k4/8/8/8/1Q6/K7 b - - 0 1	DTx	DTx KQK l&w	x/x+	1-0 8 1	-10 20
06	3	2-1	KRK	—	8/8/8/8/8/1Rk5/K7 b - - 0 1	DTx	DTR/Z/ZR s4m l&w	x/x+	1-0 433 139	16 -32
07	4	2-2	KBKB	—	8/8/8/8/8/b7/k1K1B3 w - - 0 1	DTx	DTx KBKB w&l	x/x+	1-0 — 52 14	1 1
08	4	2-2	KBKN	—	8/8/8/8/8/n1K5/k1B5 w - - 0 1	DTx	DTx KBKN w&l	x/x+	1-0 — 2 1	1 1
09	4	2-2	KBKP	p	8/8/8/8/8/p7/k1K1B3 w - - 0 1	DTx	DTx KBKP w&l	x/x+	1-0 — 104 28	1 1
10	4	2-2	KNKN	—	8/8/8/8/8/n1K5/k1N5 w - - 0 1	DTx	DTx KNKN w&l	x/x+	1-0 — 5 1	1 1
11	4	2-2	KNKP	p	8/8/8/8/p7/8/N7/k1K5 w - - 0 1	DTM	DTM KNKP w&l	M/M+	1-0 — 29 7	7 13
12	4	2-2	KPKP	p	k1K5/8/7p/8/8/6P1/8 b - - 0 1	DTM	DTM KPKP l&w	M/M+	1-0 1 12	— -33 -66
13	4	2-2	KPKR	p	8/5k2/2PK4/5r2/8/8/8 w - - 0 1	DTM	DTM s5m w&l	M/M+	1-0 — 1 1	43 85
14	4	2-2	KQKP	p	3Q4/3K4/8/8/3k4/8/3p4/8 b - - 0 1	DTC/Z	DTC/Z s5m_P-ful l&w	(C/Z)/(C+/Z)	1-0 1 1	— -26 -53
15	4	2-2	KQKR	—	8/8/8/8/7Q/2k5/3r4/7K b - - 0 1	DTC/Z	DTC/Z 2-2m l&w	C/C+	1-0 11 2	— -31 -62
16	4	2-2	KRKN	—	8/8/8/8/8/7n/1k1K3R b - - 0 1	DTC/Z	DTC/Z KRKN l&w	C/C+	1-0 2 2	— -27 -54
17	4	2-2	KRKN	—	8/8/1n4R1/2K5/8/8/8/3k4 b - - 0 1	DTM	DTM s5m_P-less l&w	M/M+	1-0 1 1	— -40 -80
18	4	3-1	KBNK	—	8/8/8/8/8/4B3/K1kN4 b - - 0 1	DTM	DTM 3-1m and DTC/R/Z/ZR s5m l&w	M/M+	1-0 436 144	— -33 -66
19	4	3-1	KNNK	—	8/8/8/8/4N3/3N4/K1k5 w - - 0 1	DTx	DTx KNNK w&l	x/x+	1-0 — 77 15	1 1
20	4	3-1	KNPK	p	1N6/8/8/8/3k4/8/P7/7K b - - 0 1	DTC	DTC 3-1m_P-ful l&w	C/C+	1-0 22 26	— -22 -44
21	4	3-1	KNPK	p	N2k4/8/P7/8/8/8/7K b - - 0 1	DTZ	DTZ 3-1m_P-ful l&w	Z/Z+	1-0 8 108	— -13 -26
22	4	3-1	KPPK	p	8/8/8/8/8/1k4P1/6P1/K7 b - - 0 1	DTM	DTM 3-1m_P-ful l&w	M/M+	1-0 10 9	— -32 -64
23	5	2-3	KQKBB	—	8/1Q6/8/8/2b5/8/3k4/K5b1 b - - 0 1	DTC/Z	DTC/Z 2-3m_P-less l&w	C/C+	1-0 74 15	— -71 -142
24	5	2-3	KQKBB	—	8/1Q6/8/8/2b5/8/3k4/K5b1 b - - 0 1	DTM	DTM 2-3m_P-less l&w	M/M+	1-0 74 15	— -81 -162
25	5	2-3	KQKRB	—	8/4Q3/b7/6r1/8/8/8/K5k1 b - - 0 1	DTM	DTM 2-5m_P-less l&w	M/M+	1-0 3 4	— -70 -140
26	5	2-3	KQKRB	—	K4b2/8/8/6Q1/8/k3r3/8 b - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 2-5m_P-less l&w	M <sub>50</sub> /M <sub>50</sub> +	1-0 3 4	— -70 -140
27	5	2-3	KQKRB	—	K4b2/8/8/6Q1/8/k3r3/8 b - - 11 1	DTM <sub>50</sub>	DTM <sub>50</sub> 2-5m_P-less l&w	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— -72 -144
28	5	2-3	KQKRP	p	8/Q7/K7/5r2/5p2/8/6k1/8 w - - 0 1	DTC	DTC 2-3m w&l	C/C+	1-0 — 1 5	79 157
29	5	2-3	KQKRP	p	8/Q7/K7/5r2/5p2/8/6k1/8 w - - 0 1	DTM	DTM 2-3m w&l	M/M+	1-0 — 1 3	104 207
30	5	2-3	KQKRP	p	8/8/1pk5/K7/8/8/1r6/4Q3 w - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 2-5m w&l	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— 98 195
31	5	2-3	KQKRP	p	8/1p4Q1/3k4/8/r7/8/8/2K5 b - - 33 1	DTM <sub>50</sub>	DTM <sub>50</sub> 2-5m l&w	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— -107 -214
32	5	2-3	KQKRP	p	8/Q7/K7/5r2/5p2/8/6k1/8 w - - 0 1	DTZ	DTZ 2-3m_P-ful w&l	Z/Z+	1-0 — 1 3	76 151
33	5	2-3	KRKNP	p	8/8/7p/7n/k7/8/2K5/3R4 w - - 0 1	—	known decisive AUMS	V*M+/U <sup>m</sup>	1-0 — —	23 45
34	5	3-2	KBBKN	—	K7/8/7B/8/4k3/8/6n1/7B b - - 0 1	DTC/Z	DTC/Z KBBKN l&w	C/C+	1-0 53 34	— -66 -132
35	5	3-2	KBNKB	—	8/7B/8/8/6N1/3k4/8/1Kb5 b - - 0 1	DTM	DTM KBNKB l&w	M/M+	1-0 1 9	— -39 -78
36	5	3-2	KBNKN	—	8/8/8/8/8/8/1n5B/2K1N2k w - - 0 1	DTC/Z	DTC/Z s6m_P-less w&l	C/C+	1-0 — 2 1	77 153
37	5	3-2	KBNKN	—	8/8/8/8/8/8/1n5B/2K1N2k w - - 0 1	DTM	DTM s6m_P-less w&l	M/M+	1-0 — 2 1	107 213
38	5	3-2	KBNKN	—	8/8/1N6/8/6B1/1K3n2/8/k7 b - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KBNKN l&w	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— -80 -160
39	5	3-2	KNNKP	p	1N6/8/p7/8/8/8/2k1N3/K7 w - - 0 1	DTC	DTC s6m w&l	C/C+	1-0 — 2 4	114 228
40	5	3-2	KNNKP	p	6k1/p7/8/8/7N/7K/2N5/8 w - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KNNKP w&l	M <sub>50</sub> /M <sub>50</sub> +	1-0 — ? ?	112 223
41	5	3-2	KNNKP	p	8/8/5N2/p7/8/k1K5/8/1N6 b - - 4 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KNNKP l&w	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— -128 -256
42	5	3-2	KNNKP	p	K7/N7/k7/8/3p4/8/N7/8 w - - 0 1	DTZ	DTZ s6m w&l	Z/Z+	1-0 — 18 13	82 164
43	5	3-2	KNPKB	p	8/8/4K3/8/P7/8/6bN/7k w - - 0 1	DTM	DTM KNNKP w&l	M/M+	1-0 — 11 3	43 85
44	5	3-2	KNPKP	p	N7/8/K7/4p3/8/8/6P1/k7 b - - 0 1	DTM	DTM KNNKP l&w	M/M+	1-0 10 10	— -57 -114
45	5	3-2	KPPKP	p	8/8/8/1p6/4P3/2K1P3/k7/8 b - - 0 1	DTM	DTM s6m l&w	M/M+	1-0 7 6	— -127 -254
46	5	3-2	KPPKP	p	8/8/5K2/1p6/3P4/3P4/7k/8 b - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KPPKP l&w	M <sub>50</sub> /M <sub>50</sub> +	1-0 4 ?	— -141 -282
47	5	3-2	KQBKQ	—	2k5/B7/Q2K4/8/8/7q/8/8 b - - 0 1	DTC/Z	DTC/Z KQBKQ l&w	C/C+	1-0 1 33	— -30 -60
48	5	3-2	KQNKQ	—	3k4/8/2NK4/8/Q7/8/8/6q1 b - - 0 1	DTM	DTM KQNKQ l&w	M/M+	1-0 1 7	— -41 -82
49	5	3-2	KQPKQ	p	4Q3/8/7q/8/8/8/k3P3/2K5 w - - 0 1	DTC	DTC KQPKQ w&l	C/C+	1-0 — 5 13	114 227
50	5	3-2	KQPKQ	p	4Q3/8/7q/8/8/8/k3P3/2K5 w - - 0 1	DTM	DTM KQPKQ w&l	M/M+	1-0 — 5 13	124 247
51	5	3-2	KQPKQ	p	3Q4/8/8/5K2/8/8/3P3/k1q6 w - - 88 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KQPKQ w&l	M <sub>50</sub> /M <sub>50</sub> +	1-0 — 3 ?	138 275
					3Q4/8/8/5K2/8/8/3P4/7k/1q6 b - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KQPKQ w&l	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— -137 -274
52	5	3-2	KQPKQ	p	8/6K1/8/8/7q/2Q5/3P4/7k w - - 96 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KQPKQ w&l	M <sub>50</sub> /M <sub>50</sub> +	1-0 — 3 ?	138 275
					8/6k1/8/8/7q/2QP4/8/7k b - - 0 1	DTM <sub>50</sub>	DTM <sub>50</sub> 0 <sub>pc</sub> KQPKQ w&l	M <sub>50</sub> /M <sub>50</sub> +	1-0 ? ?	— -137 -274
53	5	3-2	KQPKQ	p	8/q7/P6k/Q7/8/8/8/6K1 w - - 0 1	DTZ	DTZ KQPKQ w&l	Z/Z+	1-0 — 1 3	71 141
54	5	3-2	KQPKQ	p	5q2/8/3P4/8/8/7Q/8/k1K5 b - - 0 1	DTZ <sub>50</sub>	DTZ <sub>50</sub> KQPKQ l&w	Z <sub>50</sub> /Z <sub>50</sub> +	1-0 2,415 1,595	— -50 -100
55	5	3-2	KQPKQ	p	8/8/1P5Q/1K6/3q4/8/5k2/8 w - - 0 1	—	known dtz w	Z <sub>50</sub> /Z <sub>50</sub> +	1-0 — —	50 99
56	5	3-2	KQKQK	—	1Q6/Q7/8/8/8/8/K1k2q2 b - - 0 1	DTM	DTM KQKQ l&s	M/M+	1-0 44 4	— -30 -60
57	5	3-2	KQRKQ	—	KR5Q/8/6k1/6q1/8/8/8/8 b - - 0 1	DTC/Z	DTC/Z KQRKQ l&w	C/C+	1-0 31 3	— -60 -120
58	5	3-2	KRBKR	—	k7/7r/3K4/8/6B1/8/4R3/8 w - - 0 1	DTC/Z	DTC/Z KRBKR w&l	C/C+	1-0 — 28 19	59 117
59	5	3-2	KRNKP	p	8/8/8/4R3/8/2kp2N1/8/K7 b - - 0 1	DTM	DTM KRNKP l&w	M/M+	1-0 2 2	— -29 -58
60	5	3-2	KRNKR	—	2k1r3/8/R7/N2K4/8/8/8/8 w - - 0 1	DTM	DTM KRNKR w&l	M/M+	1-0 — 1 1	37 73
61	5	3-2	KRPKR	p	8/8/8/8/2k2R2/5K2/6P1/4r3 b - - 0 1	DTC	DTC KRPKR l&w	C/C+	1-0 4 33	— -60 -120
62	5	3-2	KRPKR	p	8/8/8/8/2k2R2/5K2/6P1/4r3 b - - 0 1	DTM	DTM KRPKR l&w	M/M+	1-0 4 33	— -74 -148
63	5	3-2	KRPKR	p	8/5r2/3R4/8/8/6k1/1P6/3K4 b - - 0 1	DTZ	DTZ KRPKR l&w	Z/Z+	1-0 4 3	— -35 -70
64	5	4-1	KBBPK	p	8/B7/8/8/8/B7/P4K2/3k4 b - - 0 1	DTC	DTC 4-1m_P-ful l&w	C/C+	1-0 2 3	— -16 -32
65	5	4-1	KBBPK	p	1B5B/6K1/8/8/8/P7/3k4/8 b - - 0 1	DTZ	DTZ 4-1m_P-ful l&w	Z/Z+	1-0 1 5	— -12 -24
66	5	4-1	KBNNK	—	8/8/8/1N6/B7/1Nk5/8/7K b - - 0 1	DTM	DTM 4-1m l&w	M/M+	1-0 3 1	— -34 -68
67	5	4-1	KNNNK	—	8/8/8/8/8/7N/1N1k2KN b - - 0 1	DTx	DTC/R/Z/ZR 4-1m l&w	M/M+	1-0 180 44	— -21 -42
68	5	4-1	KPPPK	p	K7/8/8/8/6P1/1k4P1/6P1/8 b - - 0 1	DTM	DTM 4-1m_P-ful l&w	M/M+	1-0 6 7	— -33 -66

Figure 5. Record sub-6m positions with consonant, defined strategies of play.

#	m	w-b	Endgame	p?	Position	Metric	(Candidate) maximal ...	Strategies		No. of Positions				DTx	
								SV <sup>+</sup> .../SV <sup>+</sup> ...	Res.	lost	won	lost	Moves	Plies	
69	6	2-4	KPKBNP	p	K7/P7/1p6/8/6n1/2b5/8/3k4 w - - 0 1	DTM	DTM 2-4m w&l	M/M <sup>+</sup>	1-0	—	11	5	224	447	
70	6	2-4	KQKBBN	—	2Q2n2/6b1/8/8/8/7/3k4/K7 w - - 0 1	DTC/Z	DTC 2-4m_P-less w&l	C/C <sup>+</sup>	1-0	9	7	—	-63	-125	
71	6	2-4	KQKBBN	—	8/b7/8/n7/8/Q2K4/b5k1/8 b - - 0 1	DTM	DTM 2-4m_P-less l&w	M/M <sup>+</sup>	1-0	9	7	—	-114	-228	
72	6	2-4	KQKBBN	—	b7/b7/5Q2/8/8/3k4/8/1K1n4 b - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> /KQKBBN l&w	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	14	18	—	-45	-90	
73	6	2-4	KQKBPP	p	b7/2p5/8/b3k3/8/8/4Q3/6K1 b - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> /KQKBPP l&w	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	26	16	—	-73	-146	
74	6	2-4	KQKBPN	p	Q7/K7/1p6/8/8/7k/7n/2b5 b - - 0 1	DTC	DTC 2-4m l&w	C-/C <sup>+</sup>	1-0	10	3	—	-192	-384	
75	6	2-4	KQKBPN	p	1Q6/K7/1p6/8/7k/4b3/7n/8 b - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> 2-4m l&w	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	10	3	—	-117	-235	
76	6	3-3	KBBKNN	—	8/8/7B/5B2/3K4/8/2k5/n6n b - - 0 1	DTC/Z	DTC/Z KBBKNN l&w	C/C <sup>+</sup>	1-0	1	11	—	-38	-76	
77	6	3-3	KBBKNN	—	8/8/7B/5B2/3K4/8/2k5/n6n b - - 0 1	DTM	DTM KBBKNN l&w	M/M <sup>+</sup>	1-0	1	11	—	-106	-212	
78	6	3-3	KBBKNN	—	7k/7B/8/2B5/3K4/2n5/8/5n2 w - - 0 1	DTM <sub>50</sub>	DTM <sub>50,0</sub> KBBKNN w&l	M <sub>50</sub> /M <sub>50</sub> <sup>+</sup>	1-0	—	1	?	?	90	179
79	6	3-3	KBBKNN	—	2n5/8/3B4/8/3K4/1B6/6n1/2k5 w - - 43 1	DTM <sub>50</sub>	DTM <sub>50,pe</sub> KBBKNN w&l	M <sub>50</sub> /M <sub>50</sub> <sup>+</sup>	1-0	—	?	?	?	91	181
80	6	3-3	KBBKNN	—	8/8/6n1/8/4B3/k7/n6B/2K5 w - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> KBBKNN w&l	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	—	46	17	29	57	
81	6	3-3	KBBKNN	—	8/8/7B/5B2/3K4/8/2k5/n6n b - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> /KBBKNN l&w	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	?	?	?	—	-38	-76
82	6	3-3	KNNKNP	p	n7/3p1K2/8/3N4/8/8/6Nk w - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> /KNNKNP w&l	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	—	?	?	?	57	114
83	6	3-3	KPPKPP	p	8/8/2p4P/5P2/1k2p3/8/K7/8 b - - 0 1	DTM	DTM KPPKPP l&w	M/M <sup>+</sup>	1-0	7	7	—	-141	-282	
84	6	3-3	KQBKQN	—	qn6/8/8/8/7B/3K4/2Q2k2/8 b - - 0 1	DTC/Z	DTC/Z KQBKQN l&w	C-/C <sup>+</sup>	1-0	1	2	—	-36	-72	
85	6	3-3	KQPKRB	p	8/1k6/8/8/3r4/7Q/4P2b/2K5 b - - 0 1	DTC	DTC 3-3m_P-ful l&w	C-/C <sup>+</sup>	1-0	9	7	—	-136	-272	
86	6	3-3	KQPKRB	p	b7/8/8/1r3k2/3P3Q/8/8/3K4 b - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> 3-3m_P-ful l&w	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	9	3	—	-103	-206	
87	6	3-3	KRBKNN	—	8/K7/2nn4/8/8/1B1k4/1R6/8 w - - 0 1	DTC/Z	DTC/Z KRBKNN w&l	C/C <sup>+</sup>	1-0	—	1	2	223	445	
88	6	3-3	KRNKNN	—	6N1/5KR1/2n5/8/8/8/2n5/1k7 w - - 0 1	DTC/Z	DTC s7m w&l	C/C <sup>+</sup>	1-0	—	1	7	243	485	
89	6	3-3	KRNKNN	—	6N1/5KR1/2n5/8/8/8/2n5/1k7 w - - 0 1	DTM	DTM s7m w&l	M/M <sup>+</sup>	1-0	—	1	7	262	523	
90	6	3-3	KRPKNN	p	8/1P1k4/2R5/n7/1n6/K7/8/8 w - - 0 1	DTM	DTM s7m_P-ful w	M/M <sup>+</sup>	1-0	—	1	—	253	505	
91	6	3-3	KRPKNN	p	8/2n3Pn/3R4/8/6K1/k7/8/8 b - - 0 1	DTM	DTM s7m_P-ful l	M/M <sup>+</sup>	1-0	30	—	—	-251	-502	
92	6	4-2	KRBKNN	—	R3B3/8/8/1N6/8/3K4/8/1k4q1 w - - 0 1	DTM	DTM 4-2m_P-less w&l	M/M <sup>+</sup>	1-0	—	4	6	121	241	
93	6	4-2	KRRKNN	—	5R1N/8/7R/4q3/8/8/7k/2K5 b - - 0 1	DTC/Z	DTC 4-2m_P-less w&l	C/C <sup>+</sup>	1-0	2	5	—	-101	-202	
94	6	4-2	KRRPKQ	p	7q/7k/8/6R1/8/8/K1P2R2/8 b - - 0 1	DTC	DTC 4-2m l&w	C-/C <sup>+</sup>	1-0	4	11	—	-243	-486	
95	6	4-2	KRRPKQ	p	7q/7k/8/6R1/8/8/K1P2R2/8 b - - 0 1	DTM	DTM 4-2m and s7m_P-ful l&w	M/M <sup>+</sup>	1-0	4	11	—	-253	-506	
96	6	4-2	KRRPKQ	p	7q/7k/8/6R1/8/8/K1P2R2/8 b - - 0 1	DTZ <sub>50'</sub>	DTZ <sub>50'</sub> s6m_P-ful l&w	Z <sub>50'</sub> /Z <sub>50'</sub> <sup>+</sup>	1-0	8	22	—	-193	-397	
97	6	5-1	KBBBNK	—	6B1/8/8/8/1B6/B4k1N/K7 b - - 0 1	DTC/Z	DTC 5-1m_P-less l&w	C-/C <sup>+</sup>	1-0	5	1	—	-13	-27	
98	6	5-1	KBBBPK	p	8/8/6B1/7B/6B1/7P/8/K2k4 b - - 0 1	DTC	DTC 5-1m l&w	C-/C <sup>+</sup>	1-0	129	269	—	-15	-31	
99	6	5-1	KBBBPK	p	8/B1B5/1B6/8/8/P7/6K1/4k3 b - - 0 1	DTZ	DTZ 5-1m l&w	Z/Z <sup>+</sup>	1-0	6	108	—	-12	-24	
100	6	5-1	KBBNNK	—	8/8/8/8/NB6/1NK5/kB6 w - - 0 1	DTM	DTM 5-1m_P-less w	M/M <sup>+</sup>	1-0	—	1	—	25	49	
101	6	5-1	KBBNNK	—	K7/8/8/8/8/4k3/2N3N3/3B4 b - - 0 1	DTM	DTM 5-1m l	M/M <sup>+</sup>	1-0	3	—	—	-34	-68	
102	6	5-1	KBBNNPK	p	K7/8/8/8/8/2NPN3/3Bk3 b - - 0 1	DTM	DTM 5-1m l	M/M <sup>+</sup>	1-0	5	—	—	-34	-68	
103	6	5-1	KBNPPK	p	N1k4K/2P5/2P5/B7/8/8/8 w - - 0 1	DTM	DTM 5-1m w	M/M <sup>+</sup>	1-0	—	1	—	33	65	
104	6	5-1	KBPPPK	p	8/8/8/B7/P7/P7/1k5/K7 b - - 0 1	DTC	DTC 5-1m l&w (in moves, not plies)	C-/C <sup>+</sup>	1-0	36	15	—	-15	-30	
105	7	2-5	KQKBPN	p	3b4/5n2/1p6/8/b6k/3K4/Q7/8 b - - 0 1	DTM	DTM 2-5m l&w	M/M <sup>+</sup>	1-0	1	2	—	-243	-486	
106	7	2-5	KQKBPN	—	8/8/7Q/3k4/n7/8/q5b1/1K4b1 w - - 0 1	DTM	DTM KQKBPN w	M/M <sup>+</sup>	1-0	—	134	—	115	229	
107	7	2-5	KQKRBNN	—	8/8/2b1b3/8/8/b1r5/4Q3/3K1k2 b - - 0 1	DTM	DTM KQKRBNN l&w	M/M <sup>+</sup>	1-0	2	—	—	-98	-196	
108	7	2-5	KQKRBNN	—	6k1/8/1K6/8/1Q6/8/bn5r/b7 w - - 0 1	DTM	DTM 2-5m_P-less w&l	M/M <sup>+</sup>	1-0	—	1	2	120	239	
109	7	3-4	KQNKRB	—	8/1r6/8/6n1/5k2/1b6/3K3N/7Q b - - 0 1	DTC/Z	DTC s8m_P-less l&w	C/C <sup>+</sup>	1-0	24	6	—	-517	-1,034	
110	7	3-4	KQNKRB	—	8/1r6/8/6n1/5k2/1b6/3K3N/7Q b - - 0 1	DTM	DTM s8m_P-less l&w	M/M <sup>+</sup>	1-0	24	6	—	-545	-1,090	
111	7	3-4	KQPKRB	p	1n1k4/6Q1/5KP1/8/7b/1r6/8/8 w - - 0 1	DTM	DTM s8m w&l	M/M <sup>+</sup>	1-0	—	3	3	549	1,097	
112	7	4-3	KBNPKBP	p	B7/NK6/2P5/8/8/2p5/kb6/8 w - - 0 1	DTM	DTM 4-3m w&l	M/M <sup>+</sup>	1-0	—	1	1	346	691	
113	7	4-3	KPPPKPP	p	8/5p2/8/PP6/1K3k1p/8/P7/8 b - - 0 1	DTM	DTM KPPPKPP l&w	M/M <sup>+</sup>	1-0	1	1	—	-296	-592	
114	7	4-3	KQBKQB	—	1k6/1b5q/N7/8/8/1Q6/8/B1K5 b - - 0 1	DTC/Z	DTC 4-3m_P-less l&w	C/C <sup>+</sup>	1-0	1	?	—	-330	-660	
115	7	4-3	KQBKQB	—	1k6/1b5q/N7/8/8/1Q6/8/B1K5 b - - 0 1	DTM	DTM 4-3m_P-less l&w	M/M <sup>+</sup>	1-0	1	2	—	-345	-690	
116	7	4-3	KQPKQP	p	8/5pkq/8/P7/1K4Q1/8/P7/8 b - - 0 1	DTM	DTM KQPKQP l&w	M/M <sup>+</sup>	1-0	2	7	—	-297	-594	
117	7	4-3	KQKQKQ	—	4Qq2/5Q2/8/8/8/2q5/Q7/2K4k w - - 0 1	DTC/Z	DTC KQKQKQ w	C/C <sup>+</sup>	1-0	?	?	—	-76	-151	
118	7	4-3	KQKQKQ	—	4Qq2/4qQ2/8/8/8/Q1K5/7k b - - 0 1	DTM	DTM KQKQKQ l&w	M/M <sup>+</sup>	1-0	4	9	—	-85	-170	
119	7	4-3	KQRNKQN	—	7Q/N7/4K3/8/n5q1/8/5R2/2k5 w - - 0 1	DTM	DTM KQRNKQN w&l	M/M <sup>+</sup>	1-0	—	4	24	92	183	
120	7	4-3	KRBKRB	—	8/8/1b6/8/4N2r/1k6/7B/R1K5 w - - 0 1	DTC	DTC KRBKRB w&l	C/C <sup>+</sup>	1-0	—	?	?	?	226	451
121	7	4-3	KRNPKPP	p	7N/R2K4/8/8/6Pp/3p4/3k4/8 b - g3 0 1	DTM	DTM KRNPKPP 1	M/M <sup>+</sup>	1-0	2	—	—	-182	-364	
122	7	4-3	KRNPKRB	p	4r3/1P6/6R1/8/1K4kb/8/8/1N6 b - - 0 1	DTM	DTM KRNPKRB l&w	M/M <sup>+</sup>	1-0	?	?	—	-301	-602	
123	7	4-3	KRNPKRB	p	4r3/1P6/6R1/8/1K4kb/8/8/1N6 b - - 0 1	DTZ	(...) DTZ 7m_P-ful l&w	C/C <sup>+</sup>	1-0	?	?	—	-260	-519	
124	7	4-3	KRPPKRP	p	8/k1P5/8/8/1R5P/7p/r7/1K6 b - - 0 1	DTM	DTM KRPPKRP l&w	M/M <sup>+</sup>	1-0	1	4	—	-217	-434	
125	7	4-3	KRRNKRR	—	r7/5r1N/8/8/6R1/6R1/3K1k2 w - - 0 1	DTC/Z	DTC/Z KRRNKRR w & l	C/C <sup>+</sup>	1-0	—	?	?	?	290	579
126	7	5-2	KBBNNKQ	—	5N2/5k1N/7q/8/8/3B4/8/2K2N2 w - - 0 1	DTC/Z	DTC/Z 5-2m_P-less w	C/C <sup>+</sup>	1-0	—	?	?	?	224	447
127	7	5-2	KBBNNKQ	—	4kN2/7N/7q/1B6/8/8/8/3K1N2 b - - 0 1	DTM	DTM 5-2m_P-less l&w	M/M <sup>+</sup>	1-0	3	4	—	-232	-464	
128	7	5-2	KNNNNKQ	—	8/N7/qN6/8/8/6N1/1k1KN3 w - - 0 1	DTC/Z	DTC KNNNNKQ w&l	C/C <sup>+</sup>	1-0	—	?	?	?	85	169
129	7	5-2	KRBBPKQ	p	7R/4q3/8/BK6/8/k6P/8/B7 w - - 0 1	DTM	DTM 5-2m w&l	M/M <sup>+</sup>	1-0	—	2	2	400	799	
130	8	5-3	KBBBKRR	—	6r1/8/B4rB1/8/1B6/5k2/7B/K7 w - - 0 1	DTC	maxDTC KB <sub>6</sub> ,B <sub>4</sub> ,B <sub>3</sub> ,KRR w&l	C/C <sup>+</sup>	1-0	—	?	?	?	64	127

Figure 6. Record 6-8m positions with consonant, defined strategies of play.

The first lacunae are the maxDTZ P-ful 6m/7m entries, though there are some credible candidates for the 7m DTC/Z entries. 6-7m DTZ EGTs have not been computed yet but are more easily computed given that WDL EGTs may be derived from already-computed DTC or DTM EGTs.

## EGT-generation timeline

This is evolving: additions and suggestions are welcome.

#	Date	DTC	DTM	DTM <sub>60</sub>	DTR	DTZ	DTZ <sub>60</sub>	DTZ <sub>60</sub> '	DTZR	WDL	WDL'	References, notes
01	1713-11-13											(De Montmort, 1713; Kuhn, 1968; Bellhouse, 2007) de Montmort on Waldergrave's strategy for <i>Le Her</i>
02	1913											(Zermelo, 1913; Schwalbe and Walker, 2001) Zermelo's theorem
03	1928											(von Neumann, 1928) vN's proof of the minimax theorem; generalisation of concept of game $\Gamma$
04	1944											(von Neumann and Morgenstern, 1944) Zero-sum, 2-person, perfect information games are strictly determined'
05	1964											(Bellman, 1964) Dynamic Programming approach to EGT generation defined
06	1970	c	m									(Ströhlein, 1970) thesis defining minimax play; first DTC EGTs - K(Q/R)K, KQK(N/R).
07	1977	c										Thompson demonstrates the value of a KQKR EGT in two Browne-BELLE games
08	1983-07-30	c										(Roycroft, 1983) Thompson KBBKN DTC/Z EGT: s6m maxDTC/Z → 132p
09	1984-08	m										(Dekker and van den Herik, 1984) KBKN EGT
10	1986-09-30	c				z						(Thompson, 1986) DTC EGT for KQKBB and DTZ EGTs for KQPKQ and KRPKR
11	1987-04	m				z						(Dekker et al, 1989) KNNKP(h) DTM EGT: s6m maxDTM → 229p
12	1991-06	c				z						(Stiller, 1991) KRBKNN DTC EGT: s7m maxDTC/Z → 445p
13	1991-3	c										Thompson publishes 5m DTC EGTs on CDs
14	1995	c										(Stiller, 1995) Stiller Ph.D. thesis: 5- and 6-man DTC EGTs: s7m maxDTC → 485p (KRNNKN)
15	1999	c	m									Nalimov 5m DTM and Wirth 5m DTC EGTs completed - maybe earlier
16	2000	c										Thompson's 64 P-less 6m DTC EGTs
17	2000-03				r				zr			(Haworth, 2000a/b) Concepts of DTR, Depth by the Rule, and DTZR defined
18	2004-09-11	m										Nalimov completes his 4-2m DTM EGTs with KPPPKP; s7m maxDTM → 506p
19	2005-04-12	c										(Bourzutschky, 2005; Krabbé, 2005a) First 7m EGT (KNNNNKQ): 7m maxDTC → 169p
20	2005-08-09	m										Nalimov completes his s7m DTM EGTs with KPPKPP; s7m maxDTM = 523p
21	2005-09-06	c										(Krabbé, 2005b; Bourzutschky and Konoval, 2006) 7m maxDTC → 451p (KRBNKR)
22	2005-10-17	c										(Krabbé, 2005c; Bourzutschky and Konoval, 2006) s8m maxDTC → 579p (KRRNKRR)
23	2006-03-31	c										(Krabbé, 2006a) Max known s8m DTC → 660p (KQBNKQB)
24	2006-05-26	c										(Krabbé, 2006b) Max known s8m DTC → 1,034p (KQNKRBN)
25	2006-07								v			SHREDDER Bitbases introduced with SHREDDER 10
26	2006-08-08	m										Last 16 Nalimov 3-3m DTM EGTs sent to Nelson Hernandez and promulgated
27	2011	c										(Bourzutschky and Konoval, 2011) First 8m EGT (KBBBBKRR): 8m maxDTC → 127p
28	2012-07-30	m										(MVL team, 2012) Completion of the 4-3m DTM EGTs
29	2012-08-27	m										(MVL team, 2012) Completion of the 5-2m DTM EGTs
30	2012-12-14	m										(MVL team, 2012; Krabbé, 2014) s8m maxDTM = 1,097p with KQPKRBN 1-0 win
31	2012-12	m										(MVL team, 2012) First web-access to MVL's DTM EGTs
32	2013-03	m										(MVL team, 2012) Web-access to 50TB of MVL DTM EGTs
33	2013-04-01						z <sub>50</sub> '		v <sub>50</sub>			(de Man, 2013) syzygy s7m WDL <sub>50</sub> and DTZ <sub>50</sub> ' EGTs, recognising the FIDE 50m-rule
34	2013-12-31		m <sub>50</sub>									(Huntington, 2013) DTM <sub>50</sub> EGTs: maxDTM <sub>50</sub> > maxDTM for KNNKP, KQPKQ and < for KBBKNN

Figure 7. A timeline for the generation of endgame tables.

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### 3-man: 2-1m

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1... Kb5''

**{1 of 3 maxDTC and 3 maxDTM s4m and of 8 maxDTZ s4m\_P-ful wtm wins: dtc/m/z = 19/28/10m}**

2. Kb3'''' Kc5'' 3. Kc3'''' Kd5'' 4. Kd3'''' Ke5'' 5. Ke3'''' Kf5'' 6. Kf3'''' Kg5'' 7. Kg3'''' Kf5' 8. Kh4'''' Kg6'' 9. Kg4'''' Kf6' 10. Kh5'''' Kg7'' {and here SC<sup>-</sup> and SZ<sup>-</sup> must diverge} 11. Kg5'' Kh7'' 12. Kf6'' Kh8'' 13. g4' Kg8'' 14. Kg6'' Kh8'' 15. g5' Kg8° 16. Kh6'' Kf7' 17. g6+' {and here SC<sup>+</sup> and SM<sup>+</sup> have different choices of moves} Kf8' 18. Kh7'''' Ke7' 19. g7'' Kd6' 20. g8=Q' {KQK: dtx = -9m} {MB 'Nalimov' DTC EGTs (Tamplin, 2003)}  
\*

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1... Kb5''

**{1 of 3 maxDTC and 3 maxDTM s4m and of 8 maxDTZ s4m\_P-ful wtm wins: dtc/m/z = 19/28/10m}**

2. Kb3'''' Kc5'' 3. Kc3'''' Kd5'' 4. Kd3'''' Ke5'' 5. Ke3'''' Kf5'' 6. Kf3'''' Kg5'' 7. Kg3'''' Kf5' 8. Kh4'''' Kg6'' 9. Kg4'''' Kf6' 10. Kh5'''' Kg7'' 11. Kg5'' Kh7'' 12. Kf6'' Kh8'' 13. g4' Kg8'' 14. Kg6'' Kh8'' 15. g5' Kg8° 16. Kh6'' Kf7'' 17. g6+' {and here SM<sup>+</sup> and SC<sup>+</sup> have different choices of moves} Kf8'' 18. Kh7'''' Ke7'' 19. g7'' Kd6'' 20. g8=Q' {KQK: dtx = -9m} Kc5'' 21. Qe8' Kd5' 22. Qa4' Kc5' 23. Kg7' Kd5' 24. Kf7' Kc5' 25. Ke6'' Kb6° 26. Kd6'' Kb7° 27. Qb4+' Ka7' 28. Kc6' Ka6' 29. Qa4#' {Nalimov and Lomonosov DTM EGTs (Nalimov et al, 2000/1; Bleicher, 2012; ChessOK, 2013)} \*

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1... Kb5''

**{1 of 3 maxDTC and 3 maxDTM s4m and of 8 maxDTZ s4m\_P-ful wtm wins: dtc/m/z = 19/28/10m}**

2. Kb3'''' Kc5'' 3. Kc3'''' Kd5'' 4. Kd3'''' Ke5'' 5. Ke3'''' Kf5'' 6. Kf3'''' Kg5'' 7. Kg3'''' Kf5'' 8. Kh4'''' Kg6'' 9. Kg4'''' Kf6'' 10. Kh5'''' Kg7'' 11. Kg5'' Kh7'' 12. Kf6'' Kh8'' 13. g4'' **{dictated by SZ}** Kg8'' 14. Kg6'' Kh8'' 15. g5'' **{SZ}** Kg8° 16. Kh6'' Kf7'' 17. g6+'' **{SZ}** Kf8'' 18. Kh7'''' Ke7'' 19. g7'' Kd6'' 20. g8=Q'' **{SC}** **{KQK: dtx = -9m}** Kc5'' 21. Qe8' Kd5' 22. Qa4' Kc5' 23. Kg7' Kd5' 24. Kf7' Kc5' 25. Ke6'' Kb6° 26. Kd6'' Kb7° 27. Qb4+' Ka7' 28. Kc6' Ka6' 29. Qa4#' **{Nalimov and Lomonosov DTM EGTs, and MB 'Nalimov' DTC & DTZ EGTs}**  
\*

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1... Kb5''

**{1 of 3 maxDTC and 3 maxDTM s4m and of 8 maxDTZ s4m\_P-ful wtm wins: dtc/m/z = 19/28/10m}**

2. Kb3'''' Kc5'' 3. Kc3'''' Kd5'' 4. Kd3'''' Ke5'' 5. Ke3'''' Kf5'' 6. Kf3'''' Kg5'' 7. Kg3'''' Kf5'' 8. Kh4'''' Kg6'' 9. Kg4'''' Kf6'' 10. Kh5'''' Kg7' **{and here SZ and SC have different choices of move}** 11. g3'' **{KP(g3)K: dtc/m/z = -11/-20/-2m}** **{MB 'Nalimov' DTZ EGTs}** \*

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**{Ströhlein (1970), p61, cites position 2w}**

**{1 of 8 maxDTx KQK btm losses: dtx = -10m}** 1... Ke6''

**{the one maxDTx KQK wtm win: dtx = 10m}** 2. Qc1' Ke5' 3. Qf1' Ke4' 4. Qf6' Ke3' 5. Qh4' Ke2' 6. Qg3' Kd2' 7. Kb2'' Ke2'' 8. Kc3'' Kf1'' 9. Qh2'' Ke1° 10. Qg2'' Kd1° 11. Qf1#' **{Nalimov and Lomonosov DTM EGT}** \*

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**{Ströhlein (1970), p61, cites position 2w and another wtm win in 16m: 7R/8/8/3k4/8/8/8/K7 w}**  
**{1 of 433 maxDTC and of 390 maxDTM s4m\_P-less, and of 433 maxDTZ s4m btm losses: dtx = -16m}**  
1... Kc3"  
**{1 of 139 maxDTC and of 390 maxDTM s4m\_P-less, and of 139 maxDTZ s4m wtm wins: dtx = 16m}** 2. Rb1'  
Kc2' 3. Rf1' Kc3' 4. Rd1' Kc2'' 5. Rd8'' Kc3'' 6. Kb1'' Kc4' 7. Kb2' Kc5' 8. Kb3' Kc6' 9. Kb4' Kc7'' 10. Rd1'  
Kc6'' 11. Rd2' Kb6' 12. Rc2'' Ka6' 13. Kc5'' Kb7'' 14. Kb5'' Ka7' 15. Kc6'' Kb8' 16. Ra2' Kc8° 17. Ra8#"  
**{Ströhlein, Nalimov and Lomonosov DTM EGTs} \***

#### **4-man: 2-2m**

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[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/b7/k1K1B3 w - - 0 1"]  
[PlyCount "1"]

**{1 of 52 maxDTx KBKB wtm wins: dtx = 1m}** 1. Bc3#""  
**{1 of 14 maxDTx KBKB btm losses: dtx = -0m}** {Nalimov and Lomonosov DTM EGTs} \*

[White "KB"]  
[Black "KN"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 2-2m, KBKN, GBR 0013.00, maxDTx KBKN w&l: SV+x/SV+x+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/n1K5/k1B5 w - - 0 1"]  
[PlyCount "1"]

**{1 of 2 maxDTx KBKN wtm wins: dtx = 1m}** 1. Bb2#""  
**{the one maxDTx KBKN btm loss: dtx = -0m}** {Nalimov and Lomonosov DTM EGTs} \*

[White "KB"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 2-2m, KBKP, GBR 0010.01, maxDTx KBKP w&l: SV<sup>+</sup>x<sup>-</sup>/SV<sup>+</sup>x<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/p7/k1K1B3 w - - 0 1"]  
[PlyCount "1"]

**{1 of 104 maxDTx KBKP wtm wins: dtx = 1m} 1. Bc3#''''**  
**{1 of 28 maxDTx KBKP btm losses: dtx = -0m} {Nalimov and Lomonosov DTM EGTs} \***

[White "KN"]  
[Black "KN"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 2-2m, KNKN, 0004.00, maxDTx KNKN w&l: SV<sup>+</sup>x<sup>-</sup>/SV<sup>+</sup>x<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/n1K5/k1N5 w - - 0 1"]  
[PlyCount "1"]

**{1 of 5 maxDTx KNKN wtm wins: dtx = 1m} 1. Nb3#''''**  
**{the one maxDTx KNKN btm loss: dtx = -0m} {Nalimov and Lomonosov DTM EGTs} \***

[White "KN"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 2-2m, KNKP, GBR 0001.01, maxDTM KNKP w&l: SV<sup>+</sup>M<sup>-</sup>/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/p7/8/N7/k1K5 w - - 0 1"]  
[PlyCount "13"]

**{1 of 29 maxDTC/M KNKP wtm wins: dtc/m/r/z/zr = 7/7/5/1/1m} 1. Nb4''''**  
**{1 of 7 maxDTC/M KNKP btm losses: dtc/m/r/z/zr = -6/-6/-5/-0/-0m} a3° 2. Nc2+'''' Ka2° 3. Nd4'''' Ka1° 4. Kc2'' Ka2'' 5. Ne2'' Ka1° 6. Nc1'' a2° 7. Nb3#'''' {Nalimov and Lomonosov DTM EGTs} \***

[White "KP"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 2-2m, KPKP, GBR 0000.11, maxDTM KPKP l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "k1K5/8/7p/8/8/6P1/8 b - - 0 1"]  
[PlyCount "66"]

{the one maxDTC/M KPKP btm loss: dtc/m/z = -14/-33/-7m} 1... Ka7''  
{the one maxDTC and 1 of 12 maxDTM KPKP wtm wins: dtc/m/z = 14/33/7m} 2. Kc7'''' Ka6'' 3. Kc6'''' Ka5''  
4. Kc5'''' Ka4'' 5. Kc4'''' Ka3'' 6. Kc3'''' Ka2'' 7. Kc2'''' Ka3'' 8. g3'''' Ka4' 9. Kc3'''' h5' 10. Kd3' Kb4' 11. Ke4''  
Kc4' 12. Kf4' Kd4' 13. Kg5'''' Ke5'' 14. Kxh5'' {KPK: dtc/m/z = -11/-20/-1m} Kf6'' 15. g4'' Kg7'' 16. Kg5''''  
Kh7'' 17. Kf6'' Kh6'' 18. g5+'' Kh7'' 19. Kf7'''' Kh8° 20. Kg6'' Kg8° 21. Kh6'' Kf7'' 22. g6+'' Kf8'' 23. Kh7''''  
Ke7'' 24. g7'' Kd6'' 25. g8=Q' {KQK: dtx = -9m} Kc5'' 26. Qe8' Kd5' 27. Qa4' Kc5' 28. Kg7' Kd5' 29. Kf7' Kc5'  
30. Ke6'' Kb6° 31. Kd6'' Kb7° 32. Qb4+'' Ka7' 33. Kc6' Ka6' 34. Qa4# {Nalimov and Lomonosov DTM EGTs}  
\*

[White "KP"]  
[Black "KR"]  
[Result "1-0"]  
[Date "2013.10.21"]  
[Event "4m, 2-2m, KPKR, GBR 0300.10, maxDTM s5m w&l: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/5k2/2PK4/5r2/8/8/8 w - - 0 1"]  
[PlyCount "85"]

{1 of 3 maxDTC KPKR and the one maxDTM s5m win: dtc/m/z = 11/43/11m} 1. c7''''  
{1 of 3 maxDTC KPKR and the one maxDTM s5m loss: dtc/m/z = -10/-42/-10m} 1. ... Rf6+'' 2. Kd5'''' Rf5+''  
3. Kd4'' Rf4+'' 4. Kd3' Rf3+'' 5. Kc2'' Rf2+'' 6. Kb3'' Rf3+'' 7. Kb4'' Rf4+'' 8. Kb5'' Rf5+'' 9. Kb6'''' Rf6+'' 10.  
Kb7'''' Rf1' 11. c8=Q'''' {KQKR: dtc/m/z = -27/-32/-27m} Rb1+'' 12. Ka6'' Ra1+'' 13. Kb5'' Rb1+'' 14. Ka4''  
Ra1+'' 15. Kb3'' Rb1+'' 16. Kc2'' Re1'' 17. Qc4+'' Re6' 18. Kc3' Kf6'' 19. Qf4+'' Ke7'' 20. Kd4'' Rd6+'' 21. Ke5''  
Rb6' 22. Qc4' Kd7'' 23. Qd4+'' Kc7'' 24. Qc5+'' Rc6'' 25. Qe7+'' Kc8' 26. Kd5'' Rc2'' 27. Qf7' Rc7'' 28. Qe8+''  
Kb7° 29. Qb5+'' Ka7'' 30. Kd6'' Rc8'' 31. Qb4'' Ka6'' 32. Kd7'' Rh8'' 33. Qa3+'' Kb6' 34. Qb2+'' Kc5'' 35. Qxh8''  
{KQK: dtx = -8m} Kc4'' 36. Qf8' Kd4' 37. Qf3'' Kc4' 38. Qe3' Kb4' 39. Qd3' Ka4' 40. Qb1' Ka3' 41. Kc6'' Ka4°  
42. Qb2'' Ka5° 43. Qb5# {Nalimov and Lomonosov DTM EGTs} \*

[White "KQ"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.10.23"]  
[Event "4m, 2-2m, KQKP, GBR 1000.01, maxDTC/Z s5m\_P-ful l&w: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "3Q4/3K4/8/8/3k4/8/3p4/8 b - - 0 1"]  
[PlyCount "53"]

**{the one maxDTC/Z s5m\_P-ful btm loss and 1 of 13 maxDTM KQKP btm losses: dtc/m/z = -26/-28/-26m}**  
1... Kd3"

**{the one maxDTC/Z s5m\_P-ful wtm win and 1 of 3 maxDTM KQKP wtm wins: dtc = 26/28/26m}** 2. Kc8+' Kc2'' 3. Qc7+'''' Kb1'' 4. Qb7+' Kc1'' 5. Qc6+'''' Kb1' 6. Qd5' Kc1' 7. Qc4+'' Kb1' 8. Qd3+' Kc1'' 9. Qc3+'' Kd1'' 10. Kc7' Ke2'' 11. Qc2' Ke1'' 12. Qe4+'' Kf1' 13. Qf3+' Ke1'' 14. Qe3+'' Kd1'' 15. Kc6' Kc2'' 16. Qe2' Kc1'' 17. Qc4+'' Kb1' 18. Qd3+' Kc1'' 19. Qc3+'' Kd1'' 20. Kd5' Ke2'' 21. Qc2' Ke1'' 22. Qe4+'' Kf1' 23. Qf3+' Ke1'' 24. Qe3+'' Kd1'' **{and here SC and SM must diverge}** 25. Kc4'' Kc2' 26. Qb3+'' Kc1° 27. Kc3'' **{forcing the loser to move to the next phase}** d1=N+' **{KQKN: dtc/m/z = 5/8/5m}** **{MB 'Nalimov' DTC EGTs}** \*

[White "KQ"]  
[Black "KR"]  
[Result "1-0"]  
[Date "2013.10.23"]  
[Event "4m, 2-2m, KQKR, GBR 1300.00, maxDTC/Z 2-2m l&w: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "K7/4r3/5k2/Q7/8/8/8/8 b - - 0 1"]  
[PlyCount "62"]

**{position, line and notes taken from (Nunn, 2002), #94, p69}**

**{1 of 11 maxDTC/Z 2-2m and of 59 maxDTM KQKR btm losses: dtc/m/z = -31/-35/-31m}** 1... Re8+''  
**{1 of 2 maxDTC/Z 2-2m and of 10 maxDTM KQKR wtm wins: dtc/m/z = 31/35/31m}** 2. Kb7' Re7+'' 3. Kc6' Re6+'' 4. Kd7' Re7+'' 5. Kd8'' Re4'' 6. Qd5' Re5'' **{and here, this line differs from SM}** 7. Qf3+' Rf5' 8. Qb3'' Ke5' 9. Ke7' Rf4'' 10. Qe6+'' Kd4° 11. Kd6'' Re4' 12. Qb3'' Re3' 13. Qd5+'' Kc3° 14. Kc5'' Rd3'' 15. Qg5' Kc2'' 16. Qg2+' Kd1'' **{JN: White must break the third-rank defence}** 17. Kc4' Re3'' 18. Kd4' Ra3' 19. Qf1+'' Kd2'' 20. Qf2+'' Kc1'' 21. Qe2'' Rb3'' 22. Kc4'' Rb2'' 23. Qf1+' Kd2'' 24. Qa1'' Rc2+'' 25. Kb3'' Rc1'' 26. Qb2+'' Kd1'' 27. Qf2' Rc8'' 28. Qf5'' Rc1' 29. Kb2' Rc7'' 30. Qf3+' Kd2' 31. Qf4+'' Kd1' 32. Qxc7'' **{KQK: dtx = -5m}** **{MB 'Nalimov' DTC EGTs}** \*



[White "KR"]  
[Black "KN"]  
[Result "1-0"]  
[Date "2014.01.24"]  
[Event "4m, 2-2m, KRKN, GBR 0103.00, maxDTC/Z KRKN l&w: SV+C-/SV+C+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/7n/1k1K3R b - - 0 1"]  
[PlyCount "54"]

{Ströhlein (1970), p62, cites position 2w}

{1 of 2 maxDTC KRKN btm losses: dtc/m/z = -27/-37/-27m} 1... Ng4''  
{1 of 2 maxDTC KRKN wtm wins: dtc/m/z = 27/37/27m} 2. Rh4'''' Ne5'' 3. Re4'''' Nf7'' 4. Rb4+' Ka2'' 5. Kc2' Ka3'' 6. Kc3' Nd6'' 7. Rb6'''' Ne4+' 8. Kd3'' Nf2+' 9. Kc4'' Nd1'' 10. Rb3+'''' Ka4'' 11. Rf3' Nb2+' 12. Kc3'' Ka3'' 13. Rg3' Na4+' 14. Kc4+'''' Ka2'' 15. Kb4' Nb2'' 16. Rg4'' Nd3+' 17. Kc3'''' Nc5'' 18. Rc4'' Ne6'' 19. Ra4+' Kb1° 20. Ra5' {and here this SC+ line diverges from SM+} Ng7'' 21. Re5' Ka2'' 22. Kd4' Kb3' 23. Kd5' Kc3'' 24. Kc6'' Kd4'' 25. Kd6'''' Kd3' 26. Ke7' Kd4' 27. Rg5' Ne8' 28. Kxe8'' {MB 'Nalimov' DTC EGTs} \*

[White "KR"]  
[Black "KN"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 2-2m, KRKN, GBR 0103.00, maxDTM s5m\_P-less l&w: SV+M-/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/1n4R1/2K5/8/8/8/3k4 b - - 0 1"]  
[PlyCount "80"]

{the one maxDTM s5m\_P-less btm loss: dtc/m/z = -26/-40/-26m} 1... Na4+'  
{the one maxDTM s5m\_P-less wtm win: dtc/m/z = 26/40/26m} 2. Kb4'''' Nb2'' 3. Kc3'''' Na4+' 4. Kb3'''' Nc5+' 5. Kc4'''' Ne4'' 6. Kd3'''' Nc5+' 7. Kd4'''' Nb3+' 8. Kc3'''' Nc5'' 9. Rg4'' Ke2'' 10. Rc4'''' Nb7'' 11. Kd4'' Nd6'' 12. Rc5'''' Kf3'' 13. Rd5'''' Ne8'' 14. Rd8'''' Ng7'' 15. Rf8+'''' Ke2'' 16. Ke4'''' Nh5'' 17. Rf3'''' Ng7'' 18. Rb3' Nh5' 19. Rb2+'''' Ke1'' 20. Rg2' Nf6+' 21. Kd4'' Kd1'' 22. Rg6'' Nh7'' 23. Rg7' Nf8'' 24. Ke5'' Kd2' 25. Kf5' Ke3'' 26. Rf7'' Ng6'' 27. Kxg6'''' {KRK: dtx = -14m} Ke4'' 28. Re7+' Kd4' 29. Kf5'' Kc4' 30. Rd7' Kb4' 31. Rd4+' Kb5' 32. Ke6'' Kc5'' 33. Re4' Kc6' 34. Re5'' Kc7'' 35. Rc5+' Kb7' 36. Kd7'' Kb6'' 37. Rd5' Kb7'' 38. Rd6'' Kb8' 39. Kc6'' Ka8' 40. Kb6'' Kb8° 41. Rd8#'' {Nalimov and Lomonosov DTM EGTs} \*

#### 4-man: 3-1m

[White "KBN"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.02.04"]  
[Event "4m, 3-1m, KBNK, GBR 0011.00, maxDTM 3-1m and maxDTC/R/Z/ZR s5m l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "K3B3/2k5/8/8/8/7N/8 b - - 0 1"]  
[PlyCount "66"]

**{Dekker and van den Herik (1984) cite position 2w and the subsequent line}**

**{1 of 436 maxDTM 3-1m and maxDTC/R/Z/ZR s5m btm losses: dtx = -33m} 1... Kc8'**

**{1 of 144 maxDTM 3-1m and maxDTC/R/Z/ZR s5m wtm wins: dtx = 33m} 2. Ka7' Kd8'' 3. Bc6' Kc7'' 4. Be4' Kd6'' 5. Nf3'' Kc5' 6. Ka6'' Kd6'' 7. Kb5' Kd7' 8. Kc5' Ke6'' 9. Kd4' Kf6'' 10. Kd5' Ke7'' 11. Ke5' Kf7'' 12. Kf5'' Ke7' 13. Ne5'' Kd6'' 14. Nd3'' Kd7' 15. Ke5' Ke7' 16. Bd5'' Kd7'' 17. Kf6' Kd6'' 18. Be6'' Kc6'' 19. Ke5' Kb5' 20. Bb3'' Ka5'' 21. Kd5' Kb5' 22. Kd6'' Ka6' 23. Kc6' Ka5'' 24. Kc5'' Ka6° 25. Bd5'' Ka5' 26. Nb2'' Ka6° 27. Nc4'' Ka7° 28. Kc6'' Ka6' 29. Be6'' Ka7° 30. Bc8'' Ka8' 31. Kc7'' Ka7° 32. Na3' Ka8° 33. Bb7+'' Ka7° 34. Nb5#'' **{Dekker and van den Herik, Nalimov and Lomonosov DTM EGTs} \*****

[White "KNN"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.11.07"]  
[Event "4m, 3-1m, KNNK, GBR 0002.00, maxDTx KNNK w&l: SV<sup>+</sup>x<sup>-</sup>/SV<sup>+</sup>x<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/4N3/3N4/K1k5 w - - 0 1"]  
[PlyCount "1"]

**{1 of 77 maxDTx KNNK wins: dtx = 1m} {not a reachable position} 1. Nb3#''''**

**{1 of 15 maxDTx KNNK losses, reachable only by 1. Nxb3#: dtx = -0m} {Nalimov DTM EGTs} \***

[White "KNP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.10.23"]  
[Event "4m, 3-1m, KNPK, GBR 0001.10, maxDTC 3-1m\_P-ful l&w: SV<sup>+</sup>C<sup>-</sup>/SV<sup>+</sup>C<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "1N6/8/8/8/3k4/8/P7/7K b - - 0 1"]  
[PlyCount "44"]

**{1 of 22 maxDTC 3-1m\_P-ful btm losses: dtc/m/z = -22/-27/-11m} 1... Kc5''**

**{1 of 26 maxDTC 3-1m\_P-ful and of 26 maxDTM KNPK wtm wins: dtc/m/z = 22/27/11m} 2. Na6+'''' Kb5' 3. Nc7+'''' Kc5' 4. Kg2' Kc6' 5. Ne6' Kd5' 6. Nf4+' Kc4' 7. Ne2' Kb4' 8. Kf2' Ka3' 9. Nc3'' Kb4'' 10. a4'' Ka5' 11. Ke3' Ka6' 12. Kd4' Kb6'' 13. Kd5' Kb7' 14. Kc5' Ka6'' 15. Kb4' Kb6' 16. a5+' **{and here SC<sup>+</sup> and SM<sup>+</sup> must diverge}** Ka7' 17. Kb5'' Kb7' 18. a6+' Ka7' 19. Nd5'' Kb8'' 20. Kb6'' Ka8'' 21. Nc7+'' Kb8° 22. a7+'' Kc8° 23. a8=Q+' **{KQNK: dtx = -2m} {MB 'Nalimov' DTC EGTs} \*****

[White "KNP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.10.22"]  
[Event "4m, 3-1m, KNPK, GBR 0001.10, maxDTZ 3-1m\_P-ful l&w: SV<sup>+</sup>Z/SV<sup>+</sup>Z<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "N2k4/8/P7/8/8/8/8/7K b - - 0 1"]  
[PlyCount "26"]

**{1 of 8 maxDTZ 3-1m\_P-ful btm losses: dtc/m/z = -14/-19/-13m}** 1... Kc8''  
**{1 of 108 maxDTZ 3-1m\_P-ful wtm wins: dtc/m/z = 14/19/13m}** 2. Nb6+'''' Kb8'' 3. Nd7+' Ka7' 4. Nc5'''' Ka8'  
5. Kg2'' Ka7' 6. Kf3'' Ka8' 7. Ke4'' Ka7' 8. Kd4' Ka8' 9. Kc4'' Ka7' 10. Kb5'' Ka8'' 11. Kb6' Kb8° 12. Ne6'' Ka8''  
13. Nc7+''' Kb8° 14. a7+''' **{KNP(a7)K: dtc/m/z = -1/-3/-1m}** **{MB 'Nalimov' DTZ EGTs}** \*

[White "KPP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "4m, 3-1m, KPPK, GBR 0000.20, maxDTM 3-1m\_P-ful l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/1k4P1/6P1/K7 b - - 0 1"]  
[PlyCount "64"]

**{1 of 21 maxDTC KPPK and of 10 maxDTM 3-1m\_P-ful btm losses: dtc/m/z = -16/-32/-7m}** 1... Kc3'  
**{1 of 62 maxDTC KPPK and of 9 maxDTM 3-1m\_P-ful wtm wins: dtc/m/z = 16/32/7m}** 2. Kb1'''' Kd3' 3.  
Kc1'''' Ke3'' 4. Kd1' Kd3'' 5. g4' Ke4'' 6. g3'''' Kd4' 7. Kd2' Ke4' 8. Ke2'' Kd4' 9. g5' Ke5'' 10. g6' Ke6' 11. Ke3'  
Kf6' 12. Kf4'' Kxg6'' **{KPK: dtc/m/z = 12/21/5m}** 13. Kg4'''' Kf6' 14. Kh5'' Kg7'' 15. Kg5'''' Kh7'' 16. Kf6''  
Kh8'' 17. g4' Kg8'' 18. Kg6'' Kh8'' 19. g5' Kg8° 20. Kh6'' Kf7'' 21. g6+' Kf8'' 22. Kh7'''' Ke7'' 23. g7'' Kd6'' 24.  
g8=Q' **{KQK: dtx= -9m}** Kc5'' 25. Qe8' Kd5' 26. Qa4' Kc5' 27. Kg7' Kd5' 28. Kf7' Kc5' 29. Ke6'' Kb6° 30.  
Kd6'' Kb7° 31. Qb4+' Ka7' 32. Kc6' Ka6' 33. Qa4#'' **{Nalimov and Lomonosov DTM EGTs}** \*

## 5-man: 2-3m

[White "KQ"]  
[Black "KBB"]  
[Result "1-0"]  
[Date "2013.10.29"]  
[Event "5m, 2-3m, KQKBB, GBR 1060.00, maxDTC/Z 2-3m\_P-less l&w: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/1Q6/8/8/2b5/8/3k4/K5b1 b - - 0 1"]  
[PlyCount "142"]

**{1 of 74 maxDTC/Z 2-3m\_P-less and of 74 maxDTM 2-3m\_P-less btm losses: dtc/m/z = -71/-81/-71m} 1...**

Bd4<sup>+</sup>

**{1 of 15 maxDTC/Z 2-3m\_P-less and of 15 maxDTM 2-3m\_P-less wtm wins: dtc/m/z = 71/81/71m} 2.** Kb1<sup>'''</sup>  
Bd3<sup>+</sup> 3. Ka2° Bc4<sup>+</sup> 4. Ka3<sup>'''</sup> Bc5<sup>+</sup> 5. Ka4<sup>''</sup> Kd3<sup>'</sup> 6. Qc7<sup>'</sup> Kd4<sup>''</sup> 7. Qc6<sup>''</sup> Bd5<sup>''</sup> 8. Qf6<sup>+</sup> Ke4<sup>''</sup> 9. Qg6<sup>+</sup> Kf4<sup>'</sup>  
10. Qh5<sup>'</sup> Ke4<sup>''</sup> 11. Qe2<sup>+</sup> Kd4<sup>''</sup> 12. Kb5<sup>''</sup> Bd6<sup>''</sup> 13. Qg4<sup>+</sup> Ke5<sup>''</sup> 14. Qd7<sup>''</sup> Be6<sup>''</sup> 15. Qg7<sup>+</sup> Kf5<sup>''</sup> 16. Kc6<sup>''</sup> Be5<sup>''</sup>  
17. Qe7<sup>''</sup> Bf4<sup>''</sup> 18. Qh7<sup>+</sup> Ke5<sup>''</sup> 19. Qh5<sup>+</sup> Kd4<sup>''</sup> 20. Qb5<sup>'</sup> Bc4<sup>'</sup> 21. Qc5<sup>+</sup> Kd3<sup>''</sup> 22. Qf5<sup>+</sup> Ke3<sup>''</sup> 23. Kc5<sup>''</sup> Bf1<sup>''</sup>  
24. Qg4<sup>'</sup> Ke4<sup>''</sup> 25. Qe6<sup>+</sup> Kf3<sup>''</sup> 26. Kd4<sup>''</sup> Bg2<sup>''</sup> 27. Qe1<sup>''</sup> Kg4<sup>''</sup> 28. Qg1<sup>''</sup> Kg3<sup>''</sup> 29. Kc4<sup>'</sup> Bg5<sup>'</sup> 30. Kd3<sup>''</sup> Kf3<sup>''</sup> 31.  
Qd1<sup>+</sup> Kg3<sup>''</sup> 32. Qe1<sup>+</sup> Kg4<sup>''</sup> 33. Qe6<sup>+</sup> Kg3<sup>''</sup> 34. Qg8<sup>''</sup> Kf4<sup>''</sup> 35. Qg6<sup>''</sup> Bf3<sup>'</sup> 36. Kd4<sup>''</sup> Bg2<sup>'</sup> 37. Qf7<sup>+</sup> Kg4<sup>''</sup> 38.  
Qf2<sup>'</sup> Bf3<sup>''</sup> 39. Ke5<sup>''</sup> Bf4<sup>+</sup> 40. Ke6<sup>'</sup> Be4<sup>''</sup> 41. Kf6<sup>''</sup> Bf3<sup>''</sup> 42. Qd4<sup>'</sup> Bg2<sup>''</sup> 43. Qd3<sup>'</sup> Bh3<sup>'</sup> 44. Kg6<sup>''</sup> Bg2<sup>''</sup> 45. Qd7<sup>+</sup>  
Kh4<sup>'</sup> 46. Qd4<sup>'</sup> Kg4<sup>'</sup> 47. Qg1<sup>''</sup> Kf3<sup>''</sup> 48. Kh5<sup>''</sup> Be3<sup>''</sup> 49. Qd1<sup>+</sup> Kf2<sup>''</sup> 50. Qc2<sup>+</sup> Kf3<sup>''</sup> 51. Qb2<sup>''</sup> Kg3<sup>''</sup> 52. Qb8<sup>+</sup>  
Kf2<sup>''</sup> 53. Qh2<sup>''</sup> Kf3<sup>''</sup> 54. Qe5<sup>''</sup> Bf1<sup>''</sup> 55. Qf5<sup>+</sup> Kg2<sup>''</sup> 56. Kh4<sup>''</sup> Bf2<sup>+</sup> 57. Kg4<sup>''</sup> Be2<sup>+</sup> 58. Kf4<sup>'''</sup> Bg1<sup>''</sup> 59. Qg5<sup>+</sup>  
**{and here SC<sup>+</sup> and SM<sup>+</sup> must diverge}** Kf2<sup>''</sup> 60. Qg3<sup>+</sup> Kf1<sup>°</sup> 61. Ke4<sup>''</sup> Bf2<sup>''</sup> 62. Qh3<sup>+</sup> Ke1<sup>'</sup> 63. Qh1<sup>+</sup> Kd2<sup>''</sup>  
64. Qh6<sup>+</sup> Kd1<sup>''</sup> 65. Qg5<sup>''</sup> Be1<sup>''</sup> 66. Qg1<sup>''</sup> Bh5<sup>''</sup> 67. Kd3<sup>'</sup> Be2<sup>+</sup> 68. Ke3<sup>''</sup> Bb5<sup>''</sup> 69. Qg4<sup>+</sup> Kc1<sup>''</sup> 70. Qd4<sup>''</sup> Bf1<sup>'</sup>  
71. Qa1<sup>+</sup> Kc2<sup>°</sup> 72. Qxe1<sup>''</sup> **{KQKB: dtc/m/r/z/zr = -5/-6/-5/-5/-5m} {MB 'Nalimov' DTC EGTs} \***

[White "KQ"]  
[Black "KBB"]  
[Result "1-0"]  
[Date "2013.10.29"]  
[Event "5m, 2-3m, KQKBB, GBR 1060.00, maxDTM 2-3m\_P-less l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/1Q6/8/8/2b5/8/3k4/K5b1 b - - 0 1"]  
[PlyCount "162"]

**{1 of 74 maxDTC/Z 2-3m\_P-less and of 74 maxDTM 2-3m\_P-less losses: dtc/m/z = -71/-81/-71m} 1... Bd4<sup>+</sup>**

**{1 of 15 maxDTC/Z 2-3m\_P-less and of 15 maxDTM 2-3m\_P-less wins: dtc/m/z = 71/81/71m} 2.** Kb1<sup>'''</sup>

Bd3<sup>+</sup> 3. Ka2° Bc4<sup>+</sup> 4. Ka3<sup>'''</sup> Bc5<sup>+</sup> 5. Ka4<sup>''</sup> Kd3<sup>'</sup> 6. Qc7<sup>'</sup> Kd4<sup>''</sup> 7. Qc6<sup>''</sup> Bd5<sup>''</sup> 8. Qf6<sup>+</sup> Ke4<sup>''</sup> 9. Qg6<sup>+</sup> Kf4<sup>'</sup>  
10. Qh5<sup>'</sup> Ke4<sup>''</sup> 11. Qe2<sup>+</sup> Kd4<sup>''</sup> 12. Kb5<sup>''</sup> Bd6<sup>''</sup> 13. Qg4<sup>+</sup> Ke5<sup>''</sup> 14. Qd7<sup>''</sup> Be6<sup>''</sup> 15. Qg7<sup>+</sup> Kf5<sup>''</sup> 16. Kc6<sup>''</sup> Be5<sup>''</sup>  
17. Qe7<sup>''</sup> Bf4<sup>''</sup> 18. Qh7<sup>+</sup> Ke5<sup>''</sup> 19. Qh5<sup>+</sup> Kd4<sup>''</sup> 20. Qb5<sup>'</sup> Bc4<sup>'</sup> 21. Qc5<sup>+</sup> Kd3<sup>''</sup> 22. Qf5<sup>+</sup> Ke3<sup>''</sup> 23. Kc5<sup>''</sup> Bf1<sup>''</sup>  
24. Qg4<sup>'</sup> Ke4<sup>''</sup> 25. Qe6<sup>+</sup> Kf3<sup>''</sup> 26. Kd4<sup>''</sup> Bg2<sup>''</sup> 27. Qe1<sup>''</sup> Kg4<sup>''</sup> 28. Qg1<sup>''</sup> Kg3<sup>''</sup> 29. Kc4<sup>'</sup> Bg5<sup>'</sup> 30. Kd3<sup>''</sup> Kf3<sup>''</sup> 31.  
Qd1<sup>+</sup> Kg3<sup>''</sup> 32. Qe1<sup>+</sup> Kg4<sup>''</sup> 33. Qe6<sup>+</sup> Kg3<sup>''</sup> 34. Qg8<sup>''</sup> Kf4<sup>''</sup> 35. Qg6<sup>''</sup> Bf3<sup>'</sup> 36. Kd4<sup>''</sup> Bg2<sup>'</sup> 37. Qf7<sup>+</sup> Kg4<sup>''</sup> 38.  
Qf2<sup>'</sup> Bf3<sup>''</sup> 39. Ke5<sup>''</sup> Bf4<sup>+</sup> 40. Ke6<sup>'</sup> Be4<sup>''</sup> 41. Kf6<sup>''</sup> Bf3<sup>''</sup> 42. Qd4<sup>'</sup> Bg2<sup>''</sup> 43. Qd3<sup>'</sup> Bh3<sup>'</sup> 44. Kg6<sup>''</sup> Bg2<sup>''</sup> 45. Qd7<sup>+</sup>  
Kh4<sup>'</sup> 46. Qd4<sup>'</sup> Kg4<sup>'</sup> 47. Qg1<sup>''</sup> Kf3<sup>''</sup> 48. Kh5<sup>''</sup> Be3<sup>''</sup> 49. Qd1<sup>+</sup> Kf2<sup>''</sup> 50. Qc2<sup>+</sup> Kf3<sup>''</sup> 51. Qb2<sup>''</sup> Kg3<sup>''</sup> 52. Qb8<sup>+</sup>  
Kf2<sup>''</sup> 53. Qh2<sup>''</sup> Kf3<sup>''</sup> 54. Qe5<sup>''</sup> Bf1<sup>''</sup> 55. Qf5<sup>+</sup> Kg2<sup>''</sup> 56. Kh4<sup>''</sup> Bf2<sup>+</sup> 57. Kg4<sup>''</sup> Be2<sup>+</sup> 58. Kf4<sup>'''</sup> Bg1<sup>''</sup> 59. Qg5<sup>+</sup>  
**{and here SM<sup>+</sup> and SC<sup>+</sup> must diverge}** Kf1<sup>''</sup> 60. Qg6<sup>'</sup> Bd1<sup>''</sup> 61. Qg3<sup>''</sup> Bf2<sup>''</sup> 62. Qh3<sup>+</sup> Ke2<sup>''</sup> 63. Qf3<sup>+</sup> Ke1<sup>''</sup> 64.  
Qd3<sup>''</sup> Be2<sup>''</sup> 65. Qc3<sup>+</sup> Kf1<sup>''</sup> 66. Qc1<sup>+</sup> Kg2<sup>''</sup> 67. Qc6<sup>+</sup> Kg1<sup>''</sup> 68. Qd5<sup>'</sup> Kf1<sup>''</sup> 69. Qh1<sup>+</sup> Bg1<sup>°</sup> 70. Kg3<sup>''</sup> Bc4<sup>'</sup> 71.  
Qg2<sup>+</sup> Ke1<sup>°</sup> 72. Qxg1<sup>''</sup> **{KQKB: dtc/m/r/z/zr = -7/-10/-7/-7/-7m}** Kd2<sup>''</sup> 73. Qd4<sup>+</sup> Bd3<sup>''</sup> 74. Kf3<sup>'</sup> Kc2<sup>''</sup> 75. Qb4<sup>'</sup>  
Bf1<sup>'</sup> 76. Ke3<sup>'</sup> Ba6<sup>'</sup> 77. Kd4<sup>''</sup> Bd3<sup>'</sup> 78. Qc3<sup>+</sup> Kb1<sup>''</sup> 79. Qb3<sup>+</sup> Kc1<sup>''</sup> 80. Kc3<sup>''</sup> Bb1<sup>'</sup> 81. Qb2<sup>+</sup> Kd1<sup>°</sup> 82. Qd2<sup>#</sup>  
**{Nalimov and Lomonosov DTM EGTs} \***

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[Black "KRB"]  
[Result "1-0"]  
[Date "2013.11.13"]  
[Event "5m, 2-3m, KQKRB, GBR 1330.00, maxDTM KQKRB l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/4Q3/b7/6r1/8/8/K5k1 b - - 0 1"]  
[PlyCount "140"]

**{1 of 3 maxDTM KQKRB btm losses: dtc/m/z = -41/-70/-41m} 1... Ra5+**  
**{1 of 4 maxDTM KQKRB wtm wins: dtc/m/z = 41/70/41m} 2. Kb1<sup>''''</sup> Bd3+'' 3. Kc1<sup>''''</sup> Kf1'' 4. Qd8<sup>''''</sup> Rc5+'' 5. Kd2<sup>''''</sup> Bf5'' 6. Ke3<sup>''''</sup> Rc3+'' 7. Kf4<sup>''''</sup> Bc2'' 8. Qd2<sup>''''</sup> Rc8'' 9. Kg4' Rg8+'' 10. Kh4' Rh8+'' 11. Kg5<sup>''''</sup> Rg8+'' 12. Kh6'' Rh8+'' 13. Kg7<sup>''''</sup> Rc8'' 14. Qf4+<sup>''''</sup> Ke1'' 15. Qb4+<sup>''''</sup> Kf1'' 16. Kf7'' Bh7'' 17. Qb5+'' Kf2'' 18. Qb6+<sup>''''</sup> Kg3'' 19. Qe3+<sup>''''</sup> Kg2'' 20. Kg7'' Rc7+'' 21. Kh6'' Rb7'' 22. Qe2+'' Kg3'' 23. Kg5<sup>''''</sup> Rg7+'' 24. Kh5'' Rb7'' 25. Qe3+<sup>''''</sup> Kg2'' 26. Qc3'' Rf7'' 27. Kg4<sup>''''</sup> Bf5+'' 28. Kh4<sup>''''</sup> Bh7'' 29. Qg3+'' Kh1' 30. Qe3' Kg2'' 31. Qg5+'' Kf2'' 32. Qd2+'' Kf1'' 33. Kg3'' Rg7+'' 34. Kh2'' Re7'' 35. Qd1+'' Kf2'' 36. Qh5'' Rb7'' 37. Qc5+'' Ke2'' 38. Qe5+'' Kf1'' 39. Qe3' Rb2+'' 40. Kg3'' Rc2'' 41. Qf3+'' Ke1'' 42. Qh1+'' Ke2'' 43. Qxh7'' **{KQKR: dtc/m/r/z/zr = -23/-28/-23/-23/-23m}** Rc3+'' 44. Kf4'' Rc4+'' 45. Ke5'' Ke3'' 46. Qa7+' Kd3'' 47. Qf2' Rb4'' 48. Qf1+' Kd2'' 49. Kd5'' Ra4'' 50. Qf2+'' Kd3'' 51. Qf3+'' Kc2'' 52. Qe2+'' Kc3'' 53. Qe1+' Kb3' 54. Qd1+' Kb4'' 55. Qd2+' Kb3'' 56. Qd3+'' Ka2'' 57. Kc5'' Ra3' 58. Qd4' Rb3' 59. Kc4'' Ra3'' 60. Qe5'' Rb3'' 61. Qd5'' Rb2'' 62. Kc3+'' Ka1' 63. Qa5+' Kb1'' 64. Qa4'' Rb8'' 65. Qe4+' Ka2'' 66. Qd5+'' Ka1' 67. Qh1+'' Ka2'' 68. Qh2+'' Kb1'' 69. Qxb8+'' **{KQK: dtx = -2m}** Kc1'' 70. Qb5' Kd1° 71. Qf1#'' **{Nalimov and Lomonosov DTM EGTs} \*****

[White "KQ"]  
[Black "KRB"]  
[Result "1-0"]  
[Date "2014.07.29"]  
[Event "5m, 2-3m, KQKRB, GBR 1330.00, maxDTM<sub>50,0</sub> 2-3m\_P-less l&w: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
[Annotator "Huntington, Galen"]  
[SetUp "1"]  
[FEN "K4b2/8/8/6Q1/8/k3r3/8 b - - 0 1"]  
[PlyCount "140"]

**{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}**  
**{a maxDTM<sub>50,0</sub> 2-3m\_P-less btm loss: dtc/m/m<sub>50</sub>/z = -41/-70/-70/-41m} 1... Re8+**  
**{a maxDTM<sub>50,0</sub> 2-3m\_P-less wtm win: dtc/m/m<sub>50</sub>/z = 41/70/70/41m} 2. Ka7<sup>''''</sup> Bc5+'' 3. Ka6<sup>''''</sup> Ka3'' 4. Qh5<sup>''''</sup> Re6+'' 5. Kb5<sup>''''</sup> Be3'' 6. Kc4<sup>''''</sup> Rc6+'' 7. Kd3<sup>''''</sup> Bb6'' 8. Qb5<sup>''''</sup> Rh6'' 9. Kd2' Rh2+'' 10. Kd1' Rh1+'' 11. Ke2'' Rh2+'' 12. Kf1'' Rh1+'' 13. Kg2'' Rh6'' 14. Qd3+<sup>''''</sup> Ka4'' 15. Qd7+<sup>''''</sup> Ka3'' 16. Kg3'' Bg1'' 17. Qe7+'' Kb3'' 18. Qf7+<sup>''''</sup> Kc2'' 19. Qc4+<sup>''''</sup> Kb2'' 20. Kg2'' Rg6+'' 21. Kf1'' Rg7'' 22. Qb4+'' Kc2'' 23. Ke2<sup>''''</sup> Rg2+'' 24. Ke1'' Rg7'' 25. Qc4+'' Kb2'' 26. Qc6'' Rg3'' 27. Kd2<sup>''''</sup> Be3+'' 28. Kd1<sup>''''</sup> Bg1'' 29. Qc2+'' Ka3' 30. Qc4'' Kb2'' 31. Qe2+'' Kb3'' 32. Qb5+'' Ka3'' 33. Kc2'' Rg2+'' 34. Kb1'' Rg4'' 35. Qa5+'' Kb3'' 36. Qe1'' **{SZ<sub>(50)</sub>: Qd5+''}** Rg7'' **{SZ<sub>(50)</sub>: Ka3''}** 37. Qe6+'' Kb4'' 38. Qe4+'' Ka3'' 39. Qf3+' Ka4'' 40. Qf1'' Rb7+'' 41. Ka2<sup>''''</sup> Rd7'' 42. Qxg1'' **{KQKR: dtc/m/z = -24/-29/-24m}** Kb5' 43. Kb3' Rd3+'' 44. Kc2'' Rd6' 45. Kc3'' Rc6+'' 46. Kd4' Rd6+'' 47. Ke5'' Rd8'' 48. Qg5'' Rd3' 49. Ke4+'' Kc4'' 50. Qf6' Rc3' 51. Qb6'' Rc2'' 52. Qc6+'' Kb3'' 53. Qb5+'' Kc3'' 54. Ke3'' Rb2'' 55. Qc5+'' Kb3'' 56. Kd3'' Ka4'' 57. Qd6'' Kb3'' 58. Qf6'' Rb1'' 59. Qc3+'' Ka2'' 60. Qe5'' **{SZ<sub>(50)</sub>: Qa5+''}** Kb3'' 61. Qd5+'' Kb2'' 62. Kd2'' Rg1'' **{SZ<sub>(50)</sub>: Ra1'}** 63. Qd4+'' Kb3'' 64. Qxg1'' **{KQK: dtx = -7m}** Kc4'' 65. Qg5' Kd4'' 66. Kc2' Ke4'' 67. Kc3'' Kf3° 68. Kd3'' Kf2° 69. Qg4'' Kf1'' 70. Ke3'' Ke1° 71. Qg1#'' **{Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTC/Z<sub>(50)</sub> EGTs} \*****

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 [Result "1-0"]  
 [Date "2014.07.29"]  
 [Event "5m, 2-3m, KQKRB, GBR 1330.00, maxDTM<sub>50,pc</sub> 2-3m\_P-less l&w: SV<sup>+</sup>M<sub>50</sub>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
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 [PlyCount "144"]

**{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}**

**{a maxDTM<sub>50,pc</sub> 2-3m\_P-less btm loss: dtc/m/m<sub>50</sub>/z = -41/-70/-72/-41m} 1... Re8+**  
**{a maxDTM<sub>50,pc</sub> 2-3m\_P-less wtm win: dtc/m/m<sub>50</sub>/z = 41/70/72/41m} 2. Ka7**<sup>''''</sup> Bc5<sup>+</sup> 3. Ka6<sup>''''</sup> Ka3<sup>''</sup> 4. Qh5<sup>''''</sup> Re6<sup>+</sup> 5. Kb5<sup>''''</sup> Be3<sup>''</sup> 6. Kc4<sup>''''</sup> Rc6<sup>+</sup> 7. Kd3<sup>''''</sup> Bb6<sup>''</sup> 8. Qb5<sup>''''</sup> Rh6<sup>''</sup> 9. Kd2<sup>''</sup> Rh2<sup>+</sup> 10. Kd1<sup>''</sup> Rh1<sup>+</sup> 11. Ke2<sup>''</sup> Rh2<sup>+</sup> 12. Kf1<sup>''</sup> Rh1<sup>+</sup> 13. Kg2<sup>''</sup> Rh6<sup>''</sup> 14. Qd3<sup>''''</sup> Ka4<sup>''</sup> 15. Qd7<sup>''''</sup> Ka3<sup>''</sup> 16. Kg3<sup>''</sup> Bg1<sup>''</sup> 17. Qe7<sup>+</sup> Kb3<sup>''</sup> 18. Qf7<sup>''''</sup> Kc2<sup>''</sup> 19. Qc4<sup>''''</sup> Kb2<sup>''</sup> 20. Kg2<sup>''</sup> Rg6<sup>+</sup> 21. Kf1<sup>''</sup> Rg7<sup>''</sup> 22. Qb4<sup>+</sup> Kc2<sup>''</sup> 23. Ke2<sup>''''</sup> Rg2<sup>+</sup> 24. Ke1<sup>''</sup> Rg7<sup>''</sup> 25. Qc4<sup>''''</sup> Kb2<sup>''</sup> 26. Qc6<sup>''</sup> Rg3<sup>''</sup> 27. Kd2<sup>''''</sup> Be3<sup>+</sup> 28. Kd1<sup>''''</sup> Bg1<sup>''</sup> 29. Qc2<sup>+</sup> Ka3<sup>''</sup> 30. Qc4<sup>''</sup> Kb2<sup>''</sup> 31. Qe2<sup>+</sup> Kb3<sup>''</sup> 32. Qb5<sup>+</sup> Ka3<sup>''</sup> 33. Kc2<sup>''</sup> Rg2<sup>+</sup> 34. Kb1<sup>''</sup> Rg4<sup>''</sup> **{and now, annotation and moves differ from the 'pc = 0' line above}** 35. Qa5<sup>+</sup> Kb3<sup>''</sup> 36. Qd5<sup>+</sup> **{SM: Qe1'}** Kb4<sup>''</sup> 37. Qe6<sup>''</sup> Rg5<sup>''</sup> **{SZ<sub>(50)</sub><sup>+</sup>: Rg7'}** 38. Qe7<sup>''''</sup> Rc5<sup>''</sup> 39. Qe1<sup>+</sup> Rc3<sup>''</sup> 40. Qxg1<sup>''''</sup> **{KQKR: dtc/m/z = -28/-33/-28m}** Kc4<sup>''</sup> 41. Kb2<sup>''</sup> Rb3<sup>+</sup> 42. Kc2<sup>''</sup> Rc3<sup>+</sup> 43. Kd2<sup>''</sup> Rd3<sup>+</sup> 44. Ke2<sup>''</sup> Rd4<sup>''</sup> 45. Ke3<sup>''</sup> Rd6<sup>''</sup> 46. Qg7<sup>''</sup> Kd5<sup>''</sup> 47. Qd4<sup>+</sup> Ke6<sup>''</sup> 48. Qc4<sup>+</sup> Ke5<sup>''</sup> 49. Qe4<sup>+</sup> Kf6<sup>°</sup> 50. Kf4<sup>''</sup> Re6<sup>''</sup> 51. Qb4<sup>''</sup> Kf7<sup>''</sup> 52. Qb7<sup>+</sup> Ke8<sup>''</sup> 53. Kf5<sup>''</sup> Rd6<sup>''</sup> 54. Ke5<sup>''</sup> Rd7<sup>''</sup> 55. Qb3<sup>''</sup> Ke7<sup>''</sup> 56. Qg8<sup>''</sup> Rc7<sup>''</sup> 57. Qg7<sup>''</sup> Kd8<sup>''</sup> 58. Qf8<sup>''</sup> Kd7<sup>°</sup> 59. Kd5<sup>''</sup> Rb7<sup>''</sup> 60. Qf7<sup>+</sup> Kc8<sup>''</sup> 61. Qe8<sup>''</sup> Kc7<sup>°</sup> 62. Kc5<sup>''</sup> Ra7<sup>''</sup> 63. Qe5<sup>+</sup> Kb7<sup>''</sup> 64. Kb5<sup>''</sup> Ra2<sup>''</sup> **{SZ<sub>(50)</sub><sup>+</sup>: Ra8'}** 65. Qd5<sup>''</sup> Kc7<sup>''</sup> 66. Qxa2<sup>''</sup> **{KQK: dtx = -7m}** Kd6<sup>''</sup> 67. Qe2<sup>''</sup> Kd5<sup>''</sup> 68. Kb6<sup>''</sup> Kd4<sup>''</sup> 69. Kc6<sup>''</sup> Kc3<sup>°</sup> 70. Kc5<sup>''</sup> Kb3<sup>°</sup> 71. Qd2<sup>''</sup> Ka3<sup>''</sup> 72. Kc4<sup>''</sup> Ka4<sup>°</sup> 73. Qa2<sup>#</sup> **{Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTC/Z<sub>(50)</sub> EGTs} \***

