

<b>BOAT</b> Name <b>Aurora Borealis</b> Sail Nr <b>RUS 2675</b>	<b>GPH</b> <b>551.7</b>	<b>HULL</b> Length Overall <b>12.200m</b> Maximum Beam <b>3.818m</b> Displacement <b>5,674kg</b> Draft <b>2.635m</b> Plan Review IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.182%</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension IMSL <b>11.519m</b> VCGD <b>-0.312m</b> Sink <b>21.61kg/mm</b> RL <b>10.962m</b> VCGM <b>-0.504m</b> WS <b>29.80m<sup>2</sup></b> LSM0 <b>11.466m</b> Displacement/Length ratio <b>3.7640</b>
<b>GENERAL</b> Class <b>ELF1180</b> Designer <b>Mataruev/Kosorotov</b> Builder <b>CYC yachts</b> Series <b>04/2015</b> Age <b>09/2016</b> Age Allowance <b>0.163%</b> Offset File <b>ELF1220-2018.off - 15/06/2018</b> Measurement by - <b>29/07/2016</b>		



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>537.9</b>			<b>609.3</b>		
Time on Time	<b>1.1155</b>			<b>1.1079</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>633.7</b>	<b>489.1</b>	<b>429.6</b>	<b>832.9</b>	<b>609.6</b>	<b>531.9</b>
Time on Time	<b>1.0651</b>	<b>1.3802</b>	<b>1.5712</b>	<b>0.8104</b>	<b>1.1073</b>	<b>1.2690</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>962.3</b>	<b>785.8</b>	<b>684.4</b>	<b>637.8</b>	<b>621.1</b>	<b>613.1</b>	<b>599.5</b>
52°	<b>629.7</b>	<b>521.1</b>	<b>473.1</b>	<b>454.0</b>	<b>445.5</b>	<b>440.8</b>	<b>435.3</b>
60°	<b>577.7</b>	<b>488.3</b>	<b>460.9</b>	<b>442.6</b>	<b>431.1</b>	<b>424.7</b>	<b>419.2</b>
75°	<b>528.7</b>	<b>462.6</b>	<b>440.3</b>	<b>427.2</b>	<b>412.0</b>	<b>397.7</b>	<b>385.0</b>
90°	<b>511.9</b>	<b>452.6</b>	<b>424.6</b>	<b>402.3</b>	<b>388.1</b>	<b>376.0</b>	<b>355.2</b>
110°	<b>531.6</b>	<b>459.4</b>	<b>428.5</b>	<b>397.5</b>	<b>368.7</b>	<b>344.1</b>	<b>314.5</b>
120°	<b>565.5</b>	<b>471.1</b>	<b>434.4</b>	<b>401.5</b>	<b>370.9</b>	<b>347.2</b>	<b>297.7</b>
135°	<b>640.7</b>	<b>511.6</b>	<b>455.2</b>	<b>424.7</b>	<b>392.8</b>	<b>360.9</b>	<b>297.7</b>
150°	<b>764.6</b>	<b>606.9</b>	<b>510.8</b>	<b>459.9</b>	<b>436.0</b>	<b>412.5</b>	<b>349.9</b>
Run VMG	<b>882.9</b>	<b>700.8</b>	<b>589.8</b>	<b>530.9</b>	<b>502.8</b>	<b>470.8</b>	<b>404.0</b>

**Certificate**  
Number **2675.6**  
ORC Ref **03570000LB**  
Issued On **24/06/2020**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

**Crew Weight**  
Default 837kg  
Maximum **837kg**  
Minimum\* **628kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **601.5 0.9975**  
Non Spin OSN **583.0 1.0292**

<b>Selected Courses</b>							
Windward / Leeward	<b>922.6</b>	<b>743.3</b>	<b>637.1</b>	<b>584.4</b>	<b>562.0</b>	<b>542.0</b>	<b>501.8</b>
Circular Random	<b>760.9</b>	<b>614.2</b>	<b>535.5</b>	<b>489.2</b>	<b>459.6</b>	<b>438.3</b>	<b>405.6</b>
Coastal / Long Distance	<b>918.6</b>	<b>695.6</b>	<b>574.2</b>	<b>506.8</b>	<b>472.4</b>	<b>442.4</b>	<b>385.6</b>
Non Spinnaker	<b>853.4</b>	<b>678.4</b>	<b>582.2</b>	<b>524.6</b>	<b>488.0</b>	<b>463.0</b>	<b>429.6</b>

