

```
In [1]: import os
import json
from cog_analysis import analyze_session
from report_fct import process_all_run

summary_path = "summary_enriched.json"

base_dir = "../Data_Sailnjord/Straight_lines"
```

## Only Upwind:

```
In [2]: # Scan de tous les dossiers de date
for date_folder in sorted(os.listdir(base_dir)):
    date_path = os.path.join(base_dir, date_folder)

    # Scan de tous les runs dans chaque dossier de date
    for run_folder in sorted(os.listdir(date_path)):
        run_path = os.path.join(date_path, run_folder)
        try:
            process_all_run(run_path, summary_path, tot=False, onlyUpwind=True, onlyDownwind=False)
        except ValueError as e:
            print(f"Error: {e}")
```

```
=====
Processing run: 06_06_Run1
=====

{'SOG_variation_boat1': 0.9060069436977556,
 'SOG_variation_boat2': 0.6152285750161369,
 'avg TWA boat1': 48.330488649949264,
 'avg TWA boat2': 48.517577751196164,
 'avg_SOG_boat1': 20.437873357228195,
 'avg_SOG_boat2': 20.159856630824375,
 'boat1_master_leeward': False,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 106.77,
 'boat2_master_leeward': True,
 'boat2_name': 'Karl Maeder',
 'boat2_total_weight': 100.97500000000001,
 'duration': 83.59299993515015,
 'end_time': 1749217774.756,
 'stability_score': 0.9676324199379018,
 'start_time': 1749217691.163}

=====
Interval 1: Upwind from 2025-06-06 13:48:11 to 2025-06-06 13:49:34 – Karl Maeder vs Gian Stragiotti
=====
```

## MainReport

	Run Statistics												
	Avg (Karl Maeder)	Avg (Gian Stragiotti)	Min (Karl Maeder)	Min (Gian Stragiotti)	Max (Karl Maeder)	Max (Gian Stragiotti)	Count (Karl Maeder)	Count (Gian Stragiotti)	StdDev (Karl Maeder)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.234	7.232	5.204	5.204	9.394	9.395	836	837	1.289	1.289			
<b>TWD</b>	171.5	171.5	169.5	169.5	173.5	173.5	836	837	1.226	1.226			
<b>SOG</b>	20.16	20.44	19.1	18.4	22.2	22.3	836	837	0.618	0.906	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	13.34	13.55	10.02	9.711	16.49	17.37	836	837	1.225	1.418	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	123	123.2	112.5	109.9	135.2	137	836	837	3.813	4.509		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	48.52	48.33	37.76	35.49	58.91	60.84	836	837	3.85	4.59			
<b>Heel_Lwd</b>	53.39	54.96	34.4	37.6	76.1	72.4	836	837	5.86	6.097	Gian Stragiotti	Karl Maeder	Tie
<b>Side_lines</b>	13.47	12.92	4.9	2.2	25.5	23.7	836	837	3.677	3.817	Karl Maeder	Karl Maeder	Karl Maeder
<b>Line_C</b>	110.9	113.8	71.8	71.9	141	152	836	833	11.52	12.23	Gian Stragiotti	Karl Maeder	Tie
<b>Total_lines</b>	124.5	126.6	79.1	82.4	162.4	170.1	836	837	13.21	14.09	Gian Stragiotti	Karl Maeder	Tie

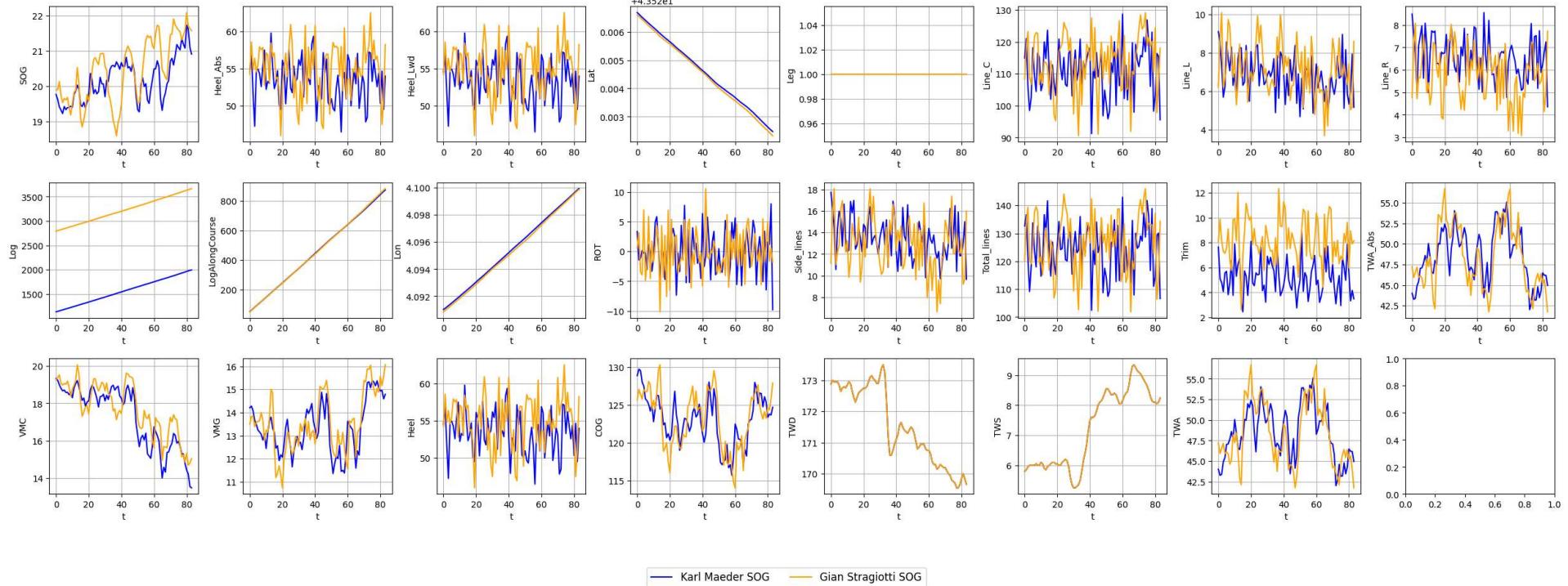
## Distance Summary

	Karl Maeder	Gian Stragiotti
<b>Distance [m]</b>	868.657991	881.134771
<b>Straight Line [m]</b>	864.963132	876.540039
<b>Distance as Percentage of Straight Line [%]</b>	100.427170	100.524190

Gain of Karl Maeder with respect to Gian Stragiotti

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-7.208146	15.080504	6.523027
<b>Final Deficit</b>	4.362416	17.079623	15.684942
<b>Total Gain</b>	11.570562	1.999119	9.161915
<b>Gain per Minute</b>	8.314973	1.436630	6.584043

## Interval 1: Upwind from 2025-06-06 13:48:11 to 2025-06-06 13:49:34 — Karl Maeder vs Gian Stragiotti - Parameters over time



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=====
Processing run: 06_06_Run2
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```
{'SOG_variation_boat1': 0.9186044828922484,
'SOG_variation_boat2': 0.8717597316888797,
'avg TWA boat1': 58.89826233453671,
'avg TWA boat2': 60.07042340168877,
'avg_SOG_boat1': 20.580144404332128,
'avg_SOG_boat2': 19.964981949458487,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.77,
'boat2_master_leeward': False,
'boat2_name': 'Karl Maeder',
'boat2_total_weight': 100.97500000000001,
'duration': 82.9869999855591,
'end_time': 1749218497.944,
'stability_score': 0.9655042043463251,
'start_time': 1749218414.957}
```

```
=====
Interval 1: Upwind from 2025-06-06 14:00:14 to 2025-06-06 14:01:37 — Gian Stragiotti vs Karl Maeder
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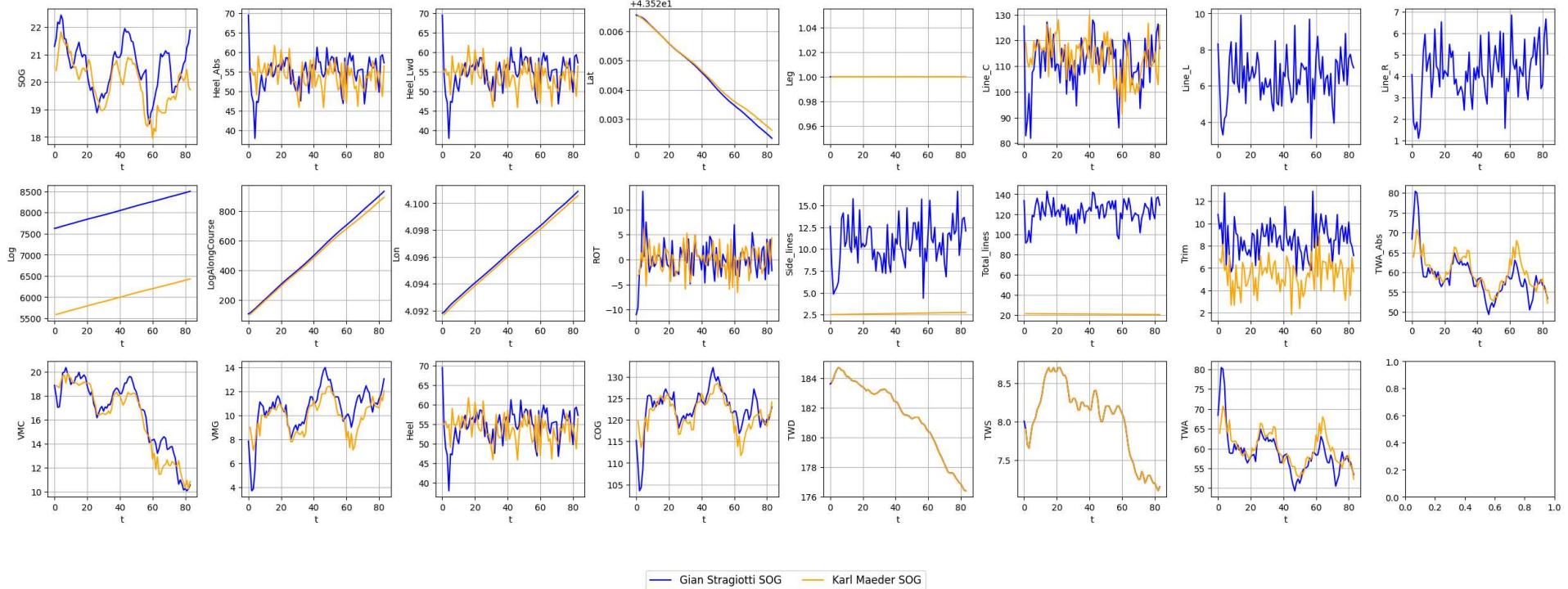
## MainReport

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.026	8.027	7.1	7.1	8.7	8.7	831	829	0.472	0.4717			
<b>TWD</b>	181.5	181.5	176.4	176.4	184.8	184.8	831	829	2.406	2.402			
<b>SOG</b>	<b>20.58</b>	<b>19.97</b>	17.9	17.8	22.7	22	831	829	<b>0.9186</b>	<b>0.8723</b>	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	<b>10.57</b>	<b>9.936</b>	2.002	5.209	15.39	13.17	831	829	<b>1.908</b>	<b>1.438</b>	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	122.6	121.4	99.6	108.4	137.2	131	831	829	<b>5.155</b>	<b>4.124</b>	Karl Maeder	Karl Maeder	
<b>TWA_Abs</b>	58.9	60.07	44.3	49.7	84.8	75.84	831	829	5.748	4.415			
<b>Heel_Lwd</b>	<b>54.62</b>	<b>53.87</b>	29.5	34.5	69.9	73.9	831	829	<b>6.067</b>	<b>5.794</b>	Gian Stragiotti	Karl Maeder	Tie
<b>Side_lines</b>	<b>10.62</b>	<b>2.63</b>	1.8	2.506	24.1	2.754	831	829	<b>3.707</b>	<b>0.07152</b>	Gian Stragiotti	Karl Maeder	Tie
<b>Line_C</b>	<b>111.5</b>	<b>113.1</b>	61.8	81.7	162.3	146.3	826	829	<b>13.32</b>	<b>10.84</b>	Karl Maeder	Karl Maeder	Karl Maeder
<b>Total_lines</b>	122.3	<b>20.92</b>	64.2	20.46	176.8	21.39	831	829	<b>14.73</b>	<b>0.2698</b>	Gian Stragiotti	Karl Maeder	Tie

## Distance Summary

	Gian Stragiotti	Karl Maeder
<b>Distance [m]</b>	881.637147	851.906469
<b>Straight Line [m]</b>	876.008669	847.703283
<b>Distance as Percentage of Straight Line [%]</b>	100.642514	100.495832
Gain of Gian Stragiotti with respect to Karl Maeder		
<b>Forward</b>	<b>Lateral</b>	<b>VMG</b>
<b>Initial Deficit</b>	-11.636441	5.025575
<b>Final Deficit</b>	-40.117615	-11.787467
<b>Total Gain</b>	<b>-28.481173</b>	<b>-16.813042</b>
<b>Gain per Minute</b>	<b>-20.592025</b>	<b>-12.155910</b>
		<b>-21.047336</b>

Interval 1: Upwind from 2025-06-06 14:00:14 to 2025-06-06 14:01:37 — Gian Stragiotti vs Karl Maeder - Parameters over time



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=====
Processing run: 06_06_Run3
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```
{'SOG_variation_boat1': 0.49000470059418433,
'SOG_variation_boat2': 0.6792614824590278,
'avg TWA boat1': 52.54139975845411,
'avg TWA boat2': 52.82867917675545,
'avg_SOG_boat1': 21.063164251207727,
'avg_SOG_boat2': 20.359541062801927,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.77,
'boat2_master_leeward': True,
'boat2_name': 'Karl Maeder',
'boat2_total_weight': 100.97500000000001,
'duration': 82.69000005722046,
'end_time': 1749219170.846,
'stability_score': 0.9702963955551277,
'start_time': 1749219088.156}
```

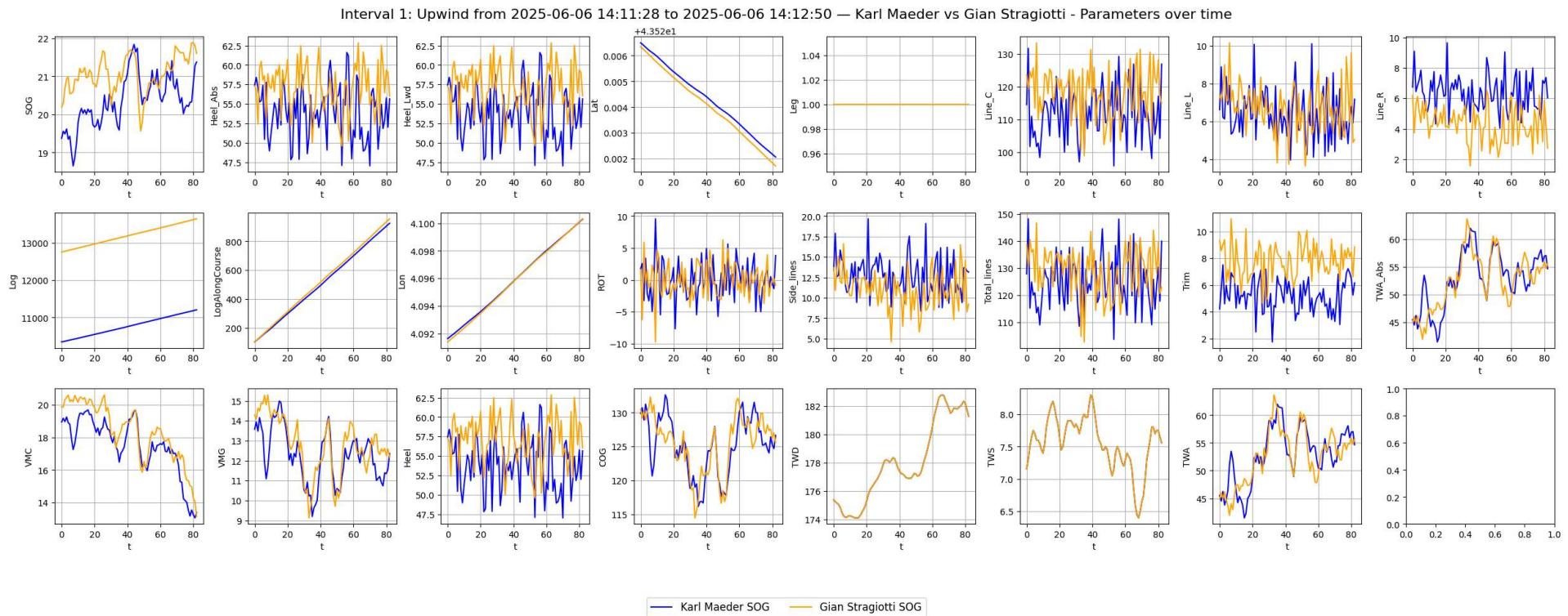
```
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Interval 1: Upwind from 2025-06-06 14:11:28 to 2025-06-06 14:12:50 – Karl Maeder vs Gian Stragiotti
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```

## MainReport

	Run Statistics												
	Avg (Karl Maeder)	Avg (Gian Stragiotti)	Min (Karl Maeder)	Min (Gian Stragiotti)	Max (Karl Maeder)	Max (Gian Stragiotti)	Count (Karl Maeder)	Count (Gian Stragiotti)	StdDev (Karl Maeder)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.554	7.554	6.4	6.4	8.3	8.3	826	828	0.4126	0.4124			
<b>TWD</b>	178	178	174.1	174.1	182.9	182.9	826	828	2.827	2.827			
<b>SOG</b>	20.36	21.06	18.5	19.5	21.9	22	826	828	0.6784	0.49	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	12.24	12.76	8.308	7.939	15.3	16.57	826	828	1.409	1.499	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	125.2	125.4	111.6	110.9	134.4	136.3	826	828	4.57	4.502		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	52.83	52.54	40.1	37.91	66.46	67.21	826	828	5.239	5.133			
<b>Heel_Lwd</b>	53.86	56.98	33.8	39.7	72.9	73.2	826	828	6.264	5.705	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	12.78	11.01	4.2	2.8	24.4	24	826	828	4.02	3.508	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	111.9	118.4	76.9	76.6	152.2	154.9	826	821	12.97	10.9	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	124.8	129	82.4	82.1	171.3	165.5	826	828	15.28	12.03	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti

## Distance Summary

	Karl Maeder	Gian Stragiotti
<b>Distance [m]</b>	866.941594	898.997515
<b>Straight Line [m]</b>	862.221169	894.202707
<b>Distance as Percentage of Straight Line [%]</b>	100.547473	100.536210
Gain of Karl Maeder with respect to Gian Stragiotti		
<b>Forward</b>	24.961832	25.600337
<b>Lateral</b>	29.913897	38.857689
<b>VMG</b>	31.960549	4.952065
<b>Initial Deficit</b>	-7.099155	
<b>Final Deficit</b>	24.861394	
<b>Total Gain</b>	31.960549	23.257352
<b>Gain per Minute</b>	23.245445	3.601720
	16.915463	