[White "KQ"]  
 [Black "KRP"]  
 [Result "1-0"]  
 [Event "5m, 2-3m, KQKRP, GBR 1300.01, maxDTC 2-3m w&l: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]  
 [Date "2013.10.29"]  
 [Annotator "Haworth, Guy"]  
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**{the one maxDTC/M/Z 2-3m win: dtc/m/z = 79/104/76m} 1. Qg7**<sup>''''</sup>  
**{1 of 5 maxDTC, of 3 maxDTM and of 3 maxDTZ 2-3m losses: dtc/m/z = -78/-103/-75m} Kf1**<sup>''</sup> 2. Qa1<sup>''''</sup> Kg2<sup>''</sup> 3. Qa2<sup>''''</sup> Kg3<sup>''</sup> 4. Qg8<sup>''''</sup> Kf2<sup>''</sup> 5. Qe6<sup>''''</sup> Rg5<sup>''</sup> 6. Qf6<sup>''</sup> Rg4<sup>''</sup> 7. Qd4<sup>''''</sup> Kg3<sup>''</sup> 8. Qg1<sup>''''</sup> Kf3<sup>''</sup> 9. Qh2<sup>''</sup> Rg3<sup>''</sup> 10. Qh4<sup>''''</sup> Rg4<sup>''</sup> 11. Qh3<sup>+</sup> Rg3<sup>''</sup> 12. Qf5<sup>''</sup> Rg4<sup>''</sup> 13. Kb7<sup>''''</sup> Kg3<sup>''</sup> 14. Qe5<sup>''''</sup> Kh3<sup>''</sup> 15. Qd5<sup>''</sup> Kg3<sup>''</sup> 16. Qd6<sup>''''</sup> Kh3<sup>''</sup> 17. Qd3<sup>+</sup> Kg2<sup>''</sup> 18. Qd4<sup>''</sup> Rh4<sup>''</sup> 19. Qd2<sup>+</sup> Kf1<sup>''</sup> 20. Qd3<sup>+</sup> Kf2<sup>''</sup> 21. Qe4<sup>''</sup> Rg4<sup>''</sup> 22. Qd4<sup>''''</sup> Kg3<sup>''</sup> 23. Qg1<sup>+</sup> Kf3<sup>''</sup> 24. Qh2<sup>''</sup> Rg2<sup>''</sup> 25. Qh4<sup>''</sup> Rg4<sup>''</sup> 26. Qh3<sup>+</sup> Rg3<sup>''</sup> 27. Qf5<sup>''</sup> Rg2<sup>''</sup> 28. Kc6<sup>''</sup> Rd2<sup>''</sup> 29. Kc5<sup>''</sup> Ke3<sup>''</sup> 30. Qg5<sup>''</sup> Rd3<sup>''</sup> 31. Qe7<sup>+</sup> Kf3<sup>''</sup> 32. Qh4<sup>''</sup> Rd2<sup>''</sup> 33. Kc4<sup>''</sup> Ke3<sup>''</sup> 34. Qe1<sup>+</sup> Re2<sup>''</sup> 35. Qg1<sup>+</sup> Ke4<sup>''</sup> 36. Kc5<sup>''</sup> Kf3<sup>''</sup> 37. Kd5<sup>''</sup> Rg2<sup>''</sup> 38. Qb1<sup>''</sup> Kg3<sup>''</sup> 39. Qg6<sup>''''</sup> Kh2<sup>''</sup> 40. Qh6<sup>+</sup> Kg3<sup>''</sup> 41. Qg5<sup>''''</sup> Kf3<sup>''</sup> 42. Qh4<sup>''</sup> Re2<sup>''</sup> 43. Qh3<sup>+</sup> Kf2<sup>°</sup> 44. Qh2<sup>''''</sup> Kf3<sup>''</sup> 45. Qh4<sup>''</sup> Re3<sup>''</sup> 46. Kd4<sup>''</sup> Re2<sup>''</sup> 47. Qh5<sup>+</sup> Kf2<sup>''</sup> 48. Kd3<sup>''</sup> Re3<sup>+</sup> 49. Kd2<sup>''</sup> Kg3<sup>''</sup> 50. Qg5<sup>''</sup> Kf3<sup>''</sup> **{and here SC and SM must diverge}** 51. Qh4<sup>''</sup> Re2<sup>+</sup> 52. Kd1<sup>''</sup> Rg2<sup>''</sup> 53. Ke1<sup>''''</sup> Rg1<sup>+</sup> 54. Kd2<sup>°</sup> Rg3<sup>''</sup> 55. Qh5<sup>+</sup> Ke4<sup>''</sup> 56. Ke1<sup>''</sup> Rg1<sup>+</sup> 57. Kf2<sup>''''</sup> Rg3<sup>''</sup> 58. Qc5<sup>''</sup> Rf3<sup>+</sup> 59. Kg2<sup>''</sup> Re3<sup>''</sup> 60. Qa5<sup>''</sup> Rg3<sup>+</sup> 61. Kh2<sup>''</sup> Re3<sup>''</sup> 62. Qg5<sup>''</sup> Rg3<sup>''</sup> 63. Qf6<sup>''</sup> Kf3<sup>''</sup> 64. Qe6<sup>''</sup> Rg2<sup>+</sup> 65. Kh3<sup>''</sup> Rg3<sup>+</sup> 66. Kh4<sup>''</sup> Rg2<sup>''</sup> 67. Qc6<sup>+</sup> Kf2<sup>''</sup> 68. Qe4<sup>''</sup> f3<sup>''</sup> 69. Qd4<sup>+</sup> Kf1<sup>''</sup> 70. Kh3<sup>''</sup> Ke2<sup>''</sup> 71. Qe4<sup>+</sup> Kf2<sup>''</sup> 72. Qf4<sup>''</sup> Ke2<sup>''</sup> 73. Qd4<sup>''</sup> Rf2<sup>''</sup> 74. Qe4<sup>+</sup> Kd2<sup>''</sup> 75. Kg3<sup>''</sup> Rf1<sup>''</sup> 76. Qc4<sup>''</sup> Ke1<sup>''</sup> 77. Qc2<sup>''</sup> f2<sup>''</sup> 78. Kf3<sup>''</sup> Rg1<sup>''</sup> 79. Qc1<sup>#</sup> **{MB 'Nalimov' DTC EGTs} \***

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**{the one maxDTC/M/Z 2-3m win: dtc/m/z = 79/104/76m}** 1. Qg7+'''  
**{1 of 5 maxDTC, of 3 maxDTM and of 3 maxDTZ 2-3m losses: dtc/m/z = -78/-103/-75m}** Kf1'' 2. Qa1+'''  
Kg2'' 3. Qa2+''' Kg3'' 4. Qg8+''' Kf2'' 5. Qe6''' Rg5'' 6. Qf6'' Rg4'' 7. Qd4+''' Kg3'' 8. Qg1+''' Kf3'' 9. Qh2''  
Rg3'' 10. Qh4''' Rg4'' 11. Qh3+'' Rg3'' 12. Qf5'' Rg4'' 13. Kb7''' Kg3'' 14. Qe5''' Kh3'' 15. Qd5' Kg3'' 16.  
Qd6''' Kh3'' 17. Qd3+'' Kg2'' 18. Qd4'' Rh4'' 19. Qd2+' Kf1'' 20. Qd3+' Kf2'' 21. Qe4'' Rg4'' 22. Qd4+''' Kg3''  
23. Qg1+'' Kf3'' 24. Qh2'' Rg2' 25. Qh4'' Rg4' 26. Qh3+'' Rg3'' 27. Qf5'' Rg2'' 28. Kc6'' Rd2'' 29. Kc5'' Ke3'' 30.  
Qg5'' Rd3'' 31. Qe7+'' Kf3'' 32. Qh4' Rd2'' 33. Kc4'' Ke3'' 34. Qe1+'' Re2'' 35. Qg1+'' Ke4'' 36. Kc5' Kf3'' 37.  
Kd5'' Rg2'' 38. Qb1' Kg3'' 39. Qg6+''' Kh2' 40. Qh6+' Kg3'' 41. Qg5+'' Kf3'' 42. Qh4'' Re2'' 43. Qh3+' Kf2°  
44. Qh2+''' Kf3'' 45. Qh4'' Re3'' 46. Kd4'' Re2'' 47. Qh5+'' Kf2'' 48. Kd3'' Re3+'' 49. Kd2'' Kg3'' 50. Qg5+'  
Kf3'' **{and here SM and SC must diverge}** 51. Kd1'' Ra3'' 52. Qf6'' Re3'' 53. Qh4'' Re5'' 54. Qh8'' Re3'' 55.  
Qh3+'' Ke4'' 56. Qh5'' Rg3'' 57. Ke1'' Rg1+'' 58. Kf2''' Rg3'' 59. Qc5' Rf3+' 60. Kg2' Re3' 61. Qh5' Rg3+'' 62.  
Kh2'' Re3'' 63. Qg6+' Ke5'' 64. Qg5+'' Ke4'' 65. Qf6'' Rg3' 66. Qe6+'' Kf3'' 67. Qf5'' Ke3'' 68. Qd5'' Kf2'' 69.  
Qe4'' Rf3'' 70. Qe5'' Kf1'' 71. Qd5'' Rf2+' 72. Kh1'' Ke1' 73. Qe4+'' Kf1' 74. Qb1+'' Ke2° 75. Kg1'' Rf3'' 76.  
Qe4+'' Re3'' 77. Qc2+'' Ke1'' 78. Qf2+'' Kd1° 79. Kf1'' Rc3' 80. Qxf4'' **{KQKR: dtc/m/r/z/zr**  
**= -21/-24/-21/-21/-21m}** Rd3' 81. Qc4' Rf3+' 82. Kg2'' Re3' 83. Kf2'' Rc3'' 84. Qd5+'' Kc1' 85. Ke2'' Rc2+' 86.  
Ke3'' Rc3+'' 87. Kd4'' Ra3' 88. Qc5+' Kb2'' 89. Qb4+'' Rb3'' 90. Qd2+'' Kb1'' 91. Kc4'' Ra3'' 92. Qe2'' Kc1'' 93.  
Kb4'' Ra8'' 94. Qf1+'' Kc2' 95. Qg2+'' Kd3'' 96. Qxa8'' **{KQK: dtx = -8m}** Ke3'' 97. Qd8' Ke2' 98. Qf8' Ke3''  
99. Qf5'' Ke2' 100. Qf4' Ke1' 101. Qh2' Kd1' 102. Qg2' Kc1' 103. Kc3'' Kb1' 104. Qb2#'' **{Nalimov and**  
**Lomonosov DTM EGTs}** \*

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 [Date "2014.07.31"]  
 [Event "5m, 2-3m, KQKRP, GBR 1300.01, maxDTM<sub>50,0</sub> 2-3m\_P-ful w&l: SV<sup>+</sup>M<sub>50</sub>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
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{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}

{a maxDTM<sub>50,0</sub> 2-3m\_P-ful wtm win: dtc/m/m<sub>50</sub>/z = 69/97/98/39} 1. Ka4<sup>'''</sup>  
 {a maxDTM<sub>50,0</sub> 2-3m\_P-ful btm loss: dtc/m/m<sub>50</sub>/z = -68/-96/-97/-38} Ra2<sup>+''</sup> 2. Kb4' Ra7<sup>'''</sup> 3. Kc3<sup>''''</sup> Ra3<sup>+''</sup> 4. Kd2' Ra2<sup>+''</sup> 5. Ke3' Ra3<sup>+''</sup> 6. Kf2' Ra2<sup>+''</sup> 7. Kf1<sup>''</sup> Ra5<sup>'''</sup> 8. Qe4<sup>+'</sup> Kc7<sup>''</sup> 9. Qe7<sup>+'''</sup> Kc6<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Kb8<sup>''</sup>} 10. Ke2<sup>''</sup> Rc5<sup>''</sup> 11. Kd3<sup>''''</sup> b5<sup>''</sup> {KQKRP(b5): dtc/m/z<sub>(50)</sub> = 58/86/37m} 12. Qe8<sup>+'</sup> Kb7<sup>''</sup> 13. Qd7<sup>+'''</sup> Kb6<sup>''</sup> 14. Qd8<sup>+'''</sup> Kc6<sup>''</sup> 15. Kd4' Rc4<sup>+''</sup> 16. Ke5<sup>''''</sup> Ra4' 17. Qb8<sup>''</sup> Rc4<sup>''</sup> 18. Ke6<sup>''</sup> Rd4' 19. Ke7' Rd7<sup>+''</sup> 20. Kf8<sup>''</sup> Rd4<sup>''</sup> 21. Ke8<sup>''</sup> Kc5<sup>''</sup> 22. Qe5<sup>+'</sup> Kc4<sup>''</sup> 23. Qe6<sup>+'''</sup> {SZ<sub>(50)</sub><sup>-</sup>: Qe2<sup>+'''</sup>} Kc3' 24. Qe3<sup>+'</sup> Kc4<sup>''</sup> 25. Qc1<sup>+'''</sup> Kb4<sup>''</sup> 26. Qb2<sup>+'''</sup> Kc5<sup>''</sup> 27. Qc3<sup>+'''</sup> Rc4<sup>''</sup> 28. Qa5<sup>''''</sup> Rd4<sup>''</sup> 29. Ke7<sup>''</sup> Kc6<sup>''</sup> 30. Qa6<sup>+'''</sup> Kc5<sup>''</sup> 31. Qa7<sup>+'''</sup> Kc4<sup>''</sup> 32. Qa2<sup>+'''</sup> Kb4<sup>''</sup> 33. Qb2<sup>+'''</sup> Kc5<sup>''</sup> 34. Qf2<sup>''</sup> Kc4<sup>''</sup> 35. Ke6<sup>''</sup> Rd3<sup>''</sup> 36. Qc2<sup>+'''</sup> Rc3<sup>''</sup> 37. Qe4<sup>+'</sup> {SM: Qa2<sup>+'''</sup>} Kc5<sup>''</sup> 38. Qe5<sup>+'''</sup> Kb4<sup>''</sup> 39. Qe1<sup>''''</sup> Kb3<sup>''</sup> 40. Qb1<sup>+'''</sup> Ka4<sup>''</sup> 41. Qa2<sup>+'''</sup> Kb4<sup>''</sup> 42. Qb2<sup>+'''</sup> Kc4<sup>''</sup> 43. Kd6' b4<sup>''</sup> {KQKRP(b4): dtc/m/z<sub>(50)</sub> = 26/55/5m} 44. Kc6<sup>''</sup> b3<sup>''</sup> {KQKRP(b3): dtc/m/z<sub>(50)</sub> = 25/54/12m} 45. Qe2<sup>+'''</sup> Rd3<sup>''</sup> 46. Qe5<sup>''</sup> Rd2<sup>''</sup> 47. Qf4<sup>+'''</sup> Kd3<sup>''</sup> 48. Qf1<sup>+'''</sup> Kd4<sup>''</sup> 49. Kb5<sup>''</sup> {SZ<sub>(50)</sub><sup>-</sup>: Qf4<sup>+'''</sup>} b2<sup>''</sup> {KQKRP(b2): dtc/m/z<sub>(50)</sub> = 20/49/20m} 50. Kb4<sup>''</sup> Ke4<sup>''</sup> 51. Kc3<sup>''</sup> Rh2<sup>''</sup> 52. Qe1<sup>+'''</sup> Kf3<sup>''</sup> 53. Kd3<sup>''</sup> Kf4<sup>''</sup> 54. Qd1<sup>''</sup> Rf2<sup>''</sup> 55. Qg1<sup>''</sup> Kf3<sup>''</sup> 56. Qe1<sup>''</sup> Kg4<sup>''</sup> 57. Ke3<sup>''</sup> Rf3<sup>+'''</sup> 58. Ke2<sup>''</sup> Rb3<sup>''</sup> 59. Qg1<sup>+'''</sup> Rg3<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Kh3<sup>''</sup>} 60. Qd1<sup>''</sup> Kf4<sup>''</sup> 61. Kf2' Rh3<sup>''</sup> 62. Qd2<sup>+'</sup> Kf5<sup>''</sup> 63. Qa5<sup>+'''</sup> Kf4<sup>''</sup> 64. Qb4<sup>+'''</sup> Kf5<sup>''</sup> 65. Kg2<sup>''</sup> Re3<sup>''</sup> 66. Qxb2<sup>''</sup> {KQKR: dtc/m/z = -27/-32/-27m} Ke4<sup>''</sup> 67. Qb4<sup>+'</sup> Kd5<sup>''</sup> 68. Kf2<sup>''</sup> Re4<sup>''</sup> 69. Qb5<sup>+'</sup> Kd6<sup>''</sup> 70. Kf3<sup>''</sup> Re5<sup>''</sup> 71. Qb3<sup>''</sup> Kd7<sup>''</sup> 72. Kf4<sup>''</sup> Rc5<sup>''</sup> 73. Ke4<sup>''</sup> Kd6<sup>''</sup> 74. Qf7<sup>''</sup> Rb5<sup>''</sup> 75. Qf8<sup>+'</sup> Kd7<sup>''</sup> 76. Kd4<sup>''</sup> Ra5<sup>''</sup> 77. Qf7<sup>+'''</sup> Kd6<sup>''</sup> 78. Qf6<sup>+'''</sup> Kc7<sup>''</sup> 79. Qe7<sup>+'''</sup> Kc6<sup>''</sup> 80. Qe6<sup>+'</sup> Kc7<sup>''</sup> 81. Kc4<sup>''</sup> Ra2<sup>''</sup> 82. Qe5<sup>+'''</sup> Kc6<sup>''</sup> 83. Kb4<sup>''</sup> Ra7<sup>''</sup> 84. Qc5<sup>+'</sup> Kb7<sup>''</sup> 85. Kb5<sup>''</sup> Kb8<sup>''</sup> 86. Qd4<sup>''</sup> {SZ<sub>(50)</sub><sup>-</sup>: Qe5<sup>+'''</sup>} Rc7<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Rh7<sup>''</sup>} 87. Kb6<sup>''</sup> Rb7<sup>+'''</sup> 88. Ka6<sup>''</sup> Kc8<sup>''</sup> 89. Qh8<sup>+'''</sup> Kc7<sup>''</sup> 90. Qg7<sup>+'''</sup> Kd6<sup>''</sup> 91. Kxb7<sup>''</sup> {KQK: dtx = -7m} Kc5<sup>''</sup> 92. Qd7<sup>''</sup> Kc4<sup>''</sup> 93. Kb6<sup>''</sup> Kc3<sup>''</sup> 94. Kb5<sup>''</sup> Kc2<sup>''</sup> 95. Kb4<sup>''</sup> Kb2<sup>''</sup> 96. Qd2<sup>+'</sup> Kb1<sup>''</sup> 97. Kb3<sup>''</sup> Ka1<sup>°</sup> 98. Qb2<sup>#</sup> {Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTC/Z<sub>(50)</sub> EGTs} \*



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{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}

{a maxDTM<sub>50,pc</sub> 2-3m\_P-ful btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -63/-91/-107/-32/-32m} 1... Rc4+  
 {a maxDTM<sub>50,pc</sub> 2-3m\_P-ful wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 63/91/107/32/32m} 2. Kb2<sup>''''</sup> Rb4+<sup>''</sup> 3. Kc3<sup>''''</sup> Rb6<sup>''</sup> 4. Kd4<sup>''''</sup> Rb4+<sup>''</sup> 5. Kd3<sup>''''</sup> Rb6<sup>''</sup> 6. Qg5<sup>''''</sup> Kd7<sup>''</sup> 7. Qf5+<sup>''''</sup> Kc7<sup>''</sup> 8. Qa5<sup>''''</sup> Kc6<sup>''</sup> 9. Kd4<sup>''''</sup> Ra6<sup>''</sup> 10. Qd8<sup>''''</sup> Ra1<sup>''</sup> {SM<sup>+</sup>: Ra4<sup>''</sup>} 11. Ke3<sup>''''</sup> {SM: Ke5<sup>''</sup>} Rh1<sup>''</sup> 12. Ke2' Rh2+<sup>''</sup> 13. Kd3<sup>''''</sup> Rh1<sup>''</sup> 14. Qf6+<sup>''''</sup> Kc7<sup>''</sup> 15. Qf3<sup>''''</sup> Rb1<sup>''</sup> 16. Qg3+<sup>''''</sup> Kc6<sup>''</sup> 17. Qg2+<sup>''''</sup> Kd7<sup>''</sup> 18. Qg7+' Kc6<sup>''</sup> 19. Qh6+<sup>''''</sup> Kc5<sup>''</sup> {SM<sup>+</sup>/Z<sub>(50)</sub><sup>+</sup>: Kb5<sup>''</sup>} 20. Qe3+<sup>''''</sup> Kc6<sup>''</sup> 21. Kc4<sup>''''</sup> b5+<sup>''</sup> {KQKRP(b5): dtc/m/z<sub>(50)</sub> = 58/86/37m} 22. Kc3<sup>''''</sup> Ra1<sup>''</sup> 23. Qe6+' Kc5<sup>''</sup> 24. Qc8+<sup>''</sup> Kb6<sup>''</sup> 25. Qb8+<sup>''</sup> Kc6<sup>''</sup> 26. Kd4<sup>''</sup> Ra4+<sup>''</sup> 27. Ke5<sup>''''</sup> Rc4<sup>''</sup> {position 18w in the KQKRP DTM<sub>50,0</sub> line above} 28. Ke6<sup>''</sup> Rd4<sup>''</sup> 29. Ke7' Rd7+<sup>''</sup> 30. Kf8<sup>''</sup> Rd4<sup>''</sup> 31. Ke8<sup>''</sup> Kc5<sup>''</sup> 32. Qe5+' Kc4<sup>''</sup> 33. Qe6+<sup>''</sup> Kc3<sup>''</sup> 34. Qe3+' Kc4<sup>''</sup> 35. Qc1+<sup>''</sup> Kb4<sup>''</sup> 36. Qb2+<sup>''</sup> Kc5<sup>''</sup> 37. Qc3+<sup>''</sup> Rc4<sup>''</sup> 38. Qa5<sup>''''</sup> Rd4<sup>''</sup> 39. Ke7<sup>''</sup> Kc6<sup>''</sup> 40. Qa6+<sup>''</sup> Kc5<sup>''</sup> 41. Qa7+<sup>''</sup> Kc4<sup>''</sup> 42. Qa2+<sup>''''</sup> Kb4<sup>''</sup> 43. Qb2+<sup>''''</sup> Kc5<sup>''</sup> 44. Qf2<sup>''</sup> Kc4<sup>''</sup> 45. Ke6<sup>''</sup> Rd3<sup>''</sup> 46. Qc2+<sup>''</sup> Rc3<sup>''</sup> 47. Qe4+' {SM: Qa2+<sup>''</sup>} Kc5<sup>''</sup> 48. Qe5+<sup>''</sup> Kb4<sup>''</sup> 49. Qe1<sup>''''</sup> Kb3<sup>''</sup> 50. Qb1+<sup>''</sup> Ka4<sup>''</sup> 51. Qa2+<sup>''</sup> Kb4<sup>''</sup> 52. Qb2+<sup>''</sup> Kc4<sup>''</sup> 53. Kd6<sup>''</sup> b4<sup>''</sup> {KQKRP(b4): dtc/m/z<sub>(50)</sub> = 26/55/5m} 54. Kc6<sup>''</sup> b3<sup>''</sup> {KQKRP(b3): dtc/m/z<sub>(50)</sub> = 25/54/12m} 55. Qe2+<sup>''</sup> Rd3<sup>''</sup> 56. Qe5<sup>''</sup> Rd2<sup>''</sup> 57. Qf4+<sup>''</sup> Kd3<sup>''</sup> 58. Qf1+<sup>''</sup> Kd4<sup>''</sup> 59. Kb5<sup>''</sup> {SZ<sub>(50)</sub><sup>-</sup>: Qf4+<sup>''</sup>} b2<sup>''</sup> {KQKRP(b2): dtc/m/z<sub>(50)</sub> = 20/49/20m} 60. Kb4<sup>''</sup> Ke4<sup>''</sup> 61. Kc3<sup>''</sup> Rh2<sup>''</sup> 62. Qe1+<sup>''</sup> Kf3<sup>''</sup> 63. Kd3<sup>''</sup> Kf4<sup>''</sup> 64. Qd1<sup>''</sup> Rf2<sup>''</sup> 65. Qg1<sup>''</sup> Kf3<sup>''</sup> 66. Qe1<sup>''</sup> Kg4<sup>''</sup> 67. Ke3<sup>''</sup> Rf3+<sup>''</sup> 68. Ke2<sup>''</sup> Rb3<sup>''</sup> 69. Qg1+<sup>''''</sup> Rg3<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Kh3<sup>''</sup>} 70. Qd1<sup>''</sup> Kf4<sup>''</sup> 71. Kf2<sup>''</sup> Rh3<sup>''</sup> 72. Qd2+' Kf5<sup>''</sup> 73. Qa5+<sup>''</sup> Kf4<sup>''</sup> 74. Qb4+<sup>''</sup> Kf5<sup>''</sup> 75. Kg2<sup>''</sup> Re3<sup>''</sup> 76. Qxb2<sup>''</sup> {KQKR: dtc/m/z = -27/-32/-27m} Ke4<sup>''</sup> 77. Qb4+' Kd5<sup>''</sup> 78. Kf2<sup>''</sup> Re4<sup>''</sup> 79. Qb5+' Kd6<sup>''</sup> 80. Kf3<sup>''</sup> Re5<sup>''</sup> 81. Qb3<sup>''</sup> Kd7<sup>''</sup> 82. Kf4<sup>''</sup> Rc5<sup>''</sup> 83. Ke4<sup>''</sup> Kd6<sup>''</sup> 84. Qf7<sup>''</sup> Rb5<sup>''</sup> 85. Qf8+' Kd7<sup>''</sup> 86. Kd4<sup>''</sup> Ra5<sup>''</sup> 87. Qf7+<sup>''</sup> Kd6<sup>''</sup> 88. Qf6+<sup>''</sup> Kc7<sup>''</sup> 89. Qe7+<sup>''</sup> Kc6<sup>''</sup> 90. Qe6+' Kc7<sup>''</sup> 91. Kc4<sup>''</sup> Ra2<sup>''</sup> 92. Qe5+<sup>''</sup> Kc6<sup>''</sup> 93. Kb4<sup>''</sup> Ra7<sup>''</sup> 94. Qc5+' Kb7<sup>''</sup> 95. Kb5<sup>''</sup> Kb8<sup>''</sup> 96. Qd4<sup>''</sup> {SZ<sub>(50)</sub><sup>-</sup>: Qe5+<sup>''</sup>} Rc7<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Rh7<sup>''</sup>} 97. Kb6<sup>''</sup> Rb7+<sup>''</sup> 98. Ka6<sup>''</sup> Kc8<sup>''</sup> 99. Qh8+<sup>''</sup> Kc7<sup>''</sup> 100. Qg7+<sup>''</sup> Kd6<sup>''</sup> 101. Kxb7<sup>''</sup> {KQK: dtx = -7m} Kc5<sup>''</sup> 102. Qd7<sup>''</sup> Kc4<sup>''</sup> 103. Kb6<sup>''</sup> Kc3<sup>''</sup> 104. Kb5<sup>''</sup> Kc2<sup>''</sup> 105. Kb4<sup>''</sup> Kb2<sup>''</sup> 106. Qd2+' Kb1<sup>''</sup> 107. Kb3<sup>''</sup> Ka1<sup>°</sup> 108. Qb2#<sup>''</sup> {Huntington DTM<sub>50</sub>, Nalimov DTM, and MB 'Nalimov' DTC/Z<sub>(50)</sub> EGTs} \*

[White "KQ"]  
[Black "KRP"]  
[Result "1-0"]  
[Event "5m, 2-3m, KQKRP, GBR 1300.01, maxDTZ 2-3m\_P-ful w&l: SV+Z/SV+Z+"]  
[Date "2013.11.14"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/Q7/K7/5r2/5p2/8/6k1/8 w - - 0 1"]  
[PlyCount "151"]

**{the one maxDTC/M/Z 2-3m win: dtc/m/z = 79/104/76m}** 1. Qg7+'''  
**{1 of 5 maxDTC, of 3 maxDTM and of 3 maxDTZ 2-3m losses: dtc/m/z = -78/-103/-75m}** Kf1'' 2. Qa1+'''  
Kg2'' 3. Qa2+''' Kg3'' 4. Qg8+''' Kf2'' 5. Qe6''' Rg5'' 6. Qf6'' Rg4'' 7. Qd4+''' Kg3'' 8. Qg1+''' Kf3'' 9. Qh2''  
Rg3'' 10. Qh4''' Rg4'' 11. Qh3+'' Rg3'' 12. Qf5'' Rg4'' 13. Kb7''' Kg3'' 14. Qe5''' Kh3'' 15. Qd5' Kg3'' 16.  
Qd6''' Kh3'' 17. Qd3+'' Kg2'' 18. Qd4'' Rh4'' 19. Qd2+' Kf1'' 20. Qd3+' Kf2'' 21. Qe4'' Rg4'' 22. Qd4+''' Kg3''  
23. Qg1+'' Kf3'' 24. Qh2'' Rg2' 25. Qh4'' Rg4' 26. Qh3+'' Rg3'' 27. Qf5'' Rg2'' 28. Kc6'' Rd2'' 29. Kc5'' Ke3'' 30.  
Qg5'' Rd3'' 31. Qe7+'' Kf3'' 32. Qh4' Rd2'' 33. Kc4'' Ke3'' 34. Qe1+'' Re2'' 35. Qg1+'' Ke4'' 36. Kc5' Kf3'' 37.  
Kd5'' Rg2'' 38. Qb1' Kg3'' 39. Qg6+''' Kh2' 40. Qh6+' Kg3'' 41. Qg5+'' Kf3'' 42. Qh4'' Re2'' 43. Qh3+' Kf2°  
44. Qh2+'' Kf3'' 45. Qh4'' Re3'' 46. Kd4'' Re2'' 47. Qh5+'' Kf2'' 48. Kd3'' Re3+'' 49. Kd2'' Kg3'' 50. Qg5+'  
Kf3'' **{and here SZ and SC must diverge}** 51. Kd1'' Ra3'' 52. Qf6'' Re3'' 53. Qh4'' Re5'' 54. Qh8'' Re3'' 55.  
Qh3+'' Ke4'' 56. Qh5'' Rg3'' 57. Ke1'' Rg1+'' 58. Kf2''' Rg3'' 59. Qc5' Rf3+'' 60. Kg2' Re3'' 61. Qh5' Rg3+'' 62.  
Kh2'' Re3'' **{and here SZ and SM must diverge}** 63. Qg5'' Rg3'' 64. Qf6'' Re3'' 65. Qe6+'' Kf3'' 66. Qf5' Re2+''  
67. Kh3'' Ke3'' 68. Qe5+' Kf3'' 69. Qd4' Re1'' 70. Qd5+'' Re4'' 71. Qc6'' Ke3'' 72. Qc3+'' Kf2'' 73. Kg4'' Kg1'' 74.  
Qf3' Rd4' 75. Kh3'' Rd2' 76. Qxf4'' **{KQKR: dtc/m/r/z/zr = -12/-17/-12/-12/-12m}** **{MB 'Nalimov' DTZ and Lomonosov DTM EGTs}** \*

[White "KR"]  
[Black "KNP"]  
[Result "1-0"]  
[Date "2013.11.24"]  
[Event "5m, 2-3m, KRKNP, GBR 0103.01, longest-known decisive AUMS: SV+M+/SU<sup>m</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/7p/7n/k7/8/2K5/3R4 w - - 0 1"]  
[PlyCount "45"]

**{other than sequences defined in the context of a 50- or 75-move-rule, this is the longest decisive AUMS, Absolutely Unique Move Sequence, known to the author}**  
**{(Conrady, 2003; van der Heijden #70232, (2010)) {dtc/m/z = 27/50/18m}** 1. Rd4+''' **{dtc/m/z = -26/-49/-17m}**  
Ka3'' 2. Kd3''' Kb3'' 3. Rd6''' Kb4'' 4. Kd4''' Nf4'' 5. Rb6+''' Ka5'' 6. Rf6''' Ne2+'' 7. Kc4''' Ng3'' 8. Rg6'''  
Ne4'' 9. Kd4''' Nd2'' 10. Rg2''' Nf3+'' 11. Kc5''' Ka6'' 12. Rg6+''' Kb7'' 13. Kd5''' h5'' 14. Rh6''' h4'' 15.  
Rf6''' Ne1'' 16. Rf1''' Nc2'' 17. Rb1+''' Ka6'' 18. Rb2''' Ne1'' 19. Ke4''' h3'' 20. Rb1''' Nc2' 21. Kd3''' Na3''  
22. Ra1''' h2' 23. Rxa3+''' **{KRKP: dtc/m/z = -3/-15/-3m}** **{Nalimov and Lomonosov DTM EGTs}** \*

## 5-man: 3-2m

[White "KBB"]

[Black "KN"]

[Result "1-0"]

[Date "2014.01.21"]

[Event "5m, 3-2m, KBBKN, GBR 0032.00, maxDTC/Z KBBKN l&w: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "K7/8/7B/8/4k3/8/6n1/7B b - - 0 1"]

[PlyCount "132"]

**{The first 5-man EGT, and the DTC-deepest known s6m position from July 1983. The line from position 2w is as published (Roycroft, 1983; Thompson, 1986). Nunn (1995) #381, pp. 280-1, gives an alternative line from this position.}**

**{1 of 53 maxDTC/Z KBBKN btm losses: dtc/m/z = -66/-78/-66m} 1... Kf3''**

**{1 of 34 maxDTC/Z KBBKN wtm wins: dtc/m/z = 66/78/66m} 2. Bf8' Kg3' 3. Bd6+'''' Kf3'' 4. Ka7' Kf2'' 5. Bh2'' Kf1' 6. Kb7' Kf2'' 7. Kc6' Kf1' 8. Kd6' Kf2'' 9. Ke6'' Kf3' 10. Kf5'' Kf2'' 11. Kg4'' Ne3+'' 12. Kh3' Nc4'' 13. Bg2' Na3' 14. Bf4' Nc4' 15. Be4' Ke2'' 16. Kh4' Nd2'' 17. Bg6'' Nf1'' 18. Kg5'' Kf3' 19. Bd6'' Ke3' 20. Bc5+'' Kf3'' 21. Kf5' Ne3+'' 22. Ke5'' Ng2'' 23. Bh5+'' Kg3° 24. Bb6' Nf4' 25. Bd1'' Ng2' 26. Kd4' Ne1' 27. Ke3'' Ng2+'' 28. Kd2'' Kf4'' 29. Ke2'' Kf5'' 30. Bc2+'' Ke6'' 31. Bb3+'' Kd6' 32. Bf2'' Nf4+'' 33. Ke3'' Ne6'' 34. Bg3+'' Ke7'' 35. Be5'' Nc5' 36. Bd5'' Ne6' 37. Ke4'' Nc5+'' 38. Kf5'' Nd7'' 39. Bf4' Nb6'' 40. Bf3'' Nc4'' 41. Ke4'' Nd6+'' 42. Kd5'' Nf7'' 43. Bd1' Kf6'' 44. Bc2'' Ng5'' 45. Be5+'' Ke7'' 46. Bg3' Ne6'' 47. Ke5'' Nd8'' 48. Be1'' Nf7+'' 49. Kd5'' Nh8' 50. Bh4+'' Kf7'' **{and here SC<sup>-</sup> diverges from SM<sup>-</sup>}** 51. Kd6'' Ng6'' 52. Bb3+'' Kf8'' 53. Bf6' Ke8'' 54. Bc3' Nf4' 55. Bd4'' Ng6'' 56. Bd1'' Kf8'' 57. Bc3' Ne7' 58. Bh5' Nf5+'' 59. Ke5'' Nh6'' 60. Ke6'' Ng8'' 61. Bd4' Nh6'' 62. Kf6'' Ng8+'' 63. Kg6'' Ne7+'' 64. Kh7'' Nd5' 65. Bc5+'' Ne7° 66. Kh6'' Kg8° 67. Bxe7'' **{KBBK: dtx = -3m} {Thompson and MB 'Nalimov' DTC EGTs} \*****

[White "KBN"]

[Black "KB"]

[Result "1-0"]

[Date "2013.12.20"]

[Event "5m, 3-2m, KBNKB, GBR 0041.00, maxDTM KBNKB l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "8/7B/8/8/6N1/3k4/8/1Kb5 b - - 0 1"]

[PlyCount "78"]

**{the one maxDTM KBNKB btm loss: dtc/m/z = -8/-39/-8m} 1... Kd2''**

**{1 of 9 maxDTM KBNKB wtm wins: dtc/m/z = 8/39/8m} 2. Ne5'''' Kd1'' 3. Bc2+'''' Kd2'' 4. Bg6'' Kd1'' 5. Bh5+'''' Kd2'' 6. Nf3+'' Kd1'' 7. Nd4+'' Kd2'' 8. Nc2' Ba3'' 9. Nxa3'''' **{KBNK: dtx = -31m}** Kd3' 10. Bg6+'' Kc3' 11. Bf7'' Kd3' 12. Nc4'' Kc3' 13. Ne5' Kd2' 14. Ng6' Kd3' 15. Be6' Kc3' 16. Kc1'' Kd3'' 17. Kb2'' Kd4'' 18. Kc2' Ke3'' 19. Kc3'' Ke2' 20. Bg4+'' Ke3'' 21. Bf5'' Ke2'' 22. Kd4'' Ke1'' 23. Nf4' Kd2'' 24. Be4' Kc1'' 25. Kc3'' Kd1° 26. Bc2+'' Ke1'' 27. Kd3'' Kf2'' 28. Ng6' Kf3' 29. Bd1+'' Kf2'' 30. Bh5' Kf1' 31. Ke3'' Kg2'' 32. Nh4+'' Kg3' 33. Nf5+'' Kg2'' 34. Be2'' Kh2' 35. Bf1' Kg1'' 36. Ke2'' Kh1' 37. Kf2'' Kh2° 38. Nh6' Kh1° 39. Bg2+'' Kh2° 40. Ng4#'' **{Nalimov and Lomonosov DTM EGTs} \*****

[White "KBN"]  
[Black "KN"]  
[Result "1-0"]  
[Event "5m, 3-2m, KBNKN, GBR 0014.00, maxDTC/Z s6m\_P-less w&l: SV+C~/SV+C+~"]  
[Date "2013.10.29"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/1n5B/2K1N2k w - - 0 1"]  
[PlyCount "153"]

**{1 of 2 maxDTC/Z and of 2 maxDTM s6m\_P-less wtm wins: dtc/m/z = 77/107/77m}** 1. Bg3'''  
**{the one maxDTC/M/Z s6m\_P-less btm loss: dtc/m/z = -76/-106/-76m}** Nc4'' 2. Kd1'''' Ne3+'' 3. Ke2'''' Nf5'' 4.  
Bf2'''' Ne7'' 5. Kf3'' Nc6'' 6. Kg3'''' Nd4'' 7. Kg4'' Nc6' 8. Kh3'''' Ne5' 9. Nc2' Nd3'' 10. Bb6'''' Nf2+'' 11. Kg3''''  
Ne4+'' 12. Kf4'' Nd2'' 13. Ne3'''' Kh2'' 14. Kg4'''' Nb3'' 15. Ba7'' Nc1'' 16. Bd4'' Nd3'' 17. Kh4'' Nf2'' 18. Bc5'  
Ne4' 19. Bb4'''' Nf2' 20. Be1'' Ne4' 21. Kg4'' Kg1'' 22. Kf4'' Nc5'' 23. Kf3'' Ne6' 24. Bc3'''' Kh2'' 25. Kg4'' Nd8'  
26. Ba5' Nc6'' 27. Bc7+'' Kg1'' 28. Kg3'''' Nd4'' 29. Bb6'' Nb3'' 30. Ba7'''' Nd2'' 31. Nc4+'''' Kh1'' 32. Ne5'  
Nc4'' 33. Ng4' Ne5'' 34. Nf2+'' Kg1° 35. Nd3+'''' Kh1'' 36. Nf4'' Nf7'' 37. Nh5'' Nd6'' 38. Kh3'' Ne4'' 39. Be3''  
Nf2+'' 40. Kg3'''' Ne4+'' 41. Kf3'' Nd6'' 42. Bf4'' Nc4'' 43. Kf2'' Na5'' 44. Nf6'' Nb7'' 45. Kf3'' Nd8' 46. Ne4'  
Kg1'' 47. Nd2' Nc6'' 48. Bd6'' Nd4+'' 49. Ke4'''' Ne2'' 50. Ke3'' Nc3'' 51. Be5'' Na2'' 52. Kf3'' Nb4'' 53. Kg3''  
Kh1'' 54. Bd4'' Nc6'' 55. Bc5'' Nd8'' 56. Ne4'' Nb7'' 57. Bb4'' Nd8'' 58. Ba5'' Ne6'' 59. Bb6'' Ng5'' 60. Nf2+''''  
Kg1° 61. Kf4'' Nf7'' 62. Ng4+'' Kg2'' 63. Ne3+'''' Kh3'' 64. Nf5'''' Kh2'' 65. Bc5'' Nd8' 66. Nd4'''' Nb7'' 67. Bb4''  
Kg2' 68. Nc6'' Kf2' **{and here SC~ and SM~ must diverge}** 69. Ke4'' Ke2' 70. Nd4+'' Kf2'' 71. Be7'' Na5' 72.  
Bh4+'' Kf1' 73. Kd5'' Kg2' 74. Bd8'' Nb7'' 75. Bb6'' Kf2' 76. Kc6'' Ke3' 77. Kxb7'' **{KBNK: dtx = -28m}** **{MB**  
**'Nalimov' DTC EGTs}** \*

[White "KBN"]  
[Black "KN"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "5m, 3-2m, KBNKN, GBR 0014.00, maxDTM s6m\_P-less w&l: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/1n5B/2K1N2k w - - 0 1"]  
[PlyCount "213"]

**{1 of 2 maxDTC/Z and of 2 maxDTM s6m\_P-less wtm wins: dtc/m/z = 77/107/77m} 1. Bg3'''**  
**{the one maxDTC/M/Z s6m\_P-less btm loss: dtc/m/z = -76/-106/-76m} Nc4'' 2. Kd1'''' Ne3+'' 3. Ke2'''' Nf5'' 4. Bf2'''' Ne7'' 5. Kf3'' Nc6'' 6. Kg3'''' Nd4'' 7. Kg4'' Nc6' 8. Kh3'''' Ne5' 9. Nc2' Nd3'' 10. Bb6'''' Nf2+'' 11. Kg3'''' Ne4+'' 12. Kf4'' Nd2'' 13. Ne3'''' Kh2'' 14. Kg4'''' Nb3'' 15. Ba7'' Nc1'' 16. Bd4'' Nd3'' 17. Kh4'' Nf2'' 18. Bc5' Ne4' 19. Bb4'''' Nf2' 20. Be1'' Ne4' 21. Kg4'' Kg1'' 22. Kf4'' Nc5'' 23. Kf3'' Ne6' 24. Bc3'''' Kh2'' 25. Kg4'' Nd8' 26. Ba5' Nc6'' 27. Bc7+'' Kg1'' 28. Kg3'''' Nd4'' 29. Bb6'' Nb3'' 30. Ba7'''' Nd2'' 31. Nc4+'''' Kh1'' 32. Ne5' Nc4'' 33. Ng4' Ne5'' 34. Nf2+'' Kg1° 35. Nd3+'''' Kh1'' 36. Nf4'' Nf7'' 37. Nh5'' Nd6'' 38. Kh3'' Ne4'' 39. Be3'' Nf2+'' 40. Kg3'''' Ne4+'' 41. Kf3'' Nd6'' 42. Bf4'' Nc4'' 43. Kf2'' Na5'' 44. Nf6'' Nb7'' 45. Kf3'' Nd8' 46. Ne4' Kg1'' 47. Nd2' Nc6'' 48. Bd6'' Nd4+'' 49. Ke4'''' Ne2'' 50. Ke3'' Nc3'' 51. Be5'' Na2'' 52. Kf3'' Nb4'' 53. Kg3'' Kh1'' 54. Bd4'' Nc6'' 55. Bc5'' Nd8'' 56. Ne4'' Nb7'' 57. Bb4'' Nd8'' 58. Ba5'' Ne6'' 59. Bb6'' Ng5'' 60. Nf2+'''' Kg1° 61. Kf4'' Nf7'' 62. Ng4+'' Kg2'' 63. Ne3+'''' Kh3'' 64. Nf5'''' Kh2'' 65. Bc5' Nd8'' 66. Nd4'''' Nb7'' 67. Bb4'' Kg2' 68. Nc6' Kf2' **{and here SM and SC must diverge}** 69. Be7' Ke2' 70. Ke4'''' Kf2'' 71. Nd4' Ke1'' 72. Ne6' Kd1' 73. Bb4'' Kc1' 74. Kd5'' Kc2' 75. Kc6'' Kb3'' 76. Be1'' Kc4'' 77. Kxb7'' **{KBNK: dtx = -30m}** Kd5'' 78. Ng5'' Ke5' 79. Nh3' Ke4'' 80. Ng1'' Kd5'' 81. Kc7' Kc5' 82. Ne2'' Kd5' 83. Ng3'' Kc5' 84. Bd2' Kd5'' 85. Be3' Ke6'' 86. Kc6'' Ke5' 87. Bd2' Ke6' 88. Bf4'' Ke7'' 89. Kd5'' Ke8'' 90. Nf5' Kd7'' 91. Bg3' Kc8'' 92. Kc6'' Kd8° 93. Bf4' Kc8' 94. Ne7+'' Kd8° 95. Kd6'' Ke8° 96. Ke6'' Kd8'' 97. Bg3' Ke8° 98. Bc7'' Kf8° 99. Nf5'' Ke8'' 100. Ng7+'' Kf8° 101. Kf6'' Kg8° 102. Ne6' Kh8' 103. Bf4' Kg8' 104. Kg6'' Kh8° 105. Kf7'' Kh7° 106. Nf8+'' Kh8° 107. Be5#'' **{Nalimov and Lomonosov DTM EGTs} \*****

[White "KBN"]  
 [Black "KN"]  
 [Result "1-0"]  
 [Date "2014.07.03"]  
 [Event "5m, 3-2m, KBNKN, GBR 0014.00, maxDTM<sub>50,0/pc</sub> s6m\_P-less l&w: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "8/8/1N6/8/6B1/1K3n2/8/k7 b - - 0 1"]  
 [PlyCount "160"]

{a maxDTM<sub>50,0/pc</sub> s6m\_P-less loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -50/-79/-80/-50/-50m} 1... Nd4+  
 {a maxDTM<sub>50,0/pc</sub> s6m\_P-less win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 50/79/80/50/50m} 2. Kc4<sup>'''</sup> Nc2<sup>''</sup> 3. Kc3<sup>''''</sup> Na3<sup>''</sup> 4. Be2<sup>''''</sup> Nb1<sup>+''</sup> 5. Kc2<sup>''''</sup> Ka2<sup>''</sup> 6. Na4<sup>''''</sup> Na3<sup>+''</sup> 7. Kc3<sup>''''</sup> Nb1<sup>+''</sup> 8. Kb4<sup>''''</sup> Nd2<sup>''</sup> 9. Bd3<sup>''''</sup> Nf3<sup>''</sup> 10. Kc3<sup>''''</sup> Ne5<sup>''</sup> 11. Bf5<sup>''''</sup> Nf7<sup>''</sup> 12. Kb4<sup>''''</sup> Ne5<sup>''</sup> 13. Be6<sup>+'''</sup> Kb1<sup>''</sup> 14. Kc3<sup>''''</sup> Kc1<sup>''</sup> 15. Nb2<sup>''''</sup> Kb1<sup>''</sup> 16. Bc8<sup>'</sup> Ka1<sup>''</sup> 17. Bh3<sup>''''</sup> Ka2<sup>'</sup> 18. Bf5<sup>''''</sup> Ka1<sup>''</sup> 19. Nd1<sup>''''</sup> Nf7<sup>''</sup> 20. Kb4<sup>''''</sup> Ne5<sup>''</sup> 21. Ne3<sup>''''</sup> Kb2<sup>''</sup> 22. Be4<sup>''''</sup> Ka2<sup>''</sup> 23. Kc3<sup>''''</sup> Ka3<sup>''</sup> 24. Bc2<sup>''''</sup> Ka2<sup>''</sup> 25. Bb3<sup>+'''</sup> Kb1<sup>''</sup> 26. Bd5<sup>''''</sup> Nd7<sup>''</sup> 27. Be4<sup>+'''</sup> Ka2<sup>''</sup> 28. Bf5<sup>''''</sup> Ne5<sup>''</sup> 29. Nc2<sup>''''</sup> {SM: Bc2<sup>''</sup>} Nf3<sup>''</sup> 30. Be6<sup>+'''</sup> Kb1<sup>''</sup> 31. Na3<sup>+'''</sup> Kc1<sup>''</sup> 32. Nc4<sup>''''</sup> Nh2<sup>''</sup> 33. Nb2<sup>''''</sup> Nf1<sup>''</sup> 34. Nd3<sup>+'''</sup> Kb1<sup>''</sup> 35. Nc5<sup>''''</sup> Kc1<sup>''</sup> 36. Bg4<sup>''''</sup> Ne3<sup>''</sup> 37. Nb3<sup>+'''</sup> Kb1<sup>''</sup> 38. Bf3<sup>''''</sup> Nf1<sup>''</sup> 39. Kd3<sup>''''</sup> Ka2<sup>'</sup> {SM<sup>+</sup>: Kb2<sup>'</sup>, Ng3<sup>'</sup>} 40. Nc5<sup>'</sup> Ng3<sup>''</sup> 41. Bg4<sup>''''</sup> Ka3<sup>''</sup> 42. Ne6<sup>''''</sup> Kb4<sup>''</sup> 43. Ng5<sup>''''</sup> Kc5<sup>''</sup> 44. Ke3<sup>''''</sup> Nf1<sup>+''</sup> 45. Ke2<sup>''''</sup> Nh2<sup>''</sup> 46. Bc8<sup>'</sup> {SM: Bh3<sup>''</sup>} Kd5<sup>'</sup> 47. Kf2<sup>''''</sup> Ke5<sup>''</sup> 48. Nh3<sup>''''</sup> Kd6<sup>''</sup> 49. Kg2<sup>''''</sup> Kc7<sup>''</sup> 50. Bf5<sup>''''</sup> Kc6<sup>'</sup> 51. Kxh2<sup>''''</sup> {KBNK: dtx = -30m} Kd6<sup>'</sup> 52. Kg2<sup>'</sup> Kc6<sup>'</sup> 53. Kg3<sup>'</sup> Kb6<sup>'</sup> 54. Kf3<sup>'</sup> Kb5<sup>'</sup> 55. Ke3<sup>'</sup> Kc5<sup>'</sup> 56. Nf4<sup>''</sup> Kc4<sup>''</sup> 57. Be6<sup>+'''</sup> Kc3<sup>''</sup> 58. Ng2<sup>'</sup> Kc2<sup>'</sup> 59. Kd4<sup>''</sup> Kb2<sup>'</sup> 60. Ne3<sup>''</sup> Kb1<sup>''</sup> 61. Kc3<sup>''</sup> Ka1<sup>'</sup> 62. Bf7<sup>'</sup> Kb1<sup>°</sup> 63. Nc2<sup>''</sup> Kc1<sup>°</sup> 64. Ba2<sup>''</sup> Kd1<sup>°</sup> 65. Nd4<sup>''</sup> Ke1<sup>''</sup> 66. Kd3<sup>'</sup> Kf2<sup>''</sup> 67. Ne2<sup>''</sup> Kg2<sup>''</sup> 68. Be6<sup>''</sup> Kf3<sup>''</sup> 69. Bd7<sup>'</sup> Kf2<sup>''</sup> 70. Bc6<sup>'</sup> Kf1<sup>'</sup> 71. Ke3<sup>''</sup> Ke1<sup>°</sup> 72. Ba4<sup>''</sup> Kf1<sup>°</sup> 73. Nf4<sup>''</sup> Ke1<sup>''</sup> 74. Ng2<sup>+'</sup> Kf1<sup>°</sup> 75. Kf3<sup>''</sup> Kg1<sup>°</sup> 76. Kg3<sup>'</sup> Kf1<sup>'</sup> 77. Bb5<sup>+'</sup> Kg1<sup>°</sup> 78. Ba6<sup>'</sup> Kh1<sup>°</sup> 79. Nf4<sup>''</sup> Kg1<sup>°</sup> 80. Nh3<sup>+'''</sup> Kh1<sup>°</sup> 81. Bb7<sup>#''</sup> {Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KNN"]  
 [Black "KP"]  
 [Result "1-0"]  
 [Date "2013.10.20"]  
 [Event "5m, 3-2m, KNNKP, GBR 0002.01, maxDTC s6m w&l: SV+C/SV+C"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "1N6/8/p7/8/8/8/2k1N3/K7 w - - 0 1"]  
 [PlyCount "228"]

**{1 of 2 maxDTC s6m wtm wins: dtc/m/z/z<sub>50</sub> = 114/115/42/∞m}** 1. Ka2'''  
**{1 of 4 maxDTC s6m btm losses: dtc/m/z/z<sub>50</sub> = -113/-114/-41/-∞m}** Kd3'' 2. Nc1+''' Kc4'' 3. Ka3''' Kc5'' 4.  
 Nb3+'' Kb5'' 5. Nd4+''' Kc5'' 6. Nf5'' Kb5'' 7. Nd6+''' Kb6'' 8. Ne8''' Kb5'' 9. Nc7+''' Kb6'' 10. Nd5+'' Kc5'' 11.  
 efNf6''' Kd6'' 12. Ne8+'' Ke6'' 13. Nc7+'' Ke5' 14. Kb3' Kd6'' 15. Na8'' a5' **{KNNKP(a5): dtc/m/z/z<sub>50</sub> =**  
**99/100/37/∞m}** 16. Ka4''' Kd5' 17. Nc7+'' Kc5' 18. Nb5'' Kb6'' 19. Nd7+'' Kc6'' 20. Nf6' Kb6' 21. Na3'' Kc5''  
 22. Ng4'' Kd5' 23. Kb5'' a4' **{KNNKP(a4): dtc/m/z/z<sub>50</sub> = 91/92/54/∞m}** 24. Ne3+'' Kd4' 25. Nec4'' Kd5'' 26.  
 Kb6'' Kd4'' 27. Kc6' Ke4'' 28. Kd6' Kf5'' 29. Kd5' Kf6'' 30. Nd6' Ke7'' 31. Ke5'' Kd7'' 32. Nf5'' Kc7'' 33. Ke6''  
 Kc6'' 34. Nd4+'' Kc5'' 35. Ndb5' Kc6'' 36. Ke5'' Kc5'' 37. Ke4'' Kc6'' 38. Kd4'' Kd7'' 39. Kd5'' Ke7'' 40. Ke5''  
 Kf7'' 41. Nc7' Kg6'' 42. Nes6'' Kh5'' 43. Kf5'' Kh4'' 44. Nd4'' Kg3'' 45. Kg5'' Kg2'' 46. Kg4'' Kf2' 47. Kf4'' Kg2''  
 48. Ne2'' Kh2' 49. Kg4'' Kg2'' 50. Nc3'' Kf2'' 51. Kf4'' Kg2'' 52. Nc2'' **{dtc/m/z/z<sub>50</sub> = -62/-63/-59/-∞m}** Kh3'' 53.  
 Kg5'' Kg3'' 54. Nd4'' Kh3' 55. Nf5'' Kg2'' 56. Kf4''' Kf2'' 57. Ke4'' a3'' **{KNNKP(a3): dtc/m/z/z<sub>50</sub> =**  
**57/58/56/∞m}** 58. Na2''' Ke2'' 59. Ng3+'' Kf2'' 60. Kf4'' Kg2'' 61. Ne4'' Kh2'' 62. Kf3'' Kh3'' 63. Ng3'' Kh2'  
**{dtc/m/z/z<sub>50</sub> = 51/52/50/50m}** 64. Nf5'' Kh3'' 65. Kf4'' Kh2' 66. Ke3'' Kg2' 67. Ke2'' Kh2' 68. Kf2'' Kh3'' 69.  
 Kf3''' Kh2° 70. Ne3'' Kg1' 71. Kg3'' Kh1° 72. Kf2'' Kh2° 73. Ng2'' Kh1' 74. Nf4' Kh2° 75. Kf3'' Kg1'' 76. Ke2''  
 Kh1'' 77. Kf1'' Kh2° 78. Kf2''' Kh1° 79. Kg3'' Kg1° 80. Ne2+'' Kf1'' 81. Kf3'' Ke1° 82. Ng3'' Kd1'' 83. Ke4''  
 Kd2'' 84. Kd4'' Kd1'' 85. Kd3'' Ke1° 86. Ke3'' Kd1° 87. Nf1' Ke1'' 88. Nh2' Kd1° 89. Nf3'' Kc2° 90. Ke2'' Kb2''  
 91. Kd2' Kb3'' 92. Kd3''' Ka4'' 93. Kc4''' Ka5° 94. Kc5''' Ka6'' 95. Kc6'' Ka5' 96. Nd2' Ka4'' 97. Kc5'' Ka5°  
 98. Nb3+'' Ka4'' 99. Nbc1'' Ka5° 100. Nd3'' Ka6'' 101. Kc6'' Ka7'' 102. Nc5'' Kb8'' 103. Kd7'' Ka7'' 104. Kc7''  
 Ka8° 105. Kb6'' Kb8° 106. Nb7'' Kc8'' 107. Kc6''' Kb8° 108. Nd6'' Ka7'' 109. Kb5'' Kb8'' 110. Kb6'' Ka8° 111.  
 Kc7'' Ka7° 112. Nb4'' a2' **{KNNKP(a2): dtc/m/z/z<sub>50</sub> = 2/3/2/2m}** 113. Nc8+'' Ka8° 114. Nc6' a1=Q' **{more**  
**generally, a1=y°, KNNKy: dtx = 1m} {MB 'Nalimov' DTC EGTs} \***

[White "KNN"]  
 [Black "KP"]  
 [Result "1-0"]  
 [Date "2014.06.10"]  
 [Event "5m, 3-2m, KNNKP, GBR 0002.01, maxDTM<sub>50,0</sub> KNNKP w&l: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "6k1/p7/8/8/7N/7K/2N5/8 w - - 0 1"]  
 [PlyCount "223"]

{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}

{a maxDTM<sub>50,0</sub> KNNKP wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 90/91/112/16/29m} 1. Kg4<sup>'''</sup>  
 {a maxDTM<sub>50,0</sub> KNNKP btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -89/-90/-111/-15/-28m} Kf8' 2. Kf4' Ke8' 3. Ke5<sup>''''</sup> Ke7<sup>''</sup>  
 {SZ<sup>+</sup>: K(d/f)7<sup>''</sup>} 4. Ng6<sup>+'''</sup> Kd7<sup>''</sup> 5. Nf8<sup>+'''</sup> {SM: N(a3/f5)''} Kc6<sup>''</sup> 6. Nd4<sup>+'''</sup> Kc5<sup>''</sup> 7. Nfe6<sup>+'''</sup> Kc4<sup>''</sup> 8. Nc2<sup>''''</sup>  
 Kc3<sup>''</sup> 9. Ned4<sup>''''</sup> Kc4<sup>''</sup> {SZ<sub>50</sub><sup>+</sup>: Kb2<sup>''</sup>} 10. Na3<sup>+'</sup> Kb4<sup>''</sup> 11. Ndc2<sup>+'</sup> Kc5<sup>''</sup> 12. Ke4<sup>''</sup> Kd6<sup>''</sup> 13. Nb5<sup>+'</sup> Kc5<sup>''</sup> 14. Nc3<sup>''</sup>  
 Kc4<sup>''</sup> 15. Nb1<sup>''</sup> Kc5<sup>''</sup> 16. Nca3<sup>''</sup> a6<sup>''</sup> {KNNKP(a6): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 87/88/96/16/18m} 17. Nc3<sup>''</sup> a5<sup>''</sup>  
 {KNNKP(a5): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 86/87/95/25/35m} 18. Kf5<sup>''</sup> Kb4<sup>''</sup> 19. Ncb1<sup>''</sup> Kb3<sup>''</sup> 20. Ke5<sup>''</sup> Kb4<sup>''</sup> 21. Kd4<sup>''</sup> Ka4<sup>''</sup>  
 22. Nc2<sup>''</sup> Kb3<sup>''</sup> 23. Kd3<sup>''</sup> Ka4<sup>''</sup> 24. Nd2<sup>''</sup> Kb5<sup>°</sup> 25. Kd4<sup>''''</sup> Kc6<sup>''</sup> 26. Ne4<sup>''</sup> Kd7<sup>''</sup> 27. Kd5<sup>''</sup> Ke7<sup>''</sup> 28. Ke5<sup>''</sup> Kf7<sup>''</sup> 29.  
 Ng5<sup>+'</sup> Kg6<sup>''</sup> 30. Ne6<sup>''</sup> Kh5<sup>''</sup> 31. Kf5<sup>''</sup> Kh4<sup>''</sup> 32. Ned4<sup>''</sup> Kg3<sup>''</sup> 33. Kg5<sup>''</sup> Kg2<sup>''</sup> 34. Kg4<sup>''</sup> Kf2<sup>''</sup> 35. Kf4<sup>''''</sup> Kg2<sup>''</sup> 36. Nf5<sup>''</sup>  
 Kf2<sup>''</sup> 37. Ng3<sup>''''</sup> Kg2<sup>''</sup> 38. Ne4<sup>''</sup> a4<sup>''</sup> {KNNKP(a4): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 60/61/74/19/34m} 39. Na3<sup>''''</sup> Kh3<sup>''</sup> 40. Kg5<sup>''</sup>  
 Kh2<sup>''</sup> 41. Kh4<sup>''</sup> {SM: Kg4<sup>''</sup>} Kg2<sup>''</sup> 42. Kg4<sup>''''</sup> Kf1<sup>''</sup> 43. Kf3<sup>''''</sup> Ke1<sup>''</sup> 44. Ke3<sup>''''</sup> Kf1<sup>''</sup> 45. Nd6<sup>''</sup> Kg2<sup>''</sup> 46. Nf5<sup>''</sup>  
 Kf1<sup>''</sup> 47. Nh4<sup>''</sup> Kg1<sup>''</sup> 48. Ke2<sup>''</sup> Kh2<sup>''</sup> 49. Kf3<sup>''</sup> Kg1<sup>''</sup> 50. Nf5<sup>''</sup> Kf1<sup>''</sup> 51. Ng3<sup>+'</sup> Kg1<sup>''</sup> 52. Ne2<sup>+'</sup> Kh2<sup>''</sup> 53. Nf4<sup>''</sup>  
 Kg1<sup>''</sup> 54. Ke2<sup>''</sup> Kh2<sup>''</sup> 55. Kf2<sup>''''</sup> Kh1<sup>°</sup> 56. Kg3<sup>''</sup> Kg1<sup>°</sup> 57. Ng2<sup>''</sup> Kf1<sup>''</sup> 58. Kf3<sup>''''</sup> Kg1<sup>°</sup> 59. Ne3<sup>''</sup> Kh2<sup>''</sup> 60. Kg4<sup>''</sup>  
 Kg1<sup>''</sup> 61. Kg3<sup>''''</sup> Kh1<sup>°</sup> 62. Nd1<sup>''</sup> Kg1<sup>°</sup> 63. Nc3<sup>''</sup> Kf1<sup>''</sup> 64. Kf3<sup>''''</sup> Kg1<sup>°</sup> 65. Nc4<sup>''</sup> Kh2<sup>''</sup> 66. Ne3<sup>''</sup> {and now,  
 diverging from SZ<sub>(50)</sub><sup>+</sup>'s Kh3<sup>''</sup>} a3<sup>''</sup> {KNNKP(a3): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 45/46/46/44/44m} 67. Na2<sup>''''</sup> Kg1<sup>''</sup> 68.  
 Kg3<sup>''</sup> Kh1<sup>°</sup> 69. Kf2<sup>''</sup> Kh2<sup>°</sup> 70. Ng2<sup>''</sup> Kh1<sup>''</sup> 71. Kf3<sup>''</sup> Kh2<sup>''</sup> 72. Nf4<sup>''</sup> Kg1<sup>''</sup> 73. Ke2<sup>''</sup> Kh1<sup>''</sup> 74. Kf1<sup>''</sup> Kh2<sup>°</sup> 75. Kf2<sup>''''</sup>  
 Kh1<sup>°</sup> 76. Kg3<sup>''</sup> Kg1<sup>°</sup> 77. Ne2<sup>+'</sup> Kf1<sup>''</sup> 78. Kf3<sup>''</sup> Ke1<sup>°</sup> 79. Ng3<sup>''</sup> Kd1<sup>''</sup> 80. Ke4<sup>''</sup> Kd2<sup>''</sup> 81. Kd4<sup>''''</sup> Kd1<sup>''</sup> 82. Kd3<sup>''</sup>  
 Ke1<sup>°</sup> 83. Ke3<sup>''''</sup> Kd1<sup>°</sup> 84. Nf1<sup>''</sup> Ke1<sup>''</sup> 85. Nd2<sup>''</sup> Kd1<sup>°</sup> 86. Nf3<sup>''''</sup> Kc2<sup>°</sup> 87. Ke2<sup>''</sup> Kb2<sup>''</sup> 88. Kd2<sup>''</sup> Kb3<sup>''</sup> 89. Kd3<sup>''''</sup>  
 Ka4<sup>''</sup> 90. Kc4<sup>''''</sup> Ka5<sup>°</sup> 91. Kc5<sup>''''</sup> Ka6<sup>''</sup> 92. Kc6<sup>''</sup> Ka5<sup>°</sup> 93. Nd2<sup>''</sup> Ka4<sup>''</sup> 94. Kc5<sup>''</sup> Ka5<sup>°</sup> 95. Nb3<sup>+'</sup> Ka4<sup>''</sup> 96. Nbc1<sup>''</sup>  
 Ka5<sup>°</sup> 97. Nd3<sup>''</sup> Ka6<sup>''</sup> 98. Kc6<sup>''''</sup> Ka7<sup>''</sup> 99. Nc5<sup>''</sup> Kb8<sup>''</sup> 100. Kd7<sup>''''</sup> Ka7<sup>''</sup> 101. Kc7<sup>''''</sup> Ka8<sup>°</sup> 102. Kb6<sup>''</sup> Kb8<sup>°</sup> 103.  
 Nb7<sup>''</sup> Kc8<sup>''</sup> 104. Kc6<sup>''''</sup> Kb8<sup>°</sup> 105. Nd6<sup>''</sup> Ka7<sup>''</sup> 106. Kb5<sup>''''</sup> Kb8<sup>''</sup> 107. Kb6<sup>''''</sup> Ka8<sup>°</sup> 108. Kc7<sup>''</sup> Ka7<sup>°</sup> 109. Nb4<sup>''''</sup>  
 Ka8<sup>''</sup> 110. Nc6<sup>''</sup> a2<sup>°</sup> {KNNKP(a2): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 1/2/2/1/1m} 111. Nc4<sup>''</sup> a1=Q<sup>'</sup> {more generally, a1=y<sup>°</sup>,  
 KNNKy: dtx = 1m} 112. Nb6<sup>#''''</sup> {Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*



[White "KNN"]  
 [Black "KP"]  
 [Result "1-0"]  
 [Date "2014.04.22"]  
 [Event "5m, 3-2m, KNNKP, GBR 0002.01, maxDTM<sub>50,pc</sub> KNNKP l&w: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "8/8/5N2/p7/8/k1K5/8/1N6 b - - 5 1"]  
 [PlyCount "256"]

**{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}**

**{earliest and latest divergences from SM, SZ and SZ<sub>50</sub> are noted}**

**{for pc=0/1, dtm<sub>50</sub> = 108m; for pc=2/3, dtm<sub>50</sub> = 110m; for pc = 4/5, dtm<sub>50</sub> = 128m; pc > 5 ⇒ '50m-draw'}**

**{a maxDTM<sub>50,pc</sub> KNNKP btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -84/-85/-128/-22/-47m} 1. ... Ka4''**

**{a maxDTM<sub>50,pc</sub> KNNKP wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 84/85/128/22/47m} 2. Ne4'''' {SM: Nd5''} Kb5° 3. Na3+'''' Ka4' {SZ+: Kc6''} 4. Kb2'''' Kb4° 5. Ka2'''' Ka4'' 6. Nc2'''' Kb5° 7. Nc3+'''' Kc5'' 8. Na4+'''' Kc4'' 9. Ka3' Kd3'' 10. Kb3'''' Kd2'' 11. Nd4'''' Kd3'' 12. Nc6' Ke3'' 13. Kc3' Ke4'' 14. Kc4'''' Kf4'' 15. Kd4' Kf5'' 16. Kd5' Kf4'' 17. Ne7'''' Kf3'' 18. Ke5'''' Kg4'' 19. Nd5' Kg3'' 20. Ne3' Kf3'' 21. Nf5' Kg4'' 22. Nd4'''' Kg5'' 23. Nf3+'''' Kg4' 24. Ke4'''' Kh5'' 25. Kf5'''' Kh6° 26. Ne5'''' Kg7'' 27. Kg5'''' Kf8'' 28. Kf6'''' Ke8'' 29. Ke6'''' Kf8'' 30. Nd3' Kg7'' 31. Nf4'''' Kg8'' 32. Kf6'''' Kf8'' 33. Ng6+' Ke8' 34. Ne5'''' Kf8'' 35. Nc4'''' Ke8'' 36. Nc5'''' Kd8'' 37. Ke6' Kc7'' 38. Na3'''' Kc6'' 39. Nb3'''' {and now, diverging from SZ<sub>(50)</sub><sup>+</sup>'s K(b/c)7''} a4'' {KNNKP(a4): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 81/82/90/48/50m} 40. Nd4+'''' Kc5'' 41. Ke5' Kb4'' 42. Ndb5'''' Kc5'' 43. Ke4'''' Kc6'' 44. Kd4'''' Kd7'' 45. Kd5'''' Ke7'' 46. Ke5'''' Kf7'' 47. Nc7' Kg6'' 48. Ne6'''' Kh5'' 49. Kf5'''' Kh4'' 50. Nd4'''' Kg3'' 51. Kg5'''' Kg2'' 52. Kg4'''' Kf2'' 53. Kf4'''' Kg2'' 54. Nf5'''' Kf2'' 55. Ng3'''' Kg2'' 56. Ne4'''' Kh3'' 57. Kg5'''' Kh2'' 58. Kh4'''' {SM: Kg4''} Kg2' 59. Kg4'''' Kf1'' 60. Kf3'''' Ke1'' 61. Ke3'''' Kf1'' 62. Nd6' Kg2'' 63. Nf5'''' Kf1'' 64. Nh4'''' Kg1'' 65. Ke2'''' Kh2'' 66. Kf3'''' Kg1'' 67. Nf5'''' Kf1'' 68. Ng3+'''' Kg1'' 69. Ne2+'''' Kh2'' 70. Nf4'''' Kg1'' 71. Ke2'''' Kh2'' 72. Kf2'''' Kh1° 73. Kg3'''' Kg1° 74. Ng2'''' Kf1'' 75. Kf3'''' Kg1° 76. Ne3'''' Kh2'' 77. Kg4'''' Kg1'' 78. Kg3'''' Kh1° 79. Nd1' Kg1° 80. Nc3'''' Kf1'' 81. Kf3'''' Kg1' 82. Nc4'' Kh2' 83. Ne3'' {and now, diverging from SZ<sub>(50)</sub><sup>+</sup>'s Kh3''} a3'' {KNNKP(a3): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 45/46/46/44/44m} 84. Na2'''' Kg1'' 85. Kg3'' Kh1° 86. Kf2'' Kh2° 87. Ng2'' Kh1' 88. Kf3' Kh2'' 89. Nf4'' Kg1'' 90. Ke2'' Kh1'' 91. Kf1'' Kh2° 92. Kf2'''' Kh1° 93. Kg3'' Kg1° 94. Ne2+' Kf1'' 95. Kf3'' Ke1° 96. Ng3'' Kd1'' 97. Ke4'' Kd2'' 98. Kd4'''' Kd1'' 99. Kd3'' Ke1° 100. Ke3'''' Kd1° 101. Nf1' Ke1'' 102. Nd2' Kd1° 103. Nf3'' Kc2° 104. Ke2'' Kb2'' 105. Kd2' Kb3'' 106. Kd3'''' Ka4'' 107. Kc4'''' Ka5° 108. Kc5'''' Ka6'' 109. Kc6'' Ka5' 110. Nd2' Ka4'' 111. Kc5'' Ka5° 112. Nb3+' Ka4'' 113. Nbc1'' Ka5° 114. Nd3'' Ka6'' 115. Kc6'''' Ka7'' 116. Nc5'' Kb8'' 117. Kd7'''' Ka7'' 118. Kc7'''' Ka8° 119. Kb6'' Kb8° 120. Nb7'' Kc8'' 121. Kc6'''' Kb8° 122. Nd6'' Ka7'' 123. Kb5'''' Kb8'' 124. Kb6'' Ka8° 125. Kc7'' Ka7° 126. Nb4'''' Ka8' 127. Nc6' a2° {KNNKP(a2): dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 1/2/2/1/1m} 128. Nc4' a1=Q' {more generally, a1=y°, KNNKy: dtx = 1m} 129. Nb6#'''' {Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \***

[White "KNN"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.10.20"]  
[Event "5m, 3-2m, KNNKP, GBR 0002.01, maxDTZ s6m w&l: SV+Z/SV+Z+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "K7/N7/k7/8/3p4/8/N7/8 w - - 0 1"]  
[PlyCount "164"]

{also a maxDTZ50' btm loss}

{1 of 18 maxDTZ s6m wtm wins:  $\text{dtc/m/z/z}_{50}' = 85/85/82/82\text{m}$  {KNNKP(d4)} 1. Nb4+''''

{1 of 13 maxDTZ s6m btm losses:  $\text{dtc/m/z/z}_{50}' = -84/-84/-81/-81\text{m}$  Kb6'' 2. Nd3'''' Kc7'' 3. Nb5+'''' Kc6'' 4. Na3'''' Kb6'' 5. Nc2' Kb5' 6. Kb7' Kc4'' 7. Ncb4' Kb5'' 8. Kc7'' Kc4' 9. Kb6' Kc3'' 10. Kc5' Kb3'' 11. Kd5' Kc3'' 12. Ke4'' Kd2'' 13. Kf3'' Kd1'' 14. Na6'' Kd2'' 15. Nac5'' Kd1'' 16. Ne4'' Kc2° 17. Ke2'' Kb3'' 18. Kd2' Kc4'' 19. Nec5' Kb5' 20. Kc2'' Kc6' 21. Kb3' Kc7' 22. Kb4'' Kc6'' 23. Ka5'' Kd6'' 24. Kb6'' Kd5'' 25. Kb5'' Kd6° 26. Kc4'' Kc6' 27. Ne4'' Kd7' 28. Kd5'' Ke7' 29. Ke5'' Kd7'' 30. Kf6'' Kc7'' 31. Ke7'' Kc6'' 32. Ke6'' Kc7'' 33. Kd5'' Kd7'' 34. Nf6+'' Ke7'' 35. Ke5'' Kf7'' 36. Nd5'' Kg6'' 37. N5b4' Kg5'' 38. Nc2'' Kg6'' 39. Ke6'' Kg7'' 40. Na3'' Kf8'' 41. Nb5'' Ke8'' 42. Nc7+'' Kd8'' 43. Kd6'' Kc8° 44. Ne6'' Kb8' 45. Kc5'' Ka7'' 46. Kc6'' Ka6'' 47. Nec5+ Ka5'' 48. Ne4' Ka6' 49. Nd2'' Ka5'' 50. Kc5'' Ka6'' 51. Nc4'' Kb7'' 52. Kd6'' Kc8'' 53. Na5'' Kd8'' 54. Nb7+'' Ke8'' 55. Ke6'' Kf8° 56. Nd6'' Kg7'' 57. Kf5'' Kh6'' 58. Kf6'' Kh5'' 59. Ne4' Kg4'' 60. Ng5'' Kh4'' 61. Kf5'' Kg3'' 62. Ke4'' Kg4'' 63. Nf7'' Kg3' 64. Nfe5'' Kh4'' 65. Kf5'' Kh5'' 66. Ng4'' Kh4° 67. Nf6'' Kh3'' 68. Ke5'' Kg3'' 69. Ke4'' Kh3'' 70. Kf3'' Kh4'' 71. Kf4'' Kh3° 72. Ne4' Kh4'' 73. Ng3'' Kh3° 74. Nf5'' Kg2' 75. Kg4'' Kg1' 76. Ng3'' Kg2' 77. Ne4'' Kg1' 78. Kg3' Kf1'' 79. Kf3'' Kg1° 80. Nd2'' Kh2' 81. Nf2'' Kg1'' 82. Kg3'' d3° {KNNKP(d3):  $\text{dtc/m/r/z/zr} = 3/3/2/2/2\text{m}$  {MB 'Nalimov' DTZ EGTs} \*

[White "KNP"]  
[Black "KB"]  
[Result "1-0"]  
[Date "2013.12.20"]  
[Event "5m, 3-2m, KNPKB, GBR 0031.10, maxDTM KNPKB w&l: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/4K3/8/P7/8/6bN/7k w - - 0 1"]  
[PlyCount "85"]

{the notes closely follow those of Nunn (1995), #141, pp. 105-6}

{1 of 11 maxDTC and of 11 maxDTM KNPKB wtm wins:  $\text{dtc/m/z} = 31/43/13\text{m}$  1. Ng4''''

{1 of 3 maxDTC and of 3 maxDTM KNPKB btm losses:  $\text{dtc/m/z} = -30/-42/-12\text{m}$  Bh3'' 2. Kf5'''' Bf1'' 3. Kf4'''' Be2' 4. Kg3'''' Kg1' 5. Ne3'''' Ba6'' 6. Nd5'''' Bb7' 7. Nc3'''' Kf1'' 8. Kf4'''' Kf2'' 9. a5'''' Ke1'' 10. Ke3'''' Ba6'' 11. Nd5' Kd1'' 12. Nb4'''' Bb5'' 13. Kd4'''' Kc1'' 14. Kc5'' Bf1'' 15. Nd5'' Kb2'' 16. Ne3' Ba6'' 17. Kb4'''' Kc1' 18. Nc4' Kc2'' 19. Nd6'' Be2'' 20. Nb5' Kd3' 21. a6' Ke3' 22. a7' Bf3'' 23. Kc5'' Kf4' 24. Kd6'' Bh1' 25. Kc7' Ke5'' 26. Nd6'' Ba8'' 27. Nc4+'' Ke6' 28. Kb8'' Bg2' 29. Na5'' Kd7' 30. Nb7'''' Ke6'' 31. a8=Q' {KQNKb:  $\text{dtc/m/z} = -6/-12/-6\text{m}$  Ke5'' 32. Qa7' Be4'' 33. Qe3' Kd5'' 34. Nc5' Bh7' 35. Kc7' Bf5' 36. Na4' Be4'' 37. Nc3+'' Ke6'' 38. Qxe4+'' {KQNK:  $\text{dtc/m/z} = -5\text{m}$  Kf6' 39. Kd6'' Kg5' 40. Ke7' Kh6'' 41. Kf6' Kh5° 42. Na2' Kh6° 43. Qh1#'' {Nalimov and Lomonosov DTM EGTs} \*

[White "KNP"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.12.20"]  
[Event "5m, 3-2m, KNPKP, GBR 0001.11, maxDTM KNPKP l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "N7/8/K7/4p3/8/8/6P1/k7 b - - 0 1"]  
[PlyCount "114"]

**{1 of 10 maxDTM KNPKP btm losses: dtc/m/z = -12/-57/-4m}** 1... e4"  
**{1 of 10 maxDTM KNPKP wtm wins: dtc/m/z = 12/57/3m}** 2. Nc7"" e3" 3. Ne6' e2" 4. Nd4"" e1=N"  
**{KNPKN : dtc/m/z = 38/54/1m}** 5. g4"" Ng2" 6. g5' Nh4" 7. Kb5"" Kb2" 8. Kc4"" Ka3" 9. Kc5"" Ka4" 10.  
Kd6"" Kb4" 11. Kd5"" Ka5" 12. Ke6"" Kb6" 13. Nf5"" Ng6" 14. Kf6" Nf4" 15. Ne3" Kc6' 16. Kf5"" Nh5" 17.  
g6" Kd7" 18. Nd5"" Ng7+" 19. Kf6"" Ne6" 20. Kf7" Nd8+' 21. Kg7" Ne6+" 22. Kh6"" Nd4" 23. Nf4" Nf5+"  
24. Kg5"" Ng7" 25. Kf6" Ne8+" 26. Kf7"" Nd6+" 27. Kg7"" Nf5+" 28. Kf6"" Nd6" 29. Nd5" Ne8+" 30. Kf7"  
Nd6+" 31. Kg7" Ke6" 32. Kh7"" Nf5" 33. Ne3"" Ne7" 34. g7"" Ke5" 35. Ng2" Nd5" 36. Nh4" Nf6+" 37. Kh8"  
Ke6" 38. Ng6" Kf7" 39. Ne5+" Ke6" 40. Ng4" Nxc4" 41. g8=Q+"" **{KQKN: dtc/m/r/z/zr**  
**= -15/-17/-15/-15/-15m}** f5" 42. Qd5+" Ne5" 43. Kg7" Kf4" 44. Kf6" Ng4+" 45. Ke6" Ne3" 46. Qa8" Ng4" 47.  
Qf8+" Kg3' 48. Kf5" Nf2" 49. Qa3+" Kg2" 50. Kf4" Nh3+" 51. Ke3" Kg3" 52. Qa4' Ng1" 53. Qf4+" Kg2" 54.  
Qg4+' Kh2" 55. Kf2" Nh3+" 56. Ke2' Ng5' 57. Kf1" Nf7' 58. Qh4#' **{Nalimov and Lomonosov DTM EGTs}** \*

[White "KPP"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "5m, 3-2m, KPPKP, GBR 0000.21, maxDTM s6m l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/1p6/4P3/2K1P3/k7/8 b - - 0 1"]  
[PlyCount "254"]

**{1 of 7 maxDTM s6m btm losses: dtc/m/z = -6/-127/-1m} 1... Ka3''**

**{1 of 6 maxDTM s6m wtm wins: dtc/m/z = 6/127/1m} 2. e5'''' b4+' 3. Kc2'''' Ka2'' 4. e6' b3+' 5. Kd2' b2'' 6. e7'''' b1=Q'' 7. e8=Q'''' {KQPKQ: dtc/m/z = -111/-121/-51m} Qb2+' 8. Kd3'''' Qb1+' 9. Kd4'' Qb2+' 10. Ke4'' Qe2'' 11. Kf4'' Qf2+' 12. Kg5'''' Qg2+' 13. Kf6'' Qf2+' 14. Kg7'' Qb2+' 15. Kh7'' Qb7+' 16. Kh6'' Qb6+' 17. Kg5'''' Kb3'' 18. Kf5'''' Qc5+' 19. Kf6'''' Kc2'' 20. Qe4+''' Kc1'' 21. Kf7'''' Qh5+' 22. Ke7'' Qc5+' 23. Kd7'' Qa7+' 24. Ke8'' Qb8+' 25. Kf7'' Qc7+' 26. Qe7'''' Qc4+' 27. Qe6'''' Qc7+' 28. Kf6'' Qc3+' 29. Qe5'' Qc6+' 30. Ke7'' Qb7+' 31. Kd8'' Qa8+' 32. Kd7'' Qa4+' 33. Ke7'' Qb4+' 34. Ke6'' Qc4+' 35. Qd5'' Qc8+' 36. Ke7' Qc7+' 37. Kf6'''' Qc3+' 38. Qd4'' Qc8'' 39. Kf7' Qc7+' 40. Kg6'' Qc6+' 41. Kg5' Qg2+' 42. Kf5' Qf1+' 43. Ke4'' Qg2+' 44. Ke5'' Qg5+' 45. Ke6'''' Qg8+' 46. Kd7'' Qf7+' 47. Kd6' Qf8+' 48. Kc7'''' Qf7+' 49. Kb6'' Qb3+' 50. Kc6'' Qe6+' 51. Kc5'' Qc8+' 52. Kb4'' Qb7+' 53. Kc3'' Qc6+' 54. Qc4'' Qf3'' 55. Kd4+' Kd2'' 56. Qd3+' Ke1'' 57. e4'' Qf6+' 58. Kc5'' Qe7+' 59. Kb6'' Qe6+' 60. Ka5'' Qe5+' 61. Qd5'' Qc3+' 62. Kb5'' Qb2+' 63. Kc6'' Qh8'' 64. Qf5'' Qe8+' 65. Kc5'' Qe7+' 66. Kc4'' Qc7+' 67. Qc5'' Qf4'' 68. Qd4'' Qf7+' 69. Qd5' Qf1+' 70. Kb4'' Qf3'' 71. Ka4'' Ke2'' 72. Qc4+''' Kd2'' 73. Qd4+' Ke2'' 74. e5'' Qc6+' 75. Kb4' Qb7+' 76. Kc4'' Qc6+' 77. Qc5'' Qa4+' 78. Kd5'' Qd7+' 79. Qd6'' Qb5+' 80. Ke6'' Qb3+' 81. Qd5'' Qb6+' 82. Kf5' Qf2+' 83. Kg5' Qg1+' 84. Kh6'' Qe3+' 85. Kh5'' Qh3+' 86. Kg6'' Qg4+' 87. Kf6'' Qh4+' 88. Kf7'' Qh5+' 89. Ke7'' Qg5+' 90. Kd7'' Qf5+' 91. Kd6' Qf4'' 92. Kc6'' Qf8'' 93. Kb7'' Qb4+' 94. Ka6'' Qa4+' 95. Kb6'' Qf4'' 96. e6' Qb8+' 97. Ka6' Qc8+' 98. Kb5'' Qb8+' 99. Kc4'' Qf4+' 100. Qd4'' Qf5'' 101. Qd6'' Qg4+' 102. Kc5' Qf5+' 103. Kc6' Qc2+' 104. Kb6' Qb2+' 105. Kc7'' Qc2+' 106. Kd8'' Qc3' 107. e7'' Qa5+' 108. Kd7'' Qa4+' 109. Qc6'' Qa7+' 110. Ke6'' Qe3+' 111. Kf7'' Qa7'' 112. Qd6'' Qb7'' 113. Qf4'' Qa7'' 114. Qe5+' Kd1'' 115. Ke6'' Qa4'' 116. Qh5+' Kc1' 117. e8=Q'' {KQKQ: dtc/m/z = -7/-11/-7m} Qc4+' 118. Qd5' Qe2+' 119. Kd7'' Qg4+' 120. Qee6' Qg7+' 121. Qe7'' Qxe7+' 122. Kxe7'''' {KQK: dtx = -6m} Kb1' 123. Qd2' Ka1° 124. Ke6' Kb1° 125. Ke5' Ka1° 126. Kd4'' Kb1° 127. Kc3'' Ka1° 128. Qb2#'' {Nalimov and Lomonosov DTM EGTs} \***

[White "KPP"]  
 [Black "KP"]  
 [Result "1-0"]  
 [Date "2014.06.10"]  
 [Event "5m, 3-2m, KPPKP, GBR 0000.21, maxDTM<sub>50, 0/pc</sub> s6m l&w: SV+M<sub>50</sub>~/SV+M<sub>50</sub>+"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "8/8/8/1p3K2/3P4/3P4/7k/8 b - - 0 1"]  
 [PlyCount "282"]

{moves are also DTZ<sub>50</sub>-optimal if possible}

{1 of 4 maxDTM<sub>50, 0/pc</sub> s6m btm losses: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -4/-124/-141/-1/-1m} 1. ... b4'' {SZ<sub>(50)</sub><sup>+</sup>: K~''}  
 {a maxDTM<sub>50, 0/pc</sub> s6m wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 4/124/141/1/1m} 2. d5'''' b3'' 3. d6'''' b2'' 4. d7'''' b1=Q'' 5.  
 d8=Q'''' {KQP(d3)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -110/-120/-137/-50/-50m} Qf1+' 6. Ke5' Qe2+' 7. Kd4'''' Qd2'' 8.  
 Kc4'''' Qc2+' 9. Kb5'''' Qb2+' 10. Kc6'''' Qc2+' 11. Kb7'''' Qg2+' 12. Ka7'''' Qg7+' 13. Ka6'''' Qg6+' 14.  
 Kb5'''' Kg3'' 15. Kc5'''' Qf5+' 16. Kc6'''' Kf2'' 17. Qd4+''' Kf1'' 18. Kc7'''' Qa5+' 19. Kd7'''' Qf5+' 20. Ke7''''  
 Qh7+' 21. Kd8'''' Qg8+' 22. Kc7'''' Qf7+' 23. Qd7'''' Qf4+' 24. Qd6'''' Qf7+' 25. Kc6'''' Qf3+' 26. Qd5''''  
 Qf6+' 27. Kd7'''' Qg7+' 28. Ke8'''' Qh8+' 29. Ke7'''' Qh4+' 30. Kd7'''' Qg4+' 31. Kd6'''' Qf4+' 32. Qe5''''  
 Qf8+' 33. Kd7' Qf7+' 34. Kc6'''' Qf3+' 35. Qe4'''' Qf8'' 36. Kc7' Qf7+' 37. Kb6'''' Qf6+' 38. Kb5' Qb2+' 39.  
 Kc5' Qc1+' 40. Kd4'''' Qb2+' 41. Kd5'''' Qb5+' 42. Kd6'''' Qb8+' 43. Ke7'''' Qc7+' 44. Ke8' Qc8+' 45. Kf7''''  
 Qc7+' 46. Kg6'''' Qg3+' 47. Kf6'''' Qd6+' 48. Kf5'''' Qf8+' 49. Kg5' {SM: Kg4''} Qg7+' 50. Kf4'''' Qf6+' 51.  
 Qf5'''' Qd4+' 52. Kg5+''' Ke2'' 53. Qe4+''' Qe3+' 54. Kf5'''' Kd2'' 55. d4'''' {KQP(d4)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub>  
 = -74/-84/-87/-44/-44m} Qh3+' 56. Kf6'' Qh6+' 57. Kf7' Qh5+' 58. Ke7'' Qg5+' 59. Kd7'' Qg7+' 60. Kc6''  
 Qf6+' 61. Kb5'' Qf1+' 62. Ka5'' Qc4'' 63. Kb6'''' Qb4+' 64. Kc6'' Qa4+' 65. Kd6'' Qb4+' 66. Ke6'' Qc4+' 67.  
 Kf6'' Kc3'' 68. Qe3+''' Kb4'' 69. Qe7+' Ka4'' 70. Qe5'' Qc6+' 71. Ke7'''' Qb7+' 72. Kd8' Qb6+' 73. Kd7'' Qa7+'  
 74. Ke6'' Qa8'' 75. Qd6'' Qe4+' 76. Kd7'' Qb7+' 77. Kd8'' Qa8+' 78. Kc7'' Qa7+' 79. Kc6'' Qa6+' 80. Kd5''  
 Qb5+' 81. Ke6'' Qe8+' 82. Kf6'' Qe4'' 83. Qa6+' Kb4'' 84. Qb6+' Ka4'' 85. Qa7+' Kb3'' 86. Qc5'' Qh4+' 87.  
 Ke6'' Qg4+' 88. Kd6'' Qg6+' 89. Kc7'' Qf7+' 90. Kb6'' Qf6+' 91. Kb5'' Qf1+' 92. Ka5'' {SM: Kc6''} Qc4''  
 {SZ<sub>(50)</sub><sup>+</sup>: Qe1+'} 93. Qb5+' Kc3'' 94. d5'''' {KQP(d5)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -37/-48/-48/-12/-12m} Qc7+' 95.  
 Qb6'''' Qe5'' 96. Qc5+''' Kd3'' 97. Kb5'' Qb8+' 98. Qb6'' Qe5'' 99. Qc6'' Qb2+' 100. Ka5' Qa1+' 101. Kb6''  
 Qg1+' 102. Qc5'' Qg8'' 103. Ka5'' Qg2'' 104. Ka4'' Qg8'' 105. Kb4'' Qg4+' 106. Kb5'' Qg7'' 107. Qc4+' Ke3''  
 108. Kb4'' Qd7'' 109. Qc5+' Kf3'' 110. d6'' {KQP(d6)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -21/-32/-32/-7/-7m} Kg2'' 111.  
 Qc7'' Qg4+' 112. Kb5'' Qe2+' 113. Qc4'' Qb2+' 114. Kc6' Qf6'' 115. Qc5' Kh2'' 116. Kc7'' Qf4'' 117. Qd5'  
 Kg1'' 118. Kc8' Qc1+' 119. Kd8'' Qc3'' 120. d7'' {KQP(d7)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -10/-22/-22/-10/-10m} Qf6+'  
 121. Kc7' Qf4+' 122. Kb6' Qf6+' 123. Qc6'' Qb2+' 124. Kc7'' Qg7'' 125. Kc8' Qg4'' 126. Kb7'' Qg7'' 127. Qc7'  
 Qg2+' 128. Kb8'' Qb2+' 129. Kc8'' Qg2'' 130. Qa7+' Kf1'' 131. Qa1+' Kf2'' 132. Qa2+' {SZ<sub>(50)</sub><sup>+</sup>: d8=Q''} Kf1''  
 133. Qxg2+' Kxg2'' 134. d8Q'' {KQK: dtx = -8m} Kg3'' 135. Kc7' Kg4'' 136. Qd3' Kg5'' 137. Kd7' Kg4'' 138.  
 Ke7' Kg5'' 139. Qe4'' Kh6'' 140. Kf6' Kh5'' 141. Qd4' Kh6'' 142. Qh4#'' {Huntington DTM<sub>50</sub>, Nalimov DTM  
 and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KQB"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2013.12.17"]  
[Event "5m, 3-2m, KQBKQ, GBR 4010.00, maxDTC KQBKQ l&w: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "2k5/B7/Q2K4/8/8/7q/8/8 b - - 0 1"]  
[PlyCount "60"]

