

COURSE MEASUREMENT SUMMARY

EVENT **MØRKETIDSLØPET Marathon, Half Marathon and 10 km**

LOCATION **TROMSØ, NORWAY**

Promoting Organisation: **MIDNIGHT SUN MARATHON / *msm.no***

Name & Address of
race director ***Nils I Hætta***
Arthus Erntzens vei 31
9020 Tromsdalen
NORWAY
Tel: +47 77 67 33 63
Email: info@msm.no

Distances: No less than 10.000 m, 21.097,5 m and 42.195 m

Measured by: Jan Schjetlein

Date: 05.11.2022

Measurement method: ***Jones counter mounted on bicycle wheel***

	elevation	elevation	Distance, in straight line,
Distance	START	FINISH	between START and FINISH
10 km	4 m	4 m	0 m
Half Marathon	4 m	4 m	0 m
Marathon	5 m	4 m	27.360 m

Description og Course

Terrain: 10 km and Half Marathon: Gently undulating
Marathon: Hilly
Race surface: Asphalt roads and cycle paths
Course configuration: Loop

Measurement Details

- i) Entire with og road and cycle path accepted
- ii) Shortest route to be taken at turns.

SIGNED:

DATE: 10.11.2022

MEASUREMENT PROCEDURE

The Marathon is a new distance to the Mørketidsløpet. The course is point to point with the finish in Storgata, Tromsø as for the other distances. I measured in opposite of running direction from the finish to find the exact starting point. I chose the nearest possible permanent reference. Using the constant of the day, this distance was 25,8 meters too long. The difference was taped, and the start was marked with a stick at the side of the road.

The Half Marathon is a re-measure of the course as measured by Hugh Jones in 2018. There was a change in route by the airport. I used the measurement for the Marathon to a reference point by the airport, were the half marathon makes a loop with two turning points. This loop was measured back to the same reference point. I then added the same number of counts from there to the finish as I had recorded from the start on the outward measurement. Adjustment was made at the second turn

The 10 km is also a re-measurement of the same measurement by Hugh Jones. There was a change at the turn and the running direction out and back on Kvaløyveien was altered to out on the road, back on the cycle path. I used the measurement from the Marathon to a reference point where the course branches off onto the road. I measured from here to the turn, and then back to a reference point where the course coincides with the Marathon course. I then added the same number of counts as for the marathon to the finish. Adjustment was made at the turn.

Calibrations

On 500m steel-taped calibration course on Evjenveien.

Pre-measurement, 10.20, 025.11.2022, T=3 °C			Pre-measurement, 16.30, 05.11.2022, T=4 °C		
start	end	reading	start	end	reading
29000	34456,5	5456,5	8000	13456	5456
34456,5	39916	5459,5	13456	18915	5459
39916	45372,5	5456,5	18915	24371	5456
45372,5	50832	5459,5	24371	29830	5459
Average	5458	x 1,001/500	Average	5458	x 1,001/500
Working constant =		10,926916	Finish constant =		10,925915

$$\text{Constant of the day} = (10,926916 + 10,925915) / 2 = \mathbf{10,92641550}$$

Marathon

Reading	counts	distance	adj. Dist.	location
c=	10,92641550			
549322	0	0,0		Sjøtun, end traffic barrier on small bridge
Adjust: Taped distanse 25,8 meters				
		25,8	0,0	START Marathon marked with a stick at side of road
<i>Measured in revers of running direction</i>				
470442	78880	7 219,2	7 193,4	Temporary Mark (TM) 35
452753	96569	8 838,1	8 812,3	Boom gates Nordfjordbotn
415807	133515	12 219,5	12 193,7	TM 30
361173	188149	17 219,6	17 193,8	TM 25
325406	223916	20 493,1	20 467,3	Henrikvik traffic sign "yield" on right
318490	230832	21 126,0	21 100,2	3. lp before Fjordveien #330
306441	242881	22 228,8	22 203,0	3. lp before Sjurelvveien east (start cycle path)
251901	297421	27 220,4	27 194,6	Center of big sign "Extra" Kvaløysletta
197351	351971	32 212,9	32 187,1	4th last lp on bridge
190320	359002	32 856,3	32 830,5	1st lp after 1st roundabout after bridge
142684	406638	37 216,0	37 190,2	Sign "Holt"
141715	407607	37 304,7	37 278,9	1st lp after Nordheim
131666	417656	38 224,4	38 198,6	Traffic sign "30" before L Zeppolas vei
120616	428706	39 235,7	39 209,9	Last lp before bus stop "Telegrafbukta"
119705	429617	39 319,1	39 293,3	1st lp in Mellomveien on left
109766	439556	40 228,7	40 202,9	1st lp after Bjerkealleen
99041	450281	41 210,3	41 184,5	Sign "pedestrian crossing" on left after J Olsens gt
88000	461322	42 220,8	42 195,0	FINISH, level with near wall on rigt in main square