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Processing run: 06_06_Run4
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```

```
{'SOG_variation_boat1': 0.7122666523594098,
'SOG_variation_boat2': 0.7265832233472408,
'avg TWA boat1': 52.66727198917456,
'avg TWA boat2': 52.53241598915989,
'avg_SOG_boat1': 20.830446549391066,
'avg_SOG_boat2': 19.742625169147495,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.77,
'boat2_master_leeward': False,
'boat2_name': 'Karl Maeder',
'boat2_total_weight': 100.97500000000001,
'duration': 73.80799984931946,
'end_time': 1749219672.165,
'stability_score': 0.9631675127350817,
'start_time': 1749219598.357}
```

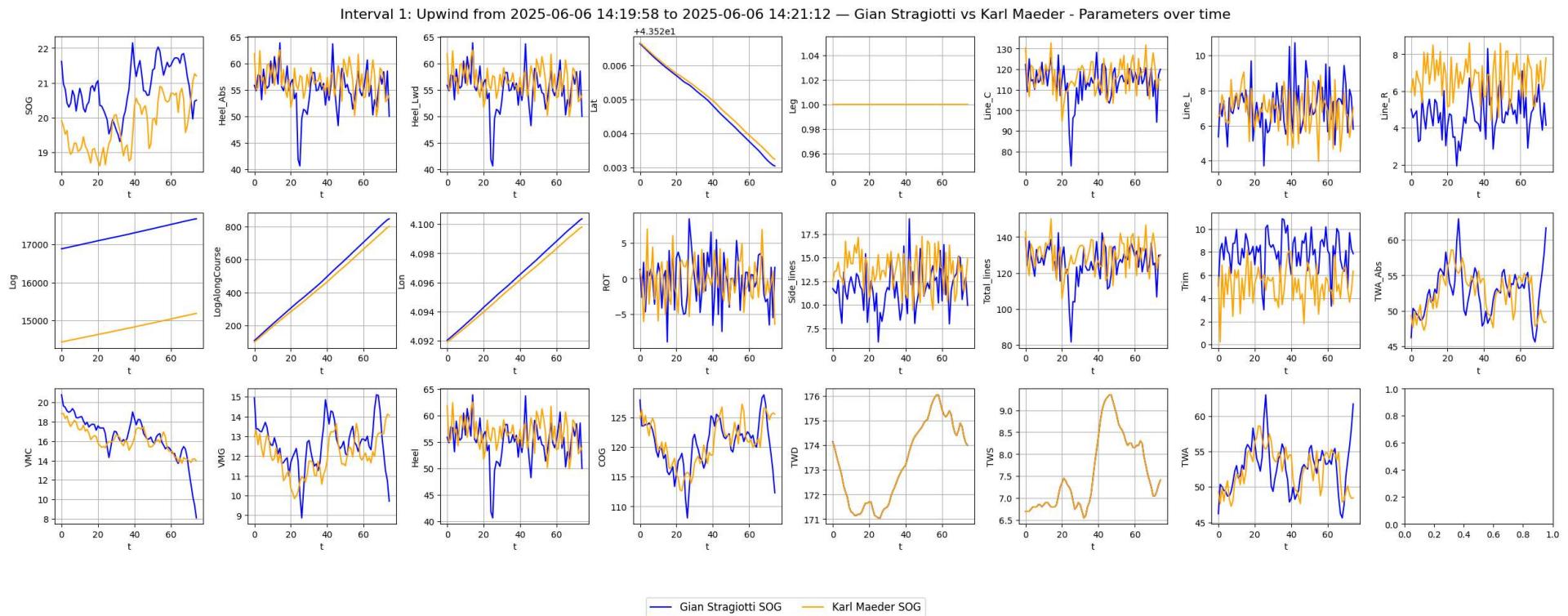
```
=====
Interval 1: Upwind from 2025-06-06 14:19:58 to 2025-06-06 14:21:12 – Gian Stragiotti vs Karl Maeder
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```

## MainReport

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.593	7.594	6.504	6.506	9.396	9.396	739	738	0.8486	0.8485			
<b>TWD</b>	173.3	173.3	171	171	176.1	176.1	739	738	1.637	1.638			
<b>SOG</b>	20.83	19.74	19.1	18.5	22.3	21.3	739	738	0.7123	0.7277	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	12.62	12	8.2	8.03	16.21	14.55	739	738	1.247	1.086	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	120.6	120.8	106	107.3	131.6	129.5	739	738	4.214	4.064		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	52.67	52.53	42.8	44.5	65.03	64.28	739	738	3.662	3.353			
<b>Heel_Lwd</b>	55.19	56.73	31.3	40.4	74.6	74.8	739	738	6.276	5.752	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	11.82	13.62	2.2	5.6	26.1	25.5	739	738	3.608	3.51	Karl Maeder	Karl Maeder	Karl Maeder
<b>Line_C</b>	113.3	116	62.3	85.7	150.6	153.8	735	738	12.43	10.99	Karl Maeder	Karl Maeder	Karl Maeder
<b>Total_lines</b>	125.4	129.6	75.1	94.5	160.7	176	739	738	13.49	12.52	Karl Maeder	Karl Maeder	Karl Maeder

## Distance Summary

	Gian Stragiotti	Karl Maeder
<b>Distance [m]</b>	792.398098	751.058332
<b>Straight Line [m]</b>	788.576683	747.458507
<b>Distance as Percentage of Straight Line [%]</b>	100.484597	100.481609
Gain of Gian Stragiotti with respect to Karl Maeder		
<b>Forward</b>	Forward	
<b>Lateral</b>	Lateral	
<b>VMG</b>	VMG	
<b>Initial Deficit</b>	-9.232465	2.878838
<b>Final Deficit</b>	-50.321621	4.786736
<b>Total Gain</b>	-41.089155	1.907898
<b>Gain per Minute</b>	-33.402196	1.550968
		-19.024166



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=====
Processing run: 06_06_Run5
=====
```

```
{'SOG_variation_boat1': 0.5502890980942721,
'SOG_variation_boat2': 0.5485079840896449,
'avg TWA boat1': 48.68512300123002,
'avg TWA boat2': 48.25772996300863,
'avg_SOG_boat1': 21.4522752275523,
'avg_SOG_boat2': 21.483148831488318,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 81.19400000572205,
'end_time': 1749220811.654,
'stability_score': 0.9628159995384037,
'start_time': 1749220730.46}
```

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Interval 1: Upwind from 2025-06-06 14:38:50 to 2025-06-06 14:40:11 – Karl Maeder vs SenseBoard
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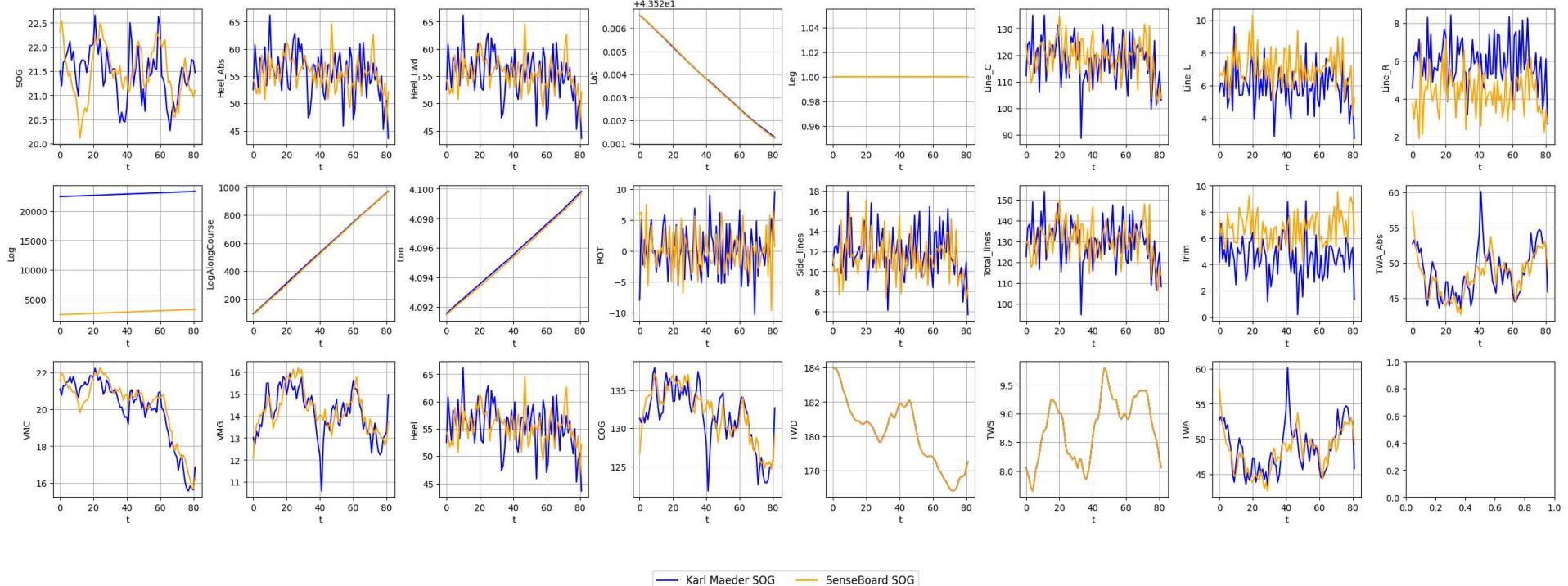
## MainReport

	Run Statistics												
	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.762	8.763	7.607	7.605	9.8	9.8	813	811	0.5466	0.5461			
<b>TWD</b>	180.1	180.1	176.8	176.8	184	184	813	811	1.892	1.888			
<b>SOG</b>	21.45	21.48	20	20	22.9	23.6	813	811	0.5503	0.5546	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	14.13	14.28	9.293	11.62	17.47	17.12	813	811	1.188	1.024	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	131.4	131.9	118	121.3	141.2	141.3	813	811	4.385	3.887		SenseBoard	SenseBoard
<b>TWA_Abs</b>	48.69	48.26	39.52	39.53	63.87	58.89	813	811	3.947	3.323			
<b>Heel_Lwd</b>	55.55	55.45	32.8	38	74.8	74.5	813	811	6.328	5.439	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	11.84	11.4	3.5	2.8	26	24.9	813	811	3.934	3.757	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	118.3	119.2	75.9	85	162.8	150.5	813	811	13.8	11.69	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	130	130.4	80.3	90.7	177.2	174.7	813	811	15.68	13.42	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	898.225740	896.927903
<b>Straight Line [m]</b>	894.110145	893.224327
<b>Distance as Percentage of Straight Line [%]</b>	100.460301	100.414630
Gain of Karl Maeder with respect to SenseBoard		
<b>Forward</b>	Initial Deficit	-5.636834
	Final Deficit	3.981248
	Total Gain	-0.731392
	Gain per Minute	-6.534813
		11.708492
		4.479425
		-0.897979
		7.727244
		5.210817
		-0.663580
		5.710208
		3.850642

Interval 1: Upwind from 2025-06-06 14:38:50 to 2025-06-06 14:40:11 — Karl Maeder vs SenseBoard - Parameters over time



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=====
Processing run: 06_06_Run6
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```

```
{'SOG_variation_boat1': 0.6024771486351213,
'SOG_variation_boat2': 0.5333213508461789,
'avg TWA boat1': 46.08574509803922,
'avg TWA boat2': 45.63624157303371,
'avg_SOG_boat1': 21.702941176470592,
'avg_SOG_boat2': 22.300560224089637,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 71.2940001487732,
'end_time': 1749221423.255,
'stability_score': 0.9690295257499035,
'start_time': 1749221351.961}
```

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=====
Interval 1: Upwind from 2025-06-06 14:49:11 to 2025-06-06 14:50:23 – SenseBoard vs Karl Maeder
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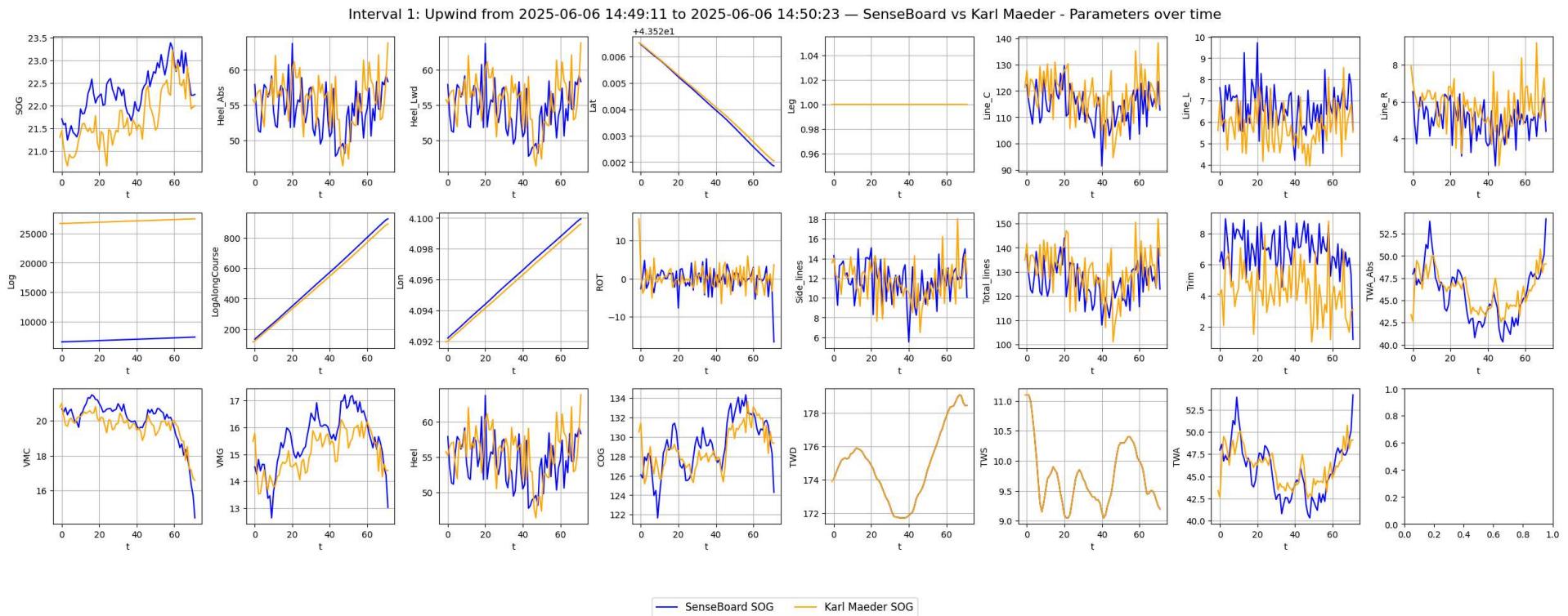
## MainReport

## Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.733	9.734	9.004	9.004	11.1	11.1	712	714	0.4951	0.4974			
<b>TWD</b>	174.9	174.9	171.7	171.7	179.2	179.2	712	714	2.179	2.181			
<b>SOG</b>	22.3	21.7	21.1	20.5	23.5	23.5	712	714	0.5335	0.6025	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	15.57	15.04	11.81	12.69	18.17	17.19	712	714	1.105	0.8833	SenseBoard	Karl Maeder	Tie
<b>COG</b>	129.2	128.8	119.2	120.7	137.6	135.5	712	714	3.157	2.662		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	45.64	46.09	36.84	38.26	56.34	54.05	712	714	3.38	2.616			
<b>Heel_Lwd</b>	54.28	55.76	38.6	38.7	70.4	71.3	712	714	5.642	5.598	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	11.68	11.54	3.1	4.2	25.6	25.8	712	714	3.634	3.497	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	114.2	118.3	69.8	71.2	149.3	154.9	710	714	12.2	13.28	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	125.9	130.1	88.1	76.4	159.4	170.5	712	714	12.26	14.77	Karl Maeder	SenseBoard	Tie

## Distance Summary

	SenseBoard	Karl Maeder	
<b>Distance [m]</b>	817.920069	798.352828	
<b>Straight Line [m]</b>	815.143704	795.949532	
<b>Distance as Percentage of Straight Line [%]</b>	100.340598	100.301941	
Gain of SenseBoard with respect to Karl Maeder			
	Forward	Lateral	VMG
<b>Initial Deficit</b>	-14.968790	7.190268	-5.326013
<b>Final Deficit</b>	-34.188164	1.094693	-23.122295
<b>Total Gain</b>	-19.219374	-6.095576	-17.796282
<b>Gain per Minute</b>	-16.217284	-5.143439	-15.016481



```
=====
Processing run: 06_06_Run7
=====

{'SOG_variation_boat1': 0.8433990042082609,
 'SOG_variation_boat2': 0.7266066949019068,
 'avg TWA boat1': 48.42436351875809,
 'avg TWA boat2': 47.25475518134715,
 'avg_SOG_boat1': 21.420957309184995,
 'avg_SOG_boat2': 21.57464424320828,
 'boat1_master_leeward': True,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 100.97500000000001,
 'boat2_master_leeward': False,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.08999999999999,
 'duration': 77.19599986076355,
 'end_time': 1749221950.56,
 'stability_score': 0.9643827859484259,
 'start_time': 1749221873.364}
```

```
=====
Interval 1: Upwind from 2025-06-06 14:57:53 to 2025-06-06 14:59:10 – Karl Maeder vs SenseBoard
=====
```