{notes are closely based on those of Nunn (1994), #236, pp. 153-4}

{this line is also SV+M/SV+M+ though uniqueness of moves vary from SV+C/SV+C+ from move 25}

{the one maxDTC/M/Z KQBKQ btm loss: dtc/m/z = -30/-33/-30m} 1... Kd8°

{1 of 33 maxDTC/Z and of 33 maxDTM KQBKQ wtm wins: dtc/m/z = 30/33/30m} 2. Bb6+' Ke8° 3. Qe2+''  
Kf7' 4. Qe7+'''' Kg6' 5. Qe8+'''' Kh7'' 6. Qe4+'''' Kg7'' 7. Bd4+' Kf7'' 8. Qe7+'''' Kg6'' 9. Qe8+'''' Kg5'' 10.  
Be3+'''' Kh4'' 11. Qe7+' Kg3'' 12. Qe5+'''' Kg2'' 13. Qb2+'''' Kh1'' 14. Qc1+' Kg2'' 15. Qg1+' Kf3° 16. Qf2+'  
{Nunn refers here to #214, Mann/Vandiest (van der Heijden, 2010, #59790)} Ke4'' 17. Qf4+' Kd3° 18.  
Qd4+'''' Ke2'' 19. Qb2+' Kf3'' 20. Qf6+' Ke4'' 21. Qd4+' Kf3'' 22. Qf4+' Ke2'' 23. Qf2+' Kd3'' 24. Qd2+''''  
Kc4'' 25. Qd4+' {' in SM} Kb5' 26. Qd3+' Ka4'' 27. Qc4+' Ka5'' 28. Qa2+' Kb5' {' in SM+} 29. Qb3+' Ka5''  
30. Bd2+' {' in SM} Ka6' {' in SM+} 31. Qxh3'''' {KQBK: dtc/m/z = -3/-6/-3m} {MB 'Nalimov' DTC EGTs} \*

[White "KQN"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2013.12.19"]  
[Event "5m, 3-2m, KQNKQ, GBR 4001.00, maxDTM KQNKQ l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "3k4/8/2NK4/8/Q7/8/8/6q1 b - - 0 1"]  
[PlyCount "82"]

{notes closely based on those of Nunn (2002), #186, pp. 121-2}

{the one maxDTC/M/Z KQNKQ btm loss: dtc/m/z = -35/-41/-35m} 1... Ke8''

{1 of 7 maxDTC/Z and of 7 maxDTM KQNKQ wtm wins: dtc/m/z = 35/41/35m} 2. Nd8+'''' Kf8'' 3. Ne6+''''  
Kf7'' 4. Qd7+'''' Kf6'' 5. Qe7+'''' Kf5'' 6. Qf7+'''' Ke4'' 7. Qb7+' Kd3'' 8. Qb3+'''' Kd2'' 9. Qb2+'''' Kd3'' 10.  
Nc5+'''' Ke3'' 11. Qc3+' Kf4'' 12. Ne6+'''' Ke4'' 13. Qc6+'''' Kf5'' 14. Qb5+' Kg6'' 15. Qe8+'''' Kh7'' 16. Qf7+'  
Kh6'' 17. Qf6+' Qg6'' 18. Qh4+' Qh5° 19. Qf4+' Kh7'' 20. Qf6+'''' Qh2+' 21. Kd7+'''' Qd2+' 22. Ke8+'''' Qh6''  
23. Nf8+'''' Kg8'' 24. Ng6+'''' Qg7'' 25. Qf5' Kh7'' 26. Ne7+'''' Kh8'' 27. Qh5+' Qh7'' 28. Qe5+' Qg7° 29. Qh2+'  
Qh7'' 30. Qf4' Qg7' 31. Kd7'' Kh7'' 32. Qh4+' Qh6° 33. Qe4+'''' Kh8'' 34. Qa8+' Kg7'' 35. Nf5+' Kf6'' 36.  
Nxb6'' {KQNK: dtc/m/z = -4/-6/-4m} Ke5'' 37. Qa4' Kd5' 38. Nf5' Kc5' 39. Qd4+' Kb5° 40. Kc7' Ka5'' 41. Nd6'  
Ka6° 42. Qa4# {Nalimov and Lomonosov DTM EGTs} \*

[White "KQP"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2013.10.30"]  
[Event "5m, 3-2m, KQPKQ, GBR 4000.10, maxDTC KQPKQ w&l: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "4Q3/8/7q/8/8/8/k3P3/2K5 w - - 0 1"]  
[PlyCount "227"]

**{1 of 5 maxDTC and of 5 maxDTM KQPKQ wins: dtc/m/z/z<sub>50</sub> = 114/124/25/25m}** 1. Kc2"  
**{1 of 13 maxDTC and of 13 maxDTM KQPKQ losses: dtc/m/z/z<sub>50</sub> = -113/-123/-24/-24m}** Qh7+'' 2. Kc3"  
Qc7+'' 3. Kd4'' Qb6+'' 4. Kd5'' Qb3+'' 5. Ke4'' Qd1'' 6. e3'' **{KQP(e3)KQ: dtc/m/z/z<sub>50</sub> = -108/-118/-48/-48m}** Qe2'' 7. Kf4'' Qf2+'' 8. Kg5'' Qg2+'' 9. Kf6'' Qf2+'' 10. Kg7'' Qb2+'' 11. Kh7'' Qb7+'' 12. Kh6'' Qb6+'' 13. Kg5'' Kb3'' 14. Kf5'' Qc5+'' 15. Kf6'' Kc2'' 16. Qe4'' Kc1'' 17. Kf7'' Qh5+'' 18. Ke7'' Qc5+'' 19. Kd7'' Qa7+'' 20. Ke8'' Qb8+'' 21. Kf7'' Qc7+'' 22. Qe7'' Qc4+'' 23. Qe6'' Qc7+'' 24. Kf6'' Qc3+'' 25. Qe5'' Qc6+'' 26. Ke7'' Qb7+'' 27. Kd8'' Qa8+'' 28. Kd7'' Qa4+'' 29. Ke7'' Qb4+'' 30. Ke6'' Qc4+'' 31. Qd5'' Qc8+'' 32. Ke7'' Qc7+'' 33. Kf6'' Qc3+'' 34. Qd4'' Qc8'' 35. Kf7'' Qc7+'' 36. Kg6'' Qc6+'' 37. Kg5'' Qg2+'' 38. Kf5'' Qf1+'' 39. Ke4'' Qg2+'' 40. Ke5'' Qg5+'' 41. Ke6'' Qg8+'' 42. Kd7'' Qf7+'' 43. Kd6'' Qf8+'' 44. Kc7'' Qf7+'' 45. Kb6'' Qb3+'' 46. Kc6'' Qe6+'' 47. Kc5'' Qc8+'' 48. Kb4'' Qb7+'' 49. Kc3'' Qc6+'' 50. Qc4'' Qf3'' 51. Kd4+'' Kd2'' 52. Qd3+'' Ke1'' 53. e4'' **{KQP(e4)KQ: dtc/m/z/z<sub>50</sub> = -61/-71/-21/-21m}** Qf6+'' 54. Kc5'' Qe7+'' 55. Kb6'' Qe6+'' 56. Ka5'' Qe5+'' 57. Qd5'' Qc3+'' 58. Kb5'' Qb2+'' 59. Kc6'' Qh8'' 60. Qf5'' Qe8+'' 61. Kc5'' Qe7+'' 62. Kc4'' Qc7+'' 63. Qc5'' Qf4'' 64. Qd4'' Qf7+'' 65. Qd5'' Qf1+'' 66. Kb4'' Qf3'' 67. Ka4'' Ke2'' 68. Qc4+'' Kd2'' 69. Qd4+'' Ke2'' 70. e5'' **{KQP(e5)KQ: dtc/m/z/z<sub>50</sub> = -44/-54/-19/-19m}** Qc6+'' 71. Kb4'' Qb7+'' 72. Kc4'' Qc6+'' 73. Qc5'' Qa4+'' 74. Kd5'' Qd7+'' 75. Qd6'' Qb5+'' 76. Ke6'' Qb3+'' 77. Qd5'' Qb6+'' 78. Kf5'' Qf2+'' 79. Kg5'' Qg1+'' 80. Kh6'' Qe3+'' 81. Kh5'' Qh3+'' 82. Kg6'' Qg4+'' 83. Kf6'' Qh4+'' 84. Kf7'' Qh5+'' 85. Ke7'' Qg5+'' 86. Kd7'' Qf5+'' 87. Kd8'' Qg5+'' 88. Kc7'' Qf4'' 89. Kb6'' Ke3'' 90. e6'' **{KQP(e6)KQ: dtc/m/z/z<sub>50</sub> = -24/-34/-15/-15m}** Qb8+'' 91. Kc5'' Qc7+'' 92. Qc6'' Qe5+'' 93. Kb6'' Qb8+'' 94. Ka6'' Qe5'' 95. Qd7'' Qa1+'' 96. Kb6'' Qb2+'' 97. Qb5'' Qf6'' 98. Qd5'' Ke2'' 99. Kc6'' Qg6'' 100. Kd7'' Qg4'' 101. Qe5+'' Kd2'' 102. Kd8'' Qg8+'' 103. Kc7'' Qa8'' 104. Qc5'' Qa4'' 105. e7'' **{KQP(e7)KQ: dtc/m/z/z<sub>50</sub> = -9/-19/-9/-9m}** Qe4'' 106. Kd6'' Qg6+'' 107. Kd7'' Qg4+'' 108. Kd8'' Qh4'' 109. Qd6+'' Kc1'' 110. Kc7'' Qh7'' 111. Qd7'' Qh2+'' 112. Kc8'' **{and here, SC<sup>+</sup> and SM<sup>+</sup> must diverge}** Qc2+'' 113. Qc7'' Kb1'' 114. Qxc2+'' **{KQPK: dtc/m/z/z<sub>50</sub> = -1/-9/-1/-1m}** **{MB 'Nalimov' DTC and Lomonosov DTM EGTs}** \*

[White "KQP"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2013.10.30"]  
 [Event "5m, 3-2m, KQPKQ, GBR 4000.10, maxDTM KQPKQ w&l: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "4Q3/8/7q/8/8/8/k3P3/2K5 w - - 0 1"]  
 [PlyCount "247"]

**{1 of 5 maxDTC and of 5 maxDTM KQPKQ wins: dtc/m/z/z<sub>50</sub> = 114/124/25/25m}** 1. Kc2"  
**{1 of 13 maxDTC and of 13 maxDTM KQPKQ losses: dtc/m/z/z<sub>50</sub> = -113/-123/-24/-24m}** Qh7+'' 2. Kc3"  
 Qc7+'' 3. Kd4'''' Qb6+'' 4. Kd5'''' Qb3+'' 5. Ke4'''' Qd1'' 6. e3'''' **{KQP(e3)KQ: dtc/m/z/z<sub>50</sub> = -108/-118/-48/-48m}** Qe2'' 7. Kf4'' Qf2+'' 8. Kg5'''' Qg2+'' 9. Kf6'' Qf2+'' 10. Kg7'' Qb2+'' 11. Kh7'' Qb7+'' 12. Kh6'' Qb6+'' 13. Kg5'''' Kb3'' 14. Kf5'''' Qc5+'' 15. Kf6'''' Kc2'' 16. Qe4+'''' Kc1'' 17. Kf7'''' Qh5+'' 18. Ke7'' Qc5+'' 19. Kd7'' Qa7+'' 20. Ke8'' Qb8+'' 21. Kf7'''' Qc7+'' 22. Qe7'''' Qc4+'' 23. Qe6'''' Qc7+'' 24. Kf6'''' Qc3+'' 25. Qe5'' Qc6+'' 26. Ke7'' Qb7+'' 27. Kd8'' Qa8+'' 28. Kd7'''' Qa4+'' 29. Ke7'' Qb4+'' 30. Ke6'' Qc4+'' 31. Qd5'' Qc8+'' 32. Ke7'' Qc7+'' 33. Kf6'''' Qc3+'' 34. Qd4'' Qc8'' 35. Kf7'' Qc7+'' 36. Kg6'' Qc6+'' 37. Kg5'' Qg2+'' 38. Kf5'' Qf1+'' 39. Ke4'' Qg2+'' 40. Ke5'' Qg5+'' 41. Ke6'''' Qg8+'' 42. Kd7'' Qf7+'' 43. Kd6'' Qf8+'' 44. Kc7'''' Qf7+'' 45. Kb6'' Qb3+'' 46. Kc6'' Qe6+'' 47. Kc5'' Qc8+'' 48. Kb4'' Qb7+'' 49. Kc3'' Qc6+'' 50. Qc4'' Qf3'' 51. Kd4+'' Kd2'' 52. Qd3+'' Ke1'' 53. e4'' **{KQP(e4)KQ: dtc/m/z/z<sub>50</sub> = -61/-71/-21/-21m}** Qf6+'' 54. Kc5'' Qe7+'' 55. Kb6'' Qe6+'' 56. Ka5'' Qe5+'' 57. Qd5'' Qc3+'' 58. Kb5'' Qb2+'' 59. Kc6'' Qh8'' 60. Qf5'' Qe8+'' 61. Kc5'' Qe7+'' 62. Kc4'' Qc7+'' 63. Qc5'' Qf4'' 64. Qd4'' Qf7+'' 65. Qd5'' Qf1+'' 66. Kb4'' Qf3'' **{uniquely optimal in SC<sup>+</sup>}** 67. Ka4'' Ke2'' 68. Qc4+'''' Kd2'' 69. Qd4+'' Ke2'' 70. e5'' **{KQP(e5)KQ: dtc/m/z/z<sub>50</sub> = -44/-54/-19/-19m}** Qc6+'' 71. Kb4'' Qb7+'' 72. Kc4'' Qc6+'' 73. Qc5'' Qa4+'' 74. Kd5'' Qd7+'' 75. Qd6'' Qb5+'' 76. Ke6'' Qb3+'' 77. Qd5'' Qb6+'' 78. Kf5'' Qf2+'' 79. Kg5'' Qg1+'' 80. Kh6'' Qe3+'' 81. Kh5'' Qh3+'' 82. Kg6'' Qg4+'' 83. Kf6'' Qh4+'' 84. Kf7'' Qh5+'' 85. Ke7'' Qg5+'' 86. Kd7'' Qf5+'' 87. Kd8'' Qg5+'' 88. Kc7'' Qf4'' 89. Kb6'' Ke3'' 90. e6'' **{KQP(e6)KQ: dtc/m/z/z<sub>50</sub> = -24/-34/-15/-15m}** Qb8+'' 91. Kc5'' Qc7+'' 92. Qc6'' Qe5+'' 93. Kb6'' Qb8+'' 94. Ka6'' Qe5'' 95. Qd7'' Qa1+'' 96. Kb6'' Qb2+'' 97. Qb5'' Qf6'' 98. Qd5'' Ke2'' 99. Kc6'' Qg6'' 100. Kd7'' Qg4'' 101. Qe5+'' Kd2'' 102. Kd8'' Qg8+'' 103. Kc7'' Qa8'' 104. Qc5'' Qa4'' 105. e7'' **{KQP(e7)KQ: dtc/m/z/z<sub>50</sub> = -9/-19/-9/-9m}** Qe4'' 106. Kd6'' Qg6+'' 107. Kd7'' Qg4+'' 108. Kd8'' Qh4'' 109. Qd6+'' Kc1'' 110. Kc7'' Qh7'' 111. Qd7'' Qh2+'' 112. Kc8'' **{and here SM<sup>+</sup> and SC<sup>+</sup> must diverge}** Qg2'' 113. Qc7+'' Kd1'' 114. e8=Q'' **{KQKQKQ: dtc/m/z/z<sub>50</sub> = -6/-10/-6/-6m}** Qa8+'' 115. Qb8'' Qxb8+'' 116. Kxb8'''' **{KQK: dtx = -8m}** Kd2'' 117. Kb7'' Kc2'' 118. Qe3'' Kb2'' 119. Qd2+'' Kb1'' 120. Kb6'' Ka1° 121. Kb5'' Kb1° 122. Kb4'' Ka1° 123. Kb3'' Kb1° 124. Qb2#'' **{MB 'Nalimov' DTC, Nalimov DTM and Lomonosov DTM EGTs}** \*



[White "KQP"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2014.06.15"]  
 [Event "5m, 3-2m, KQPKQ, GBR 4000.10, maxDTM<sub>50,pc</sub> KQPKQ w&l: SV<sup>+</sup>M<sub>50</sub>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "3Q4/8/8/5K2/8/8/3P3k/1q6 w - - 88 1"]  
 [PlyCount "275"]

{moves are also DTZ<sub>50</sub>-optimal if possible}

{1 of 3 maxDTM<sub>50,pc</sub> KQPKQ wtm wins: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 71/82/138/1/1m} 1. d3<sup>'''</sup> {S(M/Z): Qc6+<sup>''</sup>}

{q.v., DTM<sub>50</sub>-minimaxing KPPKP line after 5. d8=Q<sup>'''</sup>}

{a maxDTM<sub>50,0/pc</sub> KQPKQ btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -110/-120/-137/-50/-50m} Qf1+<sup>''</sup>

{a maxDTM<sub>50,0</sub> KQPKQ wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 110/120/137/50/50m} 2. Ke5<sup>'</sup> Qe2+<sup>''</sup> 3. Kd4<sup>'''</sup> Qd2<sup>''</sup> 4. Kc4<sup>'''</sup> Qc2+<sup>''</sup> 5. Kb5<sup>'''</sup> Qb2+<sup>''</sup> 6. Kc6<sup>'''</sup> Qc2+<sup>''</sup> 7. Kb7<sup>'''</sup> Qg2+<sup>''</sup> 8. Ka7<sup>'''</sup> Qg7+<sup>''</sup> 9. Ka6<sup>'''</sup> Qg6+<sup>''</sup> 10. Kb5<sup>'''</sup> Kg3<sup>''</sup> 11. Kc5<sup>'''</sup> Qf5+<sup>''</sup> 12. Kc6<sup>'''</sup> Kf2<sup>''</sup> 13. Qd4+<sup>'''</sup> Kf1<sup>''</sup> 14. Kc7<sup>'''</sup> Qa5+<sup>''</sup> 15. Kd7<sup>'''</sup> Qf5+<sup>''</sup> 16. Ke7<sup>'''</sup> Qh7+<sup>''</sup> 17. Kd8<sup>'''</sup> Qg8+<sup>''</sup> 18. Kc7<sup>'''</sup> Qf7+<sup>''</sup> 19. Qd7<sup>'''</sup> Qf4+<sup>''</sup> 20. Qd6<sup>'''</sup> Qf7+<sup>''</sup> 21. Kc6<sup>'''</sup> Qf3+<sup>''</sup> 22. Qd5<sup>'''</sup> Qf6+<sup>''</sup> 23. Kd7<sup>'''</sup> Qg7+<sup>''</sup> 24. Ke8<sup>'''</sup> Qh8+<sup>''</sup> 25. Ke7<sup>'''</sup> Qh4+<sup>''</sup> 26. Kd7<sup>'''</sup> Qg4+<sup>''</sup> 27. Kd6<sup>'''</sup> Qf4+<sup>''</sup> 28. Qe5<sup>'''</sup> Qf8+<sup>''</sup> 29. Kd7<sup>'''</sup> Qf7+<sup>''</sup> 30. Kc6<sup>'''</sup> Qf3+<sup>''</sup> 31. Qe4<sup>'''</sup> Qf8<sup>''</sup> 32. Kc7<sup>'''</sup> Qf7+<sup>''</sup> 33. Kb6<sup>'''</sup> Qf6+<sup>''</sup> 34. Kb5<sup>'''</sup> Qb2+<sup>''</sup> 35. Kc5<sup>'''</sup> Qc1+<sup>''</sup> 36. Kd4<sup>'''</sup> Qb2+<sup>''</sup> 37. Kd5<sup>'''</sup> Qb5+<sup>''</sup> 38. Kd6<sup>'''</sup> Qb8+<sup>''</sup> 39. Ke7<sup>'''</sup> Qc7+<sup>''</sup> 40. Ke8<sup>'''</sup> Qc8+<sup>''</sup> 41. Kf7<sup>'''</sup> Qc7+<sup>''</sup> 42. Kg6<sup>'''</sup> Qg3+<sup>''</sup> 43. Kf6<sup>'''</sup> Qd6+<sup>''</sup> 44. Kf5<sup>'''</sup> Qf8+<sup>''</sup> 45. Kg5<sup>'''</sup> {SM: Kg4<sup>'''</sup>} Qg7+<sup>''</sup> 46. Kf4<sup>'''</sup> Qf6+<sup>''</sup> 47. Qf5<sup>'''</sup> Qd4+<sup>''</sup> 48. Kg5+<sup>'''</sup> Ke2<sup>''</sup> 49. Qe4+<sup>'''</sup> Qe3+<sup>''</sup> 50. Kf5<sup>'''</sup> Kd2<sup>''</sup> 51. d4<sup>'''</sup> {KQP(d4)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -74/-84/-87/-44/-44m} Qh3+<sup>''</sup> 52. Kf6<sup>'''</sup> Qh6+<sup>''</sup> 53. Kf7<sup>'''</sup> Qh5+<sup>''</sup> 54. Ke7<sup>'''</sup> Qg5+<sup>''</sup> 55. Kd7<sup>'''</sup> Qg7+<sup>''</sup> 56. Kc6<sup>'''</sup> Qf6+<sup>''</sup> 57. Kb5<sup>'''</sup> Qf1+<sup>''</sup> 58. Ka5<sup>'''</sup> Qc4<sup>''</sup> 59. Kb6<sup>'''</sup> Qb4+<sup>''</sup> 60. Kc6<sup>'''</sup> Qa4+<sup>''</sup> 61. Kd6<sup>'''</sup> Qb4+<sup>''</sup> 62. Ke6<sup>'''</sup> Qc4+<sup>''</sup> 63. Kf6<sup>'''</sup> Kc3<sup>''</sup> 64. Qe3+<sup>'''</sup> Kb4<sup>''</sup> 65. Qe7+<sup>'''</sup> Ka4<sup>''</sup> 66. Qe5<sup>'''</sup> Qc6+<sup>''</sup> 67. Ke7<sup>'''</sup> Qb7+<sup>''</sup> 68. Kd8<sup>'''</sup> Qb6+<sup>''</sup> 69. Kd7<sup>'''</sup> Qa7+<sup>''</sup> 70. Ke6<sup>'''</sup> Qa8<sup>''</sup> 71. Qd6<sup>'''</sup> Qe4+<sup>''</sup> 72. Kd7<sup>'''</sup> Qb7+<sup>''</sup> 73. Kd8<sup>'''</sup> Qa8+<sup>''</sup> 74. Kc7<sup>'''</sup> Qa7+<sup>''</sup> 75. Kc6<sup>'''</sup> Qa6+<sup>''</sup> 76. Kd5<sup>'''</sup> Qb5+<sup>''</sup> 77. Ke6<sup>'''</sup> Qe8+<sup>''</sup> 78. Kf6<sup>'''</sup> Qe4<sup>''</sup> 79. Qa6+<sup>'''</sup> Kb4<sup>''</sup> 80. Qb6+<sup>'''</sup> Ka4<sup>''</sup> 81. Qa7+<sup>'''</sup> Kb3<sup>''</sup> 82. Qc5<sup>'''</sup> Qh4+<sup>''</sup> 83. Ke6<sup>'''</sup> Qg4+<sup>''</sup> 84. Kd6<sup>'''</sup> Qg6+<sup>''</sup> 85. Kc7<sup>'''</sup> Qf7+<sup>''</sup> 86. Kb6<sup>'''</sup> Qf6+<sup>''</sup> 87. Kb5<sup>'''</sup> Qf1+<sup>''</sup> 88. Ka5<sup>'''</sup> {SM: Kc6<sup>'''</sup>} Qc4<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Qe1+<sup>''</sup>} 89. Qb5+<sup>'''</sup> Kc3<sup>''</sup> 90. d5<sup>'''</sup> {KQP(d5)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -37/-48/-48/-12/-12m} Qc7+<sup>''</sup> 91. Qb6<sup>'''</sup> Qe5<sup>''</sup> 92. Qc5+<sup>'''</sup> Kd3<sup>''</sup> 93. Kb5<sup>'''</sup> Qb8+<sup>''</sup> 94. Qb6<sup>'''</sup> Qe5<sup>''</sup> 95. Qc6<sup>'''</sup> Qb2+<sup>''</sup> 96. Ka5<sup>'''</sup> Qa1+<sup>''</sup> 97. Kb6<sup>'''</sup> Qg1+<sup>''</sup> 98. Qc5<sup>'''</sup> Qg8<sup>''</sup> 99. Ka5<sup>'''</sup> Qg2<sup>''</sup> 100. Ka4<sup>'''</sup> Qg8<sup>''</sup> 101. Kb4<sup>'''</sup> Qg4+<sup>''</sup> 102. Kb5<sup>'''</sup> Qg7<sup>''</sup> 103. Qc4+<sup>'''</sup> Ke3<sup>''</sup> 104. Kb4<sup>'''</sup> Qd7<sup>''</sup> 105. Qc5+<sup>'''</sup> Kf3<sup>''</sup> 106. d6<sup>'''</sup> {KQP(d6)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -21/-32/-32/-7/-7m} Kg2<sup>''</sup> 107. Qc7<sup>'''</sup> Qg4+<sup>''</sup> 108. Kb5<sup>'''</sup> Qe2+<sup>''</sup> 109. Qc4<sup>'''</sup> Qb2+<sup>''</sup> 110. Kc6<sup>'''</sup> Qf6<sup>''</sup> 111. Qc5<sup>'''</sup> Kh2<sup>''</sup> 112. Kc7<sup>'''</sup> Qf4<sup>''</sup> 113. Qd5<sup>'''</sup> Kg1<sup>''</sup> 114. Kc8<sup>'''</sup> Qc1+<sup>''</sup> 115. Kd8<sup>'''</sup> Qc3<sup>''</sup> 116. d7<sup>'''</sup> {KQP(d7)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -10/-22/-22/-10/-10m} Qf6+<sup>''</sup> 117. Kc7<sup>'''</sup> Qf4+<sup>''</sup> 118. Kb6<sup>'''</sup> Qf6+<sup>''</sup> 119. Qc6<sup>'''</sup> Qb2+<sup>''</sup> 120. Kc7<sup>'''</sup> Qg7<sup>''</sup> 121. Kc8<sup>'''</sup> Qg4<sup>''</sup> 122. Kb7<sup>'''</sup> Qg7<sup>''</sup> 123. Qc7<sup>'''</sup> Qg2+<sup>''</sup> 124. Kb8<sup>'''</sup> Qb2+<sup>''</sup> 125. Kc8<sup>'''</sup> Qg2<sup>''</sup> 126. Qa7+<sup>'''</sup> Kf1<sup>''</sup> 127. Qa1+<sup>'''</sup> Kf2<sup>''</sup> 128. Qa2+<sup>'''</sup> {SZ<sub>(50)</sub><sup>+</sup>: d8=Q<sup>'''</sup>} Kf1<sup>''</sup> 129. Qxg2+<sup>'''</sup> Kxg2<sup>''</sup> 130. d8Q<sup>'''</sup> {KQK: dtx = -8m} Kg3<sup>''</sup> 131. Kc7<sup>'''</sup> Kg4<sup>''</sup> 132. Qd3<sup>'''</sup> Kg5<sup>''</sup> 133. Kd7<sup>'''</sup> Kg4<sup>''</sup> 134. Ke7<sup>'''</sup> Kg5<sup>''</sup> 135. Qe4<sup>'''</sup> Kh6<sup>''</sup> 136. Kf6<sup>'''</sup> Kh5<sup>''</sup> 137. Qd4<sup>'''</sup> Kh6<sup>''</sup> 138. Qh4<sup>'''</sup> {Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KQP"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2014.04.23"]  
 [Event "5m, 3-2m, KQPKQ, GBR 4000.10, maxDTM<sub>50,pc</sub> KQPKQ l&w: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "8/6K1/8/8/7q/2Q5/3P4/7k w - - 96 1"]  
 [PlyCount "275"]

{this is a second maxDTM<sub>50,pc</sub> position; moves are also DTZ<sub>50</sub>-optimal if possible}

{The ply-count pc is 96 but could alternatively be 97-99 (Huntington, 2013).}

{1 of 3 maxDTM<sub>50,pc</sub> KQPKQ wtm wins: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 4/17/138/1/1m} 1. d3<sup>'''</sup> {S(M/Z): Qc6+''}

{a maxDTM<sub>50,0</sub> KQPKQ btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -110/-120/-137/-50/-50m} Qe7+''

{a maxDTM<sub>50,0</sub> KQPKQ wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 110/120/137/50/50m} 2. Kg6<sup>''''</sup> Qe6+'' 3. Kg5<sup>''''</sup> Qe3+'' 4.

Kf5<sup>''''</sup> Kg2'' 5. Qc4<sup>''''</sup> Qf3+'' 6. Kg6<sup>''''</sup> Qg3+'' 7. Kf7<sup>''''</sup> Qf3+'' 8. Ke7<sup>''''</sup> Qb7+'' 9. Ke6<sup>''''</sup> Qb6+'' 10. Kf5<sup>''''</sup>

Qf2+'' 11. Qf4<sup>''''</sup> Qc5+'' 12. Qe5<sup>''''</sup> Qf8+'' 13. Qf6<sup>''''</sup> Qc8+'' 14. Ke4<sup>''''</sup> Qc2'' 15. Qd4<sup>''''</sup> Kf1'' 16. Kd5<sup>''''</sup> Qa2+''

17. Kd6<sup>''''</sup> Qg8'' 18. Kc7<sup>''''</sup> {position 22b in the KPPKP DTM<sub>50</sub>-minimaxing line} Qf7+'' 19. Qd7<sup>''''</sup> Qf4+'' 20.

Qd6<sup>''''</sup> Qf7+'' 21. Kc6<sup>''''</sup> Qf3+'' 22. Qd5<sup>''''</sup> Qf6+'' 23. Kd7<sup>''''</sup> Qg7+'' 24. Ke8<sup>''''</sup> Qh8+'' 25. Ke7<sup>''''</sup> Qh4+'' 26.

Kd7<sup>''''</sup> Qg4+'' 27. Kd6<sup>''''</sup> Qf4+'' 28. Qe5<sup>''''</sup> Qf8+'' 29. Kd7<sup>''''</sup> Qf7+'' 30. Kc6<sup>''''</sup> Qf3+'' 31. Qe4<sup>''''</sup> Qf8'' 32. Kc7''

Qf7+'' 33. Kb6<sup>''''</sup> Qf6+'' 34. Kb5<sup>''''</sup> Qb2+'' 35. Kc5<sup>''''</sup> Qc1+'' 36. Kd4<sup>''''</sup> Qb2+'' 37. Kd5<sup>''''</sup> Qb5+'' 38. Kd6<sup>''''</sup> Qb8+''

39. Ke7<sup>''''</sup> Qc7+'' 40. Ke8<sup>''''</sup> Qc8+'' 41. Kf7<sup>''''</sup> Qc7+'' 42. Kg6<sup>''''</sup> Qg3+'' 43. Kf6<sup>''''</sup> Qd6+'' 44. Kf5<sup>''''</sup> Qf8+'' 45.

Kg5<sup>''''</sup> Qg7+'' 46. Kf4<sup>''''</sup> Qf6+'' 47. Qf5<sup>''''</sup> Qd4+'' 48. Kg5<sup>''''</sup> Ke2'' 49. Qe4<sup>''''</sup> Qe3+'' 50. Kf5<sup>''''</sup> Kd2'' 51. d4<sup>''''</sup>

{KQP(d4)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -74/-84/-87/-44/-44m} Qh3+'' 52. Kf6'' Qh6+'' 53. Kf7'' Qh5+'' 54. Ke7'' Qg5+''

55. Kd7'' Qg7+'' 56. Kc6'' Qf6+'' 57. Kb5'' Qf1+'' 58. Ka5'' Qc4'' 59. Kb6<sup>''''</sup> Qb4+'' 60. Kc6'' Qa4+'' 61. Kd6''

Qb4+'' 62. Ke6'' Qc4+'' 63. Kf6'' Kc3'' 64. Qe3+<sup>''''</sup> Kb4'' 65. Qe7+'' Ka4'' 66. Qe5'' Qc6+'' 67. Ke7<sup>''''</sup> Qb7+'' 68.

Kd8'' Qb6+'' 69. Kd7'' Qa7+'' 70. Ke6'' Qa8'' 71. Qd6'' Qe4+'' 72. Kd7'' Qb7+'' 73. Kd8'' Qa8+'' 74. Kc7'' Qa7+''

75. Kc6'' Qa6+'' 76. Kd5'' Qb5+'' 77. Ke6'' Qe8+'' 78. Kf6'' Qe4'' 79. Qa6+'' Kb4'' 80. Qb6+'' Ka4'' 81. Qa7+''

Kb3'' 82. Qc5'' Qh4+'' 83. Ke6'' Qg4+'' 84. Kd6'' Qg6+'' 85. Kc7'' Qf7+'' 86. Kb6'' Qf6+'' 87. Kb5'' Qf1+'' 88.

Ka5'' {SM: Kc6''} Qc4'' {SZ<sub>(50)</sub><sup>+</sup>: Qe1+''} 89. Qb5+'' Kc3'' 90. d5<sup>''''</sup> {KQP(d5)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub>

= -37/-48/-48/-12/-12m} Qc7+'' 91. Qb6<sup>''''</sup> Qe5'' 92. Qc5<sup>''''</sup> Kd3'' 93. Kb5'' Qb8+'' 94. Qb6'' Qe5'' 95. Qc6''

Qb2+'' 96. Ka5'' Qa1+'' 97. Kb6'' Qg1+'' 98. Qc5'' Qg8'' 99. Ka5'' Qg2'' 100. Ka4'' Qg8'' 101. Kb4'' Qg4+'' 102.

Kb5'' Qg7'' 103. Qc4+'' Ke3'' 104. Kb4'' Qd7'' 105. Qc5+'' Kf3'' 106. d6'' {KQP(d6)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub>

= -21/-32/-32/-7/-7m} Kg2'' 107. Qc7'' Qg4+'' 108. Kb5'' Qe2+'' 109. Qc4'' Qb2+'' 110. Kc6'' Qf6'' 111. Qc5''

Kh2'' 112. Kc7'' Qf4'' 113. Qd5'' Kg1'' 114. Kc8'' Qc1+'' 115. Kd8'' Qc3'' 116. d7'' {KQP(d7)KQ: dtc/m/m<sub>50</sub>/z/z<sub>50</sub>

= -10/-22/-22/-10/-10m} Qf6+'' 117. Kc7'' Qf4+'' 118. Kb6'' Qf6+'' 119. Qc6'' Qb2+'' 120. Kc7'' Qg7'' 121. Kc8''

Qg4'' 122. Kb7'' Qg7'' 123. Qc7'' Qg2+'' 124. Kb8'' Qb2+'' 125. Kc8'' Qg2'' 126. Qa7+'' Kf1'' 127. Qa1+'' Kf2''

128. Qa2+'' {SZ<sub>(50)</sub><sup>-</sup>: d8=Q''} Kf1'' 129. Qxg2+'' Kxg2'' 130. d8=Q'' {KQK: dtx = -8m} Kg3'' 131. Kc7'' Kg4'' 132.

Qd3'' Kg5'' 133. Kd7'' Kg4'' 134. Ke7'' Kg5'' 135. Qe4'' Kh6'' 136. Kf6'' Kh5° 137. Qd4'' Kh6° 138. Qh4#''

{Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KQP"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2014.01.26"]  
[Event "5m, 3-2m, GBR 4000.10, maxDTZ KQPKQ w&l: SV<sup>+</sup>Z/SV<sup>+</sup>Z<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/q7/P6k/Q7/8/8/6K1 w - - 0 1"]  
[PlyCount "141"]

{Thompson (1986), p138, gave this position and line}

{The line is correct despite promotion having been constrained to P=Q only}

{the one maxDTZ (and 1 of 3 DTZ<sub>50</sub>) KQPKQ wtm win: dtc/m/z/z<sub>50</sub>' = 107/118/71/71m} 1. Kg2<sup>''''</sup>

{1 of 3 maxDTZ (and 1 of 5 DTZ<sub>50</sub>) KQPKQ btm losses: dtc/m/z/z<sub>50</sub>' = -106/-117/-70/-70m} Qg7<sup>+'''</sup> 2. Kh1<sup>''''</sup>  
Qf6<sup>''</sup> 3. Qd2<sup>+'''</sup> Kg7<sup>''</sup> 4. Qd7<sup>+'''</sup> Kg6<sup>''</sup> 5. Qd3<sup>+'''</sup> Kg7<sup>''</sup> 6. Qg3<sup>+'''</sup> Kf8<sup>''</sup> 7. Qb8<sup>+'''</sup> Kf7<sup>''</sup> 8. Qc7<sup>+'''</sup> Kg6<sup>''</sup> 9. Qc4<sup>''</sup>  
Qf3<sup>+'''</sup> 10. Kh2<sup>''''</sup> Qe3<sup>''</sup> 11. Qf1<sup>''''</sup> Qe5<sup>+'''</sup> 12. Kh1<sup>''''</sup> Qh8<sup>+'''</sup> 13. Kg2<sup>''''</sup> Qa8<sup>+'''</sup> 14. Kg1<sup>''</sup> Qa7<sup>+'''</sup> 15. Kh1<sup>''</sup> Qd7<sup>''</sup>  
16. Qf2<sup>''</sup> Kh5<sup>''</sup> 17. Qe2<sup>+'''</sup> Kg6<sup>''</sup> 18. Qe4<sup>+'''</sup> Kh5<sup>''</sup> 19. Qc4<sup>''</sup> Qa7<sup>''</sup> 20. Qe2<sup>+'''</sup> Kg5<sup>''</sup> 21. Kg2<sup>''</sup> Qd4<sup>''</sup> 22. Qf2<sup>''</sup> Qe4<sup>+'''</sup>  
23. Qf3<sup>''</sup> Qd4<sup>''</sup> 24. Qe2<sup>''</sup> Kg6<sup>''</sup> 25. Qb5<sup>''</sup> Qe3<sup>''</sup> 26. Kf1<sup>''</sup> Qe4<sup>''</sup> 27. Kf2<sup>''</sup> Qd4<sup>+'''</sup> 28. Kf3<sup>''</sup> Kh6<sup>''</sup> 29. Qc6<sup>+'''</sup> Kg7<sup>''</sup>  
30. Qc7<sup>+'''</sup> Kg6<sup>''</sup> 31. Qg3<sup>+'''</sup> Kh5<sup>''</sup> 32. Qh3<sup>+'''</sup> Kg5<sup>''</sup> 33. Qe6<sup>''</sup> Qd1<sup>+'''</sup> 34. Qe2<sup>''</sup> Qd5<sup>+'''</sup> 35. Kf2<sup>''</sup> Qf5<sup>+'''</sup> 36. Kg1<sup>''</sup>  
Qb1<sup>+'''</sup> 37. Kg2<sup>''''</sup> Qg6<sup>''</sup> 38. Qc4<sup>''''</sup> Kh5<sup>+'</sup> 39. Kf2<sup>''</sup> Qf6<sup>+'</sup> 40. Ke3<sup>''</sup> Qe5<sup>+'''</sup> 41. Kd3<sup>''</sup> Kg5<sup>''</sup> 42. Kc2<sup>''</sup> Qe3<sup>''</sup> 43. Kb2<sup>''</sup>  
Kg6<sup>''</sup> 44. Qb5<sup>''</sup> Kh6<sup>''</sup> 45. Kc2<sup>''</sup> Qe6<sup>''</sup> 46. Kc3<sup>''</sup> Qd6<sup>''</sup> 47. Kc4<sup>''</sup> Kg7<sup>''</sup> 48. Qg5<sup>+'''</sup> Kh8<sup>''</sup> 49. Qh5<sup>+'</sup> Kg7<sup>''</sup> 50. Qg4<sup>+'''</sup>  
Kf7<sup>''</sup> 51. Qf5<sup>+'''</sup> Kg7<sup>''</sup> 52. Qc8<sup>''</sup> Qf4<sup>+'''</sup> 53. Kb5<sup>''</sup> Qf6<sup>''</sup> 54. Qc6<sup>''</sup> Qb2<sup>+'''</sup> 55. Kc5<sup>''</sup> Qf2<sup>+'''</sup> 56. Kd6<sup>''</sup> Kg6<sup>''</sup> 57. Kd5<sup>+'''</sup>  
Kh7<sup>''</sup> 58. Qc7<sup>+'''</sup> Kh8<sup>''</sup> 59. Qc3<sup>+'''</sup> Kh7<sup>''</sup> 60. Kc6<sup>''</sup> Qf5<sup>''</sup> 61. Kb6<sup>''</sup> Qe6<sup>+'''</sup> 62. Kb7<sup>''</sup> Qe4<sup>+'''</sup> 63. Kb8<sup>''</sup> Qb1<sup>+'''</sup> 64.  
Kc7<sup>''</sup> Qa2<sup>''</sup> 65. Qc6<sup>''</sup> Kh8<sup>''</sup> 66. Kb8<sup>''</sup> Qb3<sup>+'''</sup> 67. Qb7<sup>''</sup> Qg3<sup>+'''</sup> 68. Ka8<sup>''</sup> Qh3<sup>''</sup> 69. Qc6<sup>''</sup> Qg4<sup>''</sup> 70. Qc3<sup>+'''</sup> Kh7<sup>''</sup> 71.  
a7<sup>''</sup> {KQP(a7)KQ: dtc/m/z = -15/-26/-15m} {Thompson and MB 'Nalimov' DTZ, and de Man DTZ<sub>50</sub>' EGTs}  
\*

[White "KQP"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2013.11.04"]  
[Event "5m, 3-2m, KQPKQ, GBR 4000.10, maxDTZ<sub>50</sub> KQPKQ l&w: SV<sup>+</sup>Z<sub>50</sub>/SV<sup>+</sup>Z<sub>50</sub><sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "5q2/8/3P4/8/8/7Q/8/k1K5 b - - 0 1"]  
[PlyCount "100"]

{1 of 2,415 maxDTZ<sub>50</sub> KQPKQ losses: dtc/m/z/z<sub>50</sub> = -58/-67/-50/-50m} 1... Qf4<sup>+'''</sup>

{1 of 1,595 maxDTZ<sub>50</sub> KQPKQ wins: dtc/m/z/z<sub>50</sub> = 58/67/50/50m} 2. Kc2<sup>''''</sup> Qa4<sup>+'''</sup> 3. Qb3<sup>''''</sup> Qe4<sup>+'''</sup> 4. Qd3<sup>''''</sup>  
Qa4<sup>+'''</sup> 5. Kd2<sup>''''</sup> Qa2<sup>+'''</sup> 6. Ke3<sup>''''</sup> Qe6<sup>+'''</sup> 7. Kf4<sup>''''</sup> Qf6<sup>+'''</sup> 8. Kg4<sup>''''</sup> Qg7<sup>+'''</sup> 9. Kh5<sup>''''</sup> Qf7<sup>+'''</sup> 10. Qg6<sup>''''</sup> Qf3<sup>+'''</sup> 11.  
Kh4<sup>''''</sup> Qf4<sup>+'''</sup> 12. Kh3<sup>''''</sup> Qf1<sup>+'''</sup> 13. Qg2<sup>''''</sup> Qf5<sup>+'''</sup> 14. Kh2<sup>''''</sup> Qh5<sup>+'''</sup> 15. Qh3<sup>''''</sup> Qe5<sup>+'''</sup> 16. Qg3<sup>''''</sup> Qh5<sup>+'''</sup> 17.  
Kg2<sup>''</sup> Qe2<sup>+'''</sup> 18. Kg1<sup>''''</sup> Qd1<sup>+'''</sup> 19. Kf2<sup>''''</sup> Qd4<sup>+'''</sup> 20. Ke2<sup>''''</sup> Qe4<sup>+'''</sup> 21. Kd2<sup>''''</sup> Qd4<sup>+'''</sup> 22. Qd3<sup>''''</sup> Qb2<sup>+'''</sup> 23.  
Ke1<sup>''''</sup> Qb4<sup>+'''</sup> 24. Kf1<sup>''''</sup> Qf4<sup>+'''</sup> 25. Ke2<sup>''''</sup> Qh2<sup>+'''</sup> 26. Kd1<sup>''</sup> Qg1<sup>+'''</sup> 27. Kc2<sup>''</sup> Qf2<sup>+'''</sup> 28. Kc3<sup>''''</sup> Qc5<sup>+'''</sup> 29. Qc4<sup>''''</sup>  
Qa3<sup>+'</sup> 30. Kc2<sup>''''</sup> Qc1<sup>+'''</sup> 31. Kd3<sup>''''</sup> Qd1<sup>+'''</sup> 32. Kc3<sup>''''</sup> Qe1<sup>+'''</sup> 33. Kd4<sup>''''</sup> Qg1<sup>+'''</sup> 34. Kd5<sup>''''</sup> Qg8<sup>+'''</sup> 35. Kc5<sup>''''</sup>  
Qc8<sup>+'''</sup> 36. Kd4<sup>''''</sup> Qh8<sup>+'''</sup> 37. Kd3<sup>''''</sup> Qh3<sup>+'''</sup> 38. Kc2<sup>''''</sup> Qg2<sup>+'''</sup> 39. Kb3<sup>''''</sup> Qb7<sup>+'''</sup> 40. Ka3<sup>''''</sup> Qb2<sup>+'''</sup> 41. Ka4<sup>°</sup>  
Qc2<sup>+'''</sup> 42. Kb4<sup>''</sup> Qb2<sup>+'''</sup> 43. Kc5<sup>''''</sup> Qa3<sup>+'''</sup> 44. Qb4<sup>''''</sup> Qc1<sup>+'''</sup> 45. Kb5<sup>''''</sup> Qf1<sup>+'''</sup> 46. Ka5<sup>''''</sup> {and here SZ<sub>50</sub><sup>+</sup> and  
SM<sup>+</sup> must diverge} Qf5<sup>+'''</sup> 47. Qb5<sup>''''</sup> Qf2<sup>''</sup> 48. Ka6<sup>''''</sup> Qf6<sup>''</sup> 49. Qa5<sup>+'''</sup> Kb1<sup>''</sup> 50. Qb6<sup>+'''</sup> Ka1<sup>''</sup> 51. d7<sup>''''</sup>  
{KQP(d7)KQ: dtc/m/z = -4/-14/-4m} {MB 'Nalimov' DTZ<sub>50</sub> and de Man DTZ<sub>50</sub>' EGTs} \*

[White "KQP"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2013.11.16"]  
[Event "5m, 3-2m, KQPKQ, GBR 4000.10, max known 'dtz<sub>50</sub> - dtz' position: SV<sup>+</sup>Z<sub>50</sub><sup>-</sup>/SV<sup>+</sup>Z<sub>50</sub><sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/1P5Q/1K6/3q4/8/5k2/8 w - - 0 1"]  
[PlyCount "99"]

**{a max known 'dtz<sub>50</sub> - dtz' position: dtc/m/z/z<sub>50</sub> = 52/63/1/50m}** 1. Qg5<sup>'''</sup> {1. b7?? dtz = -51m}  
**{dtc/m/z/z<sub>50</sub> = -67/-80/-49/-49m}** Qe4<sup>''</sup> 2. Kc5<sup>'''</sup> Qc2+<sup>''</sup> 3. Kd5' Qb3+<sup>'</sup> 4. Kc6<sup>'''</sup> Qe6+<sup>''</sup> 5. Kc5<sup>'''</sup> Qc8+<sup>''</sup> 6.  
Kd4<sup>'''</sup> Qh8+<sup>''</sup> 7. Kc4<sup>'''</sup> Qh7<sup>'</sup> 8. Qd5<sup>'''</sup> Qc2+<sup>''</sup> 9. Kb4' Qb2+<sup>'</sup> 10. Kc5<sup>'''</sup> Qa3+<sup>'</sup> 11. Kc6<sup>'''</sup> Qa4+<sup>''</sup> 12. Kd6' Qf4+<sup>'</sup>  
13. Kd7<sup>'''</sup> Qg4+<sup>''</sup> 14. Qe6<sup>'''</sup> Qg7+<sup>''</sup> 15. Kd6<sup>'''</sup> Qg3+<sup>'</sup> 16. Kc5<sup>'''</sup> Qg5+<sup>''</sup> 17. Kc4' Qc1+<sup>'</sup> 18. Kd5<sup>'''</sup> Qb2<sup>'</sup> 19.  
Qg6<sup>'''</sup> Qb5+<sup>''</sup> 20. Kd4<sup>'''</sup> Qb4+<sup>''</sup> 21. Ke5<sup>'''</sup> Qc5+<sup>'</sup> 22. Kf4<sup>'''</sup> Qd4+<sup>''</sup> 23. Kf5' Qc5+<sup>'</sup> 24. Kg4<sup>'''</sup> Qd4+<sup>''</sup> 25.  
Kh5<sup>'''</sup> Qd5+<sup>''</sup> 26. Kh6<sup>'''</sup> Ke1<sup>'</sup> 27. Qg1+<sup>'''</sup> Ke2<sup>'</sup> 28. Qg4+<sup>'''</sup> Kf1<sup>'</sup> 29. Qg5<sup>'''</sup> Qc6+<sup>'</sup> 30. Qg6<sup>'''</sup> Qb7<sup>'</sup> 31.  
Qf6+<sup>'''</sup> Ke2<sup>'</sup> 32. Kg5<sup>'''</sup> Ke3<sup>'</sup> 33. Qe5+<sup>'</sup> Kf2<sup>'</sup> 34. Qc5+<sup>'''</sup> Ke2<sup>'</sup> 35. Kf4<sup>'''</sup> Qf3+<sup>'</sup> 36. Ke5<sup>'''</sup> Qg3+<sup>'</sup> 37. Ke6<sup>'''</sup>  
Qh3+<sup>'</sup> 38. Kd6<sup>'''</sup> Qh6+<sup>''</sup> 39. Kc7<sup>'''</sup> Qg7+<sup>'</sup> 40. Kc6<sup>'''</sup> Qf6+<sup>'</sup> 41. Qd6<sup>'''</sup> Qc3+<sup>'</sup> 42. Kd7<sup>'''</sup> Qf3<sup>'</sup> 43. Kc8' Qc3+<sup>'</sup>  
44. Kd8<sup>'''</sup> Qa5<sup>'</sup> 45. Ke7<sup>'''</sup> Qb5<sup>'</sup> 46. Qf6<sup>'''</sup> Qb1<sup>'</sup> 47. Kf7' Qh7+<sup>'</sup> 48. Kf8<sup>'''</sup> Qb1<sup>'</sup> 49. Qe7+<sup>'''</sup> Kd1<sup>'</sup> 50. b7<sup>'''</sup>  
**{KQP(b7)KQ: dtc/m/z = -11/-21/-11m}** {MB 'Nalimov' DTZ<sub>50</sub> and de Man DTZ<sub>50</sub> EGTs} \*

[White "KQQ"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2014.02.15"]  
[Event "5m, 3-2m, KQQKQ, GBR 5000.00", maxDTM KQQKQ l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "1Q6/Q7/8/8/8/8/K1k2q2 b - - 0 1"]  
[PlyCount "60"]

**{1 of 44 maxDTM KQQKQ btm losses: dtc/m/z = -24/-30/-24m}** 1... Kc2+<sup>'</sup>  
**{1 of 4 maxDTM KQQKQ wtm wins: dtc/m/z = 24/30/24m}** 2. Ka2<sup>'''</sup> Qc4+<sup>''</sup> 3. Ka3<sup>'''</sup> Qc3+<sup>'</sup> 4. Ka4<sup>'''</sup> Qa1+<sup>'</sup>  
5. Kb4' Qc3+<sup>'</sup> 6. Kb5<sup>'''</sup> Qb3+<sup>'</sup> 7. Kc5<sup>'''</sup> Qc3+<sup>'</sup> 8. Kd5<sup>'''</sup> Qf3+<sup>'</sup> 9. Ke5' Qh5+<sup>'</sup> 10. Kf4<sup>'''</sup> Qh4+<sup>'</sup> 11. Kf3<sup>'''</sup> Qh5+<sup>'</sup>  
12. Kg2<sup>'</sup> Qd5+<sup>''</sup> 13. Kg1<sup>'</sup> Qd1+<sup>'</sup> 14. Kf2<sup>'</sup> Qd2+<sup>'</sup> 15. Kf3<sup>'</sup> Qd1+<sup>'</sup> 16. Kf4<sup>'</sup> Qf1+<sup>'</sup> 17. Ke5' Qe2+<sup>'</sup> 18. Kf6<sup>'</sup>  
Qf3+<sup>'</sup> 19. Kg7<sup>'</sup> {and here SM<sup>+</sup> diverges from SC<sup>+</sup>} Qg4+<sup>''</sup> 20. Kh8<sup>'</sup> Qh3+<sup>'</sup> 21. Qh7+<sup>'</sup> Qxh7+<sup>'</sup> 22. Kxh7<sup>°</sup>  
**{KQK: dtx = -9m}** Kc3<sup>'</sup> 23. Qd6' Kc4<sup>'</sup> 24. Kg6<sup>'</sup> Kc3<sup>'</sup> 25. Kf5' Kc2<sup>'</sup> 26. Qd4' Kb3<sup>'</sup> 27. Ke4<sup>'</sup> Kc2<sup>'</sup> 28. Qb4<sup>'</sup>  
Kd1<sup>'</sup> 29. Qb2' Ke1<sup>°</sup> 30. Ke3<sup>'</sup> Kd1<sup>'</sup> 31. Qb1<sup>#</sup> {Nalimov DTM EGTs} \*

[White "KQR"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2013.12.27"]  
 [Event "5m, 3-2m, KQRKQ, GBR 4100.00, maxDTC/Z KQRKQ 1&w: SV+C/SV+C+"]  
 [SetUp "1"]  
 [FEN "KR5Q/8/6k1/6q1/8/8/8 b - - 0 1"]  
 [PlyCount "120"]

{notes from Nunn (2002), #453, p319}

{White wins after terminating a 58-move check-sequence by Black}

{1 of 31 maxDTC/Z and of 31 maxDTM KQRKQ btm losses: dtc/m/r/z/zr = -60/-67/-60/-60/-60m} 1... Qa5+''  
 {1 of 3 maxDTC/Z and of 3 maxDTM KQRKQ wtm wins: dtc/m/r/z/zr = 60/67/60/60/60m} 2. Kb7° Qb5+'' 3.  
 Kc7''' Qc5+'' 4. Kd7''' Qd5+'' 5. Ke7''' Qc5+'' 6. Ke6'' Qc6+'' 7. Ke5''' Qc5+'' 8. Ke4'' Qc2+'' 9. Kd4' Qd2+'' 10.  
 Kc4' Qe2+'' 11. Kb4' Qd2+'' 12. Ka3'' Qd3+'' 13. Ka4'' Qa6+'' 14. Kb4'' Qd6+'' 15. Kc3'' Qg3+'' 16. Kb2' Qf2+''  
 17. Kb3'' Qf7+'' 18. Kc3'' Qf3+'' 19. Kb4'' Qf4+'' 20. Ka5'' Qd2+'' 21. Rb4'' Qd5+'' 22. Rb5'' Qa2+'' 23. Kb6''  
 Qe6+'' 24. Ka7'' Qe7+'' 25. Rb7'' Qa3+'' 26. Kb8'' Qd6+'' 27. Rc7'' Qb6+'' 28. Kc8'' Qa6+'' 29. Kd7'' Qd3+'' 30.  
 Kc6' Qc4+'' 31. Kd6'' Qd3+'' 32. Kc5'' Qa3+'' 33. Kc6' Qa6+'' 34. Kd5'' Qb5+'' 35. Kd4'' Qb6+'' 36. Rc5''''  
 Qd6+'' 37. Rd5'' Qb4+'' 38. Ke5'''' Qe7+'' 39. Kf4'' Qf7+'' 40. Ke4'''' Qf5+'' 41. Kd4'''' Qf4+'' 42. Kc3'' Qc7+''  
 43. Kd3'' Qg3+'' 44. Kc4'' Qc7+'' 45. Rc5'' Qf7+'' 46. Kb4'' Qb7+'' 47. Rb5'' Qe7+'' 48. Ka4'' Qa7+'' 49. Kb3''  
 Qf7+'' 50. Kc3'' Qf3+'' 51. Kb4'' Qf4+'' 52. Ka5'' Qd2+'' 53. Ka6'' Qa2+'' 54. Kb7'' Qf7+'' 55. Kb8'' Qf4+'' 56.  
 Qe5'' Qf8+'' 57. Kc7'' Qf7+'' 58. Kd8'' Qg8+'' 59. Qe8+'' {and the checks finish} Kh6' 60. Rb6+'' Kh7' 61.  
 Qxg8+'' {KRK: dtx = -5m} {MB 'Nalimov' DTC EGTs} \*

[White "KRB"]  
 [Black "KR"]  
 [Result "1-0"]  
 [Date "2013.12.17"]  
 [Event "5m, 3-2m, KRBKR, GBR 0410.00, maxDTC KRBKR w&l: SV+C/SV+C+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "k7/7r/3K4/8/6B1/8/4R3/8 w - - 0 1"]  
 [PlyCount "117"]

{notes closely based on those of Nunn (2002), #339, pp. 232-4}

{1 of 28 maxDTC KRBKR wtm wins: dtc/m/r/z/zr = 59/65/59/59/59m} 1. Bf5''''  
 {1 of 19 maxDTC KRBKR btm losses: dtc/m/r/z/zr = -58/-64/-58/-58/-58m} Rh4'' 2. Bd3'''' Rf4'' {Nunn  
 option 3} 3. Be4+'''' Ka7'' 4. Bc6'''' Rg4'' {Nunn option 3b} 5. Kc7'''' Rg7+'' 6. Bd7'''' Rg6'' 7. Be6'' Rg7+'' 8.  
 Kc6'' Rg1'' 9. Ra2+'''' Kb8° 10. Rb2+'''' Ka8'' 11. Bf5' Rc1+'' 12. Kb6'''' Rc3'' 13. Rb1'' Kb8'' 14. Rb4'''' Ra3''  
 15. Bd7'''' Ra2'' 16. Rh4'' Rb2+'' 17. Bb5'''' Rc2'' 18. Bc4'' Rb2+'' 19. Kc6'''' Rc2' 20. Rh8+'' Ka7° 21. Rh7+''''  
 Kb8'' 22. Rb7+'' Ka8'' 23. Rb4'''' Rg2'' 24. Bd3'' Rg3'' 25. Rd4'' Rf3'' 26. Bc4'''' Rh3'' 27. Rd8+'' Ka7° 28. Bd5''  
 Rh2'' 29. Rd7+'''' Kb8'' 30. Rb7+'' Ka8'' 31. Rb1'' Rc2+'' 32. Kb6+'''' Kb8'' 33. Be6'''' Re2' 34. Kc6+'''' Ka7' 35.  
 Ra1+'' Kb8'' 36. Bd5'' Rh2'' 37. Rb1+'' Ka7'' 38. Be4'' Rh6+'' 39. Kc5'''' Rb6'' 40. Rh1' Ra6'' 41. Rh8'''' Ra5+''  
 42. Kc6'''' Rg5'' 43. Rh7+'' Ka6'' 44. Bd5'''' Rg6+'' 45. Kc5'''' Ka5'' 46. Rh1' Rg4'' 47. Rb1'' Rh4'' 48. Rb7'' Rh6''  
 49. Bf7'' Rf6'' 50. Bc4'' Rf5+'' 51. Bd5'''' Rf6'' 52. Rb5+'' Ka6'' 53. Rb1' Ka7'' 54. Rb7+'' Ka6'' 55. Re7'' {and  
 here, SC+ and SM+ must diverge} Ka5'' 56. Be6'' Ka6'' 57. Bc4+'' Ka5° 58. Ra7+'' Ra6° 59. Rxa6#'' {MB  
 'Nalimov' DTC EGTs} \*

[White "KRN"]  
[Black "KP"]  
[Result "1-0"]  
[Date "2013.12.20"]  
[Event "5m, 3-2m, KRKNP, GBR 0101.01, maxDTM KRKNP l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/4R3/8/2kp2N1/8/K7 b - - 0 1"]  
[PlyCount "58"]

**{1 of 2 maxDTM KRKNP btm losses: dtc/m/z = -7/-29/-7m} 1... d2'**  
**{1 of 2 maxDTM KRKNP wtm wins: dtm = 7/29/7m} 2. Rd5''' Kc2'' 3. Rc5+''' Kb3'' 4. Rb5+''' Kc2'' 5. Rb2+''' Kd3'' 6. Rb1'' Kc2'' 7. Nf5' d1=N'' {KRKN: dtc/m/z = 16/23/16m} 8. Nd4+' Kd2'' 9. Rb3'' Nc3'' 10. Ra3' Nd1'' 11. Rf3' Nc3' 12. Kb2'' Nd5' 13. Nc6' Ne3' 14. Ne5'' Nd1+'' 15. Ka2' Nc3+' 16. Kb3'' Nb5' 17. Kc4'' Nd6+'' 18. Kc5'' Nc8'' 19. Nc4+' Ke2'' 20. Rf8'' Ne7' 21. Re8'' Kf2' 22. Rxe7'' {KRKN: dtc/m/z = -7/-8/-7m} Kg2' 23. Ne5' Kf2' 24. Kd4'' Ke2'' 25. Rd7' Kd2' 26. Nc4+'' Kc2' 27. Rb7'' Kd1'' 28. Kd3'' Kc1' 29. Nd6' Kd1° 30. Rb1#'' {Nalimov and Lomonosov DTM EGTs} \***

[White "KRN"]  
[Black "KR"]  
[Result "1-0"]  
[Date "2013.12.19"]  
[Event "5m, 3-2m, KRNKR, GBR 0401.00, maxDTM KRNKR w&l: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "2k1r3/8/R7/N2K4/8/8/8 w - - 0 0"]  
[PlyCount "30"]

**{the notes closely follow those of Nunn (2002) #265, p169}**  
**{the one maxDTC/M/Z KRNKR wtm win: dtc/m/z = 33/37/33m} 1. Ra8+'''**  
**{the one maxDTC/M/Z KRNKR btm loss: dtc/m/z = -32/-36/-32m} Kd7'' 2. Ra7+''' Kc8'' 3. Kd6''' Rd8+'' 4. Kc6''' Kb8'' 5. Rb7+''' Ka8'' 6. Rh7''' Rc8+'' 7. Kb6''' Rb8+'' 8. Kc5'' Rg8'' {q.v., Nunn #264} 9. Rh4'' Rb8'' 10. Nc6'' Rb1' 11. Rh7''' Rc1+' 12. Kd6'' Rd1+'' 13. Kc7''' Rh1'' 14. Rd7''' Rd1'' 15. Nd4'' Rb1'' 16. Rd5' Rb7+'' 17. Kc6''' Rb4'' 18. Nb5'' Rc4+'' 19. Kb6''' Kb8'' 20. Rh5' Rc1'' 21. Rh8+'' Rc8° 22. Rh1'' {q.v., Nunn #248} Rc2'' 23. Nd4'' Rb2+'' 24. Kc6''' Ka8'' 25. Re1'' Rb4'' 26. Nb5'' Rc4+'' 27. Kb6''' Kb8'' 28. Nd6'' Rb4+'' 29. Kc6''' Ka8' 30. Re8+' {and here SM+ diverges from SC+} Ka7'' 31. Nb5+'' Rxb5'' 32. Kxb5''' {KRK: dtx = -5m} Kb7° 33. Re7+'' Kc8'' 34. Kc6'' Kb8'' 35. Rh7' Ka8'' 36. Kb6'' Kb8° 37. Rh8#'' {MB 'Nalimov' DTC and Lomonosov DTM EGTs} \***

[White "KRP"]  
[Black "KR"]  
[Result "1-0"]  
[Date "2013.11.03"]  
[Event "5m, 3-2m, KRPKR, GBR 0400.10, maxDTC KRPKR l&w: SV<sup>+</sup>C<sup>-</sup>/SV<sup>+</sup>C<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/2k2R2/5K2/6P1/4r3 b - - 0 1"]  
[PlyCount "120"]

**{1 of 4 maxDTC and of 4 maxDTM KRPKR btm losses: dtc/m/z = -60/-74/-33m} 1... Kd5''**  
**{1 of 33 maxDTC and of 33 maxDTM KRPKR wtm wins: dtc/m/z = 60/74/33m} 2. Rf5+'''' Ke6'' 3. Kg4''''**  
Rg1'' 4. Rf2'''' Rc1' 5. Kg5'''' Rc5+'' 6. Kg6'' Rc8'' 7. Re2+'''' Kd5'' 8. Kg7' Rc4'' 9. Kf6'' Rf4+'' 10. Kg5'''' Rf8''  
11. Ra2'' Rg8+'' 12. Kf6'' Kd6'' 13. Ra6+'' Kd7' 14. Ra7+'' Kd6'' 15. Ra2'''' Kd7'' 16. Kf7'' Rg5' 17. Rd2+'' Kc7'  
18. Kf6' Rg8'' 19. Kf5'' Rf8+'' 20. Ke5' Re8+'' 21. Kf4'' Rf8+'' 22. Ke3'' Re8+'' 23. Kf2'' Rf8+'' 24. Kg1'' Rg8''  
25. Rd3'' Re8' 26. Kf2'' Rf8+'' 27. Ke3'' Rg8'' 28. Kf3'' Rf8+'' 29. Ke4'' Re8+'' 30. Kf5'' Rf8+'' 31. Ke6'' Rg8''  
32. g3'' Rg5'' 33. Re3' Kc8'' 34. Kf6'' Rg8'' 35. Kf5'' Rf8+'' 36. Kg5'' Kd7'' 37. g4'' Rg8+'' 38. Kf4' Rf8+'' 39.  
Kg3'' Rg8'' 40. Re4'' Kd6'' 41. Kf4'''' Kd5'' 42. Re5+'' Kd6'' 43. g5'' Rf8+'' 44. Rf5'''' Rg8'' 45. Rf6+'' Ke7'' 46.  
Kf5'' Rh8' 47. Kg6'' Rg8+'' 48. Kh6'' Rh8+'' 49. Kg7'' Rh5'' 50. g6' Rg5'' 51. Ra6' Rg4' 52. Kg8' Rf4' 53. g7'  
Rh4'' 54. Ra5'' Rh3' {and here SC<sup>-</sup> and SM<sup>-</sup> must diverge} 55. Re5+'' Kd6'' 56. Kf7' Rf3+'' 57. Ke8'''' Rg3'' 58.  
Re7'''' Rg2' 59. Kf8' Rg4' 60. Rf7' Rb4' 61. g8=Q' {KQRKR: dtc/m/z = -5/-18/-5m} {MB 'Nalimov' DTC  
EGTs} \*

[White "KRP"]  
[Black "KR"]  
[Result "1-0"]  
[Date "2013.11.03"]  
[Event "5m, 3-2m, KRPKR, GBR 0400.10, maxDTM KRPKR l&w: SV<sup>+</sup>M<sup>-</sup>/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/2k2R2/5K2/6P1/4r3 b - - 0 1"]  
[PlyCount "148"]

**{1 of 4 maxDTC and of 4 maxDTM KRPKR btm losses: dtc = -60/-74/-33m} 1... Kd5''**  
**{1 of 33 maxDTC and of 33 maxDTM KRPKR wtm wins: dtc = 60/74/33m} 2. Rf5+'''' Ke6'' 3. Kg4'''' Rg1'' 4.**  
Rf2'''' Rc1' 5. Kg5'''' Rc5+'' 6. Kg6'' Rc8'' 7. Re2+'''' Kd5'' 8. Kg7' Rc4'' 9. Kf6'' Rf4+'' 10. Kg5'''' Rf8'' 11.  
Ra2'' Rg8+'' 12. Kf6'' Kd6'' 13. Ra6+'' Kd7' 14. Ra7+'' Kd6'' 15. Ra2'''' Kd7'' 16. Kf7'' Rg5' 17. Rd2+'' Kc7'' 18.  
Kf6' Rg8'' 19. Kf5' Rf8+'' 20. Ke5' Re8+'' 21. Kf4'' Rf8+'' 22. Ke3'' Re8+'' 23. Kf2'' Rf8+'' 24. Kg1'' Rg8'' 25.  
Rd3'' Re8' 26. Kf2'' Rf8+'' 27. Ke3'' Rg8'' 28. Kf3'' Rf8+'' 29. Ke4'' Re8+'' 30. Kf5'' Rf8+'' 31. Ke6'' Rg8'' 32.  
g3'' Rg5'' 33. Re3' Kc8'' 34. Kf6'' Rg8'' 35. Kf5'' Rf8+'' 36. Kg5'' Kd7' 37. g4'' Rg8+'' 38. Kf4' Rf8+'' 39. Kg3''  
Rg8'' 40. Re4'' Kd6'' 41. Kf4'''' Kd5'' 42. Re5+'' Kd6'' 43. g5' Rf8+'' 44. Rf5'''' Rg8'' 45. Rf6+'' Ke7'' 46. Kf5''  
Rh8' 47. Kg6'' Rg8+'' 48. Kh6'' Rh8+'' 49. Kg7'' Rh5'' 50. g6' Rg5' 51. Ra6' Rg4' 52. Kg8' Rf4' 53. g7' Rh4''  
54. Ra5' Rh3' 55. Ra4'' Rg3' 56. Rh4'' Rg2' 57. Rh7' Rg1' 58. Kh8'' Ke6'' 59. g8=Q+'' Rg8+'' 60. Kxg8° {KRK:  
dtx = -15m} Kd5'' 61. Rh5+'' Kd4' 62. Kf7'' Kc4' 63. Re5' Kb4' 64. Rd5' Ka4' 65. Rd4+'' Ka3' 66. Ke6'' Kb3' 67.  
Kd5'' Kc3'' 68. Kc5'' Kb3'' 69. Rc4' Ka3'' 70. Rb4' Ka2° 71. Rb5' Ka1' 72. Kc4' Ka2° 73. Kc3'' Ka1'' 74. Kc2''  
Ka2° 75. Ra5#'' {Nalimov and Lomonosov DTM EGTs} \*

[White "KRP"]  
[Black "KR"]  
[Result "1-0"]  
[Date "2014.01.25"]  
[Event "5m, 3-2m, KRPKR, GBR 0400.10, maxDTZ KRPKR l&w: SV<sup>+</sup>Z/SV<sup>+</sup>Z<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/5r2/3R4/8/8/6k1/1P6/3K4 b - - 0 1"]  
[PlyCount "70"]

**{Thompson (1986), p139, gives this position and DTZ-minimaxing line}**

**{1 of 4 maxDTZ KRPKR btm losses: dtc/m/z = -54/-69/-35m} 1... Kg4''**

**{1 of 3 maxDTZ KRPKR wtm wins: dtc/m/z = 54/69/35m} 2. Rd5'''' Rf2'' 3. Kc1'''' Kf4'' 4. Rd2'''' Rf1+'' 5. Rd1'''' Rf2'' 6. Re1'''' Rg2' 7. Re8'''' Rh2'' 8. Kb1'''' Rh7'' 9. Kc2'' R7c7+'' 10. Kd3' Rd7+'' 11. Kc3' R7c7+'' 12. Kd4'' Rb7'' 13. Rf8+'' Kg4'' 14. Kc3'''' R7c7+'' 15. Kd3' Rb7' 16. Kc2'' R7c7+'' 17. Kb1'' Rh7'' 18. Rf6' Rb7'' 19. Rf2'' Rb8'' 20. Kc1'''' Kg5'' 21. Kc2'' R8c8+'' 22. Kd2' Rb8' 23. Kc3'' R8c8+'' 24. Kb4' Rb8+'' 25. Ka5' Ra8+'' 26. Kb6'' Rb8+'' 27. Ka7'' Rb5' 28. Ka6'''' Rb8'' 29. R2c2'' Kf6'' 30. R6c6+'' Ke5'' 31. Rb6'''' Ra8+'' 32. Kb5'''' Kd4'' 33. Rd6+'''' Ke5'' 34. R6c6' Rb8+'' 35. Rb6'''' Ra8' 36. b4' **{KRP(b4)KR: dtc/m/z = -18/-33/-4m} {Thompson and MB 'Nalimov' DTZ EGTs} \*****

## 5-man: 4-1m

[White "KBBP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.10.24"]  
[Event "5m, 4-1m, KBBPK, GBR 0020.10/20, maxDTC 4-1m\_P-ful l&w: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/B7/8/8/8/B7/P4K2/3k4 b - - 0 1"]  
[PlyCount "32"]

**{1 of 2 maxDTC 4-1m\_P-ful btm losses: dtc/m/z = -16/-21/-3m} 1... Kc2''**

**{1 of 3 maxDTC 4-1m\_P-ful wtm wins: dtc/m/z = 16/21/3m} 2. B3c5'''' Kb2'' 3. a3'''' Ka2' 4. Kf3' Kb3'' 5. Kf4' Ka4' 6. Ke5'' Ka5' 7. Kd6'' Kb5'' 8. Bab6' Ka6'' 9. Kc7'''' Kb5° 10. Kb7'' Ka4'' 11. Kc6' Kb3° 12. Kb5'' Kc3' 13. a4'' Kb3' 14. a5'' Kc3' 15. a6'' Kd3' 16. a7'' Ke4' 17. a8=Q+ **{KQBBK: dtc/m/z = -5m} {MB 'Nalimov' DTC EGTs} \*****



[White "KBBP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.10.24"]  
[Event "5m, 4-1m, KBBPK, GBR 0020.10/20, maxDTZ 4-1m\_P-ful l&w: SV+Z/SV+Z+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "1B5B/6K1/8/8/P7/3k4/8 b - - 0 1"]  
[PlyCount "24"]

**{the one maxDTZ 4-1m\_P-ful btm loss: dtc/m/z = -15/-20/-12m}** 1... Kc3''  
**{1 of 5 maxDTZ 4-1m\_P-ful wtm wins: dtc = 15/20/12m}** 2. Kf7+' Kb3'' 3. Bb2'''' Ka4' 4. Ke7' Ka5' 5. Kd7' Kb6'' 6. Kc8'''' Ka6'' 7. Bc3' Kb5'' 8. Bd2' Ka4'' 9. Bb4' Kb3' 10. Kc7' Ka4' 11. Kc6' Kb3° 12. Kb5'' Kb2' 13. a4'' **{KBBP(a4)K: dtc/m/z = -4/-8/-1m}** **{MB 'Nalimov' DTZ EGTs}** \*

[White "KBNN"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "5m, 4-1m, KBNNK, GBR 0012.00, maxDTM 4-1m l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/1N6/B7/1Nk5/8/7K b - - 0 1"]  
[PlyCount "68"]

**{1 of 3 maxDTM 4-1m btm losses: dtc/m/z = -8/-34/-8m}** 1... Kb4''  
**{the one maxDTM 4-1m wtm win: dtc/m/z = 7/34/7m}** 2. Nc3' Kxc3'' **{KBNK: dtx = 33m}** 3. Nc1' Kd2'' 4. Na2'' Ke2' 5. Kg2'' Ke3'' 6. Bb3' Ke2' 7. Kg3'' Ke3'' 8. Kg4'' Ke4'' 9. Nc1'' Ke5'' 10. Kf3'' Kf5'' 11. Nd3'' Kg5' 12. Ke4'' Kh5' 13. Nf4+' Kh6' 14. Kf5'' Kh7' 15. Ng6' Kg7' 16. Kg5'' Kh7° 17. Kf6'' Kh6° 18. Bg8'' Kh5° 19. Ne5'' Kh4'' 20. Bd5' Kh5' 21. Be4'' Kh6'' 22. Nf7+' Kh5° 23. Bf3+' Kh4° 24. Kf5'' Kg3'' 25. Ne5'' Kh3' 26. Kf4'' Kh4'' 27. Ng6+' Kh3° 28. Be4' Kh2° 29. Kf3'' Kh3' 30. Bd3'' Kh2° 31. Nf4'' Kg1'' 32. Kg3'' Kh1° 33. Be2' Kg1° 34. Nh3+' Kh1° 35. Bf3#'' **{Nalimov and Lomonosov DTM EGTs}** \*

[White "KNNN"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.10.24"]  
[Event "5m, 4-1m, KNNNK, GBR 0009.00\_30, maxDTC/R/Z/ZR 4-1m l&w: SV+C/SV+C+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/8/7N/1N1k2KN b - - 0 1"]  
[PlyCount "42"]

**{1 of 180 maxDTC/R/Z/ZR 4-1m and of 163 maxDTM KNNNK btm losses: dtx = -21m}** **{extraneous force after P=N promotion}** 1... Kc2''  
**{1 of 44 maxDTC/R/Z/ZR 4-1m and of 43 maxDTM KNNNK wtm wins: dtx = 21m}** 2. Na3+'''' Kb3'' 3. Nb5'''' Kc4'' 4. Na7' Kb4' 5. Ng3' Ka4' 6. Nf5' Kb4' 7. Ne7' Ka4' 8. Ng4' Kb4' 9. Kf2'' Kc4' 10. Ke3'' Kc3' 11. Nf6' Kc4' 12. Ne4' Kb4'' 13. Nd6' Ka4' 14. Nd5' Ka3' 15. Nc6' Kb3' 16. Kd2'' Kb2'' 17. Nd4'' Ka3'' 18. Kc1'' Ka2' 19. Ne4' Ka1' 20. Ne3' Ka2° 21. Nc3+' Ka1' 22. Nec2#'' **{MB 'Nalimov' DTC EGTs}** \*

[White "KPPP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2013.09.30"]  
[Event "5m, 4-1m, KPPPK, GBR 0000.30, maxDTM 4-1m\_P-ful l&w: SV+M-/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "K7/8/8/8/6P1/1k4P1/6P1/8 b - - 0 1"]  
[PlyCount "66"]

{1 of 35 maxDTC KPPPK and of 6 maxDTM 4-1m\_P-ful btm losses: dtc/m/z = -11/-33/-6m} 1... Kc4''  
{1 of 11 maxDTC KPPPK and of 7 maxDTM 4-1m\_P-ful wtm wins: dtc/m/z = 11/33/6m} 2. Ka7' Kd4' 3.  
Kb6'''' Ke4' 4. Kc6' Ke5'' 5. Kc5'''' Kf6'' 6. Kd4'''' Kg5'' 7. Ke3'''' Kxg4'' {KPPK: dtc/m/z = 12/27/3m} 8.  
Kf2'''' Kf5' 9. Kf3'' Kg5'' 10. g4'' Kh4'' 11. g5'''' Kxg5'' {KPK: dtc/m/z = 14/23/5m} 12. Kg3'''' Kf5' 13. Kh4''  
Kg6'' 14. Kg4'''' Kf6' 15. Kh5'' Kg7'' 16. Kg5'' Kh7'' 17. Kf6'' Kh8'' 18. g4' Kg8'' 19. Kg6'' Kh8'' 20. g5' Kg8°  
21. Kh6'' Kf7'' 22. g6+' Kf8'' 23. Kh7'''' Ke7'' 24. g7'' Kd6'' 25. g8=Q' {KQK: dtx = -9m} Kc5'' 26. Qe8' Kd5'  
27. Qa4' Kc5' 28. Kg7' Kd5' 29. Kf7' Kc5' 30. Ke6'' Kb6° 31. Kd6'' Kb7° 32. Qb4+' Ka7' 33. Kc6' Ka6' 34.  
Qa4# {Nalimov and Lomonosov DTM EGTs} \*

## 6-man: 2-4m

[White "KP"]

[Black "KBNP"]

[Result "1-0"]

[Date "2013.10.30"]

[Event "6m, 2-4m, KPKBNP, GBR 0033.11, maxDTM 2-4m w&l: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "K7/P7/1p6/8/6n1/2b5/8/3k4 w - - 0 1"]

[PlyCount "447"]