**Sails Limitations**  
Headsails **6** Spinnakers **4**

<b>Velocity Prediction in Knots for True Wind Speeds</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>42.8°</b>	<b>41.3°</b>	<b>40.1°</b>	<b>38.1°</b>	<b>37.5°</b>	<b>37.1°</b>	<b>36.8°</b>
Beat VMG	<b>3.74</b>	<b>4.58</b>	<b>5.26</b>	<b>5.64</b>	<b>5.80</b>	<b>5.87</b>	<b>6.00</b>
52°	<b>5.72</b>	<b>6.91</b>	<b>7.61</b>	<b>7.93</b>	<b>8.08</b>	<b>8.17</b>	<b>8.27</b>
60°	<b>6.23</b>	<b>7.37</b>	<b>7.81</b>	<b>8.13</b>	<b>8.35</b>	<b>8.48</b>	<b>8.59</b>
75°	<b>6.81</b>	<b>7.78</b>	<b>8.18</b>	<b>8.43</b>	<b>8.74</b>	<b>9.05</b>	<b>9.35</b>
90°	<b>7.03</b>	<b>7.95</b>	<b>8.48</b>	<b>8.95</b>	<b>9.27</b>	<b>9.57</b>	<b>10.13</b>
110°	<b>6.77</b>	<b>7.84</b>	<b>8.40</b>	<b>9.06</b>	<b>9.76</b>	<b>10.46</b>	<b>11.45</b>
120°	<b>6.37</b>	<b>7.64</b>	<b>8.29</b>	<b>8.97</b>	<b>9.71</b>	<b>10.37</b>	<b>12.09</b>
135°	<b>5.62</b>	<b>7.04</b>	<b>7.91</b>	<b>8.48</b>	<b>9.16</b>	<b>9.97</b>	<b>12.09</b>
150°	<b>4.71</b>	<b>5.93</b>	<b>7.05</b>	<b>7.83</b>	<b>8.26</b>	<b>8.73</b>	<b>10.29</b>
Run VMG	<b>4.08</b>	<b>5.14</b>	<b>6.10</b>	<b>6.78</b>	<b>7.16</b>	<b>7.65</b>	<b>8.91</b>
Gybe Angles	<b>142.5°</b>	<b>145.0°</b>	<b>148.0°</b>	<b>151.0°</b>	<b>151.0°</b>	<b>176.0°</b>	<b>143.0°</b>

**Class Division Length**  
CDL = **11.237**

**Storm Sails Areas**  
Heavy Weather Jib **29.94**  
Storm Jib (JL=9.68) **11.09**  
Storm Trysail **14.66**

**Owner**

<b>BOAT</b>			
Name	<b>Aurora Borealis</b>	Sail Nr	<b>RUS 2675</b>
File	<b>RU2675_Aurora</b>	Data in	<b>meters/kilograms</b>
<b>RIG</b>			
Forestay Tension	<b>Aft</b>	Spreaders	<b>2</b>
Inner Stay	<b>None Fitted</b>	Runners/Checkstays	<b>0</b>
Carbon Mast	<b>Yes</b>	Jib Furler	<b>No</b>
Fiber Rigging	<b>No</b>	Main Furler	<b>No</b>
Non-Circular Rigging	<b>No</b>		
Articulated Bowsprit	<b>No</b>		
P	<b>15.450</b>	E	<b>5.420</b>
IG	<b>14.815</b>	J	<b>4.100</b>
ISP	<b>17.555</b>	SFJ	<b>0.400</b>
BAS	<b>1.880</b>	SPL	<b>0.400</b>
FSD	<b>0.040</b>	TPS	<b>5.600</b>
MDT1	<b>0.111</b>	MDT2	<b>0.111</b>
MDL1	<b>0.216</b>	MDL2	<b>0.210</b>
MW	<b>0.216</b>	MWT	<b>160.00</b>
GO	<b>0.237</b>	MCG	<b>5.725</b>
BD			
TL	<b>2.640</b>		

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date		<b>16/06/2017</b>	SG <b>1.0000</b>
FFM	<b>1.261</b>	FF	<b>1.270</b>
FAM	<b>1.021</b>	FA	<b>1.027</b>
SFFP	<b>0.500</b>	SAFP	<b>11.800</b>
W1	<b>129.3</b>	PD1	<b>190.0</b>
W2	<b>129.3</b>	PD2	<b>190.0</b>
W3	<b>129.3</b>	PD3	<b>190.0</b>
W4	<b>129.3</b>	PD4	<b>190.0</b>
WD	<b>10.370</b>	GSA	<b>64.0</b>
RSA	<b>24025.</b>	PLM	<b>1530.0</b>
LCF from stem on CL / on sheer		<b>6.811 / 7.043</b>	
Maximum beam station from stem		<b>8.600</b>	
RM Measured		<b>188.5kg-m</b>	
RM Default		<b>155.9kg-m</b>	
Limit of positive stability / Stab.Index		<b>134.9° / 133.8</b>	
Freeboard at mast at 4.500		<b>1.113</b>	