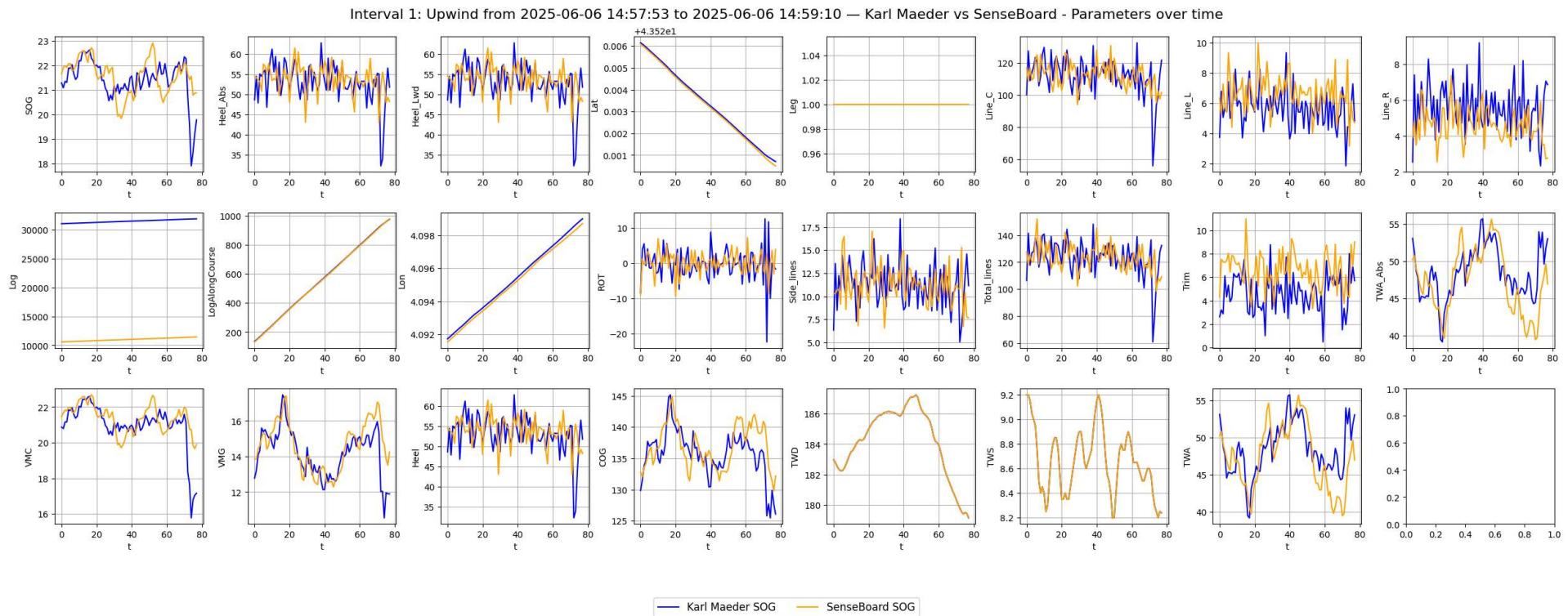
## MainReport

	Run Statistics												
	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.654	8.653	8.108	8.109	9.2	9.2	773	772	0.2658	0.2653			
<b>TWD</b>	184.2	184.2	179	179	187.3	187.3	773	772	2.234	2.236			
<b>SOG</b>	21.42	21.57	17.7	19.8	22.8	23	773	772	0.8434	0.7324	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	14.2	14.6	9.275	11.03	18.08	18.22	773	772	1.47	1.471	SenseBoard	Karl Maeder	Tie
<b>COG</b>	135.8	136.9	117.2	126.9	148.4	149.2	773	772	4.293	4.003		SenseBoard	SenseBoard
<b>TWA_Abs</b>	48.42	47.25	34.81	35.07	62.59	58.8	773	772	4.159	4.78			
<b>Heel_Lwd</b>	53.07	53.88	23.3	30.9	75.7	68.3	773	772	6.961	5.867	SenseBoard	SenseBoard	SenseBoard
<b>Side_lines</b>	11.19	11.22	2.7	2.7	28.1	24.2	773	772	3.817	3.818	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	112	112.2	41.7	65	152.8	147.4	773	771	16.63	13.04	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	123	123.5	45	82	171.1	164.1	773	772	18.01	14.64	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	852.057212	857.088102
<b>Straight Line [m]</b>	848.266453	853.420647
<b>Distance as Percentage of Straight Line [%]</b>	100.446883	100.429736
Gain of Karl Maeder with respect to SenseBoard		
<b>Forward</b>	Initial Deficit	Final Deficit
	-5.003085	15.786889
	5.000273	32.467874
<b>Lateral</b>	Total Gain	Gain per Minute
	16.680985	24.285909
	15.796666	3.886424
<b>VMG</b>	Gain per Minute	12.965168
		12.277838

## MainReport



```
=====
Processing run: 06_06_Run8
=====
```

```
{'SOG_variation_boat1': 0.5939859207419921,
 'SOG_variation_boat2': 0.7305042739030235,
 'avg TWA boat1': 51.7811052631579,
 'avg TWA boat2': 51.41245709570957,
 'avg_SOG_boat1': 22.20378289473684,
 'avg_SOG_boat2': 22.531743421052635,
 'boat1_master_leeward': False,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 100.97500000000001,
 'boat2_master_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.08999999999999,
 'duration': 60.69899998474121,
 'end_time': 1749222433.253,
 'stability_score': 0.9676355493012209,
 'start_time': 1749222372.562}
```

```
=====
Interval 1: Upwind from 2025-06-06 15:06:12 to 2025-06-06 15:07:13 — SenseBoard vs Karl Maeder
=====
```

## MainReport

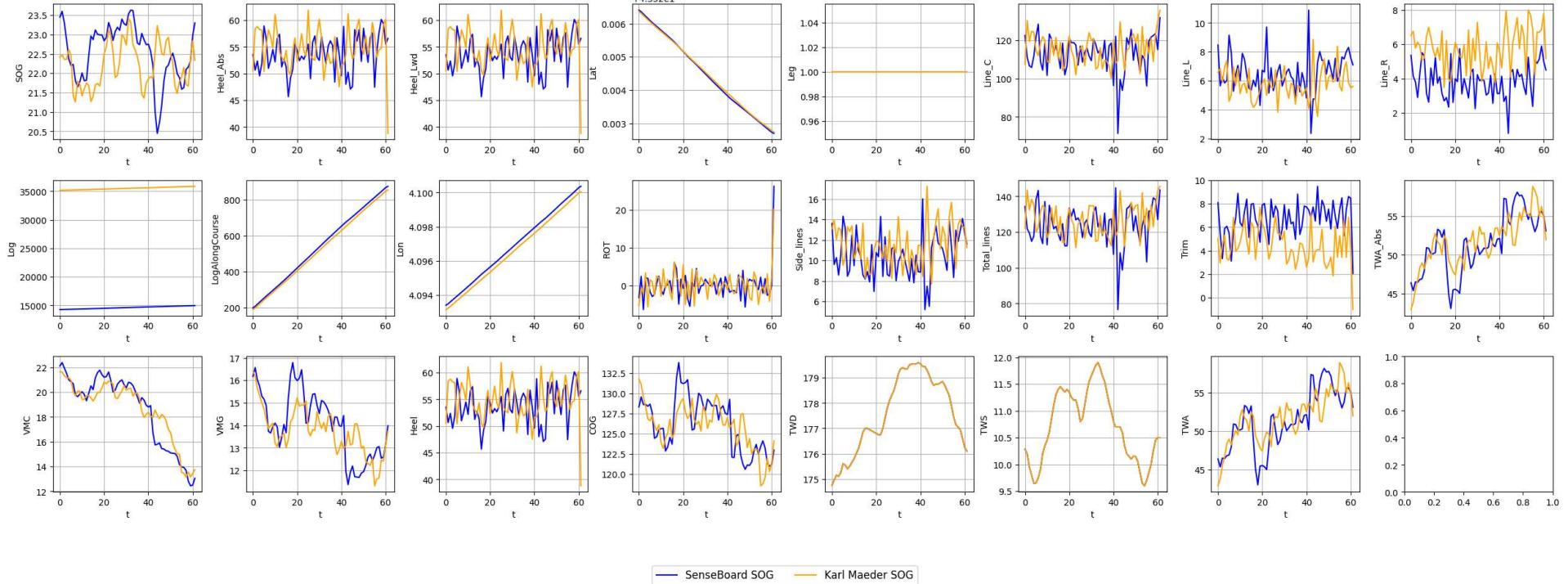
## Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	10.71	10.71	9.513	9.515	11.9	11.9	606	608	0.6764	0.6756			
<b>TWD</b>	177.6	177.6	174.7	174.7	179.7	179.7	606	608	1.475	1.479			
<b>SOG</b>	22.53	22.2	20.4	19.8	23.7	23.5	606	608	0.7301	0.594	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	14.03	13.71	9.408	10.26	17.63	17.37	606	608	1.551	1.139	SenseBoard	Karl Maeder	Tie
<b>COG</b>	126.2	125.8	114.2	115.4	136.2	135.8	606	608	3.803	3.191		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	51.41	51.78	40.7	39.17	65.28	62	606	608	4.195	3.531			
<b>Heel_Lwd</b>	53.67	54.98	32.1	31.7	75.7	75.9	606	608	6.196	5.885	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	10.43	11.58	1.7	4.2	27.5	24	606	608	3.923	3.565	Karl Maeder	Karl Maeder	Karl Maeder
<b>Line_C</b>	112.7	115.4	55	75.9	152.8	151.2	602	608	14.79	14.06	Karl Maeder	Karl Maeder	Karl Maeder
<b>Total_lines</b>	123.4	126.9	58.6	83.9	177	164.3	606	608	16.56	15.02	Karl Maeder	Karl Maeder	Karl Maeder

## Distance Summary

	SenseBoard	Karl Maeder	
<b>Distance [m]</b>	702.801188	694.299581	
<b>Straight Line [m]</b>	700.120839	692.053828	
<b>Distance as Percentage of Straight Line [%]</b>	100.382841	100.324506	
Gain of SenseBoard with respect to Karl Maeder			
	Forward	Lateral	VMG
<b>Initial Deficit</b>	-14.300088	15.991388	3.580632
<b>Final Deficit</b>	-22.387969	10.876072	-5.462280
<b>Total Gain</b>	-8.087881	-5.115316	-9.042912
<b>Gain per Minute</b>	-8.020111	-5.072454	-8.967140

Interval 1: Upwind from 2025-06-06 15:06:12 to 2025-06-06 15:07:13 — SenseBoard vs Karl Maeder - Parameters over time



Error: At least two CSV files are required.

=====

Processing run: 07\_06\_Run1

=====

```
{'SOG_variation_boat1': 0.8742758384554244,
'SOG_variation_boat2': 1.0122411358441399,
'avg_TWA_boat1': 49.980738931297715,
'avg_TWA_boat2': 50.378325688073396,
'avg_SOG_boat1': 21.907786259541986,
'avg_SOG_boat2': 21.809618320610685,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 108.19,
'boat2_master_leeward': True,
'boat2_name': 'Karl Maeder',
'boat2_total_weight': 100.97500000000001,
'duration': 65.39900016784668,
'end_time': 1749297042.555,
'stability_score': 0.9599531391568393,
'start_time': 1749296977.156}
```

=====

Interval 1: Upwind from 2025-06-07 11:49:37 to 2025-06-07 11:50:42 – Karl Maeder vs Gian Stragiotti

=====

#### Run Statistics

	Avg (Karl Maeder)	Avg (Gian Stragiotti)	Min (Karl Maeder)	Min (Gian Stragiotti)	Max (Karl Maeder)	Max (Gian Stragiotti)	Count (Karl Maeder)	Count (Gian Stragiotti)	StdDev (Karl Maeder)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.801	8.802	8.2	8.2	9.7	9.7	654	655	0.4423	0.4428			
<b>TWD</b>	192.5	192.5	190.8	190.8	194.7	194.7	654	655	1.199	1.199			
<b>SOG</b>	21.8	21.91	19.7	20	23.9	23.4	654	655	1.009	0.8743	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	13.85	14.03	10.18	10.76	17.85	18.27	654	655	1.349	1.584	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	142.2	142.5	131.1	132.1	155.1	158	654	655	4.141	4.993		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	50.38	49.98	35.79	33.21	60.07	59.83	654	655	4.501	5.19			
<b>Heel_Lwd</b>	53.74	57.27	31.9	37.9	71.6	74	654	655	5.725	5.79	Gian Stragiotti	Karl Maeder	Tie
<b>Side_lines</b>	13.85	12.49	4.9	3.3	27.5	23.4	654	655	4.002	3.57	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	116.9	119.3	79	78	157.6	150.5	654	654	14.14	11.79	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	130.9	131.9	87.9	97.3	175.8	164.1	654	655	15.86	12.4	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti

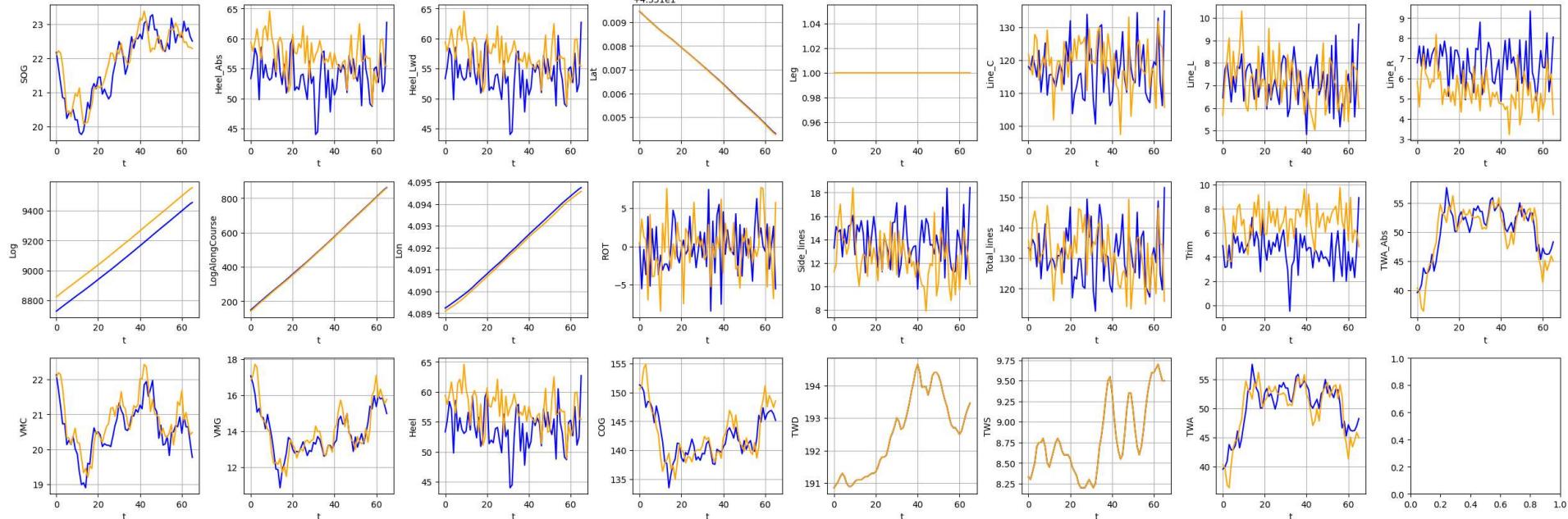
## Distance Summary

**Karl Maeder Gian Stragiotti****Distance [m]** 734.400747 738.910933**Straight Line [m]** 731.514654 734.946462**Distance as Percentage of Straight Line [%]** 100.394537 100.539423

Gain of Karl Maeder with respect to Gian Stragiotti

**Forward Lateral VMG****Initial Deficit** -8.416052 8.109635 0.879869**Final Deficit** -4.988039 13.676549 7.354028**Total Gain** 3.428014 5.566914 6.474158**Gain per Minute** 3.149783 5.115082 5.948690

Interval 1: Upwind from 2025-06-07 11:49:37 to 2025-06-07 11:50:42 — Karl Maeder vs Gian Stragiotti - Parameters over time



— Karl Maeder SOG — Gian Stragiotti SOG

Error: No or insufficient intervals for run: 07\_06\_Run10

=====

Processing run: 07\_06\_Run2

=====

```
{'SOG_variation_boat1': 0.6087969219394326,
 'SOG_variation_boat2': 0.517104764402101,
 'avg_TWA_boat1': 48.030664167916036,
 'avg_TWA_boat2': 48.998265765765765,
 'avg_SOG_boat1': 22.735232383808096,
 'avg_SOG_boat2': 22.480509745127435,
 'boat1_master_leeward': True,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 108.19,
 'boat2_master_leeward': False,
 'boat2_name': 'Karl Maeder',
 'boat2_total_weight': 100.97500000000001,
 'duration': 66.59899997711182,
 'end_time': 1749297579.456,
 'stability_score': 0.9718302241349652,
 'start_time': 1749297512.857}
```

=====

Interval 1: Upwind from 2025-06-07 11:58:32 to 2025-06-07 11:59:39 – Gian Stragiotti vs Karl Maeder

=====

#### Run Statistics

	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.67	8.67	7.806	7.807	9.4	9.4	667	666	0.4441	0.4444			
<b>TWD</b>	188.8	188.8	186.1	186.1	193.1	193.1	667	666	2.384	2.383			
<b>SOG</b>	22.74	22.48	21.3	21.4	24.6	24.2	667	666	0.6088	0.516	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	15.19	14.74	11.89	12.01	18.96	17.55	667	666	1.249	0.9356	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	140.8	139.8	133.2	131.9	152.2	150	667	666	2.994	2.999		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	48.03	49	39.56	38.75	57.45	56.21	667	666	3.261	2.589			
<b>Heel_Lwd</b>	57.32	55.08	41.6	37.9	73.8	70	667	666	5.687	5.043	Gian Stragiotti	Karl Maeder	Tie
<b>Side_Lines</b>	13.78	13.73	5.6	5.8	26.6	26.4	667	666	3.459	3.413	Gian Stragiotti	Karl Maeder	Tie
<b>Line_C</b>	121.1	119.1	84	77.8	161.5	159.9	665	666	10.91	12.07	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	134.7	132.8	100	92.7	170.8	180.2	667	666	12.08	13.37	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti

## Distance Summary

## Gian Stragiotti Karl Maeder

<b>Distance [m]</b>	780.217541	770.272138
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<b>Straight Line [m]</b>	777.931026	768.013464
--------------------------	------------	------------

<b>Distance as Percentage of Straight Line [%]</b>	100.293923	100.294093
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Gain of Gian Stragiotti with respect to Karl Maeder

## Forward Lateral VMG

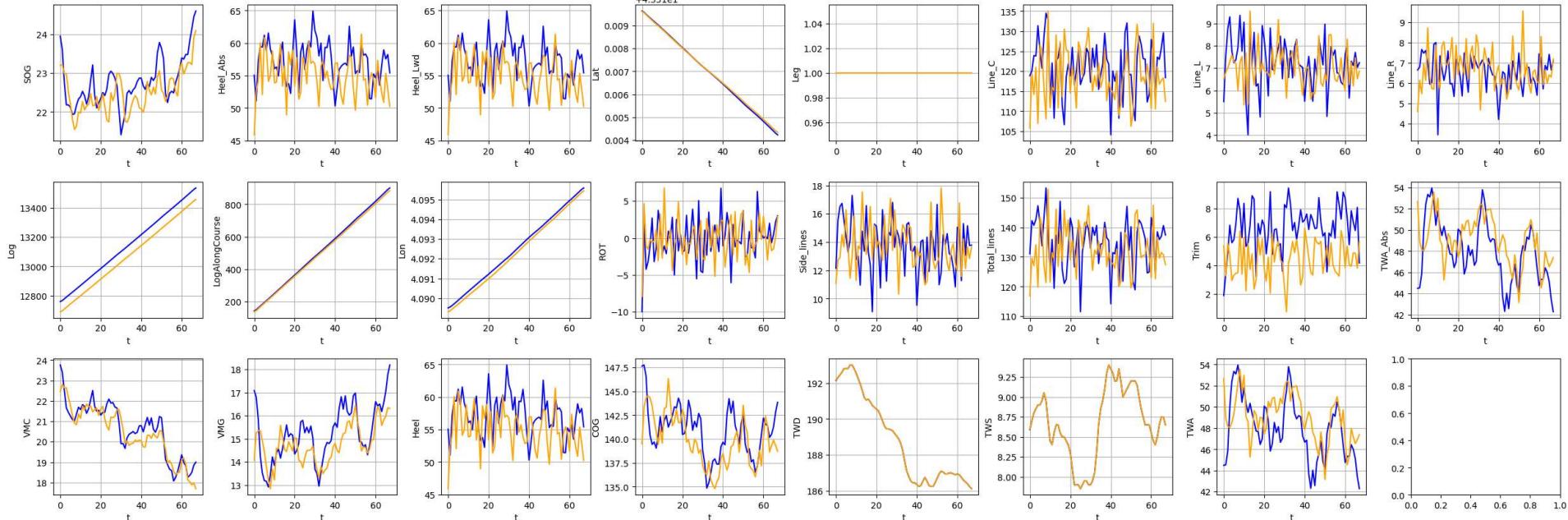
<b>Initial Deficit</b>	-7.111750	13.993113	5.648021
------------------------	-----------	-----------	----------