**{1 of 11 maxDTM 2-4m wtm wins: dtc/m = 3/224m}** 1. Kb8<sup>'''</sup>

**{1 of 5 maxDTM 2-4m btm losses: dtm = -2/-223m}** Be5<sup>+</sup> 2. Kb7<sup>'''</sup> Bd4' 3. a8=Q<sup>'''</sup> **{KQKBNP(b6): dtc/m = -190/-221m}** Ke2<sup>''</sup> 4. Qa2<sup>'''</sup> Kf3<sup>''</sup> 5. Qd5<sup>'''</sup> Ke3<sup>''</sup> 6. Qg5<sup>'''</sup> Kf3<sup>''</sup> 7. Qf5<sup>'''</sup> Kg3<sup>''</sup> 8. Qd3<sup>'''</sup> Be3<sup>''</sup> 9. Ka6<sup>'''</sup> Kf4<sup>''</sup> 10. Qf1<sup>+</sup> Kg3<sup>''</sup> 11. Kb5<sup>''</sup> Bc5<sup>''</sup> 12. Qe1<sup>'''</sup> Nf2<sup>''</sup> 13. Kc4<sup>'''</sup> Kg2<sup>''</sup> 14. Qe2<sup>''</sup> Kg3<sup>''</sup> 15. Qe5<sup>+</sup> Kg2<sup>''</sup> 16. Qg5<sup>+</sup> Kh2<sup>''</sup> 17. Qf4<sup>+</sup> Kg2<sup>''</sup> 18. Kc3<sup>''</sup> Be3<sup>''</sup> 19. Qh4<sup>''</sup> Kf3<sup>''</sup> 20. Qh2<sup>'</sup> Bc5<sup>''</sup> 21. Kc2<sup>'</sup> Be3<sup>''</sup> 22. Kb3<sup>'</sup> Bc5<sup>''</sup> 23. Kc3<sup>'</sup> Ne4<sup>+</sup> 24. Kc4<sup>'</sup> Nf2<sup>'</sup> 25. Kd5<sup>'</sup> Be3<sup>'</sup> 26. Ke6<sup>'</sup> Bc5<sup>'</sup> 27. Kf5<sup>'</sup> Be3<sup>'</sup> 28. Qh7<sup>'</sup> Bc5<sup>'</sup> 29. Qg7<sup>'</sup> Be3<sup>'</sup> 30. Qc3<sup>'</sup> Ke2<sup>'</sup> 31. Qc6<sup>'</sup> Bc5<sup>'</sup> 32. Ke6<sup>'</sup> Ke3<sup>'</sup> 33. Ke5<sup>'</sup> Ng4<sup>+</sup> 34. Kf5<sup>'</sup> Nf2<sup>'</sup> 35. Qg2<sup>'</sup> Nd1<sup>'</sup> 36. Qc2<sup>'</sup> Nf2<sup>'</sup> 37. Qc3<sup>'</sup> Ke2<sup>'</sup> 38. Ke5<sup>'</sup> Be3<sup>'</sup> 39. Qc6<sup>'</sup> Bc5<sup>'</sup> 4e0. Qg2<sup>'</sup> Kd3<sup>'</sup> 41. Qf3<sup>+</sup> Kd2<sup>'</sup> 42. Kd5<sup>'</sup> Nd1<sup>'</sup> 43. Qh5<sup>'</sup> Nc3<sup>+</sup> 44. Kc4<sup>'</sup> Ne2<sup>'</sup> 45. Qg5<sup>+</sup> Be3<sup>'</sup> 46. Qd5<sup>+</sup> Bd4<sup>'</sup> 47. Qd8<sup>'</sup> Kc2<sup>'</sup> 48. Qd7<sup>'</sup> Kd2<sup>'</sup> 49. Kd5<sup>'</sup> Bc5<sup>'</sup> 50. Ke4<sup>'''</sup> Ke1<sup>'</sup> 51. Kf3<sup>'''</sup> Nd4<sup>+</sup> 52. Kg2<sup>'</sup> Ke2<sup>'</sup> 53. Qg7<sup>'</sup> Kd2<sup>'</sup> 54. Qg3<sup>'</sup> Ne2<sup>'</sup> 55. Qg5<sup>+</sup> Kd3<sup>'</sup> 56. Kf1<sup>'</sup> Nd4<sup>'</sup> 57. Qc1<sup>'</sup> Bb4<sup>'</sup> 58. Kf2<sup>'</sup> Bc5<sup>'</sup> 59. Qd1<sup>+</sup> Kc4<sup>'</sup> 60. Qg4<sup>'</sup> Kd3<sup>'</sup> 61. Qg3<sup>+</sup> Kc2<sup>'</sup> 62. Qh3<sup>'</sup> Bb4<sup>'</sup> 63. Qg4<sup>'</sup> Bc5<sup>'</sup> 64. Ke3<sup>'</sup> Nb3<sup>+</sup> 65. Kf3<sup>'</sup> Nd4<sup>+</sup> 66. Kf4<sup>'</sup> Kd2<sup>'</sup> 67. Qg2<sup>+</sup> Kd1<sup>'</sup> 68. Ke4<sup>'</sup> Ne2<sup>'</sup> 69. Qf3<sup>'</sup> Kd2<sup>'</sup> 70. Qd3<sup>'''</sup> Ke1<sup>'</sup> 71. Kf3<sup>'</sup> Nd4<sup>+</sup> 72. Kg2<sup>'</sup> Ne2<sup>'</sup> 73. Qc2<sup>'</sup> Be3<sup>'</sup> 74. Qc6<sup>'</sup> Bc5<sup>'</sup> 75. Qh6<sup>'</sup> Kd1<sup>'</sup> 76. Qg5<sup>'</sup> Ke1<sup>'</sup> 77. Kf3<sup>'</sup> Ng1<sup>+</sup> 78. Kg3<sup>'</sup> Ne2<sup>'</sup> 79. Kg2<sup>'</sup> Bf2<sup>'</sup> 80. Qe5<sup>'</sup> Bd4<sup>'</sup> 81. Qe6<sup>'</sup> Kd2<sup>'</sup> 82. Qh6<sup>+</sup> Kd3<sup>'</sup> 83. Kf1<sup>'</sup> Nc3<sup>'</sup> 84. Qh7<sup>+</sup> Kc4<sup>'</sup> 85. Qh3<sup>'</sup> Bc5<sup>'</sup> 86. Ke1<sup>'</sup> Kd4<sup>'</sup> 87. Kd2<sup>'</sup> Nd5<sup>'</sup> 88. Qh4<sup>+</sup> Ke5<sup>'</sup> 89. Ke2<sup>'</sup> Nc3<sup>+</sup> 90. Kf1<sup>'</sup> Ne4<sup>'</sup> 91. Qg4<sup>'</sup> Nd2<sup>+</sup> 92. Ke2<sup>'</sup> Ne4<sup>'</sup> 93. Qh3<sup>'</sup> Kf4<sup>'</sup> 94. Qh2<sup>+</sup> Kf5<sup>'</sup> 95. Qb8<sup>'</sup> Nf6<sup>'</sup> 96. Kf3<sup>'</sup> Ke6<sup>'</sup> 97. Qa7<sup>'</sup> Nd5<sup>'</sup> 98. Qa8<sup>'</sup> Nf6<sup>'</sup> 99. Qa1<sup>'</sup> Nd5<sup>'</sup> 100. Kg4<sup>'</sup> Ne3<sup>+</sup> 101. Kg5<sup>'</sup> Kd5<sup>'</sup> 102. Kf4<sup>'''</sup> Nc4<sup>'</sup> 103. Qh8<sup>'</sup> Bd6<sup>+</sup> 104. Kf3<sup>'''</sup> Be5<sup>'</sup> 105. Qd8<sup>+</sup> Bd6<sup>'</sup> 106. Ke2<sup>'</sup> Kd4<sup>'</sup> 107. Qh4<sup>+</sup> Kc3<sup>'</sup> 108. Qe1<sup>'''</sup> Kb3<sup>'</sup> 109. Qb1<sup>+</sup> Kc3<sup>'</sup> 110. Qc1<sup>+</sup> Kd4<sup>'</sup> 111. Qa1<sup>+</sup> Kd5<sup>'</sup> 112. Kd3<sup>'</sup> b5<sup>'</sup> **{KQKBNP(b5): dtc/m = 81/112m}** 113. Qa8<sup>+</sup> Kc5<sup>'</sup> 114. Ke4<sup>'</sup> Be5<sup>'</sup> 115. Qf8<sup>'''</sup> Kc6<sup>'</sup> 116. Kf5<sup>'</sup> Kd5<sup>'</sup> 117. Qb4<sup>'</sup> Nd6<sup>+</sup> 118. Kg6<sup>'</sup> Kc6<sup>'</sup> 119. Kh7<sup>'</sup> Nc4<sup>'</sup> 120. Kg8<sup>'</sup> Bd6<sup>'</sup> 121. Qe1<sup>'''</sup> Kd5<sup>'</sup> 122. Kf7<sup>'''</sup> Ba3<sup>'</sup> 123. Qd1<sup>'''</sup> Kc5<sup>'</sup> 124. Ke6<sup>'''</sup> Bb2<sup>'</sup> 125. Qe1<sup>'''</sup> Bd4<sup>'</sup> 126. Qc1<sup>'</sup> Bb2<sup>'</sup> 127. Qf4<sup>'</sup> Na5<sup>'</sup> 128. Qf2<sup>+</sup> Bd4<sup>'</sup> 129. Qf3<sup>'</sup> Kb4<sup>'</sup> 130. Kd5<sup>'</sup> Nb3<sup>'</sup> 131. Qf8<sup>'''</sup> Ka4<sup>'</sup> 132. Ke4<sup>'</sup> Nc5<sup>+</sup> 133. Kf3<sup>'</sup> Nb3<sup>'</sup> 134. Ke2<sup>'</sup> Bb2<sup>'</sup> 135. Qd6<sup>'</sup> Na5<sup>'</sup> 136. Qd1<sup>'''</sup> Ka3<sup>'</sup> 137. Qd5<sup>'</sup> Kb4<sup>'</sup> 138. Qd2<sup>+</sup> Bc3<sup>'</sup> 139. Qd6<sup>'''</sup> Ka4<sup>'</sup> 140. Qd1<sup>+</sup> Ka3<sup>'</sup> 141. Qd3<sup>'</sup> Kb4<sup>'</sup> 142. Qb1<sup>+</sup> Kc5<sup>'</sup> 143. Qc1<sup>'</sup> Kc4<sup>'</sup> 144. Qc2<sup>'</sup> Kb4<sup>'</sup> 145. Kd3<sup>'</sup> Be5<sup>'</sup> 146. Qd2<sup>+</sup> Ka4<sup>'</sup> 147. Ke4<sup>'</sup> Nc4<sup>'</sup> 148. Qa2<sup>+</sup> Kb4<sup>'</sup> 149. Kd5<sup>'</sup> Bc3<sup>'</sup> 150. Qb1<sup>'''</sup> Bb2<sup>'</sup> 151. Qe4<sup>'</sup> Bc3<sup>'</sup> 152. Kc6<sup>'</sup> Ka4<sup>'</sup> 153. Qf4<sup>'</sup> Bb2<sup>'</sup> 154. Qg4<sup>'</sup> Bc3<sup>'</sup> 155. Qe4<sup>'</sup> Kb4<sup>'</sup> 156. Qe7<sup>+</sup> Ka4<sup>'</sup> 157. Qa7<sup>+</sup> Na5<sup>+</sup> 158. Kc5<sup>'</sup> Bd2<sup>'</sup> 159. Kd5<sup>'</sup> Bc3<sup>'</sup> 160. Qe3<sup>'</sup> Ba1<sup>'</sup> 161. Qe4<sup>+</sup> Ka3<sup>'</sup> 162. Qd3<sup>+</sup> Kb4<sup>'</sup> 163. Qb1<sup>+</sup> Nb3<sup>'</sup> 164. Ke4<sup>'''</sup> Kc4<sup>'</sup> 165. Qf1<sup>+</sup> Kb4<sup>'</sup> 166. Kd3<sup>'</sup> Nc5<sup>+</sup> 167. Kc2<sup>'</sup> Bd4<sup>'</sup> 168. Qe2<sup>'</sup> Na4<sup>'</sup> 169. Qe4<sup>'</sup> Kc4<sup>'</sup> 170. Qd3<sup>+</sup> Kc5<sup>'</sup> 171. Kb3<sup>'</sup> Bc3<sup>'</sup> 172. Qg6<sup>'</sup> Bb2<sup>'</sup> 173. Qa6<sup>'</sup> Ba1<sup>'</sup> 174. Qb7<sup>'</sup> Bc3<sup>'</sup> 175. Qa7<sup>+</sup> Kd5<sup>'</sup> 176. Qc7<sup>'</sup> Be5<sup>'</sup> 177. Qb7<sup>+</sup> Kc5<sup>'</sup> 178. Qc8<sup>+</sup> Kd5<sup>'</sup> 179. Qe8<sup>'</sup> Nc5<sup>+</sup> 180. Ka3<sup>'</sup> Ne4<sup>'</sup> 181. Qxb5<sup>+</sup> **{KQKBN: dtc/m/z = -31/-43/-31m}** Kd4<sup>'</sup> 182. Qb4<sup>+</sup> Kd5<sup>'</sup> 183. Qb3<sup>+</sup> Kc5<sup>'</sup> 184. Qd3<sup>'</sup> Nd6<sup>'</sup> 185. Kb3<sup>'</sup> Bd4<sup>'</sup> 186. Qd1<sup>'</sup> Kd5<sup>'</sup> 187. Kc2<sup>'</sup> Ke4<sup>'</sup> 188. Qe2<sup>+</sup> Kd5<sup>'</sup> 189. Kd3<sup>'</sup> Bc5<sup>'</sup> 190. Qg2<sup>+</sup> Ke6<sup>'</sup> 191. Qc6<sup>'</sup> Bg1<sup>'</sup> 192. Qc2<sup>'</sup> Kd7<sup>'</sup> 193. Ke2<sup>'</sup> Bb6<sup>'</sup> 194. Qa4<sup>+</sup> Kd8<sup>'</sup> 195. Qc6<sup>'</sup> Nc8<sup>'</sup> 196. Kd3<sup>'</sup> Bc7<sup>'</sup> 197. Kc4<sup>'</sup> Ne7<sup>'</sup> 198. Qe6<sup>'</sup> Bf4<sup>'</sup> 199. Kb5<sup>'</sup> Bg3<sup>'</sup> 200. Kb6<sup>'</sup> Bh2<sup>'</sup> 201. Kb7<sup>'</sup> Bc7<sup>'</sup> 202. Qa6<sup>'</sup> Bh2<sup>'</sup> 203. Qa5<sup>+</sup> Kd7<sup>'</sup> 204. Qa4<sup>+</sup> Kd6<sup>'</sup> 205. Qa3<sup>+</sup> Ke6<sup>'</sup> 206. Qa2<sup>+</sup> Kd6<sup>'</sup> 207. Qxh2<sup>+</sup> **{KQKN: dtc/m/z = -15/-17/-15m}** Ke6<sup>'</sup> 208. Qd2<sup>'</sup> Ng6<sup>'</sup> 209. Qd4<sup>'</sup> Ne5<sup>'</sup> 210. Kc7<sup>'</sup> Nf7<sup>'</sup> 211. Qc4<sup>+</sup> Kf6<sup>'</sup> 212. Qe4<sup>'</sup> Nh6<sup>'</sup> 213. Qf4<sup>+</sup> Nf5<sup>'</sup> 214. Kd7<sup>'</sup> Kg6<sup>'</sup> 215. Ke6<sup>'</sup> Ng7<sup>+</sup> 216. Kd6<sup>'</sup> Nf5<sup>+</sup> 217. Ke5<sup>'</sup> Ng7<sup>'</sup> 218. Qf6<sup>+</sup> Kh7<sup>'</sup> 219. Qg5<sup>'</sup> Ne8<sup>'</sup> 220. Qh5<sup>+</sup> Kg7<sup>'</sup> 221. Qxe8<sup>'</sup> **{KQK: dtx = -3m}** Kh6<sup>'</sup> 222. Qg8<sup>'</sup> Kh5<sup>°</sup> 223. Kf5<sup>'</sup> Kh4<sup>'</sup> 224. Qg4<sup>#</sup> **{Nalimov and Lomonosov DTM EGTs}** \*

[White "KQ"]  
[Black "KBBN"]  
[Result "1-0"]  
[Date "2013.11.14"]  
[Event "6m, 2-4m, KQKBBN, GBR 1063.00, maxDTC 2-4m\_P-less w&l: SV+C/SV+C+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "2Q2n2/6b1/8/8/8/b7/3k4/K7 w - - 0 1"]  
[PlyCount "125"]

**{the one maxDTC 2-4m\_P-less wtm win: dtc/m/z = 63/87/63m}** 1. Kb1"  
**{1 of 17 maxDTC 2-4m\_P-less btm loss: dtc/m/z = -62/-86/-62m}** Bc3" 2. Qd8+"" Ke3" 3. Qb6+' Kf4" 4.  
Qf2+"" Ke4" 5. Qe2+' Kd4" 6. Qg4+' Ke3" 7. Qg3+' Kd4" 8. Qf4+' Kd5' 9. Qf5+' Kc4" 10. Qf1+' Kd4" 11.  
Qf6+' Kc4" 12. Qa6+' Kb3" 13. Qd3"" Bc5" 14. Qd5+"" Kb4" 15. Kc2"" B3d4" 16. Qb7+' Bb6" 17. Qf7"  
Bbc5" 18. Kd3"" Kb5" 19. Qb7+"" Bb6" 20. Qa8" Bdc5" 21. Qc8' Kb4" 22. Qc6" Ba7" 23. Ke4" Bd4" 24.  
Qb7+' Kc3' 25. Qe7' Bac5" 26. Qf7"" Kb4" 27. Kd5" Ka5" 28. Qe8" Bf2' 29. Qd8+' Kb4" 30. Qb8+' Kc3" 31.  
Qb5" Bfd4" 32. Qf1" Be3' 33. Qc4+' Kd2" 34. Qg4" Kd3" 35. Kc6" Kc3" 36. Kb5" Bcd4" 37. Qc8+' Bc5" 38.  
Qf5" Bf2' 39. Qf4' Bfd4" 40. Qf1" Bf2' 41. Qc4+' Kd2" 42. Qb3" Bfe3" 43. Qd5+' Kc3" 44. Qc4+' Kd2" 45.  
Qb3" Ke2" 46. Qc2+' Ke1' 47. Qf5" Ke2' 48. Kc4" Kd2" 49. Qd3+' Ke1" 50. Qb1+' Ke2" 51. Qc2+' Kf3" 52.  
Qf5+"" Ke2" 53. Qe5" Kf1' 54. Qh5' Kf2" 55. Kd3" Kg3' 56. Qf5" Bed4' 57. Ke4" Kg2" 58. Qf3+' Kg1" 59.  
Kd3" Kh2' 60. Qg4' Be3' 61. Ke4' Nh7' 62. Qh4+' Kg2' 63. Qxh7" **{KQKBB: dtc/m/z = -7/-8/-7m}** **{JT's MB**  
**'Nalimov' DTC EGTs}** \*

[White "KQ"]  
[Black "KBBN"]  
[Result "1-0"]  
[Date "2013.10.30"]  
[Event "6m, 2-4m, KQKBBN, GBR 1063.00, maxDTM 2-4m\_P-less l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/b7/8/n7/8/Q2K4/b5k1/8 b - - 0 1"]  
[PlyCount "228"]

**{1 of 9 maxDTM 2-4m\_P-less losses: dtc/m/z = -51/-114/-51m}** 1... Bb1+''  
**{1 of 7 maxDTM 2-4m\_P-less wins: dtc/m/z = 51/114/51m}** 2. Kc3'''' Bf2'' 3. Qe7'''' Bd4+'' 4. Kd2'' Nb3+'' 5. Ke2'''' Nc1+'' 6. Kd1'' Na2'' 7. Qe2+'''' Kg3'' 8. Ke1'''' Nc1'' 9. Qd2'''' Bb2'' 10. Qf2+'' Kg4'' 11. Qg2+'''' Kf4'' 12. Kd1'''' Nd3'' 13. Kd2'' Ke5'' 14. Qh2+'' Ke6'' 15. Qg1'' Bc1+'' 16. Kc3'' Ke5'' 17. Qd4+'''' Kf5'' 18. Qa7'' Bb2+'' 19. Kb3'''' Ke5'' 20. Qe3+'' Kf5'' 21. Qh3+'' Ke5'' 22. Qh4'' Bc1'' 23. Kc3'' Kf5'' 24. Kd4'''' Bb2+'' 25. Kc4'''' Ke6'' 26. Qh3+'''' Ke5'' 27. Qh5+'' Kf4'' 28. Qh2+'''' Kf5'' 29. Kb5'' Bc1'' 30. Qh4'''' Ke5'' 31. Qa4'' Bb2'' 32. Qc4'' Kf6'' 33. Qe4'' Kf7'' 34. Qd5+'' Kf8'' 35. Ka4'' Ke7'' 36. Qe4+'' Kf7'' 37. Qf3+'' Ke6'' 38. Qd1'' Nc1'' 39. Qe1+'' Kf7'' 40. Qf1+'''' Ke7'' 41. Qg2'' Nd3'' 42. Kb5'' Ke6'' 43. Qe2+'' Kd6'' 44. Qe4'' Be5'' 45. Qh1'' Ba2'' 46. Qf3'' Bd5'' 47. Qf8+'' Ke6'' 48. Qg8+'' Kd6'' 49. Qg6+'' Be6'' 50. Qxd3+'''' **{KQKBB: dtc/m/z = -55/-65/-55m}** Bd5'' 51. Qf5'' Bc6+'' 52. Kc4'' Bd5+'' 53. Kd3'' Bc6'' 54. Qg6+'' Kd7'' 55. Qg8'' Bd6'' 56. Kc4'' Kc7'' 57. Qe6'' Bb7'' 58. Kb5'' Bc6+'' 59. Ka6'' Bb7+'' 60. Ka5'''' Bc6'' 61. Qc4'' Be5'' 62. Qc5'' Bf6'' 63. Qf8'' Bd8'' 64. Qg7+'' Kd6+'' 65. Kb4'' Be7'' 66. Kc4'' Bd8'' 67. Qg6+'' Kd7'' 68. Kd4'' Bb6+'' 69. Ke5'''' Bc7+'' 70. Kf5'' Bd5'' 71. Qa6'' Bd6'' 72. Qb5+'' Bc6'' 73. Qa5'' Bb7'' 74. Kf6'' Bc6'' 75. Qa2'' Bb7'' 76. Qc4'' Bc8'' 77. Kf7'' Bb7'' 78. Qg4+'' Kc7'' 79. Qd4'' Kd7'' 80. Qa7'' Kc6'' 81. Ke8'' Bc5'' 82. Qa4+'' Kb6'' 83. Qb3+'' Kc6'' 84. Qb2'' Kc7'' 85. Qh2+'' Kb6'' 86. Qb8'' Kc6'' 87. Qe5'' Ba6'' 88. Qe6+'' Kb7'' 89. Kd8'' Bb6+'' 90. Kd7'' Bb5+'' 91. Kd6'''' Ba7'' 92. Qf6'' Kb6'' 93. Qd8+'' Ka6'' 94. Qc8+'' Kb6'' 95. Qc7+'' Ka6'' 96. Kd5'' Bb6'' 97. Qc8+'' Ka5'' 98. Qa8+'' Kb4'' 99. Qf8+'' Ka4'' 100. Qe7'' Ba5'' 101. Qa7'' Kb4'' 102. Qc5+'' Ka4'' 103. Qc2+'' Ka3'' 104. Qc1+'' Kb3'' 105. Qb1+'' Kc3'' 106. Qxb5'' **{KQKB: dtc/m/z = -3/-9/-3m}** Bd8'' 107. Qc5+'' Kd3'' 108. Qd4+'' Ke2'' 109. Ke4'' Bg5'' 110. Qd3+'' Kf2'' 111. Qf3+'' Kg1'' 112. Qg3+'' Kf1'' 113. Kf3'' Bh4'' 114. Qg2+'' Ke1'' 115. Qe2#''  
**{Nalimov and Lomonosov DTM EGTs} \***

[White "KQ"]  
[Black "KBBN"]  
[Result "1-0"]  
[Date "2014.07.31"]  
[Event "6m, 2-4m, KQKBBN, GBR 1063.00, maxDTZ<sub>50'</sub> 2-4m\_P-less l&w: SV+Z<sub>50'</sub>/SV+Z<sub>50'</sub>+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "b7/b7/5Q2/8/8/3k4/8/1K1n4 b - - 0 1"]  
[PlyCount "90"]

**{1 of 14 maxDTZ<sub>50'</sub> 2-4m\_P-less btm losses: dtc/m/z/z<sub>50'</sub> = -51/-114/-51/-45m}** 1... Bb7''  
**{1 of 18 maxDTZ<sub>50'</sub> 2-4m\_P-less wtm wins: dc/m/z/tz<sub>50'</sub> = 51/114/51/45m}** 2. Qf1+'''' Kd2'' 3. Qf4+'''' Kd3'' 4. Qc7'' Nc3+'''' 5. Kb2'''' Na4+'''' 6. Ka3'''' Nc5'''' 7. Qa5'''' Ba6'''' 8. Kb4'' Ke4'''' 9. Qc7'''' Bb7'''' 10. Qh2'''' Nd3+'' 11. Kb5'' Nc5'''' 12. Qe2+'' Kd4'' 13. Qd1+'' Ke4'''' 14. Qb1+'' Kf4'''' 15. Qa2'' Ba6+'''' 16. Kc6'' Ke4'' 17. Qd5+'''' Ke3'''' 18. Qg8'' Bb7+'' 19. Kc7'''' Kd4'' 20. Qg1+'''' Kc4'' 21. Qf1+'' Kd5'''' 22. Qg2+'' Kd4'' 23. Qb2+'' Ke4'''' 24. Kd6'' Ba6'' 25. Qg2+'' Ke3'' 26. Qg7'' Bb7'''' 27. Qg1+'' Kd3'' 28. Qb1+'''' Ke3'''' 29. Ke7'' Ba6'' 30. Qd1'''' Ke4'' 31. Qd8'' Bb7'' 32. Qd2'' Ba6'' 33. Qd1'' Bb7'' 34. Qb1+'' Ke3'' 35. Kf8'' Ba6'' 36. Qg1+'' Ke4'' 37. Qg2+'''' Kf4'' 38. Qa8'' Bb6'' 39. Kg7'' Bb7'' 40. Qe8'' Ba7'' 41. Kh6'' Kf5'' 42. Qe7'' Kg4'''' 43. Qf6'' Kg3'' 44. Qa1'' Bb8'''' 45. Qg1+'' Kf3'' 46. Qxc5'' **{KQKBB: dtc/m/z = -61/-71/-61m}** **{de Man DTZ<sub>50'</sub> EGTs} \***

[White "KQ"]  
 [Black "KBBP"]  
 [Result "1-0"]  
 [Date "2014.07.29"]  
 [Event "6m, 2-4m, KQKBBP, GBR 1060.01, maxDTZ<sub>50</sub>' KQKBBP l&w: SV<sup>+</sup>Z<sub>50</sub>'/SV<sup>+</sup>Z<sub>50</sub>'<sup>+</sup>"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "b7/2p5/8/b3k3/8/8/4Q3/6K1 b - - 0 1"]  
 [PlyCount "146"]

**{dtz<sub>50</sub>' is a nominal '-246p' but an actual -146p as the conversion is to a type-1 loss, i.e., 50mr draw}**

**{this position does not therefore challenge KQKBNP's -235p for the maxDTZ<sub>50</sub>' 2-4m record}**

**{1 of 26 maxDTZ<sub>50</sub>' btm losses in KQKBBP: dtm/z<sub>50</sub>' = -150/-73m} 1... Kf4''**

**{1 of 16 maxDTZ<sub>50</sub>' wtm wins in KQKBBP: dtm/z<sub>50</sub>' = 150/73m} 2. Kh2'''' Bb6'''' 3. Qd2+'''' Kf5'' 4. Qd7+'''' Kf4'''' 5. Qf7+'' Ke3'''' 6. Qb3+'''' Kf4'''' 7. Qg3+'' Kf5'''' 8. Qh3+'''' Kf4'''' 9. Qh6+'' Ke4'''' 10. Qg6+'' Kf4'' 11. Qf6+'' Ke4'' 12. Qe7+'' Kd4'''' 13. Qg7+'' Kc4'' 14. Qg4+'''' Kc3'' 15. Qg3+'' Kc4'' 16. Qf4+'' Kb3'' 17. Qf7+'''' Kc3'' 18. Qf6+'' Kb3'' 19. Qe6+'' Kc3'' 20. Qe1+'' Kc2'''' 21. Qf1'' Kd2'' 22. Qc4'' Bf3'' 23. Kg3'' Bd1'' 24. Qd5+'' Ke2'' 25. Qe4+'' Kd2'' 26. Kf4'' Bc2'' 27. Qb4+'''' Kd3'' 28. Ke5'''' Bf2'' 29. Qe4+'' Kd2'''' 30. Qf4+'' Ke2'''' 31. Qc1'' Kd3'' 32. Kd5'' Bb6'' 33. Qb2'' Bd1'''' 34. Qa3+'' Kd2'' 35. Qg3'' Be2'''' 36. Qf4+'' Kc3'' 37. Qe5+'' Kd3'' 38. Qe4+'' Kd2'''' 39. Qb4+'' Ke3'' 40. Ke5' Bd3' 41. Qe1+'' Kf3' 42. Qd2'' Be2' 43. Qf4+'' Kg2° 44. Ke4'' Kg1'''' 45. Qf6' Kg2'''' 46. Kf4'' Kf2'''' 47. Qh4+'' Kf1'''' 48. Qh1+'' Kf2'''' 49. Ke4'' Bb5'''' 50. Qh2+'' Ke1'' 51. Kf3'' Kd1'' 52. Qb2' Bc6+'' 53. Kf4'' Bb7' 54. Qc3' Bc8'' 55. Qd3+'' Ke1'''' 56. Qc2'' Ba6' 57. Kf3'' Bb7+'''' 58. Kg3'' Bc8'''' 59. Qg2'' Ba6'' 60. Qa8'' Bd3'' 61. Qa2'' Kd1'' 62. Kf3'' Bc2'' 63. Qd5+'' Ke1'''' 64. Qg5'' Kd1'' 65. Qg2'' Bd3'''' 66. Qb2'' Bc2'''' 67. Qc3'' Bh7'''' 68. Qc4'' Kd2'''' 69. Qb4+'' Kc2'''' 70. Ke2'' Bd3+'''' 71. Ke1'' Be3'''' 72. Qa4+'' Kc3'''' 73. Qc6+'' Kd4' 74. Qxc7'' **{KQKBB: dtc/m/z<sub>50</sub>' = -67/-77/-67m}****

**{de Man DTZ<sub>50</sub>' EGTs} \***

[White "KQ"]  
[Black "KBNP"]  
[Result "1-0"]  
[Date "2014.02.26"]  
[Event "6m, 2-4m, KQKBNP, GBR 1033.01, maxDTC 2-4m 1&w: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "Q7/K7/1p6/8/8/7k/7n/2b5 b - - 0 1"]  
[PlyCount "384"]

**{1 of 10 maxDTC 2-4m btm losses: dtc/m = -192/-223m} 1... Be3"**

**{1 of 3 maxDTC 2-4m wtm wins: dtc/m = 192/223m} 2. Qh8+''' Kg2'' 3. Qg7+''' Kf3 4. Qf6+ Kg2'' 5. Qg6+''' Kf3 6. Qc6+ Kf2 7. Qc2+''' Kg3'' 8. Qc3 Ng4 9. Ka6''' Kf4 10. Qb4+ Kg3 11. Kb5 Bc5 12. Qe1+''' Nf2 13. Kc4''' Kg2 14. Qd2 Kf3 15. Qh6 Kg3 16. Qg5+ Kh2 17. Qf4+ Kg2'' 18. Kc3 Be3'' 19. Qh4 Kf3'' 20. Qh2 Bc5 21. Kc4 Be3'' 22. Kb3 Bc5'' 23. Kc3 Ne4+ 24. Kc4 Nf2'' 25. Kd5 Be3'' 26. Ke6 Bc5'' 27. Kf5 Be3 28. Qe5 Bc5 29. Qg7 Be3 30. Qc3 Ke2'' 31. Qc6 Bc5 32. Ke6 Ke3 33. Ke5 Ng4+ 34. Kf5 Nf2'' 35. Qg2 Nd1 36. Qc2''' Nf2'' 37. Qc3+ Ke2'' 38. Ke5 Be3 39. Qc6 Bc5 40. Qg2 Kd3 41. Qf3+ Kd2 42. Kd5 Nd1 43. Qh5 Nc3+ 44. Kc4''' Ne2 45. Qg5+ Be3 46. Qd5+ Bd4'' 47. Qd8 Kc2'' 48. Qd7 Kd2'' 49. Kd5 Bc5 50. Ke4+''' Ke1 51. Kf3''' Nd4+ 52. Kg2 Ke2 53. Qg4+ Ke3 54. Kf1 Kd3 55. Qh5 Kc3 56. Kf2 Bb4 57. Qe5 Kc2'' 58. Qf6 Bc5'' 59. Qg6+ Kd2'' 60. Qg2 Kd3'' 61. Qg3+ Kc2'' 62. Qh3 Bb4'' 63. Qg4 Bc5 64. Ke3 Nb5+ 65. Kf3 Nd4+ 66. Kf4 Kd2'' 67. Qg2+ Ke1 68. Qg3+ Kd2 69. Ke4 Ne2'' 70. Qd3+ Ke1'' 71. Kf3 Nd4+ 72. Kg2 Ne2'' 73. Qc2 Be3 74. Qc6 Bc5 75. Qh6 Kd1'' 76. Qg5 Ke1 77. Kf3 Ng1+'' 78. Kg3 Ne2+ 79. Kg2''' Bf2 80. Qe5 Bd4'' 81. Qe6 Kd2'' 82. Qh6+ Kd3'' 83. Kf1 Nc3'' 84. Qh7+ Kc4 85. Qh3 Bc5'' 86. Ke1 Kd4 87. Kd2 Nd5 88. Qh4+ Ke5'' 89. Ke2 Nc3+ 90. Kf1 Ne4 91. Qg4 Nd2+ 92. Ke2 Ne4'' 93. Qh5+ Kf4 94. Qh2+ Kf5'' 95. Qb8 Nf6 96. Kf3 Ke6'' 97. Qa7 Nd5 98. Qa8 Nf6 99. Qa1 Nd5'' 100. Kg4 Ne3+ 101. Kg5 Kd5 102. Kf4''' Nc4'' 103. Qh8 Bd6+ 104. Kf3''' Be5 105. Qd8+ Bd6 106. Ke2 Kd4 107. Qh4+ Kc3 108. Qe1+''' Kb3 109. Qb1+ Kc3'' 110. Qc1+ Kd4'' 111. Qa1+ Kd5 112. Kd3 b5**

**{KQKBNP(b5): dtc/m = 81/112m} 113. Qa8+ Kc5'' 114. Ke4 Be5 115. Qf8+''' Kc6 116. Kf5 Kd5 117. Qb4 Nd6+ 118. Kg6 Kc6 119. Kh7 Nc4 120. Kg8 Bd6 121. Qe1''' Kd5 122. Kf7''' Ba3 123. Qd1+''' Kc5 124. Ke6''' Bb2 125. Qe1''' Bd4 126. Qc1 Bb2 127. Qf4 Na5 128. Qf2+ Bd4'' 129. Qf3 Kb4 130. Kd5 Nb3 131. Qf8+''' Ka4 132. Ke4 Nc5+ 133. Kf3 Nb3 134. Ke2 Bb2 135. Qd6 Na5 136. Qd1+''' Ka3 137. Qd5 Kb4 138. Qd2+ Bc3'' 139. Qd6+''' Ka4 140. Qd1+ Ka3 141. Qd3 Kb4'' 142. Qb1+ Kc5 143. Qc2 Kc4 144. Ke3 Kb4 145. Kd3 Be5 146. Qd2+ Ka4'' 147. Ke4 Nc4 148. Qa2+ Kb4'' 149. Kd5 Bf6 150. Qb1+''' Bb2 151. Qe4 Bc3 152. Kc6''' Ka4 153. Qc2+ Kb4'' 154. Qb1+ Bb2'' 155. Qe4 Bc3 156. Qe7+ Ka4'' 157. Qa7+ Na5+'' 158. Kc5 Bb4+ 159. Kd5 Bc3 160. Qe3 Ba1 161. Qe4+ Ka3 162. Qd3+ Kb4 163. Qb1+ Nb3'' 164. Ke4''' Kc3 165. Qe1+ Kc4 166. Qf1+ Kb4 167. Kd3 Nc5+ 168. Kc2 Bd4'' 169. Qe2 Na4 170. Qe4 Kc4 171. Qd3+ Kc5 172. Kb3 Bc3 **{and here, this line diverges from SM}** 173. Qe3+ Kc6 174. Qa7 Bb2 175. Qa6+ Kc5 176. Qb7 Bc3 177. Qc7+ Kd5 178. Ka3 Be5 179. Qb7+ Kc5 180. Qc8+ Kd5 181. Kb4 Nc3 182. Qd7+ Ke4 183. Kc5 Bf6 184. Qe6+ Be5 185. Qg4+ Ke3 186. Qf5 Bf6 187. Kb4 Bd4 188. Kb3 Kd2 189. Qg5+ Kd3 190. Qf4 Bh8 191. Qg3+ Ke4 192. Qh4+ Kd3 193. Qxh8''**

**{KQKNP: dtc/m/z = -3/-18/-1m} {YK-MB DTC EGTs} \***

[White "KQ"]  
 [Black "KBNP"]  
 [Result "1-0"]  
 [Date "2014.07.29"]  
 [Event "6m, 2-4m, KQKBNP, GBR 1033.01, maxDTZ<sub>50</sub>' 2-4m l&w: SV<sup>+</sup>Z<sub>50</sub>'/SV<sup>+</sup>Z<sub>50</sub>'<sup>+</sup>"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "1Q6/K7/1p6/8/7k/4b3/7n/8 b - - 0 1"]  
 [PlyCount "235"]

**{dtz<sub>50</sub>' is nominally -335p but actually -235p: '100' has been added to the dtz<sub>50</sub>' of, e.g., position 118b}**

**{1 of 10 maxDTZ<sub>50</sub>' 2-4m btm losses: dtm/z<sub>50</sub>' = -223/-117m(-235p)} 1... Kh3''**

**{1 of 3 maxDTZ<sub>50</sub>' 2-4m wtm wins: dtm/z<sub>50</sub>' = 223/117m (234p)} 2. Qh8+'''' Kg2'''' 3. Qg7+'''' Kf3'' 4. Qf6+' Kg2'''' 5. Qg6+' Kf3'' 6. Qc6+' Kf2' 7. Qc2+'''' Kg3'' 8. Qc3'' Ng4'' 9. Ka6'''' Kf4'' 10. Qc4+' Kf3' 11. Qf7+' Kg3'' 12. Kb5' Bc5'' 13. Qg7'' Kf3'' 14. Kc4'' Nf2'' 15. Qf6+' Kg3' 16. Qg5+' Kh2'' 17. Qf4+' Kg2'''' 18. Kc3'' Be3'''' 19. Qh4'' Kf3'''' 20. Kb3' Bc5' 21. Kc2'' Be3'' 22. Qh2'' Bc5'' 23. Kc3'' Ne4+' 24. Kc4'' Nf2'' 25. Kd5'' Be3'' 26. Ke6'' Bc5'' 27. Kf5'' Be3'' 28. Qh8' Bc5' 29. Qg7'' Be3'' 30. Qc3'' Ke2'''' 31. Qc6'' Bc5'' 32. Ke6' Ke3'' 33. Ke5'' Nd3+' 34. Kf5'''' Nf2'''' 35. Qg2'' Nd1'' 36. Qc2'''' Nf2'''' 37. Qc3+' Ke2'''' 38. Ke5' Be3' 39. Qc6'' Bc5'' 40. Qg2'' Kd3'' 41. Qf3+' Kd2'' 42. Kd5'' Nd1'' 43. Qh5'' Nc3+' 44. Kc4'''' Ne2'' 45. Qg5+' Be3'' 46. Qd5+' Bd4'''' 47. Qd8'' Kc2'''' 48. Qd7'' Kd2'''' 49. Kd5'' Ke1' 50. Ke4'''' Bc5'' 51. Kf3'''' Nd4+' 52. Kg2' Ke2' 53. Qh3' Kd2'' 54. Qg3' Ne2' 55. Qg5+' Kd3'' 56. Kf1'' Nd4'' 57. Qc1'' Bb4'' 58. Kf2'' Bc5'''' 59. Qe3+' Kc4'' 60. Qf4' Kd3' 61. Qg3+' Kc2'' 62. Qh3'' Bb4'' 63. Qg2' Kb3'''' 64. Qg8+' Kb2'''' 65. Qd8'''' Bc5'''' 66. Qd5' Kc2'''' 67. Ke3'' Nb5+'''' 68. Kf3'''' Nc3'''' 69. Qd7'''' Kc1'' 70. Qd3'' Kb2'''' 71. Qg6'' Kb3'' 72. Qf5'' Kc4' 73. Kg2'''' Be3'' 74. Qf1+'''' Kb3'' 75. Qe1'' Bc5'' 76. Qe5' Kc2'' 77. Kf1'''' Kd2'' 78. Qh2+'''' Kd3'' 79. Qh7+'''' Kd4'' 80. Ke1' Nd5'' 81. Qf5' Bb4+' 82. Ke2'' Nc3+' 83. Kf1'' Bc5' 84. Qf3'' Ne4' 85. Ke2'' Nc3+' 86. Kd2'' Nd5'' 87. Qg4+' Ke5'''' 88. Ke2'' Nc3+' 89. Kf3'' Kd5'' 90. Kg2'' Ne4' 91. Qh4' Ke5'' 92. Kf3' Nd2+' 93. Ke2'' Ne4'''' 94. Qh2+' Kf5' 95. Qb8'' Ke6' 96. Kf3'' Nf6'''' 97. Qa7'' Nd5' 98. Qa8'' Nf6' 99. Qa1'' Nd5'''' 100. Kg4'' Nf6+' 101. Kg5'' Be3+' 102. Kg6'' Nd5'''' 103. Qe1'' Nf4+' 104. Kg7' Nd5'''' 105. Qe2'' Ke7'' 106. Qf3' Kd6' 107. Kf7'' Ke5'' 108. Qg3+' Kd4'' 109. Qg4+'''' Kd3'' 110. Qd7' Kc4'' 111. Qa4+'''' Kd3'' 112. Qb5+' Kd4' 113. Qc6'' Ke5'''' 114. Qe8+' Kd4'''' 115. Qe6'' Kc5'''' 116. Qe4'' Bd4'' 117. Ke6'' Ne3'''' 118. Qd3'''' b5''**

**{KQKBNP(b5): dtm/z<sub>50</sub>' = 104/68m} {de Man DTZ<sub>50</sub>' EGTs} \***



## 6-man: 3-3m

[White "KBB"]

[Black "KNN"]

[Result "1-0"]

[Date "2013.11.14"]

[Event "6m, 3-3m, KBBKNN, GBR 0026.00, maxDTC/Z KBBKNN l&w: SV<sup>+</sup>C<sup>-</sup>/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "8/8/7B/5B2/3K4/8/2k5/n6n b - - 0 1"]

[PlyCount "76"]

**{the one maxDTC/M/Z KBBKNN btm loss: dtc/m/z = -38/-106/-38m} 1... Kb3''**

**{1 of 11 maxDTC/Z and of 11 maxDTM KBBKNN wtm wins: dtc/m/z = 38/106/38m} 2. Be6+'''' Kc2'' 3.**

**Ke3'''' Nb3'' 4. Bf5+'''' Kd1'' 5. Bg4+'''' Ke1'' 6. Bg5'''' Kf1'' 7. Be2+'' Kg1'' 8. Bc4'''' Nc5'' 9. Be7'''' Na4'' 10.**

**Bb3'''' Nb6'' 11. Kf4'''' Kg2'' 12. Bc5'''' Nd7'' 13. Bd5+'''' Kh2'' 14. Bd4'''' Ng3'' 15. Bf3'''' Kh3'' 16. Kg5'' Kh2''**

**17. Kg4'' Nf1'' 18. Bc6' Nf8'' 19. Bb7'' Nd2'' 20. Bg7'' Ne6'' 21. Be5+'''' Kg1'' 22. Bd5'''' Nf8'' 23. Bc3'''' Nf1''**

**24. Kf3'' Nh2+'' 25. Kf4'' Kf2'' 26. Bd4+'''' Ke2'' 27. Bc4+'''' Ke1'' 28. Bf7'' {and here SC<sup>+</sup> and SM<sup>+</sup> must**

**diverge} Nf1'' 29. Bc3+'''' Ke2'' 30. Bb4'''' Nd7'' 31. Bc4+'''' Kf2'' 32. Be7'''' Kg2'' 33. Bd5+'' Kh2' 34. Bd6''**

**Kg1' 35. Bc6'' Nf6'' 36. Kg5'' Ng8'' 37. Bd5'' Nd2'' 38. Kg6' Kf2' 39. Bxg8'' {KBBKN: dtc/m/z = -54/-66/-54m}**

**{JT's MB 'Nalimov' DTC and Lomonosov DTM EGTs} \***

[White "KBB"]

[Black "KNN"]

[Result "1-0"]

[Date "2013.11.13"]

[Event "6m, 3-3m, KBBKNN, GBR 0026.00, maxDTM KBBKNN l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "8/8/7B/5B2/3K4/8/2k5/n6n b - - 0 1"]

[PlyCount "212"]

**{dtz<sub>50</sub> = 'draw' until position 49b}**

**{the one maxDTC/M/Z KBBKNN btm loss: dtc/m/z = -38/-106/-38m} 1... Kb3''**

**{1 of 11 maxDTC/Z and of 11 maxDTM KBBKNN wtm wins: dtc/m/z = 38/106/38m} 2. Be6+'''' Kc2'' 3.**

**Ke3'''' Nb3'' 4. Bf5+'''' Kd1'' 5. Bg4+'''' Ke1'' 6. Bg5'''' Kf1'' 7. Be2+'' Kg1'' 8. Bc4'''' Nc5'' 9. Be7'''' Na4'' 10.**

**Bb3'''' Nb6'' 11. Kf4'''' Kg2'' 12. Bc5'''' Nd7'' 13. Bd5+'''' Kh2'' 14. Bd4'''' Ng3'' 15. Bf3'''' Kh3'' 16. Kg5'' Kh2''**

**17. Kg4'' Nf1'' 18. Bc6' Nf8'' 19. Bb7'' Nd2'' 20. Bg7'' Ne6'' 21. Be5+'''' Kg1'' 22. Bd5'''' Nf8'' 23. Bc3'''' Nf1''**

**24. Kf3'' Nh2+'' 25. Kf4'' Kf2'' 26. Bd4+'''' Ke2'' 27. Bc4+'''' Ke1'' 28. Bf7'' {and here SM<sup>+</sup> and SC<sup>+</sup> must**

**diverge} Kd1'' 29. Bc3' Ke2'' 30. Bg7'' Nd7'' 31. Be6'' Nc5'' 32. Bc4+'''' Kd2'' 33. Kg3'''' Ne4+'' 34. Kxh2''''**

**{KBBKN: dtc/m/z = -61/-73/-61m} Ke3'' 35. Bb3' Nd6' 36. Be5'' Nc8' 37. Kg3'' Ke4'' 38. Bc3' Nd6' 39. Bc2+''**

**Ke3'' 40. Bg7' Nc8' 41. Ba4' Ne7' 42. Kg4'' Nd5'' 43. Kf5'' Nb4'' 44. Ke5'' Nd3+'' 45. Kd5'' Nf4+'' 46. Kc4''**

**Ng2' 47. Bc6' Nh4'' 48. Bh6+'' Ke2'' 49. Bf4' Nf3'' 50. Kd5'' Kf1'' 51. Bd6' Kf2'' 52. Ke4'' Nh4' 53. Bd5' Ng2''**

**54. Bc7'' Ne1'' 55. Bb6+'' Kg3'' 56. Kf5'' Ng2'' 57. Kg5'' Ne1'' 58. Bc7+'' Kf2'' 59. Kg4'' Ke3'' 60. Bf7'' Nc2'' 61.**

**Bb6+'' Kd3'' 62. Bg6+'' Kc3'' 63. Ba5+'' Kb3'' 64. Kf4'' Nb4'' 65. Bf7+'' Ka4'' 66. Bb6'' Kb5'' 67. Be3'' Kc6'' 68.**

**Ke5'' Nd3+'' 69. Kd4'' Nc5'' 70. Bd5+'' Kb5'' 71. Bf2'' Kb4'' 72. Bf7'' Nb3+'' 73. Ke4'' Nc5+'' 74. Kd5'' Na4'' 75.**

**Kd4'' Nc5'' 76. Be1+'' Kb5'' 77. Kd5'' Nb3'' 78. Be8+'' Kb6'' 79. Kd6'' Ka6'' 80. Bg6' Kb5'' 81. Bh5' Na5' 82.**

**Be2+'' Ka4'' 83. Kd5'' Nb3'' 84. Bd1'' Ka3'' 85. Bc3' Nc1' 86. Kc4'' Na2' 87. Bg7'' Nc1'' 88. Kc3'' Na2+'' 89.**

**Kc2'' Ka4' 90. Kb2+'' Kb4' 91. Bb3' Nc1'' 92. Bf8+'' Kb5' 93. Kxc1'' {KBBK: dtx = -14m} Kb6' 94. Ba4' Ka5''**

**95. Bd7' Ka6' 96. Bd6' Kb6' 97. Kc2' Ka6' 98. Kc3' Kb6' 99. Kc4' Ka6'' 100. Kc5'' Ka5'' 101. Bc7+'' Ka6° 102.**

**Bc8+'' Ka7° 103. Bd6'' Ka8° 104. Kc6'' Ka7° 105. Kc7'' Ka8° 106. Bb7+'' Ka7° 107. Bc5#'' {Nalimov and**

**Lomonosov DTM EGTs} \***

[White "KBB"]  
 [Black "KNN"]  
 [Result "1-0"]  
 [Date "2014.06.10"]  
 [Event "6m 3-3m, KBBKNN, GBR 0026.00, maxDTM<sub>50,0</sub> w&l: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
 [Annotator "Huntington, Galen"]  
 [SetUp "1"]  
 [FEN "7k/7B/8/2B5/3K4/2n5/8/5n2 w - - 0 1"]  
 [PlyCount "179"]

**{(Huntington, 2013). Moves are also DTZ<sub>50</sub>-optimal wherever possible}**

**{the unique maxDTM<sub>50,0</sub> KBBKNN wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 6/67/90/6/29m} 1. Bd3<sup>'''</sup>**

**{a maxDTM<sub>50,0</sub> KBBKNN btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -5/-66/-89/-5/-28m} Na4<sup>''</sup> 2. Bb4<sup>'''</sup> {SM/Z: Bd6<sup>''</sup>}**

Ng3<sup>''</sup> 3. Ke5<sup>'</sup> Nb2<sup>''</sup> 4. Bb5<sup>'</sup> Nd1<sup>''</sup> 5. Be1<sup>'''</sup> Nh1<sup>''</sup> 6. Kf6<sup>'''</sup> Ne3<sup>''</sup> 7. Kf7<sup>'''</sup> Ng4<sup>''</sup> 8. Kg6<sup>'''</sup> Ne5<sup>+'</sup> 9. Kf5<sup>'''</sup> Nf3<sup>''</sup>  
 10. Bc3<sup>'''</sup> Kg8<sup>''</sup> 11. Bc4<sup>'''</sup> Kh7<sup>''</sup> 12. Kg4<sup>'''</sup> Nh2<sup>+'</sup> 13. Kh3<sup>'''</sup> Nf3<sup>''</sup> 14. Kg2<sup>'''</sup> Ng5<sup>''</sup> 15. Bd3<sup>'''</sup> Kg8<sup>''</sup> 16.  
 Bf6<sup>'''</sup> Nh7<sup>''</sup> 17. Bh4<sup>'''</sup> Nf8<sup>''</sup> 18. Kf3<sup>'''</sup> Kf7<sup>''</sup> 19. Bc4<sup>'''</sup> Kg7<sup>''</sup> 20. Bf1<sup>'''</sup> Ng6<sup>''</sup> {SZ<sub>50</sub><sup>+</sup>: Kg6<sup>''</sup>} 21. Be1<sup>'''</sup> Kf6<sup>'</sup>  
 22. Ke4<sup>'''</sup> Ne7<sup>''</sup> 23. Bh3<sup>''</sup> Kf7<sup>''</sup> 24. Bg2<sup>''</sup> Ke6<sup>''</sup> 25. Bf3<sup>''</sup> Kd6<sup>''</sup> 26. Bxh1<sup>''</sup> {KBBKN: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -50/-62/-  
 64/-50/-50m} Kc5<sup>'</sup> 27. Bd2<sup>'</sup> Nd5<sup>'</sup> 28. Bg2<sup>'</sup> Kd6<sup>'</sup> 29. Kd4<sup>'</sup> Nf6<sup>'</sup> 30. Bc3<sup>'</sup> Ke6<sup>'</sup> 31. Bh3<sup>+'</sup> Ke7<sup>'</sup> 32. Ke5<sup>'''</sup> Kf7<sup>''</sup>  
 33. Bd4<sup>'</sup> Ne8<sup>'</sup> 34. Bf5<sup>'''</sup> Nf6<sup>'</sup> 35. Bc2<sup>'''</sup> Ne8<sup>'</sup> 36. Kf4<sup>'</sup> Ng7<sup>'</sup> 37. Bb3<sup>+'</sup> Kg6<sup>'</sup> 38. Kg4<sup>'''</sup> Ne8<sup>'</sup> 39. Bc2<sup>'''</sup> Kf7<sup>''</sup>  
 40. Kg5<sup>'''</sup> Ke6<sup>'</sup> 41. Bb3<sup>+'</sup> Kd6<sup>'</sup> 42. Kf5<sup>'</sup> Nc7<sup>'</sup> 43. Be5<sup>+'</sup> Kc6<sup>'</sup> 44. Bh2<sup>'''</sup> Nb5<sup>''</sup> 45. Ke5<sup>'''</sup> Kc5<sup>''</sup> 46. Bd5<sup>'''</sup>  
 Nc3<sup>''</sup> 47. Be6<sup>'</sup> Ne2<sup>'</sup> 48. Bf7<sup>'''</sup> Kb4<sup>'</sup> 49. Ke4<sup>'''</sup> Nc3<sup>+'</sup> 50. Kd4<sup>'''</sup> Nb5<sup>+'</sup> 51. Ke5<sup>'''</sup> Kc5<sup>''</sup> 52. Bg1<sup>'''</sup> Kb4<sup>'</sup> 53.  
 Bf2<sup>'''</sup> Kc3<sup>''</sup> 54. Kd5<sup>'''</sup> Kd2<sup>'</sup> 55. Bh4<sup>'''</sup> Ke3<sup>'</sup> 56. Bg5<sup>+'</sup> Kd3<sup>'</sup> 57. Kc5<sup>'</sup> Na3<sup>'</sup> 58. Bg6<sup>+'</sup> Kc3<sup>'</sup> 59. Bd8<sup>'''</sup> Nc2<sup>'</sup>  
 60. Ba5<sup>'''</sup> Kb3<sup>'</sup> 61. Bf7<sup>'''</sup> Ka3<sup>'</sup> 62. Kb5<sup>'</sup> {SM: Bc3<sup>''</sup>} Kb2<sup>'</sup> 63. Kc4<sup>'''</sup> Na3<sup>+'</sup> 64. Kd3<sup>'''</sup> Nb5<sup>''</sup> 65. Bb4<sup>'</sup> Na3<sup>'</sup>  
 66. Bd6<sup>'</sup> Nb1<sup>'</sup> 67. Bf8<sup>'</sup> Kc1<sup>'</sup> 68. Bg7<sup>'''</sup> Na3<sup>'</sup> 69. Be8<sup>'''</sup> Nb1<sup>'</sup> 70. Ba4<sup>'''</sup> Na3<sup>'</sup> 71. Kc3<sup>'''</sup> Nb1<sup>+'</sup> 72. Kb3<sup>'''</sup> Kd1<sup>'</sup>  
 {SZ/Z<sub>50</sub><sup>+</sup>: Nd2<sup>+'</sup>} 73. Kb2<sup>+'</sup> Kd2<sup>'</sup> 74. Kxb1<sup>'</sup> Kd3<sup>'</sup> {KBBK: dtx = -16m} 75. Bb3<sup>''</sup> Ke3<sup>'</sup> 76. Bc2<sup>'</sup> Kf3<sup>'</sup> 77. Kc1<sup>'</sup>  
 Ke3<sup>'</sup> 78. Kd1<sup>'</sup> Kf3<sup>'</sup> 79. Kd2<sup>'</sup> Kf4<sup>'</sup> 80. Ke2<sup>'</sup> Kg4<sup>'</sup> 81. Bh6<sup>'</sup> Kg3<sup>'</sup> 82. Ke3<sup>'</sup> Kg4<sup>'</sup> 83. Bf4<sup>'</sup> Kh4<sup>'</sup> 84. Bd1<sup>'</sup> Kh3<sup>°</sup> 85.  
 Kf2<sup>'</sup> Kh4<sup>°</sup> 86. Be2<sup>'</sup> Kh3<sup>°</sup> 87. Bg5<sup>'</sup> Kh2<sup>°</sup> 88. Bf1<sup>'</sup> Kh1<sup>°</sup> 89. Bg2<sup>+'</sup> Kh2<sup>°</sup> 90. Bf4<sup>#</sup>{Huntington DTM<sub>50</sub>,  
 Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KBB"]  
[Black "KNN"]  
[Result "1-0"]  
[Date "2014.06.28"]  
[Event "6m, 3-3m, KBBKNN, GBR 0026.00, maxDTM<sub>50,pc</sub> KBBKNN w&l: SV<sup>+</sup>M<sub>50</sub><sup>-</sup>/SV<sup>+</sup>M<sub>50</sub><sup>+</sup>"]  
[Annotator "Huntington, Galen"]  
[SetUp "1"]  
[FEN "2n5/8/3B4/8/3K4/1B6/6n1/2k5 w - - 43 1"]  
[PlyCount "181"]

{moves are also DTZ<sub>50</sub>-optimal if possible (Huntington, 2014)}

{a maxDTM<sub>50,pc</sub> KBBKNN wtm win: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = 12/70/91/12/29m} 1. Ba3+<sup>'''</sup>  
{a maxDTM<sub>50,pc</sub> KBBKNN btm loss: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -11/-69/-90/-11/-28m} Kd2<sup>''</sup> 2. Bb4+<sup>'''</sup> Ke2<sup>''</sup> {SZ<sup>+</sup>:  
Kc1<sup>''</sup>} 3. Bc4+<sup>'''</sup> {SM: Be6<sup>''</sup>} Kf3<sup>''</sup> 4. Bd5+<sup>'''</sup> Kg3<sup>''</sup> 5. Ke4<sup>''</sup> Nb6<sup>''</sup> 6. Be6<sup>'''</sup> Na4<sup>''</sup> 7. Bb3<sup>'''</sup> Nb6<sup>''</sup> 8. Bc5<sup>''</sup> Nd7<sup>''</sup>  
9. Bd6+<sup>'''</sup> Kh4<sup>''</sup> 10. Be7+<sup>'''</sup> Kh5<sup>''</sup> 11. Be6<sup>'''</sup> Nb6<sup>''</sup> 12. Bc5<sup>'''</sup> Na8<sup>''</sup> 13. Bd7<sup>'''</sup> Kh6<sup>''</sup> 14. Bh3<sup>'''</sup> Nh4<sup>''</sup> 15. Be7<sup>'''</sup>  
Ng6<sup>''</sup> 16. Bd8<sup>'''</sup> Kg7<sup>''</sup> 17. Be6<sup>'''</sup> Kf8<sup>''</sup> 18. Kd4<sup>'''</sup> Nf4<sup>''</sup> 19. Bf5<sup>'''</sup> Kf7<sup>''</sup> 20. Ke5<sup>'''</sup> Ng6+<sup>''</sup> 21. Kd6<sup>'''</sup> Nf4<sup>''</sup> 22.  
Bc8<sup>'''</sup> Kg6<sup>''</sup> 23. Ke5<sup>'''</sup> Nd3+<sup>''</sup> 24. Kd4<sup>'''</sup> Nc1<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Nf4<sup>''</sup>} 25. Bb7<sup>'''</sup> Kf5<sup>''</sup> 26. Ke3<sup>'''</sup> Nb3<sup>''</sup> 27. Bxa8<sup>'''</sup>  
{KBBKN: dtc/m/m<sub>50</sub>/z/z<sub>50</sub> = -50/-62/-64/-50/-50m} Nc5<sup>''</sup> 28. Ba5<sup>''</sup> Nd7<sup>''</sup> 29. Bb7<sup>''</sup> Ke6<sup>''</sup> 30. Kd4<sup>'''</sup> Nf6<sup>''</sup> 31.  
Bc8+<sup>'''</sup> Ke7<sup>''</sup> 32. Bf5<sup>'''</sup> Kf7<sup>''</sup> 33. Ke5<sup>'''</sup> Ne8<sup>''</sup> 34. Be6+<sup>''</sup> Kg6<sup>''</sup> 35. Bd8<sup>''</sup> Ng7<sup>''</sup> 36. Bb3<sup>'''</sup> Nh5<sup>''</sup> 37. Kd6<sup>''</sup> Ng7<sup>''</sup> 38.  
Kd7<sup>''</sup> Kf5<sup>''</sup> 39. Ke7<sup>'''</sup> Kf4<sup>''</sup> 40. Bc7+<sup>'''</sup> Ke3<sup>''</sup> 41. Bb6+<sup>'''</sup> Kd3<sup>''</sup> 42. Bf7<sup>'''</sup> Nf5+<sup>''</sup> 43. Ke6<sup>'''</sup> Ne3<sup>''</sup> 44. Bg6+<sup>'''</sup>  
Ke2<sup>''</sup> 45. Be4<sup>'''</sup> Nc4<sup>''</sup> 46. Bd4<sup>'''</sup> Nd2<sup>''</sup> 47. Bg6<sup>'''</sup> Kf3<sup>''</sup> 48. Kf5<sup>'''</sup> Ke2<sup>''</sup> 49. Kf4<sup>'''</sup> Nb3<sup>''</sup> 50. Bb6<sup>''</sup> Nd2<sup>''</sup> 51.  
Bd8<sup>'''</sup> Nb3<sup>''</sup> 52. Ke5<sup>'''</sup> Nd2<sup>''</sup> 53. Be8<sup>'''</sup> Nf3+<sup>''</sup> 54. Kf4<sup>'''</sup> Nd4<sup>''</sup> 55. Ke4<sup>'''</sup> Nb3<sup>''</sup> 56. Bh5+<sup>'''</sup> Kd2<sup>''</sup> 57. Bf6<sup>'''</sup>  
Nc1<sup>''</sup> 58. Bg6<sup>'''</sup> Ne2<sup>''</sup> 59. Bg5+<sup>'''</sup> Kc3<sup>''</sup> 60. Ke3<sup>'''</sup> Nc1<sup>''</sup> 61. Bh4<sup>'''</sup> Kb4<sup>''</sup> 62. Be1+<sup>'''</sup> Ka4<sup>''</sup> 63. Kd4<sup>''</sup> {SM:  
Kd2<sup>''</sup>} Kb3<sup>''</sup> 64. Bd2<sup>'''</sup> Na2<sup>''</sup> 65. Bf5<sup>'''</sup> Kb2<sup>''</sup> 66. Kc4<sup>'''</sup> Ka3<sup>''</sup> 67. Be3<sup>''</sup> Kb2<sup>''</sup> 68. Bd4+<sup>''</sup> Ka3<sup>''</sup> 69. Bg7<sup>''</sup> Nc1<sup>''</sup> 70.  
Bg4<sup>'''</sup> Na2<sup>''</sup> 71. Bd1<sup>'''</sup> Nc1<sup>''</sup> 72. Kc3<sup>'''</sup> Na2+<sup>''</sup> 73. Kc2<sup>'''</sup> Ka4<sup>''</sup> {SZ<sub>(50)</sub><sup>+</sup>: Nb4+<sup>''</sup>} 74. Kb2+<sup>''</sup> Kb4<sup>''</sup> 75. Kxa2<sup>''</sup>  
{KBBK: dtx = -16m} Kc4<sup>''</sup> 76. Bc2<sup>''</sup> Kc5<sup>''</sup> 77. Bb3<sup>''</sup> Kc6<sup>''</sup> 78. Ka3<sup>''</sup> Kc5<sup>''</sup> 79. Ka4<sup>''</sup> Kc6<sup>''</sup> 80. Kb4<sup>''</sup> Kc7<sup>''</sup> 81. Kc5<sup>''</sup>  
Kd7<sup>''</sup> 82. Bf8<sup>''</sup> Kc7<sup>''</sup> 83. Ba4<sup>''</sup> Kb7<sup>''</sup> 84. Kb5<sup>''</sup> Ka7<sup>''</sup> 85. Kc6<sup>''</sup> Ka6<sup>''</sup> 86. Kc7<sup>''</sup> Ka5<sup>''</sup> 87. Bd7<sup>''</sup> Ka6<sup>°</sup> 88. Bb4<sup>''</sup> Ka7<sup>°</sup> 89.  
Bc8<sup>''</sup> Ka8<sup>°</sup> 90. Bb7+<sup>''</sup> Ka7<sup>°</sup> 91. Bc5<sup>#</sup> {Huntington DTM<sub>50</sub>, Nalimov DTM and MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KBB"]  
[Black "KNN"]  
[Result "1-0"]  
[Date "2013.11.03"]  
[Event "6m, 3-3m, KBBKNN, GBR 0026.00, maxDTZ<sub>50</sub> KBBKNN w&l: SV<sup>+</sup>Z<sub>50</sub><sup>-</sup>/SV<sup>+</sup>Z<sub>50</sub><sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/6n1/8/4B3/k7/n6B/2K5 w - - 0 1"]  
[PlyCount "57"]

{1 of 46 maxDTZ<sub>50</sub> KBBKNN wtm wins: dtc/m/z/z<sub>50</sub> = 6/70/6/29m} 1. Kc2<sup>'''</sup>  
{1 of 17 maxDTZ<sub>50</sub> KBBKNN btm losses: dtc/m/z/z<sub>50</sub> = -7/-71/-7/-28m} Nh8<sup>''</sup> 2. Bd6+<sup>'''</sup> Ka4<sup>''</sup> 3. Bc6+<sup>'''</sup> Ka5<sup>''</sup>  
4. Kb3<sup>'''</sup> Nc1+<sup>''</sup> 5. Kc4<sup>'''</sup> Nf7<sup>''</sup> 6. Bc7+<sup>'''</sup> Ka6<sup>°</sup> 7. Bd5<sup>'''</sup> Nh8<sup>''</sup> 8. Bf3<sup>''</sup> Ng6<sup>''</sup> 9. Bd6<sup>'''</sup> Nh4<sup>''</sup> 10. Be4<sup>'''</sup> Ne2<sup>''</sup>  
11. Bh2<sup>'''</sup> Ka5<sup>''</sup> 12. Bc7+<sup>'''</sup> Ka6<sup>''</sup> 13. Kc5<sup>'''</sup> Ka7<sup>''</sup> 14. Bd3<sup>''</sup> Ng1<sup>''</sup> 15. Bg3<sup>''</sup> Ng2<sup>''</sup> 16. Kc6<sup>''</sup> Nh3<sup>''</sup> 17. Bf1<sup>''</sup> Nhf4<sup>''</sup>  
18. Bf2+<sup>'''</sup> Kb8<sup>''</sup> 19. Bb6<sup>''</sup> Ka8<sup>''</sup> 20. Ba6<sup>''</sup> Kb8<sup>''</sup> 21. Bc4<sup>''</sup> Nh5<sup>''</sup> 22. Bc7+<sup>''</sup> Ka7<sup>''</sup> 23. Be5<sup>''</sup> Nhf4<sup>''</sup> 24. Bd6<sup>''</sup> Nh5<sup>''</sup>  
25. Kc7<sup>''</sup> Nf6<sup>''</sup> 26. Bc5+<sup>''</sup> Ka8<sup>°</sup> 27. Kc8<sup>''</sup> Ne1<sup>''</sup> 28. Bb5<sup>''</sup> Nc2<sup>''</sup> 29. Bc6<sup>#</sup> {MB 'Nalimov' DTZ<sub>50</sub> EGTs} \*

[White "KBB"]  
 [Black "KNN"]  
 [Result "1-0"]  
 [Date "2014.08.05"]  
 [Event "6m, 3-3m, KBBKNN, GBR 0026.00, maxDTZ<sub>50</sub>' KBBKNN l&w: SV<sup>+</sup>Z<sub>50</sub>'/SV<sup>+</sup>Z<sub>50</sub>'<sup>+</sup>"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/8/7B/5B2/3K4/8/2k5/n6n b - - 0 1"]  
 [PlyCount "76"]

{a maxDTZ<sub>50</sub>' KBBKNN btm loss: dtc/m/z/z<sub>50</sub>/z<sub>50</sub>' = -38/-106/-38/-∞/-38m} 1... Kb3'  
 {a maxDTZ<sub>50</sub>' KBBKNN wtm win: dtc/m/z/z<sub>50</sub>/z<sub>50</sub>' = 38/106/38/∞/38m} 2. Be6+'''' Kc2'' 3. Ke3'' Nb3'' 4. Bf5+'''' Kd1'' 5. Bg4+'''' Ke1'' 6. Bg5'''' Kf1'' 7. Be2+'' Kg1'' 8. Bc4'''' Nc5'''' 9. Be7'''' Na4'''' 10. Bb3'''' Nb6'''' 11. Kf4'''' Kg2'' 12. Bc5'''' Nd7'''' 13. Bd5+'''' Kh2'''' 14. Bd4'''' Ng3'''' 15. Bf3'''' Kh3'' 16. Kg5'' Kh2'' 17. Kg4'' Nf1'' 18. Ba8' Nf8'' 19. Bb7'' Nd2'' 20. Bg7'' Ne6'' 21. Be5+'''' Kg1'' 22. Bd5'''' Nf8'' 23. Bc3'''' Nf1'' 24. Kf3'' Nh2+'' 25. Kf4'' Kf2'' 26. Bd4+'''' Ke2'' 27. Bc4+'''' Ke1'' 28. Bf7'' Nf1'' 29. Bc3+'''' Ke2'' 30. Bb4'''' Nd7'''' 31. Bc4+'''' Kf2'' 32. Be7'''' Kg2'' 33. Bd5+'' Kh2'' 34. Bd6'' Nb6'' 35. Kf3+'' Kh3'' 36. Be6+'' Kh4° 37. Bf4'' Kh5'' 38. Kf2' Kg6'' 39. Kxf1'' {de Man DTZ<sub>50</sub>' EGTs} \*

[White "KNN"]  
 [Black "KNP"]  
 [Result "1-0"]  
 [Date "2014.08.06"]  
 [Event "6m, 3-3m, KNNKNP, GBR 0005.01, maxDTZ<sub>50</sub>' KNNKNP w&l: SV<sup>+</sup>Z<sub>50</sub>'/SV<sup>+</sup>Z<sub>50</sub>'<sup>+</sup>"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "n7/3p1K2/8/3N4/8/8/6Nk w - - 0 1"]  
 [PlyCount "115"]

{dtz<sub>50</sub>' is a nominal '215p' but an actual 115p as the conversion is to a type-1 loss, i.e., 50mr draw}  
 {this position does not therefore challenge KQPKRB's 206p for the maxDTZ<sub>50</sub>' 3-3m\_P-ful record}  
 {1 of 396 maxDTZ<sub>50</sub>' KNNKNP wtm wins: dtm/z<sub>50</sub>/z<sub>50</sub>' = 138/∞/58m} 1. Nf3'  
 {1 of 60 maxDTZ<sub>50</sub>' KNNKNP btm losses: dtm/z<sub>50</sub>/z<sub>50</sub>' = -137/-∞/-57m} Kg2'''' 2. Nd4'''' Kf2' 3. Kf6'''' Ke1'' 4. Ke5' Kd1'' 5. Ke4'''' Kd2'' 6. Nb3+'''' Kc2'' 7. Nc5'''' Kd2'' 8. Kd4'' Kc2'' 9. sKc4' Kd2'' 10. Nd3'' Kc2'' 11. N3f4'' Kd2'' 12. Kc5'' Kc1' 13. Nd3+' Kd2' 14. Kd4'' Ke2' 15. N3b4' Kd2'' 16. Kc4'' Ke2' 17. Kc3' Kd1'' 18. Nc2'' Ke2'' 19. Nd4+'' Kd1'' 20. Nb3' Ke2' 21. Kc2'' Kf3' 22. Kd3'''' Kf2'' 23. Nd4'' Kf1'' 24. Kc3'' Ke1'' 25. Kc2'' Kf1'' 26. Kd1'' Kf2'' 27. Kd2'' Kf1'' 28. Nf3'' Kg2'' 29. Ke2'' Kh3'' 30. Ne5'' Kg3'' 31. Kd3'' Kf2'' 32. Kd2'' Kf1'' 33. Ng4' Kg1'' 34. Kd3' Kg2'' 35. Ke2'' Kg3'' 36. Ne5'' Kh4'' 37. Ke3' Kg5'' 38. Ke4'' Kh4'' 39. Kf4'' Kh3'' 40. Kf3' Kh4'' 41. Nf7' Kh3'' 42. Ng5+' Kh4'' 43. Kf4' Kh5'' 44. Ne4' Kh4'' 45. Kf5'' Kh3'' 46. Kg5'' Kh2'' 47. Kg4'' Kg1'' 48. Kf3'' Kf1'' 49. Ke3' Ke1'' 50. Nf2'' Kf1'' 51. Nd3'' Kg2'' 52. Ne5'' Kh3'' 53. Kd4' Kh4'' 54. Nf7'' Kg4' 55. Ke4'' Kg3'' 56. Ke3'' Kg2'' 57. Ke2'' Nc7' 58. Nxc7'''' {KNNKP(d7): dtc/m/z/z<sub>50</sub>/z<sub>50</sub>' = -68/-68/-13/-∞/-0m} d5'''' {KNNKP(d5): dtc/m/z/z<sub>50</sub>/z<sub>50</sub>' = 68/68/12/∞/1m} 59. Ne6' d4'''' {KNNKP(d4): dtc/m/z/z<sub>50</sub>/z<sub>50</sub>' = 67/67/64/∞/64m} {de Man DTZ<sub>50</sub>' EGTs} \*

[White "KPP"]  
 [Black "KPP"]  
 [Result "1-0"]  
 [Date "2014.01.06"]  
 [Event "6m, 3-3m, KPPKPP, GBR 0000.22, maxDTM KPPKPP 1&w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/8/2p4P/5P2/1k2p3/8/K7/8 b - - 0 1"]  
 [PlyCount "282"]

**{1 of 7 maxDTM KPPKPP btm losses: dtc/m/z = -3/-141/-1m} 1... e3"**  
**{1 of 7 maxDTM KPPKPP wtm wins: dtc/m/z = 3/141/1m} 2. f6''' e2' 3. f7''' e1=Q' 4. f8=Q+''' {KQPKQP: dtc/m = -98/-138m} Kc4'' 5. Qf4+'' Kc5'' 6. Kb2'' Qe2+'' 7. Kc3'' Qe1+'' 8. Qd2'' Qg1'' 9. Qc2'' Qd4+'' 10. Kb3+° Kd6'' 11. h7''' Qb6+'' 12. Ka3' Qa5+'' 13. Kb2'' Qe5+'' 14. Kc1'' Kc7'' 15. Qd3' Qc5+'' 16. Kd1' Qe5' 17. Kd2'' Qg5+'' 18. Qe3' Qd5+'' 19. Kc3'' Qa5+'' 20. Kd3'' Qb5+'' 21. Ke4'' Qd5+'' 22. Kf4° Qf7+'' 23. Kg3'' Qg7+'' 24. Kf3'' Kb7'' 25. Qd3' Kc7'' 26. Qf5'' Kb6'' 27. Kf4'' Qd4+'' 28. Kg5'' Qd8+'' 29. Kh5'' Qd1+'' 30. Kg6'' Qd6+'' 31. Kf7'' Qc7+'' 32. Ke8'' Qb8+'' 33. Ke7'' Qc7+'' 34. Qd7'' Qe5+'' 35. Kf7'' Qh5+'' 36. Kf8'' Qe5'' 37. Qd8+'' Kb5'' 38. Qh4''' Qf5+'' 39. Ke8'' Qg6+'' 40. Ke7'' Qg7+'' 41. Ke6' Qg6+'' 42. Ke5'' Qe8+'' 43. Kd4'' Qd7+'' 44. Kc3''' Qg7+'' 45. Kc2'' Qg6+'' 46. Kc1'' Qg1+'' 47. Kd2'' Qg2+'' 48. Ke3'' Qg1+'' 49. Qf2'' Qa1'' 50. Qc2' Kb6'' 51. Qb3+'' Ka5'' 52. Qd3'' Qe5+'' 53. Qe4'' Qf6'' 54. Kd3'' Qa1'' 55. Qf5+'' Kb6'' 56. Qf2+'' Kb7'' 57. Qf7+'' Kb6'' 58. Kc2'' Qe5'' 59. Qf2+'' c5'' 60. Kb1'' Kc6'' 61. Qh4'' Qf5+'' 62. Kb2''' Qe5+'' 63. Kb3'' Qd5+'' 64. Qc4''' Qf3+'' 65. Kb2''' Qg2+'' 66. Qc2''' Qg7+'' 67. Ka2'' Qf7+'' 68. Ka3'' Qg7'' 69. Qa4+'' Kb6'' 70. Qe4'' Qa7+'' 71. Kb2'' Qg7+'' 72. Kb1'' Qg1+'' 73. Ka2'' Qf2+'' 74. Ka3'' Qg3+'' 75. Ka4'' Qg7'' 76. Qd3' Ka7'' 77. Qf5'' Kb6'' 78. Kb3'' Qg3+'' 79. Kc4'' Qh4+'' 80. Kd5'' Qd4+'' 81. Ke6° Kb5'' 82. Qf3'' Kb4'' 83. Qb7+'' Kc4'' 84. Qd7'' Qe4+'' 85. Kd6'' Qf4+'' 86. Kc6'' Qf3+'' 87. Kb6' Qf6+'' 88. Kb7'' Qf3+'' 89. Ka7'' Qa3+'' 90. Kb6'' Qb2+'' 91. Kc6'' Qf6+'' 92. Qd6'' Qh8'' 93. Qxc5+'' {KQPKQ: dtc/m/z = -35/-49/-35m} Kb3'' 94. Qe7''' Qc8+'' 95. Kb6'' Qh8'' 96. Kc7'' Qc3+'' 97. Kb7'' Qf3+'' 98. Kb6'' Qf2+'' 99. Ka6'' Qf1+'' 100. Ka7'' Qa1+'' 101. Kb7'' Qb2'' 102. Qe4'' Qg7+'' 103. Kc6' Qh8'' 104. Kc7'' Qg7+'' 105. Kd6'' Qf8+'' 106. Kd7'' Qh8'' 107. Qb7+' Ka4'' 108. Ke6'' Qe8+'' 109. Kf6'' Qf8+'' 110. Qf7'' Qh6+'' 111. Qg6'' Qh4+'' 112. Ke5'' Qe7+'' 113. Kf4'' Qc7+'' 114. Kf3'' Qc3+'' 115. Kg2'' Qd2+' 116. Kh3''' Qc3+'' 117. Qg3'' Qh8'' 118. Qg4+'' Ka5' 119. Qg8'' Qc3+'' 120. Kg4'' Qd4+'' 121. Kh5''' Qd1+'' 122. Qg4''' Qh1+'' 123. Kg6'' Qc6+'' 124. Kg5'' Qc3' 125. Qf5+'' Ka4'' 126. Qf4+'' Ka3' 127. Qf8+'' Kb3' 128. h8=Q' {KQKQ: dtc/m/z = -9/-14/-9m} Qg3+'' 129. Kf5'' Qf3+'' 130. Ke6'' Qe4+'' 131. Qe5'' Qc6+'' 132. Qfd6'' Qe8+'' 133. Kf6' Qh8+'' 134. Kg6' Qxe5'' 135. Qxe5''' {KQK: dtx = -7m} Kb4' 136. Qc7' Ka4' 137. Qb7' Ka3' 138. Kf6' Ka2' 139. Ke5'' Ka1' 140. Kd4'' Ka2° 141. Kc3'' Ka1' 142. Qb2#'' {Nalimov and Lomonosov DTM EGTs} \***

[White "KQB"]  
[Black "KQN"]  
[Result "1-0"]  
[Date "2014.01.27"]  
[Event "6m, 3-3m, KQBKQN, GBR 4013.00, maxDTC KQBKQN l&w: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "qn6/8/8/8/7B/3K4/2Q2k2/8 b - - 0 1"]  
[PlyCount "72"]

**{the curiosity here is that the impossible double-check renders this position inaccessible}**

**{the one maxDTC KQBKQN btm loss: dtx = -36m} 1... Kg1"**

**{1 of 2 maxDTC KQBKQN wtm wins: dtx = 36m} 2. Bf2+''' Kg2'' 3. Bb6+''' Kg3' 4. Bc7+''' Kg4'' 5. Qc4+''' Kg5'' 6. Qg8+''' Kf5'' 7. Qf7+''' Kg5'' 8. Qe7+'' Kf5'' 9. Qe5+'' Kg6'' 10. Qe6+''' Kg7'' 11. Be5+'' Kf8'' 12. Bd6+''' Kg7° 13. Qe5+'' Kg6'' 14. Qe8+'' Kf5'' 15. Qf7+'' Kg5'' 16. Be7+'' Kh6'' 17. Qe6+'' Kh7'' 18. Qf5+'' Kg7'' 19. Bf6+'' Kf7'' 20. Bg5+''' Kg7'' 21. Qf6+''' Kg8'' 22. Qe6+'' Kg7'' 23. Bf6+'' Kg6' 24. Be5+'' Kg5'' 25. Qf6+'' Kh5'' 26. Qf7+'' Kg5' 27. Bf6+'' Kf4' 28. Be7+'' Kg4' 29. Qg6+'' Kf3'' 30. Qh5+'' Kf2'' 31. Bc5+'' **{in SM}** Kg3'' 32. Bd6+'' Kg2'' 33. Qg4+'' Kf1'' 34. Qe2+'' Kg1° 35. Bc5+'' Kh1° 36. Qf1+'' Kh2° 37. Bd6#''**

**{Thompson and JT's MB 'Nalimov' DTC EGTs} \***

[White "KQP"]  
[Black "KRB"]  
[Result "1-0"]  
[Date "2014.02.26"]  
[Event "6m, 3-3m, KQP KRB, GBR 1330.10, maxDTC 3-3m\_P-ful l&w: SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/1k6/8/8/3r4/7Q/4P2b/2K5 b - - 0 1"]  
[PlyCount "272"]

**{1 of 9 maxDTC 3-3m\_P-ful btm losses: dtc/m = -136/-155m} 1... Bc7''**

**{1 of 7 maxDTC 3-3m\_P-ful wtm wins: dtc/m = 136/155m} 2. Qg2+ Kb6'' 3. Qg1''' Be5'' 4. Qg8''' Rd6'' 5. Qb8+''' Kc5'' 6. Qe8''' Kd4'' 7. Kc2''' Bf4'' 8. Qa4+ Ke5'' 9. Qb5+ Rd5'' 10. Qb8+''' Kf5 11. Qf8+ Ke5'' 12. Qe7+ Kd4'' 13. Qf6+ Ke4'' 14. Qc6 Ke5'' 15. Kc3 Bd2+'' 16. Kc4''' Rd4+'' 17. Kc5 Bb4+'' 18. Kb5''' Be7'' 19. Qe8 Ke6 20. Qg6+ Ke5'' 21. Qg3+ Kd5'' 22. Kb6 Bd8+'' 23. Kb7 Bf6'' 24. e3''' **{KQP(e3)KRB: dtc/m = -113/-132m}** Rb4+'' 25. Kc8''' Bc3'' 26. Qg6 Kc4 27. Qe4+''' Kc5'' 28. Qd3 Rc4'' 29. Kd7 Kb4'' 30. Qb1+''' Ka5'' 31. Kd6 Bb4+'' 32. Ke5 Rc8'' 33. Qg6 Kb5'' 34. Qd3+''' Kb6'' 35. Ke4 Re8+'' 36. Kf3 Rf8+ 37. Ke2 Rc8'' 38. Qd4+ Bc5'' 39. Qb2+ Kc6 40. Qa2 Rc7 41. Qa6+''' Bb6'' 42. e4 **{KQP(e4)KRB: dtc/m = -95/-114m}** Re7'' 43. Kf3 Re5 44. Qc4+ Kd7 45. Qd3+''' Kc6'' 46. Qc3+ Rc5'' 47. Qf6+''' Kb7'' 48. Qd6 Rc3+ 49. Kg4 Rc5 50. Qe7+ Rc7 51. Qb4 Rc5 52. Qb2 Ka7 53. Qg7+ Kb8 54. Qh6 Kc7 55. Qg6 Kb7'' 56. Qd6''' Rc2 57. Qd7+ Rc7'' 58. Qd5+ Ka7 59. Qa2+ Kb7'' 60. Qb2 Kc6 61. Kf5 Bc5 62. Qa2''' Kb5 63. Qd5 Ra7 64. Qd3+ Kb6 65. Qb3+''' Kc6 66. Qe6+ Kb5 67. Qc8 Re7 68. Qd8''' **{zug}** Kc6 69. Kf6''' Rc7 70. Qd5+ Kb5 71. Qd3+ Ka5 72. Qg3 Kb6 73. Qb3+''' Kc6 74. Qa4+ Kb6'' 75. Ke5''' Be7 76. Qb3+ Kc6 77. Ke6 Bf8 78. Qc2+ Kb7 79. Qb1+ Kc6'' 80. Qb3 Bc5'' 81. Qa4+ Kb6'' 82. Kd5 Be7'' 83. Qb3+ Ka6'' 84. Qb8 Rb7'' 85. Qc8 Kb6'' 86. Qe6+ Ka7'' 87. Qc6 Kb8'' 88. Qc3 Bd8 89. Qg3+ Kc8 90. Qa3 Kb8 91. Ke6 Rc7 92. Qd6 Kc8'' 93. Qb4 Rb7 94. Qa3 Kb8'' 95. Qc5 Ra7 96. Qd4 Re7+'' 97. Kf5 Kc8'' 98. Qc4+ Rc7'' 99. Qe6+ Kb8'' 100. Qd5 Be7 101. Ke6 Bc5 102. Qb3+ Rb7 103. Qg3+ Rc7 104. Qc3 Kb7 105. Qa5 Rc6+ 106. Kd5 Bb6'' 107. Qa4 Rc5+'' 108. Kd6''' Rc7 109. Qe8 Bc5+ 110. Kd5''' Be7 111. Ke6 Bc5 112. Qb5+ Ka7 113. Ke5 Bf8 114. Kd4 Be7 115. Kd5 Ka8 116. Qb6 Rb7 117. Qa5+ Ra7 118. Qc3 Kb8 119. Qh8+ Kc7 120. Qe5+ Kc8 121. Qe6+ Kb8 122. Qg8+ Kc7 123. Qf7 Kc8 124. Ke6 Bc5 125. Qe8+ Kc7 126. e5 **{KRP(e5)KRB: dtc/m = -11/-28m}** Bb4 127. Kd5''' Rb7 128. Kc4 Rb8 129. Qf7+ Kd8 130. Qa7 Kc8 131. e6 Rb7 132. Qa8+''' Kc7'' 133. Qe8''' Ba3 134. e7 Rb4+ 135. Kd5 Bb2 136. Qc6+'' Kb8° 137. e8=Q+'' **{KQKRB: dtx = -1m} {YK-MB DTC EGTs} \*****

[White "KQP"]  
[Black "KRB"]  
[Result "1-0"]  
[Date "2014.07.24"]  
[Event "6m, 3-3m, KQPKRB, GBR 1330.10, maxDTZ<sub>50</sub>' l&w: SV<sup>+</sup>Z<sub>50</sub>' /SV<sup>+</sup>Z<sub>50</sub>'<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "b7/8/8/1r3k2/3P3Q/8/8/3K4 b - - 0 1"]  
[PlyCount "206"]

**{1 of 9 maxDTZ<sub>50</sub>' 3-3p btm losses: dtm/z<sub>50</sub>' = -132/-103m} 1. ... Kg6''''**  
**{1 of 3 maxDTZ<sub>50</sub>' 3-3p wtm wins: dtm/z<sub>50</sub>' = 132/103m} 2. Qg4+'''' Kf6'''' 3. Qg3'' Rd5'''' 4. Qf3+'' Kg7' 5. Qc3' Kf7'' 6. Qb3'''' Kg7'' 7. Qb6'' Rd7'''' 8. Qb5'''' Bf3+'''' 9. Kc1'''' Rd5'''' 10. Qf1'''' Be4'' 11. Qe2'''' Bg6'''' 12. Qg2'''' Rb5'' 13. Qc6'' Rf5'' 14. Qd7+'' Rf7'' 15. Qg4'' Rf5' 16. Kb2' Kf6'' 17. Qh4+'''' Ke6' 18. Qh6' Kf7' 19. Qh3'' Kf8' 20. Kc3'' Rh5'' 21. Qc8+'''' Kg7'' 22. Qg4'''' Kf6'' 23. Qf3+'' Rf5'''' 24. Qc6+'''' Kg7'''' 25. Qe6'' Rf3+'' 26. Kb4'' Rf5'' 27. Qd7+'' Rf7'' 28. Qh3' Rf5'' 29. Qg2'' Kh7'' 30. Qb7+'' Kg8' 31. Qc6' Kh7'' 32. Qc8'' Kg7'' 33. Qe6'' Rf2'' 34. Qe7+'' Rf7'''' 35. Qe5+'' Kh7'' 36. Qh2+'' Kg7'''' 37. Qg2'' Kf6'''' 38. Kc5'' Bf5'''' 39. Qh2'''' Kg5'' 40. Qe5'' Rh7'' 41. Qe3+'' Kg6'' 42. Qg3+'''' Kf6'''' 43. Qd6+'' Kg5'''' 44. Qf8'' Rd7'' 45. Qe8'''' Kf6'''' 46. Kc6'''' Rf7'' 47. Qe5+'' Kg5'' 48. Qe3+'' Kh5' 49. Qb3'' Kg6'' 50. Qg3+'''' Kf6'''' 51. Qh4+'' Kg6'''' 52. Kd5'' Bd7'''' 53. Qg3+' Kf6'''' 54. Kd6'' Bc8'' 55. Qf2+'' Kg6' 56. Qg2+'' Kf6'' 57. Qg3'' Bf5'' 58. Qh4+'' Kg6'' 59. Ke5'' Bd7'' 60. Qg3+'' Kh6'' 61. Qg1' Rg7'' 62. Qf1'' Kg6'' 63. Qa6+'' Kf7'' 64. Qf6+'' Kg8'' 65. Qf3'' Rf7'' 66. Qg3+' Rg7'' 67. Qb3+'' Kf8'' 68. Kd6'' Bg4'' 69. Qa2'' Bd7'' 70. Qa3'' Be8'' 71. Qh3'' Kg8'' 72. Qf5'' Rh7'' 73. Qe4'' Rd7+'' 74. Kc5'' Kf8'' 75. Qf4+'' Rf7'' 76. Qd6+' Kg8'' 77. Qe5'' Bd7'' 78. Kd6'' Bf5'' 79. Qg3+'' Rg7'' 80. Qb3+'' Rf7'' 81. Qf3'' Kg7'' 82. Qh5'' Rf6+'' 83. Ke5'' Bg6'' 84. Qh4'' Rf5+'' 85. Ke6'''' Rf7'' 86. Qd8'' Bf5+'' 87. Ke5'''' Bd7'' 88. Kd6'' Bf5'' 89. Qg5+'' Kh7'' 90. Kd5'' Bc8'' 91. Ke4'' Bd7'' 92. Ke5'' Kh8'' 93. Qg6'' Rg7'' 94. Qh5+'' Rh7'' 95. Qf3'' Kg8'' 96. Qa8+'' Kf7'' 97. Qd5+'' Kf8'' 98. Qd6+'' Kg8'' 99. Qb8+'' Kf7'' 100. Qc7'' Kg6'' 101. Qd6+' Kh5'' 102. Qf6' Rh6'' 103. Qf7+' Rg6' 104. Qxd7' **{KQPKR: dtc/m/z = -2/-13/-2m} {de Man DTZ<sub>50</sub>' EGTs} \*****

[White "KRB"]  
 [Black "KNN"]  
 [Result "1-0"]  
 [Date "2014.01.19"]  
 [Event "6m, 3-3m, KRBKNN, GBR 0113.00, maxDTC KRBKNN w&l: SV+C/SV+C"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/K7/2nn4/8/8/1B1k4/1R6/8 w - - 0 1"]  
 [PlyCount "445"]