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<b>MIZZEN RIG AND SAILS</b>			
N/A			

<b>PROPELLER</b>			
Installation	<b>Strut</b>	PRD	<b>0.435</b>
Type	<b>Folding 2 blades</b>	PBW	<b>0.120</b>
Twin Screw	<b>No</b>	PIPA	<b>0.0033</b>
ST1	<b>0.065</b>	ST3	<b>0.180</b>
ST2	<b>0.180</b>	ST4	<b>0.110</b>
		ST5	<b>0.110</b>
		EDL	<b>2.620</b>

<b>Certificate</b>	
Number	<b>2675.6</b>
ORC Ref	<b>03570000LBE</b>
Issued On	<b>24/06/2020</b>
VPP Ver.	<b>2020 1.02</b>
Valid until	<b>31/12/2020</b>

<b>COMMENTS</b>			

<b>MOVABLE BALLAST</b>			
N/A			

<b>CENTERBOARD</b>			
N/A			



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<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.20	1.13	2.03	3.50	4.55	49.82	50.82	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	Area	Formula		
	18.80	15.96	17.38	9.71	9.37	139.65	AS · (SFL + 4·SHW) / 6		

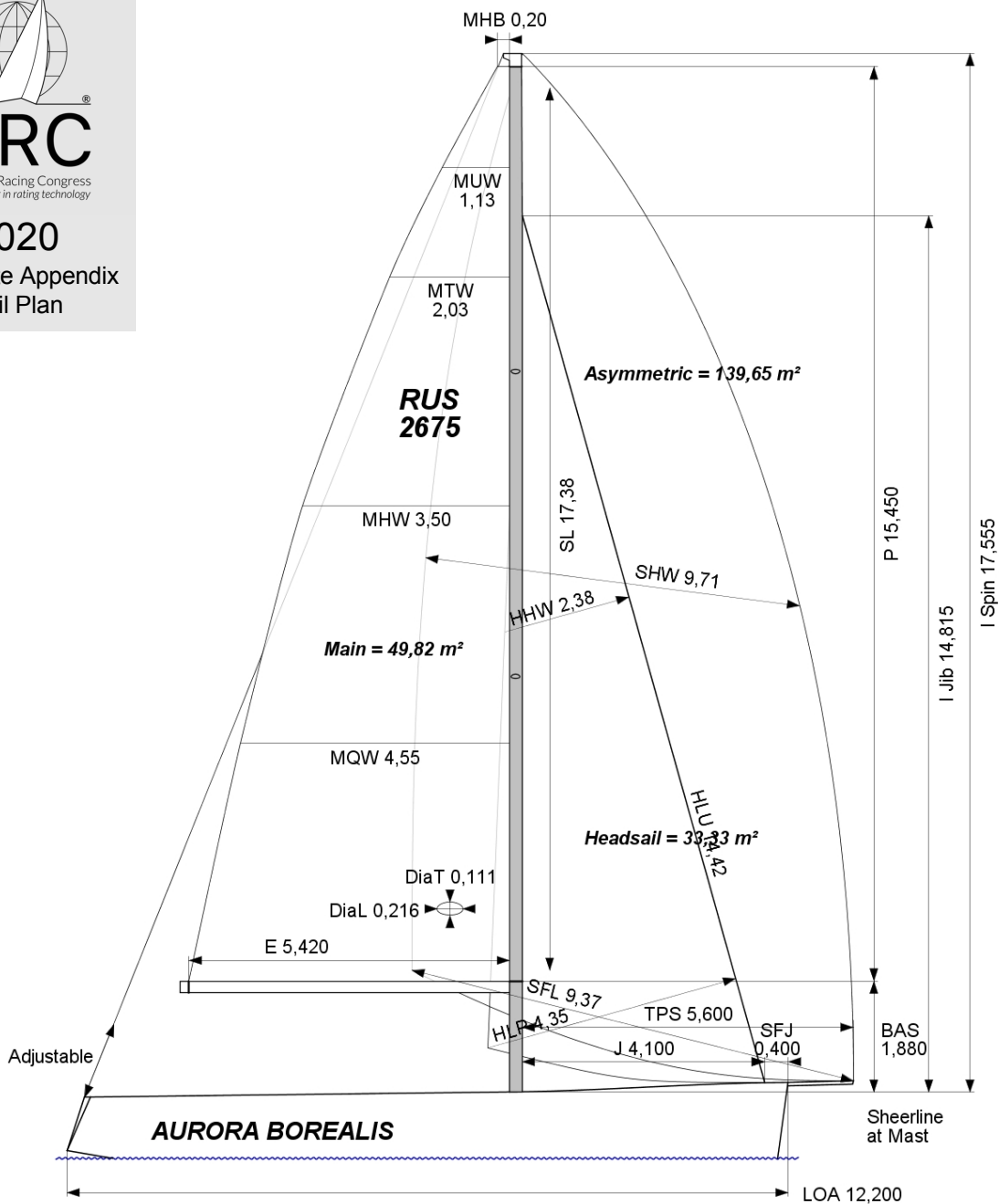
<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Flying</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.10	0.77	1.40	2.38	3.29	4.35	14.42	33.33	Y	No	23/11/2019	Carbon	J1
0.10	0.72	1.34	2.35	3.30	4.40	14.42	33.16	Y	No	09/11/2017	Carbon	
0.05	0.49	0.97	2.05	3.32	4.44	14.17	30.49	Y	No	12/05/2018	Dacron	
0.10	0.54	1.01	1.98	2.95	3.90	12.57	24.89	Y	No	23/11/2019	Carbon	J4OSRHeavy
0.08	0.51	0.94	1.87	2.80	3.68	11.56	21.61	Y	No	12/05/2018	Dacron	OSR Heavy