<b>Final Deficit</b>	-17.172246	1.091471	-10.672167
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<b>Total Gain</b>	-10.060496	-12.901642	-16.320187
-------------------	------------	------------	------------

<b>Gain per Minute</b>	-9.063646	-11.623275	-14.703092
------------------------	-----------	------------	------------

Interval 1: Upwind from 2025-06-07 11:58:32 to 2025-06-07 11:59:39 — Gian Stragiotti vs Karl Maeder - Parameters over time



— Gian Stragiotti SOG — Karl Maeder SOG

```
=====
Processing run: 07_06_Run3
=====
```

```
{'SOG_variation_boat1': 0.8131639589427351,
'SOG_variation_boat2': 0.5512421454915069,
'avg_TWA_boat1': 43.432024154589364,
'avg_TWA_boat2': 44.034191935483875,
'avg_SOG_boat1': 22.3768115942029,
'avg_SOG_boat2': 22.30998389694042,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 108.19,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 62.003000020980835,
'end_time': 1749298544.164,
'stability_score': 0.9617234182036005,
'start_time': 1749298482.161}
```

```
=====
Interval 1: Upwind from 2025-06-07 12:14:42 to 2025-06-07 12:15:44 – SenseBoard vs Gian Stragiotti
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.364	9.364	8.806	8.806	9.894	9.894	620	621	0.2555	0.2553			
<b>TWD</b>	180.6	180.6	178.3	178.3	183.8	183.8	620	621	2.044	2.044			
<b>SOG</b>	22.31	22.38	21.2	21.1	23.7	24.4	620	621	0.5508	0.8132	Gian Stragiotti	SenseBoard	Tie
<b>VMG</b>	16	16.21	12.12	14.08	18.28	18.4	620	621	0.983	0.8443	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	136.6	137.2	127.6	130.4	145	146.3	620	621	2.755	2.524		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	44.03	43.43	36.2	32.01	55.68	52.72	620	621	3.586	3.436			
<b>Heel_Lwd</b>	53.6	57.38	35.5	42	69.3	71.4	620	621	5.727	5.484	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	118.2	122	82.8	78.4	149.4	146.9	620	617	12.97	10.75	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	nan	14.41	nan	6.5	nan	24.2	nan	621	nan	3.353			
<b>Total_lines</b>	nan	136.4	nan	101.8	nan	163.6	nan	621	nan	10.66			

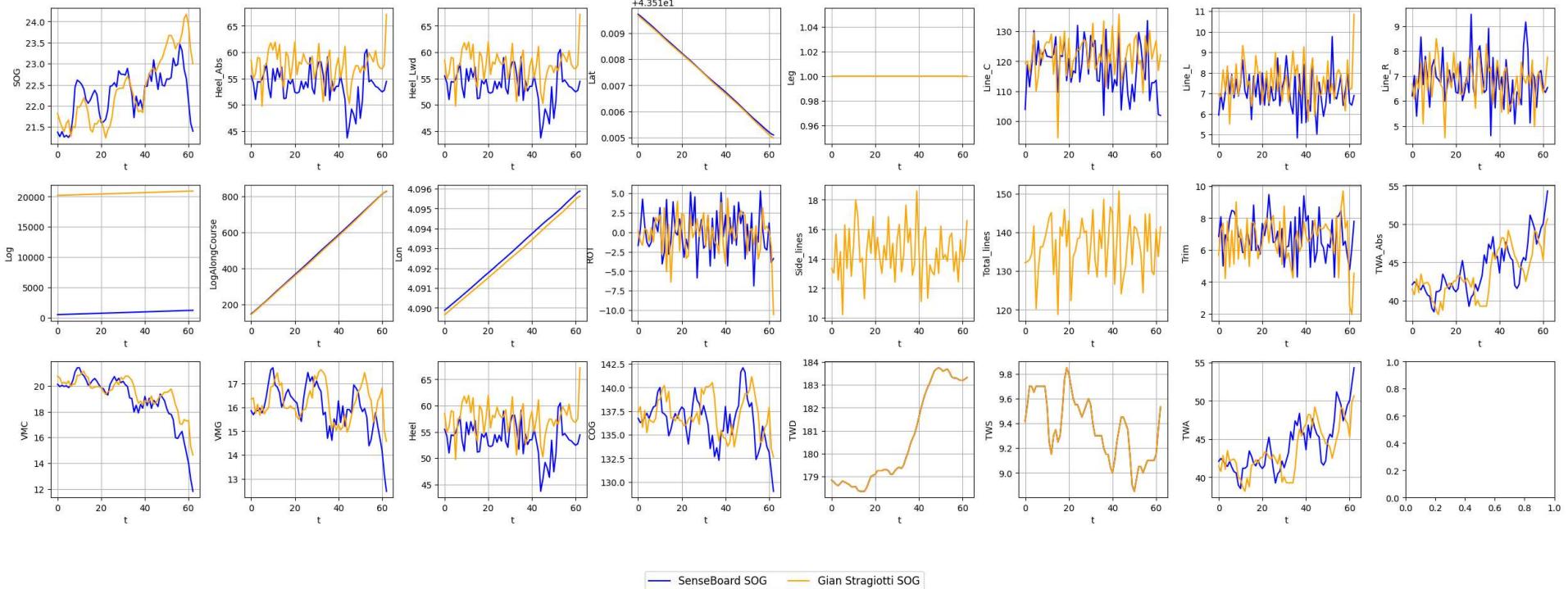
## Distance Summary

	SenseBoard	Gian Stragiotti
<b>Distance [m]</b>	711.819478	715.657192
<b>Straight Line [m]</b>	709.646617	713.574304
<b>Distance as Percentage of Straight Line [%]</b>	100.306189	100.291895

## Gain of SenseBoard with respect to Gian Stragiotti

	<b>Forward</b>	<b>Lateral</b>	<b>VMG</b>
<b>Initial Deficit</b>	-8.990020	16.501216	5.006548
<b>Final Deficit</b>	-5.084044	23.725225	12.835958
<b>Total Gain</b>	<b>3.905975</b>	<b>7.224009</b>	<b>7.829410</b>
<b>Gain per Minute</b>	<b>3.786021</b>	<b>7.002157</b>	<b>7.588966</b>

Interval 1: Upwind from 2025-06-07 12:14:42 to 2025-06-07 12:15:44 — SenseBoard vs Gian Stragiotti - Parameters over time



Error: No or insufficient intervals for run: 07\_06\_Run4

=====  
Processing run: 07\_06\_Run5  
=====

```
{'SOG_variation_boat1': 0.8300439451975229,
 'SOG_variation_boat2': 0.7481384336369988,
 'avg_TWA_boat1': 37.39404484304933,
 'avg_TWA_boat2': 37.37355455904335,
 'avg_SOG_boat1': 21.772496263079223,
 'avg_SOG_boat2': 22.079073243647233,
 'boat1_master_leeward': False,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 108.19,
 'boat2_master_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 102.89,
 'duration': 66.80599999427795,
 'end_time': 1749299823.864,
 'stability_score': 0.9534171638142162,
 'start_time': 1749299757.058}
```

=====  
Interval 1: Upwind from 2025-06-07 12:35:57 to 2025-06-07 12:37:03 – SenseBoard vs Gian Stragiotti  
=====

#### Run Statistics

	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.59	8.59	7.905	7.904	9.195	9.196	669	669	0.3084	0.3084			
<b>TWD</b>	167.3	167.3	164.3	164.3	170.5	170.5	669	669	1.873	1.873			
<b>SOG</b>	22.08	21.77	20.2	20.1	23.6	23.5	669	669	0.7493	0.83	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	17.52	17.27	15.14	14.5	20.05	20.04	669	669	1.039	1.176	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	129.9	129.9	120.8	121.5	139.8	140.1	669	669	3.481	3.56			SenseBoard
<b>TWA_Abs</b>	37.37	37.39	26.6	24.3	46.74	45.75	669	669	3.481	3.651			
<b>Heel_Lwd</b>	54.24	55.45	36.5	37.3	75.9	72.4	669	669	6.248	6.017	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	6.452	118.5	2.7	73.9	11.7	150.7	669	668	1.722	12.2	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	nan	13.58	nan	5.1	nan	25.4	nan	669	nan	3.712			
<b>Total_lines</b>	nan	131.7	nan	84.1	nan	173.2	nan	669	nan	13.75			

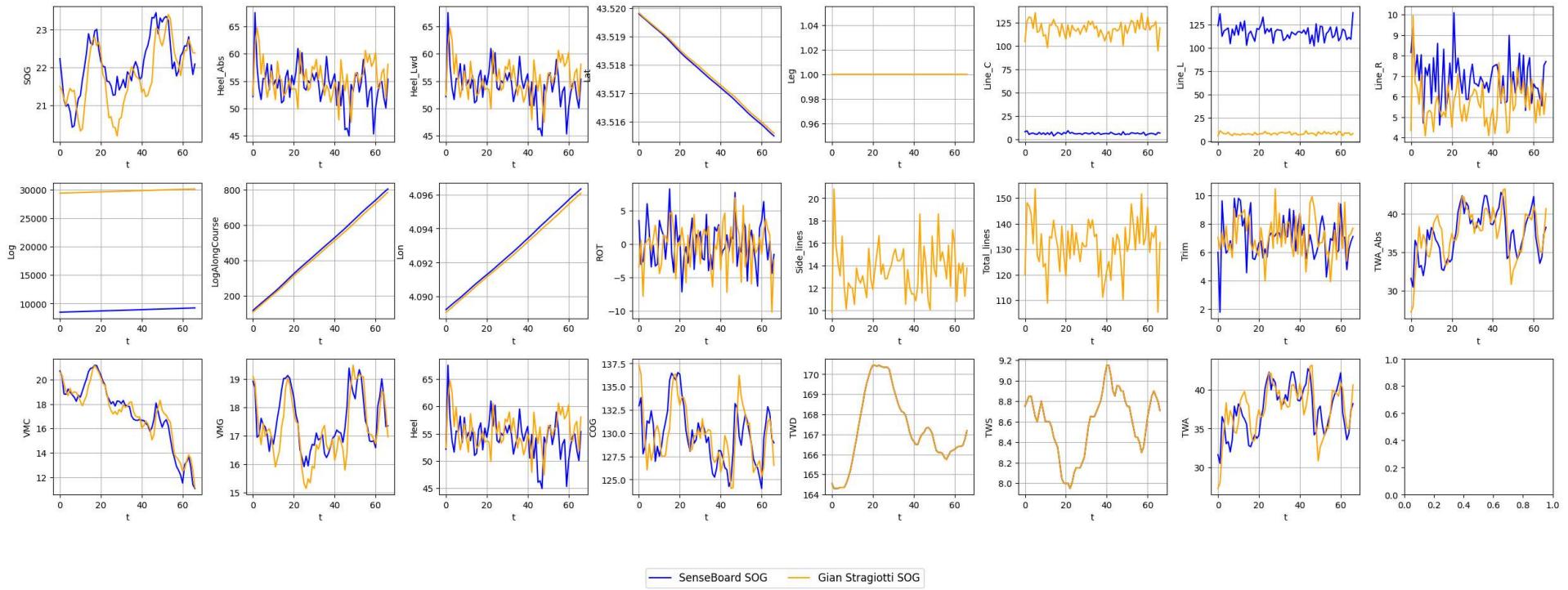
#### Distance Summary

	SenseBoard	Gian Stragiotti
<b>Distance [m]</b>	760.399316	750.221172
<b>Straight Line [m]</b>	757.657655	747.261983
<b>Distance as Percentage of Straight Line [%]</b>	100.361860	100.396004

## Gain of SenseBoard with respect to Gian Stragiotti

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-12.145715	4.349712	-7.011743
<b>Final Deficit</b>	-22.539800	4.086564	-15.431558
<b>Total Gain</b>	<b>-10.394085</b>	<b>-0.263148</b>	<b>-8.419815</b>
<b>Gain per Minute</b>	<b>-9.336004</b>	<b>-0.236361</b>	<b>-7.562708</b>

Interval 1: Upwind from 2025-06-07 12:35:57 to 2025-06-07 12:37:03 — SenseBoard vs Gian Stragiotti - Parameters over time



```
=====
Processing run: 07_06_Run6
=====
```

```
{'SOG_variation_boat1': 0.6888301361886973,
'SOG_variation_boat2': 0.7760294705295894,
'avg_TWA_boat1': 53.60065277777778,
'avg_TWA_boat2': 53.41760173913043,
'avg_SOG_boat1': 23.195833333333333,
'avg_SOG_boat2': 22.960416666666667,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 108.19,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 57.48900008201599,
'end_time': 1749300463.756,
'stability_score': 0.9581830675524912,
'start_time': 1749300406.267}
```

```
=====
Interval 1: Upwind from 2025-06-07 12:46:46 to 2025-06-07 12:47:43 – Gian Stragiotti vs SenseBoard
=====
```

## Run Statistics

	Avg (Gian Stragiotti)	Avg (SenseBoard)	Min (Gian Stragiotti)	Min (SenseBoard)	Max (Gian Stragiotti)	Max (SenseBoard)	Count (Gian Stragiotti)	Count (SenseBoard)	StdDev (Gian Stragiotti)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.683	8.683	7.705	7.706	9.496	9.495	576	575	0.4027	0.403			
<b>TWD</b>	185.3	185.3	181.4	181.4	190.3	190.3	576	575	2.968	2.968			
<b>SOG</b>	23.2	22.96	21.3	20.9	24.6	24.5	576	575	0.6888	0.7719	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	13.75	13.67	10.09	8.73	16.84	16.9	576	575	1.507	1.8	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	131.7	131.9	124.9	121.5	140.6	143.3	576	575	3.069	3.474			Gian Stragiotti
<b>TWA_Abs</b>	53.6	53.42	44.48	43.23	64.45	66.51	576	575	3.983	4.64			
<b>Heel_Lwd</b>	55.44	55.33	37.9	38	69.7	71.2	576	575	5.33	5.235	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	11.76	nan	3.3	nan	25.8	nan	576	nan	3.636	nan			
<b>Line_C</b>	117.2	6.702	86.9	2.5	157.6	14.1	576	575	12.7	1.77	Gian Stragiotti	SenseBoard	Tie
<b>Total_lines</b>	128.9	nan	93.1	nan	179.6	nan	576	nan	13.94	nan			

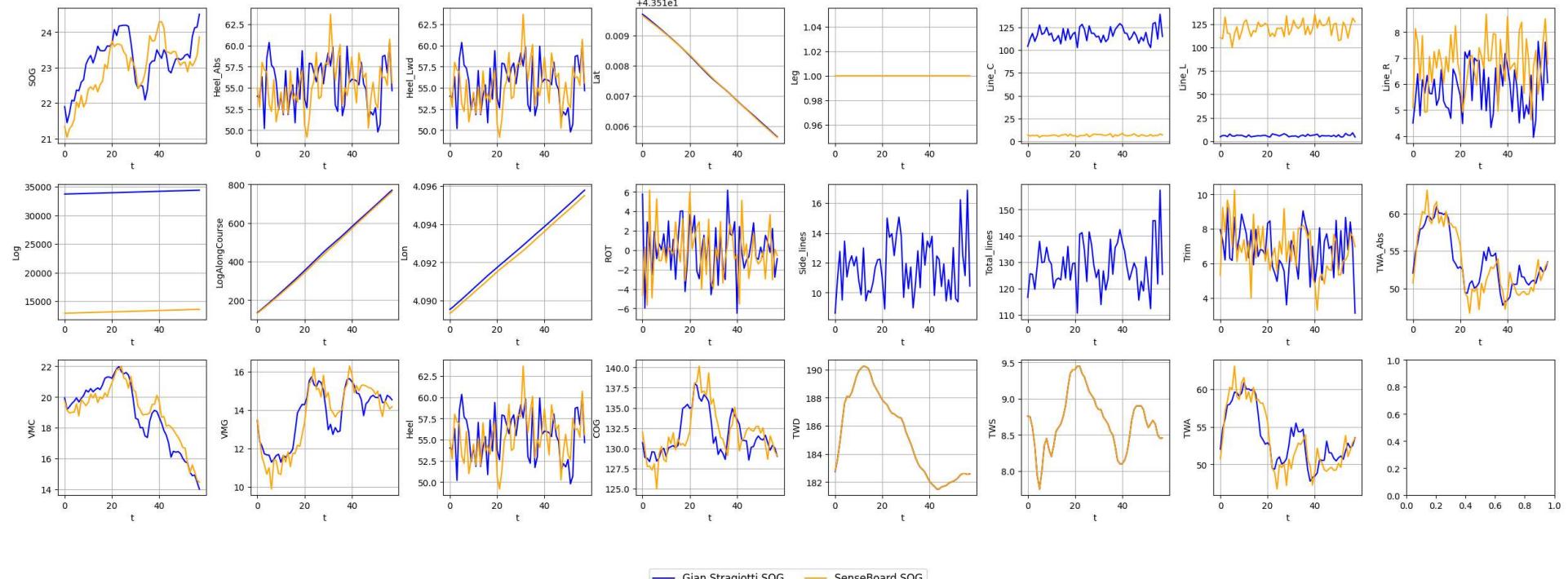
## Distance Summary

	Gian Stragiotti	SenseBoard
<b>Distance [m]</b>	687.894782	680.278016
<b>Straight Line [m]</b>	685.924733	677.896358
<b>Distance as Percentage of Straight Line [%]</b>	100.287211	100.351331

## Gain of Gian Stragiotti with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-7.589717	14.728960	7.351632
<b>Final Deficit</b>	-15.618874	16.651850	4.134837
<b>Total Gain</b>	<b>-8.029157</b>	<b>1.922890</b>	<b>-3.216796</b>
<b>Gain per Minute</b>	<b>-8.379854</b>	<b>2.006878</b>	<b>-3.357299</b>

Interval 1: Upwind from 2025-06-07 12:46:46 to 2025-06-07 12:47:43 — Gian Stragiotti vs SenseBoard - Parameters over time



```
=====
Processing run: 07_06_Run7
=====
```

```
{'SOG_variation_boat1': 1.0445256316356346,
'SOG_variation_boat2': 0.7177630459613766,
'avg_TWA_boat1': 48.16938733431517,
'avg_TWA_boat2': 47.540169616519165,
'avg_SOG_boat1': 21.933873343151696,
'avg_SOG_boat2': 21.935493372606775,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 67.80399990081787,
'end_time': 1749301276.356,
'stability_score': 0.9623063604159979,
'start_time': 1749301208.552}
```

```
=====
Interval 1: Upwind from 2025-06-07 13:00:08 to 2025-06-07 13:01:16 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.164	9.164	7.5	7.5	10	10	679	678	0.644	0.6443			
<b>TWD</b>	181.5	181.5	174.9	174.9	186.7	186.7	679	678	4.269	4.271			
<b>SOG</b>	21.93	21.94	18.6	20.2	24.2	23.6	679	678	1.045	0.7182	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	14.49	14.69	9.382	10.25	20.41	19.25	679	678	2.678	2.352	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	133.3	134	121.7	123.1	149.6	146.6	679	678	5.434	4.783			SenseBoard
<b>TWA_Abs</b>	48.17	47.54	26.8	28.83	64.51	61.16	679	678	8.667	7.913			
<b>Heel_Lwd</b>	54.89	54.34	36	37.9	79.1	68	679	678	6.077	5.317	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	122.3	14.26	78.9	6.5	170.3	25.4	679	678	12.86	3.336	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	6.705	114.4	3	83	13.5	144.1	679	676	1.917	10.67	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	129.5	128.6	85.1	92.6	175.7	168.1	679	678	13.62	12.21	Karl Maeder	SenseBoard	Tie