**{the s7m maxDTC position until superseded by KRNKNN. This is the line from (Stiller, 1991)}**

**{the one maxDTC KRBKNN wtm win: dtc/m/z = 223/238/223m} 1. Ka6'''**

**{1 of 2 maxDTC KRBKNN btm losses: dtc/m/z = -222/-237/-222m} Nb4+'' 2. Ka5'''' Nc6+'' 3. Ka4'''' Nc4'' 4. Rh2'''' Nb6+'' 5. Ka3'''' Nc4+'' 6. Ka2'''' Nb4+'' 7. Ka1'''' Ne5'' 8. Kb2'''' Nc4+'' 9. Kc1'''' Kc3'' 10. Bd1'''' Nd3+'' 11. Kb1° Nd2+'' 12. Ka1'''' Nb3+'' 13. Ka2'''' Nbc5'' 14. Ka3' Nb4' 15. Rh3+' Nbd3'' 16. Bg4' Kd4'' 17. Bf5' Nf2'' 18. Rh6' Nfd3'' 19. Ka2'' Ke5' 20. Bg6' Kd4'' 21. Kb1'' Kc3'' 22. Bh7'' Kd2'' 23. Rh2+' Kc3'' 24. Bg8'' Kd4'' 25. Kc2'' Nb4+'' 26. Kd1'' Ne4'' 27. Be6'' Ke3'' 28. Bf5' Nd5'' 29. Kc1' Nd6'' 30. Bd7' Kd4'' 31. Kb2'' Ne3' 32. Rh4+' Kd5'' 33. Ba4'' Ndf5'' 34. Rh8'' Nd6'' 35. Rh5+'' Kd4'' 36. Bc6' Ndc4+' 37. Kb3'' Nd2+'' 38. Kb4'' Ne4'' 39. Ba8'' Nc2+'' 40. Kb5'' Ne3' 41. Kc6'' Nf6'' 42. Rh4+'' Ke5'' 43. Kc5'' Nd7+'' 44. Kb5'' Nf6'' 45. Bh1'' Nf5'' 46. Ra4'' Nd6+' 47. Kc5'' Nfe4+'' 48. Kc6'' Ng3'' 49. Bg2'' Nde4'' 50. Ra8'' Kd4'' 51. Rd8+'' Ke5'' 52. Rd5+'' Kf4'' 53. Ra5'' Nc3'' 54. Kc5'' Nf5'' 55. Bc6' Ne3'' 56. Kd4' Ne2+'' 57. Kd3'' Nc1+'' 58. Kc3'''' Ne2+'' 59. Kb4'''' Nf5'' 60. Ba8'' Neg3' 61. Kc3' Ne4+'' 62. Kd3'' Ng5'' 63. Bc6' Nf7'' 64. Ra4+'' Ke5'' 65. Ra7' N5d6'' 66. Ra8' Kf4'' 67. Ra4+'' Ke5'' 68. Bd7'' Nb7'' 69. Re4+'' Kd6'' 70. Rd4+'''' Ke5'' 71. Bc6'' Nbd6'' 72. Bg2'' Nf5'' 73. Re4+'' Kd6'' 74. Ra4'' Ke5'' 75. Bh3'' Ng3'' 76. Rg4'' Nf5'' 77. Re4+'' Kf6'' 78. Re1' N7d6'' 79. Re2'' Kg7' 80. Re5' Kf6'' 81. Rd5' Ke6'' 82. Rc5'' Kf6'' 83. Ke2'' Nd4+'' 84. Ke3'' Ne6'' 85. Rd5'' Nc4+'' 86. Kf2'''' Ng7'' 87. Ke2'' Ne6'' 88. Rf5+'' Ke7'' 89. Kd3'' Nb2+'' 90. Kc3'' Na4+'' 91. Kb4'' Nac5'' 92. Kc4'' Nd7'' 93. Ra5'' Nb6+'' 94. Kc3'' Nc5'' 95. Kb4'' Nd3+'' 96. Kb5'' Nd5' 97. Bf5'' N3f4'' 98. Kc6'' Kf6'' 99. Bb1'' Ne3'' 100. Ra6' Ne2'' 101. Kd7+' Ke5'' 102. Re6+'' Kf4'' 103. Re4+'' Kf3'' 104. Re8'' Ng3' 105. Ke6' Nef1'' 106. Bc2' Kf4'' 107. Rf8+' Ke3'' 108. Rd8'' Nh2'' 109. Ra8' Ngf1'' 110. Ra3+' Kf4'' 111. Bd1'' Nd2'' 112. Kd5'' Nhf1'' 113. Kd4'' Ng3'' 114. Ra4'' Nde4'' 115. Kd5'' Ke3'' 116. Ke5'' Kd2'' 117. Bh5'' Nc5'' 118. Ra2+'''' Ke3'' 119. Bg6'' Nd7+'' 120. Kd6'' Nf6'' 121. Ra3+' Kf4'' 122. Ra4+' Kg5'' 123. Bd3'' Ng4'' **{and here SC and SM diverge}** 124. Ba6' Nf5+'' 125. Ke6'' Ng7+'' 126. Kf7' Nf5'' 127. Be2'' Ngh6+'' 128. Ke6'' Ng3'' 129. Bd1'' Ngf5'' 130. Rb4'' Ne3' 131. Bf3'' Nef5'' 132. Bg2'' Ng7+' 133. Kd5'' Nh5'' 134. Rb5'' Kf4'' 135. Ke6'' Ng3'' 136. Rb4+'' Kg5'' 137. Bh3'' Ne2' 138. Ke5'' Ng3'' 139. Ra4' Ne2'' 140. Be6'' Ng3'' 141. Bd7'' Nf7+'' 142. Kd4'' Nd6'' 143. Bh3'' Ndf5+'' 144. Ke5'' Nh6'' 145. Ra5'' Kh4'' 146. Bg2'' Kg5'' 147. Ba8'' Ng4+'' 148. Ke6+'' Kf4'' 149. Ra3'' Nh2'' 150. Bb7'' Ne2'' 151. Ra4+'' Ke3'' 152. Re4+'' Kf2'' 153. Kd6'' Nf3'' 154. Re8'' Ned4'' 155. Kc5'' Kg3'' 156. Be4'' Ne2'' 157. Bc2'' Nf4'' 158. Kc4'' Kf2'' 159. Ba4'' Ng6'' 160. Kd5' Ng5'' 161. Kd4'' Nf4'' 162. Bc6'' Nf3+'' 163. Ke4'' Ne6'' 164. Re7'' Nc5+'' 165. Kd5'' Nb3'' 166. Be8'' Nbd2'' 167. Bh5'' Kg3' 168. Re3'' Kf2'' 169. Rd3'' Ke2'' 170. Rc3'' Kf2'' 171. Bg4'' Kg2' 172. Rd3' Kf2'' 173. Ke6'' Ke2'' 174. Ra3'' Kf2'' 175. Kf5'' Nd4+'' 176. Kg5'' Nf1' 177. Rd3'' Ne2'' 178. Rf3+'' Ke1'' 179. Bh5'' Nd4'' 180. Ra3'' Ne2'' 181. Ra7' Nfg3'' 182. Bg6'' Kd2'' 183. Rb7' Ke3'' 184. Kg4'' Nf1'' 185. Rh7'' Nd2'' 186. Re7+'' Kf2'' 187. Bd3'' Nc1'' 188. Ba6'' Ndb3'' 189. Kf4'' Nc5'' 190. Bb5'' N1d3+'' 191. Kf5'' Nb4'' 192. Re8'' Kf3'' 193. Be2+'' Kf2'' 194. Bh5' Kg3'' 195. Re3+'' Kf2'' 196. Re2+'' Kg3'' 197. Rd2'' Nc6'' 198. Rd6' Nb4'' 199. Ke5'' Nbd3+'' 200. Kd4'' Nf4'' 201. Bf7'' Ncd3'' 202. Ra6'' Nf2'' 203. Ra3+' Kh4'' 204. Ke3'' N2h3'' 205. Bb3'' Kg5' 206. Ke4'' Kh4'' 207. Ba4'' Nh5'' 208. Bc2'' Ng7' 209. Bb3'' Nh5' 210. Ra4'' Kg5'' 211. Kf3'' Ng1+'' 212. Kf2'' Nh3+'' 213. Kg2'' N3f4+'' 214. Kf3'' Nh3'' 215. Ra5+'' Kh6'' 216. Ra6+'' Kg5'' 217. Be6' N3f4'' 218. Ra5+'' Kh6' 219. Bf7'' Ng6'' 220. Ra6' Nhf4'' 221. Kg4'' Kg7'' 222. Be8'' Nd5'' 223. Bxg6'' **{KRBKN: dtc/m/z = -7/-12/-7m} {JT's MB 'Nalimov' DTC EGTs} \*****



[White "KRN"]  
 [Black "KNN"]  
 [Result "1-0"]  
 [Date "2013.09.30"]  
 [Event "6m, 3-3m, KRNKNN, GBR 0107.00, maxDTC s7m\_P-less w&l: SV+C/SV+C+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "6N1/5KR1/2n5/8/8/2n5/1k6 w - - 0 1"]  
 [PlyCount "485"]

**{1 of 14 maxDTC s7m wtm wins, 3 here in KRNKNN and 11 in KRRPKQ:**

**dtc/m/r/zr/z50' = 243/262/243/243/243m (Thompson, 1996a) } 1.Ke6''''**

**{1 of 4 maxDTZ/Z50' s7m btm losses: dtc/m/r/zr/z50' = -242/-261/-242/-242/-242m} N6b4'' 2. Ke5''''**  
 Nd3+'' 3. Ke4'''' Nf2+'' 4. Kf3'''' Nd3'' 5. Ke2'''' Ncb4'' 6. Ke3'''' Kb2'' 7. Kd4'''' Nf4'' 8. Kc4'' Nbd5'' 9. Rh7''''  
 Ne3+'' 10. Kd4'''' Nc2+'' 11. Ke4'''' Ne6'' 12. Ke5'' Ng5'' 13. Rh5'''' Ne1'' 14. Kf5'''' Ngf3'' 15. Ke4'' Nd2+'' 16.  
 Ke3'''' Nb3'' 17. Rh1'''' Nc2+'' 18. Kd3'''' Nc1+'' 19. Ke4'' Nb3'' 20. Rh3'''' Nc5+'' 21. Ke5'''' Ne1'' 22. Nf6''''  
 Ned3+'' 23. Kd6'''' Nb7+'' 24. Kc7'' Nbc5'' 25. Kc6'''' Kc2'' 26. Rh2+'''' Kb3' 27. Kd5'' Kb4'' 28. Kd4' Nf4'' 29.  
 Rh4'''' Kb5'' 30. Ne8'''' Nb3+'' 31. Ke4'' Ng6'' 32. Rh7'''' Nc5+'' 33. Kd4'' Nf4'' 34. Nd6+'' Kc6'' 35. Rh6''''  
 Nb3+'' 36. Ke4'' Ne6'' 37. Ke5'''' Ned4'' 38. Rh3'''' Nc5'' 39. Nc8'' Nc2'' 40. Rc3'''' Nb4'' 41. Kd4'''' Nba6'' 42.  
 Rc2'''' Kd7'' 43. Nb6+'' Kd6'' 44. Nc4+'' Kc6'' 45. Ne3'' Kd6'' 46. Nf5+'' Ke6'' 47. Ng7+'' Kf7'' 48. Nh5''''  
 Ne6+'' 49. Ke5'''' Nb4'' 50. Re2'''' Nd3+'' 51. Ke4'''' Nb4'' 52. Rb2'' Kg6'' 53. Ng3'''' Ng5+'' 54. Kd4'''' Ne6+''  
 55. Kc4'' Na6'' 56. Rf2'''' Ng5'' 57. Rf1'''' Nc7'' 58. Ne2'''' Nf7'' 59. Nf4+'''' Kg5'' 60. Kd4'' Nb5+'' 61. Kc5''  
 Nbd6'' 62. Ne6+'' Kg6'' 63. Nf8+'' Kg5'' 64. Kd5'' Nf5'' 65. Rb1' Ng3'' 66. Rb7'''' Nh6'' 67. Rg7+'''' Kf4'' 68.  
 Ne6+'''' Kf3'' 69. Rb7'' Nh5'' 70. Rb4'''' Nf6+'' 71. Kd4'''' Nh5'' 72. Kd3'' Ng4'' 73. Ng5+'''' Kg3'' 74. Ne4+''''  
 Kh4'' 75. Ra4'''' Nf4+'' 76. Kd4'''' Ne6+'' 77. Kd5'''' Nf4+'' 78. Kd6'''' Nh3'' 79. Ra8'' Ngf2'' 80. Nc5'''' Kg5'' 81.  
 Ke5'''' Ng4+'' 82. Kd4'''' Nf4'' 83. Ne4+'''' Kg6'' 84. Ra6+'''' Kf5'' 85. Ra5+'' Ke6'' 86. Nc5+'''' Ke7'' 87.  
 Ra7+'''' Kf6'' 88. Ke4'''' Kg5'' 89. Ra5'''' Nh5'' 90. Ne6+'''' Kg6'' 91. Rb5'''' Kf7'' 92. Nc5'''' Ke7'' 93. Rb2''''  
 Kd6'' 94. Nb7+'''' Ke7'' 95. Ra2'' Ng7'' 96. Re2'''' Kd7'' 97. Rg2'''' Ne8'' 98. Kf4'''' Ngf6'' 99. Ke5'''' Ke7'' 100.  
 Re2'''' Kd7'' 101. Na5'' Ng4+'' 102. Kf5'''' Nh6+'' 103. Kg6'''' Ng8'' 104. Nc4'' Nc7'' 105. Kf7'''' Nh6+'' 106.  
 Kf6'' Ng8+'' 107. Ke5'''' Ne7'' 108. Rd2+'''' Kc6'' 109. Rc2'''' Na6' 110. Ne3+'''' Kd7'' 111. Rd2+'''' Kc6'' 112.  
 Rd6+'' Kb5'' 113. Rh6'''' Nc8'' 114. Kd4' Nb4' 115. Rh5+'' Kc6'' 116. Nc4'' Ne7'' 117. Rh6+'' Kc7'' 118. Rh7''  
 Kd7'' 119. Ke5'''' Nbd5'' 120. Nd6' Kc6' 121. Ne4'''' Ng6+'' 122. Kf5'''' Nf8'' 123. Rh6+'''' Kc7'' 124. Rh1''''  
 Nd7'' 125. Rb1'' Nb8'' 126. Ke5'' Ne3'' 127. Kd4'' Nf5+'' 128. Kd5'' Ne3+'' 129. Kc5'''' Nd7+'' 130. Kd4'''' Ng4''  
 131. Rc1+'''' Kd8'' 132. Re1'''' Ngf6'' 133. Ng5' Kc7'' 134. Nf7'' Nf8'' 135. Rf1'' Ng4'' 136. Rg1'' Nf6'' 137.  
 Re1'' Kd7'' 138. Ke5'''' Ne8'' 139. Nh8'''' Ke7'' 140. Kd5+'' Kd7'' 141. Rf1'' Nc7+'' 142. Ke5'''' Nfe6'' 143.  
 Ng6'' Nc5'' 144. Rb1'' Kc6'' 145. Ne7+'''' Kd7° 146. Nf5'' Kc6'' 147. Nd4+'' Kd7° 148. Rd1'' N7a6'' 149. Nf5+''  
 Kc6'' 150. Rh1'' Nb4'' 151. Rh6+'' Kd7'' 152. Kd4'' Ne6+'' 153. Kc4'''' Na6'' 154. Rh7+'' Kc6'' 155. Rh1'' Nac7''  
 156. Rd1'''' Ne8'' 157. Ne7+'''' Kc7'' 158. Kd5'''' Nf8'' 159. Ng8'' Kd7'' 160. Kc5+'' Ke6' 161. Re1+'''' Kd7'' 162.  
 Re7+'' Kd8'' 163. Ra7'' Nd7+'' 164. Kc6'''' Ne5+'' 165. Kd5'' Ng6'' 166. Rh7'' Nc7+'' 167. Kc6'' Ne5+'' 168.  
 Kd6'' Nc4+'' 169. Kc5'' Ne5'' 170. Rh5'' Nf7'' 171. Kc6'' Ne6'' 172. Ra5'' Ke8'' 173. Nf6+'' Ke7'' 174. Nd5+''''  
 Kf8'' 175. Kd7'' Nd4'' 176. Nf4'' Nh6'' 177. Rd5'' Ndf5'' 178. Ke6'''' Ng7+'' 179. Kf6'''' Ng8+'' 180. Ke5'' Nh6''  
 181. Ra5'' Ng4+'' 182. Kd4' Kf7'' 183. Ra7+'''' Kf6'' 184. Ke4'''' Ne8'' 185. Ra6+'''' Kg7'' 186. Rb6' Ngf6+'' 187.  
 Kf5'''' Nd7'' 188. Ne6+'''' Kf7'' 189. Ng5+'''' Kf8'' 190. Ra6'''' Ng7+'' 191. Kg6'''' Ne5+'' 192. Kh7'' Ne8'' 193.  
 Re6'''' Nf7'' 194. Nf3'' Nfd6'' 195. Kg6'' Nf5'' 196. Re1'' Ne7+'' 197. Kg5'''' Kf7'' 198. Ne5+'''' Kg7'' 199. Ng4''  
 Kf8'' 200. Nh6'' Nd5'' 201. Nf5'' Kf7'' 202. Re2' Nb6'' 203. Re7+'' Kf8'' 204. Re1'' Nd5'' 205. Re5'' {and here  
**SC<sup>+</sup> and SM<sup>+</sup> must diverge**} Nb6' 206. Kg6'' Nc7'' 207. Nd6'' Nbd5'' 208. Re1'' Ne6' 209. Kf5'' Nec7' 210. Ke5''  
 Nb4'' 211. Rf1+'' Ke7'' 212. Rf7+'' Kd8° 213. Nb7+'' Kc8'' 214. Nc5'' Nb5'' 215. Rg7' Kd8'' 216. Rb7'' Nc6+''  
 217. Ke6'' Kc8'' 218. Rh7'' Nb4'' 219. Na4'' Na6'' 220. Kd5'' Nbc7+'' 221. Kd6'' Ne8+'' 222. Ke7'' Nec7'' 223.  
 Rh6'' Nb8'' 224. Nb6+'' Kb7° 225. Nc4'' Nc6+'' 226. Kd6' Nb4'' 227. Rh8'' Nba6'' 228. Rh7'' Kc8'' 229. Na5''  
 Kd8'' 230. Nc6+'' Kc8'' 231. Ne7+'' Kd8'' 232. Nd5'' Ne8+'' 233. Kc6'' Nb8+'' 234. Kb5'' Nd6+'' 235. Kc5''  
 Nc8'' 236. Rh8+'' Kd7° 237. Nf6+'' Kc7'' 238. Rh7+'' Kd8'' 239. Rb7'' Na6+'' 240. Kc6'' Ne7+'' 241. Kb6'' Nb4''

242. Rd7+'' Kc8° 243. Rxe7'' {**KRNKN: dtc/m/z/z<sub>50</sub>' = -1/-3/-1/-1m**} {**Stiller DTC, JT's MB 'Nalimov' DTC, Lomonosov DTM and de Man DTZ<sub>50</sub>' EGTs**} \*

[White "KRN"]  
 [Black "KNN"]  
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 [Date "2013.09.30"]  
 [Event "6m, 3-3m, KRNN, GBR 0107.00, maxDTM s7m w&l: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
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 [PlyCount "525"]

**{the one maxDTM s7m wtm win: dtc/m/r/z/zr = 243/262/243/243/243m} 1. Ke6'''**  
**{1 of 7 maxDTM s7m btm losses: dtc/m/r/z/zr = -242/-261/-242/-242/-242m} 1...** N6b4'' 2. Ke5'''' Nd3+' 3. Ke4'''' Nf2+' 4. Kf3'''' Nd3'' 5. Ke2'''' Ncb4'' 6. Ke3'''' Kb2'' 7. Kd4'''' Nf4'' 8. Kc4'' Nbd5'' 9. Rh7'''' Ne3+' 10. Kd4'''' Nc2+' 11. Ke4'''' Ne6'' 12. Ke5'' Ng5'' 13. Rh5'''' Ne1'' 14. Kf5'''' Ngf3'' 15. Ke4'' Nd2+' 16. Ke3'''' Nb3'' 17. Rh1'''' Nc2+' 18. Kd3'''' Nc1+' 19. Ke4'' Nb3'' 20. Rh3'''' Nc5+' 21. Ke5'''' Ne1'' 22. Nf6'''' Ned3+' 23. Kd6'''' Nb7+' 24. Kc7'' Nbc5'' 25. Kc6'''' Kc2'' 26. Rh2+''' Kb3' 27. Kd5'' Kb4'' 28. Kd4' Nf4'' 29. Rh4'''' Kb5'' 30. Ne8'''' Nb3+' 31. Ke4'' Ng6'' 32. Rh7'''' Nc5+' 33. Kd4'' Nf4'' 34. Nd6+' Kc6'' 35. Rh6'''' Nb3+' 36. Ke4'' Ne6'' 37. Ke5'''' Ned4'' 38. Rh3'''' Nc5'' 39. Nc8'' Nc2'' 40. Rc3'''' Nb4'' 41. Kd4'''' Nba6'' 42. Rc2'''' Kd7'' 43. Nb6+' Kd6'' 44. Nc4+' Kc6'' 45. Ne3'' Kd6'' 46. Nf5+' Ke6'' 47. Ng7+' Kf7'' 48. Nh5'''' Ne6+' 49. Ke5'''' Nb4'' 50. Re2'''' Nd3+' 51. Ke4'''' Nb4'' 52. Rb2'' Kg6'' 53. Ng3'''' Ng5+' 54. Kd4'''' Ne6+' 55. Kc4'' Na6'' 56. Rf2'''' Ng5'' 57. Rf1'''' Nc7'' 58. Ne2'''' Nf7'' 59. Nf4+''' Kg5'' 60. Kd4'' Nb5+' 61. Kc5'' Nbd6'' 62. Ne6+' Kg6'' 63. Nf8+' Kg5'' 64. Kd5'' Nf5'' 65. Rb1' Ng3'' 66. Rb7'''' Nh6'' 67. Rg7+''' Kf4'' 68. Ne6+''' Kf3'' 69. Rb7'' Nh5'' 70. Rb4'''' Nf6+' 71. Kd4'''' Nh5'' 72. Kd3'' Ng4'' 73. Ng5+''' Kg3'' 74. Ne4+''' Kh4'' 75. Ra4'''' Nf4+' 76. Kd4'''' Ne6+' 77. Kd5'''' Nf4+' 78. Kd6'' Nh3'' 79. Ra8'' Ngf2'' 80. Nc5'''' Kg5'' 81. Ke5'''' Ng4+' 82. Kd4'''' Nf4'' 83. Ne4+''' Kg6'' 84. Ra6+''' Kf5'' 85. Ra5+' Ke6'' 86. Nc5+''' Ke7'' 87. Ra7+''' Kf6'' 88. Ke4'''' Kg5'' 89. Ra5'''' Nh5'' 90. Ne6+''' Kg6'' 91. Rb5'''' Kf7'' 92. Nc5'''' Ke7'' 93. Rb2'''' Kd6'' 94. Nb7+''' Ke7'' 95. Ra2'' Ng7'' 96. Re2'''' Kd7'' 97. Rg2'''' Ne8'' 98. Kf4'''' Ngf6'' 99. Ke5'''' Ke7'' 100. Re2'''' Kd7'' 101. Na5'' Ng4+' 102. Kf5'''' Nh6+' 103. Kg6'''' Ng8'' 104. Nc4'' Nc7'' 105. Kf7'''' Nh6+' 106. Kf6'' Ng8+' 107. Ke5'''' Ne7'' 108. Rd2+''' Kc6'' 109. Rc2'''' Na6'' 110. Ne3+''' Kd7'' 111. Rd2+''' Kc6'' 112. Rd6+' Kb5'' 113. Rh6'''' Nc8'' 114. Kd4' Nb4'' 115. Rh5+' Kc6'' 116. Nc4'' Ne7'' 117. Rh6+' Kc7'' 118. Rh7'' Kd7'' 119. Ke5'''' Nbd5'' 120. Nd6' Kc6'' 121. Ne4'''' Ng6+' 122. Kf5'''' Nf8'' 123. Rh6+''' Kc7'' 124. Rh1'''' Nd7'' 125. Rb1'' Nb8'' 126. Ke5'' Ne3'' 127. Kd4'' Nf5+' 128. Kd5'' Ne3+' 129. Kc5'''' Nd7+' 130. Kd4'''' Ng4'' 131. Rc1+''' Kd8'' 132. Re1'''' Ngf6'' 133. Ng5' Kc7'' 134. Nf7'' Nf8'' 135. Rf1'' Ng4'' 136. Rg1'' Nf6'' 137. Re1'' Kd7'' 138. Ke5'''' Ne8'' 139. Nh8'''' Ke7'' 140. Kd5+' Kd7'' 141. Rf1'' Nc7+' 142. Ke5'''' Nfe6'' 143. Ng6'' Nc5'' 144. Rb1'' Kc6'' 145. Ne7+''' Kd7° 146. Nf5'' Kc6'' 147. Nd4+' Kd7° 148. Rd1'' N7a6'' 149. Nf5+' Kc6'' 150. Rh1'' Nb4'' 151. Rh6+' Kd7'' 152. Kd4'' Ne6+' 153. Kc4'''' Na6'' 154. Rh7+' Kc6'' 155. Rh1'' Nac7'' 156. Rd1'''' Ne8'' 157. Ne7+''' Kc7'' 158. Kd5'''' Nf8'' 159. Ng8'' Kd7'' 160. Kc5+' Ke6'' 161. Re1+''' Kd7'' 162. Re7+' Kd8'' 163. Ra7'' Nd7+' 164. Kc6'''' Ne5+' 165. Kd5'' Ng6'' 166. Rh7'' Nc7+' 167. Kc6'' Ne5+' 168. Kd6'' Nc4+' 169. Kc5'''' Ne5'' 170. Rh5'' Nf7'' 171. Kc6'' Ne6'' 172. Ra5'' Ke8'' 173. Nf6+' Ke7'' 174. Nd5+''' Kf8'' 175. Kd7'' Nd4'' 176. Nf4'' Nh6'' 177. Rd5'' Ndf5'' 178. Ke6'''' Ng7+' 179. Kf6'''' Ng8+' 180. Ke5'' Nh6'' 181. Ra5'' Ng4+' 182. Kd4' Kf7'' 183. Ra7+''' Kf6'' 184. Ke4'''' Ne8'' 185. Ra6+''' Kg7'' 186. Rb6' Ngf6+' 187. Kf5'''' Nd7'' 188. Ne6+''' Kf7'' 189. Ng5+''' Kf8'' 190. Ra6'''' Ng7+' 191. Kg6'''' Ne5+' 192. Kh7'' Ne8'' 193. Re6'''' Nf7'' 194. Nf3'' Nfd6'' 195. Kg6'' Nf5'' 196. Re1'' Ne7+' 197. Kg5'''' Kf7'' 198. Ne5+''' Kg7'' 199. Ng4'' Kf8'' 200. Nh6'' Nd5'' 201. Nf5'' Kf7'' 202. Re2' Nb6'' 203. Re7+' Kf8'' 204. Re1'' Nd5'' 205. Re5'' **{and here SM+ and SC+ must diverge}** Nec7'' 206. Nd6'' Nb4'' 207. Re4' Nba6'' 208. Kf5'' Nc5'' 209. Re2'' N5e6'' 210. Rd2' Nc5'' 211. Nc4'' N7e6'' 212. Rd5'' Kf7'' 213. Ne5+' Ke7'' 214. Nc6+' Kf7'' 215. Rd1'' Ng7+' 216. Ke5'''' Nh5'' 217. Rd6'' Ke8'' 218. Rh6' Ng7'' 219. Kf6'' Nge6'' 220. Rh7'' Nd7+' 221. Kf5'''' Nec5'' 222. Re7+' Kf8° 223. Re2'' Nb6'' 224. Ke5'' Na6'' 225. Re1'' Nc4+' 226. Kd4'' Nb6'' 227. Rb1'' Nd7'' 228. Kd5'' Nf6+' 229. Ke5' Ng4+' 230. Kd6'' Nf6'' 231. Rf1'' Kg7'' 232. Re1'' Kg6'' 233. Ne5+' Kf5'' 234. Rf1+''' Kg5'' 235. Nd3'' Ne8+' 236. Ke5'' Kg6'' 237. Nf4+' Kf7'' 238. Nd5+' Kg7'' 239. Rc1'' Kf7'' 240. Rc8'' Ng7'' 241. Rc6'' Nb8'' 242. Rc7+' Kg6'' 243. Ne7+' Kh5'' 244. Rb7'' Na6'' 245. Nd5'' Ne8'' 246. Re7'' Nc5'' 247. Rxe8'' **{KRNN: dtc/m/z = -8/-15/-8m}** Kg4'' 248. Ra8' Nd3+' 249. Kd4'' Nf2'' 250. Ra3'' Nh3'' 251. Ke5'' Ng5'' 252. Nf6+' Kh4'' 253.

Ne4' Nxe4'' 254. Kxe4'' {**KRK: dtx = -8m**} Kg4' 255. Ke5'' Kg5'' 256. Rg3+'' Kh4'' 257. Rg1' Kh3' 258. Kf4''  
Kh2'' 259. Rg3'' Kh1° 260. Kf3' Kh2° 261. Kf2'' Kh1° 262. Rh3#'' {**Lomonosov DTM and Stiller DTC EGTs**} \*

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 [Black "KNN"]  
 [Result "1-0"]  
 [Date "2013.09.30"]  
 [Event "6m, 3-3m, KRPKNN, GBR 0106.10, maxDTM s7m\_P-ful w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/1P1k4/2R5/n7/1n6/K7/8/8 w - - 0 1"]  
 [PlyCount "505"]

**{the one maxDTM s7m\_P-ful wtm win: dtc/m/z = 1/253/1m}** 1. b8=N+''' {KRKNN: dtc/m/z = -233/-252/-233m} Kd8'' 2. Rc3'''' Nd5'' 3. Rc5'''' Nb6'' 4. Kb4'''' Nb7'' 5. Rc1'''' Nd5+'' 6. Kb5'''' Ne3'' 7. Kc6'''' Na5+'' 8. Kb6'''' Nb3'' 9. Rb1'''' Nd4'' 10. Kc5'''' Ndf5'' 11. Rb7'''' Kc8'' 12. Rb4'''' Nc2'' 13. Rb1'' Nce3'' 14. Kc6'''' Kd8'' 15. Rb7'''' Kc8'' 16. Rb4'' Ne7+'' 17. Kd6'''' N7f5+'' 18. Ke5'' Kc7'' 19. Rb3'''' Nd6'' 20. Kd4'''' Ng2'' 21. Na6+'''' Kd7'' 22. Nc5+'''' Ke7'' 23. Rb4'' Nf4'' 24. Ke5'''' Ne2'' 25. Na4'''' Nf7+'' 26. Kd5'''' Kf6'' 27. Re4'''' Ng3'' 28. Rf4+'''' Nf5'' 29. Nc5'''' Kg5'' 30. Ne6+'''' Kg6'' 31. Nf8+'''' Kf6'' 32. Rf2'''' N7h6'' 33. Ke4'''' Ke7'' 34. Ng6+'' Ke6'' 35. Nf4+'' Kf6'' 36. Nd3'' Ke6'' 37. Nc5+'' Kd6'' 38. Nb7+'' Kc7'' 39. Na5'''' Nd6+'' 40. Kd5'''' Ng4'' 41. Rd2'''' Ne3+'' 42. Kd4'''' Ng4'' 43. Rg2'' Kb6'' 44. Nb3'''' Nb5+'' 45. Ke4'''' Nd6+'' 46. Kf4'' Nh6'' 47. Rc2'''' Nb5'' 48. Rc1'''' Nf7'' 49. Nd2'''' Nc7'' 50. Nc4+'''' Kb5'' 51. Ke4'' Ng5+'' 52. Kf5'' Nge6'' 53. Nd6+'' Kb6'' 54. Nc8+'' Kb5'' 55. Ke5'''' Nc5'' 56. Rg1' Nb3'' 57. Rg7'''' Na6'' 58. Rb7+'''' Kc4'' 59. Nd6+'''' Kc3'' 60. Rg7'' Na5'' 61. Rg4'''' Nc6+'' 62. Ke4'''' Na5'' 63. Ke3'' Nb4'' 64. Nb5+'''' Kb3'' 65. Nd4+'''' Ka4'' 66. Rh4'''' Nc4+'' 67. Ke4'''' Nd6+'' 68. Ke5'''' Nc4+'' 69. Ke6'' Na3'' 70. Rh8'' Nbc2'' 71. Nf5'''' Kb5'' 72. Kd5'''' Nb4+'' 73. Ke4'''' Nc4'' 74. Nd4+'''' Kb6'' 75. Rh6+'''' Kc5'' 76. Rh5+'' Kd6'' 77. Nf5+'''' Kd7'' 78. Rh7+'''' Kc6'' 79. Kd4'''' Kb5'' 80. Rh5'''' Na5'' 81. Nd6+'''' Kb6'' 82. Rg5'''' Kc7'' 83. Nf5'''' Kd7'' 84. Rg2'''' Ke6'' 85. Ng7+'''' Kd7'' 86. Rh2'' Nb7'' 87. Rd2'''' Ke7'' 88. Rb2'''' Nd8'' 89. Kc4'''' Nbc6'' 90. Kd5'''' Kd7'' 91. Rd2'''' Ke7'' 92. Nh5'' Nb4+'' 93. Kc5'''' Na6+'' 94. Kb6'''' Nb8'' 95. Nf4'' Nf7'' 96. Kc7'''' Na6+'' 97. Kc6'' Nb8+'' 98. Kd5'''' Nd7'' 99. Re2+'''' Kf6'' 100. Rf2'''' Nh6'' 101. Nd3+'''' Ke7'' 102. Re2+'''' Kf6'' 103. Re6+'' Kg5'' 104. Ra6'''' Nf8'' 105. Ra5'' Ng4'' 106. Ke4+'''' Kf6'' 107. Nf4'' Nd7'' 108. Ra6+'' Kf7'' 109. Ra7'' Ke7'' 110. Kd5'''' Nge5'' 111. Ne6' Kf6'' 112. Nd4'''' Nb6+'' 113. Kc5'''' Nc8'' 114. Ra6+'''' Kf7'' 115. Ra1'''' Ne7'' 116. Rg1'' Ng8'' 117. Kd5'' Nd3'' 118. Ke4'' Nc5+'' 119. Ke5'' Nd3+'' 120. Kf5'''' Ne7+'' 121. Ke4'''' Nb4'' 122. Rf1+'''' Ke8'' 123. Rd1'''' Nbc6'' 124. Ne6' Kf7'' 125. Nc7'' Nc8'' 126. Rc1'' Nb4'' 127. Rb1'' Nc6'' 128. Rd1'' Ke7'' 129. Kd5'''' Nd8'' 130. Na8'''' Kd7'' 131. Ke5+'' Ke7'' 132. Rc1'' Nf7+'' 133. Kd5'''' Ncd6'' 134. Nb6'' Nf5'' 135. Rg1'' Kf6'' 136. Nd7+'''' Ke7° 137. Nc5'' Kf6'' 138. Ne4+'' Ke7° 139. Re1'' N7h6'' 140. Nc5+'' Kf6'' 141. Ra1'' Ng4'' 142. Ra6+'' Ke7'' 143. Ke4'' Nd6+'' 144. Kf4'''' Nh6'' 145. Ra7+'' Kf6'' 146. Ra1'' Nhf7'' 147. Re1'''' Nd8'' 148. Nd7+'''' Kf7'' 149. Ke5'''' Nc8'' 150. Nb8'' Ke7'' 151. Kf5+'' Kf7'' 152. Rd1'' Ne7+'' 153. Ke5'''' Ng6+'' 154. Kd6'' Ne6'' 155. Nd7'' Nef4'' 156. Rh1'' Ne6'' 157. Rf1+'' Nef4'' 158. Rf2'' Kg8'' 159. Nf6+'' Kg7'' 160. Ne4'' Nd3'' 161. Ra2' Nh4'' 162. Rd2'' Nf4'' 163. Rf2'' Nhg6'' 164. Rh2'' Nf8'' 165. Ra2'' N8g6'' 166. Ra4' Kh7'' 167. Nf2' Kh6'' 168. Ra5'''' Kg7'' 169. Ng4'' Nh4'' 170. Ke5'' Nfg6+'' 171. Kd5'' Nf5'' 172. Ra6'' Kf7'' 173. Rb6'' Nfe7+'' 174. Kc5'' Nf8'' 175. Rf6+'' Kg7'' 176. Rf2'' Neg6'' 177. Kd6'' Nh8'' 178. Ne5'' Nhg6'' 179. Rg2'' Kh6'' 180. Ng4+'' Kg5'' 181. Ne3+'''' Kf4'' 182. Nd5+'''' Kf3'' 183. Rg1' Kf2'' 184. Rc1' Kf3'' 185. Rf1+'' Kg3'' 186. Rf7'' Kh3'' 187. Nf6'' Kg3'' 188. Ng8'' Kg4'' 189. Kd5'' Kg3'' 190. Rf5'' Nh7'' 191. Ke4'' Kg4'' 192. Nh6+'' Kh4'' 193. Ra5'' Ne7'' 194. Kf4'' Nf6'' 195. Nf7'' Nfd5+'' 196. Kf3'' Kh5'' 197. Ra6'' Ng8'' 198. Ke4'''' Nge7'' 199. Ke5'' Kg4'' 200. Ra4+'' Kf3'' 201. Ng5+'' Ke2'' 202. Ra3'' Nb4'' 203. Ke4'' Kd2'' 204. Nf3+'' Kc1'' 205. Ne5'' Kb2'' 206. Nc4+'' Kc2'' 207. Rf3'' Nbc6'' 208. Rh3'' Nb4'' 209. Na3+'' Kd2'' 210. Nb5'' Nec6'' 211. Rh2+'' Kc1'' 212. Nd6'' Kd1'' 213. Nf5'' Kc1'' 214. Nh4'' Kb1'' 215. Ng6'' Kc1'' 216. Nf4'' Kd1'' 217. Rb2'' Kc1'' 218. Rf2'' Kd1'' 219. Ke3'' Kc1'' 220. Nd3+'' Nxd3'' 221. Kxd3'''' {KRKN: dtc/m/z = -22/-32/-22m} Nb4+'' 222. Kc3'''' Nd5+'' 223. Kc4'' Nb6+'' 224. Kd3'' Na4'' 225. Rc2+'''' Kd1'' 226. Rc6'' Nb2+'' 227. Kc3'' Kc1'' 228. Rc7'' Nd1+'' 229. Kd3+'''' Kb1'' 230. Kd2'' Nb2'' 231. Rd7'' Nc4+'' 232. Kc3'''' Ne3'' 233. Rd3'' Nf5'' 234. Rf3'' Nd6'' 235. Re3'' Nf5'' 236. Re2'' Nd6'' 237. Kb3'' Kc1'' 238. Re5'' Nf7'' 239. Rd5'' Nh8'' 240. Kc3'' Kb1'' 241. Rb5+'' Ka2'' 242. Rb2+'' Ka3'' 243. Rb8'' Ka4'' 244. Rxb8'' {KRK: dtx = -9m} Kb5'' 245. Rc8'' Kb6'' 246. Rc4'' Kb5'' 247. Kb3'' Ka5'' 248. Rb4'' Ka6° 249. Ka4'' Ka7° 250. Ka5'' Ka8° 251. Kb6'' Kb8° 252. Rc4'' Ka8° 253. Rc8#'' {Nalimov and Lomonosov DTM EGTs} \*

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 [Black "KNN"]  
 [Result "1-0"]  
 [Date "2013.11.02"]  
 [Event "6m, 3-3m, KRPKNN, GBR 0106.10, maxDTM 3-3m\_P-ful btm loss: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
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 [PlyCount "502"]

**{1 of 30 maxDTM 3-3m\_P-ful btm losses: dtc/m = -2/-251m} 1... Ne8"**

2. Ra6+''' Kb4'' 3. g8=N''' {**KRNKNN: dtc/m/z = -230/-249/-230m**} Kc5'' 4. Ne7''' Kb5'' 5. Rh6''' Nhf6+'' 6. Kf5''' Kc5'' 7. Rh2''' Nd5'' 8. Rc2+''' Kd6'' 9. Nc8+''' Kd7° 10. Ke5''' Nec7'' 11. Na7''' Ne3'' 12. Rd2+''' Ncd5'' 13. Rd3''' Kc7'' 14. Rb3''' Kd7'' 15. Rb1' Nc7'' 16. Rb4''' Ne8'' 17. Rd4+'' Kc7'' 18. Nb5+''' Kc6'' 19. Nc3''' Kc5'' 20. Na4+'' Kc6'' 21. Rb4''' Nd6'' 22. Rb6+''' Kc7'' 23. Rb1'' Kd7'' 24. Nc5+'' Kc6'' 25. Rc1''' Nf7+'' 26. Ke4'' Nc4'' 27. Kd4''' Nce5'' 28. Rf1''' Nd6'' 29. Na6'' Ng6'' 30. Rf6''' Ne7'' 31. Ke5''' Nec8'' 32. Rg6''' Kb5'' 33. Nc7+'' Kc5'' 34. Ne6+'' Kc6'' 35. Nf4'' Kc5'' 36. Nd3+''' Kc4'' 37. Nb2+'' Kb3'' 38. Nd1''' Nc4+'' 39. Kd4''' Ne7'' 40. Rg4''' Nf5+'' 41. Ke4''' Ne7'' 42. Rg7'' Kc2'' 43. Nf2''' Nd2+'' 44. Ke5''' Nc4+'' 45. Ke6'' Nc8'' 46. Rg3''' Nd2'' 47. Rh3''' Nb6'' 48. Ng4''' Nb3'' 49. Ne3+''' Kd2'' 50. Ke5'' Nd7+'' 51. Kd6'' Ndc5'' 52. Nc4+'' Kc2'' 53. Na3+'' Kd2'' 54. Kd5''' Nd3'' 55. Rh7' Nf2'' 56. Rb7''' Nc1'' 57. Rb2+''' Ke3'' 58. Nc4+''' Kf3'' 59. Rb7'' Nd1'' 60. Re7''' Nc3+'' 61. Ke5''' Nd1'' 62. Kf5'' Ne2'' 63. Nd2+''' Kf2'' 64. Ne4+''' Ke1'' 65. Re8''' Ne3+'' 66. Ke5''' Ng4+'' 67. Kd5' Ne3+'' 68. Kc5''' Nf1'' 69. Ra8'' Neg3'' 70. Nd6''' Kd2'' 71. Kd4''' Ne2+'' 72. Ke5''' Ne3'' 73. Ne4+''' Kc2'' 74. Rc8+''' Kd3'' 75. Rd8+'' Kc4'' 76. Nd6+''' Kb4'' 77. Rb8+''' Kc3'' 78. Ke4''' Kd2'' 79. Rd8''' Nd1'' 80. Nc4+''' Kc2'' 81. Rd7''' Kb3'' 82. Nd6+''' Kb4'' 83. Rg7''' Kc5'' 84. Nb7+''' Kb4'' 85. Rg8'' Nb2'' 86. Rg4''' Kb5'' 87. Rg2''' Na4'' 88. Ke3''' Nec3'' 89. Kd4''' Kb4'' 90. Rg4''' Kb5'' 91. Nd8'' Ne2+'' 92. Kd3''' Nc1+'' 93. Kc2''' Na2'' 94. Ne6'' Nb6'' 95. Kb3''' Nc1+'' 96. Kc3'' Na2+'' 97. Kd4'' Nb4'' 98. Rg5+''' Kc6'' 99. Rg6''' Nc2+'' 100. Kc3'' Ne3'' 101. Nd4+''' Kd7'' 102. Nb5''' Ned5+'' 103. Kd4''' Nc8'' 104. Rh6''' Nb4'' 105. Rh7+'' Ke6'' 106. Nc7+''' Kd6'' 107. Kc4'' Nc6'' 108. Ne8+''' Ke5'' 109. Rh5+''' Kf4'' 110. Kd5''' Nb4+'' 111. Kc5'' Nd3+'' 112. Kd4''' Nb4'' 113. Rh4+'' Kf5'' 114. Rh6'' Nc2+'' 115. Kc5''' Ne3'' 116. Ng7+''' Kg5'' 117. Re6''' Ng2'' 118. Re2''' Nh4'' 119. Kd5''' Nb6+'' 120. Kc6''' Na4'' 121. Ne6+''' Kf6'' 122. Nd4''' Nc3'' 123. Re3''' Nd1'' 124. Re1''' Nc3'' 125. Kc5''' Ng2'' 126. Re8''' Nf4'' 127. Kd6''' Kg5'' 128. Re3'' Nfd5'' 129. Rf3''' Kg4'' 130. Rf8'' Ne3'' 131. Rc8' Ne4+'' 132. Ke5''' Ng5'' 133. Rg8''' Kh4'' 134. Rg6'' Kh5'' 135. Rg7'' Kh4'' 136. Kf4'' Nd5+'' 137. Kf5'' Ne3+'' 138. Kg6'' Nd5'' 139. Rd7''' Ne3'' 140. Re7'' Nf1'' 141. Kf6'' Ng3'' 142. Ke5''' Kg4'' 143. Rg7''' N3e4'' 144. Ne6'' Kh4'' 145. Nd8'' Ng3'' 146. Rg6'' Nf1'' 147. Kf4'' Nh3+'' 148. Kf5'' Ng3+'' 149. Ke5'' Ng5'' 150. Rf6'' Ne2'' 151. Rf8'' Nh3'' 152. Rg8'' Ng5'' 153. Nb7'' Nf3+'' 154. Kd5'' Nh2'' 155. Nc5'' Ng4'' 156. Rf8''' Nc3+'' 157. Kd4'' Ne2+'' 158. Kd3'' Ng1'' 159. Ke4'' Nh3'' 160. Rb8'' Kg5'' 161. Rg8+'' Kf6'' 162. Rd8'' Kg5'' 163. Rd5+'' Kh4'' 164. Rd6'' Ng5+'' 165. Kf4'' Nh3+'' 166. Kf5'' Ne3+'' 167. Ke4''' Ng2'' 168. Rd7'' Ngf4'' 169. Rb7'' Kg5'' 170. Nd7'' Nh5'' 171. Rb6'' Kh4'' 172. Ne5'' Ng5+'' 173. Ke3'' Ng7'' 174. Rb4+'' Kh5'' 175. Rb1'' Kh4'' 176. Rh1+'' Kg3'' 177. Rg1+'' Kh4'' 178. Rg4+'' Kh5'' 179. Rg2'' Kh4'' 180. Nd7'' Nh5'' 181. Rh2+'' Nh3'' 182. Kf3'' N5f4'' 183. Ne5'' Kg5'' 184. Ke4''' Kh4'' 185. Ra2'' Nh5'' 186. Ra4'' Kg5'' 187. Nd3'' Kf6'' 188. Ra6+''' Kg5'' 189. Rb6'' Ng1'' 190. Rb5+'' Kh4'' 191. Nf2'' Ne2'' 192. Re5'' Ng7'' 193. Nd1'' Ng3+'' 194. Kf4'' N7f5'' 195. Nf2'' Nh6'' 196. Ra5'' Nh5+'' 197. Kf3'' Nf6'' 198. Nd3'' Nf7'' 199. Kf4'' Nh5+'' 200. Kf5'' Ng3+'' 201. Kg6'' Nd6'' 202. Ra4+''' Kh3'' 203. Kg5'' Nf7+'' 204. Kf6'' Nd6'' 205. Rb4'' Nde4+'' 206. Ke5''' Kg2'' 207. Kf4'' Nc3'' 208. Rc4' Nd5+'' 209. Ke5''' Ne3'' 210. Rf4'' Nd1'' 211. Ne1+'' Kg1'' 212. Rf3'' Nh1'' 213. Rf8'' Nhf2'' 214. Kf4'' Kf1'' 215. Re8''' Nc3'' 216. Kf3'' Nce4'' 217. Nc2''' Ng5+'' 218. Kg3'' Nge4+'' 219. Kf4'' Ke2'' 220. Na3'' Kd2'' 221. Kf3'' Kc3'' 222. Rd8'' Kb3'' 223. Nb5'' Kc4'' 224. Nd4'' Kb4'' 225. Nc6+'' Kc4'' 226. Ne5+'' Kc3'' 227. Ke3'' Kc2'' 228. Rf8' Kc1'' 229. Nf3' Kc2'' 230. Rf4'' Kc1'' 231. Nd4'' Kb1'' 232. Nf5' Ka1'' 233. Ng3'' Nxcg3'' 234. Rxf2' {**KRKN: dtc/m/z = -6/-18/-6m**} Kb1'' 235. Kf4'' Nh5+'' 236. Ke5'' Ng7'' 237. Rh2'' Ne8'' 238. Rh7'' Kc1'' 239. Re7'' Nf6'' 240. Kxf6'' {**KRK: dtx = -12m**} Kc2'' 241. Re4'' Kb2'' 242. Rd4'' Kc2'' 243. Ke6'' Kb2'' 244. Rc4'' Ka2'' 245. Kd6'' Kb2'' 246. Kc5'' Kb3'' 247. Kb5'' Ka3'' 248. Rb4'' Ka2° 249. Ka4'' Ka1° 250. Kb3'' Kb1° 251. Rc4'' Ka1° 252. Rc1#'' {**Nalimov and Lomonosov DTM EGTs**} \*

## 6-man: 4-2m

[White "KRBN"]

[Black "KQ"]

[Result "1-0"]

[Date "2013.10.24"]

[Event "6m, 4-2m, KRBNKQ, GBR 3111.00, maxDTM 4-2m\_P-less w&l: SV+M/SV+M+"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "R3B3/8/8/1N6/8/3K4/8/1k4q1 w - - 0 1"]

[PlyCount "241"]

{1 of 4 maxDTM 4-2m\_P-less wtm wins: dtc/m/z = 99/121/99m} 1. Na3+'''

{1 of 6 maxDTM 4-2m\_P-less btm losses: dtc/m/z = -98/-120/-98m} Kc1'' 2. Rc8+''' Kb2'' 3. Nc4+''' Kb3'' 4. Rb8+''' Ka2'' 5. Ra8+''' Kb1'' 6. Nd2+'' Kb2'' 7. Rb8+'' Ka2'' 8. Bf7+'' Ka3'' 9. Nc4+''' Ka2'' 10. Rb5'' Qf1+'' 11. Kc2''' Qb1+'' 12. Kc3''' Qc1+'' 13. Kb4'' Qe1+'' 14. Ka4''' Qf1'' 15. Bd5''' Qd1+'' 16. Kb4''' Qe1+'' 17. Kc5'' Qg1+'' 18. Kc6'' Qg6+'' 19. Kb7'' Qg7+'' 20. Ka6'' Qg6+'' 21. Ka5'' Ka1'' 22. Rb3''' Qg5'' 23. Ne3''' Qd8+'' 24. Kb5' Qb8+'' 25. Kc4'' Qc7+'' 26. Kd3'' Qg3'' 27. Ke4'' Qh4+'' 28. Kf5'' Qh3+'' 29. Kf6'' Qh6+'' 30. Kf7' Qh2' 31. Ke6'' Qc7'' 32. Nc4'' Qf4'' 33. Rf3'' Qh4'' 34. Ke5'' Qh8+'' 35. Ke4'' Ka2'' 36. Bc6'' Qd8'' 37. Ke5'' Qc7+'' 38. Kd5''' Kb1'' 39. Re3'' Qf7+'' 40. Kc5'' Qf8+'' 41. Kb5'' Kc2'' 42. Be4+'' Kd1'' 43. Bg6'' Qg8'' 44. Bh5+''' Kc1'' 45. Bf3''' Kc2'' 46. Be4+''' Kd1'' 47. Bc6''' Qb8+'' 48. Ka4'' Qc8'' 49. Bf3+'' Kc2'' 50. Be4+''' Kd1'' 51. Bd3''' Qb7'' 52. Re4' Qa7+'' 53. Kb4' Qb8+'' 54. Kc3'' Qg3'' 55. Re3' Qg7+'' 56. Re5'' Qg3'' 57. Kb4'' Kc1'' 58. Bh7'' Qf2'' 59. Bf5'' Qg3'' 60. Re8'' Qf2'' 61. Bd7'' Kc2'' 62. Bc6'' Qf4'' 63. Rd8'' Kc1'' 64. Ba4'' Qf3' 65. Re8'' Qf2'' 66. Re3'' Kb1'' 67. Bc6'' Qf8+'' 68. Kc3'' Qh8+'' 69. Ne5'' Qc8'' 70. Re1+'' Ka2° 71. Re2+'' Ka1' 72. Re4'' Qc7'' 73. Kc2'' Qh7'' 74. Nd3'' Qh2+'' 75. Kc3'' Qh8+'' 76. Kb3'' Qb8+'' 77. Rb4'' Qh2'' 78. Rc4'' Qa2+'' 79. Kb4'' Qd2+'' 80. Rc3''' Ka2'' 81. Bd5+'' Ka1'' 82. Bf3'' Kb1'' 83. Be4'' Ka1'' 84. Kc4'' Qa2+'' 85. Kb5'' Qg8'' 86. Ka4'' Qe8+'' 87. Kb3'' Qg8+'' 88. Rc4'' Qf7' 89. Nb4'' Qe6'' 90. Bd5'' Qe3+'' 91. Rc3'' Qh6'' 92. Bc4'' Qh1' 93. Ka3'' Qa8+'' 94. Ba6'' Qh1'' 95. Nd3' Kb1'' 96. Bb7'' Qg1' 97. Nc5'' Qc1+'' 98. Rxc1+'' Kxc1° {KBNK: dtx = 23m} 99. Be4' Kd1' 100. Ne6' Kd2' 101. Kb3' Ke3'' 102. Bc2' Kf3' 103. Bf5' Ke3' 104. Kc2'' Ke2'' 105. Bg6'' Ke3'' 106. Kd1'' Kf2'' 107. Kd2'' Kf3'' 108. Kd3'' Kg3' 109. Bh5'' Kh3' 110. Bf3' Kg3' 111. Ke3' Kh3' 112. Nd4' Kh4'' 113. Kf4'' Kh3° 114. Nc2'' Kh2' 115. Kg4'' Kg1° 116. Kg3'' Kf1° 117. Bg4'' Kg1° 118. Ne3' Kh1° 119. Kf2'' Kh2° 120. Nf1+'' Kh1° 121. Bf3#'' {Nalimov and Lomonosov DTM EGTs} \*

[White "KRRN"]  
[Black "KQ"]  
[Result "1-0"]  
[Date "2013.11.14"]  
[Event "6m, 4-2m, KRRNKQ, GBR 3201.00, maxDTC/Z/Z<sub>50</sub>' 4-2m\_P-less l&w: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "5R1N/8/7R/4q3/8/8/7k/2K5 b - - 0 1"]  
[PlyCount "202"]

**{1 of 2 maxDTC/Z 4-2m\_P-less btm loss: dtc/m/z/z<sub>50</sub>' = -101/-108/-101/-101m} 1... Kg3''**  
**{1 of 5 maxDTC/Z 4-2m\_P-less wtm win: dtc/m/z/z<sub>50</sub>' = 101/108/101/101m} 2. Rg6+'''' Kh4'' 3. Rgf6'''' Qe3+' 4. Kd1'''' Qd3+' 5. Ke1'' Qe3+' 6. Kf1'' Qd3+' 7. Kf2'' Qd2+' 8. Kf3'' Qd3+' 9. Kf4'' Qd4+' 10. Kf5'' Qg4+' 11. Ke5° Qe2+' 12. Kd6' Qa6+' 13. Kd7' Qb7+' 14. Ke8'' Qe4+' 15. Kf7'' Qh7+' 16. Ke6'' Qe4+' 17. Kd6'' Qb4+' 18. Kc7'' Qe7+' 19. Kc8'' Qc5+' 20. Kd7'' Qb5+' 21. Rc6'' Qb7+' 22. Kd6'''' Qb4+' 23. Rc5' Qb6+' 24. Kd5'' Qb7+' 25. Kc4'' Qe4+' 26. Kb5'' Qd3+' 27. Rc4+' Kg3'' 28. Rfc8'' Kf3'' 29. Kc5'' Kf2'' 30. Kb4'' Qd2+' 31. Kb3' Qd5'' 32. Ka4'' Qd1+' 33. Ka3'' Qd6+' 34. R4c5'' Qa6+' 35. Kb4'' Qb7+' 36. Kc3'' Qe4'' 37. R5c6'' Qe3+' 38. Kb4'' Qe4+' 39. Ka5'' Qe1+' 40. Ka6'' Qe2+' 41. Ka7'' Qe3+' 42. Rc5'' Qe6'' 43. Rc2+' Kf1'' 44. R2c6'' Qe3+' 45. Ka6'' Qe2+' 46. Rc4'' Qd3'' 47. Kb6'' Qe3+' 48. Kc6'' Qe6+' 49. Kb7'' Qd7+' 50. Kb6'' Qe6+' 51. Ka5'' Qe1+' 52. Ka6'' Qe2'' 53. Kb7'' Qe5'' 54. Rc1+' Kg2'' 55. R1c5'' Qe7+' 56. Ka8'' Qe4+' 57. Ka7'' Qd4'' 58. Kb6'' Qd6+' 59. Kb5'' Qe7'' 60. Rc2+' Kg1' 61. Ka4'' Qd7+' 62. Ka3' Qd6+' 63. Ka2' Qb6'' 64. Ka1'' Qb5'' 65. Rg8+' Kh1' 66. Ra8'' Qf1+' 67. Ka2'''' Qf5' 68. Rac8'' Qb5'' 69. R8c4'' Qb6'' 70. Ka1'' Qa6+' 71. Kb1'' Qb5+' 72. Kc1'' Qa6'' 73. Nf7'' Qa1+' 74. Kd2° Qf6'' 75. Rc7'''' Qd4+' 76. Ke2'' Qe4+' 77. Kd1'' Qf4'' 78. R2c4'' Qe3'' 79. Kc2'' Kg1'' 80. Rd7'' Qe2+' 81. Kb3'' Qe3+' 82. Ka4'' Qe2' 83. Nd6'' Qd1+' 84. Kb4'' Qd2+' 85. Kc5'' Qg5+' 86. Kc6'' Qg2+' 87. Ne4'' Qg8'' 88. Kb5'' Qe8' 89. Nc5'' Qb8+' 90. Ka4'' Qa8+' 91. Kb4' Qb8+' 92. Ka3'' **{and here, SC<sup>+</sup> and SM<sup>+</sup> diverge}** Kf2' 93. Rd2+' Ke3' 94. Rd3+' Kf2' 95. Rc2+' Ke1'' 96. Nb3' Qa7+' 97. Kb2'' Qh7' 98. Rdd2'' Qg7+' 99. Nd4' Qg3'' 100. Re2+' Kf1'' 101. Rc1+' Qe1° 102. Rcxel#'' **{JT's MB 'Nalimov' DTC and Lomonosov DTM EGTs} \*****



[White "KRRP"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2014.02.26"]  
 [Event "6m, 4-2m, KRRPKQ, GBR 3200.10, maxDTC s7m l&w: SV+C/SV+C"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "7q/7k/8/6R1/8/8/K1P2R2/8 b - - 0 1"]  
 [PlyCount "486"]

{1 of 4 maxDTC s7m btm losses: dtc/m = -243/-253m} 1... Qa8+

{1 of 11 maxDTC s7m wtm wins: dtc/m = 243/253m} 2. Kb2 Qb7+ 3. Kc1 Qh1+ 4. Kd2 Qh4 5. Rfg2 Qd4+ 6. Ke2 Qe4+ 7. Kd1 Qf3+ 8. Kd2 Qf4+ 9. Kd3 Qf3+ 10. Kc4 Qc6+ 11. Kb4 Qe4+ 12. Kb3 Qb7+ 13. Kc3 Qc7+ 14. Kd3 Qd6+ 15. Ke2 Qa6+ 16. Kd2 Qd6+ 17. Ke1 Qb4+ 18. Kd1 Qd6+ 19. Rd2 Qf4 20. Rd7+ Kh6 21. Rgd5 Qg4+ 22. Kd2 Qb4+ 23. Kd3 Qa3+ 24. Ke2 Qa4 25. R7d6+ Kh7 26. Rh5+ Kg8 27. Rg5 Kh7 28. Kd1 Qf4 29. Rh5+ Kg7 30. Rhd5 Qg4+ 31. Kd2 Qb4+ 32. Kd3 Qa3+ 33. Ke2 Qa4 34. Rd2 Qe4+ 35. Kf2 Qf4+ 36. Kg1 Qe3+ 37. Rf2 Qe1+ 38. Kg2 Qe4+ 39. Kf1 Qh1+ 40. Ke2 Qh5+ 41. Kd3 Qb5+ 42. Ke4 Qe8+ 43. Kd4 Qb8 44. Rdf6 Qb4+ 45. Kd5 Qa5+ 46. Ke4 Qa8+ 47. Kf5 Qh1 48. Rg6+ Kh7 49. Rg4 Kh6 50. Rgf4 Qd5+ 51. Kg4 Qh5+ 52. Kg3 Qe5 53. Kf3 Qh5+ 54. Ke4 Qe8+ 55. Kd3 Qb5+ 56. Rc4 Qd5+ 57. Rd4 Qb5+ 58. Ke4 Qe8+ 59. Kf3 Qc6+ 60. Ke3 Qc3+ 61. Rd3 Qc5+ 62. Kf3 Qc6+ 63. Kg3 Qe4 64. Rfd2 Qe5+ 65. Kg2 Qg7+ 66. Kf3 Qf7+ 67. Ke4 Qb7+ 68. Rd5 Qc6 69. Kf3 Qc3+ 70. Kf2 Kh7 71. Re2 Qc4 72. Rh5+ Kg7 73. Rhe5 Qf4+ 74. Kg1 Qd4+ 75. R5e3 Kh6 76. Kf1 Qh4 77. Rf2 Qc4+ 78. Rd3 Kg5 79. Re2 Qb4 80. Re5+ Kf6 81. Re1 Kg5 82. Rg3+ Kh4 83. Rge3 Qb2 84. R1e2 Kh5 85. Ke1 Qc1+ 86. Kf2 Qh1 87. Rd3 Kh6 88. Re6+ Kg7 89. Re7+ Kg6 90. Ke2 Qh5+ 91. Kd2 Qa5+ 92. Kd1 Qa1+ 93. Ke2 Qa4 94. Rc3 Qg4+ 95. Kd3 Qd1+ 96. Kc4 Qf1+ 97. Kb4 Qb1+ 98. Kc5 Qa1 99. Ree3 Qa5+ 100. Kc4 Qa4+ 101. Kd3 Qb5+ 102. Kd2 Qa5 103. Ke2 {and here, the line differs from SM+} Qh5+ 104. Rf3 Qh2+ 105. Ke1 Qg1+ 106. Rf1 Qg4 107. Rcf3 Qb4+ 108. Kd1 Qd4+ 109. Ke2 Kh5 110. Rf5+ Kh6 111. R1f4 Qd8 112. Rc4 Qe7+ 113. Kf3 Kg6 114. Rfc5 Qb7+ 115. Kf4 Qf7+ 116. Ke4 Qe7+ 117. Kd3 Qa7 118. Rc6+ Kf5 119. R4c5+ Kg4 120. Rg6+ Kf4 121. Rf6+ Kg4 122. Rff5 Qa3+ 123. Ke2 Qh3 124. Ra5 Qg2+ 125. Kd3 Qh3+ 126. Kd2 Qh6+ 127. Rg5+ Kf3 128. Rf5+ Ke4 Qe4 129. Kc1 Qh1+ 130. Kb2 Qh8+ 131. Re5+ Kf4 132. Rh5 Qd8 133. Ref5+ Kg3 134. Rfg5+ Kf3 135. Kc1 Qb6 136. Rf5+ Ke4 137. Re5+ Kf4 138. Rhf5+ Kg4 139. Rg5+ Kf4 140. Ref5+ Ke4 141. Rb5 Qh6 142. Kb1 Qh1+ 143. Ka2 Ke3 144. Rg3+ Kf4 145. Rc3 Qa8+ 146. Kb2 Qe4 147. Rd3 Qe7 148. Rd4+ Ke3 149. Rd1 Kf4 150. Rb6 Qg7+ 151. Kb1 Qg2 152. Rdd6 Ke3 153. Rg6 Qh1+ 154. Kb2 Qh8+ 155. Rgf6 Qg7 156. Kc3 Qc7+ 157. Kb3 Qg3 158. Rg6 Qh3 159. Rgc6 Qh1 160. c4 {KRRP(c4)KQ: dtc/m = -84/-94m} Qa1 161. Re6+ Kf4 162. Rf6+ Ke4 163. Rbe6+ Kd4 164. Rd6+ Ke5 165. Rfe6+ Kf4 166. Re2 Qa7 167. Rf2+ Kg3 168. Rfd2 Qb8+ 169. Ka4 Qc7 170. Kb5 Qb8+ 171. Rb6 Qe8+ 172. Kb4 Qe4 173. Rdd6 Qe1+ 174. Kb5 Qb1+ 175. Kc5 Qf5+ 176. Rd5 Qf2+ 177. Kc6 Qf6+ 178. Kb7 Qe7+ 179. Ka6 Qa3+ 180. Ra5 Qf8 181. Rc6 Qa8+ 182. Kb6 Qb8+ 183. Kc5 Kf4 184. Raa6 Ke3 185. Rd6 Qb7 186. Ra3+ Kf4 187. Rf6+ Kg4 188. Raa6 Qe7+ 189. Kd4 Qb4 190. Rg6+ Kh4 191. Rgc6 Kg3 192. Rab6 Qa5 193. Ke4 Qh5 194. Ra6 Kf2 195. Kd4 Ke2 196. Re6+ Kd1 197. c5 {KRRP(c5)KQ: dtc/m = -47/-57m} Kc2 198. Kc4 Qd1 199. Ra2+ Kb1 200. Rae2 Qa4+ 201. Kd5 Qd7+ 202. Ke5 Qd3 203. Re4 Ka2 204. c6 Qd8 205. Rd6 Qg5+ 206. Ke6 Qg6+ 207. Kd5 Qf5+ 208. Re5 Qf3+ 209. Ke6 Qg4+ 210. Rf5 Qe4+ 211. Kf6 Qh4+ 212. Kf7 Qh7+ 213. Ke6 Qg6+ 214. Rf6 Qe8+ 215. Kd5 Kb3 216. Kc5 Ka4 217. Rde6 Qb8 218. Rf7 Qb4+ 219. Kd5 Qd2+ 220. Ke5 Qc3+ 221. Kd6 Kb5 222. c7 {KRRP(c7)KQ: dtc/m = -22/-32m} Qc6+ 223. Ke5 Qc3+ 224. Kf5 Qd3+ 225. Kf6 Qc3+ 226. Kg6 Qg3+ 227. Kh7 Qh3+ 228. Rh6 Qg4 229. Rg6 Qh3+ 230. Kg8 Qc8+ 231. Kg7 Qh3 232. Re7 Qc3+ 233. Kg8 Qc4+ 234. Kf8 Kb4 235. Rd6 Kb3 236. Ke8 Qg8+ 237. Kd7 Qg4+ 238. Ree6 Qa4+ 239. Rc6 Qd4+ 240. Kc8 Qh8+ 241. Kb7 Qg7 242. Red6 Qh7 243. Kb8 Ka2 244. c8=Q {KQRRKQ: dtx = -4m} {YK-MB DTC EGTs} \*

[White "KRRP"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2014.02.26"]  
 [Event "6m, 4-2m, KRRPKQ, GBR 3200.10, maxDTM 4-2m l&w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "7q/7k/8/6R1/8/8/K1P2R2/8 b - - 0 1"]  
 [PlyCount "506"]

{1 of 4 maxDTM s7m btm losses: dtc/m = -243/-253m} 1... Qa8+''

{1 if 11 maxDTM s7m wtm wins: dtc/m = 243/253m} 2. Kb2'''' Qb7+' 3. Kc1'''' Qh1+' 4. Kd2'''' Qh4'' 5. Rfg2'''' Qd4+' 6. Ke2' Qe4+' 7. Kd1'' Qf3+' 8. Kd2'' Qf4+' 9. Kd3' Qf3+' 10. Kc4'' Qc6+' 11. Kb4'' Qe4+' 12. Kb3'' Qb7+' 13. Kc3'' Qc7+' 14. Kd3'' Qd6+' 15. Ke2'' Qa6+' 16. Kd2'' Qd6+' 17. Ke1'' Qb4+' 18. Kd1'' Qd6+' 19. Rd2'' Qf4'' 20. Rd7+' Kh6'' 21. Rgd5'''' Qg4+' 22. Kd2'' Qb4+' 23. Kd3'' Qa3+' 24. Ke2'' Qa4'' 25. R7d6+' Kh7'' 26. Rh5+' Kg8'' 27. Rg5+''' Kh7'' 28. Kd1'''' Qf4'' 29. Rh5+' Kg7'' 30. Rhd5'' Qg4+' 31. Kd2'' Qb4+' 32. Kd3'' Qa3+' 33. Ke2'' Qa4'' 34. Rd2'' Qe4+' 35. Kf2' Qf4+' 36. Kg1'' Qe3+' 37. Rf2'' Qe1+' 38. Kg2'''' Qe4+' 39. Kf1'' Qh1+' 40. Ke2° Qh5+' 41. Kd3'' Qb5+' 42. Ke4'''' Qe8+' 43. Kd4'' Qb8' 44. Rdf6'' Qb4+' 45. Kd5' Qa5+' 46. Ke4'' Qa8+' 47. Kf5'' Qh1'' 48. Rg6+' Kh7'' 49. Rg4'' Kh6'' 50. Rgf4'' Qd5+' 51. Kg4'' Qh5+' 52. Kg3° Qe5'' 53. Kf3'' Qh5+' 54. Ke4'' Qe8+' 55. Kd3'' Qb5+' 56. Rc4'' Qd5+' 57. Rd4'''' Qb5+' 58. Ke4'' Qe8+' 59. Kf3'' Qc6+' 60. Ke3'' Qc3+' 61. Rd3'' Qc5+' 62. Kf3'''' Qc6+' 63. Kg3'' Qe4'' 64. Rfd2'' Qe5+' 65. Kg2'' Qg7+' 66. Kf3'' Qf7+' 67. Ke4'' Qb7+' 68. Rd5'' Qc6'' 69. Kf3' Qc3+' 70. Kf2'' Kh7'' 71. Re2' Qc4'' 72. Rh5+' Kg7'' 73. Rhe5' Qf4+' 74. Kg1'' Qd4+' 75. R5e3'' Kh6'' 76. Kf1'' Qh4'' 77. Rf2'' Qc4+' 78. Rd3'' Kg5'' 79. Re2'' Qb4'' 80. Re5+' Kf6'' 81. Re1'' Kg5'' 82. Rg3+' Kh4'' 83. Rge3'' Qb2'' 84. R1e2'' Kh5'' 85. Ke1'' Qc1+' 86. Kf2° Qh1'' 87. Rd3'' Kh6'' 88. Re6+' Kg7'' 89. Re7+' Kg6'' 90. Ke2'' Qh5+' 91. Kd2'' Qa5+' 92. Kd1'' Qa1+' 93. Ke2'''' Qa4'' 94. Rc3'' Qg4+' 95. Kd3'''' Qd1+' 96. Kc4'''' Qf1+' 97. Kb4'' Qb1+' 98. Kc5'' Qa1'' 99. Ree3'' Qa5+' 100. Kc4'' Qa4+' 101. Kd3'' Qb5+' 102. Kd2'' Qa5'' 103. Ke2'' {and here, this line diverges from the SV+C/SV+C+ line above} Qa6+' 104. Red3'' Qa4'' 105. Rb3'' Qg4+' 106. Kd2'' Qg5+' 107. Re3'' Qa5+' 108. Kc1'' Qa1+' 109. Rb1'' Qa5'' 110. Reb3'' Qa2'' 111. Rc3'' Kf5'' 112. Rbb3'' Qa1+' 113. Kd2'''' Ke5'' 114. Ra3'' Qg1'' 115. Rh3' Qf1'' 116. Rhd3'' Ke6'' 117. Ra4'' Qh1'' 118. Rdd4'' Qf1'' 119. Rf4'' Qg1'' 120. Rad4' Qb1'' 121. Rfe4+' Kf6'' 122. Ra4'' Kf5'' 123. Reb4' Qg1'' 124. Kc3'' Qc1'' 125. Rb7'' Qe1+' 126. Kb2'''' Qe5+' 127. Kb1'' Qe1+' 128. Ka2'''' Qe6+' 129. Rb3'' Qd5'' 130. Kb1'' Qc5'' 131. Rb7' Qg1+' 132. Kb2'' Qc5'' 133. Rab4'' Qe5+' 134. Ka2'' Qe6+' 135. Rb3'' Kf4'' 136. R7b4+' Kf5'' 137. Rb5+' Kf4'' 138. Kb2'' Qe7'' 139. R3b4+' Kf3'' 140. Rf5+' Ke2'' 141. Rff4'' Qg7+' 142. Ka2'' Qg8+' 143. Rbc4'' Qb8'' 144. Rg4'' Kd2'' 145. Rb4'''' Qc8'' 146. Rg2+''' Kc3'' 147. Rb3+''' Kc4'' 148. Rgg3'' Qf8'' 149. Rbf3'' Qa8+' 150. Ra3'' Qf8'' 151. Rg4+' Kc5'' 152. Ra5+' Kb6'' 153. Re5'' Qa8+' 154. Kb2'' Qh8'' 155. Rb4+' Kc7'' 156. Rbb5'' Kc6'' 157. Kb3'' Qh1'' 158. Rec5+' Kd6'' 159. Rd5+' Kc6'' 160. Rbc5+' Kb6'' 161. Kb2'' Qe4'' 162. Rb5+' Ka6'' 163. Kb3'' Qe3+' 164. Ka2'' Qe6'' 165. Rbc5'' Kb6'' 166. Kb3'' Qe4' 167. Rh5'' Qe2'' 168. Kb2'' Qg4'' 169. Rb5+' Kc6' 170. Rhc5+' Kd6'' 171. Rd5+' Ke6'' 172. Kb3' Qg3+' 173. c3' {KRRP(c3)KQ: dtc/m = -72/-81m} Qg1'' 174. Kb4'' Qb1+' 175. Kc5'''' Qa1'' 176. c4'''' {KRRP(c4)KQ: dtc/m = -69/-78m} Qa2'' 177. Rd4'' Qf2'' 178. Rb6+''' Ke5'' 179. Rbd6'''' Qa2'' 180. R6d5+' Ke6'' 181. Kb5' Qb2+' 182. Kc6'' Qa2'' 183. Rb5'' Qa8+' 184. Rb7'''' Qa4+' 185. Kc7'''' Kf6'' 186. Rb6+' Ke5'' 187. Rd5+''' Ke4'' 188. Re6+''' Kf4'' 189. c5'''' {KRRP(c5)KQ: dtc/m = -56/-65m} Qa7+' 190. Kd6'''' Qb8+' 191. Ke7'' Qb7+' 192. Rd7'' Qb4'' 193. Kd6'' Qd4+' 194. Kc6'''' Qa4+' 195. Kc7'''' Qa7+' 196. Kd6'''' Qb8+' 197. Rc7'' Qd8+' 198. Kc6'' Qa8+' 199. Kb6'' Qb8+' 200. Rb7'''' Qd8+' 201. Kb5'' Qd3+' 202. Kc6'''' Qa6+' 203. Rb6'''' Qc8+' 204. Kb5'' Qd7+' 205. Kc4'' Qf7'' 206. Kb4'' Qh7'' 207. Rf6+' Kg4'' 208. Rfd6'' Kf4'' 209. Ka5'' Qg7'' 210. Rf6+' Ke5'' 211. Rfc6'' Qh8'' 212. Rb7' Kd5'' 213. Rbc7'''' Qb8'' 214. Ka6'''' Qa8+' 215. Kb6'' Qb8+' 216. Rb7'''' Qd8+' 217. Rcc7'' Qh8'' 218. Ka7'' Qa1+' 219. Kb8'' Qh8+' 220. Rc8'''' Qh2+' 221. Rbc7'' Qg3'' 222. Rd8+' Kc4'' 223. Rd6'' Qg8+' 224. Ka7'' Qg3'' 225. Rdc6'' Kd4'' 226. Rd7+' Kc4'' 227. Rb7'' Qa3+' 228. Kb8'''' Qg3+' 229. Rcc7'' Qg8+' 230. Ka7'' Qg5'' 231. c6' {KRRP(c6)KQ: dtc/m = -14/-23m} Qc5+' 232. Kb8'' Qd6'' 233. Rb6'' Qd8+' 234. Kb7'''' Kc5'' 235. Ra6'' Qd3'' 236. Ra5+' Kc4'' 237. Rg7'' Qb3+' 238. Kc7'' Qd3'' 239. Rgg5' Qf1'' 240. Rab5' Qh1'' 241. Rgd5' Qh7+' 242. Kc8' Qg7'' 243. c7'' {KRRP(c7)KQ: dtc/m = -4/-11m} Qg8+' 244. Kb7'' Qxd5+' 245. Rxd5''''

Kxd5'' 246. c8=Q'' {**KQK: dtx = -8m**} Kd4' 247. Qe8' Kd3'' 248. Qe1' Kd4' 249. Kb6' Kd3' 250. Kc5'' Kc2° 251. Kc4'' Kb2° 252. Qd1' Ka2'' 253. Kc3'' Ka3° 254. Qa1#' {**YK-MB DTC, and Nalimov and Lomonosov DTM EGTs**} \*

[White "KRRP"]

[Black "KQ"]

[Result "1-0"]

[Date "2014.07.23"]

[Event "6m, 4-2m, KRRPKQ, GBR 3200.10, maxDTZ<sub>50</sub>' KRRPKQ l&w: SV<sup>+</sup>Z<sub>50</sub>'/SV<sup>+</sup>Z<sub>50</sub>'<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "7q/7k/8/6R1/8/8/K1P2R2/8 b - -"]

[PlyCount "387"]

**{This position is also a maxDTC s7m and maxDTM 4-2m position}**

**{ Bourzutschky and Konoval (2012b, p324) state that maxDTZ = 192m for KRRPKQ}**

**{This 'cursed' win (de Man, 2013) is some 2-4 ply deeper in the maxDTZ<sub>50</sub>' metric}**

**{1 of 8 maxDTZ<sub>50</sub>' KRRPKQ btm losses: dtc/m/z<sub>50</sub>' = -243/-253/-193m(-387p)}**

**{1 of 22 maxDTZ<sub>50</sub>' KRRPKQ wtm win: dtc/m/z<sub>50</sub>' = 243/253/193m(386p)}** 1... Qa8+'''' 2. Kb2'''' Qb7+'''' 3. Kc1'''' Qh1+'''' 4. Kd2'''' Qh4'''' 5. Rfg2'''' Qd4+'' 6. Ke2' Qe4+' 7. Kd1'' Qf3+'' 8. Kd2'' Qf4+'' 9. Kd3' Qf3+'' 10. Kc4'' Qc6+' 11. Kb4'' Qe4+'' 12. Kb3'' Qb7+'''' 13. Kc3'' Qc7+'' 14. Kd3'' Qd6+'' 15. Ke2'' Qa6+'' 16. Kd2'' Qd6+'''' 17. Ke1'' Qb4+'' 18. Kd1'' Qd6+' 19. Rd2'' Qf4'' 20. Rd7+'' Kh6'' 21. Rgd5'''' Qg4+'' 22. Kd2'' Qb4+'' 23. Kd3'' Qa3+'' 24. Ke2'' Qa4'' 25. R7d6+'' Kh7'' 26. Rh5+'' Kg8' 27. Rg5+'''' Kh7'' 28. Kd1'' Qf4'' 29. Rh5+'' Kg7'' 30. Rhd5'' Qg4+'' 31. Kd2'' Qb4+'' 32. Kd3'' Qa3+'' 33. Ke2'' Qa4'' 34. Rd2'' Qe4+'' 35. Kf2' Qf4+'' 36. Kg1'' Qe3+'' 37. Rf2'' Qe1+'' 38. Kg2'''' Qe4+'' 39. Kf1'' Qh1+'' 40. Ke2° Qh5+'' 41. Kd3'' Qb5+'' 42. Ke4'''' Qe8+'' 43. Kd4'' Qb8' 44. Rdf6'' Qb4+' 45. Kd5' Qa5+' 46. Ke4'' Qa8+'' 47. Kf5'' Qh1'' 48. Rg6+'' Kh7'' 49. Rg4'' Kh6'' 50. Rgf4'' Qd5+' 51. Kg4'' Qh5+'' 52. Kg3° Qe5'' 53. Kf3'' Qh5+' 54. Ke4'' Qe8+'' 55. Kd3'' Qb5+'' 56. Rc4'' Qd5+'' 57. Rd4'''' Qb5+'' 58. Ke4'' Qe8+' 59. Kf3'' Qc6+' 60. Ke3'' Qc3+'' 61. Rd3'' Qc5+'' 62. Kf3'''' Qc6+'' 63. Kg3'' Qe4'' 64. Rfd2' Qe5+' 65. Kg2'' Qg7+' 66. Kf3'' Qf7+'' 67. Ke4'' Qb7+'' 68. Rd5'' Qc6'' 69. Kf3' Qc3+' 70. Kf2'' Kh7'' 71. Re2' Qc4'' 72. Rh5+' Kg7'' 73. Rhe5' Qf4+' 74. Kg1'' Qd4+' 75. R5e3'' Kh6'' 76. Kf1'' Qh4'' 77. Rf2'' Qc4+'' 78. Rd3'' Kg5'' 79. Re2'' Qb4'' 80. Re5+'' Kf6'' 81. Re1'' Kg5'' 82. Rg3+'' Kh4'' 83. Rge3'' Qb2'' 84. R1e2'' Kh5'' 85. Ke1'' Qc1+'' 86. Kf2° Qh1'' 87. Rd3'' Kh6'' 88. Re6+'' Kg7'' 89. Re7+'' Kg6'' 90. Ke2'' Qh5+'' 91. Kd2'' Qa5+'' 92. Kd1'' Qa1+'' 93. Ke2'' Qa4'' 94. Rc3'' Qg4+'' 95. Kd3'''' Qd1+'' 96. Kc4'''' Qf1+'' 97. Kb4'' Qb1+'' 98. Kc5'' Qa1'' 99. Ree3'' Qa5+'' 100. Kc4' Qa4+' 101. Kd3'' Qb5+' 102. Kd2'' Qa5'' 103. Ke2' Qa6+'' 104. Red3'' Qa4'' 105. Rb3'' Qg4+'' 106. Kd2'' Qg5+'' 107. Re3'' Qa5+'' 108. Kc1'' Qa1+'' 109. Rb1'' Qa5'' 110. Reb3'' Qa2'' 111. Rc3'' Kf5'' 112. Rbb3' Qa1+'' 113. Kd2'''' Ke6'' 114. Re3+' Kd5' 115. Red3+' Ke6'' 116. Ra3'' Qg1'' 117. Kc3'' Qc1'' 118. Ra4'' Qb1'' 119. Rh3'' Qe1+'' 120. Kb2'' Qe5+'''' 121. Kb3'' Qd5+'' 122. Rc4'' Qb5+' 123. Rb4'' Qd5+' 124. Kb2'' Qe5+'' 125. Rc3'' Kf6'' 126. Rb6+'' Kf7'' 127. Rbb3'' Kf6'' 128. Kb1'' Qe1+'' 129. Ka2'' Qe5'''' 130. Rb6+' Ke7'''' 131. Rb7+'' Kd6'' 132. Rbb3'' Qa5+'' 133. Kb2'' Ke7'' 134. Rb7+'' Kd6'''' 135. Re3'' Qh5'' 136. Rb8'' Qg5'' 137. Rbb3'' Qf6+' 138. Ka2' Qf7'' 139. Re1'' Qf2'' 140. Rd3+'' Kc5' 141. Rc1'' Kc4' 142. Kb1' Qb6+'''' 143. Rb3'' Qd4'''' 144. Rf1' Kc5' 145. Re1'' Qg4'' 146. Re8'' Kc4' 147. Rd8'' Qf5' 148. Rdd3'' Qf6' 149. Ka2' Qe5' 150. Ra3'' Qh8' 151. Ra4+'' Kc5'' 152. Rg3'' Kb5'' 153. Raa3'' Kb4' 154. Rg6'' Kb5'' 155. Kb1'' Qe5'' 156. Rag3'' Qe8'' 157. Kb2'' Kc5'' 158. Rc3+'' Kd5'' 159. Rg5+'' Kd6'' 160. Rc4'' Qe3'' 161. Rb5'' Qg1'' 162. Rbc5'' Qg2' 163. Kb3' Qb7+'' 164. Ka4'' Qa8+' 165. Kb4'' Qb7+'' 166. Rb5'' Qh1'' 167. Rd4+'' Kc6' 168. Rc5+'' Kb6'' 169. Rd6+'' Kb7'' 170. Rd3'' Kb6'' 171. Rc8'' Kb7'' 172. Rdc3'' Qb1+'' 173. Rb3'' Qf1'' 174. Rc4'' Ka6'' 175. Rc6+'' Kb7'' 176. Kc5+'' Ka7'' 177. Rc7+'' Ka8'' 178. Rc3'' Qe1'' 179. Kb5' Qb1+'' 180. Ka4'' Qd1' 181. Rd3' Qa1+'' 182. Ra3'' Qb2'' 183. Rc5'' Qd4+'' 184. Kb5+' Kb8'' 185. Rac3' Qd7+'' 186. Kb4' Qd4+' 187. Ka3'' Ka7'' 188. R5c4'' Qd6+' 189. Ka2'' Qe6' 190. Ra3+'' Kb6'' 191. Rb3+'' Ka5'' 192. Rcb4' Qe1' 193. Rb8'' Qe4' 194. Ra8+'' Qxa8° {**KRPKQ: dtc/m/z = 2/15/2m**} {**de Man DTZ<sub>50</sub>' EGTs**} \*

## 6-man: 5-1m

[White "KBBBN"]

[Black "K"]

[Result "1-0"]

[Date "2014.02.26"]

[Event "6m, 5-1m, KBBBNK, GBR 0091.00\_30, maxDTC/Z 5-1m\_P-less 1: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "6B1/8/8/8/1B6/B4k1N/K7 b - - 0 1"]

[PlyCount "27"]

**{1 of 5 maxDTC/Z 5-1m\_P-less btm losses: dtc/m/z = -13/-17/-13m}**

**{the bK may alternatively be on f3, f4, g4 or h4} 1... Kg3''**

**{the one maxDTC/Z 5-1m\_P-less wtm win: dtc/m/z = 13/17/13m}** 2. Nf1+'''' Kg2' 3. Ne3+' Kg3' 4. Nf5+' Kg4'

5. Bb1' Kf3'' 6. Bd3' Kg4' 7. Bbd5' Kh5' 8. Bf3+' Kg6'' 9. Bh5+' Kg5'' 10. Be4' Kf6' 11. Kb2'' Kg5' 12. Kc3''

Kf6' 13. Kd4'' Kg5° 14. Ke5'' Kxh5° **{KBBNK: dtc/m/z = 3/10/3m}** **{YK-MB DTC and de Man DTZ<sub>50</sub>' EGTs}**

\*

[White "KBBBP"]

[Black "K"]

[Result "1-0"]

[Date "2014.02.26"]

[Event "6m, 5-1m, KBBBPK, GBR 0090.10\_30, maxDTC 5-1m 1: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "8/8/6B1/7B/6B1/7P/8/K2k4 b - - 0 1"]

[PlyCount "31"]

**{1 of 165 maxDTC 5-1m btm losses, 129 in KBBBPK and 36 in KBPPPK: dtc/m = -15/-20m}**

**{note, the maxDTC losses in KBPPPK are one ply shorter and therefore not 'maxDTC' in plies} 1... Ke1''**

**{1 of 284 maxDTC 5-1m wtm wins, 269 in KBBBPK and 15 in KBPPPK: dtc = 15/20m}**

**{again, note that the maxDTC wins in KBPPPK are one ply shorter and therefore not 'maxDTC' in plies}**

2. Kb2 Kf2 3. Kc3 Kg3 4. Kd4 Kh4 5. Ke5 Kg5 6. Ke6'''' Kh6 7. Kf7'''' Kg5° 8. Be2 Kh6 9. Be4 Kg5° 10. Bf1

Kf4 11. Bd1 Kg5 12. Kg7 Kh4 13. Kh6 Kg3° 14. Kg5 Kh2 15. Kh4 Kg1° 16. Kg3'' Kxf1° **{KBBPK: dtc/m/z =**

**5/11/1m}** **{YK-MB DTC EGTs}** \*

[White "KBBBP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.04.17"]  
[Event "6m, 5-1m, KBBBPK, GBR 00090.10\_30, maxDTZ 5-1m\_P-ful l&w: SV+Z/SV+Z+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/B1B5/1B6/8/8/P7/6K1/4k3 b - - 0 1"]  
[PlyCount "24"]

**{candidate line to be confirmed (or not) as correct: syzygy EGT statistics (de Man, 2013)}**

**{1 of 6 maxDTZ 5-1p btm losses: dtc/m/z = -14/-20/-12m} 1... Kd2''**

**{1 of 108 maxDTZ 5-1p wtm wins: dtm/z = 14/20/12m} 2. Bd4'''' Kc2'' 3. Kf3' Kb3'' 4. Bd6'''' Ka4'' 5. Ke4'''' Ka5'' 6. Kd5'''' Kb5'' 7. Bac5' Ka5'' 8. Kc6'' Ka6'' 9. Bf4' Ka5° 10. Bb4+' Ka4'' 11. Bde3' Kb3° 12. Kb5'' Ka2' 13. a4'' **{KBBBP(a4)K: dtc/m/z = -4/-8/-1m} {de Man DTZ<sub>50</sub>' EGTs} \*****

[White "KBBNN"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.04.24"]  
[Event "6m, 5-1m, KBBNNK, GBR 0022.00, maxDTM 5-1m\_P-less w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/8/NB6/1NK5/kB6 w - - 0 1"]  
[PlyCount "49"]

**{the one maxDTM 5-1m\_P-less wtm win: dtc/m/z = 1/25/1m} 1. Kd2' Kxb2° **{KBBNK: dtc/m/z = 1/24/1m}****

**2. Nc4+' Kxb3'' **{KBNK: dtx = 23m}** 3. Ne3' Kb2' 4. Bd3' Ka2'' 5. Kc3'' Ka1'' 6. Bc4'' Kb1° 7. Nc2'' Kc1° 8. Ba2'' Kd1° 9. Nd4'' Ke1'' 10. Bd5' Kd1' 11. Be4'' Kc1'' 12. Ne2+' Kd1° 13. Kd3'' Ke1° 14. Ke3'' Kd1'' 15. Bd3' Ke1° 16. Bc2'' Kf1° 17. Nf4'' Ke1'' 18. Ng2+' Kf1° 19. Kf3'' Kg1° 20. Bd3' Kh1' 21. Nf4' Kg1' 22. Kg3'' Kh1° 23. Be2' Kg1° 24. Nh3+' Kh1° 25. Bf3#'' **{Lomonosov DTM EGTs} \*****

[White "KBNNN"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.04.09"]  
[Event "6m, 5-1m, KBNNNK, GBR 0019.00\_30, maxDTM 5-1m btm l: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "K7/8/8/8/4k3/2NNN3/3B4 b - - 0 1"]  
[PlyCount "68"]

**{1 of 23 maxDTM 5-1m btm losses (in KBNNxK, 'x' = Q/R/B/N/P): dtc/m = -2/-34m}**

**1... Kxd2'' **{KBNNK: dtc/m/z = 7/34/7m}** 2. Nc3' Kxc3'' **{KBNK: dtx = 33m}** 3. Na3' Kb4'' 4. Nb1'' Kc4' 5. Bc2' Kd5' 6. Kb7'' Kd6'' 7. Kb6'' Ke5' 8. Kc5' Ke6'' 9. Na3' Ke7' 10. Kd5' Kf6' 11. Nc4' Ke7'' 12. Bb1' Ke8' 13. Ke6' Kf8'' 14. Kf6' Kg8'' 15. Bc2' Kh8'' 16. Nd6' Kg8° 17. Nf7'' Kf8° 18. Bh7'' Ke8° 19. Ne5'' Kd8'' 20. Be4' Kc7' 21. Nc4'' Kd7'' 22. Kf7'' Kd8'' 23. Bc6' Kc7'' 24. Bb5' Kd8'' 25. Ke6' Kc7'' 26. Ba4' Kd8' 27. Bd7'' Kc7° 28. Ke7'' Kb8'' 29. Kd8'' Kb7'' 30. Bb5'' Ka8' 31. Kc8' Ka7° 32. Kc7'' Ka8° 33. Nd6' Ka7° 34. Nc8+' Ka8° 35. Bc6#'' **{MVL DTM EGTs} \*****

[White "KBNNP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.04.09"]  
[Event "6m, 5-1m, KBNNPK, GBR 0012.10, maxDTM 5-1m btm l: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "K7/8/8/8/8/8/2NPN3/3Bk3 b - - 0 1"]  
[PlyCount "68"]