List of split locations

START	Sjøtun, Kattfjord on Kvaløya, 25,8 m after end of traffic barrier on small bridge. Marked with a stick at the side of the road.
35 km to go	Marked with a stick at the side of the road
30 km to go	Marked with a stick at the side of the road
25 km to go	Marked with a stick at the side of the road
Half way	3. lp before Fjordveien #330. Marked with a stick at the side of the road
15 km to go	0,4 m after center of big sign "Extra" Kvaløysletta
10 km to go	7,9 m after 4th last lp on bridge
5 km to go	4,8 m after sign "Holt"
4 km to go	3,6 m before traffic sign "30" before L Zeppolas vei
3 km to go	17,9 m before last lp before bus stop "Telegrafbukta"
2 km to go	7,9 m before 1st lp after Bjerkealleen
1 km to go	10,5 m after Sign "pedestrian crossing" on left after J Olsens gt
FINISH	Storgata, in town square level with near low wall, before fountain

Half Marathon

Reading	counts	distance	adj. Dist.	location
c=	10,92641550			
88000	0	0,0		START, level with south wall on left in main square
142684	54684	5 004,8		Sign "Holt"
190320	102320	9 364,5		Last lp before last roundabout before bridge
54855	102320	9 364,5		Last lp before last roundabout before bridge
63249	110714	10 132,7		Turn- level with tel poles at end of Skognesveien
Adjust - Add 1,5m around single cone				
76136	123601	11 312,1	11 313,6	Turn - 2nd last lp before bridge
Adjust - Add 1,5m around single cone and retract by 8,6 m (overall deduct 15,8 m)				
80891	128356	11 747,3	11 733,0	1st lp after 1st roundabout after bridge
<i>Measured in revers of running direction</i>				
190320	128356	11 747,3	11 733,0	1st lp after 1st roundabout after bridge
142684	175992	16 107,0	16 092,7	Sign "Holt"
131666	187010	17 115,4	17 101,1	Traffic sign "30" before L Zeppolas vei
120616	198060	18 126,7	18 112,4	Last lp before buss stop "Telegrafbukta"
109766	208910	19 119,7	19 105,4	1st lp after Bjerkealleen
99041	219635	20 101,3	20 087,0	Sign "pedestrian crossing" on left after J Olsens gt
88000	230676	21 111,8	21 097,5	FINISH, level with near wall on right in main square

List of split locations

START	Level with south wall on left in main square 35 km to go at the side of the road	Marked with a stick
TURN	Cone placedLevel with tel poles at end of Skognesveien	
TURN	Cone placed 8,6 mm before 2 nd last lp on left before Sandnessund Bridge	
5 km to go	4,8 m after sign "Holt"	
4 km to go	3,6 m before traffic sign "30" before L Zeppolas vei	
3 km to go	17,9 m before last lp before bus stop "Telegrafbukta"	
2 km to go	7,9 m before 1st lp after Bjerkealleen	
1 km to go	10,5 m after Sign "pedestrian crossing" on left after J Olsens gt	
FINISH	Storgata, in town square level with near low wall, before fountain	

10 km

Reading	counts	distance	adj. Dist.	location
c=	10,92641550			
88000	0	0,0		START, level with south wall on left in main square
119705	31705	2 901,7		Last lp in Mellomveien on right
81470	31705	2 901,7		Last lp in Mellomveien on right
104532	54767	5 012,3		Sign "Holt"
<i>Adjust - Add 1,5m around single placed and retract by 10,3 m (overall deduct 19,1 m)</i>				
105523	55758	5 103,0	5 083,9	1st lp after Nordheim
<i>Measured in revers of running direction</i>				
141715	55758	5 103,0	5 083,9	1st lp after Nordheim
131666	65807	6 022,7	6 003,6	Traffic sign "30" before L Zeppolas vei
120616	76857	7 034,1	7 015,0	Last lp before buss stop "Telegrafbukta"
109766	87707	8 027,1	8 008,0	1st lp after Bjerkealleen
99041	98432	9 008,6	8 989,5	Sign "pedestrian crossing" on left after J Olsens gt
88000	109473	10 019,1	10 000,0	FINISH, level with near wall on rigt in main square