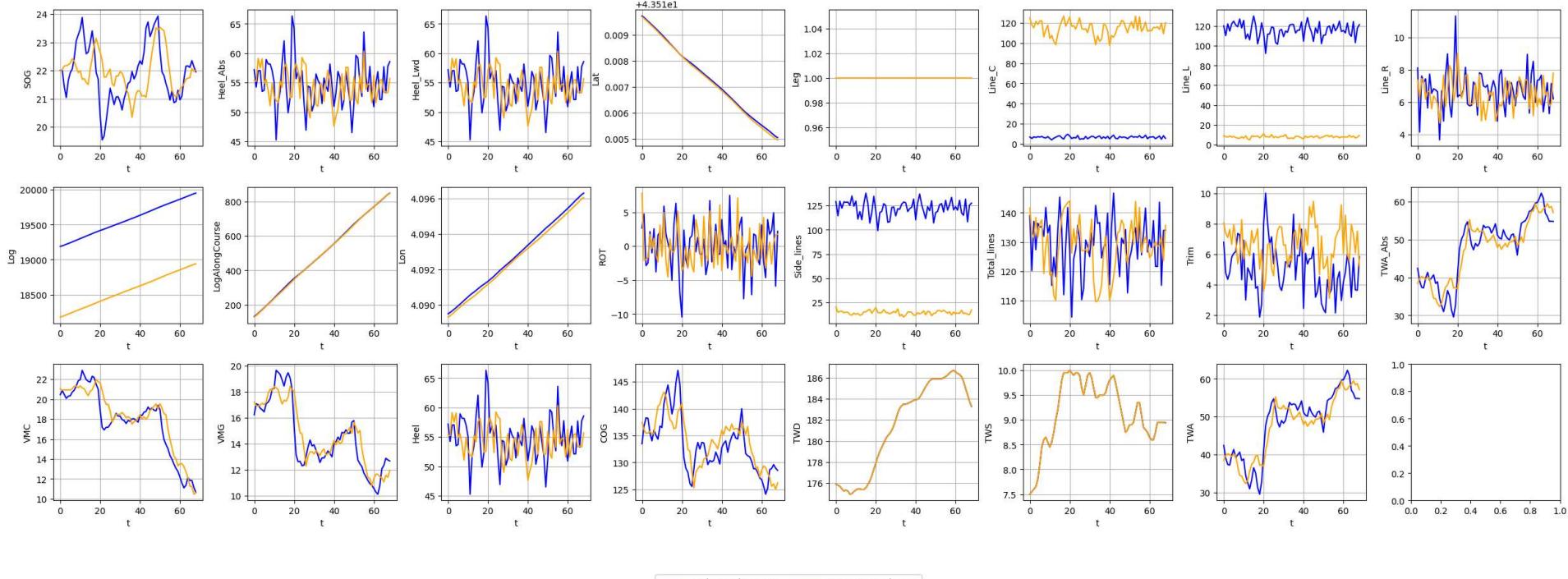
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	767.001752	766.075156
<b>Straight Line [m]</b>	762.111677	761.957156
<b>Distance as Percentage of Straight Line [%]</b>	100.641648	100.540450

## Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-7.964621	13.131171	4.474049
<b>Final Deficit</b>	-8.155162	20.963207	10.183363
<b>Total Gain</b>	-0.190541	7.832036	5.709313
<b>Gain per Minute</b>	-0.168611	6.930597	5.052191

Interval 1: Upwind from 2025-06-07 13:00:08 to 2025-06-07 13:01:16 — Karl Maeder vs SenseBoard - Parameters over time



```
=====
Processing run: 07_06_Run8
=====
```

```
{'SOG_variation_boat1': 0.5330671829582392,
'SOG_variation_boat2': 0.5809299769964135,
'avg_TWA_boat1': 41.97196784565916,
'avg_TWA_boat2': 41.890666129032255,
'avg_SOG_boat1': 22.524919614147908,
'avg_SOG_boat2': 22.74951768488746,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 62.0789999961853,
'end_time': 1749301801.155,
'stability_score': 0.9655864159321811,
'start_time': 1749301739.076}
```

```
=====
Interval 1: Upwind from 2025-06-07 13:08:59 to 2025-06-07 13:10:01 – SenseBoard vs Karl Maeder
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.53	9.53	7.804	7.805	10.7	10.7	620	622	0.7424	0.7422			
<b>TWD</b>	182.3	182.3	180.8	180.8	183.9	183.9	620	622	0.7432	0.7442			
<b>SOG</b>	22.75	22.52	21.4	21	24.3	23.5	620	622	0.5829	0.5331	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	16.91	16.72	14.68	14.62	19.5	18.46	620	622	0.8005	0.6988	SenseBoard	Karl Maeder	Tie
<b>COG</b>	140.4	140.3	131.8	131.4	148.2	147.2	620	622	2.79	2.816		SenseBoard	SenseBoard
<b>TWA_Abs</b>	41.89	41.97	33.77	34.66	49.72	50.31	620	622	2.821	2.875			
<b>Heel_Lwd</b>	53.69	55.8	34.3	42.4	70.7	71.9	620	622	5.444	5.214	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	12.34	125.5	4.7	82.7	23.1	167.3	620	622	3.254	13.51	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	115.4	6.526	81.8	2.5	150.3	12.6	618	622	11.81	1.802	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	128	131.9	88.1	86.3	168.4	173.2	620	622	12.95	14	Karl Maeder	SenseBoard	Tie

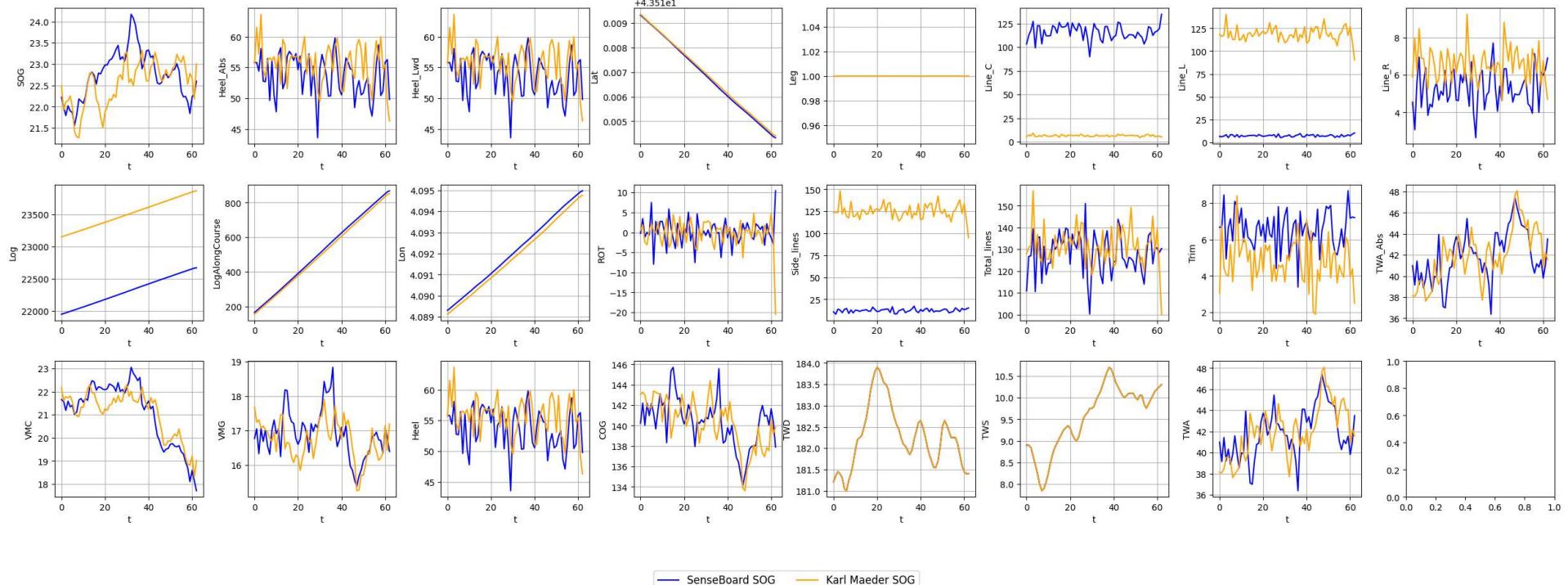
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	725.583603	721.473547
<b>Straight Line [m]</b>	723.745011	719.574316
<b>Distance as Percentage of Straight Line [%]</b>	100.254039	100.263938

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-13.235776	8.429906	-4.224270
<b>Final Deficit</b>	-17.412319	7.068373	-8.242488
<b>Total Gain</b>	<b>-4.176543</b>	<b>-1.361533</b>	<b>-4.018218</b>
<b>Gain per Minute</b>	<b>-4.048738</b>	<b>-1.319869</b>	<b>-3.895258</b>

Interval 1: Upwind from 2025-06-07 13:08:59 to 2025-06-07 13:10:01 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 07_06_Run9
=====
```

```
{'SOG_variation_boat1': 0.6218267494031011,
'SOG_variation_boat2': 0.4460205841525167,
'avg_TWA_boat1': 37.2340906200318,
'avg_TWA_boat2': 37.22738155802862,
'avg_SOG_boat1': 22.486645468998407,
'avg_SOG_boat2': 22.53608903020668,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.9750000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 62.80200004577637,
'end_time': 1749302292.46,
'stability_score': 0.9670551969484428,
'start_time': 1749302229.658}
```

```
=====
Interval 1: Upwind from 2025-06-07 13:17:09 to 2025-06-07 13:18:12 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	10.46	10.46	9.006	9.007	11.2	11.2	629	629	0.551	0.551			
<b>TWD</b>	181.4	181.4	178.9	178.9	183.9	183.9	629	629	1.344	1.344			
<b>SOG</b>	22.49	22.53	20.8	21.3	24.4	23.6	629	629	0.6218	0.4474	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	17.86	17.92	14.82	15.43	20.4	20.06	629	629	0.9519	0.9083	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	144.2	144.2	136.6	138.5	151.7	151.5	629	629	2.784	2.64			
<b>TWA_Abs</b>	37.23	37.23	28.3	28.63	46.2	45.37	629	629	3.679	3.3			
<b>Heel_Lwd</b>	55.59	54.04	39.2	38	71.7	67.6	629	629	5.5	4.984	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	124.4	12.99	81.5	4.6	159.5	27.2	629	629	14.1	3.918	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	6.319	118.4	2.9	83.5	12.7	156.1	629	627	1.858	11.86	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	130.6	131.2	85.6	95.8	170.6	179.5	629	629	14.84	13.17	SenseBoard	SenseBoard	SenseBoard

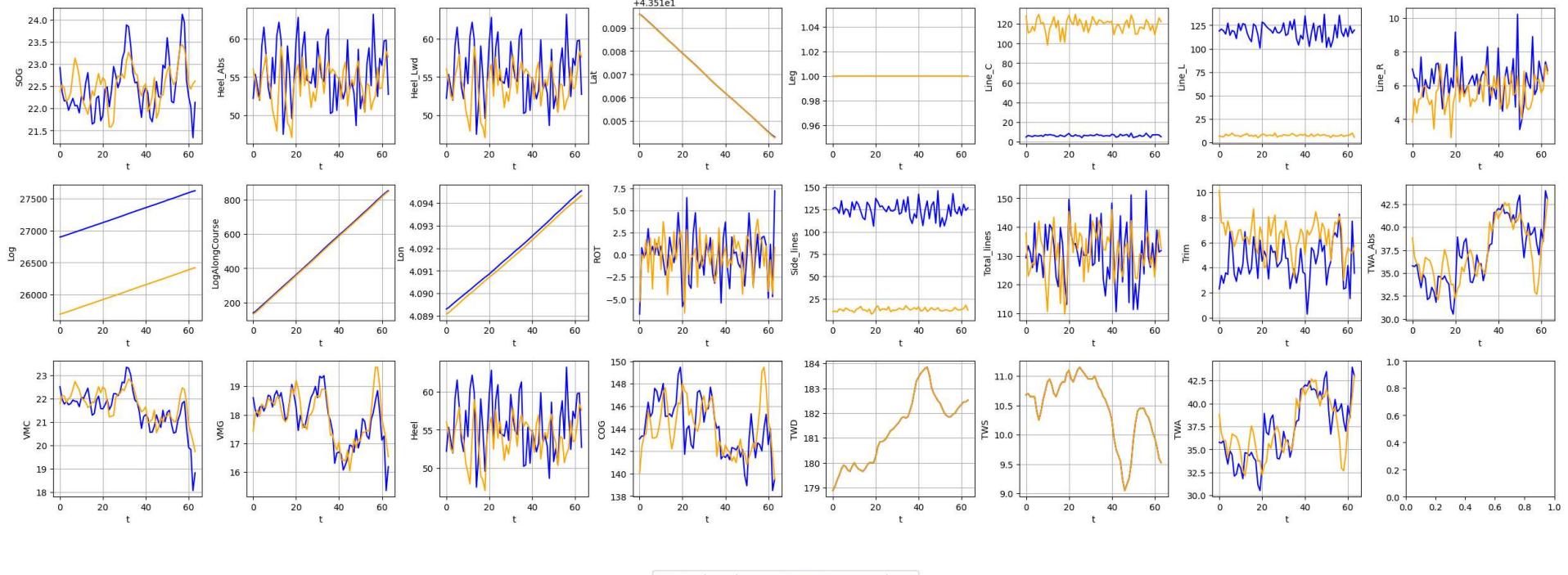
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	726.770398	729.140682
<b>Straight Line [m]</b>	724.998072	727.514281
<b>Distance as Percentage of Straight Line [%]</b>	100.244459	100.223556

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-9.739649	15.708549	1.750382
<b>Final Deficit</b>	-7.221112	16.024072	3.946482
<b>Total Gain</b>	2.518537	0.315523	2.196100
<b>Gain per Minute</b>	2.406169	0.301446	2.098118

Interval 1: Upwind from 2025-06-07 13:17:09 to 2025-06-07 13:18:12 — Karl Maeder vs SenseBoard - Parameters over time



Error: At least two CSV files are required.  
Error: No or insufficient intervals for run: 09\_06\_Run1

```
=====
Processing run: 09_06_Run10
=====
```

```
{'SOG_variation_boat1': 0.4172626962395209,
'SOG_variation_boat2': 0.4660087049211628,
'avg TWA boat1': 53.63761990212071,
'avg TWA boat2': 53.313418300653595,
'avg_SOG_boat1': 23.155464926590536,
'avg_SOG_boat2': 23.533442088091356,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.08999999999999,
'duration': 61.204999923706055,
'end_time': 1749475539.06,
'stability_score': 0.9685558287592516,
'start_time': 1749475477.855}
```