**{1 of 23 maxDTM 5-1m btm losses (in KBNNxK, 'x' = Q/R/B/N/P): dtc/m = -4/-34m}**

1... Kxd2'' {**KBNNK: dtc/m/z = 7/34/7m**} 2. Nc3' Kxc3'' {**KBNK: dtx = 33m**} 3. Na3' Kb4'' 4. Nb1'' Kc4' 5. Bc2' Kd5' 6. Kb7'' Kd6'' 7. Kb6'' Ke5' 8. Kc5' Ke6'' 9. Na3' Ke7' 10. Kd5' Kf6' 11. Nc4' Ke7'' 12. Bb1' Ke8' 13. Ke6' Kf8'' 14. Kf6' Kg8'' 15. Bc2' Kh8'' 16. Nd6' Kg8° 17. Nf7'' Kf8° 18. Bh7'' Ke8° 19. Ne5'' Kd8'' 20. Be4' Kc7' 21. Nc4'' Kd7'' 22. Kf7'' Kd8'' 23. Bc6' Kc7'' 24. Bb5' Kd8'' 25. Ke6' Kc7'' 26. Ba4' Kd8' 27. Bd7'' Kc7° 28. Ke7'' Kb8'' 29. Kd8'' Kb7'' 30. Bb5'' Ka8' 31. Kc8' Ka7° 32. Kc7'' Ka8° 33. Nd6' Ka7° 34. Nc8+'' Ka8° 35. Bc6#'' {**MVL DTM EGTs**} \*

[White "KBNPP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.04.24"]  
[Event "6m, 5-1m, KBNPPK, GBR 0011.20, maxDTM 5-1m w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "N1k4K/2P5/2P5/B7/8/8/8/8 w - - 0 1"]  
[PlyCount "65"]

**{1 of 23 maxDTM 5-1m wtm wins, 1 here in KBNPPK and 22 in KPPPPK: dtc/m/z = 1/33/1m}** 1. Nb6+'''' Kxc7° {**KBNNPK: dtc/m/z = 3/32/2m**} 2. Na8+' Kxc6'' {**KBNK: dtx = 31m**} 3. Nc7'' Kd6' 4. Kh7' Kc6' 5. Kg7' Kc5' 6. Kf6'' Kd4' 7. Kf5'' Ke3' 8. Ne8' Kf3' 9. Ng7' Ke3' 10. Bb6+'' Kf3'' 11. Nh5'' Kg2'' 12. Kf4' Kh2' 13. Ng3' Kg2' 14. Kg4'' Kh2° 15. Kf3'' Kh3° 16. Bg1'' Kh4° 17. Ne4'' Kh5'' 18. Bd4' Kh4' 19. Be5'' Kh3'' 20. Ng5+' Kh4° 21. Kf4'' Kh5° 22. Kf5'' Kh4'' 23. Bf4' Kh5° 24. Bg3'' Kh6° 25. Ne6'' Kh5'' 26. Ng7+' Kh6° 27. Kf6'' Kh7° 28. Nf5' Kh8' 29. Bd6' Kg8' 30. Kg6'' Kh8° 31. Bc5' Kg8° 32. Nh6+'' Kh8° 33. Bd4#'' {**Lomonosov DTM EGTs**} \*

[White "KBPPP"]  
[Black "K"]  
[Result "1-0"]  
[Date "2014.02.26"]  
[Event "6m, 5-1m, KBPPPK, GBR 0010.30, maxDTC 5-1m l&w (in moves only): SV+C/SV+C"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/8/B7/P7/P7/P1k5/K7 b - - 0 1"]  
[PlyCount "30"]

**{1 of 165 maxDTC 5-1m btm losses, 129 in KBBBPK and 36 in KBPPPK: dtc/m = -15/-20m}**  
**{however, the maxDTC losses here in KBPPPK are one ply shorter and therefore not 'maxDTC' in plies}**  
1... Kd3"  
**{1 of 284 maxDTC 5-1m wtm wins, 269 in KBBBPK and 15 in KBPPPK: dtc/m = 15/20m}**  
**{again, note that the maxDTC wins in KBPPPK are one ply shorter and therefore not 'maxDTC' in plies}**  
2. Bb6 Kc4" 3. Be3 Kd5" 4. a5"" Kd6 5. a6"" Kc7 6. Ba7"" Kc6 7. a4 Kc7 8. a3 Kc8 9. Kb2 Kc7 10. Kc3 Kc8  
11. Kd4 Kc7 12. Kd5 Kd8 13. Bb8 Kc8 14. Bd6 Kd8 15. a7 Kd7 **{and now, promotion to Q/R merely draws}**  
16. a8=(B/N)" **{KBBPPK: dtc/m/z = -5/-6/-1m} {YK-MB DTC EGTs} \***

## 7-man: 2-5m

[White "KQ"]

[Black "KBBNP"]

[Result "1-0"]

[Date "2013.11.28"]

[Event "7m, 2-5m, KQKBBNP, GBR 1063.01, maxDTM 2-5m l&w: SV+M/SV+M+"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "3b4/5n2/1p6/8/b6k/3K4/Q7/8 b - - 0 1"]

[PlyCount "486"]

{the one maxDTM 2-5m btm loss: dtm = -243m} 1... Bb5+''

{1 of 2 maxDTM 2-5m wtm wins: dtm = 243m} 2. Kc2'''' Ne5'' 3. Qe6'''' Nc4'' 4. Qe4+'''' Kh5'' 5. Qf3+'' Kh4'' 6. Qh1+'' Kg3'' 7. Qg1+'''' Kh3'' 8. Kb3'' Bh4'' 9. Qf1+'' Kh2'' 10. Qe2+'''' Kg3'' 11. Qd3+'' Kf4'' 12. Qd4+'''' Kg3'' 13. Ka2'' Ba6'' 14. Qg7+'' Kh3'' 15. Qd7+'''' Kg2'' 16. Qd5+'' Kh2'' 17. Qa8'' Bb5'' 18. Qh8'''' Kh3'' 19. Qc8+'''' Kg3'' 20. Qg8+'' Kf4'' 21. Qf8+'' Kg3'' 22. Qf1' Ba6'' 23. Qe1+'' Kh3'' 24. Qh1+'''' Kg3'' 25. Qa8'' Bb5'' 26. Qd5'' Ba6'' 27. Qg8+'' Kh2'' 28. Qh8'' Kg3'' 29. Qb8+'' Kg4'' 30. Qa8'''' Bb5'' 31. Qe4+'' Kg3'' 32. Qd3+'' Kf4'' 33. Qd4+'' Kg3'' 34. Qc3+'' Kf4'' 35. Qb4'' Ba6'' 36. Qa4'' Bf2'' 37. Qxa6'''' {KQKBNP: dtm = -207m} Ne5'' 38. Qe2'''' Ng4'' 39. Kb2'' Bc5'' 40. Qf1+'' Kg3'' 41. Kc3'' Nf2'' 42. Qg1+'' Kf3'' 43. Qh2'' Ne4+'' 44. Kc4'' Nf2'' 45. Kd5'' Be3'' 46. Ke6'' Bc5'' 47. Kf5'' Be3'' 48. Qh7'' Bc5'' 49. Qg7'' Be3'' 50. Qc3'' Ke2'' 51. Qc6'' Bc5'' 52. Ke6'' Ke3'' 53. Ke5'' Ng4+'' 54. Kf5'' Nf2'' 55. Qg2'' Nd1'' 56. Qc2'''' Nf2'' 57. Qc3+'' Ke2'' 58. Ke5'' Be3'' 59. Qc6'' Bc5'' 60. Qg2'' Kd3'' 61. Qf3+'' Kd2'' 62. Kd5'' Nd1'' 63. Qh5'' Nc3+'' 64. Kc4'''' Ne2'' 65. Qg5+'' Be3'' 66. Qd5+'' Bd4'' 67. Qd8'' Kc2'' 68. Qd7'' Kd2'' 69. Kd5'' Bc5'' 70. Ke4+'''' Ke1'' 71. Kf3'''' Nd4+'' 72. Kg2'' Ke2'' 73. Qg7'' Kd2'' 74. Qg3'' Ne2'' 75. Qg5+'' Kd3'' 76. Kf1'' Nd4'' 77. Qc1'' Bb4'' 78. Kf2'' Bc5'' 79. Qd1+'' Kc4'' 80. Qg4'' Kd3'' 81. Qg3+'' Kc2'' 82. Qh3'' Bb4'' 83. Qg4'' Bc5'' 84. Ke3'' Nb3+'' 85. Kf3'' Nd4+'' 86. Kf4'' Kd2'' 87. Qg2+'' Kd1'' 88. Ke4'' Ne2'' 89. Qf3'' Kd2'' 90. Qd3+'''' Ke1'' 91. Kf3'' Nd4+'' 92. Kg2'' Ne2'' 93. Qc2'' Be3'' 94. Qc6'' Bc5'' 95. Qh6'' Kd1'' 96. Qg5'' Ke1'' 97. Kf3'' Ng1+'' 98. Kg3'' Ne2+'' 99. Kg2'''' Bf2'' 100. Qe5'' Bd4'' 101. Qe6'' Kd2'' 102. Qh6+'' Kd3'' 103. Kf1'' Nc3'' 104. Qh7+'' Kc4'' 105. Qh3'' Bc5'' 106. Ke1'' Kd4'' 107. Kd2'' Nd5'' 108. Qh4+'' Ke5'' 109. Ke2'' Nc3+'' 110. Kf1'' Ne4'' 111. Qg4'' Nd2+'' 112. Ke2'' Ne4'' 113. Qh3'' Kf4'' 114. Qh2+'' Kf5'' 115. Qb8'' Nf6'' 116. Kf3'' Ke6'' 117. Qa7'' Nd5'' 118. Qa8'' Nf6'' 119. Qa1'' Nd5'' 120. Kg4'' Ne3+'' 121. Kg5'' Kd5'' 122. Kf4'''' Nc4'' 123. Qh8'' Bd6+'' 124. Kf3'''' Be5'' 125. Qd8+'' Bd6'' 126. Ke2'' Kd4'' 127. Qh4+'' Kc3'' 128. Qe1+'''' Kb3'' 129. Qb1+'' Kc3'' 130. Qc1+'' Kd4'' 131. Qa1+'' Kd5'' 132. Kd3'' b5'' 133. Qa8+'' Kc5'' 134. Ke4'' Be5'' 135. Qf8+'''' Kc6'' 136. Kf5'' Kd5'' 137. Qb4'' Nd6+'' 138. Kg6'' Kc6'' 139. Kh7'' Nc4'' 140. Kg8'' Bd6'' 141. Qe1'''' Kd5'' 142. Kf7'''' Ba3'' 143. Qd1+'''' Kc5'' 144. Ke6'''' Bb2'' 145. Qe1'''' Bd4'' 146. Qc1'' Bb2'' 147. Qf4'''' Na5'' 148. Qf2+'' Bd4'' 149. Qf3'' Kb4'' 150. Kd5'' Nb3'' 151. Qf8+'''' Ka4'' 152. Ke4'' Nc5+'' 153. Kf3'' Nb3'' 154. Ke2'' Bb2'' 155. Qd6'' Na5'' 156. Qd1+'''' Ka3'' 157. Qd5'' Kb4'' 158. Qd2+'' Bc3'' 159. Qd6+'''' Ka4'' 160. Qd1+'' Ka3'' 161. Qd3'' Kb4'' 162. Qb1+'' Kc5'' 163. Qc1'' Kc4'' 164. Qc2'' Kb4'' 165. Kd3'' Be5'' 166. Qd2+'' Ka4'' 167. Ke4'' Nc4'' 168. Qa2+'' Kb4'' 169. Kd5'' Bc3'' 170. Qb1+'''' Bb2'' 171. Qe4'' Bc3'' 172. Kc6'''' Ka4'' 173. Qf4' Bb2'' 174. Qg4' Bc3'' 175. Qe4'' Kb4'' 176. Qe7+'' Ka4'' 177. Qa7+'' Na5+'' 178. Kc5'' Bd2'' 179. Kd5'' Bc3'' 180. Qe3'' Ba1'' 181. Qe4+'' Ka3'' 182. Qd3+'' Kb4'' 183. Qb1+'' Nb3'' 184. Ke4'''' Kc4'' 185. Qf1+'' Kb4'' 186. Kd3'' Nc5+'' 187. Kc2'' Bd4'' 188. Qe2'' Na4'' 189. Qe4'' Kc4'' 190. Qd3+'' Kc5'' 191. Kb3'' Bc3'' 192. Qg6'' Bb2'' 193. Qa6'' Ba1'' 194. Qb7'' Bc3'' 195. Qa7+'' Kd5'' 196. Qc7'' Be5'' 197. Qb7+'' Kc5'' 198. Qc8+'' Kd5'' 199. Qe8'' Nc5+'' 200. Ka3'' Ne4'' 201. Qxb5+'' {KQKBN: dtc/m/z = -31/-43/-31m} Kd4'' 202. Qb4+'' Kd5'' 203. Qb3+'' Kc5'' 204. Qd3'' Nd6'' 205. Kb3'' Bd4'' 206. Qd1'' Kd5'' 207. Kc2'' Ke4'' 208. Qe2+'' Kd5'' 209. Kd3'' Bc5'' 210. Qg2+'' Ke6'' 211. Qc6'' Bg1'' 212. Qc2'' Kd7'' 213. Ke2'' Bb6'' 214. Qa4+'' Kd8'' 215. Qc6'' Nc8'' 216. Kd3'' Bc7'' 217. Kc4'' Ne7'' 218. Qe6'' Bf4'' 219. Kb5'' Bg3'' 220. Kb6'' Bh2'' 221. Kb7'' Bc7'' 222. Qa6'' Bh2'' 223. Qa5+'' Kd7'' 224. Qa4+'' Kd6'' 225. Qa3+'' Ke6'' 226. Qa2+'' Kd6'' 227. Qxh2+'' {KQKN: dtc/m/z = -15/-17/-15m} Ke6'' 228. Qd2'' Ng6'' 229. Qd4'' Ne5'' 230. Kc7'' Nf7'' 231. Qc4+'' Kf6'' 232. Qe4'' Nh6'' 233. Qf4+'' Nf5'' 234. Kd7'' Kg6'' 235. Ke6'' Ng7+'' 236. Kd6'' Nf5+'' 237. Ke5'' Ng7'' 238. Qf6+'' Kh7'' 239. Qg5'' Ne8'' 240. Qh5+'' Kg7'' 241. Qxe8'' {KQK: dtx = -3m} Kh6'' 242. Qg8'' Kh5° 243. Kf5'' Kh4'' 244. Qg4#'' {Lomonosov DTM EGTs} \*



[White "KQ"]  
[Black "KQBBN"]  
[Result "1-0"]  
[Date "2013.11.26"]  
[Event "7m, 2-5m, KQKQBPN, GBR 4063.00, maxDTM KQKQBPN w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/7Q/3k4/n7/8/q5b1/1K4b1 w - - 0 1"]  
[PlyCount "229"]

**{the deepest known maxDTM 2-5m\_P-less wtm win until KQKRBBN's maxDTM was discovered}**

**{1 of 134 maxDTM KQKQBPN wtm wins: dtc/m/z = 1/115/1m} 1. Kxa2''''**

**{KQKBBN: dtc/m/z = -51/-114/-51m} Kc4'' 2. Qa6+'''' Kb4'' 3. Qd6+'''' Kc4'' 4. Qg3'''' Nc3+'' 5. Kb2'''' Nd1+'' 6. Kc1'''' Ne3'' 7. Qe1'''' Bf1'' 8. Kd2'' Kd5'' 9. Qg3'''' Bg2'' 10. Qb8'''' Nf1+'' 11. Ke2'' Ne3'' 12. Qb5+'' Kd4'' 13. Qb2+'' Kd5'' 14. Qa2+'' Kd6'' 15. Qb1'' Bf1+'' 16. Kf3'' Kd5'' 17. Qe4+'''' Kc5'' 18. Qh7'' Bg2+'' 19. Kg3'''' Kd5'' 20. Qd3+'' Kc5'' 21. Qa3+'' Kd5'' 22. Qa4'' Bf1'' 23. Kf3'' Kc5'' 24. Ke4'''' Bg2+'' 25. Kf4'''' Kd6'' 26. Qa3+'''' Kd5'' 27. Qa5+'' Kc4'' 28. Qa2+'''' Kc5'' 29. Kg5'' Bf1'' 30. Qa4'''' Kd5'' 31. Qh4'' Bg2'' 32. Qf4'' Kc6'' 33. Qd4'' Kc7'' 34. Qe5+'' Kc8'' 35. Kh4'' Kd7'' 36. Qd4+'' Kc7'' 37. Qc3+'' Kd6'' 38. Qe1'' Nf1'' 39. Qd1+'' Kc7'' 40. Qc1+'''' Kd7'' 41. Qb2'' Ne3'' 42. Kg5'' Kd6'' 43. Qd2+'' Ke6'' 44. Qd4'' Bd5'' 45. Qa1'' Bh2'' 46. Qc3'' Be5'' 47. Qc8+'' Kd6'' 48. Qb8+'' Ke6'' 49. Qb6+'' Bd6'' 50. Qxe3+'''' **{KQKBB: dtc/m/z = -55/-65/-55m} Be5'' 51. Qc5'' Bf6+'' 52. Kf4'' Be5+'' 53. Ke3'' Bf6'' 54. Qb6+'' Ke7'' 55. Qb8'' Be6'' 56. Kf4'' Kf7'' 57. Qd6'' Bg7'' 58. Kg5'' Bf6+'' 59. Kh6'' Bg7+'' 60. Kh5'' Bf6'' 61. Qf4'' Bd5'' 62. Qf5'' Bc6'' 63. Qc8'' Be8'' 64. Qb7+'' Ke6+'' 65. Kg4'' Bg6'' 66. Kf4'' Be8'' 67. Qb6+'' Ke7'' 68. Ke4'' Bg6+'' 69. Kd5'''' Bf7+'' 70. Kc5'' Be5'' 71. Qh6'' Be6'' 72. Qg5+'' Bf6'' 73. Qh5'' Bf7'' 74. Qf5'' Bg7'' 75. Qf4'' Be6'' 76. Kc6'' Bd7+'' 77. Kc7'' Be6'' 78. Qb4+'' Kf7'' 79. Qe4'' Ke7'' 80. Qh7'' Kf6'' 81. Kd8'' Bf5'' 82. Qh4+'' Kg6'' 83. Qg3+'' Kf6'' 84. Qg2'' Kf7'' 85. Qa2+'' Kg6'' 86. Qg8'' Kf6'' 87. Qd5'' Bh6'' 88. Qd6+'' Kg7'' 89. Ke8'' Bg6+'' 90. Ke7'' Bg5+'' 91. Ke6'''' Bh7'' 92. Qc6'' Kg6'' 93. Qe8+'' Kh6'' 94. Qf8+'' Kg6'' 95. Qf7+'' Kh6'' 96. Ke5'' Bg6'' 97. Qf8+'' Kh5'' 98. Qh8+'' Kg4'' 99. Qc8+'' Kh4'' 100. Qd7'' Bh5'' 101. Qh7'' Kg4'' 102. Qf5+'' Kh4'' 103. Qf2+'' Kh3'' 104. Qf1+'' Kg3'' 105. Qg1+'' Kf3'' 106. Qxg5'' **{KQKB: dtc/m/z = -3/-9/-3m} Be8'' 107. Qf5+'' Ke3'' 108. Qe4+'' Kd2'' 109. Kd4'' Bb5'' 110. Qe3+'' Kc2'' 111. Qc3+'' Kb1'' 112. Qb3+'' Kc1'' 113. Kc3'' Bd3'' 114. Qb2+'' Kd1° 115. Qd2#'' **{Lomonosov DTM EGTs} \*********

[White "KQ"]  
 [Black "KRBBB"]  
 [Result "1-0"]  
 [Date "2013.11.28"]  
 [Event "7m, 2-5m, KQKRBBB, GBR 1309.00\_03, maxDTM KQKRBBB l&w: SV+M+/SV+M"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/8/2b1b3/8/8/b1r5/4Q3/3K1k2 b - - 0 1"]  
 [PlyCount "196"]

**{the deepest known maxDTM 2-5m\_P-less btm loss until KQKRBBN's maxDTM was discovered}**

**{1 of 2 maxDTM KQKRBBB btm losses: dtc/m/z = -2/-98/-2m}** 1... Kg1° 2. Qe1+"" Kg2'' 3. Qxc3''''  
**{KQKBBB: dtc/m/z = -23/-96/-23m}** Ba4+'' 4. Ke2'''' Bab3'' 5. Qf3+'''' Kh2'' 6. Qh5+'''' Kg3'' 7. Qg5+''''  
 Bg4+'' 8. Kf1'''' Bc4+'' 9. Kg1'''' Kf3'' 10. Qf6+'''' Ke4'' 11. Qg6+'' Kf4'' 12. Qh6+'' Ke4'' 13. Qh1+'' Kf4'' 14.  
 Qh2+'' Ke4' 15. Qg2+'' Kf4'' 16. Kh2'' Bf3'' 17. Qd2+'''' Ke4'' 18. Qd7'''' Bfe2'' 19. Qh7+'''' Ke5'' 20. Qh8+''''  
 Kf4'' 21. Qh4+'' Ke3'' 22. Qg3+'' Bf3'' 23. Qe1+'''' Kd3'' 24. Qf1+'''' Ke3'' 25. Qxc4'''' **{KQKBB: dtc/m/z**  
**= -64/-74/-64m}** Bd6+'' 26. Kh3'' Be5'' 27. Qb4'' Kd3'' 28. Kh4'' Be4'' 29. Kg5'' Bc3'' 30. Qb5+' Kd4'' 31. Qa4+'  
 Kd3' 32. Kf4'' Bd2+'' 33. Ke5'' Bc3+'' 34. Kd6'' Bd4'' 35. Qb3+'' Kd2' 36. Qc4'' Ke3'' 37. Ke6'' Bf3'' 38. Qb3+''  
 Ke2'' 39. Qb1' Kf2' 40. Qd3' Be3'' 41. Kf5'' Bg2'' 42. Kg4'' Bf3+'' 43. Kh3'' Bg2+'' 44. Kh4'' Bf3'' 45. Qf5''  
 Bd4'' 46. Qf4'' Bc3'' 47. Qc1' Be1'' 48. Qb2+'' Ke3+'' 49. Kg5'' Bd2' 50. Kf5'' Be1' 51. Qb3+' Ke2'' 52. Ke5''  
 Bg3+'' 53. Kd4'''' Bf2+'' 54. Kc4'' Be4'' 55. Qh3'' Kd2' 56. Qh6+'' Ke2'' 57. Kc3'' Be3'' 58. Qf6'' Bf3'' 59. Qe5''  
 Bg2'' 60. Kc2' Bc6'' 61. Qh5+'' Bf3'' 62. Qh2+'' Bf2'' 63. Kc3'' Ke3'' 64. Qh6+'' Ke4'' 65. Kd2'' Bg4'' 66. Qh7+''  
 Bf5'' 67. Qh1+'' Kf4'' 68. Qh2+'' Bg3' 69. Qe2' Bh4' 70. Qc4+'' Kg3'' 71. Qc3+'' Kg4'' 72. Ke2'' Kf4'' 73. Qf3+'  
 Kg5'' 74. Ke3'' Kf6'' 75. Qc6+'' Be6'' 76. Ke4'' Bg5'' 77. Qc5'' Bh6' 78. Qf2+'' Kg6' 79. Ke5'' Bg4'' 80. Qf6+''  
 Kh5'' 81. Ke4'' Bg5' 82. Qf7+'' Kh4' 83. Qh7+'' Kg3'' 84. Qg7' Kh4' 85. Qh8+'' Kg3'' 86. Qe5+'' Kh4'' 87.  
 Qh2+'' Bh3° 88. Kf3'' Bc1'' 89. Qg3+'' Kh5° 90. Qxh3+'' **{KQKB: dtc/m/z = -5/-9/-5m}** Kg5' 91. Ke4' Kf6'' 92.  
 Qc3+' Ke6' 93. Qxc1' **{KQK: dtx = -6m}** Kd6'' 94. Qc2' Ke6'' 95. Qc6+'' Ke7'' 96. Kf5'' Kf7' 97. Qc7+' Kf8' 98.  
 Kf6'' Ke8' 99. Qc8# **{Lomonosov DTM EGTs}** \*

[White "KQ"]  
 [Black "KRBBN"]  
 [Result "1-0"]  
 [Date "2014.04.24"]  
 [Event "7m, 2-5m, KQKRBBN, GBR 1363.00, maxDTM 2-5m\_P-less w&l: SV+M-/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "6k1/8/1K6/8/1Q6/8/bn5r/b7 w - - 0 1"]  
 [PlyCount "239"]

**{the one maxDTM 2-5m\_P-less wtm win: dtm = 120m}** 1. Qg4+''  
**{1 of 2 maxDTM 2-5m\_P-less btm losses: dtm = -119m}** Kh8'' 2. Qd4+'' Kh7'' 3. Qe4+'' Kg8'' 4. Qe8+'' Kh7''  
 5. Qe7+'' Kg8'' 6. Qg5+'' Kh7'' 7. Qf5+'' Kg8'' 8. Qc8+'' Kg7'' 9. Qc3+'' Kf8'' 10. Qc5+'' Kf7'' 11. Qc7+'' Ke6''  
 12. Qxh2'' **{KQKBBN: dtc/m/z = -45/-108/-45m}** Nc4+'' 13. Kc5'' Bb2'' 14. Qh7'' Ke5'' 15. Kb5'' Nd6+'' 16.  
 Kb4' Nc4'' 17. Qe7+'' Kd5'' 18. Qb7+'' Ke5'' 19. Qb8+'' Kf5'' 20. Qa7'' Ba3+'' 21. Kc3'' Ke5'' 22. Qd4+'' Ke6''  
 23. Qg1' Bb2+'' 24. Kc2'' Ke5'' 25. Qc5+'' Ke6'' 26. Qc8+'' Ke5'' 27. Qd8' Ba3'' 28. Kc3'' Ke6'' 29. Kd4'' Bb2+''  
 30. Kd3'' Kf5'' 31. Qc8+'' Ke5'' 32. Qe8+'' Kd6'' 33. Qb8+'' Ke6'' 34. Ke2'' Ba3'' 35. Qd8'' Ke5'' 36. Qd1''  
 Bb2'' 37. Qd3'' Kf6'' 38. Qd5'' Kg6'' 39. Qe4+'' Kh6'' 40. Kd1'' Kg5'' 41. Qf3' Kg6'' 42. Qc6+'' Kf5'' 43. Qa4''  
 Na3'' 44. Qa5+'' Kg6'' 45. Qa6+'' Kg5'' 46. Qb7'' Nc4'' 47. Ke2'' Kf5'' 48. Qb5+'' Kf4'' 49. Qd5'' Be5'' 50. Qa8''  
 Bb1'' 51. Qc6'' Be4'' 52. Qh6+'' Kg4'' 53. Qe6+'' Kf4'' 54. Qf7+'' Bf5'' 55. Qxc4+'' **{KQKBB: dtc/m/z**  
**= -55/-65/-55m}** Be4'' 56. Qe6' Bf3+'' 57. Kd3'' Be4+'' 58. Kc4'' Bf3'' 59. Qf7+'' Kg4'' 60. Qh7' Bf4'' 61. Kd3''  
 Kg3'' 62. Qf5'' Bg2'' 63. Ke2'' Bf3+'' 64. Kf1'' Bg2+'' 65. Ke1'' Bf3'' 66. Qd3'' Be5'' 67. Qe3'' Bf6'' 68. Qh6'  
 Bh4'' 69. Qg7+'' Kf4+'' 70. Kd2'' Bg5'' 71. Kd3'' Bh4'' 72. Qf7+'' Kg4'' 73. Kd4'' Bf2+'' 74. Ke5'' Bg3+'' 75.  
 Ke6'' Be4'' 76. Qf1'' Bf4'' 77. Qe2+'' Bf3'' 78. Qf2' Be4'' 79. Kf6'' Bf3'' 80. Qd4' Bg2'' 81. Qd3' Bh3'' 82. Kg6''  
 Bg2'' 83. Qd7+'' Kh4'' 84. Qd4'' Kg4'' 85. Qg1'' Kf3'' 86. Kh5'' Be3'' 87. Qd1+'' Kf2'' 88. Qc2+'' Kf3'' 89. Qb2''  
 Kg3'' 90. Qb8+'' Kf2'' 91. Qh2'' Kf3'' 92. Qe5'' Bf1'' 93. Qf5+'' Kg2'' 94. Kh4'' Bf2+'' 95. Kg4'' Be2+'' 96. Kf4''  
 Bg1'' 97. Qg5+'' Kf1'' 98. Qg6' Bd1'' 99. Qg3'' Bf2'' 100. Qh3+'' Ke2'' 101. Qf3+'' Ke1'' 102. Qd3'' Be2'' 103.  
 Qc3+'' Kf1'' 104. Qc1+'' Kg2'' 105. Qc6+'' Kg1'' 106. Qd5'' Kf1'' 107. Qh1+'' Bg1'' 108. Kg3'' Bc4'' 109. Qg2+''  
 Ke1'' 110. Qxg1+'' **{KQKB: dtc/m/z = -7/-10/-7m}** Kd2'' 111. Qd4+'' Bd3'' 112. Kf3'' Kc2'' 113. Qb4' Bf1'' 114.  
 Ke3' Ba6'' 115. Kd4'' Bd3'' 116. Qc3+'' Kb1'' 117. Qb3+'' Kc1'' 118. Kc3'' Bb1'' 119. Qb2+'' Kd1'' 120. Qd2#''  
**{Lomonosov DTM EGTs} \***

## 7-man: 3-4m

[White "KQN"]

[Black "KRBN"]

[Result "1-0"]

[Date "2013.11.14"]

[Event "7m, 3-4m, KQNKRB, GBR 1334.00, maxDTC s8m\_P-less l&w: SV<sup>+</sup>C<sup>-</sup>/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN " 8/1r6/8/6n1/5k2/1b6/3K3N/7Q b - - 0 1"]

[PlyCount "1034"]

**{This took the DTC record on or before 26<sup>th</sup> May 2006 (Krabbé, 2006b)}**

**{1 of 24 maxDTC s8m\_P-less btm losses: dtc/m/z = -517/-545/-517m} 1... Rd7+''**

**{1 of 6 maxDTC s8m\_P-less wtm wins: dtc/m/z = 517/545/517m} 2. Kc3'''' Bd1'' 3. Qf1+'''' Bf3'' 4. Qc1+'''' Kf5'' 5. Kb2'''' Rb7+'' 6. Ka3 Ra7+'' 7. Kb4'''' Rb7+'' 8. Ka5 Ra7+'' 9. Kb6'''' Rb7+'' 10. Ka6'''' Re7'' 11. Qf1 Re6+ 12. Ka7 Re7+'' 13. Kb8 Re8+'' 14. Kc7'''' Re3'' 15. Kc8 Rc3+'' 16. Kb8'''' Kf4'' 17. Qg1'''' Ne4'' 18. Nf1'''' Rb3+'' 19. Ka7'''' Rd3'' 20. Qh2+'''' Kf5'' 21. Kb8 Nf6'' 22. Nd2'''' Bd5'' 23. Qf2+'''' Ke5'' 24. Qe2+ Kd4'' 25. Ka7'''' Nd7'' 26. Qg4+'''' Kc5'' 27. Qg1+'''' Kb4'' 28. Qb1+'''' Kc3'' 29. Qc1+ Kd4 30. Qb2+ Kc5'' 31. Qc2+'''' Kd4'' 32. Qa4+'''' Kc5'' 33. Qa5+'''' Kd4'' 34. Qb4+ Ke5'' 35. Ka6 Kf5 36. Qb1 Ne5 37. Kb5'''' Bc6+ 38. Kb4'''' Bd5'' 39. Qf1+ Kg6 40. Qe2 Kf6 41. Qh5 Ke6 42. Qg5 Nc6+'' 43. Kb5 Ne5'' 44. Qh6+ Kf5'' 45. Nf1 Bc6+'' 46. Kb4 Rd4+'' 47. Kb3 Rd3+'' 48. Ka2'''' Bd5+'' 49. Kb1'''' Nc4'' 50. Qh5+'''' Kf6'' 51. Qh4+ Ke6'' 52. Ng3'''' Rb3+'' 53. Kc1'''' Rc3+'' 54. Kd1 Re3'' 55. Nf1'''' Ra3'' 56. Qf4 Kd7 57. Ke1 Kc6 58. Qh6+ Kc5 59. Kf2 Rb3 60. Qh8 Ra3 61. Qb8 Kc6 62. Qb1 Rc3 63. Kg1 Ra3 64. Qc2 Kb6 65. Qf5 Kc5 66. Qf8+ Kb5 67. Qe8+ Kc5'' 68. Qe2 Rf3 69. Qe7+ Kd4 70. Qg7+ Kc5'' 71. Qg5 Kc6'' 72. Qh4 Kb5 73. Qe7 Kb6 74. Qb4+ Kc6'' 75. Qe1 Ra3 76. Qf2 Rf3'' 77. Qd4 Kd6'' 78. Qh4 Kc5'' 79. Nh2 Ra3'' 80. Ng4 Ra1+'' 81. Kf2'''' Ra2+'' 82. Kg3'''' Ra3+'' 83. Kf4 Rf3+'' 84. Kg5° Be6'' 85. Nf6'''' Ne5'' 86. Nh5 Rf5+ 87. Kh6° Ng4+ 88. Kg6'''' Ne5+'' 89. Kh7 Rf7+'' 90. Kh6'''' Ng4+'' 91. Kg5 Ne5'' 92. Qa4'''' Rf5+'' 93. Kh6'''' Bc4'' 94. Qa5+ Kd4'' 95. Qb6+ Kd5'' 96. Qd8+ Ke4'' 97. Qd1 Ke3'' 98. Qc1+ Kd4'' 99. Ng3 Rf6+'' 100. Kh5 Kd5 101. Kh4 Rg6'' 102. Kh3 Bd3 103. Qf4 Rg8'' 104. Qb4 Bc4 105. Qd2+ Ke6'' 106. Qh6+ Kd5'' 107. Qh7 Kc5'' 108. Kh2 Rg6'' 109. Qe7+ Kd5'' 110. Qd8+ Ke6'' 111. Qf8 Kd5'' 112. Kh3 Bb5'' 113. Qa3 Bc6'' 114. Kg2 Rf6'' 115. Kh2 Nf3+ 116. Kh3'''' Rh6+'' 117. Kg2'''' Nd4'' 118. Qe7 Kc4+'' 119. Kg1'''' Rg6 120. Qf7+ Re6'' 121. Qf4 Kd3 122. Qf1+ Kc3'' 123. Qc1+ Kb4 124. Kh2 Rf6 125. Kh3 Bd7+'' 126. Kg2'''' Bc6+'' 127. Kh2'''' Rf3 128. Qd1 Kc5 129. Nh5 Kd5 130. Qh1 Ke6 131. Qg1 Ke5 132. Qg7+ Ke4'' 133. Qc7 Kd5 134. Nf4+ Kc4'' 135. Qb8 Rc3 136. Qa7 Be4'' 137. Qb6 Bc6'' 138. Qa6+ Kc5 139. Nd3+ Kd6'' 140. Nb2 Rb3 141. Nd1 Nf3+'' 142. Kg3 Nd4+'' 143. Kf2 Rf3+'' 144. Ke1 Kd5'' 145. Qb6 Kc4 146. Qa7 Bb5'' 147. Nf2'''' Nc2+'' 148. Kf1 Bc6'' 149. Qa6+ Kc5'' 150. Qa2 Nd4'' 151. Kg1'''' Rf5'' 152. Kh2 Rh5+'' 153. Kg3'''' Rg5+'' 154. Kf4'''' Rf5+'' 155. Kg4'''' Bf3+'' 156. Kh4 Rh5+'' 157. Kg3° Rg5+'' 158. Kf4'''' Rf5+'' 159. Ke3'''' Re5+'' 160. Kd3'''' Be2+'' 161. Kd2'''' Kb4'' 162. Qg8 Bb5'' 163. Qg4 Re2+ 164. Kc1'''' Kc4 165. Nd1'''' Rc2+ 166. Kb1° Rd2'' 167. Qc8+ Bc6'' 168. Qg8+'''' Kb4'' 169. Nb2 Be4+'' 170. Ka2'''' Nb5'' 171. Qb3+'''' Ka5 172. Ka1'''' Bd5'' 173. Qa4+'''' Kb6'' 174. Qb4'''' Rd4'' 175. Qe1 Be4 176. Nd1 Rc4 177. Qe3+ Kc6 178. Kb2 Rc2+ 179. Kb3 Nd6 180. Qh6 Rc5 181. Nc3 Bd5+ 182. Kc2 Kd7 183. Qg7+ Kc6 184. Kd1 Bf7 185. Kd2 Bc4 186. Ke1 Ra5 187. Qf6 Rf5 188. Qg6 Kc7 189. Qg7+ Rf7 190. Qg3 Kc6 191. Qg2+ Kc7 192. Qh2 Kc6 193. Qh1+ Kc5 194. Qh8 Re7+ 195. Kd1'''' Re8 196. Qh2 Re3 197. Kc2 Rd3 198. Qe5+ Kc6'' 199. Qh5 Rg3 200. Qa5 Rh3 201. Kd2 Rh2+ 202. Ke3 Rh3+ 203. Kf4 Rd3'' 204. Na4 Rd4+'' 205. Kf3 Rd3+'' 206. Kg4 Rd4+ 207. Kh3 Ne4 208. Qa7 Be6+ 209. Kg2'''' Rb4 210. Qa6+'''' Kd5 211. Kf3 Kd4 212. Qe2 Kd5'' 213. Ke3 Bd7'' 214. Nb2 Bb5'' 215. Qh5+ Ke6 216. Nd1 Nf6 217. Qh3+ Kf7 218. Kd2 Rd4+ 219. Kc1 Rc4+ 220. Kb2 Rb4+ 221. Ka3 Ra4+ 222. Kb3'''' Rd4 223. Nc3 Bc4+ 224. Kc2'''' Be6 225. Qe3 Rh4 **{and here, this SC<sup>-</sup> line diverges from the SM<sup>-</sup> line below}** 226. Qa7+ Kg6 227. Ne2 Rb4 228. Kc1 Rc4+ 229. Kb2 Rb4+ 230. Ka3 Rb3+ 231. Ka4'''' Rf3'' 232. Qd4 Bd7+ 233. Kb4 Be6 234. Qc5 Bd7 235. Qd6 Bg4 236. Nd4 Rd3'' 237. Kc4 Re3'' 238. Nc6 Bc8 239. Qh2 Re4+ 240. Kc5 Bb7 241. Qg1+ Kh7 242. Na7 Rg4 243. Qh2+ Kg6'' 244. Nb5 Rg2 245. Qh3 Rg5+'' 246. Kb4 Bg2 247. Qh2 Bd5 248. Nd6 Ne4 249. Nc8 Nf6'' 250. Qd6 Rh5 251. Qc7 Kg5 252. Qe5+ Kg6'' 253. Qe3 Kh7 254. Qd3+ Kg7 255. Nd6 Rg5 256. Ka4 Rh5 257. Qg3+ Kh7 258. Kb4 Kh6'' 259. Ka3 Rg5 260. Qc3 Kg6'' 261. Qc2+**

Kh6 262. Nf5+ Kh5 263. Qd3 Kg6'' 264. Ng3+ Kf7 265. Qe3 Rg8 266. Nf5 Ra8+' 267. Kb2'''' Ra2+' 268. Kb1 Ra6 269. Qe7+ Kg6'' 270. Nd6 Rb6+ 271. Kc2 Rb3'' 272. Qe5 Rf3'' 273. Kd2 Bc6 274. Nc4 Bd5 275. Ne3 Be4 276. Ng4 Bb7 277. Qe6'' Kg5 278. Ne5 Rf2+ 279. Kc3 Rf4 280. Nf7+ Kg6'' 281. Nd6 Be4 282. Kd2 Rf2+ 283. Ke1 Rf4 284. Qc4 Kg5 285. Qe2 Bg6 286. Qe5+ Kg4'' 287. Ke2 Bf5 288. Qa1 Nh5 289. Ke3 Bc2 290. Qa8 Bg6 291. Qd5 Ng3 292. Nc4 Nf5+ 293. Ke2'''' Ng3+ 294. Kd2 Kh3 295. Qc6 Re4 296. Qa6 Re2+ 297. Kc3 Be4 298. Qd6 Kg2 299. Kb4 Bf3 300. Ka5 Nf5 301. Qc5 Be4 302. Kb6 Rc2 303. Qb4 Kf2 304. Ne5 Ke3 305. Nd7 Nd4 306. Qa3+ Ke2 307. Ne5 Nf5'' 308. Qa6+ Kf2 309. Qa4 Ng3 310. Qb4 Ke3 311. Nc4+ Kd3'' 312. Nd6 Ke3'' 313. Ka7 Bd3 314. Qb6+ Kf3 315. Qd4 Be4 316. Kb8 Re2 317. Nf7 Bf5 318. Ng5+ Kg2° 319. Qd5+ Be4 320. Qb3 Bf5 321. Qf3+ Kh2'' 322. Qb7 Re8+ 323. Ka7'''' Re2'' 324. Qd5 Rf2 325. Nf3+ Kg2 326. Nd2+ Kh3 327. Qc6 Kg4 328. Qc3 Rf4'' 329. Nc4 Re4'' 330. Ne3+ Kg5'' 331. Qc5 Re6 332. Kb8 Re8+ 333. Kb7 Re6 334. Kc7 Re4 335. Kc6 Re8 336. Kb6 Re4 337. Ka5 Re6 338. Kb5 Re4'' 339. Nd5 Nh5 340. Ne7 Ng3 341. Qc1+ Kh4 342. Qh6+ Kg4'' 343. Nd5 Kf3 344. Qf6 Kg4 345. Qg7+ Kf3'' 346. Qc3+ Kf2'' 347. Qc5+ Kf3'' 348. Ka5 Bg4'' 349. Nf6 Rf4'' 350. Qc6+ Kf2'' 351. Nd5 Re4 352. Qf6+ Bf3 353. Nf4 Ne2 354. Nd3+ Ke3'' 355. Ne5 Rf4 356. Qb6+ Nd4'' 357. Kb4 Ke4'' 358. Nc4 Kf5 359. Qh6 Be2'' 360. Ne3+ Ke5'' 361. Qh8+ Ke4'' 362. Qe8+''' Kf3'' 363. Nd5'''' Re4'' 364. Qf7+ Kg3 365. Qg6+ Kf3 366. Nf6 Rf4 367. Qh5+ Kg3 368. Qg5+ Kf3'' 369. Kc3 Nb5+' 370. Kb3'''' Rc4'' 371. Nd5 Nd4+' 372. Kb2 Rc2+' 373. Kb1 Ke4'' 374. Nf6+ Kd3'' 375. Nd7 Bf3'' 376. Ne5+ Ke2'' 377. Qh4 Rd2'' 378. Nc4'''' Rd1+ 379. Kb2'''' Rd3'' 380. Qg5 Rb3+ 381. Ka2'''' Rd3'' 382. Qe5+ Kf2 383. Nb2 Rd2'' 384. Qf4 Ke2'' 385. Kb1 Bg2'' 386. Nc4 Rd3'' 387. Qh2 Kf1'' 388. Qh7 Rc3'' 389. Kb2 Rc2+' 390. Ka3 Rc3+' 391. Kb4'' Ne2 392. Ne5 Rh3 393. Qf5+ Ke1'' 394. Nd3+ Kd2'' 395. Nc5 Rg3 396. Qh7 Ke3 397. Qd3+ Kf2'' 398. Qc4 Rc3 399. Qh4+ Rg3 400. Ka5 Kg1 401. Qe7 Kf2'' 402. Qf6+ Ke1 403. Qh4 Kf1'' 404. Qd8 Ke1'' 405. Nd3+ Kd2'' 406. Nb4+ Kc1 407. Qe7 Kd2'' 408. Qd6+ Ke3'' 409. Nc2+ Kf2'' 410. Qe7 Rf3 411. Qh4+ Rg3'' 412. Ka6 Bh3 413. Qf6+ Rf3'' 414. Qa1 Rd3 415. Qe1+ Kf3'' 416. Qb4 Kg3'' 417. Qe7 Kf2'' 418. Ka5 Rc3 419. Qf8+ Rf3 420. Qb4 Rc3 421. Qb6+ Kg3'' 422. Ne3 Nf4'' 423. Nc4 Rf3 424. Qc7 Rf2 425. Qg7+ Kh2'' 426. Qe5 Kg3 427. Qg5+ Kh2 428. Kb6 Bg2 429. Ne3 Bh3 430. Qe5 Kg3 431. Nd5 Kg4'' 432. Qd4 Kg3 433. Qe3+ Rf3'' 434. Qe5 Kg4'' 435. Nf6+ Kg3'' 436. Ne4+ Kg2 437. Qc5 Ne2 438. Qc4 Nf4 439. Qc2+ Kh1 440. Qc5 Bg2 441. Nf2+ Kh2'' 442. Ng4+ Kh3 443. Qg5 Rb3+ 444. Ka5 Ra3+ 445. Kb4 Rf3'' 446. Ne5 Nd5+ 447. Kb5 Rf4'' 448. Kc5 Be4'' 449. Nc6 Rh4'' 450. Qd2 Kg4'' 451. Qe1 Bg2'' 452. Qe6+ Kg3'' 453. Nd4 Nf4'' 454. Qb3+ Kh2'' 455. Qe3 Rh5+ 456. Kd6'''' Rd5+ 457. Ke7'''' Nh3'' 458. Qd2 Kg3 459. Qc3+ Kh2'' 460. Qe3 Rg5 461. Qe2 Nf4 462. Qf2 Rg4 463. Nf5 Nd5+ 464. Ke6 Rg6+ 465. Kd7 Rg4 466. Qe1 Nf6+ 467. Kc7 Ne4 468. Qc1 Rg5 469. Qf4+''' Kg1'' 470. Ne3 Rg7+ 471. Kb6 Rg6+ 472. Ka5 Rg5+ 473. Kb4 Rg6 474. Qe5 Bf3 475. Qa1+ Kh2 476. Qb2+ Kh1 477. Qc1+ Rg1 478. Qc8 Rg3 479. Qh8+ Kg1'' 480. Qa1+ Kf2 481. Qd4 Rg5 482. Nf5+ Kg2'' 483. Qb2+ Kh3 484. Ne3 Rh5 485. Nf1 Kg4 486. Qg7+ Kh3 487. Qg1 Rh4 488. Ka3 Rf4 489. Qh2+ Kg4° 490. Ne3+ Kg5° 491. Nd5 Rf7 492. Qe5+ Kh4 493. Ne7 Ng5 494. Ng8 Ne4 495. Nh6 Rf6 496. Nf5+ Kg4 497. Ne3+ Kh4 498. Kb4 Rb6+ 499. Ka5 Rf6'' 500. Qh2+ Kg5° 501. Qh7 Ng3 502. Qg7+ Rg6 503. Qe5+ Kh6 504. Qf4+ Rg5+ 505. Kb6 Be2 506. Qf8+ Kh7 507. Nd5 Bc4 508. Nf6+ Kg6° 509. Nd7 Nh5 510. Qd6+ Kh7 511. Qe7+ Kh6 512. Qe3 Be6 513. Ne5 Bd5 514. Qd4 Bg8 515. Qd2 Nf6 516. Nf3 Nd5+ 517. Kb7 Kg7 518. Qxg5+

**{KQNKBN: dtc/m/z = -4/-8/-4m} {MB-YK DTC EGTs and Lomonosov DTM EGTs} \***

[White "KQN"]  
[Black "KRBN"]  
[Result "1-0"]  
[Date "2013.11.14"]  
[Event "7m, 3-4m, KQNKRB, GBR 1334.00, maxDTM 3-4m\_P-less l&w: SV+M/SV+M+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/1r6/8/6n1/5k2/1b6/3K3N/7Q b - - 0 1"]  
[PlyCount "1090"]

{1 of 24 maxDTM 3-4m\_P-less btm losses: dtc/m/z = -517/-545/-517m} 1... Rd7+''

{1 of 6 maxDTM 3-4m\_P-less wtm wins: dtm = 517/545/517m} 2. Kc3'''' Bd1'' 3. Qf1+'''' Bf3'' 4. Qc1+'''' Kf5''  
5. Kb2'''' Rb7+'' 6. Ka3'' Ra7+'' 7. Kb4'''' Rb7+'' 8. Ka5'' Ra7+'' 9. Kb6'''' Rb7+'' 10. Ka6'''' Re7'' 11. Qf1'' Re6+''  
12. Ka7' Re7+'' 13. Kb8' Re8+'' 14. Kc7'''' Re3'' 15. Kc8'' Rc3+'' 16. Kb8'''' Kf4'' 17. Qg1'''' Ne4'' 18. Nf1''''  
Rb3+'' 19. Ka7'''' Rd3'' 20. Qh2+'''' Kf5'' 21. Kb8'' Nf6'' 22. Nd2'''' Bd5'' 23. Qf2+'''' Ke5'' 24. Qe2+'' Kd4'' 25.  
Ka7'''' Nd7'' 26. Qg4+'''' Kc5'' 27. Qg1+'''' Kb4'' 28. Qb1+'''' Kc3'' 29. Qc1+'' Kd4'' 30. Qb2+'' Kc5'' 31. Qc2+''''  
Kd4'' 32. Qa4+'''' Kc5'' 33. Qa5+'' Kd4'' 34. Qb4+'' Ke5'' 35. Ka6'' Kf5'' 36. Qb1' Ne5' 37. Kb5'''' Bc6+' 38.  
Kb4'''' Bd5'' 39. Qf1+'' Kg6' 40. Qe2' Kf6' 41. Qh5' Ke6'' 42. Qg5'' Nc6+'' 43. Kb5'' Ne5'' 44. Qh6+'' Kf5'' 45.  
Nf1'' Bc6+'' 46. Kb4'' Rd4+'' 47. Kb3' Rd3+'' 48. Ka2'''' Bd5+'' 49. Kb1'''' Nc4'' 50. Qh5+'''' Kf6'' 51. Qh4+''  
Ke6'' 52. Ng3'''' Rb3+'' 53. Kc1'''' Rc3+'' 54. Kd1'' Re3'' 55. Nf1'''' Ra3'' 56. Qf4' Kd7'' 57. Ke1'' Kc6'' 58.  
Qh6+'' Kc5'' 59. Kf2'' Rb3'' 60. Qh8'' Ra3'' 61. Qb8' Kc6'' 62. Qb1'' Rc3'' 63. Kg1'' Ra3'' 64. Qc2' Kb6'' 65. Qf5'  
Kc5'' 66. Qf8+'' Kb5'' 67. Qe8+'' Kc5'' 68. Qe2'' Rf3'' 69. Qe7+'' Kd4'' 70. Qg7+'' Kc5'' 71. Qg5'' Kc6'' 72. Qh4''  
Kb5'' 73. Qe7'' Kb6'' 74. Qb4+'' Kc6'' 75. Qe1'' Ra3'' 76. Qf2'' Rf3'' 77. Qd4'' Kd6'' 78. Qh4'' Kc5'' 79. Nh2''  
Ra3'' 80. Ng4'' Ra1+'' 81. Kf2'''' Ra2+'' 82. Kg3'''' Ra3+'' 83. Kf4'' Rf3+'' 84. Kg5° Be6'' 85. Nf6'''' Ne5'' 86.  
Nh5'' Rf5+'' 87. Kh6° Ng4+'' 88. Kg6'''' Ne5+'' 89. Kh7' Rf7+'' 90. Kh6'''' Ng4+'' 91. Kg5'' Ne5'' 92. Qa4''''  
Rf5+'' 93. Kh6'''' Bc4'' 94. Qa5+'' Kd4'' 95. Qb6+'' Kd5'' 96. Qd8+'' Ke4'' 97. Qd1'' Ke3'' 98. Qc1+'' Kd4'' 99.  
Ng3'' Rf6+'' 100. Kh5' Kd5'' 101. Kh4'' Rg6'' 102. Kh3'' Bd3'' 103. Qf4'' Rg8'' 104. Qb4'' Bc4'' 105. Qd2+''  
Ke6'' 106. Qh6+'' Kd5'' 107. Qh7'' Kc5'' 108. Kh2'' Rg6'' 109. Qe7+'' Kd5'' 110. Qd8+'' Ke6'' 111. Qf8'' Kd5''  
112. Kh3'' Bb5'' 113. Qa3'' Bc6'' 114. Kg2'' Rf6'' 115. Kh2'' Nf3+'' 116. Kh3'''' Rh6+'' 117. Kg2'''' Nd4'' 118.  
Qe7'' Kc4+'' 119. Kg1'''' Rg6'' 120. Qf7+'' Re6'' 121. Qf4'' Kd3'' 122. Qf1+'' Kc3'' 123. Qc1+'' Kb4'' 124. Kh2''  
Rf6'' 125. Kh3'' Bd7+'' 126. Kg2'''' Bc6+'' 127. Kh2'''' Rf3'' 128. Qd1'' Kc5'' 129. Nh5'' Kd5'' 130. Qh1' Ke6'  
131. Qg1' Ke5' 132. Qg7+' Ke4'' 133. Qc7'' Kd5' 134. Nf4+'' Kc4'' 135. Qb8'' Rc3'' 136. Qa7' Be4'' 137. Qb6'  
Bc6'' 138. Qa6+'' Kc5'' 139. Nd3+'' Kd6'' 140. Nb2'' Rb3'' 141. Nd1'' Nf3+'' 142. Kg3' Nd4+'' 143. Kf2'' Rf3+''  
144. Ke1'' Kd5'' 145. Qb6' Kc4'' 146. Qa7'' Bb5'' 147. Nf2'''' Nc2+'' 148. Kf1'' Bc6'' 149. Qa6+'' Kc5'' 150. Qa2''  
Nd4'' 151. Kg1'''' Rf5'' 152. Kh2'' Rh5+'' 153. Kg3'''' Rg5+'' 154. Kf4'''' Rf5+'' 155. Kg4'''' Bf3+'' 156. Kh4'  
Rh5+'' 157. Kg3° Rg5+'' 158. Kf4'''' Rf5+'' 159. Ke3'''' Re5+'' 160. Kd3'''' Be2+'' 161. Kd2'''' Kb4'' 162. Qg8''  
Bb5'' 163. Qg4'' Re2+' 164. Kc1'''' Kc4'' 165. Nd1'''' Rc2+'' 166. Kb1° Rd2'' 167. Qc8+'' Bc6'' 168. Qg8+''''  
Kb4'' 169. Nb2'' Be4+'' 170. Ka2'''' Nb5'' 171. Qb3+'''' Ka5'' 172. Ka1'''' Bd5'' 173. Qa4+'''' Kb6° 174. Qb4''''  
Rd4'' 175. Qe1'' Be4' 176. Nd1'' Rc4'' 177. Qe3+'' Kc6'' 178. Kb2'' Rc2+'' 179. Kb3'' Nd6'' 180. Qh6'' Rc5'' 181.  
Nc3'' Bd5+'' 182. Kc2'' Kd7'' 183. Qg7+'' Kc6'' 184. Kd1'' Bf7' 185. Kd2'' Bc4'' 186. Ke1'' Ra5'' 187. Qf6'' Rf5''  
188. Qg6'' Kc7'' 189. Qg7+'' Rf7'' 190. Qg3'' Kc6'' 191. Qg2+'' Kc7'' 192. Qh2'' Kc6'' 193. Qh1+'' Kc5'' 194.  
Qh8'' Re7+'' 195. Kd1'''' Re8'' 196. Qh2'' Re3'' 197. Kc2'' Rd3'' 198. Qe5+'' Kc6'' 199. Qh5'' Rg3'' 200. Qa5''  
Rh3'' 201. Kd2'' Rh2+'' 202. Ke3'' Rh3+'' 203. Kf4'' Rd3'' 204. Na4'' Rd4+'' 205. Kf3'' Rd3+'' 206. Kg4'' Rd4+''  
207. Kh3'' Ne4'' 208. Qa7'' Be6+'' 209. Kg2'''' Rb4'' 210. Qa6+'''' Kd5'' 211. Kf3'' Kd4'' 212. Qe2'' Kd5'' 213.  
Ke3'' Bd7'' 214. Nb2'' Bb5'' 215. Qh5+'' Ke6'' 216. Nd1'' Nf6'' 217. Qh3+'' Kf7' 218. Kd2'' Rd4+'' 219. Kc1''  
Rc4+'' 220. Kb2'' Rb4+'' 221. Ka3'' Ra4+'' 222. Kb3'''' Rd4'' 223. Nc3'' Bc4+'' 224. Kc2'''' Be6' 225. Qe3'' Rh4''  
**{and here, this SM line diverges from the SC line above}** 226. Ne2'' Rc4+' 227. Kd2'' Rc5'' 228. Nd4'' Bg4''  
229. Qb3+'' Kg7'' 230. Qb7+'' Kg6'' 231. Qb4'' Rc7'' 232. Nb5'' Rh7'' 233. Qb1+'' Bf5'' 234. Qg1+'' Ng4'' 235.  
Kc1'' Kg5'' 236. Qc5'' Rh1+'' 237. Kb2'' Re1'' 238. Nd4'' Ne5'' 239. Qe7+'' Kh5'' 240. Qf6'' Bg4'' 241. Nb5''  
Re3'' 242. Nc7'' Ng6'' 243. Nd5'' Re4'' 244. Qf1' Kg5'' 245. Nc3'' Rb4+' 246. Ka1'' Rd4' 247. Qe1' Rf4' 248.  
Nb5' Rf6' 249. Nc7' Rf4' 250. Kb2'' Rf3' 251. Ne8'' Rf4'' 252. Qe3'' Kh5'' 253. Qa7'' Rb4+' 254. Kc3'' Rf4'' 255.  
Qh7+'' Kg5° 256. Nd6'' Be6'' 257. Qg7'' Ra4'' 258. Kd2'' Ra2+'' 259. Kd1'' Ra4'' 260. Kc1'' Kh5'' 261. Qc3''

Nf4' 262. Qe3' Ra1+' 263. Kc2' Ra2+' 264. Kb1'' Kg4'' 265. Ne4'' Kf5'' 266. Nd2'' Bd5'' 267. Nf1'' Ra8'' 268. Qb6'' Rc8'' 269. Ne3+''' Ke5'' 270. Nc2'' Rc4'' 271. Qb8+''' Ke4'' 272. Qa7'' Be6'' 273. Qe3+''' Kd5'' 274. Kb2'' Bf5'' 275. Ne1'' Ne6' 276. Nf3'''' Rb4+''' 277. Ka3'' Re4'' 278. Qc3' Kd6'' 279. Kb2'' Nc5' 280. Qd2+''' Kc7'' 281. Nd4'' Be6'' 282. Qh2+''' Kd7'' 283. Qh8'' Kc7'' 284. Kc2'' Kd6'' 285. Kc3'' Bd7'' 286. Nc2'' Be6'' 287. Qf8+''' Kc6'' 288. Nd4+''' Kd5'' 289. Qa8+''' Ke5'' 290. Nb5'' Rc4+''' 291. Kd2'''' Kf4'' 292. Qb8+''' Kg5'' 293. Qh8'' Kg6'' 294. Qe5'' Bf5'' 295. Qe8+''' Kg7'' 296. Qb8'' Ne4+''' 297. Ke2'' Rc8'' 298. Qf4'' Re8'' 299. Kd3'' Rf8'' 300. Nd4'' Nd6+''' 301. Kc3'' Rf6'' 302. Kb4'' Be4'' 303. Qg4+''' Kf8'' 304. Qd7'' Bf5'' 305. Qc7'' Bg4'' 306. Qc5'' Bd7'' 307. Qg5'' Kf7'' 308. Qe5'' Ne8'' 309. Qd5+''' Ke7'' 310. Kc3'' Ra6'' 311. Qe5+''' Kf8'' 312. Qg5'' Rf6'' 313. Qa5'' Kf7'' 314. Qd5+''' Ke7'' 315. Qh5'' Ng7'' 316. Qg5' Kf7'' 317. Qd5+''' Be6'' 318. Qd8'' Rh6'' 319. Qc7+''' Kg8'' 320. Qb8+''' Kf7'' 321. Nf3'' Rh5'' 322. Qc7+''' Kg6'' 323. Qg3+''' Kf6'' 324. Qf4+''' Bf5'' 325. Qd4+''' Kg6'' 326. Ne5+''' Kh7'' 327. Nc6'' Be6'' 328. Qf4'' Rf5'' 329. Qh2+''' Rh5'' 330. Qc2+''' Kg8'' 331. Qf2'' Nf5'' 332. Qf4'' Rh3+''' 333. Kb2'' Rh5'' 334. Ne5'' Ng7'' 335. Ng6'' Kh7'' 336. Ne7'' Bh3' 337. Qf7' Be6'' 338. Qg6+''' Kh8° 339. Qe4'' Rh2+''' 340. Kc1' Rh6'' 341. Qc6' Kh7'' 342. Qc2+''' Kh8'' 343. Qe4'' Nh5'' 344. Ng6+''' Kg7'' 345. Ne5'' Rf6'' 346. Qb7+''' Kg8'' 347. Qe7'' Bf7'' 348. Ng4'' Rc6+''' 349. Kb2' Rb6+''' 350. Ka3'' Ra6+''' 351. Kb4'''' Rg6'' 352. Qh4'' Re6'' 353. Qd8+''' Kg7'' 354. Qg5+''' Rg6'' 355. Qe5+''' Nf6'' 356. Ne3'' Kh7'' 357. Nf5'' Nh5'' 358. Nd6'' Rg4+''' 359. Kc3'' Rg3+''' 360. Kd2'' Rg2+''' 361. Ke1'' Bg6'' 362. Qe7+''' Kh6'' 363. Nc4'' Rg1+''' 364. Kf2'' Rg4'' 365. Ne5'' Rf4+''' 366. Ke2' Nf6'' 367. Qf8+''' Kh7'' 368. Qc5'' Bh5+' 369. Ke1'' Rf5'' 370. Qa7+''' Kh6'' 371. Qe3+''' Kh7'' 372. Nc6'' Kg7'' 373. Qg3+''' Kh6'' 374. Qd6'' Kg5'' 375. Nd4'' Rd5'' 376. Qc7'' Kg6'' 377. Nc6'' Rd1+''' 378. Kf2° Ne4+''' 379. Ke3'''' Nd6'' 380. Ne5+''' Kf6'' 381. Nd7+''' Kg6'' 382. Nf8+''' Kf6'' 383. Qd8+''' Kf7'' 384. Nd7'''' Ne8'' 385. Ne5+''' Kg8'' 386. Qb8'' Rf1'' 387. Qb3+''' Kg7'' 388. Qd3' Rf6'' 389. Qd7+''' Kh6'' 390. Qh3'' Kg5'' 391. Kd2'' Nd6'' 392. Kc1'' Nf7'' 393. Qe3+''' Kf5'' 394. Nd3'' Rd6'' 395. Qf4+''' Kg6'' 396. Nc5'' Rf6'' 397. Qe4+''' Kh6'' 398. Qd4'' Kg6'' 399. Nd7'' Rf5'' 400. Nf8+''' Kh6'' 401. Ne6'' Ne5'' 402. Qd8'' Bf7'' 403. Nd4'' Rf1+''' 404. Kc2'' Rf2+''' 405. Kc3'''' Ng6'' 406. Kd3'' Rf1'' 407. Kd2'' Rf2+''' 408. Ke3'' Rf4'' 409. Qd7'' Rf6'' 410. Qg4'' Ne7'' 411. Kd2'' Rf2+''' 412. Kc1'' Rf1+''' 413. Kb2'' Rf2+''' 414. Ka3'' Rf6'' 415. Qg3'' Nd5'' 416. Nf3'' Ra6+''' 417. Kb2'' Rb6+''' 418. Kc1'' Rc6+''' 419. Kd2'' Nf6'' 420. Ke1'' Re6+''' 421. Kd1'' Ne8'' 422. Ne5'' Bh5+''' 423. Kc2'' Nf6'' 424. Kd3'' Nh7'' 425. Kd4'' Rf6'' 426. Qh3'' Rf4+''' 427. Kc3'' Ng5'' 428. Qh2'' Ne6'' 429. Qh1'' Kg5'' 430. Qa8'' Rf6'' 431. Qg2+''' Kh6'' 432. Qh1'' Rf5'' 433. Ng4+''' Kg7'' 434. Ne3'' Re5'' 435. Qg2+''' Bg6'' 436. Qb2'' Kh7'' 437. Ng4'' Rc5+''' 438. Kb4'''' Rg5'' 439. Nf6+''' Kh6'' 440. Ng8+''' Kh7'' 441. Ne7'' Rg4+''' 442. Ka3'' Rg3+''' 443. Ka2'' Nf4'' 444. Qf6'' Rg2+''' 445. Ka3' Rg3+''' 446. Ka4'' Nh5'' 447. Qe6'' Kg7'' 448. Qg8+''' Kf6'' 449. Nd5+''' Kg5'' 450. Qd8+''' Kh6'' 451. Qf8+''' Kh7'' 452. Qe7+''' Kg8'' 453. Qd6'' Kg7'' 454. Qe5+''' Kh6'' 455. Ne3'' Rf3'' 456. Ng4+''' Kh7° 457. Qg5'' Rf4+''' 458. Kb3'' Be8'' 459. Kb2' Bf7'' 460. Ka3'' Rf3+''' 461. Kb4'' Rf4+''' 462. Kb5'' Rd4'' 463. Kc6'' Be8+''' 464. Kc5'' Rf4'' 465. Kd6'' Re4'' 466. Qf5+''' Bg6'' 467. Qd7+''' Kh8'' 468. Qd8+''' Kh7'' 469. Qc7+''' Kg8'' 470. Qc5'' Kh7'' 471. Qa7+''' Kg8'' 472. Qg1'' Kh7'' 473. Ne5'' Bf5'' 474. Qh1'' Kh6'' 475. Qh2'' Ra4'' 476. Qg2'' Kh7'' 477. Ke7'' Ra7+''' 478. Kf8'' Rg7'' 479. Qf2' Bg6'' 480. Qf3'' Rg8+''' 481. Ke7° Rg7+''' 482. Kd6'' Be8'' 483. Qf5+''' Bg6'' 484. Qg5'' Bf7'' 485. Qh4' Be8'' 486. Kc5'' Rc7+''' 487. Kb6'' Rg7'' 488. Qd8'' Bg6'' 489. Ka5'' Bf5'' 490. Qh4'' Kh6'' 491. Qf2'' Bb1'' 492. Qf1' Bg6'' 493. Qc1+''' Kh7'' 494. Qg5'' Be8'' 495. Qf5+''' Kg8'' 496. Qe6+''' Kf8'' 497. Qd6+''' Kg8'' 498. Qd8'' Kf8'' 499. Qb8'' Ke7'' 500. Kb4'' Nf6'' 501. Qc7+''' Bd7'' 502. Kc5'' Ke6'' 503. Kd4'' Ng4'' 504. Qb6+''' Kf5'' 505. Nf3'' Be6'' 506. Kc3'' Kf6'' 507. Nd4'' Re7'' 508. Qd8'' Bd7'' 509. Nf3'' Be6'' 510. Kd4'' Nh6'' 511. Qh8+''' Kg6'' 512. Ne5+''' Kg5'' 513. Qd8'' Nf5+''' 514. Kd3'' Kf6'' 515. Nc6'' Kf7'' 516. Nxe7'' Nxe7'' **{KQKBN: dtc/m/z = -19/-30/-19m}** 517. Qd6' Ng6' 518. Kd4' Nf8' 519. Qd8'' Ng6' 520. Kc5'' Kg7'' 521. Qd4+''' Kg8' 522. Qf6'' Bf7'' 523. Kd4'' Kf8'' 524. Qd6+''' Ke8'' 525. Ke4'' Ne7'' 526. Ke5'' Bg8'' 527. Qd3' Kf8'' 528. Qf3+''' Bf7'' 529. Qa3'' Ke8'' 530. Qc5'' Ng8'' 531. Qc8+''' Ke7° 532. Qb8'' Be8'' 533. Qc7+''' Bd7'' 534. Qd6+''' Ke8'' 535. Qb8+''' Kf7'' 536. Qb7'' Ke8'' 537. Qa8+''' Kf7'' 538. Qd5s+''' Be6' 539. Qxe6+''' **{KQKN: dtc/m/z = -6/-7/-6m}** Kg7'' 540. Qe8' Nh6' 541. Ke6'' Ng8' 542. Qh5'' Nh6'' 543. Qg5+''' Kh7' 544. Ke7'' Ng8+' 545. Kf8'' Nh6' 546. Qg7''# **{Lomonosov DTM EGTs}** \*

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[Black "KRBN"]  
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[Date "2013.09.30"]  
[Event "7m, 3-4m, KQPKRBN, GBR 1333.10, maxDTM s8m w&l: SV+M/SV+M+"]  
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[SetUp "1"]  
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[PlyCount "1097"]

{MVL team (2012) 2012-12-14; entry #393 (Krabbé, 2014)}

{1 of 3 maxDTM s8m wtm wins, the others having the R on b1/b2: dtm = 549m} 1. Kf5'''

{1 of 3 maxDTM s8m btm losses: dtm = -548m} Rb5+' 2. Kg4'''' Rb4+' 3. Kf3'''' Nd7'' 4. Qh8+'''' Ke7'' 5. g7'''' Bf6'' 6. g8=N+'''' {KQNKRBN: dtm = -543m} Ke6'' 7. Qh3+'''' Kd6'' 8. Kg2'''' Rb2+' 9. Kf1'' Rb1+' 10. Ke2'' Rb2+' 11. Kd1'' Rb1+' 12. Kc2'' Rb2+' 13. Kc1'' Rb5'' 14. Qh6'' Rc5+' 15. Kb1' Rb5+' 16. Ka2' Ra5+' 17. Kb3'' Rf5'' 18. Ka3'' Rf3+' 19. Ka2'''' Ke6'' 20. Qh7'''' Ne5'' 21. Nh6'''' Rf2+' 22. Kb1'''' Rf4'' 23. Qg8+'''' Kd6'' 24. Ka2'' Nc6'' 25. Ng4'''' Bd4'' 26. Qg6+'''' Kd5'' 27. Qg5+' Ke4'' 28. Kb1'' Nb4'' 29. Qe7+'''' Kd3'' 30. Qh7+'''' Ke2'' 31. Qh2+'''' Kf3'' 32. Qh3+' Ke4'' 33. Qg2+' Kd3'' 34. Qg3+'''' Ke4'' 35. Qe1+'''' Kd3'' 36. Qd1+' Ke4'' 37. Qe2+' Kd5'' 38. Kc1'' Kd6'' 39. Qh2' Nd5'' 40. Kd2'''' Bc3+' 41. Ke2'''' Bd4'' 42. Qh6+' Kd7'' 43. Qh7+' Kc6'' 44. Qg8' Kc5'' 45. Kd3'' Nb4+' 46. Kd2'' Nd5'' 47. Qc8+' Kd6'' 48. Nh6'' Bc3+' 49. Ke2'' Re4+' 50. Kf2' Rf4+' 51. Kg1'' Bd4+' 52. Kh2'''' Ne3'' 53. Qd8+'''' Kc6'' 54. Qe8+' Kc5'' 55. Nf7'''' Rf2+' 56. Kh3'''' Rf3+' 57. Kh4'' Rf5'' 58. Nh6'''' Rf1'' 59. Qa8' Kb4'' 60. Kh5'' Kc3'' 61. Qc8+' Kd3'' 62. Kg6'' Rf2'' 63. Qa8'' Rf1'' 64. Qb8' Kd2'' 65. Qb3' Ke2'' 66. Qb5+' Kd2'' 67. Qg5'' Kc2'' 68. Kh7'' Kd3'' 69. Qb5+' Kc3'' 70. Qa5+' Kd3'' 71. Qg5'' Rf6'' 72. Qb5+' Ke4'' 73. Qb7+' Kd3'' 74. Qd7'' Kc3'' 75. Qe8'' Kd2'' 76. Qb5'' Kc2'' 77. Qe2+' Kc3'' 78. Qh5'' Rf1'' 79. Qg6'' Rf6'' 80. Qe4'' Kc4'' 81. Qe8'' Kd3'' 82. Ng8'' Rf1'' 83. Ne7'' Rh1+' 84. Kg6'''' Rg1+' 85. Kf7'''' Rf1+' 86. Ke6'' Rf6+' 87. Kd7° Bc5'' 88. Nc6'''' Nd5'' 89. Nd8'' Rd6+' 90. Kc8° Ne7+' 91. Kc7'''' Nd5+' 92. Kb7' Rb6+' 93. Kc8'''' Ne7+' 94. Kd7'' Nd5'' 95. Qe1'' Rd6+' 96. Kc8'''' Be3'' 97. Qd1+' Ke4'' 98. Qc2+' Kd4'' 99. Qa4+' Ke5'' 100. Qh4'' Kf5'' 101. Qh3+' Ke4'' 102. Nf7'' Rc6+' 103. Kd8' Kd4'' 104. Ke8'' Rc7'' 105. Kf8'' Bf4'' 106. Qe6'' Ra7'' 107. Qe2'' Be3'' 108. Qg4+' Kc5'' 109. Qe8+' Kd4'' 110. Qb8'' Kd3'' 111. Kg8'' Rc7'' 112. Qb5+' Kd4'' 113. Qa4+' Kc5'' 114. Qa6'' Kd4'' 115. Kf8'' Bd2'' 116. Qf1'' Bc3'' 117. Kg7'' Rc6'' 118. Kg8'' Nf6+' 119. Kf8'' Rc8+' 120. Kg7'''' Ne4'' 121. Qb5'' Ke3+' 122. Kh7'''' Rc7'' 123. Qb6+' Rc5'' 124. Qe6'' Kf4'' 125. Qh6+' Kf3'' 126. Qh3+' Ke2'' 127. Kg8'' Rc6'' 128. Kf8'' Bb4+' 129. Kg7'''' Bc3+' 130. Kg8'' Rf6'' 131. Qh4'' Kd3'' 132. Nd8'' Kd4'' 133. Qg4' Ke5'' 134. Qe2' Kf4'' 135. Qc4'' Kf3'' 136. Qb3'' Kf2'' 137. Ne6'' Ke3'' 138. Qa2'' Rf3'' 139. Qc2' Be5'' 140. Qd1' Bc3'' 141. Qc1+' Kd3'' 142. Nf4+' Kc4'' 143. Ng2'' Rf2'' 144. Nh4'' Nf6+' 145. Kg7' Ne4+' 146. Kg6' Rf6+' 147. Kh5'' Kd4'' 148. Qd1+' Ke3'' 149. Qb1'' Bd2'' 150. Ng6'' Ng3+' 151. Kh6'' Bc3'' 152. Qc1+' Kd3'' 153. Qg1'' Ne4'' 154. Kh7'''' Rd6'' 155. Kg8'' Rd8+' 156. Kf7'''' Rd7+' 157. Ke6'''' Rd6+' 158. Ke7'''' Bf6+' 159. Ke8' Rd8+' 160. Kf7° Rd7+' 161. Ke6'''' Rd6+' 162. Kf5'''' Rd5+' 163. Kf4'''' Bg5+' 164. Kg4'''' Ke2'' 165. Qa7'' Bd2'' 166. Qe7'' Rg5+' 167. Kh3'''' Ke3'' 168. Nh4'''' Rg3+' 169. Kh2° Rg4'' 170. Qa3+'''' Bc3'' 171. Qa7+'''' Ke2'' 172. Ng2'' Be5+' 173. Kg1'''' Nd2'' 174. Qf2+'''' Kd1'' 175. Kh1'''' Bd4'' 176. Qe1+'''' Kc2° 177. Qe2'''' Re4'' 178. Qh5'' Nf1'' 179. Qd5'' Nd2'' 180. Qf5'' Kd1'' 181. Nf4'' Be5'' 182. Qh5+' Kc2'' 183. Ng6'' Bf6'' 184. Kg2'' Bg5'' 185. Qh7'' Kd1'' 186. Qh8'' Be3'' 187. Qh5+' Kc2'' 188. Nh4' Bd4'' 189. Nf5'' Be5'' 190. Qe8' Rg4+' 191. Kh3'''' Re4'' 192. Qc8+' Kd1'' 193. Qc5' Nc4'' 194. Nh6'' Nd2'' 195. Ng4'' Bd4'' 196. Qb5'' Rf4'' 197. Kh4'' Be3'' 198. Qd3' Bd4'' 199. Kh5'' Re4'' 200. Qa3'' Rf4'' 201. Qd6'' Re4'' 202. Nh6'' Bf2'' 203. Kg6'' Rc4'' 204. Qe5'' Bb6'' 205. Qg3'' Rc6+' 206. Kg7'' Rc4'' 207. Nf7'' Bc7'' 208. Qg1+' Kc2'' 209. Nh6'' Be5+' 210. Kg8'' Re4'' 211. Nf5'' Bf4'' 212. Qh1' Be5'' 213. Qh3'' Kd1'' 214. Kf8'' Bf4'' 215. Qg4+' Ke1'' 216. Qg2'' Be5'' 217. Qh1+' Ke2'' 218. Ke8' Bg3+' 219. Kd7'' Bf2'' 220. Ne7'' Rd4+' 221. Nd5'' Kd3'' 222. Kc6'' Rh4'' 223. Qg2'' Rc4+' 224. Kb5'' Be3'' 225. Qh1'' Bc5'' 226. Qh7+' Ke2'' 227. Qh5+' Ke1'' 228. Kc6'' Bd4+' 229. Kd6'' Bf2'' 230. Kd7'' Rd4'' 231. Qh1+' Ke2'' 232. Ke6'' Rh4'' 233. Qg2'' Rc4'' 234. Ke7'' Nf3'' 235. Qh3'' Re4+' 236. Kd8'' Rd4'' 237. Qh5'' Bg3'' 238. Qe8+' Be5'' 239. Qb5+' Kf2'' 240. Kc8'' Re4'' 241. Kb7'' Bd4'' 242. Qc6'' Rg4'' 243. Ka6'' Rg7'' 244. Nb4'' Re7'' 245. Nd3+' Ke3'' 246. Qc1+' Ke4'' 247. Nb4'' Re5'' 248. Qb1+' Ke3'' 249. Qc2'' Rc5'' 250. Qd3+' Kf4'' 251. Qe2'' Kg3'' 252. Qe7'' Rh5'' 253. Nd3'' Rh6+' 254. Ka5' Rh4'' 255. Qe6' Bc3+' 256. Ka6' Bd4'' 257. Qc6' Be3'' 258. Qe8'' Bd4'' 259.



Qb8+" Kg2" 260. Qg8+" Kh3" 261. Qg6" Rg4" 262. Qc6" Kg3" 263. Qc7+" Kh3" 264. Nf4+" Kh4" 265. Qd6" Kg3" 266. Ng6+" Kf2" 267. Qe6" Rg1' 268. Nf4" Ra1+" 269. Kb7"" Ra7+" 270. Kb8" Ra3" 271. Qe2+" Kg3" 272. Nd3" Rb3+' 273. Kc8' Rb6" 274. Qe4" Rf6" 275. Kd7" Bc3' 276. Nc5" Bd4" 277. Ne6" Be5" 278. Ng5" Bb2" 279. Qe3"" Kg4" 280. Ne4" Rf7+" 281. Kc6" Rf5" 282. Nf2+" Kg3" 283. Nd3" Be5" 284. Kd7" Rf7+" 285. Ke8" Rf5" 286. Qc5" Kg4" 287. Nf2+' Kg5" 288. Qd5" Kg6" 289. Nd3" Bg7" 290. Qe4' Kg5" 291. Ke7" Bd4" 292. Kd7" Rf6' 293. Kc8" Rf8+" 294. Kb7" Rf7+" 295. Ka6" Rf6+" 296. Ka5' Bc3+" 297. Ka4" Ra6+" 298. Kb5"" Ra5+" 299. Kb6' Rf5" 300. Qe7+" Kg6" 301. Qe8+" Kg5" 302. Kb7" Bd4" 303. Qe7+' Kh5' 304. Qe4" Rf7+' 305. Ka6" Rf6+' 306. Kb5" Kg5" 307. Nb4" Be5' 308. Nd5" Rf5' 309. Qe3+' Kh5' 310. Ka6" Rf7' 311. Qf2" Ng5' 312. Qc2" Nf3" 313. Qc8" Kg5" 314. Qe6" Rf5" 315. Kb7" Bd4" 316. Qe7+" Bf6" 317. Qe3+" Kh5" 318. Qe4" Kg5" 319. Nc7" Nd4" 320. Qg2+" Kh5' 321. Nd5" Nf3" 322. Ne3' Rf4" 323. Qh3+" Nh4" 324. Qe6" Kg5" 325. Qd5+" Kg6' 326. Qd6' Kg5" 327. Qc5+" Kg6' 328. Qc7" Kg5" 329. Nd5" Rf3" 330. Qc1+" Kg4" 331. Ne3+" Kg5" 332. Nc4+" Rf4" 333. Nb6" Kg4" 334. Qd1+" Kg3' 335. Nd5" Rf3" 336. Qd2" Kg4" 337. Ne3+" Kh5" 338. Nc4" Bg5" 339. Qd1" Bf4" 340. Nb6" Bg3' 341. Nd7" Kg5" 342. Qd5+" Rf5" 343. Qe4" Rf4" 344. Qe7+" Kg4" 345. Qe6+" Kf3" 346. Nf6" Kg2" 347. Qd5+" Kh2" 348. Ne4" Nf5" 349. Ng5" Nd6+' 350. Kb6' Bf2+" 351. Kc7" Bg3" 352. Kd7" Nf5" 353. Qd2+" Rf2" 354. Qd1' Rf4" 355. Qe2+" Rf2" 356. Qh5+" Kg2" 357. Kc6" Rc2+" 358. Kd5" Rd2+" 359. Kc4" Rf2" 360. Qh3+" Kg1° 361. Kb4' Rf1" 362. Ka5" Rf4" 363. Ka6" Ra4+" 364. Kb5" Rf4" 365. Ka5" Rf2" 366. Qh8" Kg2" 367. Qc3" Rf4" 368. Qd2+" Kf1" 369. Qd5" Nd4" 370. Kb6" Bf2" 371. Kc7" Rh4" 372. Qe5" Kg2" 373. Ne4" Kf3" 374. Nd2+" Kg2" 375. Qd5+" Kh2" 376. Kb7" Rh7+" 377. Ka6" Rh6+" 378. Ka5"" Rh4" 379. Qd6+" Kh3" 380. Qd7+" Kg2" 381. Qb7+" Kg3" 382. Qg7+" Rg4" 383. Nf1+" Kh3" 384. Qd7" Kh4" 385. Qh7+' Kg5° 386. Qg7+" Kf4" 387. Qc7+" Kg5" 388. Nd2" Rf4" 389. Qg7+" Kf5" 390. Nc4" Nf3" 391. Nd6+" Ke6° 392. Ne8" Kf5" 393. Ka6" Bd4" 394. Nd6+" Ke6° 395. Qg8+" Kf6" 396. Qh7" Ke6" 397. Ne4" Kd5" 398. Qb7+" Ke6" 399. Ng3" Be5" 400. Qb3+" Kd6" 401. Qb6+" Ke7" 402. Ne4" Kf7" 403. Qh6" Kg8" 404. Qe6+" Kh8" 405. Qe7" Rf5" 406. Kb6" Bg7" 407. Ng3" Rf6+" 408. Kb5" Nd4+" 409. Kc4"" Rc6+" 410. Kd3" Rc3+" 411. Ke4" Rc6" 412. Qe8+" Kh7" 413. Kd3" Rd6" 414. Qh5+" Kg8" 415. Ne4" Rd8" 416. Ke3" Bh6+" 417. Kf2" Rf8+" 418. Kg2" Kh7" 419. Ng3" Ne6" 420. Qh4" Ng7' 421. Qe4+" Kg8" 422. Qd5+" Kh7" 423. Qd6" Rf7" 424. Qd3+" Kg8" 425. Qd5" Bc1" 426. Kh3" Ba3" 427. Kg4" Be7" 428. Qc4" Kf8" 429. Qc8+"" Ne8" 430. Nf5" Rf6" 431. Qd7" Rf7" 432. Qd3' Bf6" 433. Qe3" Be7' 434. Qh6+" Kg8" 435. Qh1" Rh7" 436. Qd5+" Kf8" 437. Kf3" Nf6' 438. Qe5' Ne8" 439. Ke2" Bf6' 440. Qd5" Rf7" 441. Kd2" Bg5+' 442. Kc2' Rc7+' 443. Kb2" Bf6+' 444. Kb1" Rh7" 445. Qf3' Ra7" 446. Qb3" Rc7" 447. Qb4+" Kf7" 448. Qb6" Rd7" 449. Qb3+" Kf8" 450. Nh6" Rg7" 451. Qa3+" Be7" 452. Qf3+" Bf6" 453. Ng4" Ke7" 454. Kc2" Rg5" 455. Qe3+" Kf7" 456. Qb3+" Kf8" 457. Qe6" Bg7" 458. Ne3" Re5" 459. Qb6" Bf6" 460. Ng4" Rf5" 461. Qe6" Rf4" 462. Qc8" Bd4" 463. Qd7" Bg7" 464. Ne3" Rf2+" 465. Kb1" Rf7" 466. Qc8" Rc7" 467. Qa6" Rd7" 468. Qa3+' Kf7" 469. Qb3+" Kf8" 470. Qb4+" Nd6" 471. Qf4+" Kg8" 472. Nd5" Nf7" 473. Qc4" Ra7" 474. Nf4" Rb7+" 475. Kc2" Rb2+" 476. Kd1" Rb6" 477. Qc8+" Kh7" 478. Qc7" Rd6+" 479. Ke2" Kg8" 480. Qe7" Bf8" 481. Qe8" Ng5" 482. Qc8" Rf6' 483. Qg4" Bh6" 484. Nh5" Re6+" 485. Kf1' Re5" 486. Qc8+' Bf8" 487. Qc2" Re6" 488. Qa2' Kh7" 489. Qg2' Kh6" 490. Qh1" Rb6" 491. Nf4+" Kg7" 492. Qh5" Nh7" 493. Qg4+" Kf7" 494. Qd7+" Be7" 495. Qd5+" Kf8" 496. Ne6+" Ke8" 497. Qh5+" Kd7° 498. Ng7" Nf6" 499. Qf5+" Kc7" 500. Qe5+" Kd7" 501. Qd4+" Kc7" 502. Qe3" Nd5" 503. Qe5+" Kc6" 504. Nf5" Rb7" 505. Qe4" Kc5" 506. Qc2+" Kb6" 507. Qb3+" Kc6" 508. Nd4+" Kc5" 509. Qxb7" Kxd4" **{KQKBN: dtc/m/z = 29/40/29m}** 510. Kf2' Ke4" 511. Qb1+" Kd4" 512. Qg6' Bf6' 513. Kf3" Be7' 514. Qg1+' Kc4" 515. Qg4+' Kc5" 516. Ke2" Nf6" 517. Qf5+' Kd4" 518. Qf4+" Kd5" 519. Kf3" Ke6" 520. Qc4+" Kf5" 521. Qa6" Nd7" 522. Qd3+' Ke6" 523. Qe3+" Kd6" 524. Kf4' Nc5' 525. Kf5" Bf8" 526. Qf3" Nd7' 527. Qc3" Ke7" 528. Qd4" Ke8" 529. Ke6" Nc5+" 530. Kd5" Nd7" 531. Kc6" Nb8+" 532. Kb6' Nd7+" 533. Kc7" Nc5" 534. Qc4' Be7" 535. Qg8+" Bf8" 536. Kc6" Na6" 537. Qe6+" Be7" 538. Qc8+" Kf7" 539. Qxa6" **{KQKB: dtc/m/z = -7/-10/-7m}** Ke6" 540. Qd3' Bg5' 541. Qe4+" Kf6" 542. Kd6" Bd2' 543. Qe5+' Kg6' 544. Ke6" Bg5" 545. Qf5+" Kh5" 546. Qf3+' Kh6' 547. Qf7" Bh4' 548. Kf5" Bg5' 549. Qg6#" **{Lomonosov DTM EGTs}** \*

## 7-man: 4-3m

[White "KBNP"]

[Black "KBP"]

[Result "1-0"]

[Date "2013.11.25"]

[Event "7m, 4-3m, KBNPKBP, GBR 0041.11, maxDTM 4-3m w&l: SV+M/SV+M+"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "B7/NK6/2P5/8/8/2p5/kb6/8 w - - 0 1"]

[PlyCount "691"]

{the one maxDTM 4-3m wtm win: dtc/m/z = 2/346/1m} 1. c7'''

{the one maxDTM 4-3m btm loss: dtc/m/z = -1/-345/-1m} c2'' 2. c8=Q''' c1=Q'' {KQBNKQB: dtm = 344m}

3. Qe6+''' Ka1'' 4. Nb5''' Qc2'' 5. Qe1+''' Qb1'' 6. Qe8'' Bf6'' 7. Kb8''' Qb2'' 8. Qe1+''' Qb1'' 9. Qe2'' Qf5'' 10. Qd1+''' Qb1'' 11. Qd7'' Be5+'' 12. Kc8''' Qg6'' 13. Qd5''' Qf5+'' 14. Kb7''' Qf6'' 15. Qd1+'' Kb2'' 16. Qe2+''' Ka1'' 17. Qe1+'' Ka2'' 18. Qe4'' Kb3'' 19. Ka7''' Qf2+'' 20. Ka6'' Qa2+'' 21. Kb7'' Bh2'' 22. Qf3+''' Kb4'' 23. Nd4''' Ka4'' 24. Qc6+'' Kb4'' 25. Nc2+'' Kb3'' 26. Ne3'' Qa4'' 27. Qe6+''' Kb4'' 28. Nd5+'' Kc5'' 29. Nb6''' Qd4'' 30. Qc6+'' Kb4'' 31. Qa4+''' Kc3'' 32. Qa1+''' Kd3'' 33. Qf1+'' Kc2'' 34. Qg2+'' Qd2'' 35. Qg8'' Qe2'' 36. Ka7''' Qe7+'' 37. Bb7''' Qa3+'' 38. Ba6''' Qe7+'' 39. Ka8'' Qd6'' 40. Qc8+''' Kd1'' 41. Nc4''' Qd4'' 42. Na5''' Qd5+'' 43. Nc6''' Kd2'' 44. Qe8''' Bg1'' 45. Qe2+''' Kc3'' 46. Bb7'' Bc5'' 47. Nb8''' Qd3'' 48. Qe5+'' Qd4'' 49. Qe1+''' Qd2'' 50. Qe8'' Qd6'' 51. Qh8+'' Bd4'' 52. Qh3+''' Kd2'' 53. Qg2+''' Kc3'' 54. Qf3+''' Kb2'' 55. Qe2+'' Kc3'' 56. Bc6'' Be5'' 57. Qe3+'' Kc4'' 58. Qc1+'' Kb3'' 59. Nd7'' Bf4'' 60. Qb1+''' Kc3'' 61. Qa1+''' Kc4'' 62. Qa2+'' Kc3'' 63. Qa5+''' Qb4'' 64. Qa1+'' Kd2'' 65. Qf6'' Qa5+'' 66. Kb7° Qc7+'' 67. Ka6''' Be3'' 68. Qb2+''' Ke1'' 69. Qb1+'' Kf2'' 70. Qa2+'' Ke1'' 71. Qe6'' Qa7+'' 72. Kb5° Qd4'' 73. Be4''' Qc3'' 74. Bd5'' Kd2'' 75. Bc4''' Qd4'' 76. Kc6''' Qa7'' 77. Qe5'' Qa4+'' 78. Bb5''' Qd4'' 79. Qf5'' Bf2'' 80. Qb1'' Kc3'' 81. Qa2'' Kb4'' 82. Qa4+''' Kc3'' 83. Qa3+'' Kc2'' 84. Ba4+'' Kb1'' 85. Qb3+'' Ka1'' 86. Qc2'' Qb2'' 87. Qc4'' Bd4'' 88. Qf1+'' Qb1'' 89. Qf4'' Qb2'' 90. Bb5'' Qc3+'' 91. Kb7'' Be3'' 92. Qa4+'' Kb2'' 93. Bc4'' Qa3'' 94. Qc6'' Qc3'' 95. Qb5+'' Ka3'' 96. Qa6+'' Kb2'' 97. Bg8'' Kc2'' 98. Qe2+'' Qd2'' 99. Qb5'' Qd4'' 100. Kc8'' Qc3+'' 101. Kd8''' Kd2'' 102. Qd5+'' Qd3'' 103. Qa5+'' Qc3'' 104. Qa2+'' Qc2'' 105. Qa8'' Qd3'' 106. Be6'' Bb6+'' 107. Ke8''' Bd4'' 108. Qa2+'' Ke1'' 109. Kd8'' Qb5'' 110. Bd5'' Qb2'' 111. Qa4'' Qa1'' 112. Qb4+'' Qc3'' 113. Qb1+'' Kd2'' 114. Qf5'' Qa5+'' 115. Ke8'' Qb5'' 116. Qg5+'' Be3'' 117. Qe5'' Bf2'' 118. Qe6'' Bd4'' 119. Kd8'' Qa5+'' 120. Kc8'' Qa3'' 121. Be4'' Qa5'' 122. Qh6+'' Ke2'' 123. Qh2+'' Ke3'' 124. Qg2'' Qa6+'' 125. Bb7''' Qc4+'' 126. Bc6'' Kd3'' 127. Kd8'' Qe6'' 128. Qf3+'' Kd2'' 129. Qf4+'' Qe3'' 130. Qh2+'' Kc1'' 131. Qh1+'' Qg1'' 132. Qf3'' Qg5+'' 133. Kc8'' Qe3'' 134. Qf1+'' Kb2'' 135. Nf8'' Qe5'' 136. Qc4'' Qc5'' 137. Qe2+''' Qc2'' 138. Qb5+'' Qb3'' 139. Qf1'' Qg8'' 140. Qe2+'' Kc3'' 141. Qf3+'' Kd2'' 142. Kc7'' Qg7+'' 143. Nd7'' Be3'' 144. Qh3'' Qd4'' 145. Kd8'' Qc4'' 146. Qg2+'' Ke1'' 147. Kc7'' Qf4+'' 148. Kc8'' Qc4'' 149. Qg3+'' Kd2'' 150. Qd6+'' Qd3'' 151. Qe5'' Qa6+'' 152. Kc7''' Qa7+'' 153. Kd8'' Qd4'' 154. Qe6'' Qd3'' 155. Qa2+'' Qc2'' 156. Qd5+'' Qd3'' 157. Qg2+'' Qe2'' 158. Qg8'' Kc1'' 159. Qg3'' Qd3'' 160. Qg2'' Qd6'' 161. Kc8'' Qe6'' 162. Qf3'' Kd2'' 163. Bb5'' Kc2'' 164. Kc7'' Kb2'' 165. Bc6'' Bd4'' 166. Be4'' Qc4+'' 167. Kd8'' Kc1'' 168. Qf4+'' Kd1'' 169. Nf8'' Qg8'' 170. Bf3+'' Kc2'' 171. Kd7''' Qg7+'' 172. Ke6''' Bc3'' 173. Nd7''' Qg6+'' 174. Ke7'' Qg7+'' 175. Kd8'' Qh8+'' 176. Kc7''' Qd4'' 177. Qf5+'' Kc1'' 178. Bd5'' Qe3'' 179. Kd8'' Bd4'' 180. Be4'' Qb3'' 181. Qf4+'' Qe3'' 182. Qg4'' Qg1'' 183. Qf5'' Qg8+'' 184. Ke7'' Qg7+'' 185. Kd6'' Qg3+'' 186. Kd5'' Bf2'' 187. Ne5'' Qg8+'' 188. Kd6'' Qd8+'' 189. Ke6'' Qc8+'' 190. Nd7''' Qg8+'' 191. Kd6'' Qg3+'' 192. Ke7'' Bd4'' 193. Qd5'' Qh3'' 194. Kf7'' Qg3'' 195. Ke8'' Qh3'' 196. Qg5+'' Qe3'' 197. Qf5'' Qb3'' 198. Qg4'' Kb2'' 199. Nf8'' Qb8+'' 200. Kf7''' Qc7+'' 201. Kg8'' Kc3'' 202. Bf5'' Qc4+'' 203. Be6'' Qc7'' 204. Qf3+'' Kd2'' 205. Bd7'' Kc1'' 206. Kf7'' Qd6'' 207. Bf5'' Qc7+'' 208. Nd7'' Qc4+'' 209. Be6'' Qc3'' 210. Qd5'' Qe3'' 211. Bf5'' Qg3'' 212. Qc4+'' Qc3'' 213. Qf1+'' Kd2'' 214. Qg2+'' Ke1'' 215. Qh1+'' Kd2'' 216. Qh2+'' Ke1'' 217. Qh4+'' Kd2'' 218. Nf8'' Qc7+'' 219. Bd7'' Bc5'' 220. Qg5+'' Kc2'' 221. Qf5+'' Kb2'' 222. Ng6'' Bd6'' 223. Qe6'' Kc3'' 224. Qe3+'' Kc2'' 225. Ke6'' Bg3'' 226. Qd4'' Qc3'' 227. Qg4'' Qe3+'' 228. Kf7'' Bd6'' 229. Qf5+'' Kd2'' 230. Qf6'' Qb3+'' 231. Be6''' Qb7+'' 232. Kg8'' Qb8+'' 233. Kh7'' Qc7+'' 234. Bf7'' Bg3'' 235. Qg5+'' Kc2'' 236. Ne7'' Be5'' 237. Qg6+''' Kb2'' 238. Nf5''' Qb7'' 239. Nh4''' Bc3'' 240. Qe6''' Bd2'' 241. Qa2+'' Kc1'' 242. Qc4+'' Kb1'' 243. Kg6'' Qb6+'' 244. Kh5'' Qe3'' 245. Bg6+'' Ka1'' 246. Qa4+'' Kb2'' 247. Qc2+'' Ka3'' 248. Qf5''' Qf4'' 249.