<b>MEASUREMENT INVENTORY</b>				
Measurer	<b>RUS 279</b>			
Date	<b>12/06/2018</b>			
Comment				
<b>Internal Ballast total = 0.0</b>				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
A1	Anchor	0.0	41.20	0.30 Danfort 15 kg in-
Ch1	Chain	0.0	41.20	0.30 rope d14 150-6 kg
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
E	Engine	Volvo Penta	D1-30 Sail	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn Description</b>
F	Tank Fuel		fixed, plastic	120.0	9.10	0.00	40.0 At CL under cokpit
W	Tank Water		Portable, plastic	60.0	4.50	1.00	0.0 portable cans - 3 pc
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
B1	Battery	15.0	8.60	-0.20 Starter Exide EN 600 62 AH			
B2	Battery		3.13	-0.20 Consumers - Exide AGM EK950			



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Sail Plan



**SAILS INVENTORY**

**MAINSAIL (2)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
M2	0.20	1.13	2.03	3.50	4.55	49.82		12/05/2018	SSSails	Dyneema	
OUK4015145	0.11	1.11	2.02	3.51	4.57	49.78		28/11/2019	North Sails	Carbon	

**HEADSAILS (5)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
OUK401	0.10	0.77	1.40	2.38	3.29	4.35	14.42	106%	33.33	Y	No		23/11/2019	North Sails	Carbon	J1
ODK	0.10	0.72	1.34	2.35	3.30	4.40	14.42	107%	33.16	Y	No		09/11/2017	North Sails	Carbon	
H2	0.05	0.49	0.97	2.05	3.32	4.44	14.17	108%	30.49	Y	No		12/05/2018	Unknown	Dacron	
OUK-	0.10	0.54	1.01	1.98	2.95	3.90	12.57	95%	24.89	Y	No		23/11/2019	North Sails	Carbon	J4OSRHeavy
H3	0.08	0.51	0.94	1.87	2.80	3.68	11.56	90%	21.61	Y	No		12/05/2018	Ulman Sails	Dacron	OSR Heavy

**SYMMETRIC SPINNAKERS (0)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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**ASYMMETRIC SPINNAKERS (4)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
ODK 105903-	18.80	15.96	17.38	9.71	9.37	139.65	asym		21/10/2017	North Sails	Unknown	A2
OUK4015145	19.03	16.01	17.52	9.59	9.46	139.64	asym		04/11/2019	North Sails	Unknown	A1.5
OUK	15.96	14.42	15.19	7.45	9.49	99.47	asy79		20/10/2018	North Sails	Unknown	A5
OUK	17.62	16.44	17.03	5.94	7.92	89.92	asy76		25/10/2018	North Sails	Unknown	A0