```
=====
Interval 1: Upwind from 2025-06-09 13:24:37 to 2025-06-09 13:25:39 – SenseBoard vs Karl Maeder
=====
```

## Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.043	7.042	6.5	6.5	7.8	7.8	612	613	0.3462	0.3467			
<b>TWD</b>	236.5	236.5	233	233	240.1	240.1	612	613	2.362	2.363			
<b>SOG</b>	23.53	23.16	22.5	22.1	24.4	24	612	613	0.4665	0.4173	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	14.03	13.7	10.9	9.926	17.25	16.57	612	613	1.247	1.201	SenseBoard	Karl Maeder	Tie
<b>COG</b>	183.2	182.9	172.5	173.5	192.5	193.1	612	613	3.571	3.589		SenseBoard	SenseBoard
<b>TWA_Abs</b>	53.31	53.64	44.05	43.9	62.1	64.67	612	613	3.689	3.707			
<b>Heel_Lwd</b>	54.6	55.43	33.4	37.6	69.1	71.5	612	613	5.223	5.225	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	124.3	14.31	56.4	5.9	164.1	26	612	613	12.64	3.445	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	6.056	117.7	0.9	80	12.1	154.6	611	613	1.752	12.52	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	130.5	132.4	57.6	91.5	176.2	176.8	612	613	13.39	13.79	Karl Maeder	SenseBoard	Tie

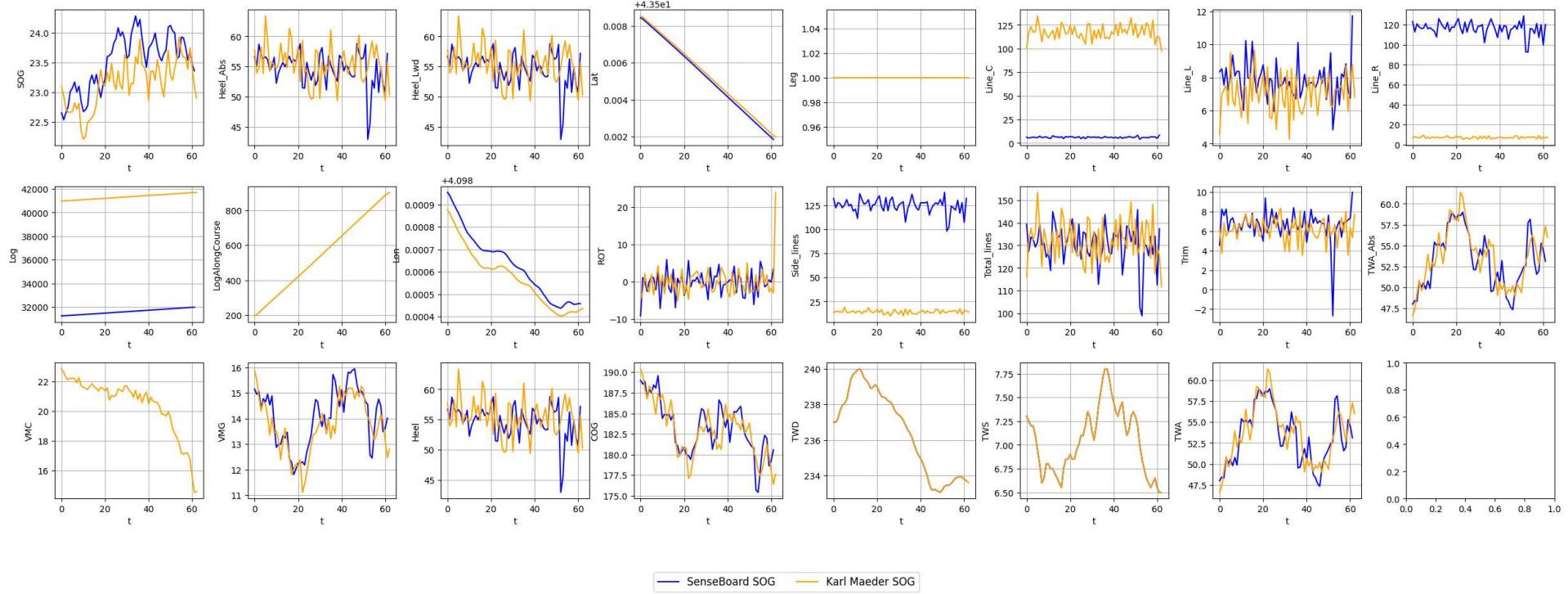
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	740.289207	729.599182
<b>Straight Line [m]</b>	738.876414	728.162169
<b>Distance as Percentage of Straight Line [%]</b>	100.191208	100.197348

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-11.181033	7.042555	-1.032445
<b>Final Deficit</b>	-21.932300	2.772855	-10.879599
<b>Total Gain</b>	<b>-10.751267</b>	<b>-4.269699</b>	<b>-9.847153</b>
<b>Gain per Minute</b>	<b>-10.557536</b>	<b>-4.192762</b>	<b>-9.669714</b>

Interval 1: Upwind from 2025-06-09 13:24:37 to 2025-06-09 13:25:39 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 09_06_Run11
=====
```

```
{'SOG_variation_boat1': 0.6936663946225158,
'SOG_variation_boat2': 0.6433790136832493,
'avg_TWA_boat1': 52.5763244047619,
'avg_TWA_boat2': 52.12876154992549,
'avg_SOG_boat1': 22.59032738095238,
'avg_SOG_boat2': 22.65357142857143,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.08999999999999,
'duration': 67.09000015258789,
'end_time': 1749476119.654,
'stability_score': 0.957127357613573,
'start_time': 1749476052.564}
```

```
=====
Interval 1: Upwind from 2025-06-09 13:34:12 to 2025-06-09 13:35:19 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.257	7.256	6.104	6.104	8	8	672	671	0.4089	0.4081			
<b>TWD</b>	232.4	232.4	230	230	234.8	234.8	672	671	1.056	1.052			
<b>SOG</b>	22.59	22.66	21.2	21.2	24.2	23.6	672	671	0.6937	0.6453	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	13.69	13.88	10.5	10.82	15.93	15.99	672	671	0.8706	0.82	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	179.8	180.3	168.8	170.4	189.3	191.5	672	671	3.709	3.809		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	52.58	52.13	45	42.04	62.3	61.4	672	671	3.125	3.013			
<b>Heel_Lwd</b>	55.52	54.61	31.9	36.9	74.2	70.5	672	671	5.827	5.271	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	14.03	125.4	5.1	82.3	25.5	161.4	672	671	3.535	11.09	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	116	6.57	73	1.2	163.5	12.1	672	666	13.4	1.666	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	130	132	82.5	83.5	182.6	162.1	672	671	15.1	11.54	SenseBoard	SenseBoard	SenseBoard

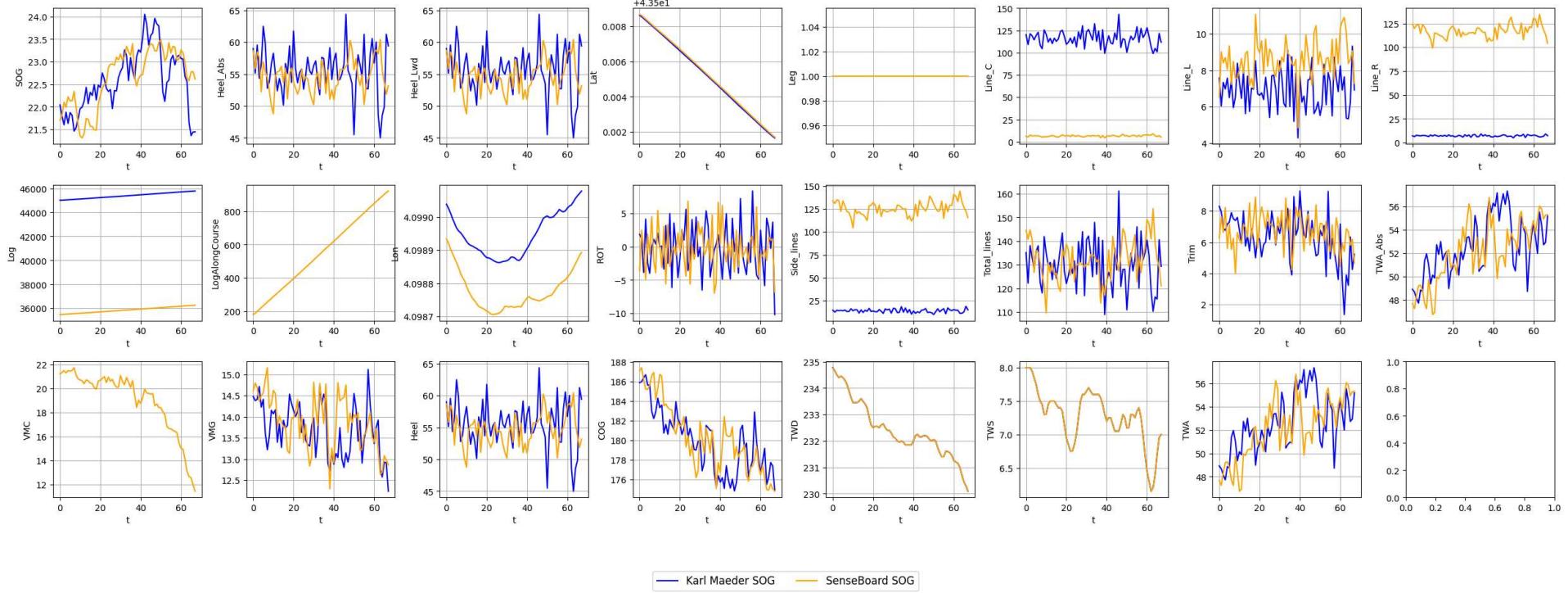
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	779.659914	780.751685
<b>Straight Line [m]</b>	778.003259	779.012757
<b>Distance as Percentage of Straight Line [%]</b>	100.212937	100.223222

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-6.113330	8.468087	3.009949
<b>Final Deficit</b>	-5.118573	14.881461	8.707735
<b>Total Gain</b>	0.994757	6.413374	5.697786
<b>Gain per Minute</b>	0.889632	5.735615	5.095650

Interval 1: Upwind from 2025-06-09 13:34:12 to 2025-06-09 13:35:19 — Karl Maeder vs SenseBoard - Parameters over time



Error: No or insufficient intervals for run: 09\_06\_Run2  
 Error: At least two CSV files are required.

```
=====
Processing run: 09_06_Run4
=====
```

```
{'SOG_variation_boat1': 0.32204164944144703,
'SOG_variation_boat2': 0.4157278383213897,
'avg TWA boat1': 49.306181240063594,
'avg TWA boat2': 49.00578980891719,
'avg_SOG_boat1': 23.74006359300477,
'avg_SOG_boat2': 24.408267090620033,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 106.97500000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 62.801000118255615,
'end_time': 1749472181.65,
'stability_score': 0.9756446070411259,
'start_time': 1749472118.849}
```

```
=====
Interval 1: Upwind from 2025-06-09 12:28:38 to 2025-06-09 12:29:41 – SenseBoard vs Karl Maeder
=====
```

## Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.869	7.871	6.111	6.108	9.7	9.7	628	629	1.15	1.149			
<b>TWD</b>	241.7	241.7	240.4	240.4	243.5	243.5	628	629	0.9002	0.8997			
<b>SOG</b>	24.41	23.74	23.3	22.9	25.4	24.6	628	629	0.4167	0.322	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	15.98	15.44	13.36	11.43	18.55	18.61	628	629	0.8759	1.237	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	192.7	192.4	184.2	179.7	203.6	203.3	628	629	3.366	3.938			
<b>TWA_Abs</b>	49.01	49.31	37.85	39.75	56.27	61.17	628	629	3.032	3.867			
<b>Heel_Lwd</b>	57.42	55.62	43.6	39.1	76.4	71.2	628	629	4.71	4.986	SenseBoard	SenseBoard	SenseBoard
<b>Side_lines</b>	127.5	14.49	85.9	6.5	157.2	27.3	628	629	10.59	3.527	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	6.443	122.3	1.7	92.7	11.6	155.1	626	629	1.721	12.06	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	133.9	136.9	92	104	166.6	174.1	628	629	11.05	13.83	Karl Maeder	SenseBoard	Tie

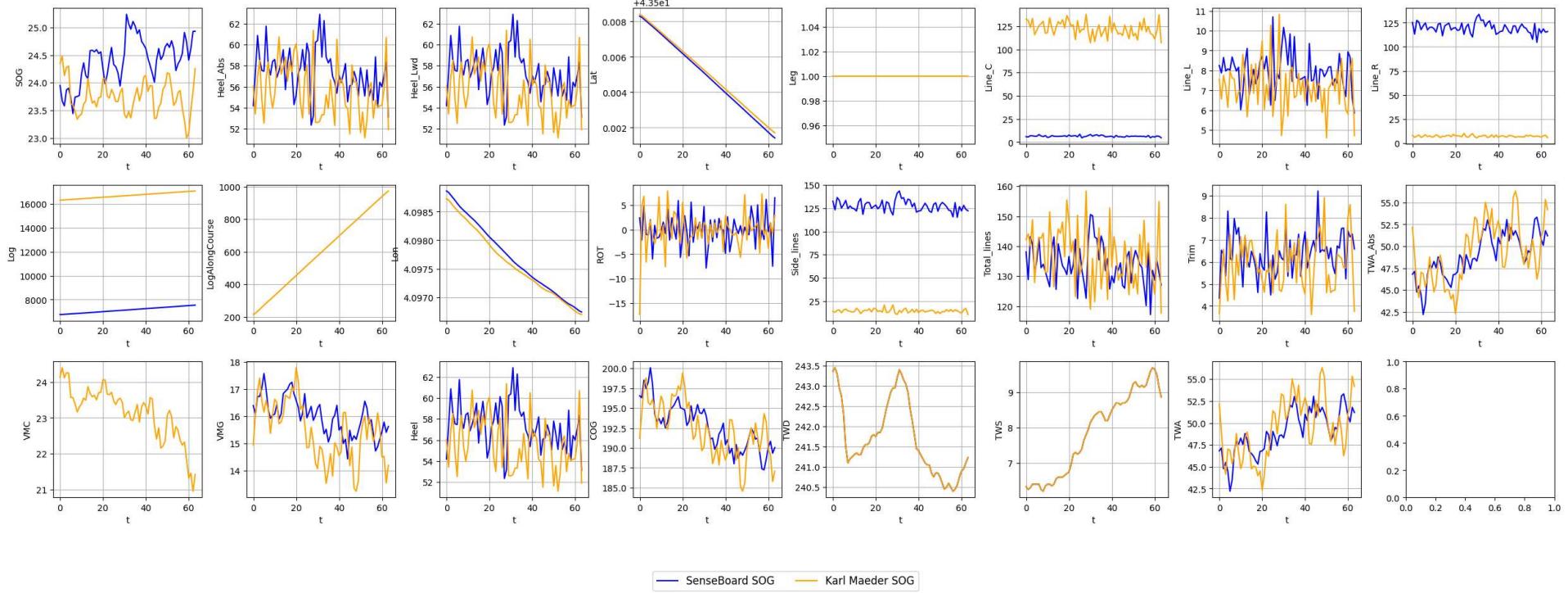
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	787.819286	767.900300
<b>Straight Line [m]</b>	786.484937	766.098882
<b>Distance as Percentage of Straight Line [%]</b>	100.169660	100.235142

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-9.019250	13.323392	4.139836
<b>Final Deficit</b>	-29.445168	10.318784	-11.526904
<b>Total Gain</b>	<b>-20.425918</b>	<b>-3.004609</b>	<b>-15.666740</b>
<b>Gain per Minute</b>	<b>-19.546956</b>	<b>-2.875315</b>	<b>-14.992574</b>

Interval 1: Upwind from 2025-06-09 12:28:38 to 2025-06-09 12:29:41 — SenseBoard vs Karl Maeder - Parameters over time



Error: No or insufficient intervals for run: 09\_06\_Run5

=====

Processing run: 09\_06\_Run6

=====

```
{'SOG_variation_boat1': 0.5131314014854907,
 'SOG_variation_boat2': 0.47743257900555647,
 'avg_TWA_boat1': 48.00279735682819,
 'avg_TWA_boat2': 47.65900294117647,
 'avg_SOG_boat1': 23.03303964757709,
 'avg_SOG_boat2': 23.575477239353894,
 'boat1_master_leeward': False,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 106.97500000000001,
 'boat2_master_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.08999999999999,
 'duration': 68.0,
 'end_time': 1749473220.452,
 'stability_score': 0.9744204774376893,
 'start_time': 1749473152.452}
```

=====

Interval 1: Upwind from 2025-06-09 12:45:52 to 2025-06-09 12:47:00 – SenseBoard vs Karl Maeder

=====

#### Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.562	7.561	6.504	6.504	8.4	8.4	680	681	0.6253	0.6257			
<b>TWD</b>	240.5	240.5	239.2	239.2	244.5	244.5	680	681	1.394	1.393			
<b>SOG</b>	23.58	23.03	22.6	21.7	24.8	26.5	680	681	0.4797	0.5131	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	15.84	15.39	12.91	11.71	18.13	18.77	680	681	0.9798	1.022	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	192.9	192.5	182.9	181.3	201.3	202.2	680	681	3.714	3.526		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	47.66	48	40.53	40.77	57.09	58.79	680	681	3.404	3.084			
<b>Heel_Lwd</b>	56.83	55.85	41.3	42.9	72.5	71.2	680	681	4.769	4.762	SenseBoard	Karl Maeder	Tie
<b>Side_lines</b>	123.8	14.83	93.5	6.5	144.5	25.5	680	681	9.65	3.377	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	4.271	124.1	0.5	90.3	8.9	157.7	676	681	1.607	11.75	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	127.6	139.1	94.2	101.5	152.6	178.7	680	681	9.997	12.77	Karl Maeder	SenseBoard	Tie

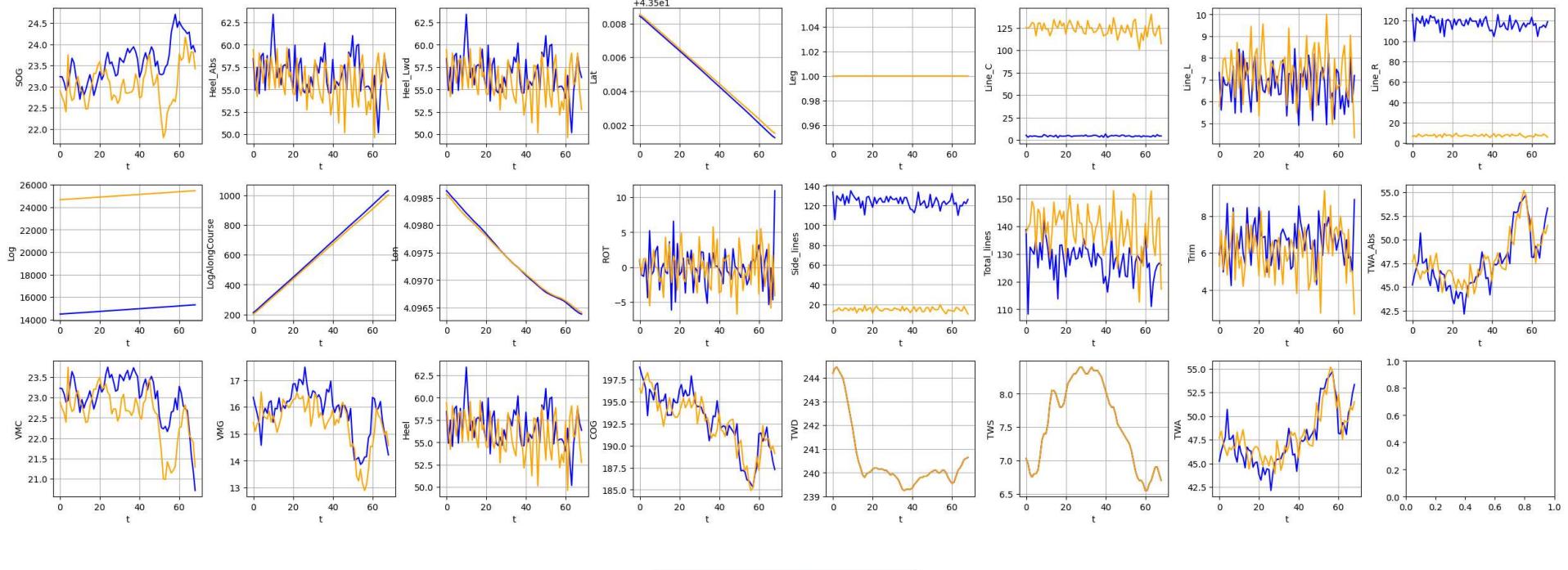
#### Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	824.671834	806.286547
<b>Straight Line [m]</b>	822.938608	804.762039
<b>Distance as Percentage of Straight Line [%]</b>	100.210614	100.189436

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-10.452774	7.784123	-1.287033
<b>Final Deficit</b>	-28.669785	3.907586	-16.422526
<b>Total Gain</b>	-18.217011	-3.876537	-15.135493
<b>Gain per Minute</b>	-16.095847	-3.425159	-13.373136

Interval 1: Upwind from 2025-06-09 12:45:52 to 2025-06-09 12:47:00 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 09_06_Run7
=====
```

```
{'SOG_variation_boat1': 0.5271773185574329,
'SOG_variation_boat2': 0.481809816843384,
'avg_TWA_boat1': 49.11989275362319,
'avg_TWA_boat2': 47.80012354651163,
'avg_SOG_boat1': 22.484492753623186,
'avg_SOG_boat2': 22.590289855072463,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 106.9750000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 68.87999987602234,
'end_time': 1749473713.441,
'stability_score': 0.9725206272449781,
'start_time': 1749473644.561}
```

```
=====
Interval 1: Upwind from 2025-06-09 12:54:04 to 2025-06-09 12:55:13 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.202	7.202	6.604	6.604	7.8	7.8	690	688	0.2762	0.2764			
<b>TWD</b>	244.2	244.2	242.7	242.7	245.6	245.6	690	688	0.8767	0.8758			
<b>SOG</b>	22.48	22.59	20.1	20.3	24.8	26	690	688	0.5272	0.5012	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	14.7	15.15	11.93	12.15	17.65	18.66	690	688	0.8061	0.9189	SenseBoard	Karl Maeder	Tie
<b>COG</b>	195.1	196.4	187.2	186.2	207.8	205.9	690	688	2.609	2.853		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	49.12	47.8	37.67	36.8	56.67	58.1	690	688	2.63	3.111			
<b>Heel_Lwd</b>	54.62	55.01	32.2	38.6	71.4	69.2	690	688	5.038	5.25	SenseBoard	Karl Maeder	Tie
<b>Side_lines</b>	13.92	119.5	3.6	77.7	25.6	149.7	690	688	3.511	11.54	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	117.5	4.57	70	0.6	158.3	9	690	686	12.86	1.536	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	131.6	124.1	75.7	78.8	180.9	156.8	690	688	14.39	12.25	Karl Maeder	SenseBoard	Tie

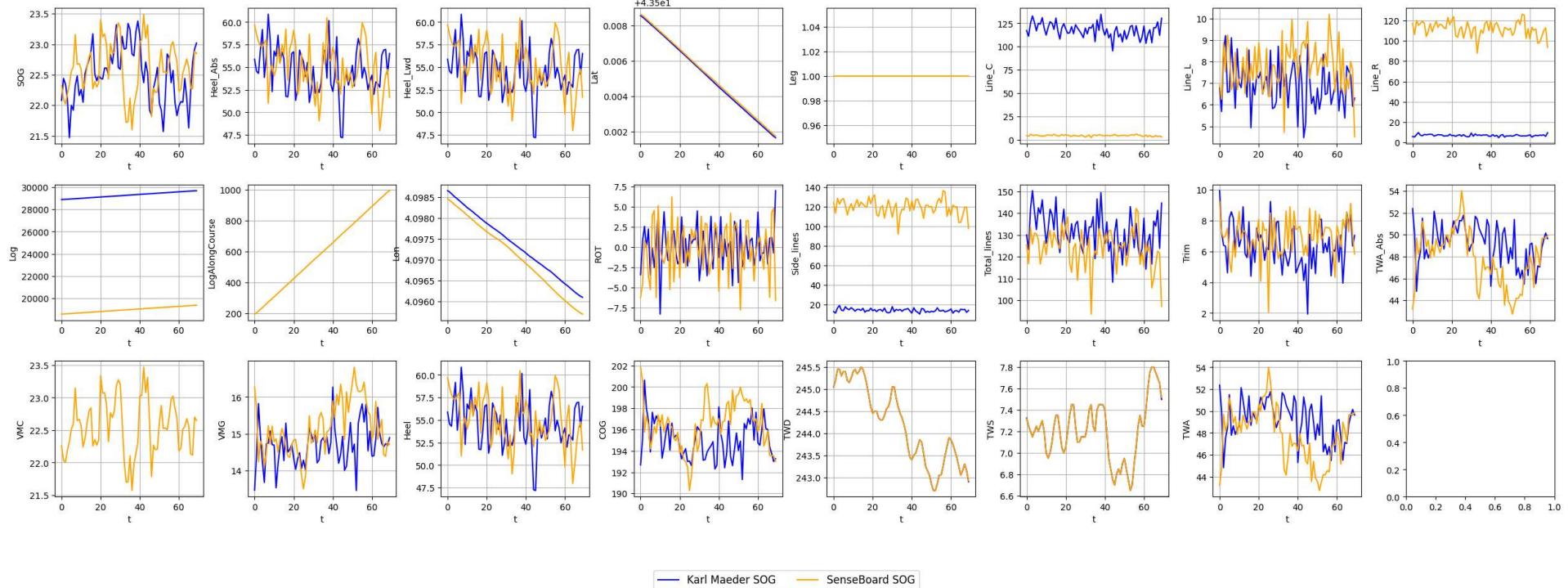
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	798.269700	799.432173
<b>Straight Line [m]</b>	797.425401	798.436988
<b>Distance as Percentage of Straight Line [%]</b>	100.105878	100.124642

## Gain of Karl Maeder with respect to SenseBoard

	<b>Forward</b>	<b>Lateral</b>	<b>VMG</b>
<b>Initial Deficit</b>	-3.684170	17.054576	10.483506
<b>Final Deficit</b>	-2.895893	34.192214	23.956915
<b>Total Gain</b>	0.788277	17.137638	13.473409
<b>Gain per Minute</b>	0.686653	14.928256	11.736419

Interval 1: Upwind from 2025-06-09 12:54:04 to 2025-06-09 12:55:13 — Karl Maeder vs SenseBoard - Parameters over time