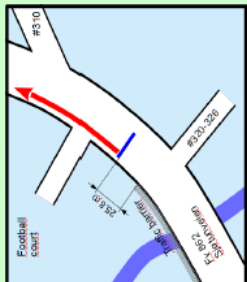
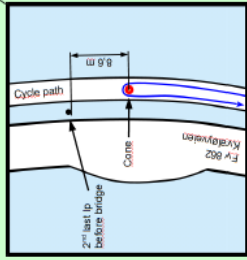
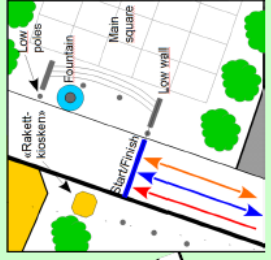
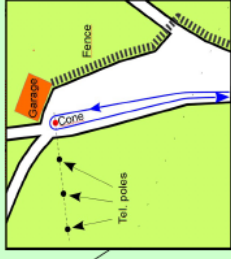
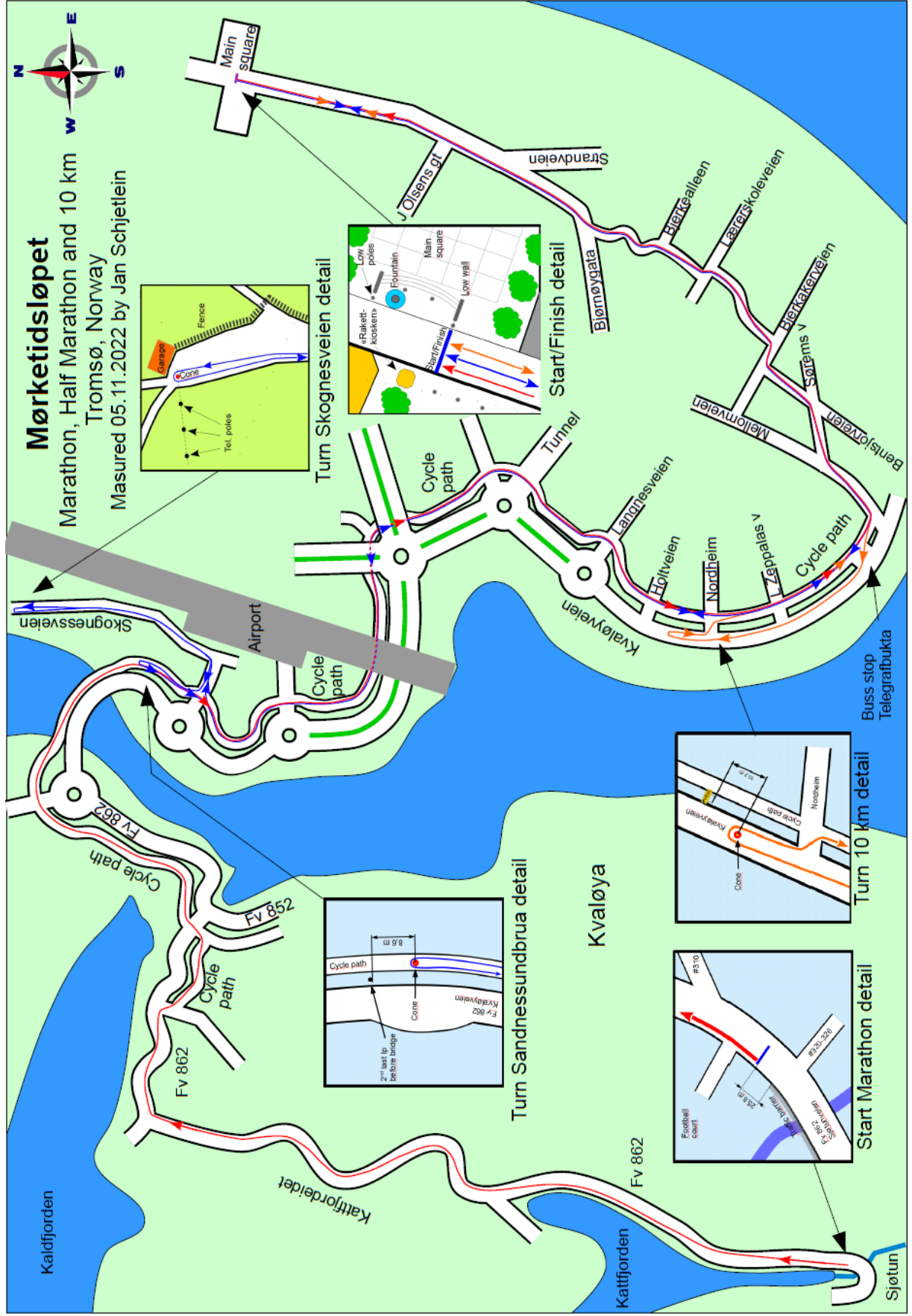
List of split locations

START	Level with south wall on left in main square 35 km to go at the side of the road	Marked with a stick
TURN	Cone placed 10,3 m before sign "Holt"	
4 km to go	3,6 m before traffic sign "30" before L Zeppolas vei	
3 km to go	17,9 m before last lp before bus stop "Telegrafbukta"	
2 km to go	7,9 m before 1st lp after Bjerkealleen	
1 km to go	10,5 m after Sign "pedestrian crossing" on left after J Olsens gt	
FINISH	Storgata, in town square level with near low wall, before fountain	



Møketidsløpet

Marathon, Half Marathon and 10 km
Tromsø, Norway
Measured 05.11.2022 by Jan Schjettelein



Bus stop
Telegrafbukta

Turn 10 km detail

Start Marathon detail