Qd3+'' Ka4' 250. Nf3'' Be3'' 251. Qc2+'' Kb4' 252. Be4'' Ka5'' 253. Qa2+'' Kb5' 254. Qb2+'' Ka5'' 255. Qb7'' Qf8'' 256. Kh4'' Qh8+'' 257. Bh7'' Qf6+'' 258. Kg4'' Qf4+'' 259. Kh3'' Bf2'' 260. Kg2'' Qg3+'' 261. Kf1'' Be5'' 262. Ke2'' Qd6'' 263. Qb1'' Ba3'' 264. Qe4'' Qa6+'' 265. Kf2'' Kb6'' 266. Kg2'' Kc7'' 267. Qf4+'' Bd6'' 268. Qf7+'' Kb8' 269. Qe6'' Kc7'' 270. Bf5'' Qc6'' 271. Be4'' Qb5'' 272. Qa2' Be7' 273. Qa7+'' Kd8'' 274. Qd4+'' Kc8'' 275. Qc3+'' Kd8'' 276. Qd2+'' Kc8'' 277. Qc2+'' Kd8'' 278. Bf5'' Qc5'' 279. Qe4'' Kc7'' 280. Qe6'' Qd6'' 281. Qc8+'' Kb6° 282. Be4'' Qc7'' 283. Qg8' Qd6'' 284. Qc4'' Qc5'' 285. Qd3'' Bf6'' 286. Nd2'' Qg5+'' 287. Kf1'' Qf4+'' 288. Bf3'' Qd4' 289. Qb3+'' Kc7'' 290. Qf7+'' Qd7'' 291. Qc4+'' Kd8'' 292. Ke2'' Qf5' 293. Bg4'' Qe5+'' 294. Ne4'' Ke7'' 295. Ke3' Kf8'' 296. Be6'' Bg5+'' 297. Kf3'' Ke7'' 298. Bh3'' Kf8'' 299. Qc8+'' Kg7'' 300. Qc6'' Kf8'' 301. Be6'' Bd8'' 302. Bc4'' Qh5+'' 303. Ke3'' Qh3+'' 304. Ke2' Qh2+'' 305. Kd3' Qh3+'' 306. Kc2'' Qh2+'' 307. Nd2'' Qh7+'' 308. Kb3'' Qh3+'' 309. Nf3'' Qf5'' 310. Qh6+'' Ke8'' 311. Qh8+'' Ke7'' 312. Qg7+'' Kd6'' 313. Qd4+'' Ke7'' 314. Ne5'' Qb1+'' 315. Ka4'' Qc2+'' 316. Kb5'' Qb1+'' 317. Ka6' Qb6+'' 318. Qxb6° **{KQBKNB: dtc/m/z = -1/-28/-1m}** Bxb6'' 319. Kxb6'' **{KBNK: dtx = -27m}** Kf6'' 320. Nd7+'' Kg6' 321. Kc6' Kh6'' 322. Ne5' Kh5'' 323. Kd6' Kg5'' 324. Ke6'' Kf4'' 325. Bd3'' Ke3'' 326. Kd5'' Kf4'' 327. Nc4'' Kf3'' 328. Ke5'' Kg4'' 329. Bc2' Kh4'' 330. Kf5'' Kh5'' 331. Ne5'' Kh6'' 332. Kf6'' Kh5'' 333. Bg6+'' Kh4'' 334. Kf5'' Kg3'' 335. Bh5'' Kf2'' 336. Kf4'' Ke1'' 337. Ke3'' Kf1° 338. Bf3'' Ke1' 339. Nd3+ Kf1° 340. Kf4'' Kg1° 341. Kg3'' Kf1° 342. Bd1' Kg1° 343. Be2'' Kh1° 344. Nf4' Kg1° 345. Nh3+'' Kh1° 346. Bf3#'' **{Lomonosov DTM EGTs}** \*

[White "KPPP"]

[Black "KPP"]

[Result "1-0"]

[Date "2013.11.14"]

[Event "7m, 4-3m, KPPPKPP, GBR 0000.32, maxDTM KPPPKPP l&w: SV+M/SV+M+"]

[SetUp "1"]

[FEN "8/5p2/8/PP6/1K3k1p/8/P7/8 b - - 0 1"]

[PlyCount "592"]

**{the one maxDTM KPPPKPP btm loss: dtm = -296m}** 1... h3''

**{the one maxDTM KPPPKPP wtm win: dtm = 296m}** 2. b6'' h2' 3. b7'' h1=Q' 4. b8=Q+''

**{KQP(a2)P(a5)KQP(f7): dtm = -293m}** Kg5'' 5. Qg3+'' Kf6'' 6. Qd6+'' Kg7'' 7. Qd4+'' Kg8'' 8. a6'' Qb1+'' 9. Ka3'' Qc1+'' 10. Ka4'' Qc6+'' 11. Ka5'' Qc7+'' 12. Kb5'' Qb8+'' 13. Ka4'' Qe8+'' 14. Ka5'' Qe1+'' 15. Kb6'' Qe6+'' 16. Kb7'' Qe7+'' 17. Kb8'' Qe8+'' 18. Kc7'' Qe7+'' 19. Qd7'' Qe3'' 20. Kb7'' Qe4+'' 21. Qc6'' Qb1+'' 22. Qb6'' Qh1+'' 23. Ka7'' Qd5'' 24. Qb8+'' Kh7'' 25. Qh2+'' Kg7' 26. Qg3+'' Kh7'' 27. Qh3+'' Kg6'' 28. Qb3'' Qe5'' 29. Qb8'' Qd5'' 30. Qc7'' Kg7'' 31. Qc3+'' Kg8'' 32. Kb6'' Qd6+'' 33. Kb7'' Qd7+'' 34. Qc7'' Qb5+'' 35. Qb6'' Qd7+'' 36. Kb8'' Qe8+'' 37. Ka7'' Qd7+'' 38. Qb7'' Qd2'' 39. Qc8+'' Kh7'' 40. Qf5+'' Kg8'' 41. Qg4+'' Kf8'' 42. a4'' **{KQP(a4)P(a6)KQP(f7)}** Qe3+'' 43. Kb7'' Qb3+'' 44. Kc6'' Qc3+'' 45. Kb5'' Qe5+'' 46. Kc4'' Qe8'' 47. Kd3'' Qc6'' 48. Qc4'' Qb6'' 49. Kc3'' Qe3+'' 50. Kb4'' Qb6+'' 51. Qb5'' Qd4+'' 52. Ka5'' Kg7'' 53. Qg5+'' Kf8'' 54. Qf5'' Kg7'' 55. Kb5'' Qb2+'' 56. Kc6'' Qd4'' 57. Qc2'' Qf6+'' 58. Kb5'' Qf1+'' 59. Ka5'' Qe1+'' 60. Kb6'' Qe3+'' 61. Qc5'' Qe6+'' 62. Qc6'' Qe3+'' 63. Kb7'' Qe7+'' 64. Kc8'' Qf8+'' 65. Kd7'' Qb4'' 66. Qg2+'' Kh7' 67. Qc2+'' Kg8'' 68. Kc6'' Qd4'' 69. a5'' **{KQP(a5)P(a6)KQP(f7)}** Qf6+'' 70. Kb7'' Qe7+'' 71. Qc7'' Qe4+'' 72. Kb8'' Qb4+'' 73. Ka8'' Qe4+'' 74. Qb7'' Qf5'' 75. Qb8+'' Kh7'' 76. Qc7'' Qd5+'' 77. Kb8'' Qb5+'' 78. Qb7'' Qe5+'' 79. Kc8'' Qe8+'' 80. Kc7° Qe7+'' 81. Kc6'' Qe6+'' 82. Kc5'' Qe3+'' 83. Kd5'' Qe6+'' 84. Kd4'' Qf6+'' 85. Kc5'' Qe5+'' 86. Qd5'' Qc7+'' 87. Kd4'' Qa7+'' 88. Kc3'' Qc7+'' 89. Kd3'' Qg3+'' 90. Kd4'' Qg1+'' 91. Kc4'' Qc1+'' 92. Kb5'' Qc7'' 93. Qe4+'' Kg8'' 94. Qa8+'' Kh7'' 95. Qe8'' Kg7'' 96. Qc6'' Qe5+'' 97. Qc5'' Qe8+'' 98. Kb4'' Qe4+'' 99. Qc4'' Qb1+'' 100. Kc5'' Qf5+'' 101. Qd5'' Qc8+'' 102. Qc6'' Qd8'' 103. Kb5'' Qd4'' 104. Qc5'' Qd3+'' 105. Qc4'' Qf5+'' 106. Ka4'' Qd7+'' 107. Kb4'' Qd6+'' 108. Kc3'' Qg3+'' 109. Kb2'' Qg1'' 110. Qb4'' Kh7'' 111. Qd2'' Kg8'' 112. Qd6'' Kg7'' 113. Kc2'' Qe3'' 114. Qd2'' Qa7'' 115. Qd3'' Qf2+'' 116. Kb3'' Qa7'' 117. Qg3+'' Kh7'' 118. Qd6'' Qe3+'' 119. Kc4'' **{50m-draw claim available here}** Qe4+'' 120. Kc5'' Qe3+'' 121. Kc6'' Kg7'' 122. Kb7'' Qb3+'' 123. Ka8'' Qc4'' 124. Qe5+'' f6'' **{KQP(a5)P(a6)KQP(f6)}** 125. Qe7+'' Kg6'' 126. Qd6'' Qc8+'' 127. Ka7'' Qc4'' 128. Kb6'' Qb3+'' 129. Kc7'' Qc3+'' 130. Kb7'' Qb3+'' 131. Kc8'' Qc3+'' 132. Qc7'' Qh3+'' 133. Kb8'' Qb3+'' 134. Qb7'' Qg3+'' 135. Ka8'' Qe5' 136. Qb1+'' Kh6' 137. Qc1+'' Kg6'' 138. Qc4'' Qe8+'' 139. Kb7'' Qd7+'' 140. Kb6'' Qd6+'' 141. Kb5'' Qb8+'' 142. Ka4'' Qe8+'' 143. Kb3''

Qe3+'' 144. Kb4'' Qe1+' 145. Kb5'' Qe5+'' 146. Qc5'' Qe8+'' 147. Qc6'' Qe5+'' 148. Kb6'' Qb8+'' 149. Kc5'''' Qe5+'' 150. Qd5'' Qe3+'' 151. Qd4'' Qe7+'' 152. Kc4'' Qe6+'' 153. Kc3'' Qe1+'' 154. Qd2'' Qe5+'' 155. Kc2'''' Qe6'' 156. Qd3+'' Kg7'' 157. Kb2' Qe5+'' 158. Kb3'' Qb8+'' 159. Kc2'' Qh2+'' 160. Qd2'' Qc7+'' 161. Qc3'' Qh2+'' 162. Kb3'''' Qb8+'' 163. Qb4'' Qg3+'' 164. Ka4'' Qe5'' 165. Qg4+'' Kh6'' 166. Qh3+'' Kg6' 167. Qd3+'' Kh6'' 168. Kb3'' Qe6+'' 169. Kc3' Qe5+'' 170. Kc2'' Kh5'' 171. Kb3'' Qxa5'' **{KQP(a6)KQP(f6)}** 172. Qe2+'''' Kg6'' 173. Qe8+'''' Kh6' 174. Qe3+'''' Kg6'' 175. a7'''' Qb5+'' 176. Kc3' Qc6+'' 177. Kd3'' Qd5+'' 178. Qd4'' Qf3+'' 179. Kd2' Qg2+'' 180. Kc3'' Qb7'' 181. Qc5'' Qh1'' 182. Kb3' Qb1+' 183. Ka4'' Qd1+' 184. Kb5'' Qe2+'' 185. Kb6' Qe6+'' 186. Kc7'' Qf7+'' 187. Kd8'' Qg8+'' 188. Kd7'' Qf7+'' 189. Qe7'' Qd5+'' 190. Kc7'' Qa5+'' 191. Kc8'' Qd5'' 192. Qe8+'' Kg5'' 193. Qa4'''' Qc5+'' 194. Kd8'' Qb6+'' 195. Kd7'' Qb7+'' 196. Kd6' Qb6+'' 197. Kd5'' Qd8+'' 198. Ke4'' Qe7+'' 199. Kf3'''' Qb7+'' 200. Kf2'' Qb6+' 201. Kf1'' Qb1+'' 202. Ke2'' Qb2+'' 203. Kd3'' Qb1+'' 204. Qc2'' Qh1'' 205. Qf2' Kg6'' 206. Qg3+'' Kh5'' 207. Qe3'' Qd5+'' 208. Qd4'' Qc6' 209. Ke3'' Qh1'' 210. Qc5+'' Kg6'' 211. Qc2+'' Kg7'' 212. Qc7+'' Kg6'' 213. Kf2'' Qd5'' 214. Qc2+'' f5'' **{KQP(a6)KQP(f5)}** 215. Kg1'' Kf6'' 216. Qa4'' Qc5+'' 217. Kg2'''' Qd5+'' 218. Kg3'' Qe5+'' 219. Qf4'''' Qc3+'' 220. Kg2'''' Qb2+'' 221. Qf2'''' Qb7+'' 222. Kh2'' Qc7+'' 223. Kh3'' Qb7'' 224. Qh4+'' Kg6'' 225. Qd4'' Qh7+'' 226. Kg2'' Qb7+'' 227. Kg1'' Qb1+'' 228. Kh2'' Qc2+'' 229. Kh3'' Qb3+'' 230. Kh4'' Qb7'' 231. Qe3' Kh7'' 232. Qc5'' Kg6'' 233. Kg3'' Qb3+'' 234. Kf4'' Qa4+'' 235. Ke5'' Qe4+'' 236. Kd6° Kg5'' 237. Qc3'' Kg4'' 238. Qg7+'' Kf4'' 239. Qe7'' Qd4+' 240. Ke6'' Qc4+'' 241. Kf6'' Qc3+'' 242. Kg6' Qc6+'' 243. Kg7'' Qc3+' 244. Kh7'' Qh3+'' 245. Kg6'' Qg2+'' 246. Kf6'' Qc6+'' 247. Qe6'' Qa8'' 248. Qxf5+'' **{KQPKQ: dtc/m/z = -35/-49/-35m}** Kg3'' 249. Qd7'''' Qf8+'' 250. Kg6'' Qa8'' 251. Kf7'' Qf3+'' 252. Kg7'' Qc3+'' 253. Kg6'' Qc2+'' 254. Kh6'' Qc1+'' 255. Kh7'' Qh1+'' 256. Kg7'' Qg2'' 257. Qd4'' Qb7+'' 258. Kf8' Qa8+'' 259. Kf7'' Qb7+'' 260. Ke6'' Qc8+'' 261. Ke7'' Qa8'' 262. Qg7+' Kh4'' 263. Kd6'' Qd8+'' 264. Kc6'' Qc8+'' 265. Qc7'' Qa6+'' 266. Qb6'' Qa4+' 267. Kd5'' Qd7+'' 268. Kc4'' Qf7+'' 269. Kc3'' Qf3+'' 270. Kb2'' Qg2+' 271. Ka3'' Qf3+'' 272. Qb3'' Qa8'' 273. Qb4+'' Kh5' 274. Qb8'' Qf3+'' 275. Kb4'' Qe4+'' 276. Ka5'''' Qe1+'' 277. Qb4'''' Qa1+'' 278. Kb6'' Qf6+'' 279. Kb5'' Qf3' 280. Qc5+'' Kh4'' 281. Qc4+'' Kh3' 282. Qc8+'' Kg3' 283. a8=Q' **{KQKQ: dtc/m/z = -9/-14/-9m}** Qb3+'' 284. Kc5'' Qc3+'' 285. Kd6'' Qd4+'' 286. Qd5'' Qf6+'' 287. Qce6'' Qd8+'' 288. Kc6' Qa8+'' 289. Kb6' Qxd5'' 290. Qxd5'''' **{KQK: dtx = -7m}** Kg4' 291. Qf7' Kh4' 292. Qg7' Kh3' 293. Kc6' Kh2' 294. Kd5'' Kh1' 295. Ke4'' Kh2° 296. Kf3'' Kh1' 297. Qg2#'' **{Lomonosov DTM EGTs}** \*

[White "KQBN"]

[Black "KQB"]

[Result "1-0"]

[Date "2013.11.09"]

[Event "7m, 4-3m, KQBNKQB, GBR 4041.00, maxDTC 4-3m\_P-less l&w: SV+C/SV+C+"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "1k6/1b5q/N7/8/8/1Q6/8/B1K5 b - - 0 1"]

[PlyCount "660"]

**{This held the DTC record from 31<sup>st</sup> March 2006 to 26<sup>th</sup> May 2006 (Krabbé, 2006a/b)}**

**{the one maxDTM 4-3m\_P-less btm loss: dtc/m/z = -330/-345/-330m}** 1... Ka8''

**{1 of 2 maxDTM 4-3m\_P-less wtm wins: dtc/m/z = 330/345/330m}** 2. Nb4'''' Qh1+'' 3. Kb2'''' Qg1'' 4. Qa4+'''' Qa7'' 5. Qe8+'''' Qb8'' 6. Qe1 Bf3'' 7. Kb1'''' Qf4 8. Qe8+'''' Qb8'' 9. Qe7 Qf4'' 10. Qd8+'''' Qb8'' 11. Qd2 Be4+'' 12. Kc1'''' Qg3'' 13. Qd4'''' Qf4+'' 14. Kb2'''' Qf3'' 15. Qd8+ Kb7'' 16. Qe7+'''' Ka8'' 17. Qe8+'''' Ka7'' 18. Qe5'''' Kb6'' 19. Ka2'''' Qf7+'' 20. Ka3 Qa7+'' 21. Kb2 Bh7'' 22. Qf6+'''' Kb5'' 23. Nd5'''' Ka5'' 24. Qc3+ Kb5'' 25. Nc7+ Kb6'' 26. Ne6 Qa5'' 27. Qe3+'''' Kb5'' 28. Nd4+ Kc4'' 29. Nb3'''' Qd5'' 30. Qc3+ Kb5° 31. Qa5+'''' Kc6'' 32. Qa8+'''' Kd6'' 33. Qf8+ Kc7'' 34. Qg7+ Qd7'' 35. Qg1 Qe7'' 36. Ka2'''' Qe2+'' 37. Bb2'''' Qa6+'' 38. Ba3'''' Qe2+'' 39. Ka1'' Qd3'' 40. Qc1+'''' Kd8'' 41. Nc5'''' Qd5'' 42. Na4'''' Qd4+'' 43. Nc3'''' Kd7'' 44. Qe1'''' Bg8'' 45. Qe7+'''' Kc6'' 46. Bb2 Bc4'' 47. Nb1'''' Qd6 48. Qe4+ Qd5'' 49. Qe8+'''' Qd7'' 50. Qe1 Qd3'' 51. Qh1+ Bd5'' 52. Qh6+'''' Kd7 53. Qg7+'''' Kc6'' 54. Qf6+'''' Kb7'' 55. Qe7+'' Kc6'' 56. Bc3 Be4'' 57. Qe6+ Kc5 58. Qc8+ Kb6'' 59. Nd2 Bf5'' 60. Qb8+'''' Kc6'' 61. Qa8+'''' Kc5'' 62. Qa7+ Kc6'' 63. Qa4+'''' Qb5'' 64. Qa8+ Kd7'' 65. Qf3 Qa4+'' 66. Kb2° Qc2+'' 67. Ka3'''' Be6'' 68. Qb7+'''' Ke8'' 69. Qa8+ Kf7'' 70. Qf3+ Ke8 71. Qe3 Qa2+ 72. Kb4°

Qd5 73. Be5<sup>\*\*\*\*</sup> Qc6 74. Bd4 Kd7 75. Bc5<sup>\*\*\*\*</sup> Qd5 76. Kc3<sup>\*\*\*\*</sup> Qa2 77. Qe4 Qa5+ 78. Bb4<sup>\*\*\*\*</sup> Qd5 79. Qh7+ Bf7 80. Qg7 Qa2 81. Qd4+ Qd5<sup>''</sup> 82. Qa7+ Kc8<sup>''</sup> 83. Qa6+ Kc7 84. Ba5+<sup>'''</sup> Kb8<sup>''</sup> 85. Qb6+ Ka8<sup>''</sup> 86. Qc7 Qb7<sup>''</sup> 87. Qc5 Bd5<sup>''</sup> 88. Qf8+ Qb8 89. Qf5 Qd6 90. Bb4 Qc6+<sup>''</sup> 91. Kb2 Be6<sup>''</sup> 92. Qa5+ Kb7<sup>''</sup> 93. Bc5 Qa6 94. Qc3 Qc6 95. Qb4+ Ka6 96. Qa3+ Kb7<sup>''</sup> 97. Bg1 Kc7 98. Qe7+ Qd7 99. Qb4 Qd5<sup>''</sup> 100. Kc1 Qc6+ 101. Kd1<sup>\*\*\*\*</sup> Kd7 102. Qd4+ Qd5 103. Qa7+ Kc8<sup>''</sup> 104. Qa4 Qe5 105. Bb6 Qh5+ 106. Kc1 Qe5<sup>''</sup> 107. Bf2 Bd5<sup>''</sup> 108. Qa6+ Kd8 109. Qa3 Kd7 110. Qd3 Qc7+ 111. Kd1 Qd6<sup>''</sup> 112. Bg3 Qc6<sup>''</sup> 113. Qd4 Ke6 114. Bf4 Kf7 115. Be5 Ke6 116. Bh8 Ke7 117. Qb4+ Ke8 118. Be5 Qb7 119. Qc5 Qc6<sup>''</sup> 120. Qa3 Qh6 121. Bc3 Qc6 122. Qa5 Kd7<sup>''</sup> 123. Kc1 Be6<sup>''</sup> 124. Qe5 Qh1+<sup>''</sup> 125. Kc2 Qd5<sup>''</sup> 126. Qg7+ Bf7<sup>''</sup> 127. Qg3 Qd6<sup>''</sup> 128. Qe3 Bd5<sup>''</sup> 129. Kd1 Qe6 130. Qd4 Kc8<sup>''</sup> 131. Qh8+ Qg8<sup>''</sup> 132. Qf6 Qg4+<sup>''</sup> 133. Kc1 Qe6<sup>''</sup> 134. Qf8+ Kb7<sup>''</sup> 135. Nf1 Qe4<sup>''</sup> 136. Qc5 Qc4<sup>''</sup> 137. Qe7+<sup>\*\*\*\*</sup> Qc7<sup>''</sup> 138. Qb4+ Qb6<sup>''</sup> 139. Qf8 Qg1<sup>''</sup> 140. Qe7+ Kc6<sup>''</sup> 141. Qf6+ Kd7<sup>''</sup> 142. Kc2 Qg2+<sup>''</sup> 143. Nd2 Be6<sup>''</sup> 144. Qh6 Qd5<sup>''</sup> 145. Kd1 Qc5 146. Qg7+ Ke8 147. Kc2 Qf5+<sup>''</sup> 148. Kc1 Qc5<sup>''</sup> 149. Qg6+ Kd7<sup>''</sup> 150. Qd3+ Qd6<sup>''</sup> 151. Qe4 Qa3+<sup>''</sup> 152. Kc2<sup>\*\*\*\*</sup> Qa2+<sup>''</sup> 153. Kd1 Qd5<sup>''</sup> 154. Qe3 Qd6<sup>''</sup> 155. Qa7+ Qc7 156. Qd4+ Qd6<sup>''</sup> 157. Qg7+ Qe7<sup>''</sup> 158. Qg1 Kc8<sup>''</sup> 159. Qg6 Qd6 160. Qg7 Qf4 161. Kc1 Qe3 162. Qf6 Kd7 163. Bb4 Kc8 164. Kc2 Kb7<sup>''</sup> 165. Bc3 Bd5<sup>''</sup> 166. Be5 Qc5+ 167. Kd1 Kc8 168. Qf5+ Kd8<sup>''</sup> 169. Nf1 Qg1<sup>''</sup> 170. Bf6+ Kc7<sup>''</sup> 171. Kd2<sup>\*\*\*\*</sup> Qg2+<sup>''</sup> 172. Ke3<sup>\*\*\*\*</sup> Bc6 173. Nd2<sup>\*\*\*\*</sup> Qg3+ 174. Ke2 Qh2+ 175. Kd1 Qh1+<sup>''</sup> 176. Kc2<sup>''</sup> Qd5<sup>''</sup> 177. Qf4+ Kc8<sup>''</sup> 178. Bd4 Qe6<sup>''</sup> 179. Kd1 Bd5 180. Be5 Qb6 181. Qf5+ Qe6 182. Qg5 Qg8 183. Qf4 Qg1+ 184. Ke2 Qg2+ 185. Kd3 Qg6+<sup>''</sup> 186. Kd4 Bf7 187. Ne4 Qg1+<sup>''</sup> 188. Kd3 Qd1+<sup>''</sup> 189. Ke3 Qe1+ 190. Kf3 Qf1+<sup>''</sup> 191. Nf2<sup>\*\*\*\*</sup> Qc4<sup>''</sup> 192. Qf6 Qe6<sup>''</sup> 193. Qh8+<sup>\*\*\*\*</sup> Qe8<sup>''</sup> 194. Qg7<sup>\*\*\*\*</sup> Qd8<sup>''</sup> 195. Ke2<sup>\*\*\*\*</sup> Qe7<sup>''</sup> 196. Qh8+ Qe8<sup>''</sup> 197. Qh3+ Qe6<sup>''</sup> 198. Qe3<sup>\*\*\*\*</sup> Qb3<sup>''</sup> 199. Qc5+<sup>\*\*\*\*</sup> Kb7<sup>''</sup> 200. Qe7+<sup>\*\*\*\*</sup> Ka6<sup>''</sup> 201. Kd2<sup>\*\*\*\*</sup> Bg6 202. Qc5 Qb6 203. Qc4+<sup>\*\*\*\*</sup> Qb5<sup>''</sup> 204. Qc8+ Qb7<sup>''</sup> 205. Qc3 Qd5+ 206. Ke3<sup>\*\*\*\*</sup> Kb5 207. Qb2+<sup>\*\*\*\*</sup> Kc6<sup>''</sup> 208. Kf4<sup>\*\*\*\*</sup> Qc4+<sup>''</sup> 209. Kg3<sup>\*\*\*\*</sup> Bc2<sup>''</sup> 210. Kh2 Kd7 211. Qb7+ Ke6<sup>''</sup> 212. Bg3<sup>\*\*\*\*</sup> Bf5<sup>''</sup> 213. Qg7<sup>\*\*\*\*</sup> Qc8 214. Bh4 Qb8+ 215. Kg1 Qe5 216. Qe7+ Kd5<sup>°</sup> 217. Qf7+ Kc6 218. Qb3 Qd4 219. Bg3 Bd7 220. Qb1 Be6 221. Qg6 Kd7 222. Qh7+ Kc6<sup>''</sup> 223. Qc7+ Kb5<sup>''</sup> 224. Qb7+<sup>'''</sup> Qb6<sup>''</sup> 225. Qe4 Bb3<sup>''</sup> 226. Bf4 Qc6 227. Qh7 Qf3 228. Qd7+<sup>\*\*\*\*</sup> Qc6<sup>''</sup> 229. Qg7 Qc5 230. Kg2 Be6<sup>''</sup> 231. Qb2+ Kc6 232. Qe2 Bf5 233. Qe8+ Kb7<sup>''</sup> 234. Kg3 Qc3+<sup>''</sup> 235. Kh2<sup>\*\*\*\*</sup> Qf6 236. Qb8+ Kc6<sup>''</sup> 237. Qc7+ Kd5<sup>''</sup> 238. Kg1<sup>\*\*\*\*</sup> Qg6+<sup>''</sup> 239. Bg3<sup>\*\*\*\*</sup> Qf6<sup>''</sup> 240. Qc1 Qd4 241. Qh6 Bd7 242. Qa6 Bc6 243. Qe2 Kc5 244. Be5 Qc4<sup>''</sup> 245. Nd3+<sup>\*\*\*\*</sup> Kb5<sup>''</sup> 246. Qb2+<sup>\*\*\*\*</sup> Ka4<sup>''</sup> 247. Nf4 Qb3 248. Qd4+ Qb4 249. Qa1+ Qa3 250. Qe1 Qf3 251. Kh2<sup>\*\*\*\*</sup> Bb7 252. Qd2 Kb5 253. Bf6 Ka6 254. Be7 Bc6 255. Bc5 Kb7 256. Qb2+ Kc8 257. Qf6 Kb7 258. Qe7+ Kc8<sup>''</sup> 259. Qd6 Kb7 260. Bd4 Ka6<sup>''</sup> 261. Qc7 Kb5 262. Qb6+ Kc4 263. Be3 Kc3<sup>''</sup> 264. Qd4+ Kb3<sup>''</sup> 265. Qd3+ Ka4<sup>''</sup> 266. Qc4+ Ka5<sup>''</sup> 267. Bc5 Qe4 268. Qc3+ Kb5 269. Bd6 Qc4 270. Qe3 Bd7 271. Qd2 Bc6 272. Kh3 {**and here, this SC<sup>+</sup> line diverges from the SM<sup>+</sup> line below**} Ka6 273. Be5 Bb5 274. Bd4 Qf7 275. Kg3 Qg8+ 276. Kf3 Qb3+ 277. Be3 Kb7 278. Kf2 Kc8 279. Qd6 Qa2+ 280. Kf3 Qc4 281. Qf8+ Kb7 282. Kg3 Qc7 283. Qh8 Qe7 284. Qd4 Qg5+ 285. Kf3 Qf5 286. Qb6+ Kc8<sup>''</sup> 287. Bd4 Qd7 288. Kg3 Qc6 289. Qa7 Qb7 290. Qc5+ Qc6<sup>''</sup> 291. Qf5+ Qd7<sup>''</sup> 292. Qe5 Qe8 293. Ne6 Qg6+<sup>''</sup> 294. Kf3 Qd3+<sup>''</sup> 295. Kf4 Qd2+<sup>''</sup> 296. Kg3<sup>\*\*\*\*</sup> Qd3+<sup>''</sup> 297. Be3 Qg6+<sup>''</sup> 298. Ng5 Qe8 299. Qd4 Qd7 300. Qb4 Qd5 301. Bf4 Bc6 302. Qf8+ Kd7 303. Qg7+ Ke8<sup>''</sup> 304. Qc7 Qg2+ 305. Kh4<sup>°</sup> Qh1+ 306. Bh2 Qd5 307. Kh5 Bd7 308. Bd6 Qh1+ 309. Kg6 Qc6 310. Qb8+<sup>\*\*\*\*</sup> Bc8 311. Qb4<sup>\*\*\*\*</sup> Qd5<sup>''</sup> 312. Qb6 Qf5+ 313. Kh5<sup>\*\*\*\*</sup> Qg4+ 314. Kh6 Qh4+ 315. Kg6<sup>\*\*\*\*</sup> Qc4 316. Kf6 Qf1+ 317. Kg7<sup>\*\*\*\*</sup> Qf5 318. Qe3+<sup>\*\*\*\*</sup> Kd7 319. Nf7 Kc6 320. Qc1+ Kb5 321. Ne5 Be6 322. Qc6+ Ka5<sup>°</sup> 323. Qa8+ Kb6<sup>''</sup> 324. Qb8+ Ka6<sup>''</sup> 325. Bc7 Qg5+<sup>''</sup> 326. Ng6<sup>\*\*\*\*</sup> Qe3 327. Qa8+ Kb5<sup>''</sup> 328. Qe8+ Ka6 329. Kf6 Qc3+ 330. Be5<sup>\*\*\*\*</sup> Qc4 331. Qxe6+<sup>''</sup> {**KQBNKQ: dtc/m/z = -1/-26/-1m**} {**MB-YK DTC EGTs**} \*

[White "KQBN"]  
[Black "KQB"]  
[Result "1-0"]  
[Date "2013.11.09"]  
[Event "7m, 4-3m, KQBNKQB, GBR 4041.00, maxDTM 4-3m\_P-less l&w: SV+M/SV+M+"]  
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[PlyCount "690"]

**{the one maxDTM 4-3m\_P-less btm loss: dtc/m/z = -330/-345/-330m, q.v. Krabbé (2006a)}** 1... Ka8"  
**{1 of 2 maxDTM 4-3m\_P-less wtm wins: dtm = 330/345/330m}** 2. Nb4"" Qh1+" 3. Kb2"" Qg1" 4. Qa4+""  
Qa7" 5. Qe8+"" Qb8" 6. Qe1" Bf3" 7. Kb1"" Qf4" 8. Qe8+"" Qb8" 9. Qe7" Qf4" 10. Qd8+"" Qb8" 11. Qd2"  
Be4+"" 12. Kc1"" Qg3" 13. Qd4"" Qf4+"" 14. Kb2"" Qf3" 15. Qd8+"" Kb7" 16. Qe7+"" Ka8" 17. Qe8+"" Ka7"  
18. Qe5"" Kb6" 19. Ka2"" Qf7+"" 20. Ka3" Qa7+"" 21. Kb2" Bh7" 22. Qf6+"" Kb5" 23. Nd5"" Ka5" 24. Qc3+""  
Kb5" 25. Nc7+"" Kb6" 26. Ne6" Qa5" 27. Qe3+"" Kb5" 28. Nd4+"" Kc4" 29. Nb3"" Qd5" 30. Qc3+"" Kb5" 31.  
Qa5+"" Kc6" 32. Qa8+"" Kd6" 33. Qf8+"" Kc7" 34. Qg7+"" Qd7" 35. Qg1" Qe7" 36. Ka2"" Qe2+"" 37. Bb2""  
Qa6+"" 38. Ba3"" Qe2+"" 39. Ka1" Qd3" 40. Qc1+"" Kd8" 41. Nc5"" Qd5" 42. Na4"" Qd4+"" 43. Nc3"" Kd7"  
44. Qe1"" Bg8" 45. Qe7+"" Kc6" 46. Bb2" Bc4" 47. Nb1"" Qd6" 48. Qe4+"" Qd5" 49. Qe8+"" Qd7" 50. Qe1"  
Qd3" 51. Qh1+"" Bd5" 52. Qh6+"" Kd7" 53. Qg7+"" Kc6" 54. Qf6+"" Kb7" 55. Qe7+"" Kc6" 56. Bc3" Be4" 57.  
Qe6+"" Kc5" 58. Qc8+"" Kb6" 59. Nd2" Bf5" 60. Qb8+"" Kc6" 61. Qa8+"" Kc5" 62. Qa7+"" Kc6" 63. Qa4+""  
Qb5" 64. Qa8+"" Kd7" 65. Qf3" Qa4+"" 66. Kb2° Qc2+"" 67. Ka3"" Be6" 68. Qb7+"" Ke8" 69. Qa8+"" Kf7" 70.  
Qf3+"" Ke8" 71. Qe3" Qa2+"" 72. Kb4° Qd5" 73. Be5"" Qc6" 74. Bd4" Kd7" 75. Bc5"" Qd5" 76. Kc3"" Qa2" 77.  
Qe4" Qa5+"" 78. Bb4"" Qd5" 79. Qh7+"" Bf7" 80. Qg7" Qa2" 81. Qd4+"" Qd5" 82. Qa7+"" Kc8" 83. Qa6+"" Kc7"  
84. Ba5+"" Kb8" 85. Qb6+"" Ka8" 86. Qc7" Qb7" 87. Qc5" Bd5" 88. Qf8+"" Qb8" 89. Qf5" Qd6" 90. Bb4" Qc6+""  
91. Kb2" Be6" 92. Qa5+"" Kb7" 93. Bc5" Qa6" 94. Qc3" Qc6" 95. Qb4+"" Ka6" 96. Qa3+"" Kb7" 97. Bg1" Kc7"  
98. Qe7+"" Qd7" 99. Qb4" Qd5" 100. Kc1" Qc6+"" 101. Kd1"" Kd7" 102. Qd4+"" Qd5" 103. Qa7+"" Kc8" 104.  
Qa4" Qe5" 105. Bb6" Qh5+"" 106. Kc1" Qe5" 107. Bf2" Bd5" 108. Qa6+"" Kd8" 109. Qa3" Kd7" 110. Qd3"  
Qc7+"" 111. Kd1" Qd6" 112. Bg3" Qc6" 113. Qd4" Ke6" 114. Bf4" Kf7" 115. Be5" Ke6" 116. Bh8" Ke7" 117.  
Qb4+"" Ke8" 118. Be5" Qb7" 119. Qc5" Qc6" 120. Qa3" Qh6" 121. Bc3" Qc6" 122. Qa5" Kd7" 123. Kc1" Be6"  
124. Qe5" Qh1+"" 125. Kc2" Qd5" 126. Qg7+"" Bf7" 127. Qg3" Qd6" 128. Qe3" Bd5" 129. Kd1" Qe6" 130.  
Qd4" Kc8" 131. Qh8+"" Qg8" 132. Qf6" Qg4+"" 133. Kc1" Qe6" 134. Qf8+"" Kb7" 135. Nf1" Qe4" 136. Qc5"  
Qc4" 137. Qe7+"" Qc7" 138. Qb4+"" Qb6" 139. Qf8" Qg1" 140. Qe7+"" Kc6" 141. Qf6+"" Kd7" 142. Kc2"  
Qg2+"" 143. Nd2" Be6" 144. Qh6" Qd5" 145. Kd1" Qc5" 146. Qg7+"" Ke8" 147. Kc2" Qf5+"" 148. Kc1" Qc5"  
149. Qg6+"" Kd7" 150. Qd3+"" Qd6" 151. Qe4" Qa3+"" 152. Kc2"" Qa2+"" 153. Kd1" Qd5" 154. Qe3" Qd6" 155.  
Qa7+"" Qc7" 156. Qd4+"" Qd6" 157. Qg7+"" Qe7" 158. Qg1" Kc8" 159. Qg6" Qd6" 160. Qg7" Qf4" 161. Kc1"  
Qe3" 162. Qf6" Kd7" 163. Bb4" Kc8" 164. Kc2" Kb7" 165. Bc3" Bd5" 166. Be5" Qc5+"" 167. Kd1" Kc8" 168.  
Qf5+"" Kd8" 169. Nf1" Qg1" 170. Bf6+"" Kc7" 171. Kd2"" Qg2+"" 172. Ke3"" Bc6" 173. Nd2"" Qg3+"" 174.  
Ke2" Qh2+"" 175. Kd1" Qh1+"" 176. Kc2"" Qd5" 177. Qf4+"" Kc8" 178. Bd4" Qe6" 179. Kd1" Bd5" 180. Be5"  
Qb6" 181. Qf5+"" Qe6" 182. Qg5" Qg8" 183. Qf4" Qg1+"" 184. Ke2" Qg2+"" 185. Kd3" Qg6+"" 186. Kd4" Bf7"  
187. Ne4" Qg1+"" 188. Kd3" Qd1+"" 189. Ke3" Qe1+"" 190. Kf3" Qf1+"" 191. Nf2"" Qc4" 192. Qf6" Qe6" 193.  
Qh8+"" Qe8" 194. Qg7"" Qd8" 195. Ke2"" Qe7" 196. Qh8+"" Qe8" 197. Qh3+"" Qe6" 198. Qe3"" Qb3" 199.  
Qc5+"" Kb7" 200. Qe7+"" Ka6" 201. Kd2"" Bg6" 202. Qc5" Qb6" 203. Qc4+"" Qb5" 204. Qc8+"" Qb7" 205.  
Qc3" Qd5+"" 206. Ke3"" Kb5" 207. Qb2+"" Kc6" 208. Kf4"" Qc4+"" 209. Kg3"" Bc2" 210. Kh2" Kd7" 211.  
Qb7+"" Ke6" 212. Bg3"" Bf5" 213. Qg7"" Qc8" 214. Bh4" Qb8+"" 215. Kg1" Qe5" 216. Qe7+"" Kd5° 217. Qf7+""  
Kc6" 218. Qb3" Qd4" 219. Bg3" Bd7" 220. Qb1" Be6" 221. Qg6" Kd7" 222. Qh7+"" Kc6" 223. Qc7+"" Kb5"  
224. Qb7+"" Qb6" 225. Qe4" Bb3" 226. Bf4" Qc6" 227. Qh7" Qf3" 228. Qd7+"" Qc6" 229. Qg7" Qc5" 230.  
Kg2" Be6" 231. Qb2+"" Kc6" 232. Qe2" Bf5" 233. Qe8+"" Kb7" 234. Kg3" Qc3+"" 235. Kh2"" Qf6" 236. Qb8+""  
Kc6" 237. Qc7+"" Kd5" 238. Kg1"" Qg6+"" 239. Bg3"" Qf6" 240. Qc1" Qd4" 241. Qh6" Bd7" 242. Qa6" Bc6"  
243. Qe2" Kc5" 244. Be5" Qc4" 245. Nd3+"" Kb5" 246. Qb2+"" Ka4" 247. Nf4" Qb3" 248. Qd4+"" Qb4" 249.  
Qa1+"" Qa3" 250. Qe1" Qf3" 251. Kh2"" Bb7" 252. Qd2" Kb5" 253. Bf6" Ka6" 254. Be7" Bc6" 255. Bc5" Kb7"  
256. Qb2+"" Kc8" 257. Qf6" Kb7" 258. Qe7+"" Kc8" 259. Qd6" Kb7" 260. Bd4" Ka6" 261. Qc7" Kb5" 262. Qb6+""

Kc4' 263. Be3'' Kc3'' 264. Qd4+'' Kb3'' 265. Qd3+'' Ka4'' 266. Qc4+'' Ka5'' 267. Bc5'' Qe4'' 268. Qc3+'' Kb5'' 269. Bd6'' Qc4'' 270. Qe3' Bd7' 271. Qd2'' Bc6'' 272. Kh3'' {and here, SM<sup>+</sup> must diverge from the SC<sup>+</sup> line above} Bd7+'' 273. Kg3' Qb3+'' 274. Kh4'' Qf3'' 275. Qb4+'' Ka6'' 276. Qc4+'' Bb5'' 277. Qa2+'' Kb6'' 278. Be5'' Qe4' 279. Qb2'' Qh7+'' 280. Kg3'' Qg8+'' 281. Bg7'' Qc4'' 282. Bd4+'' Kb7'' 283. Qa1' Ba4' 284. Be3'' Qe4'' 285. Bd4'' Bb5'' 286. Qa7+'' Kc8'' 287. Qc5+'' Qc6'' 288. Qf5+'' Qd7'' 289. Qe5' Qe8'' 290. Ne6'' Qg6+'' 291. Kf3'' Qd3+'' 292. Kf4'' Qd2+'' 293. Kg3'' Qd3+'' 294. Be3'' Qg6+'' 295. Ng5'' Qe8'' 296. Qd4'' Qd7'' 297. Qb4'' Bc6' 298. Bf4'' Qd5'' 299. Qb2' Bb7' 300. Qc3+'' Kd7'' 301. Qc7+'' Ke8° 302. Kh4'' Bc6'' 303. Kh5'' Qd1+'' 304. Kh6'' Qd7'' 305. Qb8+'' Qd8'' 306. Qb2'' Bd5'' 307. Bg3' Qe7'' 308. Qb5+'' Qd7'' 309. Qb8+'' Ke7'' 310. Nh7'' Qe6+'' 311. Kg7'' Qf7+'' 312. Kh8'' Qe8+'' 313. Qxe8+'' Kxe8° {KBNKB: dtc/m/z = 2/33/2m} 314. Nf6+'' Kf8' 315. Nxd5'' {KBNK: dtx = -31m} Kf7'' 316. Kh7'' Ke6'' 317. Nc7+' Kf5'' 318. Kh6'' Kg4'' 319. Bd6'' Kh4'' 320. Ne6' Kh3'' 321. Kh5' Kg2° 322. Kg4'' Kf2'' 323. Bc5+' Kg2'' 324. Ng7' Kh1'' 325. Nh5' Kh2'' 326. Ng3' Kg2° 327. Bd4' Kh2° 328. Kf3'' Kh3° 329. Bg1'' Kh4° 330. Ne4'' Kh5'' 331. Bd4' Kh4' 332. Be5'' Kh3'' 333. Ng5+' Kh4° 334. Kf4'' h5° 335. Kf5'' Kh4'' 336. Bf4' Kh5° 337. Bg3'' Kh6° 338. Ne6'' Kh5'' 339. Ng7+' Kh6° 340. Kf6'' Kh7° 341. Nf5' Kh8' 342. Bd6' Kg8' 343. Kg6'' Kh8° 344. Bc5' Kg8° 345. Nh6+'' Kh8° 346. Bd4#'' {Lomonosov DTM EGTs} \*

[White "KQPP"]

[Black "KQP"]

[Result "1-0"]

[Date "2013.09.30"]

[Event "7m, 4-3m, KQPPKQP, GBR 4000.21, maxDTM KQPPKQP l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "8/5pkq/8/P7/1K4Q1/8/P7/8 b - - 0 1"]

[PlyCount "594"]

{1 of 2 maxDTM KQPPKQP btm losses: dtm = -297m} 1... Kf8''

{1 of 7 maxDTM KQPPKQP wtm wins: dtm = 297m} 2. Qc8+'' Kg7'' 3. Qc3+'' Kg8'' 4. Qg3+'' Kh8'' 5.

Qe5+'' Kg8'' 6. Qg5+'' Kf8' 7. Qd8+'' Kg7° 8. Qd4+'' Kg8'' 9. a6'' Qb1+'' 10. Ka3'' Qc1+'' 11. Ka4'' Qc6+'' 12. Ka5'' Qc7+'' 13. Kb5' Qb8+'' 14. Ka4'' Qe8+'' 15. Ka5'' Qe1+'' 16. Kb6'' Qe6+'' 17. Kb7' Qe7+'' 18. Kb8'' Qe8+' 19. Kc7'' Qe7+'' 20. Qd7'' Qe3'' 21. Kb7'' Qe4+'' 22. Qc6'' Qb1+'' 23. Qb6'' Qh1+'' 24. Ka7'' Qd5'' 25. Qb8+'' Kh7'' 26. Qh2+'' Kg7' 27. Qg3+'' Kh7'' 28. Qh3+'' Kg6'' 29. Qb3'' Qe5'' 30. Qb8'' Qd5'' 31. Qc7'' Kg7'' 32. Qc3+'' Kg8'' 33. Kb6'' Qd6+' 34. Kb7'' Qd7+'' 35. Qc7'' Qb5+'' 36. Qb6'' Qd7+'' 37. Kb8'' Qe8+'' 38. Ka7'' Qd7+'' 39. Qb7'' Qd2'' 40. Qc8+'' Kh7'' 41. Qf5+' Kg8'' 42. Qg4+'' Kf8'' 43. a4'' Qe3+'' 44. Kb7'' Qb3+' 45. Kc6'' Qc3+'' 46. Kb5'' Qe5+'' 47. Kc4'' Qe8'' 48. Kd3'' Qc6'' 49. Qc4'' Qb6'' 50. Kc3'' Qe3+'' 51. Kb4'' Qb6+'' 52. Qb5'' Qd4+'' 53. Ka5'' Kg7'' 54. Qg5+'' Kf8'' 55. Qf5'' Kg7'' 56. Kb5'' Qb2+'' 57. Kc6'' Qd4'' 58. Qc2'' Qf6+'' 59. Kb5'' Qf1+' 60. Ka5'' Qe1+'' 61. Kb6'' Qe3+'' 62. Qc5'' Qe6+'' 63. Qc6'' Qe3+'' 64. Kb7'' Qe7+'' 65. Kc8'' Qf8+'' 66. Kd7'' Qb4'' 67. Qg2+'' Kh7' 68. Qc2+'' Kg8'' 69. Kc6'' Qd4'' 70. a5'' Qf6+'' 71. Kb7'' Qe7+'' 72. Qc7'' Qe4+'' 73. Kb8'' Qb4+'' 74. Ka8'' Qe4+'' 75. Qb7'' Qf5'' 76. Qb8+'' Kh7'' 77. Qc7'' Qd5+' 78. Kb8'' Qb5+'' 79. Qb7'' Qe5+'' 80. Kc8'' Qe8+'' 81. Kc7° Qe7+'' 82. Kc6'' Qe6+'' 83. Kc5'' Qe3+'' 84. Kd5'' Qe6+'' 85. Kd4'' Qf6+'' 86. Kc5'' Qe5+'' 87. Qd5'' Qc7+'' 88. Kd4'' Qa7+'' 89. Kc3'' Qc7+'' 90. Kd3'' Qg3+'' 91. Kd4'' Qg1+'' 92. Kc4'' Qc1+'' 93. Kb5'' Qc7'' 94. Qe4+' Kg8'' 95. Qa8+'' Kh7'' 96. Qe8'' Kg7'' 97. Qc6'' Qe5+'' 98. Qc5'' Qe8+'' 99. Kb4'' Qe4+'' 100. Qc4'' Qb1+' 101. Kc5'' Qf5+'' 102. Qd5'' Qc8+'' 103. Qc6'' Qd8'' 104. Kb5'' Qd4'' 105. Qc5'' Qd3+'' 106. Qc4'' Qf5+'' 107. Ka4'' Qd7+'' 108. Kb4'' Qd6+'' 109. Kc3'' Qg3+'' 110. Kb2'' Qg1'' 111. Qb4'' Kh7'' 112. Qd2'' Kg8'' 113. Qd6'' Kg7'' 114. Kc2'' Qe3'' 115. Qd2'' Qa7'' 116. Qd3'' Qf2+' 117. Kb3'' Qa7'' 118. Qg3+' Kh7'' 119. Qd6'' Qe3+' 120. Kc4'' Qe4+' 121. Kc5'' Qe3+'' 122. Kc6'' Kg7'' 123. Kb7'' Qb3+'' 124. Ka8'' Qc4'' 125. Qe5+'' f6'' 126. Qe7+'' Kg6'' 127. Qd6'' Qc8+'' 128. Ka7'' Qc4'' 129. Kb6'' Qb3+'' 130. Kc7'' Qc3+'' 131. Kb7' Qb3+'' 132. Kc8'' Qc3+'' 133. Qc7'' Qh3+'' 134. Kb8'' Qb3+'' 135. Qb7'' Qg3+'' 136. Ka8'' Qe5' 137. Qb1+'' Kh6' 138. Qc1+'' Kg6'' 139. Qc4'' Qe8+'' 140. Kb7'' Qd7+'' 141. Kb6'' Qd6+'' 142. Kb5'' Qb8+'' 143. Ka4'' Qe8+'' 144. Kb3'' Qe3+'' 145. Kb4'' Qe1+' 146. Kb5'' Qe5+'' 147. Qc5'' Qe8+'' 148. Qc6'' Qe5+'' 149. Kb6'' Qb8+'' 150. Kc5'' Qe5+'' 151. Qd5'' Qe3+'' 152. Qd4'' Qe7+'' 153.

Kc4'' Qe6+' 154. Kc3'' Qe1+' 155. Qd2'' Qe5+' 156. Kc2'''' Qe6'' 157. Qd3+' Kg7'' 158. Kb2' Qe5+' 159.  
 Kb3'' Qb8+' 160. Kc2'' Qh2+' 161. Qd2'' Qc7+' 162. Qc3'' Qh2+' 163. Kb3'''' Qb8+' 164. Qb4'' Qg3+' 165.  
 Ka4'' Qe5'' 166. Qg4+' Kh6'' 167. Qh3+' Kg6'' 168. Qd3+' Kh6'' 169. Kb3'' Qe6+' 170. Kc3' Qe5+' 171. Kc2''  
 Kh5'' 172. Kb3'' Qxa5'' **{KQPKQP: dtm = -126m}** 173. Qe2+''''' Kg6'' 174. Qe8+''''' Kh6' 175. Qe3+''''' Kg6''  
 176. a7'''' Qb5+' 177. Kc3' Qc6+' 178. Kd3'' Qd5+' 179. Qd4'' Qf3+' 180. Kd2' Qg2+' 181. Kc3'' Qb7'' 182.  
 Qc5'' Qh1'' 183. Kb3' Qb1+' 184. Ka4'' Qd1+' 185. Kb5'' Qe2+' 186. Kb6' Qe6+' 187. Kc7'' Qf7+' 188. Kd8''  
 Qg8+' 189. Kd7'' Qf7+' 190. Qe7'' Qd5+' 191. Kc7'' Qa5+' 192. Kc8'' Qd5'' 193. Qe8+' Kg5'' 194. Qa4''''  
 Qc5+' 195. Kd8'' Qb6+' 196. Kd7'' Qb7+' 197. Kd6' Qb6+' 198. Kd5'' Qd8+' 199. Ke4'' Qe7+' 200. Kf3''''  
 Qb7+' 201. Kf2'' Qb6+' 202. Kf1'' Qb1+' 203. Ke2'' Qb2+' 204. Kd3'' Qb1+' 205. Qc2'' Qh1'' 206. Qf2' Kg6''  
 207. Qg3+' Kh5'' 208. Qe3'' Qd5+' 209. Qd4'' Qc6' 210. Ke3'' Qh1'' 211. Qc5+' Kg6'' 212. Qc2+' Kg7'' 213.  
 Qc7+' Kg6'' 214. Kf2'' Qd5'' 215. Qc2+' f5'' 216. Kg1'' Kf6'' 217. Qa4'' Qc5+' 218. Kg2'''' Qd5+' 219. Kg3''  
 Qe5+' 220. Qf4'''' Qc3+' 221. Kg2'''' Qb2+' 222. Qf2'''' Qb7+' 223. Kh2'' Qc7+' 224. Kh3'' Qb7'' 225. Qh4+'  
 Kg6'' 226. Qd4'' Qh7+' 227. Kg2'' Qb7+' 228. Kg1'' Qb1+' 229. Kh2'' Qc2+' 230. Kh3'' Qb3+' 231. Kh4''  
 Qb7'' 232. Qe3' Kh7'' 233. Qc5'' Kg6'' 234. Kg3'' Qb3+' 235. Kf4'' Qa4+' 236. Ke5'' Qe4+' 237. Kd6° Kg5''  
 238. Qc3'' Kg4'' 239. Qg7+' Kf4'' 240. Qe7'' Qd4+' 241. Ke6'' Qc4+' 242. Kf6'' Qc3+' 243. Kg6' Qc6+' 244.  
 Kg7'' Qc3+' 245. Kh7'' Qh3+' 246. Kg6'' Qg2+' 247. Kf6'' Qc6+' 248. Qe6'' Qa8'' 249. Qxf5+' **{KQPKQ:  
 dtc/m/z = -35/-49/-35m}** Kg3'' 250. Qd7'''' Qf8+' 251. Kg6'' Qa8'' 252. Kf7'' Qf3+' 253. Kg7'' Qc3+' 254.  
 Kg6'' Qc2+' 255. Kh6'' Qc1+' 256. Kh7'' Qh1+' 257. Kg7'' Qg2'' 258. Qd4'' Qb7+' 259. Kf8' Qa8+' 260. Kf7''  
 Qb7+' 261. Ke6'' Qc8+' 262. Ke7'' Qa8'' 263. Qg7+' Kh4'' 264. Kd6'' Qd8+' 265. Kc6'' Qc8+' 266. Qc7''  
 Qa6+' 267. Qb6'' Qa4+' 268. Kd5'' Qd7+' 269. Kc4'' Qf7+' 270. Kc3'' Qf3+' 271. Kb2'' Qg2+' 272. Ka3''  
 Qf3+' 273. Qb3'' Qa8'' 274. Qb4+' Kh5' 275. Qb8'' Qf3+' 276. Kb4'' Qe4+' 277. Ka5'''' Qe1+' 278. Qb4''''  
 Qa1+' 279. Kb6'' Qf6+' 280. Kb5'' Qf3' 281. Qc5+' Kh4'' 282. Qc4+' Kh3' 283. Qc8+' Kg3' 284. a8=Q'  
**{KQQKQ: dtc/m/z = -9/-14/-9m}** Qb3+' 285. Kc5'' Qc3+' 286. Kd6'' Qd4+' 287. Qd5'' Qf6+' 288. Qce6''  
 Qd8+' 289. Kc6' Qa8+' 290. Kb6' Qxd5'' 291. Qxd5'''' **{KQK: dtx = -7m}** Kg4' 292. Qf7' Kh4' 293. Qg7' Kh3'  
 294. Kc6' Kh2' 295. Kd5'' Kh1' 296. Ke4'' Kh2° 297. Kf3'' Kh1' 298. Qg2#'' **{Lomonosov DTM EGTs}** \*



[White "KQQQ"]  
 [Black "KQQ"]  
 [Result "1-0"]  
 [Date "2013.02.06"]  
 [Event "7m, 4-3m, KQQQKQQ, GBR 9000.00\_32, maxDTC KQQQKQQ w&l: SV+C/SV+C"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "4Qq2/5Q2/8/8/2q5/Q7/2K4k w - - 0 1"]  
 [PlyCount "151"]

{(Krabbé, 2005b); B&K14, p500 of (Bourzutschky and Konoval, 2006)}

{maxDTC KQQQKQQ wtm win: dtc/m/z = 76/85/76m} 1. Kd1''' Qd4+' 2. Ke2''' Qg4+' 3. Kd3''' Qd1+' 4. Qd2 Qa3+' 5. Ke4''' Qg4+' 6. Ke5''' Qag3+' 7. Qff4''' Qg5+ 8. Ke4''' Qg6+' 9. Kd5''' Qb3+' 10. Kd4''' Qg7+ 11. Kc5 Qa7+' 12. Kd6''' Qaa3+' 13. Ke5 Qc5+' 14. Kf6''' Qbb6+' 15. Qe6''' Qf8+' 16. Ke5''' Qg7+' 17. Qef6 Qg5+' 18. Ke4''' Qb1+ 19. Kd4''' Qa1+' 20. Kc4 Qa4+' 21. Kd3''' Qb3+' 22. Qfc3 Qb1+' 23. Kd4 Qb6+' 24. Ke4 Qbg6+ 25. Ke3 Qg1+' 26. Ke2''' Q6g2+' 27. Kd3''' Qb1+' 28. Kd4''' Qb6+' 29. Qc5 Qf2+' 30. Qde3''' Qfb2+' 31. Kd5''' Qa2+' 32. Qfc4''' Qd2+' 33. Qcd3 Qa2+' 34. Kd4 Qf6+' 35. Qee5''' Qff2+' 36. Qde3 Qfb2+' 37. Qec3''' Qf2+' 38. Qee3 Qf6+' 39. Kd3 Qb1+ 40. Kc4''' Qa6+' 41. Kd5 Qf5+' 42. Qee5''' Qf7+' 43. Ke4 Qe2+' 44. Kd4''' Qef2+' 45. Qee3 Q2f6+' 46. Kd3 Qf1+' 47. Ke4 Qe6+ 48. Q5e5''' Qg4+' 49. Q3f4''' Qfg2+ 50. Kd4 Qd7+' 51. Qd6''' Qf2+' 52. Kc4''' Qa2+ 53. Kc5 Qaa7+' 54. Kd5''' Qb5+ 55. Ke4''' Qe2+' 56. Qfe3 Qa4+ 57. Kd5 Qeb5+ 58. Qec5 Qa2+ 59. Kd4''' Qf2+' 60. Qe3''' Qbb2+ 61. Ke4 Qg2+ 62. Kf5''' Qb1+ 63. Kf4 Qbf1+ 64. Ke5''' Qg7+ 65. Kd5''' Qfg2+ 66. Kc4 Qa2+ 67. Qb3 Qg4+ 68. Qcd4''' Qc8+ 69. Kb4 Qb7+ 70. Q6b6 Qe7+ 71. Kc4 Qae2+ 72. Kc3 {and here, this SC<sup>+</sup> line diverges from SM<sup>+</sup>} Qf3+ 73. Kb2 Qee2+ {the last of 73 consecutive checks} 74. Qc2 Qef2 75. Qh8+ Kg1 76. Qcxf2+' {KQQQKQ: dtc/m/z = -0/-8/-0m} {MB-YK DTC EGTs} \*

[White "KQQQ"]  
 [Black "KQQ"]  
 [Result "1-0"]  
 [Date "2013.02.06"]  
 [Event "7m, 4-3m, KQQQKQQ, GBR 9000.00\_32, maxDTM KQQQKQQ l&w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "4Qq2/4qQ2/8/8/8/8/Q1K5/7k b - - 0 1"]  
 [PlyCount "170"]

**{1 of 4 maxDTM KQQQKQQ btm losses: dtm = -85m} 1... Qc5+''**  
**{1 of 9 maxDTM KQQQKQQ wtm wins: dtm = 85m} 2. Kd1'''' Qd4+'' 3. Ke2'''' Qg4+'' 4. Kd3'''' Qd1+'' 5. Qd2'' Qa3+'' 6. Ke4'''' Qg4+'' 7. Ke5'''' Qag3+'' 8. Qff4'''' Qg5+'' 9. Ke4'''' Qg6+'' 10. Kd5'''' Qb3+'' 11. Kd4'''' Qg7+'' 12. Kc5'' Qa7+'' 13. Kd6'''' Qaa3+'' 14. Ke5'' Qc5+'' 15. Kf6'''' Qbb6+'' 16. Qe6'''' Qf8+'' 17. Ke5'''' Qg7+'' 18. Qef6'' Qg5+'' 19. Ke4'''' Qb1+'' 20. Kd4'''' Qa1+'' 21. Kc4'' Qa4+'' 22. Kd3'''' Qb3+'' 23. Qfc3'' Qb1+'' 24. Kd4'''' Qb6+'' 25. Ke4'' Qbg6+'' 26. Ke3'' Qg1+'' 27. Ke2'''' Q6g2+'' 28. Kd3'''' Qb1+'' 29. Kd4'''' Qb6+'' 30. Qc5'' Qf2+'' 31. Qde3'''' Qfb2+'' 32. Kd5'''' Qa2+'' 33. Qfc4'''' Qd2+'' 34. Qcd3'' Qa2+'' 35. Kd4'' Qf6+'' 36. Qee5'''' Qff2+'' 37. Qde3'' Qfb2+'' 38. Qec3'''' Qf2+'' 39. Qee3'' Qf6+'' 40. Kd3'' Qb1+'' 41. Kc4'''' Qa6+'' 42. Kd5'' Qf5+'' 43. Qee5'''' Qf7+'' 44. Ke4'' Qe2+'' 45. Kd4'''' Qef2+'' 46. Qee3'' Q2f6+'' 47. Kd3'' Qf1+'' 48. Ke4'' Qe6+'' 49. Q5e5'''' Qg4+'' 50. Q3f4'''' Qfg2+'' 51. Kd4'' Qd7+'' 52. Qd6'''' Qf2+'' 53. Kc4'''' Qa2+'' 54. Kc5' Qaa7+'' 55. Kd5'''' Qb5+'' 56. Ke4'' Qe2+'' 57. Qfe3'' Qa4+'' 58. Kd5'' Qeb5+'' 59. Qec5'' Qa2+'' 60. Kd4'''' Qf2+'' 61. Qe3'''' Qbb2+'' 62. Ke4'' Qg2+'' 63. Kf5'''' Qb1+'' 64. Kf4'' Qbf1+'' 65. Ke5'''' Qg7+'' 66. Kd5'''' Qfg2+'' 67. Kc4'' Qc2+'' 68. Kb4' Qb7+'' 69. Ka5'' Qd2+'' 70. Qcc3'' Qa8+'' 71. Kb5'' Qb7+'' 72. Kc5'' Qa7+'' 73. Qb6'' Qe7+'' 74. Qxe7'' Qxc3+'' **{KQKQ: dtc/m/z = 7/12/7m}** 75. Kb5' Qd3+'' 76. Ka5' Qd5+'' 77. Qb5'' Qd2+'' 78. Qbb4'' Qxb4+'' 79. Qxb4' **{KQK: dtx = -7m}** Kg1' 80. Qg4+'' Kf1' 81. Kb5' Kf2'' 82. Kb4' Kf1' 83. Kc4' Ke1' 84. Qg2'' Kd1° 85. Kd3'' Kc1' 86. Qc2#'' **{Lomonosov DTM EGTs} 1-0****

[White "KQRN"]  
 [Black "KQN"]  
 [Result "1-0"]  
 [Date "2013.12.26"]  
 [Event "7m, 4-3m, KQRNKQN, GBR 4104.00, maxDTM KQRNKQN w&l: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "7Q/N7/4K3/8/n5q1/8/5R2/2k5 w - - 0 1"]  
 [PlyCount "183"]

**{1 of 4 maxDTM KQRNKQN wtm wins: dtm = 92m}** 1. Ke5'''  
**{1 of 24 maxDTM KQRNKQN btm losses: dtm = -91m}** Qg3+' 2. Rf4'''' Qg5+' 3. Rf5'''' Qg3+' 4. Kf6''  
 Qd6+' 5. Kf7'' Qc7+' 6. Kg6'' Qg3+' 7. Rg5'' Qd3+' 8. Kf6'' Qd6+' 9. Kf5'' Qd3+' 10. Kf4'' Qd2+' 11. Kg4''  
 Qd1+' 12. Kg3'' Qg1+' 13. Kf4'''' Qf2+' 14. Kg4'''' Qg2+' 15. Kf5'' Qf3+' 16. Ke6'' Qb3+' 17. Kf6'' Qb6+'  
 18. Kf5'''' Qf2+' 19. Kg6'' Qc2+' 20. Rf5'' Qg2+' 21. Kf6'' Qb2+' 22. Re5'''' Qf2+' 23. Ke6' Qb6+' 24. Kf7''  
 Qb7+' 25. Kf8'' Qb8+' 26. Re8'''' Qb4+' 27. Kf7'' Qb3+' 28. Ke7'' Qe3+' 29. Kd6'' Qc5+' 30. Ke6'''' Qb6+' 31.  
 Kf5' Qf2+' 32. Ke4'' Qe1+' 33. Kd3'' Qg3+' 34. Kc4'' Nb2+' 35. Kd5'''' Qf3+' 36. Ke5' Qe3+' 37. Kf5' Qf2+'  
 38. Kg6'' Qg1+' 39. Kh6'' Qh1+' 40. Kg7'' Qb7+' 41. Kg6'' Qg2+' 42. Kf7'' Qd5+' 43. Re6'' Qd7+' 44. Re7''''  
 Qd5+' 45. Kg6'' Qd3+' 46. Kg5'' Qg3+' 47. Kf5'''' Qf2+' 48. Ke6'' Qb6+' 49. Kf7'' Qb3+' 50. Re6'' Qb7+'  
 51. Kg6'' Qg2+' 52. Kh7'' Qh1+' 53. Rh6'' Qe4+' 54. Kg7'' Qd4+' 55. Kg6'' Qd3+' 56. Kf6'' Qd6+' 57. Kf5''  
 Qd3+' 58. Ke6'' Qa6+' 59. Ke5' Qa5+' 60. Ke4' Qe1+' 61. Kf5'' Qf2+' 62. Ke5'' Qe3+' 63. Kd5'' Qf3+' 64.  
 Kc5'' Qa3+' 65. Kb5' Qa4+' 66. Kb6'''' Nc4+' 67. Kb7'''' Qb4+' 68. Kc7' Qc5+' 69. Nc6'' Qb6+' 70. Kd7'  
 Qb7+' 71. Kd8' Qa8+' 72. Kc7'' Qxh8'' **{ending 71 consecutive 'spite' checks by the loser, a longer sequence  
 than in KQRKQ}** 73. Rxh8'''' **{KRKN: dtc/m/z = -13/-19/-13m}** Kc2'' 74. Rd8' Kc3'' 75. Kb7'' Ne3' 76. Ne5'  
 Nf5'' 77. Rd3+' Kb4'' 78. Rf3' Ne7' 79. Nc6+' Nxc6'' 80. Kxc6'' **{KRK: dtx = -12m}** Kc4'' 81. Re3'' Kd4'' 82.  
 Re6' Kc4' 83. Rd6'' Kb4'' 84. Rd4+' Kb3' 85. Kb5'' Kc3'' 86. Rd5' Kb3' 87. Rc5'' Ka3' 88. Kc4'' Kb2'' 89. Kb4''  
 Ka2' 90. Kc3'' Ka1' 91. Kc2'' Ka2° 92. Ra5#'' **{Lomonosov DTM EGTs}** \*

[White "KRBN"]  
[Black "KRB"]  
[Result "1-0"]  
[Date "2014.02.06"]  
[Event "7m, 4-3m, KRBNKRB, GBR 0441.00, maxDTC KRBNKRB w&l: SV+C/SV+C+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "8/8/1b6/8/4N2r/1k6/7B/R1K5 w - - 0 1"]  
[PlyCount "451"]

**{this was the DTC-deepest known 7m endgame from 6<sup>th</sup> September to 17<sup>th</sup> October, 2005 (Krabbé, 2005b/c), B&K18/31 (Bourzutschky and Konoval, 2006)}**

**{a maxDTC KRBNKRB wtm win: dtc/m/z = 226/239/226m}** 1. Rb1+"" Kc4'' 2. Nd2+"" Kd3'' 3. Nf3"" Rh6'' 4. Kd1"" Ba5'' 5. Rb3+"" Bc3'' 6. Ne5+"" Ke4'' 7. Ng4"" Rg6 8. Nf2+"" Kd4'' 9. Rb8"" Re6'' 10. Rd8+"" Kc4'' 11. Rc8+"" Kd4'' 12. Ng4 Re1+'' 13. Kc2° Re2+'' 14. Kb3"" Rb2+'' 15. Ka3"" Rc2'' 16. Bg1+"" Kd3'' 17. Rd8+"" Ke4'' 18. Nf2+ Kf5'' 19. Rd3"" Rc1'' 20. Rf3+"" Ke6'' 21. Nh3"" Be5'' 22. Kb3"" Rb1+'' 23. Kc2 Rb2+'' 24. Kd1"" Rb1+'' 25. Ke2"" Rb2+'' 26. Kf1"" Rb1+'' 27. Kg2"" Rb2+'' 28. Kh1"" **{Bourzutschky: "particularly striking is that White's king does not re-emerge until move 134"}** Rb4 29. Ng5+"" Kd5'' 30. Rd3+"" Kc4'' 31. Rd1"" Rb3'' 32. Re1"" Kd5'' 33. Rf1"" Ra3'' 34. Rf2"" Rb3'' 35. Rf5"" Rb4'' 36. Nf3 Ke4'' 37. Rf7"" Rb2'' 38. Ng5+"" Kd5'' 39. Ra7 Bd6 40. Ra5+"" Kc4'' 41. Ne4"" Bb8'' 42. Ra8 Bc7'' 43. Nf6 Kb5'' 44. Rg8"" Kc6'' 45. Rg6"" Kd6'' 46. Ng4+"" Kd5'' 47. Ne3+"" Ke4'' 48. Re6+"" Kf3'' 49. Nd5 Ba5 50. Re3+"" Kg4° 51. Re4+"" Kg3 52. Re8"" Kf3'' 53. Rf8+ Kg3'' 54. Rf1 Bb4'' 55. Rf7"" Bd6'' 56. Rd7 Bb8 57. Rd8 Be5'' 58. Re8"" Bd6'' 59. Re6 Bb8'' 60. Re3+"" Kg4'' 61. Ra3 Kf5'' 62. Ra4"" Rd2 63. Ne3+"" Ke6'' 64. Nc4 Rc2'' 65. Ra6+"" Kd7'' 66. Ne3"" Rc6'' 67. Ra4"" Bc7'' 68. Ng4"" Rc2'' 69. Re4 Bd6'' 70. Nf6+"" Kc7'' 71. Re6"" Bc5'' 72. Bh2+"" Kb7'' 73. Ne4 Bb6'' 74. Be5 Bc5'' 75. Rh6 Bb6 76. Nc3 Ba5 77. Nd5 Rc5'' 78. Rh7+"" Ka6'' 79. Rd7"" Kb5 80. Bg3"" Kc6'' 81. Nf6"" Rg5'' 82. Rd6+"" Kb5'' 83. Rd3"" Rg6'' 84. Ne4 Kc6'' 85. Rd1"" Re6'' 86. Ng5 Rg6'' 87. Bf4 Rf6'' 88. Nh3 Rg6'' 89. Rc1+ Kd7'' 90. Nf2 Ke6'' 91. Rb1"" Kf5'' 92. Bh2"" Rb6'' 93. Rc1"" Rb5'' 94. Rc8"" Bb6'' 95. Rf8+"" Ke6'' 96. Nd3"" Rb3'' 97. Nf4+"" Ke7 98. Rh8 Rb2 99. Nd3"" Rd2'' 100. Ne5"" Bc5 101. Bf4 Re2'' 102. Nd3 Be3'' 103. Bg3 Rd2 104. Bh4+ Kd6'' 105. Be1"" Rc2 106. Rh7 Ra2 107. Bg3+ Ke6'' 108. Rh5"" Bd4 109. Be1 Ba7 110. Rg5 Bd4 111. Nf4+ Kf7'' 112. Rf5+ Ke8 113. Nd3 Ra3 114. Rf3"" Ra2'' 115. Rf4 Ba7 116. Nc1 Rb2 117. Rf5 Kd8 118. Nd3 Ra2 119. Bg3 Kd7 120. Rh5 Be3 121. Rd5+ Kc8'' 122. Rf5 Rd2 123. Rf8+ Kb7 124. Rd8 Ka7 125. Be1 Rc2 126. Re8 Bb6'' 127. Nb4 Rc4 128. Re6 Kb7 129. Nd5"" Ba5 130. Bg3 Rc5 131. Re7+ Kc6 132. Nf6 Rf5 133. Re6+ Kc5 134. Kg2 Bc3 135. Ne8 Kd5 136. Nc7+"" Kc4 137. Re7 Rf6 138. Ne6 Bd2 139. Ng7 Bh6 140. Ne8 Rf8'' 141. Nd6+ Kd5 142. Re4 Bd2 143. Rg4 Be3 144. Rh4 Kc5 145. Ne4+ Kc6 146. Nc3 Kc5 147. Re4 Bd4 148. Ne2 Bg7 149. Nf4 Rf7 150. Bf2+ Kc6 151. Rc4+ Kb5 152. Rc5+ Ka4 153. Ne6 Re7'' 154. Nc7 Rd7 155. Bg3 Kb4 156. Rc6 Rd3 157. Bd6+ Kb3 158. Ne6 Bd4'' 159. Bf4 Be3 160. Be5 Ba7 161. Nf4 Rd2+ 162. Kf3 Bd4'' 163. Bb8 Bg1 164. Ne2 Rd3+'' 165. Kg4 Rd2'' 166. Re6 Bc5 167. Bf4 Rd7 168. Kf3 Kc4 169. Re4+ Kd5 170. Nc3+ Kc6° 171. Re6+ Kb7'' 172. Ne4 Rd3+ 173. Kg4 Rd5 174. Rh6 Ba3 175. Rh3 Ra5 176. Rc3 Bf8 177. Rc7+ Ka6 178. Be3 Re5 179. Kf3 Bb4 180. Bd4 Re6 181. Rc5 Ba5 182. Rd5 Bb6 183. Ba1 Re8 184. Rd1 Rd8 185. Nc5+"" Kb5 186. Nd7 Bc7 187. Rb1+ Kc6'' 188. Nf6"" Bd6 189. Ke4 Bc5 190. Rc1 Kb6 191. Be5 Kc6 192. Nh5 Kb5'' 193. Ng7 Rd2 194. Ne6 Re2+ 195. Kf5 Bf2 196. Nc7+ Kb4 197. Nd5+ Kb3 198. Rb1+ Kc4'' 199. Ke6 Rc2 200. Rb4+ Kd3'' 201. Ra4 Rd2 202. Kf5 Bc5 203. Bg7 Rc2 204. Bf6 Rd2 205. Nf4+ Ke3'' 206. Rc4 Bd6 207. Rc3+ Kf2'' 208. Ne6 Re2 209. Ng5 Kg2 210. Bd4 Rd2 211. Rc4 Bg3 212. Ne4 Ra2 213. Rc1 Bb8 214. Kg4 Ba7 215. Nc3 Ra5 216. Rc2+ Kf1 217. Bf6 Bb8 218. Bh4 Ba7 219. Bg3 Ra1 220. Kf3 Bd4 221. Bh4 Be5 222. Be7 Re1 223. Bc5 Ra1 224. Rf2+ Kg1 225. Re2+ Bd4 226. Bxd4+'' **{KRBNKR: dtx = -3m} {MB-YK DTC EGTs} \***

[White "KRNP"]  
 [Black "KPP"]  
 [Result "1-0"]  
 [Date "2013.12.03"]  
 [Event "7m, 4-3m, KRNPKPP, GBR 0103.12, maxDTM KRNPKPP 1&w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "7N/R2K4/8/8/6Pp/3p4/3k4/8 b - g3 0 1"]  
 [PlyCount "364"]

**{1 of 2 maxDTM KRNPKPP btm losses, the other having the 'h' pawn on f4: dtm = -182m}**

**{the only known maxDTM positions featuring an e.p.-capture opportunity}** 1... hxg3'' 2. Ng6'''' g2'' 3. Nh4'''' g1=N'' 4. Ng2'''' Ke2'' 5. Nf4+'''' Ke3'' 6. Nd5+'''' Ke2'' 7. Ra1' d2'' 8. Ke6'''' d1=N'' **{a second P=N 'under'promotion; KRKNKN: dtc/m/z = 156/175/156m}** 9. Kf5'''' Nf3'' 10. Nf4+'''' Kd2'' 11. Ra2+'''' Ke3'' 12. Ra3+'''' Kf2'' 13. Ne6' Ke2'' 14. Kf4'' Ne1'' 15. Nc5'''' Kd2'' 16. Ne4+'''' Kc2'' 17. Rh3'''' Nd3+'' 18. Kf5'''' N1b2'' 19. Rh2+'''' Kb3'' 20. Nd2+'''' Kb4'' 21. Ke4'''' Nc5+'' 22. Kd5'''' Nba4'' 23. Nb1'' Nd3'' 24. Rh4+' Kb3'' 25. Nd2+' Kc2'' 26. Rh2'''' Nc3+'' 27. Kd4'''' Nb5+'' 28. Kc4'' Nd6+' 29. Kd5'''' Nb5'' 30. Ne4+'''' Kb3'' 31. Rh3'' Kc2'' 32. Re3'' Nc7+'' 33. Kc6'' Ne6'' 34. Re2+'''' Kc1'' 35. Kb6'' Nef4'' 36. Rh2'''' Kd1'' 37. Rd2+'' Ke1'' 38. Kb5'' Ne5'' 39. Ra2'' Nfd3'' 40. Nc3'' Nc1'' 41. Rg2'' Ncd3' 42. Rc2'' Kf1'' 43. Re2'' Kg1'' 44. Ne4'' Nf4' 45. Ra2'' Nfd3'' 46. Ng3'' Nf2'' 47. Kc5'''' Kg2'' 48. Ne4'''' Neg4'' 49. Kd4'''' Kf3'' 50. Ng5+'''' Kf4'' 51. Ne6+'' Kf5'' 52. Nf8'' Kf4'' 53. Ng6+'' Kg5'' 54. Ne7'''' Kf6'' 55. Nd5+'' Kf5'' 56. Ra6'' Nh3'' 57. Ne7+'' Kf4'' 58. Ra5'' Nh2'' 59. Ra4'' Nf3+'' 60. Kd3+'''' Ke5'' 61. Ke3'''' Nfg5'' 62. Nc6+'' Kf5'' 63. Rh4'' Kf6'' 64. Nd4'' Ke5'' 65. Rh5'' Kf6'' 66. Rh8'' Kg6'' 67. Ra8'' Nf7'' 68. Ra6+'' Kg5'' 69. Ke4'' Nf2+'' 70. Kf3'''' Nd3'' 71. Ke3'' Nfe5'' 72. Re6'' Ng6'' 73. Rb6'' Nge5'' 74. Rb5'' Kf6'' 75. Nc2'' Nb2'' 76. Ke4' Nbc4'' 77. Kd5'''' Nd2'' 78. Ne3'''' Ng6'' 79. Rb6+'''' Kf7'' 80. Rb2'' Ne7+'' 81. Kd4'' Nf3+'' 82. Ke4'''' Ng5+'' 83. Kf4'' Nh7' 84. Ke5'''' Ng6+'' 85. Kd6'' Ng5'' 86. Rf2+'' Ke8'' 87. Rf1'' Nf7+'' 88. Kd5'' Nd8'' 89. Rg1'' Kf7'' 90. Ng4'' Ne6'' 91. Kd6'' Ng5'' 92. Rf1+'' Kg7'' 93. Rb1'' Nf7+'' 94. Kd5'' Nf4+'' 95. Ke4'''' Ne6'' 96. Ne3'' Kf8'' 97. Kf5'' Nc5'' 98. Rh1'' Ke8' 99. Nc4'' Ke7'' 100. Rh7'''' Nd7'' 101. Rg7'' Ke8'' 102. Ke6'' Nf8+'' 103. Kd5'' Nd7'' 104. Rg6'' Nf8'' 105. Ra6'' Ke7'' 106. Ne3'' Ng5'' 107. Ng4'' Kf7'' 108. Ke5'' Nd7+'' 109. Kf5'' Nh7'' 110. Nh6+'' Ke7'' 111. Re6+'' Kd8'' 112. Nf7+' Kc7'' 113. Re2'' Kc6'' 114. Rc2+'' Kd5'' 115. Rd2+'' Kc6'' 116. Rd6+'' Kc7'' 117. Ke6'' Nb6'' 118. Rd1'' Nf8+'' 119. Kf5'' Nc8'' 120. Rc1+'' Kd7'' 121. Ne5+'' Kd8'' 122. Nf3'' Ne7+' 123. Kf6'' Nd5+'' 124. Kf7'' Nd7'' 125. Rd1'' Nc3'' 126. Rd4'''' Nb5'' 127. Rd5'' Nc3'' 128. Rf5'''' Na4'' 129. Ke6'''' Ndc5+'' 130. Kd6'' Kc8'' 131. Rf7'' Nb7+'' 132. Ke5'''' Nac5'' 133. Re7'' Na6'' 134. Nd2'' Nc7'' 135. Nc4'' Nc5' 136. Nb6+'' Kd8'' 137. Rf7'' Nb5'' 138. Kd5'' Na6'' 139. Rd7+'' Ke8° 140. Rb7'' Kd8'' 141. Nc4' Nac7+'' 142. Kc5'' Kc8'' 143. Rb6'' Nc3'' 144. Rh6'' Kd8'' 145. Rh8+' Kd7' 146. Rh7+'' Kd8'' 147. Kc6'' Ne6'' 148. Nd6'' Nd4+'' 149. Kc5'''' Ne6+'' 150. Kc4'' Ne2'' 151. Kd5'' Nc7+'' 152. Kc5'' Na6+'' 153. Kc4'' Nf4' 154. Nb7+' Kc8'' 155. Kb5'' Nb8'' 156. Nc5'' Nd5'' 157. Ne6'' Nd7'' 158. Kc6'' Nb4+'' 159. Kd6'' Nf6'' 160. Rh4'' Na6'' 161. Rd4' Kb7'' 162. Rf4'' Nh5'' 163. Rf3' Kb6'' 164. Ke5'' Nb4' 165. Rh3'' Nf6'' 166. Kxf6'' **{KRKNKN: dtc/m/z = -12/-17/-12m}** Kb5'' 167. Kf5' Nd5' 168. Ke5'' Ne7'' 169. Nd4+' Kb4'' 170. Rh6'' Nc8'' 171. Rf6' Ne7' 172. Nc6+' Nxc6+'' 173. Rxc6'''' **{KRK: dtx = -10m}** Kb5'' 174. Rc2' Kb4' 175. Kd5'' Kb3'' 176. Rc4'' Ka3' 177. Kc5'' Kb3'' 178. Kb5'' Ka3' 179. Rb4'' Ka2° 180. Ka4'' Ka1° 181. Kb3'' Kb1° 182. Rc4'' Ka1° 183. Rc1#'' **{Lomonosov DTM EGTs}** \*