```
=====
Processing run: 09_06_Run8
=====
```

```
{'SOG_variation_boat1': 0.8467710683012128,
'SOG_variation_boat2': 0.5286703541190796,
'avg_TWA_boat1': 56.368471728594514,
'avg_TWA_boat2': 56.132697411003235,
'avg_SOG_boat1': 22.98788368336026,
'avg_SOG_boat2': 23.934894991922455,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.08999999999999,
'duration': 61.789000034332275,
'end_time': 1749474388.641,
'stability_score': 0.9622994570570873,
'start_time': 1749474326.852}
```

```
=====
Interval 1: Upwind from 2025-06-09 13:05:26 to 2025-06-09 13:06:28 – SenseBoard vs Karl Maeder
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.902	7.903	5.908	5.907	9.2	9.2	618	619	0.9396	0.939			
<b>TWD</b>	246.7	246.7	244	244	249.9	249.9	618	619	1.586	1.587			
<b>SOG</b>	23.95	22.99	22.5	20.7	26.7	27.6	618	619	0.5475	0.8468	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	13.32	12.73	7.812	8.322	17.3	18.23	618	619	1.855	1.738	SenseBoard	Karl Maeder	Tie
<b>COG</b>	190.5	190.3	178.5	181.5	200.3	202.4	618	619	3.786	3.488		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	56.13	56.37	46	43.81	70.5	67.45	618	619	4.81	4.238			
<b>Heel_Lwd</b>	54.5	56.42	39.8	34.7	68.2	77.7	618	619	4.791	5.682	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	128.6	13.57	90.2	4.9	159	26.1	618	619	10.2	3.647	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	6.567	117.5	2.6	69.6	11.5	152.9	608	619	1.78	14.36	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	134.8	131.1	93.8	82	161.9	171.6	618	619	10.61	15.35	SenseBoard	SenseBoard	SenseBoard

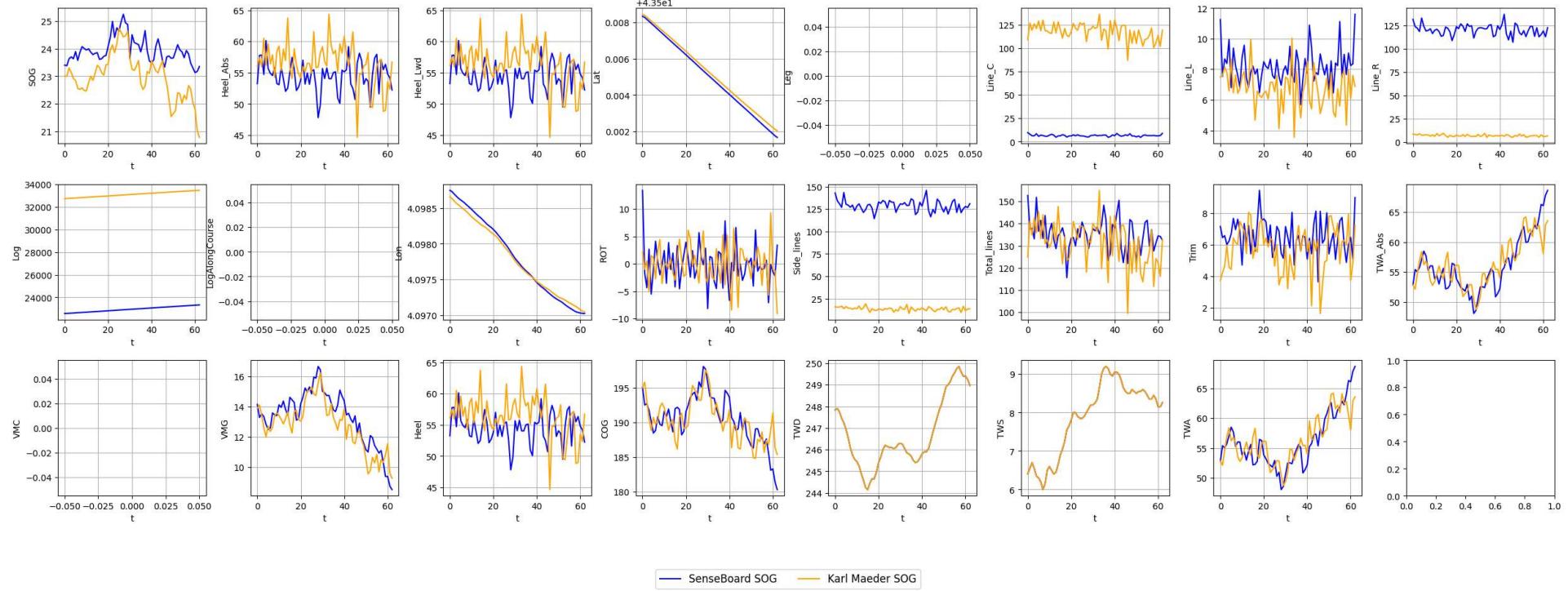
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	760.515637	731.126994
<b>Straight Line [m]</b>	758.852487	729.796132
<b>Distance as Percentage of Straight Line [%]</b>	100.219166	100.182361

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-10.944094	9.518713	1.804601
<b>Final Deficit</b>	-40.057125	5.863274	-17.454858
<b>Total Gain</b>	<b>-29.113031</b>	<b>-3.655439</b>	<b>-19.259459</b>
<b>Gain per Minute</b>	<b>-28.309054</b>	<b>-3.554492</b>	<b>-18.727595</b>

Interval 1: Upwind from 2025-06-09 13:05:26 to 2025-06-09 13:06:28 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 09_06_Run9
=====
```

```
{'SOG_variation_boat1': 0.5431600589134501,
'SOG_variation_boat2': 0.6840614956417097,
'avg_TWA_boat1': 41.60781976744186,
'avg_TWA_boat2': 41.441870451237264,
'avg_SOG_boat1': 22.307558139534883,
'avg_SOG_boat2': 22.687063953488373,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.9750000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.08999999999999,
'duration': 68.69199991226196,
'end_time': 1749475007.056,
'stability_score': 0.9646825750124971,
'start_time': 1749474938.364}
```

```
=====
Interval 1: Upwind from 2025-06-09 13:15:38 to 2025-06-09 13:16:47 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.92	7.919	6.906	6.905	8.497	8.496	688	687	0.4616	0.4616			
<b>TWD</b>	229.8	229.8	227.8	227.8	232.5	232.5	688	687	1.214	1.214			
<b>SOG</b>	22.31	22.69	20.8	20.9	24.2	25	688	687	0.5432	0.6853	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	16.62	16.98	12.43	13.15	19.91	19.87	688	687	1.09	0.9756	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	188.1	188.3	177.8	178.7	199	197.4	688	687	3.946	3.226			SenseBoard
<b>TWA_Abs</b>	41.61	41.44	31.36	32.14	54.3	53.28	688	687	4.336	3.322			
<b>Heel_Lwd</b>	56.06	55.5	39	38.8	74.8	71.2	688	687	5.117	5.093	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	13.76	128.4	5	70.7	26.1	159.1	688	687	3.601	11.44	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	118	6.344	82.6	1.8	155.2	11.5	688	687	12.5	1.706	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	131.5	134.3	88.6	76.9	170.9	167.7	688	687	14.35	11.82	SenseBoard	SenseBoard	SenseBoard

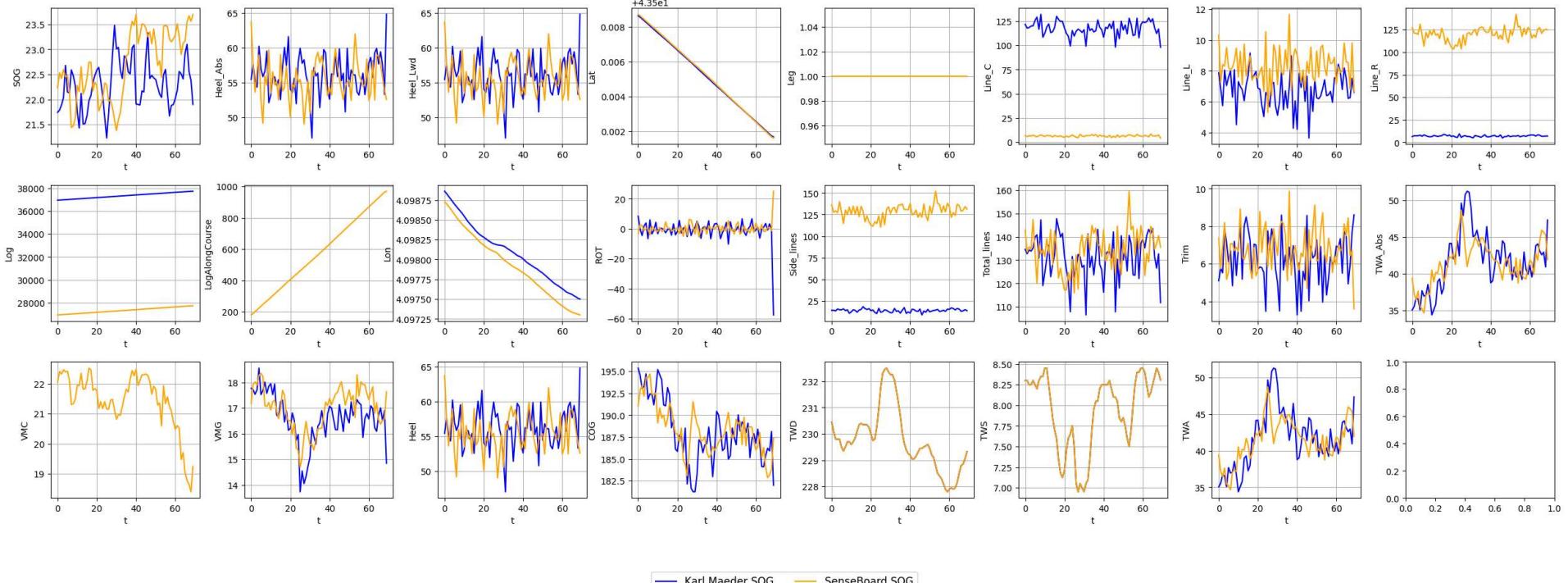
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	787.241036	802.900747
<b>Straight Line [m]</b>	785.367556	801.642668
<b>Distance as Percentage of Straight Line [%]</b>	100.238548	100.156938

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-6.880790	12.419923	3.102421
<b>Final Deficit</b>	9.420582	14.979547	16.990704
<b>Total Gain</b>	16.301373	2.559624	13.888283
<b>Gain per Minute</b>	14.238665	2.235740	12.130917

Interval 1: Upwind from 2025-06-09 13:15:38 to 2025-06-09 13:16:47 — Karl Maeder vs SenseBoard - Parameters over time



Error: At least two CSV files are required.

=====

Processing run: 10\_06\_Run1

=====

```
{'SOG_variation_boat1': 0.653690579620312,
'SOG_variation_boat2': 0.34356141868005996,
'avg TWA boat1': 52.140115803814716,
'avg TWA boat2': 52.74440927694407,
'avg_SOG_boat1': 21.688283378746593,
'avg_SOG_boat2': 21.445367847411443,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.195,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 73.30599999427795,
'end_time': 1749558582.059,
'stability_score': 0.9696679129386098,
'start_time': 1749558508.753}
```

=====

Interval 1: Upwind from 2025-06-10 12:28:28 to 2025-06-10 12:29:42 – SenseBoard vs Gian Stragiotti

=====

#### Run Statistics

	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	5.727	5.728	5.3	5.3	6.395	6.394	733	734	0.2397	0.24			
<b>TWD</b>	217.8	217.8	216.2	216.2	219.9	219.9	733	734	0.9808	0.9802			
<b>SOG</b>	21.45	21.69	20.6	18.5	22.3	23.5	733	734	0.3435	0.6537	Gian Stragiotti	SenseBoard	Tie
<b>VMG</b>	12.97	13.29	10.79	10.71	15.03	15.44	733	734	0.7321	0.6944	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	165.1	165.7	157.8	158.1	171.5	174.9	733	734	2.346	2.66		SenseBoard	SenseBoard
<b>TWA_Abs</b>	52.74	52.14	45.4	41.63	60.02	59.65	733	734	2.483	2.492			
<b>Heel_Lwd</b>	56.55	60.31	39.2	41.6	73.9	73.8	733	734	5.587	5.519	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	108.9	129.9	78.7	63.9	139.3	166.5	728	734	10.63	12.12	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	nan	17.01	nan	5.5	nan	28	nan	734	nan	3.627			
<b>Total_lines</b>	nan	146.9	nan	70.3	nan	192.2	nan	734	nan	14.17			

## Distance Summary

## SenseBoard Gian Stragiotti

<b>Distance [m]</b>	807.584715	820.362041
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<b>Straight Line [m]</b>	806.909014	819.512621
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<b>Distance as Percentage of Straight Line [%]</b>	100.083740	100.103649
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Gain of SenseBoard with respect to Gian Stragiotti

## Forward Lateral VMG

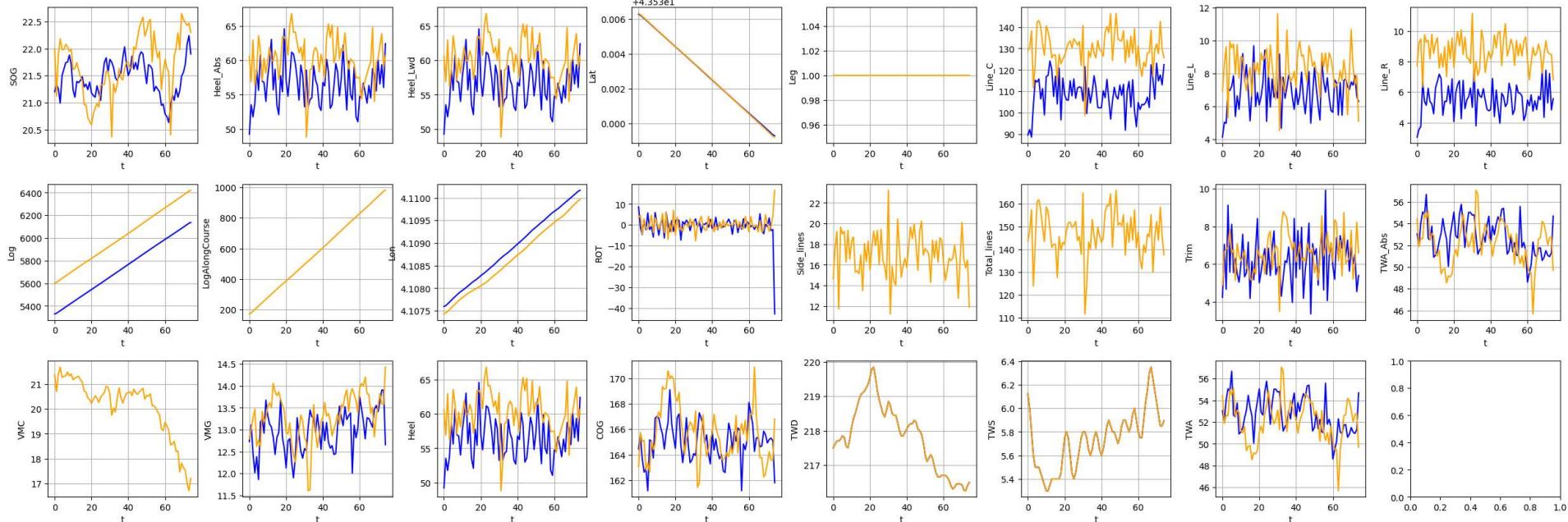
<b>Initial Deficit</b>	-8.420456	11.813367	4.305238
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<b>Final Deficit</b>	4.186944	18.459492	17.227346
----------------------	----------	-----------	-----------

<b>Total Gain</b>	12.607399	6.646125	12.922108
-------------------	-----------	----------	-----------

<b>Gain per Minute</b>	10.335346	5.448387	10.593339
------------------------	-----------	----------	-----------

Interval 1: Upwind from 2025-06-10 12:28:28 to 2025-06-10 12:29:42 — SenseBoard vs Gian Stragiotti - Parameters over time