[White "KRNP"]  
[Black "KRB"]  
[Result "1-0"]  
[Date "2013.12.04"]  
[Event "7m, 4-3m, KRNPKRB, GBR 0131.10, maxDTM KRNPKRB l&w: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "4r3/1P6/6R1/8/1K4kb/8/8/1N6 b - - 0 1"]  
[PlyCount "602"]

**{1 of 3 maxDTM KRNPKRB btm losses: dtc/m/z = -260/-301/-260m} 1... Kf5''**  
**{the one maxDTM KRNPKRB wtm win: dtm = 260/301/260m} 2. Rh6'''' Re2'' 3. Rh5+'''' Bg5'' 4. Kc3' Re8''**  
5. Kc4'''' Kg6'' 6. Rh3'''' Bf4'' 7. Rb3'''' Re4+'' 8. Kc5' Re5+'' 9. Kb6'' Re6+'' 10. Ka7'''' Bh2'' 11. Rh3'''' Bg1+''  
12. Kb8'''' Be3'' 13. Rf3'''' Bd4'' 14. Rd3'''' Be5+'' 15. Ka7'''' Bh2'' 16. Rd1'' Bf4'' 17. Rg1+'' Kh6'' 18. Rf1''  
Be3+'' 19. Kb8'''' Kg5'' 20. Kc8'''' Rc6+'' 21. Kd8' Rb6'' 22. Kc7'''' Rb3'' 23. Re1'' Bf4+'' 24. Kc6'''' Kg6'' 25.  
Rg1+'' Kh6'' 26. Rd1'' Re3'' 27. Rc1'' Re7'' 28. Rc3'' Kg6'' 29. Kb6'' Be3+'' 30. Ka6'' Re6+'' 31. Ka5'''' Re5+''  
32. Ka4'''' Ba7'' 33. Rc7'''' Rf5'' 34. Rc6+'''' Kg7'' 35. Nc3'''' Rf7'' 36. Rb6'''' Rf6'' 37. Rb5'''' Kf7'' 38. Ka5''''  
Ke8'' 39. Rd5'''' Bb8' 40. Na4'''' Rf1'' 41. Rd3'' Rh1' 42. Nc5' Ba7'' 43. Rc3'' Ke7'' 44. Nb3' Bb8'' 45. Kb6''  
Rh6+'' 46. Kb5'''' Rh1' 47. Rc8'' Be5'' 48. Kc6'' Rh6+'' 49. Kc5'' Rh3'' 50. Na5'' Bd6+'' 51. Kc6'''' Bf4'' 52.  
Rg8'''' Rh6+'' 53. Kc5' Rh5+'' 54. Kb6'''' Be3+'' 55. Ka6'''' Rh6+'' 56. Kb5'''' Rb6+'' 57. Kc4'''' Bf4'' 58. Kc5''''  
Be3+'' 59. Kd5'''' Bf4'' 60. Rg4'' Bb8'' 61. Rg7+'' Kf6'' 62. Rg8'''' Bc7'' 63. Rf8+'' Kg7'' 64. Rf3'' Bb8'' 65. Kc5''  
Ba7'' 66. Kc4'''' Bb8'' 67. Rh3'' Kg6'' 68. Rh8'' Be5'' 69. Re8'' Kf6'' 70. Kc5'' Rb1'' 71. Kc6'' Rc1+'' 72. Kb5''  
Rb1+'' 73. Ka6'' Bc7'' 74. Nc4'''' Kf7'' 75. Re4' Rb3'' 76. Re2' Kf6'' 77. Re8'' Kf7'' 78. Rc8'' Bf4'' 79. Na5''''  
Rb1'' 80. Rc3'' Ke6'' 81. Nb3' Bb8'' 82. Rd3'' Ke7'' 83. Nc5'''' Bd6'' 84. Rd5'' Rb2'' 85. Na4'' Rb1'' 86. Ka7''  
Ke6'' 87. Rd3' Ke7'' 88. Rc3'' Rb5'' 89. Rc4'' Rb3' 90. Nc5'' Rb1'' 91. Rc3' Rb4'' 92. Na6' Rb1'' 93. Rh3'' Kd7''  
94. Rh6'' Ke7'' 95. Rh7+'' Kd8'' 96. Rg7'' Rb2' 97. Rg4'' Rb5'' 98. Rh4'' Rb1'' 99. Nb4'' Bg3'' 100. Rg4'' Bh2''  
101. Rg8+'' Ke7'' 102. Rg7+'' Kf6'' 103. Rg2'' Bd6'' 104. Nd5+'' Kf7'' 105. Nc3' Rb4'' 106. Ka6'' Ke6'' 107.  
Rg1'' Bb8'' 108. Rd1'' Rc4'' 109. Rd8'''' Bh2'' 110. Rh8'' Bc7'' 111. Rh6+'''' Ke5'' 112. Rh5+'''' Ke6'' 113. Nd5''''  
Bg3'' 114. Rh3'' Bb8'' 115. Rh8'' Bg3'' 116. Nb6'' Rc1'' 117. Re8+'''' Kf7'' 118. Re4'''' Ra1+'' 119. Na4'' Bb8''  
120. Rh4'' Rb1' 121. Rh8'' Be5'' 122. Rh3'' Bb8'' 123. Re3'' Bc7' 124. Re4'' Ra1' 125. Kb5'' Rb1+'' 126. Kc6''  
Rc1+'' 127. Nc5'' Bb8'' 128. Ra4'' Ke7'' 129. Ra2'' Kf7' 130. Ra8'' Bf4' 131. Rh8'' Bg3'' 132. Rh3'' Bb8'' 133.  
Kd5'' Rd1+'' 134. Nd3'' Ke7'' 135. Kc6'' Rb1'' 136. Rh7+'' Kf6'' 137. Rh8'' Bg3'' 138. Rg8'' Bd6'' 139. Nf2''  
Ke7'' 140. Rg7+'' Ke6'' 141. Nd3'' Kf6'' 142. Rg8'' Bh2'' 143. Nc5'' Rc1'' 144. Kb6'' Rb1+'' 145. Ka7'' Ke7'' 146.  
Rg7+'' Kd6'' 147. Rg2'' Be5'' 148. Na6'' Kd7'' 149. Rd2+'' Ke7'' 150. Re2'' Kf6'' 151. Nc5'' Bc7'' 152. Rc2''  
Ke7'' 153. Rc3'' Bd6'' 154. Nb3' Rb2'' 155. Re3+'' Kf8'' 156. Ka6'' Bb8'' 157. Nd4'' Rb1'' 158. Re4'' Kf7'' 159.  
Nc6'' **{and here SM<sup>+</sup> diverges from the SZ<sup>+</sup> line below}** Bg3' 160. Nb4'' Bd6'' 161. Nd5'' Rb2'' 162. Re1'' Rd2''  
163. Nb6'' Bc7'' 164. Rc1'' Bb8'' 165. Na4'' Ke7'' 166. Rc8'' Bf4'' 167. Nc5'' Ra2+'' 168. Kb6' Rb2+'' 169. Kc6''  
Rc2'' 170. Rh8'' Bg3'' 171. Rh7+'' Kf6'' 172. Rh1'' Bb8'' 173. Kd5'' Rd2+'' 174. Kc4'' Rh2'' 175. Rd1'' Rc2+''  
176. Kb4'' Ba7'' 177. Ra1'' Bb8'' 178. Ra8'' Bg3'' 179. Ra3'' Rb2+'' 180. Kc4'' Bd6'' 181. Ra7'' Bh2'' 182. Ra6+''  
Kf7'' 183. Rh6'' Bg3'' 184. Rh3' Bb8'' 185. Rh7+'' Kg6'' 186. Re7'' Kf6'' 187. Re8'' Bg3'' 188. Rf8+'' Ke7'' 189.  
Rg8'' Bf4'' 190. Nd3'' Kf7'' 191. Rh8'''' Rh2'' 192. Rc8'' Bg3'' 193. Kb5'' Rh5+'' 194. Kb6'' Rh6+'' 195. Ka7''  
Rh1'' 196. Rc3'' Ra1+'' 197. Kb6'''' Bb8' 198. Nc5'' Rb1+'' 199. Kc6'' Rd1'' 200. Na6'' Rd6+'' 201. Kb5'''' Ba7''  
202. Rc7+'' Kf6'' 203. Rc6'' Ke7'' 204. Nc5'' Rd1'' 205. Rc7+'' Kf6'' 206. Na4'' Bb8' 207. Rc8'' Rb1+'' 208.  
Ka6'' Bh2'' 209. Rh8'' Bc7'' 210. Rh6+'' Kg7'' 211. Rc6'' Bb8'' 212. Rc8'' Bh2'' 213. Rc2'' Bb8'' 214. Nc3'' Rh1''  
215. Nb5'' Kf7'' 216. Rc8'' Bf4'' 217. Rd8'' Ke7'' 218. Rd6'''' Rh8'' 219. Rg6'' Rh7'' 220. Kb6'' Kd7'' 221. Nc3''  
Bc7+'' 222. Ka7'' Rh8'' 223. Ne4'' Bb8+'' 224. Kb6'''' Ke7'' 225. Kc6'' Rh4'' 226. Rg8'' Rh6+'' 227. Kd5'' Bh2''  
228. Rg7+'' Ke8'' 229. Nc5'' Rh5+'' 230. Kc6'' Rh6+'' 231. Kb5'' Kf8'' 232. Rd7'' Ke8'' 233. Rd4'' Bc7'' 234.  
Re4+'' Kf7'' 235. Nd7'' Rh5+'' 236. Kc6'' Bg3'' 237. Re3'' Bh2'' 238. Re2'' Bg3'' 239. Rg2'' Rh6+'' 240. Kb5''  
Bd6' 241. Rg1'' Rh5+'' 242. Kc6'' Rh6'' 243. Kd5'' Bc7'' 244. Rc1'' Rh5+'' 245. Kc6'' Bg3'' 246. Nc5'' Rh6+''  
247. Kb5'' Ke7'' 248. Re1+'' Kf7'' 249. Rd1'' Bb8'' 250. Na6'' Ba7'' 251. Rd7+'' Ke8'' 252. Rc7'' Rd6' 253. Nb4'  
Rb6+'' 254. Ka5' Kd8'' 255. Nd5' Rb1'' 256. Rg7'' Ra1+'' 257. Kb5'' Rb1+'' 258. Nb4'' Ke8'' 259. Rh7'' Bb8''  
260. Kc6'' Rc1+'' 261. Kb6'' Bd6' 262. Kb5'' Rc5+'' 263. Ka6'' Bg3'' 264. Kb6'' Rc1'' 265. Na6'' Kf8'' 266. Kb5''

Rb1+' 267. Kc6'' Kg8'' 268. Re7'' Kf8'' 269. Rd7'' Rc1+' 270. Nc5'' Kg8'' 271. Kd5'' Kf8'' 272. Ne4'' Rd1+' 273. Ke6'' Re1'' 274. Kf5'' Rf1+' 275. Kg6'' Be5'' 276. Rh7'' Rb1'' 277. Nf6'' Rg1+' 278. Ng4'' Bd6'' 279. Kf5'' Re1'' 280. Kf6'' Ke8'' 281. Kg6'' Rg1'' 282. Kf5'' Bg3'' 283. Ne5'' Rb1'' 284. b8=R+' Rxb8° **{KRNKRB: dtc/m/z = 2/18/2m}** 285. Rh8+' Ke7° 286. Rxb8'' **{KRNK: dtc/m/z = -11/-16/-11m}** Kd6'' 287. Rd8+' Kc7' 288. Rg8' Bf2' 289. Rg6' Bd4' 290. Ke6' Be3' 291. Rg7+' Kb6'' 292. Nc4+' Kc5'' 293. Nxe3'' **{KRNK: dtc/m/z = -7/-9/-7m}** Kd4'' 294. Nd5' Kc4' 295. Rg4+' Kd3' 296. Ke5' Kd2' 297. Ke4'' Kc2' 298. Rg2+' Kd1' 299. Nb4' Kc1' 300. Kd3'' Kb1'' 301. Kc3'' Kal' 302. Rg1#'' **{Lomonosov DTM EGTs}** \*

[White "KRNP"]  
 [Black "KRB"]  
 [Result "1-0"]  
 [Date "2013.12.04"]  
 [Event "7m, 4-3m, KRNPKRB, GBR 0131.10, candidate maxDTZ 7m\_P-ful l&w: SV+C/SV+C"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "4r3/1P6/6R1/8/1K4kb/8/8/1N6 b - - 0 1"]  
 [PlyCount "520"]

**{the wP is on b7, hence the DTZ status here (Bourzutschky and Konoval (2012b), BK.25, pp324-5)}**

**{candidate maxDTZ 7m\_P-ful btm loss: dtc/m/z = -260/-301/-260m} 1... Kf5''**

**{candidate maxDTZ 7m\_P-ful wtm win: dtc/m/z = 260/301/260m} 2. Rh6'''' Re2'' 3. Rh5+'''' Bg5'' 4. Kc3 Re8'' 5. Kc4'''' Kg6'' 6. Rh3'''' Bf4'' 7. Rb3'''' Re4+'' 8. Kc5 Re5+'' 9. Kb6 Re6+'' 10. Ka7'''' Bh2'' 11. Rh3'''' Bg1+ 12. Kb8'''' Be3 13. Rf3'''' Bd4'' 14. Rd3'''' Be5+'' 15. Ka7'''' Bh2'' 16. Rd1 Bf4'' 17. Rg1+ Kh6'' 18. Rf1 Be3+'' 19. Kb8'''' Kg5'' 20. Kc8'''' Rc6+'' 21. Kd8 Rb6'' 22. Kc7'''' Rb3'' 23. Re1 Bf4+'' 24. Kc6'''' Kg6 25. Rg1+ Kh6'' 26. Rd1 Re3'' 27. Rc1 Re7'' 28. Rc3 Kg6'' 29. Kb6 Be3+'' 30. Ka6 Re6+'' 31. Ka5'''' Re5+'' 32. Ka4'''' Ba7'' 33. Rc7'''' Rf5'' 34. Rc6+'''' Kg7'' 35. Nc3'''' Rf7'' 36. Rb6'''' Rf6'' 37. Rb5'''' Kf7 38. Ka5'''' Ke8 39. Rd5'''' Bb8 40. Na4'''' Rf1'' 41. Rd3 Rh1 42. Nc5 Ba7 43. Rc3 Ke7'' 44. Nb3 Bb8'' 45. Kb6 Rh6+ 46. Kb5'''' Rh1 47. Rc8 Be5 48. Kc6 Rh6+'' 49. Kc5 Rh3 50. Na5 Bd6+ 51. Kc6'''' Bf4 52. Rg8'''' Rh6+'' 53. Kc5 Rh5+'' 54. Kb6'''' Be3+'' 55. Ka6'''' Rh6+'' 56. Kb5'''' Rb6+'' 57. Kc4'''' Bf4'' 58. Kc5'''' Be3+'' 59. Kd5'''' Bf4'' 60. Rg4 Bb8'' 61. Rg7+ Kf6'' 62. Rg8'''' Bc7 63. Rf8+ Kg7'' 64. Rf3 Bb8'' 65. Kc5 Ba7'' 66. Kc4'''' Bb8'' 67. Rh3 Kg6 68. Rh8 Be5'' 69. Re8 Kf6'' 70. Kc5 Rb1'' 71. Kc6 Rc1+'' 72. Kb5 Rb1+'' 73. Ka6 Bc7'' 74. Nc4'''' Kf7 75. Re4 Rb3 76. Re2 Kf6 77. Re8 Kf7 78. Rc8 Bf4 79. Na5'''' Rb1 80. Rc3 Ke6 81. Nb3 Bb8 82. Rd3 Ke7'' 83. Nc5'''' Bd6 84. Rd5 Rb2 85. Na4 Rb1'' 86. Ka7 Ke6 87. Rd3 Ke7'' 88. Rc3 Rb5 89. Rc4 Rb3 90. Nc5 Rb1 91. Rc3 Rb4 92. Na6 Rb1 93. Rh3 Kd7 94. Rh6 Ke7'' 95. Rh7+ Kd8'' 96. Rg7 Rb2 97. Rg4 Rb5 98. Rh4 Rb1 99. Nb4 Bg3'' 100. Rg4 Bh2'' 101. Rg8+ Ke7'' 102. Rg7+ Kf6 103. Rg2 Bd6'' 104. Nd5+ Kf7 105. Nc3 Rb4'' 106. Ka6 Ke6 107. Rg1 Bb8 108. Rd1 Rc4'' 109. Rd8'''' Bh2 110. Rh8 Bc7'' 111. Rh6+'''' Ke5'' 112. Rh5+'''' Ke6'' 113. Nd5'''' Bg3 114. Rh3 Bb8'' 115. Rh8 Bg3'' 116. Nb6 Rc1 117. Re8+'''' Kf7 118. Re4'''' Ra1+ 119. Na4 Bb8 120. Rh4 Rb1 121. Rh8 Be5'' 122. Rh3 Bb8'' 123. Re3 Bc7 124. Re4 Ra1 125. Kb5 Rb1+ 126. Kc6 Rc1+'' 127. Nc5 Bb8'' 128. Ra4 Ke7 129. Ra2 Kf7 130. Ra8 Bf4 131. Rh8 Bg3'' 132. Rh3 Bb8'' 133. Kd5 Rd1+'' 134. Nd3 Ke7 135. Kc6 Rb1'' 136. Rh7+ Kf6'' 137. Rh8 Bg3'' 138. Rg8 Bd6 139. Nf2 Ke7 140. Rg7+ Ke6'' 141. Nd3 Kf6'' 142. Rg8 Bh2'' 143. Nc5 Rc1'' 144. Kb6 Rb1+'' 145. Ka7 Ke7 146. Rg7+ Kd6'' 147. Rg2 Be5'' 148. Na6 Kd7 149. Rd2+ Ke7'' 150. Re2 Kf6'' 151. Nc5 Bc7'' 152. Rc2 Ke7'' 153. Rc3 Bd6 154. Nb3 Rb2 155. Re3+ Kf8 156. Ka6 Bb8 157. Nd4 Rb1 158. Re4 Kf7'' 159. Nc6 **{and here this SZ<sup>+</sup> line diverges from the SM<sup>+</sup> line above}** Bd6 160. Nb4 Bh2 161. Re2 Bg3 162. Re3 Bd6'' 163. Nd5 Rb2'' 164. Re4 Rb3'' 165. Re2 Rd3'' 166. Rf2+ Ke8'' 167. Nf6+ Ke7'' 168. Ne4'''' Bb8'' 169. Rg2 Kf7 170. Rg1 Rd4 171. Nc5 Rd2 172. Rb1 Ke7 173. Kb6 Rd6+ 174. Kb5'''' Rd2 175. Re1+ Kf7 176. Rc1 Rd5 177. Rf1+ Kg7 178. Rf2 Rd6 179. Rf5 Ba7 180. Na4 Rd3 181. Ka5 Rd7 182. Ka6 Bb8'' 183. Nb6 Rd3 184. Nd5 Rb3'' 185. Rf1 Rd3'' 186. Nb4 Rb3 187. Kb5 Bd6'' 188. Rg1+'''' Kf7 189. Rg4'''' Bb8 190. Rc4 Rb1'' 191. Kc6 Rd1'' 192. Nd5 Ke8'' 193. Nc7+ Kd8'' 194. Na6 Rd6+'' 195. Kb5'''' Rd5+'' 196. Ka4 Bd6 197. Rg4 Bh2 198. Rh4 Bg3 199. Rh8+ Ke7 200. Rh7+ Kd8'' 201. Kb4 Rd7 202. Rh8+'''' Ke7° 203. Kc4 Rd1 204. Rh7+ Kf6'' 205. Kc5 Rb1 206. Kc6 Ra1 207. Kb6 Rb1+ 208. Ka7 Rc1 209. Rh3 Be5'' 210. Kb6 Rb1+ 211. Kc6 Rc1+ 212. Kd7 Rd1+ 213. Ke8 Rb1 214. Rh7'''' Bf4 215. Rd7 Rb6 216. Nc5'''' Kg6 217. Kd8 Be5 218. Rd5 Bh2 219. Kd7 Rb2 220. Rd4 Kf7 221. Rd3 Kg6 222. Rh3 Rd2+ 223. Nd3 Bf4 224. Ke6 Re2+'' 225. Kd5 Rd2 226. Kc5 Bc7 227. Kc6 Rc2+'' 228. Kd5 Rd2 229. Ke6 Rd1 230. Kd7 Bb8'' 231. Rf3 Kg7 232. Kc8 Bd6 233. Nc5 Rc1 234. Kd7'''' Bb8 235. Ne6+ Kg6 236. Rb3 Kf6 237. Rb6 Ke5 238. Ra6 Ke4 239. Ra4+ Ke3 240. Rh4 Rg1 241. Rh7 Ke4 242. Ng7 Rf1 243. Ne8 Rf8 244. Rh1 Kd4 245. Rc1 Rf7+ 246. Kc6'''' Rf2 247. Rd1+ Ke3 248. Kd7 Ke2 249. Rc1 Rf7+ 250. Kc8'''' Bf4 251. Rc6 Rf8 252. Re6+ Kd3 253. Kd7 Bb8 254. Rc6 Ke3 255. Rc8 Rf7+ 256. Kc6'''' Bg3 257. Nc7 Rf6+ 258. Kd7 Rd6+ 259. Ke8 Rb6 260. Nd5+'''' Ke4 261. Nxb6'''' **{KRNPKB: dtc/m/z = -1/-10/-1m} {MB-YK DTC and Lomonosov DTM EGTs} \*****



[White "KRPP"]  
 [Black "KRP"]  
 [Result "1-0"]  
 [Date "2013.09.30"]  
 [Event "7m, 4-3m, KRPPKRP, GBR 0400.21, maxDTM KRPPKRP l&w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/k1P5/8/8/1R5P/7p/r7/1K6 b - - 0 1"]  
 [PlyCount "434"]

{the one maxDTM KRPPKRP btm loss: dtm = -217m} 1... h2"  
 {1 of 4 maxDTM KRPPKRP wtm wins: dtm = 217m} 2. Kxa2"" h1=Q"  
 3. c8=R""! {KRRPKQ: dtm = -215m; a 'Saavedra' under-promotion} Qd5+'' 4. Kb1"" Qa5' 5. Rcc4"" Qe5"  
 6. Ra4+"" Kb6'' 7. Rc2'' Kb5'' 8. Rac4"" Qg7'' 9. Rc5+'' Kb4'' 10. R2c4+"" Kb3' 11. Rc3+"" Kb4'' 12. R5c4+""  
 Kb5'' 13. Rc7'' Qg1+'' 14. Ka2"" Qg2+'' 15. Ka3"" Qg1' 16. Rb7+"" Ka6'' 17. Rb2"" Qa1+'' 18. Kb3'' Qe1'' 19.  
 Rc6+'' Ka7'' 20. Rc4'' Qe6'' 21. Rbc2"" Ka6'' 22. Ka4'' Qd7+'' 23. Rc6+'' Ka7'' 24. Kb3"" Qd5+'' 25. Kb4''  
 Qh1'' 26. Rc7+'' Ka8' 27. R7c4'' Qh3'' 28. Ka4'' Ka7'' 29. Rb4'' Qd7+'' 30. Ka3'' Qd3+'' 31. Kb2'' Qd5'' 32.  
 Rbc4'' Qh1'' 33. Ka2' Qd5'' 34. Ka3'' Qd6+'' 35. Kb2'' Qf6+'' 36. Kb1'' Qb6+'' 37. Ka1'' Qg1+'' 38. Ka2'' Qg8''  
 39. Kb2'' Qd8'' 40. Ra4+'' Kb6'' 41. Rb4+'' Ka5'' 42. Rbc4"" Qh8+'' 43. Kb3'' Qg8' 44. Ka3'' Qf8+'' 45. Rc5+''  
 Ka6' 46. h5'' Ka7'' 47. Kb4"" Kb6'' 48. Kb3'' Qf3+'' 49. Ka2"" Qf7+'' 50. Kb2'' Qf6+'' 51. R2c3'' Qf2+'' 52.  
 Ka3'' Qf8'' 53. Ka4'' Qf1'' 54. Rc6+'' Kb7' 55. h6"" Qa1+'' 56. Kb4'' Qb2+'' 57. Rb3'' Qd2+'' 58. Kc5+'' Ka7''  
 59. Ra3+"" Kb7'' 60. Rb6+"" Kc8'' 61. Ra8+"" Kc7'' 62. Ra7+"" Kc8'' 63. Rc6+"" Kb8'' 64. Ra4"" Kb7'' 65.  
 Rb4+'' Ka7'' 66. Rc4'' Qe3+'' 67. Kd5'' Qd2+'' 68. Ke5' Qe3+'' 69. Kf5"" Qd3+'' 70. Ke6'' Ka8' 71. Rc8+'' Ka7''  
 72. R8c7+"" Ka6' 73. h7'' Qh3+'' 74. Kf6'' Qh6+'' 75. Kf5'' Qh3+'' 76. Kf4'' Kb5'' 77. Rc3'' Qh1'' 78. Rb3+""  
 Ka6'' 79. Rd7"" Qh4+'' 80. Ke5' Qg5+'' 81. Kd4'' Qf6+'' 82. Kd3'' Qg6+'' 83. Kc3'' Qg3+'' 84. Kc2' Qg2+'' 85.  
 Kb1'' Qf1+'' 86. Ka2'' Qe2+'' 87. Ka3'' Qe5'' 88. Rbd3'' Qa1+'' 89. Kb3' Qb1+'' 90. Kc4'' Qc1+'' 91. Kd5''  
 Qg5+'' 92. Ke4'' Qg4+'' 93. Ke3'' Qg5+'' 94. Kf2'' Qh4+'' 95. Ke2"" Qe4+'' 96. Kd1'' Qg4+'' 97. Kc1' Qc4+'' 98.  
 Kd2'' Qf4+'' 99. Re3'' Qf2+'' 100. Kd3'' Qf5+'' 101. Kc3'' Qc5+'' 102. Kd2'' Qa5+'' 103. Rc3'' Qa2+'' 104. Ke3''  
 Qe6+'' 105. Kf2"" Qb6+'' 106. Re3'' Qf6+'' 107. Rf3'' Qb6+'' 108. Kg2' Qg6+'' 109. Kf1'' Qb1+'' 110. Ke2''  
 Qb5+'' 111. Ke3'' Qe5+'' 112. Kd2"" Kb5'' 113. Rdf7'' Qd5+'' 114. Ke2' Qe5+'' 115. Kf1'' Qh2'' 116. R3f4'' Ka5'  
 117. Ke1'' Kb5'' 118. Kd1'' Qh5+'' 119. Kd2'' Qd5+'' 120. Ke2' Qe6+'' 121. Kf2'' Qh3'' 122. R4f5+'' Ka4'' 123.  
 Ra7+'' Kb4'' 124. Rb7+'' Kc4'' 125. Rc7+'' Kb4'' 126. Rf4+'' Kb5'' 127. Rfc4'' Qh2+'' 128. Ke3'' Qh1'' 129. Kd2''  
 Kb6' 130. Kc2'' Qa1'' 131. R4c6+'' Kb5'' 132. Rc3'' Qa2+'' 133. Kc1' Qa1+'' 134. Kd2'' Qb2+'' 135. Ke3'' Qh2''  
 136. Kd3'' Kb6' 137. R3c6+'' Ka5'' 138. Rc5+'' Kb4' 139. Rc4+'' Ka5'' 140. Kc3'' Kb6'' 141. Kb3'' Qh1'' 142.  
 R4c6+'' Kb5'' 143. Rc2' Qf3+'' 144. Kb2'' Qh1'' 145. Rf2'' Qh4'' 146. Rf3'' Qh2+'' 147. Kb3"" Qh1' 148. Rf5+''  
 Kb6'' 149. Rcf7"" Kc6'' 150. R7f6+'' Kd7'' 151. Kb2'' Qh2+'' 152. Kc3'' Ke7'' 153. Rc6'' Qg3+'' 154. Kc2'  
 Qg2+'' 155. Kb3"" Qg3+'' 156. Rc3'' Qb8+'' 157. Kc4'' Qc7+'' 158. Kb4'' Qb6+'' 159. Rb5'' Qd4+'' 160. Kb3''  
 Qd1+'' 161. Ka3'' Qa1+'' 162. Kb4"" Qb2+'' 163. Kc4"" Qh2'' 164. Kb3'' Kd6'' 165. Rb7'' Qh1'' 166. Rbc7""  
 Ke5'' 167. R3c5+'' Kd4'' 168. Kb2'' Qh6'' 169. Rb5' Qf8'' 170. Rbb7'' Ke4'' 171. Rc4+'' Ke5'' 172. Rc3'' Qf2+''  
 173. Kb3'' Qh2'' 174. Re7+'' Kd6'' 175. Rec7'' Qh1'' 176. R3c5' Ke6'' 177. Kb4'' Kf6'' 178. Rd7'' Ke6'' 179.  
 Rcd5"" Qe1+'' 180. Kb5'' Qb1+'' 181. Ka6' Qa1+'' 182. Kb6'' Qb2+'' 183. Rb5'' Qh8'' 184. Rb7'' Kd6'' 185. Rf5'  
 Ke6'' 186. Rh5'' Qd4+'' 187. Ka6'' Qa4+'' 188. Ra5"" Qe8'' 189. Re7+'' Qxe7'' 190. h8=Q"" {KQRKQ: dtc/m/z  
 = -19/-28/-19m} Qd6+'' 191. Kb5'' Qd5+'' 192. Kb4'' Qd6+'' 193. Rc5'' Qb6+'' 194. Rb5'' Qd6+'' 195. Kb3''  
 Qd1+'' 196. Ka3'' Qd6+'' 197. Rb4'' Qd3+'' 198. Ka4'' Qc2+'' 199. Rb3'' Qc4+'' 200. Ka5'' Qc5+'' 201. Ka6''  
 Qc4+'' 202. Rb5"" Kd7'' 203. Qh5' Kd6' 204. Qf5' Kc7'' 205. Qc5+'' Qxc5'' 206. Rxc5+"" {KRK: dtx = -12m}  
 Kd7'' 207. Kb6' Kd6'' 208. Rh5'' Ke6'' 209. Kc6' Kf6'' 210. Kd6' Kg6'' 211. Rd5' Kf6'' 212. Kd7'' Kf7'' 213. Rd6''  
 Kf8' 214. Ke6'' Kg7'' 215. Ke7'' Kg8' 216. Kf6'' Kh8' 217. Kg6'' Kg8° 218. Rd8#'' {Lomonosov DTM EGTs} \*

[White "KRRN"]  
[Black "KRR"]  
[Result "1-0"]  
[Date "2013.11.22"]  
[Event "7m, 4-3m, KRRNKRR, GBR 0801.00, maxDTC KRRNKRR w&l: SV+C/SV+C+"]  
[Annotator "Haworth, Guy"]  
[SetUp "1"]  
[FEN "r7/5r1N/8/8/6R1/6R1/3K1k2 w - - 0 0"]  
[PlyCount "579"]

**{This broke Stiller's 15 year old DTC-record of 243m DTC and implicitly Nalimov's DTM-record of 262m, both in KRKNKN (Krabbé, 2005c; Bourzutschky and Konoval, 2006). It held the DTC-record from 17<sup>th</sup> October 2005 until 26<sup>th</sup> May 2006, succeeded by KQBNKQB's DTC of 330m (Krabbé, 2006a).}**

**{maxDTC KRRNKRR wtm win: dtc/m/z = 290/304/290m}** 1. Rg1+''' Kf2° 2. R3g2+''' Ke3'' 3. Re2+''' Kd4 4. Rd2+''' Kc5 5. Rg5+''' Kc4 6. Rg4+''' Kc3'' 7. Rg3+''' Kc4'' 8. Ng5''' Rg8'' 9. Re2''' Rf4'' 10. Re5''' Rgf8 11. Kd2''' Rd4+'' 12. Ke1''' Rb8'' 13. Ra3''' Rg4'' 14. Nh3''' Rb3 15. Ra4+ Rb4'' 16. Ra8 Rb2'' 17. Kf1''' Rg3'' 18. Re4+''' Kd5'' 19. Rh4''' Rf3+'' 20. Kg1''' Kc6'' 21. Re8''' Rg3+ 22. Kh1''' Rf3'' 23. Re1 Rf6'' 24. Rd1 Rc2'' 25. Ng5''' Rcf2'' 26. Rd3 R6f4'' 27. Rh6+''' Kb5'' 28. Nh3''' Rf6'' 29. Rh5+''' R6f5'' 30. Rh4 Rb2'' 31. Rd1''' Ka5'' 32. Ra1+''' Kb5'' 33. Rh8 Kc6'' 34. Re1''' Rd2'' 35. Rc1+''' Kb7 36. Rb1+ Kc7'' 37. Rh7+''' Kc6'' 38. Rh6+''' Kc7'' 39. Rg1 Rdd5'' 40. Rg7+''' Rd7'' 41. Rg2 Rdd5'' 42. Kg1''' Rh5'' 43. Rg7+''' Kc8 44. Rc6+''' Kb8'' 45. Re6 Rde5'' 46. Rb6+ Ka8'' 47. Rg3 Rb5 48. Ra3+''' Ra5° 49. Rf3 Rhf5'' 50. Rfb3 Rf7 51. Rb8+''' Ka7° 52. Rg8''' Ra2 53. Re3''' Rc2 54. Ra3+''' Kb7'' 55. Rb3+''' Ka7'' 56. Rg4 Ra2'' 57. Rb1 Rb7'' 58. Re1 Rf7'' 59. Rd1 Kb7'' 60. Rg5 Rf3'' 61. Rg7+''' Kc6'' 62. Rg6+''' Kb7'' 63. Rd7+''' Kc8'' 64. Rh7''' Rf8'' 65. Rc6+''' Kb8'' 66. Rc1''' Ra7'' 67. Rb1+''' Ka8'' 68. Rh5''' Rg7+'' 69. Kh2 Rf6'' 70. Ng5''' Rgg6'' 71. Ne4''' Rb6 72. Ra5+''' Ra6'' 73. Rf5 Rg8'' 74. Ng5 Ra2+'' 75. Kg3 Ra3+'' 76. Kg4 Ra4+'' 77. Kh5 Rh8+ 78. Kg6''' Ra6+ 79. Kg7''' Rb8'' 80. Rd1''' Ra7+'' 81. Kg6 Rg8+'' 82. Kh5 Ra4'' 83. Nf3 Ra6 84. Rb5 Ra4 85. Rdb1 Ra7'' 86. Ng5 Rb7'' 87. Ra1+ Ra7'' 88. Rd1 Rb7'' 89. Rf5 Rb4'' 90. Nf3''' Ra4'' 91. Kh6 Ra6+'' 92. Kh7 Re8'' 93. Ne5 Ra5'' 94. Re1''' Ra6'' 95. Kg7 Re7+'' 96. Kf8''' Rc7'' 97. Rd1''' Ra5'' 98. Kg8''' **{Krabbé: "utterly mysterious"}** Rac5'' 99. Rd2 Rc2 100. Rd4 R2c5'' 101. Rdf4 Kb7'' 102. Rb4+''' Ka8'' 103. Kh8 Re7'' 104. Rf8+''' Ka7'' 105. Ra4+''' Kb6'' 106. Ng6''' Rb7'' 107. Nf4 Rc6'' 108. Ra3 Rd7'' 109. Rfa8''' Kc7'' 110. R3a7+ Kd6'' 111. Ra5 Rf7'' 112. Ra4''' Rcc7 113. R8a6+''' Ke5'' 114. R6a5+ Kd6'' 115. Rd4+''' Kc6'' 116. Ne6''' Kb6'' 117. Ra8 Ra7'' 118. Rd6+ Ka5'' 119. Rd5+ Kb4'' 120. Rad8 Rfe7 121. Ng5 Re2 122. Rd4+ Kb3 123. Rg4 Rae7'' 124. Rdd4 Ra2 125. Rb4+ Kc2'' 126. Rgc4+ Kd3 127. Rc8 Rea7 128. Rb3+ Ke2'' 129. Rc1 Re7 130. Rb8 Ra5 131. Rg1 Raa7 132. Rh1 Kd3 133. Rh6 Kc4 134. Rf8 Rac7 135. Rh3 Kc5 136. Rhf3 Rc6 137. Rb8 Rg6 138. Nf7 Kc4 139. Rd8 Kb4 140. Kh7 Rg1 141. Rd4+ Kc5 142. Rh4 Kc6 143. Rf6+ Kd7 144. Rd4+ Kc7 145. Kh6 Rh1+ 146. Kg7 Rhe1 147. Rff4 R1e6 148. Rb4 Kc6 149. Rfc4+ Kd5'' 150. Rc8 Re8 151. Rc1 R8e7 152. Rb8 Re8'' 153. Rb2 R8e7'' 154. Rd2+ Ke4° 155. Rd8 Kf4 156. Kf8 Re3 157. Rc4+ R7e4 158. Rc5 Re6 159. Ra5 **{and here this SC<sup>+</sup> choice is not SM<sup>+</sup>}** R3e4 160. Rda8 Re2 161. Rc5 Re1 162. Rd5 Rf1 163. Raa5 Ke3 164. Ra7 Ke4 165. Rg5 Kf4 166. Kg7 Rfe1 167. Raa5 Re7 168. Raf5+ Ke3'' 169. Rf6 Kd4 170. Rd6+ Kc4'' 171. Rc6+ Kd4 172. Kf6 Re8'' 173. Nh6 Rf1+ 174. Kg6 Ke4 175. Rd6 Ra1 176. Rc5 Rea8 177. Rc4+ Kf3'' 178. Nf7 R1a6 179. Ne5+''' Kg2 180. Rc2+ Kh1 181. Nc6 Ra1'' 182. Rd4 R8a2 183. Rh4+ Kg1° 184. Rc3 Ra3 185. Rc5 Rg3+ 186. Kf5 Rf1+ 187. Ke4 Re1+'' 188. Kf4 Rg8'' 189. Ne5 Rf8+'' 190. Kg5''' Ra1 191. Rc3 Raa8 192. Rb4 Ra5 193. Rc1+ Kg2'' 194. Rc2+ Rf2 195. Rg4+''' Kf1'' 196. Rc1+''' Ke2° 197. Re4+ Kd2° 198. Rb1''' Rf8'' 199. Rb6 Rc5 200. Kg6 Rcc8 201. Rb2+ Kc3'' 202. Ree2 Rce8 203. Rbc2+ Kb3'' 204. Rcd2 Rc8'' 205. Rb2+ Ka3 206. Ra2+ Kb3 207. Reb2+ Kc3° 208. Rd2 Kb4 209. Rab2+ Kc3 210. Nd7 Rh8 211. Nf6 Kc4 212. Rb1 Ra8 213. Kg5 Ra5+ 214. Kg4 Raa8 215. Nd5 Rag8+ 216. Kf5 Rf8+'' 217. Nf6 Rc8 218. Rdb2 Ra8 219. Rb7 Ra5+ 220. Kg6 Ra6 221. Rc1+ Kd3'' 222. Rd7+ Ke3 223. Rc3+ Ke2'' 224. Rc2+ Ke1'' 225. Kg5 Raa8'' 226. Rd3 Rhc8'' 227. Rh2 Rh8'' 228. Rhd2 Ra3'' 229. Rd1+ Ke2'' 230. R3d2+ Kf3'' 231. Rf1+ Ke3'' 232. Rdd1 Rha8'' 233. Nd5+ Ke2'' 234. Nf4+ Ke3° 235. Rde1+ Kd4 236. Ne6+ Kc4 237. Rf4+ Kc3 238. Rf2 Kc4 239. Kf6 Rd3 240. Rc2+ Kb3'' 241. Rh2 Kc4 242. Kf5 Rd5+ 243. Kf4 Rd3'' 244. Rc2+ Kb3 245. Rc7 Rd2 246. Nc5+ Ka2'' 247. Rh7 Rc2 248. Ne4 Rb8 249. Rhh1 Ka3 250. Ra1+ Ra2'' 251. Rac1 Rg2 252. Rc6 Rgg8 253. Rh3+ Kb2 254. Rh2+ Ka3'' 255. Ke5 Rb5+ 256. Kf6 Rf8+ 257. Ke7 Rff5 258. Nd6 Rbe5+'' 259. Kd7 Rh5'' 260. Ra6+ Kb4 261. Rb2+ Kc3'' 262. Rab6 Rh7+'' 263. Kc6 Re1'' 264. R6b3+ Kd4° 265.

Rf3 Rg7 266. Rd2+ Ke5° 267. Nc4+ Ke4'' 268. Rf6 Rc1 269. Re2+ Kd4'' 270. Rf4+'''' Kc3'' 271. Re3+ Kb4'' 272. Kd5 Rd1+ 273. Ke6 Kc5 274. Re5+ Kc6'' 275. Na5+ Kc7 276. Rc4+ Kb6 277. Rb4+ Ka6'' 278. Nb3 Rg6+'' 279. Kf7 Rb6'' 280. Ra4+ Kb7° 281. Na5+ Kc7 282. Rc4+'''' Kb8 283. Re8+ Ka7 284. Nc6+ Ka6 285. Ra4+ Kb7 286. Na5+ Kc7 287. Rc4+'''' Kd7 288. Re7+ Kd6 289. Re6+ Kd7 290. Rxb6'' {**KRRNKR: dtc/m/z = -6/-8/-6m**} {**MB-YK DTC EGTs**} \*

## 7-man: 5-2m

[White "KBNNN"]

[Black "KQ"]

[Result "1-0"]

[Date "2013.12.06"]

[Event "7m, 5-2m, KBNNNKQ, GBR 3019.00\_30, maxDTC 5-2m\_P-less w: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "5N2/5k1N/7q/8/8/3B4/8/2K2N2 w - - 0 1"]

[PlyCount "447"]

**{Bourzutschky and Konoval (2006), B&K6 p497; extraneous force after P=N promotion}**

**{maxDTC 5-2m\_P-less wtm win: dtc/m/z = 224/232/224m}** 1. Kd1<sup>''''</sup> Qh5+<sup>''</sup> 2. Ke1<sup>''''</sup> Qe5+ 3. Kf2<sup>''''</sup> Qd4+<sup>''</sup> 4. Ke2<sup>''''</sup> Qg4+<sup>''</sup> 5. Kd2 Qb4+<sup>''</sup> 6. Ke3<sup>''''</sup> Qe1+<sup>''</sup> 7. Kf4 Qf2+<sup>''</sup> 8. Ke4<sup>''''</sup> Qg2+<sup>''</sup> 9. Kd4<sup>''''</sup> Qb2+ 10. Ke3 Qg2<sup>''</sup> 11. Nd2 Qg1+<sup>''</sup> 12. Ke2<sup>''''</sup> Qg2+ 13. Kd1 Qh1+<sup>''</sup> 14. Kc2<sup>''''</sup> Qc6+<sup>''</sup> 15. Nc4 Kg7<sup>''</sup> 16. Kd2<sup>''''</sup> Qg2+ 17. Kc3<sup>''''</sup> Qd5 18. Bc2 Qc6 19. Kd4<sup>''''</sup> Qa6 20. Ne3<sup>''''</sup> Qb6+ 21. Ke4 Qc6+<sup>''</sup> 22. Kf4 Qh6+ 23. Kf3 Qh3+ 24. Ke4 Kh8 25. Bd1 Qh1+ 26. Bf3 Qb1+<sup>''</sup> 27. Kf4 Qb8+<sup>''</sup> 28. Kg4 Qb4+<sup>''</sup> 29. Kg3 Qb8+<sup>''</sup> 30. Kf2 Qb2+<sup>''</sup> 31. Be2 Qb8<sup>''</sup> 32. Bc4 Qh2+ 33. Kf3 Qh1+ 34. Kf4 Qh4+ 35. Ke5 Qh3 36. Ke4 Qh2 37. Bd5 Qf2 38. Kd3 Qe1<sup>''</sup> 39. Ng2 Qg3+<sup>''</sup> 40. Ke2 Kg7<sup>''</sup> 41. Ne3 Qh2+<sup>''</sup> 42. Kf3 Qh5+ 43. Kg3 Qe5+<sup>''</sup> 44. Kf2<sup>''''</sup> Qh2+<sup>''</sup> 45. Bg2 Qh4+<sup>''</sup> 46. Kf3 Qh5+<sup>''</sup> 47. Kf4 Qh6+<sup>''</sup> 48. Ke4<sup>''''</sup> Qh4+<sup>''</sup> 49. Kd3 Qh5<sup>''</sup> 50. Bc6 Qa5<sup>''</sup> 51. Bd5 Qb5+<sup>''</sup> 52. Ke4 Qe2<sup>''</sup> 53. Be6 Qe1 54. Kd3 Qb1+ 55. Ke2 Qb5+ 56. Kf2 Qh5 57. Bf5 Qh2+ 58. Kf3 Qh5+ 59. Kg3 Qe2<sup>''</sup> 60. Ng4 Qe1+<sup>''</sup> 61. Kg2<sup>''''</sup> Qd2+<sup>''</sup> 62. Nf2<sup>''''</sup> Qd5+<sup>''</sup> 63. Be4<sup>''''</sup> Qc4<sup>''</sup> 64. Kg3 Qc7+<sup>''</sup> 65. Kg4 Qc4<sup>''</sup> 66. Kh4 Qe2 67. Kg3<sup>''''</sup> Qc4<sup>''</sup> 68. Kg2 Kg8<sup>''</sup> 69. Kf3 Qf7+<sup>''</sup> 70. Kg3 Qc7+<sup>''</sup> 71. Kh3 Qc3+<sup>''</sup> 72. Nd3 Qd4<sup>''</sup> 73. Bf5<sup>''''</sup> Qe3+<sup>''</sup> 74. Kg4 Qe2+ 75. Kf4 Qh2+ 76. Ke4 Qg2+<sup>''</sup> 77. Ke5 Qg7+<sup>''</sup> 78. Kd6 Qd4+<sup>''</sup> 79. Kc6 Qa4+ 80. Kd5 Qb3+<sup>''</sup> 81. Ke5 Qb8+<sup>''</sup> 82. Kd4 Qb6+ 83. Nc5 Kh8<sup>''</sup> 84. Be4 Qb4+ 85. Kd5<sup>''''</sup> Qa5<sup>''</sup> 86. Kc6 Qa3<sup>''</sup> 87. Bd3 Qa2 88. Nce6 Qa3<sup>''</sup> 89. Bb5 Qa8+ 90. Kc5 Qa3+<sup>''</sup> 91. Kb6 Qe3+<sup>''</sup> 92. Kb7 Qb3<sup>''</sup> 93. Nc7 Qb4 94. Kc8 Qc5 95. Bd7 Qb4 96. Bf5 Qc5<sup>''</sup> 97. Be4 Qb4<sup>''</sup> 98. Bb7 Qa3<sup>''</sup> 99. Ba8 Qh3+ 100. Nce6 Qc3+<sup>''</sup> 101. Kd7 Qd3+ 102. Ke8 Qb5+ 103. Ke7<sup>''''</sup> Qa5 104. Bc6 Qa3+<sup>''</sup> 105. Ke8 Qa6<sup>''</sup> 106. Bf3 Qb5+ 107. Ke7<sup>''''</sup> Qb4+<sup>''</sup> 108. Kd7 Qb5+<sup>''</sup> 109. Kd6 Qd3+<sup>''</sup> 110. Bd5<sup>''''</sup> Qa6+<sup>''</sup> 111. Ke5 Qa1+<sup>''</sup> 112. Kf5 Qf1+<sup>''</sup> 113. Nf4 Kg7<sup>''</sup> 114. Be4 Qf2 115. Kg4 Qg1+<sup>''</sup> 116. Kf3 Qf1+ 117. Ke3 Kh6 118. Nd5<sup>''''</sup> Qg1+ 119. Ke2 Qh2+ 120. Kd3 Qb8 121. Ndf6 Qb3+ 122. Ke2 Qc4+ 123. Kf2 Qd4+<sup>''</sup> 124. Kf3 Qd1+ 125. Kf4 Qd2+ 126. Kg4 Qe3 127. Bf3 Qg1+<sup>''</sup> 128. Kf4 Qh2+ 129. Ke4 Qh4+ 130. Ke3 Qe1+<sup>''</sup> 131. Kf4 Qc1+ 132. Kf5 Qc5+ 133. Ke4 Qb4+ 134. Kd3 Qb5+ 135. Ke3 Qc5+ 136. Ke2 Qb5+ 137. Kf2 Qb2+ 138. Kf1 Qb1+ 139. Kg2 Qb2+ 140. Kh3 Qc3<sup>''</sup> 141. Kg4 Qc4+<sup>''</sup> 142. Ne4 Kg7<sup>''</sup> 143. Kg3 Qc7+<sup>''</sup> 144. Kh3 Qc8+<sup>''</sup> 145. Bg4 Qa6 146. Ng3 Kg8 147. Bf5 Qh6+<sup>''</sup> 148. Kg4 Qg7+<sup>''</sup> 149. Kh4 Qe7+ 150. Kh3 Qe5<sup>''</sup> 151. Be4 Qd4<sup>''</sup> 152. Bf3 Qd3 153. Bg2 Qd2 154. Ne4 Qe3+<sup>''</sup> 155. Kg4 Qg1<sup>''</sup> 156. Kf3 Qd1+ 157. Kf2 Qc2+ 158. Kg3 Qc7+ 159. Kf3 Qb7 160. Kg4 Qc8+ 161. Kh5 Qc2 162. Bf3 Kg7<sup>''</sup> 163. Neg5 Qh2+<sup>''</sup> 164. Kg4<sup>''''</sup> Qg1+ 165. Kh3 Qf1+ 166. Bg2 Qd3+ 167. Kh4 Qd2 168. Nfe6+ Kh6<sup>''</sup> 169. Kg3 Qe1+ 170. Kg4 Qe2+ 171. Bf3 Qc4+ 172. Kg3 Qc3 173. Nf4 **{and here, this SC<sup>+</sup> line diverges from SM<sup>+</sup>}** Qd4 174. Nd5 Qc4 175. Ndf6 Qc1 176. Be4 Qg1+ 177. Kh4 Qf2+ 178. Kg4 Qg1+ 179. Kf5 Qf2+ 180. Nf3 Qc5+<sup>''</sup> 181. Ne5 Qf2+ 182. Ke6 Qb6+ 183. Bc6 Qc5 184. Bd5 Qc8+ 185. Ned7 Kg6 186. Be4+ Kh6<sup>''</sup> 187. Ng4+ Kh5<sup>''</sup> 188. Nge5 Kh4 189. Nhf6 Kg5<sup>''</sup> 190. Bc6 Kf4 191. Nd5+ Kg5 192. Ne7 Qa6 193. Nf6 Qa2+ 194. Ned5 Qg2 195. Bb5 Qh3+ 196. Ke7 Qf5 197. Kd6 Qb1 198. Nf3+ Kh6<sup>''</sup> 199. Bd7 Qa2 200. Ne5 Qe2 201. Nf4 Qd2+ 202. Nfd3 Qe2 203. Bc6 Qa2 204. Ne4 Qg8 205. Ke7 Kg7 206. Ndc5 Qf8+ 207. Kd7 Qb8 208. Ne6+ Kh8 209. Nd6 Kg8 210. Ndf7 Qa7+ 211. Ke8 Qb8+ 212. Ke7 Qb4+ 213. Kf6 Qh4+ 214. Neg5 Qf2+ 215. Bf3 Qb6+ 216. Nc6 Qb2+ 217. Nfe5 Qf2 218. Ne7+ Kf8<sup>''</sup> 219. Nf5 Qb6+ 220. Bc6 Qd8+ 221. Kg6<sup>''''</sup> Qa5 222. Nef7 Qb6 223. Nh7+<sup>''</sup> Kg8<sup>°</sup> 224. N(e7/5h6)#<sup>''</sup> **{MB-YK DTC EGTs}** \*

[White "KBNNN"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2013.11.26"]  
 [Event "7m, 5-2m, KBNNNKQ, GBR 3019.00\_30, maxDTM 5-2m\_P-less l&w: SV+M/SV+M+"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
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 [PlyCount "464"]

**{1 of 3 maxDTM 5-2m\_P-less btm losses: dtm = -232m} {extraneous force after P=N promotion} 1... Kf7''**  
**{1 of 4 maxDTM 5-2m\_P-less wtm wins: dtm = 232m} 2. Bd3'''' Qh5+' 3. Ke1'''' Qe5+' 4. Kf2'''' Qd4+' 5. Ke2'''' Qg4+' 6. Kd2'' Qb4+' 7. Ke3'' Qe1+' 8. Kf4'' Qf2+' 9. Ke4'''' Qg2+' 10. Kd4'' Qb2+' 11. Ke3'' Qg2'' 12. Nd2'' Qg1+' 13. Ke2'''' Qg2+' 14. Kd1'' Qh1+' 15. Kc2'''' Qc6+' 16. Nc4'' Kg7'' 17. Kd2'''' Qg2+' 18. Kc3'''' Qd5' 19. Bc2'' Qc6'' 20. Kd4'''' Qa6'' 21. Ne3'''' Qb6+' 22. Ke4'' Qc6+' 23. Kf4'' Qh6+' 24. Kf3'' Qh3+' 25. Ke4'' Kh8'' 26. Bd1'' Qh1+' 27. Bf3'' Qb1+' 28. Kf4'' Qb8+' 29. Kg4'' Qb4+' 30. Kg3'' Qb8+' 31. Kf2'' Qb2+' 32. Be2'' Qb8'' 33. Bc4'' Qh2+' 34. Kf3'' Qh1+' 35. Kf4'' Qh4+' 36. Ke5'' Qh3' 37. Ke4'' Qh2' 38. Bd5'' Qf2'' 39. Kd3'' Qe1'' 40. Ng2'' Qg3+' 41. Ke2'' Kg7'' 42. Ne3'' Qh2+' 43. Kf3'' Qh5+' 44. Kg3'' Qe5+' 45. Kf2'' Qh2+' 46. Bg2'' Qh4+' 47. Kf3'' Qh5+' 48. Kf4'' Qh6+' 49. Ke4'' Qh4+' 50. Kd3'' Qh5'' 51. Bc6'' Qa5'' 52. Bd5'' Qb5+' 53. Ke4'' Qe2'' 54. Be6'' Qe1'' 55. Kd3'' Qb1+' 56. Ke2'' Qb5+' 57. Kf2'' Qh5'' 58. Bf5'' Qh2+' 59. Kf3'' Qh5+' 60. Kg3'' Qe2'' 61. Ng4'' Qe1+' 62. Kg2'''' Qd2+' 63. Nf2'''' Qd5+' 64. Be4'''' Qc4'' 65. Kg3'' Qc7+' 66. Kg4'' Qc4'' 67. Kh4'' Qe2' 68. Kg3'''' Qc4'' 69. Kg2'' Kg8'' 70. Kf3'' Qf7+' 71. Kg3'' Qc7+' 72. Kh3'' Qc3+' 73. Nd3'' Qd4'' 74. Bf5'''' Qe3+' 75. Kg4'' Qe2+' 76. Kf4'' Qh2+' 77. Ke4'' Qg2+' 78. Ke5'' Qg7+' 79. Kd6'' Qd4+' 80. Kc6'' Qa4+' 81. Kd5'' Qb3+' 82. Ke5'' Qb8+' 83. Kd4'' Qb6+' 84. Nc5'' Kh8'' 85. Be4'' Qb4+' 86. Kd5'''' Qa5'' 87. Kc6'' Qa3'' 88. Bd3'' Qa2' 89. Nce6'' Qa3'' 90. Bb5'' Qa8+' 91. Kc5'' Qa3+' 92. Kb6'' Qe3+' 93. Kb7'' Qb3'' 94. Nc7'' Qb4'' 95. Kc8'' Qc5'' 96. Bd7'' Qb4' 97. Bf5'' Qc5'' 98. Be4'' Qb4'' 99. Bb7'' Qa3'' 100. Ba8'' Qh3+' 101. Nce6'' Qc3+' 102. Kd7'' Qd3+' 103. Ke8'' Qb5+' 104. Ke7'''' Qa5'' 105. Bc6'' Qa3+' 106. Ke8'' Qa6'' 107. Bf3'' Qa4+' 108. Kd8'''' Qa5+' 109. Kd7'' Qb5+' 110. Kd6'' Qd3+' 111. Bd5'''' Qa6+' 112. Ke5'' Qa1+' 113. Kf5'' Qf1+' 114. Nf4'' Kg7'' 115. Be4'' Qf2'' 116. Kg4'' Qg1+' 117. Kf3'' Qf1+' 118. Ke3'' Kh6'' 119. Nd5'''' Qg1+' 120. Ke2'' Qh2+' 121. Kd3'' Qb2' 122. Ndf6'' Qb3+' 123. Ke2'' Qc4+' 124. Kf2'' Qd4+' 125. Kf3'' Qd1+' 126. Kf4'' Qd2+' 127. Kg4'' Qe1' 128. Bf3'' Qg1+' 129. Kf4'' Qh2+' 130. Ke4'' Qh4+' 131. Ke3'' Qe1+' 132. Kf4'' Qc1+' 133. Kf5'' Qc5+' 134. Ke4'' Qb4+' 135. Kd3'' Qb5+' 136. Ke3'' Qc5+' 137. Ke2'' Qb5+' 138. Kf2'' Qb2+' 139. Kf1'' Qb1+' 140. Kg2'' Qb2+' 141. Kh3'' Qc3'' 142. Kg4'' Qc4+' 143. Ne4'' Kg7'' 144. Kg3'' Qc7+' 145. Kh3'' Qc8+' 146. Bg4'' Qa6'' 147. Ng3'' Kg8'' 148. Bf5'' Qh6+' 149. Kg4'' Qg7+' 150. Kh4'' Qe7+' 151. Kh3'' Qe5'' 152. Be4'' Qd4'' 153. Bf3'' Qd3'' 154. Bg2'' Qd2'' 155. Ne4'' Qe3+' 156. Kg4'' Qg1'' 157. Kf3'' Qd1+' 158. Kf2'' Qc2+' 159. Kg3'' Qc7+' 160. Kf3'' Qb7'' 161. Kg4'' Qc8+' 162. Kh5'' Qc2'' 163. Bf3'' Kg7'' 164. Neg5'' Qh2+' 165. Kg4'''' Qg1+' 166. Kh3'' Qf1+' 167. Bg2'' Qf2' 168. Nfe6+' Kh6'' 169. Bb7'' Qf1+' 170. Kg4'' Qb1' 171. Bg2'' Qc2'' 172. Nf4'' Qc8+' 173. Kg3'' Qc3+' 174. Bf3'' Qc4' 175. Bd5'' Qa4' 176. Kg4'' Qd7+' 177. Kf3'' Qb5' 178. Be4'' Qb3+' 179. Nd3'' Kg7'' 180. Kf4'' Qc4'' 181. Ke3'' Qc3' 182. Nf3'' Qb3' 183. Nfe5'' Qd1' 184. Ng5'''' Kf6'' 185. Ngf3'' Qf1' 186. Ng4+' Ke6' 187. Nh6'' Ke7' 188. Nf5+' Kd8'' 189. N3d4'' Qg1+' 190. Kd2'' Qa1'' 191. Nc5'' Qa2+' 192. Bc2'' Ke8'' 193. Ne4'' Kd8' 194. Nc3'' Qb2'' 195. Ncb5'' Ke8'' 196. Nbd6+' Kd8' 197. Kd3'' Qa1' 198. Kc4'' Kc7'' 199. N6b5+' Kd7'' 200. Bb3'' Qa8'' 201. Kd3'' Qa5' 202. Be6+' Ke8'' 203. Nbd6+' Kf8'' 204. Bd7'' Qe1'' 205. Bb5'' Kg8'' 206. Nc6'' Kf8'' 207. Kd4'' Qa1+' 208. Kd5'' Qa2+' 209. Ke5'' Qg8'' 210. Nb8'' Qh8+' 211. Ke6'' Qg8+' 212. Kf6'' Qh8+' 213. Kg5'' Qg8+' 214. Kf4'' Qg1'' 215. Nd7+' Kg8'' 216. Ke5'' Qa1+' 217. Ke6'' Qb1' 218. Ne5'' Qg1' 219. Ndf7'' Qb1' 220. Bc6'' Qc1' 221. Kf6'' Qa1'' 222. Ng5'' Kf8'' 223. Ne6+' Kg8'' 224. Ne7+' Kh8'' 225. Bf3'' Qb2' 226. Kf7'' Qc2' 227. N7g6+' Kh7'' 228. Nef8+' Kh6'' 229. Ng4+' Kh5' 230. Nf6+' Kg5' 231. Ne6+' Kh6'' 232. Ng8+' Kh7'' 233. Nef8#' **{Lomonosov DTM EGTs} \*****

[White "KNNNN"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2013.02.06"]  
 [Event "7m, 5-2m, KNNNNKQ = KN<sup>4</sup>KQ, GBR 3009.00\_40, maxDTC KNNNNKQ w&l: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "8/N7/qN6/8/8/6N1/1k1KN3 w - - 0 1"]  
 [PlyCount "169"]

**{The first MB-YK 7m DTC EGT, therefore setting a 7m but not a s8m DTC record (Bourzutschky, 2005; Krabbé, 2005a). Held the 7m DTC record from 12<sup>th</sup> April until 6<sup>th</sup> September 2005, succeeded by KRBNKRB (Krabbé, 2005b)}**

**{maxDTC KNNNNKQ wtm win: dtc/m/z = 85/89/85m} 1. Nac8<sup>'''</sup>**

**{maxDTC KNNNNKQ btm loss: dtc/m/z = -84/-88/-84m} Qa3<sup>''</sup> 2. Nh4<sup>'''</sup> Qb3+ 3. Ke2<sup>'''</sup> Qb5+ 4. Kf2 Qb2+<sup>''</sup> 5. Kf1<sup>'''</sup> Qb5+<sup>''</sup> 6. Kg1<sup>'''</sup> Qg5+<sup>''</sup> 7. Neg2<sup>'''</sup> Qf6 8. Kh2<sup>'''</sup> Qe5+ 9. Kh3 Qe4 10. Kg3<sup>'''</sup> Qe5+<sup>''</sup> 11. Kf3 Qf6+<sup>''</sup> 12. Ke3 Qh6+ 13. Kd3 Kc1 14. Kd4 Qg7+ 15. Ke4 Qg4+ 16. Ke5 Qg7+ 17. Ke6 Qc7 18. Kf6 Qc3+ 19. Kg6 Qg3+ 20. Kh5 Qe5+<sup>''</sup> 21. Kh6 Qh8+<sup>''</sup> 22. Kg5 Qd8+<sup>''</sup> 23. Kf4 Qc7+<sup>''</sup> 24. Kf3 Qh7<sup>''</sup> 25. Kf2 Qc2+ 26. Kg3 Qc3+<sup>''</sup> 27. Nf3 Qg7+<sup>''</sup> 28. Kh3 Qf6<sup>''</sup> 29. Kg4 Qe6+<sup>''</sup> 30. Kg3 Qg6+<sup>''</sup> 31. Kh2 Qc2<sup>''</sup> 32. Nfh4 Qc7+<sup>''</sup> 33. Kg1 Qc5+ 34. Kh1 Kb1<sup>''</sup> 35. Ng6 Qh5+<sup>''</sup> 36. N2h4 Qe2<sup>''</sup> 37. Kg1 Kc2 38. Ng2<sup>'''</sup> Qd1+<sup>''</sup> 39. Kh2<sup>'''</sup> Kd3 40. Nd7 Ke4 41. Nc5+<sup>'''</sup> Kd4<sup>''</sup> 42. Ne6+<sup>'''</sup> Ke4<sup>''</sup> 43. Ng6f4 Ke5 44. Nb6 Qc2 45. Nd7+<sup>'''</sup> Kd6<sup>''</sup> 46. Ndf8<sup>'''</sup> Ke7 47. Kg3<sup>'''</sup> Qb1 48. Kg4 Kf7 49. Nh4<sup>'''</sup> Qg1+<sup>''</sup> 50. Kh5 Qd1+<sup>''</sup> 51. Kh6 Qe1 52. Nhg6 Qa1 53. Nh5 Qh1 54. Nef4 Ke8 55. N8e6 Kd7 56. Kg5 Kd6 57. Nf6 Qe1 58. Ne8+ Kc6 59. Kf6 Kb6 60. Nd5+ Kb5 61. Ne8c7+ Ka5 62. Ngf4 Qa1+ 63. Ke7 Qa3+ 64. Kd7 Qa4+ 65. Kd6 Qa1 66. Nd8 Qa3+ 67. Kd7 Ka4 68. Nc6 Qa1 69. Nce6 Ka3 70. Kd6 Qc1 71. Ned4 Qf1 72. Kc5 Qc1+ 73. Kb5 Qf1+ 74. Nfe2 Qf7 75. Kc4 Qb7 76. Ndb4 Qh7 77. Nd3 Qg8+ 78. Kc3 Qd5 79. Nb2 Qg5 80. Ne5 Qh6 81. Nec4+ Ka2<sup>°</sup> 82. Nd3 Kb1 83. Kb3 Qg7 84. Na3+ Ka1<sup>°</sup> 85. Ndc2# **{MB-YK DTC EGTs} \*****

[White "KRBBP"]  
 [Black "KQ"]  
 [Result "1-0"]  
 [Date "2013.11.25"]  
 [Event "7m, 5-2m, KRBBPKQ, GBR 3120.10\_20, maxDTM 5-2 w&l: SV<sup>+</sup>M/SV<sup>+</sup>M<sup>+</sup>"]  
 [Annotator "Haworth, Guy"]  
 [SetUp "1"]  
 [FEN "7R/4q3/8/BK6/8/k6P/8/B7 w - - 0 1"]  
 [PlyCount "799"]

**{1 of 2 maxDTM 5-2m wtm wins: dtm = 400m} {extraneous force after P=B underpromotion} 1. Bd8<sup>'''</sup>**

**{1 of 2 maxDTM 5-2m btm losses: dtm = -399m} Qb7+<sup>''</sup> 2. Kc5<sup>'''</sup> Qb4+<sup>''</sup> 3. Kc6<sup>'''</sup> Qa4+<sup>''</sup> 4. Kb7<sup>'''</sup> Qe4+<sup>''</sup> 5. Ka7<sup>'''</sup> Qa4+<sup>''</sup> 6. Kb8<sup>'''</sup> Qb3+<sup>''</sup> 7. Kc8<sup>'''</sup> Qc2+<sup>''</sup> 8. Bc7<sup>'''</sup> Qf5+<sup>''</sup> 9. Kd8<sup>'''</sup> Kb3<sup>''</sup> 10. Bce5<sup>'''</sup> Kc4<sup>''</sup> 11. Rh4+<sup>'''</sup> Kd5<sup>''</sup> 12. Bg7<sup>'''</sup> Qb1<sup>''</sup> 13. Bab2<sup>'''</sup> Ke6<sup>''</sup> 14. Rh6+<sup>'''</sup> Kf5<sup>''</sup> 15. Bgf6<sup>''</sup> Qe4<sup>''</sup> 16. Bbd4<sup>'''</sup> Qd5+<sup>''</sup> 17. Ke7<sup>'''</sup> Qb7+<sup>''</sup> 18. Kf8<sup>''</sup> Qb8+<sup>''</sup> 19. Kg7<sup>''</sup> Qb7+<sup>''</sup> 20. Kg8<sup>''</sup> Qc8+<sup>''</sup> 21. Kh7<sup>''</sup> Qd7+<sup>''</sup> 22. Bg7<sup>''</sup> Ke4<sup>''</sup> 23. Bde5<sup>'''</sup> Qf5+<sup>''</sup> 24. Kg8<sup>''</sup> Qc8+<sup>''</sup> 25. Kf7<sup>''</sup> Qc4+<sup>''</sup> 26. Kf6<sup>''</sup> Kf3<sup>''</sup> 27. Bf8<sup>'''</sup> Kg2<sup>''</sup> 28. Bfd6<sup>'''</sup> Qc1<sup>''</sup> 29. Rh8<sup>'''</sup> Qd1<sup>''</sup> 30. h4<sup>''</sup>  
**{KRBBP(h4)KQ} Qf3+<sup>''</sup> 31. Kg7<sup>''</sup> Qg4+<sup>''</sup> 32. Kf7<sup>''</sup> Qc4+<sup>''</sup> 33. Kf6<sup>''</sup> Kh3<sup>''</sup> 34. Bg3<sup>'''</sup> Qc3+<sup>''</sup> 35. Bde5<sup>'''</sup> Qf3+<sup>''</sup> 36. Ke7<sup>''</sup> Qa3+<sup>''</sup> 37. Bd6<sup>''</sup> Qe3+<sup>''</sup> 38. Kf8<sup>''</sup> Qe6<sup>''</sup> 39. Bde5<sup>''</sup> Qd7<sup>''</sup> 40. Rh6<sup>''</sup> Qd8+<sup>''</sup> 41. Kf7<sup>'''</sup> Qd7+<sup>''</sup> 42. Kf6<sup>''</sup> Qd8+<sup>''</sup> 43. Kf5<sup>''</sup> Qd7+<sup>''</sup> 44. Re6<sup>''</sup> Qf7+<sup>''</sup> 45. Rf6<sup>'''</sup> Qh5+<sup>''</sup> 46. Kf4<sup>''</sup> Qg4+<sup>''</sup> 47. Ke3<sup>°</sup> Qh5<sup>''</sup> 48. Bd6<sup>''</sup> Qh8<sup>''</sup> 49. Rf8<sup>''</sup> Qh5<sup>''</sup> 50. Kd4<sup>''</sup> Qa5<sup>''</sup> 51. Kc4<sup>''</sup> Kg2<sup>''</sup> 52. Bde5<sup>''</sup> Kh3<sup>''</sup> 53. Bef4<sup>''</sup> Qa2+<sup>''</sup> 54. Kb5<sup>''</sup> Qd5+<sup>''</sup> 55. Kb6<sup>'''</sup> Kg4<sup>''</sup> 56. Be5<sup>'''</sup> Kh3<sup>''</sup> 57. Bd6<sup>''</sup> Kg4<sup>''</sup> 58. Rf4+<sup>'''</sup> Kh5<sup>''</sup> 59. Rb4<sup>'''</sup> Qd2<sup>''</sup> 60. Rb5+<sup>''</sup> Kg4<sup>''</sup> 61. Kb7<sup>'''</sup> Qh6<sup>''</sup> 62. Rb4+<sup>'''</sup> Kh3<sup>''</sup> 63. Re4<sup>''</sup> Qd2<sup>''</sup> 64. Kb6<sup>''</sup> Qb2+<sup>''</sup> 65. Rb4<sup>'''</sup> Qh8<sup>''</sup> 66. Rc4<sup>'''</sup> Qg8<sup>''</sup> 67. Rc5<sup>'''</sup> Kg4<sup>''</sup> 68. Be1<sup>'''</sup> Qd8+<sup>''</sup> 69. Bc7<sup>'''</sup> Qg8<sup>''</sup> 70. Ka7<sup>''</sup> Qg7<sup>''</sup> 71. Kb7<sup>''</sup> Qe7<sup>''</sup> 72. Re5<sup>'''</sup> Qf6<sup>''</sup> 73. Re4+<sup>''</sup> Kh3<sup>''</sup> 74. Re3+<sup>'''</sup> Kg4<sup>''</sup> 75. Bca5<sup>''</sup> Qg7+<sup>''</sup> 76. Ka6<sup>''</sup> Qf6+<sup>''</sup> 77. Kb5<sup>''</sup> Qf5+<sup>''</sup> 78. Kc4<sup>''</sup> Qf4+<sup>''</sup> 79. Kd3<sup>'''</sup> Qf5+<sup>''</sup> 80. Kd4<sup>'''</sup> Qf6+<sup>''</sup> 81. Re5<sup>''</sup> Qd6+<sup>''</sup> 82. Rd5<sup>''</sup> Qf6+<sup>''</sup> 83. Kc5<sup>''</sup> Qe7+<sup>''</sup> 84. Kc4<sup>''</sup> Qe6<sup>''</sup> 85. Bac3<sup>''</sup> Kf3<sup>''</sup> 86. Kc5<sup>''</sup> Qe7+<sup>''</sup> 87. Kb5<sup>''</sup> Qb7+<sup>''</sup> 88. Kc4<sup>'''</sup> Qf7<sup>''</sup> 89.****

Kd4'' Qa7+' 90. Rc5'' Qd7+' 91. Kc4'' Qa4+' 92. Bb4'' Qc2+' 93. Kb5'' Qd3+' 94. Kc6'' Qg6+' 95. Kc7'' Qf7+' 96. Kb6'' Qe6+' 97. Rc6'' Qe3+' 98. Kb7'' Qe4+' 99. Bbc3'' Qe7+' 100. Ka6'' Qa3+' 101. Kb6'' Qb3+' 102. Kc7'' Qf7+' 103. Kd6'' Qf8+' 104. Ke5'' Qf4+' 105. Ke6'' Qe4+' 106. Kd6'' Qe8'' 107. Rc4'' Qg6+' 108. Kc5'' Qf5+' 109. Kc6'' Qe6+' 110. Kb5'' Qf5+' 111. Rc5'' Qb1+' 112. Ka6'' Qa2+' 113. Ra5'' Qe2+' 114. Kb6'' Qe3+' 115. Kc6'' Qe6+' 116. Kc5'' Qf5+' 117. Kd6'' Qf8+' 118. Ke5'' Qe8+' 119. Kd5'' Qg6'' 120. Bcd2'' Ke2'' 121. Ra3'' Qf5+' 122. Kd4'' Kd1'' 123. Ra5'' Qd3+' 124. Ke5'' Ke2'' 125. Bc3'' Qe3+' 126. Kd6'' Qb6+' 127. Kd5'' Qb1'' 128. Ke5'' Qb8+' 129. Ke4'' Qb7+' 130. Kd4'' Qd7+' 131. Rd5'' Qa7+' 132. Ke4'' Qe3+' 133. Kf5'' Kf3'' 134. Rd4'' Qe8'' 135. Rf4+' Kg2'' 136. Rg4+' Kh2'' 137. Re4'' Qh5+' 138. Kf4'' Kg2'' 139. Ke3'' Qf3+' 140. Kd4'' Qf6+' 141. Re5'' Kh3'' 142. Kc4'' Qb6'' 143. Bcd2'' Qc7+' 144. Rc5'' Qh7'' 145. Kc3'' Qa7'' 146. Rb5'' Qa1+' 147. Rb2'' Kg4'' 148. Kb3'' Qd1+' 149. Kb4'' Kh3'' 150. Rb3+' Kg2'' 151. Rg3+' Kf1'' 152. Rc3'' Qb1+' 153. Rb3'' Qa1'' 154. Bc3'' Qa6'' 155. Rb2'' Qb6+' 156. Ka4'' Qa6+' 157. Kb3'' Qb5+' 158. Kc2'' Qa4+' 159. Kd2'' Qf4+' 160. Kd1'' Qa4+' 161. Rc2'' Qb3'' 162. Bed2'' Qd5'' 163. Kc1'' Kg2'' 164. Bg5'' Kg3'' 165. Be1+' Kg4'' 166. Rc3'' Qa2'' 167. Rg3+' Kh5'' 168. Kd1'' Qa6'' 169. Kd2'' Qe6'' 170. Rf3'' Kg4'' 171. Rf4+' Kh3'' 172. Bf2'' Qe5'' 173. Rf3+' Kg2'' 174. Rf6'' Kh3'' 175. Bb6'' Qg3'' 176. Bd8'' Kg4'' 177. Kc2'' Qa3'' 178. Be7'' Qa5'' 179. Bd6'' Kh5'' 180. Kb3'' Qb5+' 181. Kc3'' Qd5'' 182. Kb4'' Kg4'' 183. Be7'' Qb7+' 184. Kc3'' Qa7'' 185. Kd3'' Qb7'' 186. Kd4'' Qa7+' 187. Kd5'' Qb7+' 188. Kd6'' Qb4+' 189. Kd7'' Qa4+' 190. Rc6'' Kf5'' 191. Bc5'' Kg4'' 192. Bb6'' Qb5'' 193. Bbd8'' Qb7+' 194. Kd6'' Kh5'' 195. Rb6'' Qf7'' 196. Bgf6'' Qe8'' 197. Bfe7'' Qa4'' 198. Bg5'' Qa7'' 199. Kc6'' Qf7'' 200. Bde7'' Qf5'' 201. Kb7'' Qd5+' 202. Kb8'' Qe5+' 203. Rd6'' Qc3'' 204. Rf6'' Qc2'' 205. Bd8'' Qc4'' 206. Kb7'' Qc2'' 207. Bc7'' Qa4'' 208. Rh6+' Kg4'' 209. Kc8'' Qe8+' 210. Bcd8'' Qb5'' 211. Bde7'' Qe5'' 212. Bd6'' Qe8+' 213. Kc7'' Kh3'' 214. Bde7'' Kg4'' 215. Bef6'' Kf5'' 216. Bd8'' Qb5'' 217. Rf6+' Kg4'' 218. Rf4+' Kh5'' 219. Kd6'' Qe8'' 220. Rf5'' Qe4'' 221. Rf6'' Qe8'' 222. Re6'' Qf8+' 223. Kd7'' Qf7+' 224. Bde7'' Qf5'' 225. Bef6'' Kg6'' 226. Kd6'' Qd3+' 227. Bd4+' Kh5'' 228. Bgf6'' Qa3+' 229. Kd7'' Qb3'' 230. Ke7'' Qb4+' 231. Rd6'' Kg6'' 232. Bg5+' Kh5'' 233. Bde3'' Qb7+' 234. Kf8'' Qb8+' 235. Rd8'' Qc7'' 236. Bf6'' Qb7'' 237. Bf4'' Kg6'' 238. Be7'' Kh7'' 239. Rd6'' Qc8+' 240. Bd8'' Qf5+' 241. Rf6'' Qc5+' 242. Bd6'' Qc3'' 243. B6c7'' Qd4'' 244. Rd6'' Qh8+' 245. Ke7'' Qa1'' 246. Bb6'' Qa4'' 247. Bd4'' Qb3'' 248. Bf6'' Qe3+' 249. Kd7'' Qa7+' 250. Ke8'' Qa4+' 251. Ke7'' Qe4+' 252. Re6'' Qd5'' 253. Bg5'' Kg7'' 254. Rf6'' Qc5+' 255. Kd7'' Qd5+' 256. Kc7'' Qa5+' 257. Kc6'' Qa4+' 258. Kb7'' Qe4+' 259. Kb8'' Qe8'' 260. Kc8'' Kg8'' 261. Rd6'' Kf8'' 262. Bf4'' Kg7'' 263. Kc7'' Qe2'' 264. Bf6+' Kh7'' 265. B6g5'' Qc4+' 266. Kd8'' Qg8+' 267. Ke7'' Qg7+' 268. Ke6'' Kg6'' 269. Be7'' Qb2'' 270. Kd7+' Kf7'' 271. Rf6+' Kg7'' 272. Bh6+' Kg8'' 273. Bg5'' Qb7+' 274. Kd6'' Qe4'' 275. Bf8'' Qc4'' 276. Ke5'' Qc3+' 277. Kd5'' Qb3+' 278. Kc5'' Qa3+' 279. Kc4'' Qa2+' 280. Kb5'' Qe2+' 281. Kb6'' Qb2+' 282. Kc6'' Qg2+' 283. Kc7'' Qc2+' 284. Kd8'' Qb3'' 285. Bd6'' Kg7'' 286. Ke7'' Qb7+' 287. Ke6'' Qe4+' 288. Be5'' Qc4+' 289. Ke7'' Qc5+' 290. Bd6'' Qd5'' 291. Bh6+' Kh7'' 292. Bhf4'' Qh1'' 293. Bg5'' Qb7+' 294. Kd8'' Qb6+' 295. Bc7'' Qd4+' 296. Ke8'' Qa4+' 297. Kf8'' Qa8+' 298. Ke7'' Kg7'' 299. Bh6+' Kh7'' 300. Bhf4'' Qh1'' 301. Bg3'' Qe4+' 302. Bce5'' Qd5'' 303. Bgf4'' Qb7+' 304. Ke6'' Qc8+' 305. Kd5'' Qa8+' 306. Kc4'' Qa4+' 307. Kc3'' Qa3+' 308. Kd2'' Qa2+' 309. Ke1'' Qb1+' 310. Kf2'' Qc2+' 311. Kf1'' Qd1+' 312. Kg2'' Qe2+' 313. Kh3'' Qf1+' 314. Kg4'' Qe2+' 315. Kg5'' Qg2+' 316s. Bg3'' Qd2+' 317. Kf5'' Qc2+' 318. Kf4'' Qd2+' 319. Kf3'' Qd5+' 320. Kf2'' Qd2+' 321. Kgl'' Qe2'' 322. Bef4'' Qd1+' 323. Kg2'' Qd5+' 324. Kh2'' Qa2+' 325. Kh3'' Qd5'' 326. Rd6'' Qe4'' 327. h5'' **{KRBBP(h5)KQ}** Qe8'' 328. h6'' **{KRBBP(h6)KQ}** Qh5+' 329. Kg2'' Qe2+' 330. Kgl'' Qf3'' 331. Rd7+' Kg6'' 332. Rg7+' Kh5'' 333. Rc7'' Qe2'' 334. Bc1'' Kg4'' 335. Rc3'' Qd1+' 336. Kg2'' Qd5+' 337. Kh2'' Kf5'' 338. Bgf4'' Qd4'' 339. Rc2'' Kg6'' 340. Bce3'' Qf6'' 341. Kg3'' Qa1'' 342. Rc1'' Qb2'' 343. Bc5'' Qh8'' 344. Bb6'' Qg8'' 345. Bfe3'' Kh5+' 346. Kf2'' Qa2+' 347. Ke1'' Kg4'' 348. Rc3'' Qa1+' 349. Kd2'' Qb2+' 350. Kd3'' Qb1+' 351. Kc4'' Qa1'' 352. Rb3'' Qf1+' 353. Kb4'' Qe1+' 354. Ka4'' Qa1+' 355. Ra3'' Qb1'' 356. Bbd4'' Qb7'' 357. Ra1'' Kf3'' 358. Rh1'' Qd7+' 359. Kb4'' Ke2'' 360. Rh2+' Kd3'' 361. Rd2+' Ke4'' 362. Ra2'' Qb7+' 363. Kc3'' Qc7+' 364. Bc5'' Qd7'' 365. Ra1'' Qd3+' 366. Kb4'' Kd5'' 367. Rc1'' Qe4+' 368. Bcd4'' Qe7+' 369. Rc5+' Ke4'' 370. Kc3'' Qf7'' 371. Rc4'' Qd7'' 372. Bb6+' Kf5'' 373. Rc7'' Qd1'' 374. Ra7'' Qe1+' 375. Bd2'' Qb1'' 376. Bd4'' Ke4'' 377. Re7+' Kd5'' 378. Re5+' Kc6'' 379. Rc5+' Kd6'' 380. Ra5'' Qf1'' 381. Kc2'' Qh1'' 382. Ra7'' Qe4+' 383. Kc3'' Qf3+' 384. Kb4'' Kd5'' 385. h7'' **{KRBBP(h7)KQ}** Qf8+' 386. Kb3'' Qb8+' 387. Bb4'' Qc8'' 388. h8=Q' **{QORBBKQ: dtm = -12m}** Qc4+' 389. Ka4'' Qc6+' 390. Ka5'' Kc4'' 391. Qb8'' Kxd4'' **{QORBKQ: dtc/m/z = 2/9/2m}** 392. Qh8+' Kd3'' 393. Qe5'' Kc4'' 394. Qc3+' Kd5'' 395. Qf3+' Ke5'' 396. Qxc6'' **{QORBK: dtm = -3/-4/-3m}** Kf4'' 397. Qe6'' Kf3'' 398. Qf5+' Ke3'' 399. Re7+' Kd4'' 400. Qe4#'' **{Lomonosov DTM EGTs}** \*

## 8-man: 5-3m

[White "KBBBB"]

[Black "KRR"]

[Result "1-0"]

[Date "2014.02.27"]

[Event "8m, 5-3m, KBBBBKRR = KB<sup>4</sup>KR<sup>2</sup>, GBR 0690.00\_40/22: SV<sup>+</sup>C/SV<sup>+</sup>C<sup>+</sup>"]

[Annotator "Haworth, Guy"]

[SetUp "1"]

[FEN "6r1/8/B4rB1/8/1B6/5k2/7B/K7 w - - 0 1"]

[PlyCount "127"]

**{set the 8m DTC record as the first 8m EGT (Bourzutschky and Konoval (2011a))}**

**{a maxDTC KB<sub>w</sub>B<sub>w</sub>B<sub>b</sub>B<sub>b</sub>KRR wtm win: dtc/m/z = 64m} 1. Bh5+''''**

**{a maxDTC KB<sub>w</sub>B<sub>w</sub>B<sub>b</sub>B<sub>b</sub>KRR btm loss: dtc/m/z = -63m} Ke3 2. Bbd6'''' Rd8 3. Bc5+'''' Kd2 4. Bae2'''' Re6 5. Beg4'''' Rc6 6. Bf4+'''' Kc3 7. Be5+'''' Kd2 8. Bcd4 Rd5 9. Bb2'''' Rb6 10. Bbc3+'''' Ke3 11. Bf7'''' Rd8 12. Ba2'''' Rb5 13. Bf6 Rd6 14. Be7'''' Ra6 15. Bcb4'''' Rb8 16. Bbc5+'''' Kd3 17. Bf3'''' Kc2 18. Ba3'''' Kc3 19. Bad6'''' Rbb6 20. Bc5'''' Rb5 21. Bh1 Rb8 22. Bed6 Rb5 23. Be4 Raa5 24. Ba3'''' Kd4 25. Bf3'''' Ra7 26. Bab4'''' Ra4 27. Be1'''' Kd3 28. Bd1'''' Ra7 29. Beb4'''' Rab7 30. Ba3 Kc3 31. Be2 Ra5 32. Bf3'''' Rbb5 33. Be7 Ra7 34. Bfd5 Raa5 35. Bb2+ Kc2 36. Be4+'''' Kd2 37. Bc6 Rb8 38. Bcd5 Kc2 39. Bba3 Kc3 40. Bed6 Rbb5 41. Be5+ Kd2 42. Bf4+'''' Kc3 43. Bb2+ Kc2 44. Be4+'''' Kd1 45. Kb1 Rb4 46. Bc2+'''' Ke2 47. Bd6'''' Rh4 48. Bba3 Rb5+ 49. Bab3 Rh3 50. Bd1+ Kf1 51. Bdb4 Rh4 52. Be7 Rc4 53. Ka1 Rc8 54. Bg4 Rc7 55. Bge6 Kf2 56. Bbc4 Rh5 57. Bd8 Rh1+ 58. Kb2 Rg7 59. Bc5+ Kg3 60. Bd6+ Kf2 61. Bb6+ Ke1 62. Kc1 Rg2 63. Bb4+'' Rd2° 64. Bxd2#''**

**{YK-MB DTC EGTs} \***