— SenseBoard SOG — Gian Stragiotti SOG

Error: No or insufficient intervals for run: 10\_06\_Run10

=====

Processing run: 10\_06\_Run2

=====

```
{'SOG_variation_boat1': 0.7741700772777428,
 'SOG_variation_boat2': 0.6155188589560149,
 'avg TWA boat1': 52.30156270096463,
 'avg TWA boat2': 52.145245980707394,
 'avg SOG_boat1': 22.768167202572346,
 'avg SOG_boat2': 22.051125401929262,
 'boat1_master_leeward': True,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 106.195,
 'boat2_master_leeward': False,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 102.89,
 'duration': 62.1010000705719,
 'end_time': 1749559054.755,
 'stability_score': 0.9661567984326258,
 'start_time': 1749558992.654}
```

=====

Interval 1: Upwind from 2025-06-10 12:36:32 to 2025-06-10 12:37:34 – Gian Stragiotti vs SenseBoard

=====

#### Run Statistics

	Avg (Gian Stragiotti)	Avg (SenseBoard)	Min (Gian Stragiotti)	Min (SenseBoard)	Max (Gian Stragiotti)	Max (SenseBoard)	Count (Gian Stragiotti)	Count (SenseBoard)	StdDev (Gian Stragiotti)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	6.196	6.196	5.7	5.7	6.7	6.7	622	622	0.245	0.245			
<b>TWD</b>	212.6	212.6	211.2	211.2	214.9	214.9	622	622	1.212	1.212			
<b>SOG</b>	22.77	22.05	19.7	20.2	25.5	23.4	622	622	0.7742	0.6147	Gian Stragiotti	SenseBoard	Tie
<b>VMG</b>	13.77	13.44	4.652	5.367	17.1	16.4	622	622	2.341	2.038	Gian Stragiotti	SenseBoard	Tie
<b>COG</b>	160.3	160.4	132.8	135.3	171.9	171.6	622	622	7.776	6.902		SenseBoard	SenseBoard
<b>TWA_Abs</b>	52.3	52.15	39.82	42.39	78.83	76.33	622	622	7.395	6.401			
<b>Heel_Lwd</b>	57.19	56.23	32.5	35.3	73.3	73.2	622	622	6.381	5.921	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	15.37	nan	4.7	nan	25.4	nan	622	nan	3.806	nan			
<b>Line_C</b>	122.3	109.8	76	60.5	147.9	144.4	622	614	14.3	12.17	Gian Stragiotti	SenseBoard	Tie
<b>Total_lines</b>	137.7	nan	86.2	nan	165.4	nan	622	nan	16.22	nan			

## Distance Summary

## Gian Stragiotti SenseBoard

<b>Distance [m]</b>	727.587690	704.953620
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<b>Straight Line [m]</b>	720.666128	699.717916
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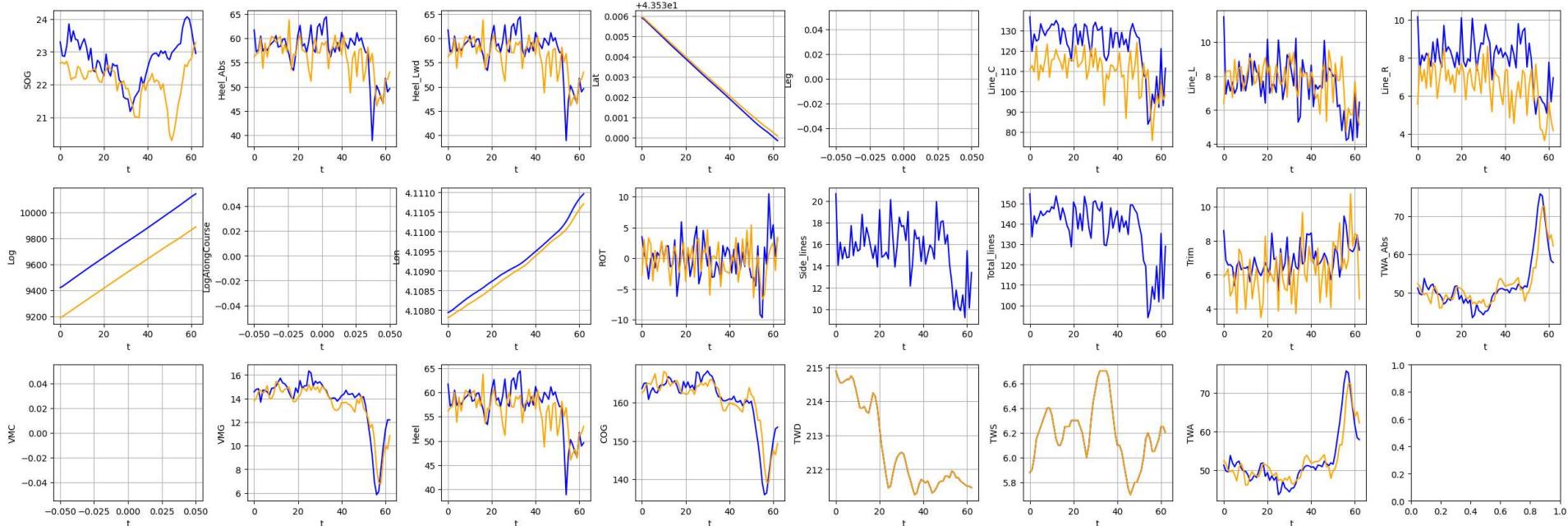
<b>Distance as Percentage of Straight Line [%]</b>	100.960439	100.748259
--	------------	------------

Gain of Gian Stragiotti with respect to SenseBoard

## Forward Lateral VMG

<b>Initial Deficit</b>	-9.386246	7.919598	0.517705
<b>Final Deficit</b>	-30.355216	10.508961	-10.269246
<b>Total Gain</b>	-20.968970	2.589363	-10.786951
<b>Gain per Minute</b>	-20.259549	2.501760	-10.422007

Interval 1: Upwind from 2025-06-10 12:36:32 to 2025-06-10 12:37:34 — Gian Stragiotti vs SenseBoard - Parameters over time



Gian Stragiotti SOG      SenseBoard SOG

```
=====
Processing run: 10_06_Run3
=====
```

```
{'SOG_variation_boat1': 0.7148200380354032,
'SOG_variation_boat2': 0.5779364885443138,
'avg_TWA_boat1': 49.995786435786435,
'avg_TWA_boat2': 50.876849710982654,
'avg_SOG_boat1': 22.099278499278498,
'avg_SOG_boat2': 22.045021645021645,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.195,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 69.20099997520447,
'end_time': 1749559513.154,
'stability_score': 0.9637924299775269,
'start_time': 1749559443.953}
```

```
=====
Interval 1: Upwind from 2025-06-10 12:44:03 to 2025-06-10 12:45:13 – SenseBoard vs Gian Stragiotti
=====
```

## Run Statistics

	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	6.147	6.147	5.4	5.4	6.9	6.9	692	693	0.4462	0.4459			
<b>TWD</b>	214.2	214.2	209.2	209.2	217.6	217.6	692	693	2.72	2.721			
<b>SOG</b>	22.05	22.1	20.3	20	23.3	25.1	692	693	0.5752	0.7148	Gian Stragiotti	SenseBoard	Tie
<b>VMG</b>	13.9	14.18	10.87	11	16.63	17.24	692	693	1.024	1.201	Gian Stragiotti	SenseBoard	Tie
<b>COG</b>	163.3	164.2	154	157.6	171.1	172.9	692	693	2.745	2.779		SenseBoard	SenseBoard
<b>TWA_Abs</b>	50.88	50	41.31	41.37	60.25	58.5	692	693	2.929	3.69			
<b>Heel_Lwd</b>	56.59	59.52	26.2	46.1	70.9	73.1	692	693	5.756	4.436	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	112.5	129.6	50.8	91.6	145.6	158.6	691	693	12.65	9.413	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	nan	16.61	nan	7.1	nan	27.7	nan	693	nan	3.477			
<b>Total_lines</b>	nan	146.2	nan	107	nan	177.7	nan	693	nan	11.11			

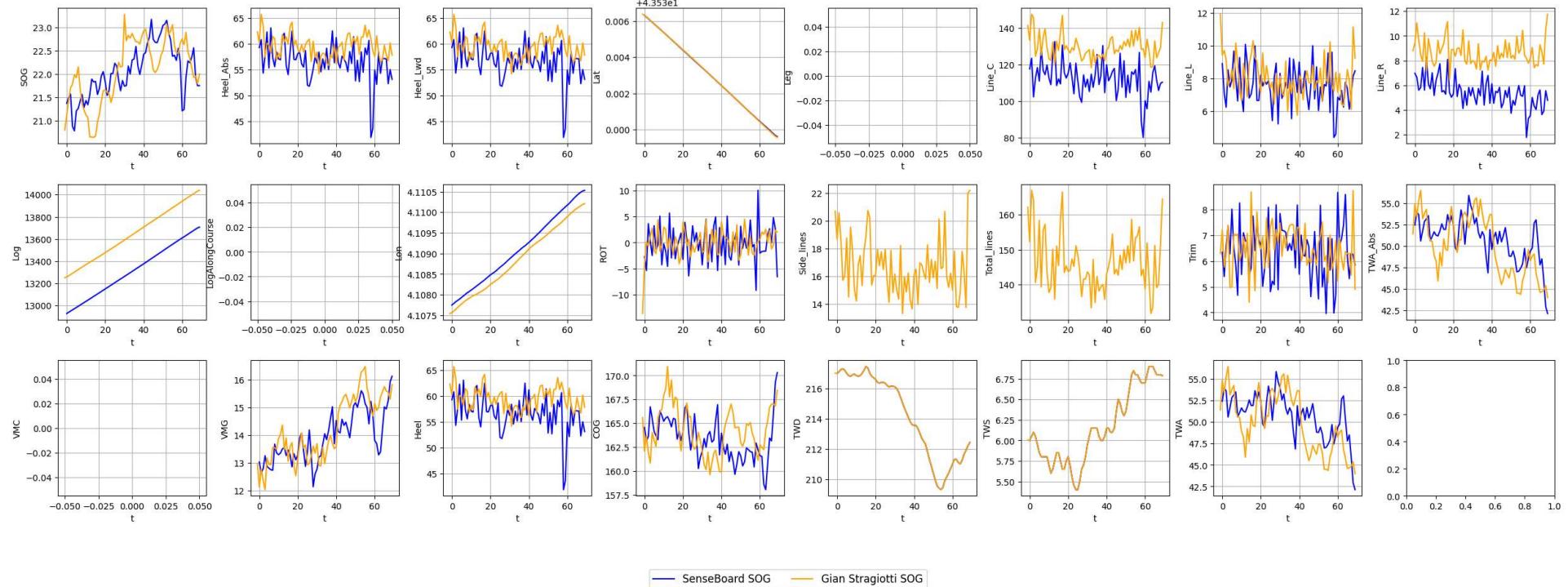
## Distance Summary

	SenseBoard	Gian Stragiotti
<b>Distance [m]</b>	783.638619	787.228994
<b>Straight Line [m]</b>	782.743025	786.299026
<b>Distance as Percentage of Straight Line [%]</b>	100.114417	100.118272

## Gain of SenseBoard with respect to Gian Stragiotti

	<b>Forward</b>	<b>Lateral</b>	<b>VMG</b>
<b>Initial Deficit</b>	-6.211823	14.128002	7.040871
<b>Final Deficit</b>	-2.707977	26.240558	18.648608
<b>Total Gain</b>	3.503846	12.112556	11.607736
<b>Gain per Minute</b>	3.042898	10.519089	10.080681

Interval 1: Upwind from 2025-06-10 12:44:03 to 2025-06-10 12:45:13 — SenseBoard vs Gian Stragiotti - Parameters over time



```
=====
Processing run: 10_06_Run4
=====
```

```
{'SOG_variation_boat1': 0.3954585811078938,
'SOG_variation_boat2': 0.4432496653425174,
'avg_TWA_boat1': -135.37653558052435,
'avg_TWA_boat2': -135.27015759849908,
'avg_SOG_boat1': 26.68239700374532,
'avg_SOG_boat2': 25.471910112359552,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.195,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 53.319000005722046,
'end_time': 1749560208.072,
'stability_score': 0.9735561698878598,
'start_time': 1749560154.753}
```

```
=====
Interval 1: Upwind from 2025-06-10 12:55:54 to 2025-06-10 12:56:48 – Gian Stragiotti vs SenseBoard
=====
```

## Run Statistics

	Avg (Gian Stragiotti)	Avg (SenseBoard)	Min (Gian Stragiotti)	Min (SenseBoard)	Max (Gian Stragiotti)	Max (SenseBoard)	Count (Gian Stragiotti)	Count (SenseBoard)	StdDev (Gian Stragiotti)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	6.356	6.357	5.605	5.605	6.895	6.896	534	533	0.2899	0.2899			
<b>TWD</b>	215.6	215.6	212.6	212.6	216.8	216.8	534	533	1.29	1.291			
<b>SOG</b>	26.68	25.47	25.9	24.5	27.4	26.5	534	533	0.3955	0.4448	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	18.97	18.06	16.3	14.55	20.58	20.48	534	533	0.732	1.001	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	351	350.9	344.4	341.8	355.5	359.5	534	533	1.922	2.738			Gian Stragiotti
<b>TWA_Abs</b>	135.4	135.3	127.8	125.1	140.3	144.1	534	533	2.35	3.247			
<b>Heel_Lwd</b>	57.23	50.22	38.6	34.7	68.3	67.4	534	533	4.239	5.593	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	17.65	nan	9	nan	26.3	nan	534	nan	2.76	nan			
<b>Line_C</b>	114	87.73	88.8	55.8	145.2	118.6	534	532	10.51	11.43	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	131.5	nan	102	nan	168	nan	534	nan	12	nan			

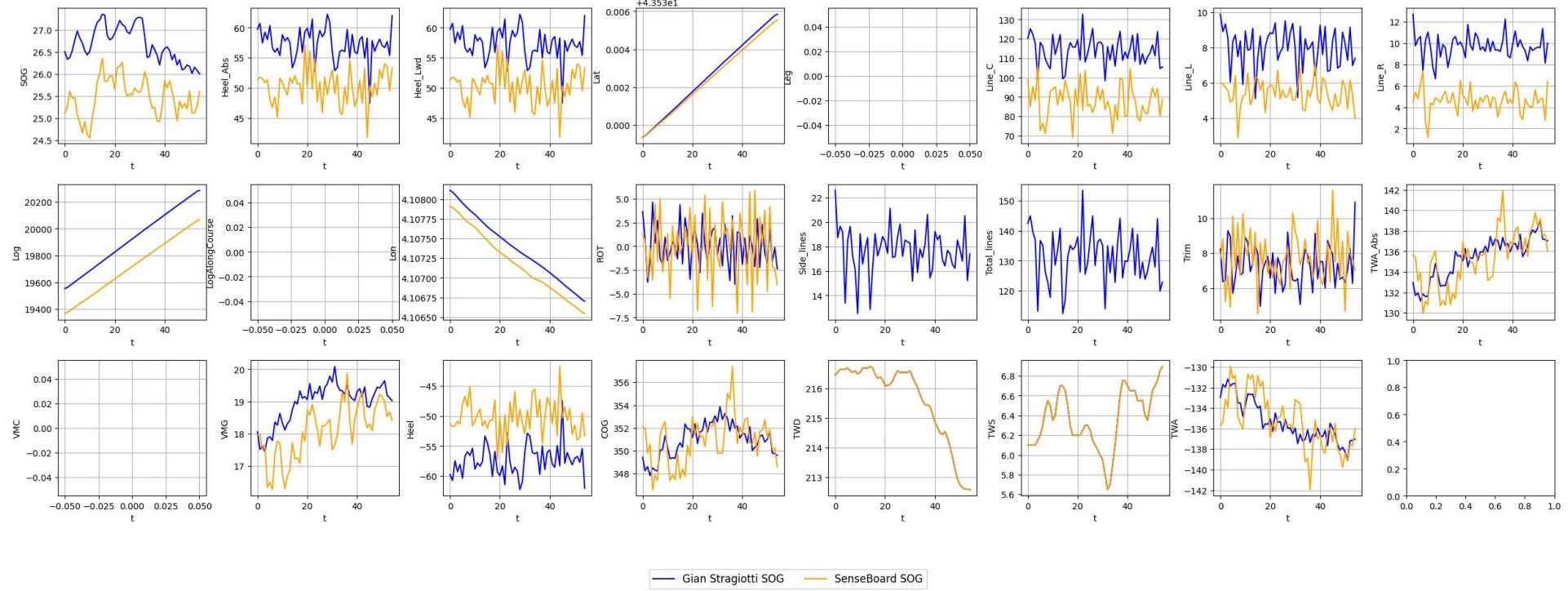
## Distance Summary

	Gian Stragiotti	SenseBoard
<b>Distance [m]</b>	731.997505	697.945743
<b>Straight Line [m]</b>	731.584904	697.149990
<b>Distance as Percentage of Straight Line [%]</b>	100.056398	100.114144

## Gain of Gian Stragiotti with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	2.356075	16.402933	9.845229
<b>Final Deficit</b>	-32.145307	17.950630	35.488384
<b>Total Gain</b>	-34.501382	1.547697	25.643155
<b>Gain per Minute</b>	-38.824489	1.741627	28.856305

Interval 1: Upwind from 2025-06-10 12:55:54 to 2025-06-10 12:56:48 — Gian Stragiotti vs SenseBoard - Parameters over time



```
=====
Processing run: 10_06_Run5
=====
```

```
{'SOG_variation_boat1': 0.5005847480056898,
'SOG_variation_boat2': 0.44646452469984443,
'avg_TWA_boat1': 53.364595432300156,
'avg_TWA_boat2': 53.518686274509804,
'avg_SOG_boat1': 22.025285481239806,
'avg_SOG_boat2': 22.11337683523654,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.195,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 61.199000120162964,
'end_time': 1749560597.354,
'stability_score': 0.9663098809174583,
'start_time': 1749560536.155}
```

```
=====
Interval 1: Upwind from 2025-06-10 13:02:16 to 2025-06-10 13:03:17 – SenseBoard vs Gian Stragiotti
=====
```

## Run Statistics

	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	5.993	5.994	5.5	5.5	6.8	6.8	612	613	0.374	0.3742			
<b>TWD</b>	213	213	211.1	211	214.2	214.2	612	613	0.7288	0.7327			
<b>SOG</b>	22.12	22.03	21.4	21.2	23.1	26	612	613	0.4465	0.5006	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	13.11	13.11	10.67	10.79	16.35	16.28	612	613	1.065	0.8652	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	159.5	159.7	151.7	152.7	169.3	167.7	612	613	3.353	2.634		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	53.52	53.36	42.2	44.7	61.7	61.23	612	613	3.847	3.13			
<b>Heel_Lwd</b>	56.53	61.18	42.4	44.4	71.9	76.2	612	613	5.091	4.615	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	113.3	131.7	82	95.5	143.3	154.3	610	613	10.3	9.576	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	nan	17.38	nan	7.5	nan	26.5	nan	613	nan	3.245			
<b>Total_lines</b>	nan	149	nan	107.2	nan	175.9	nan	613	nan	10.6			

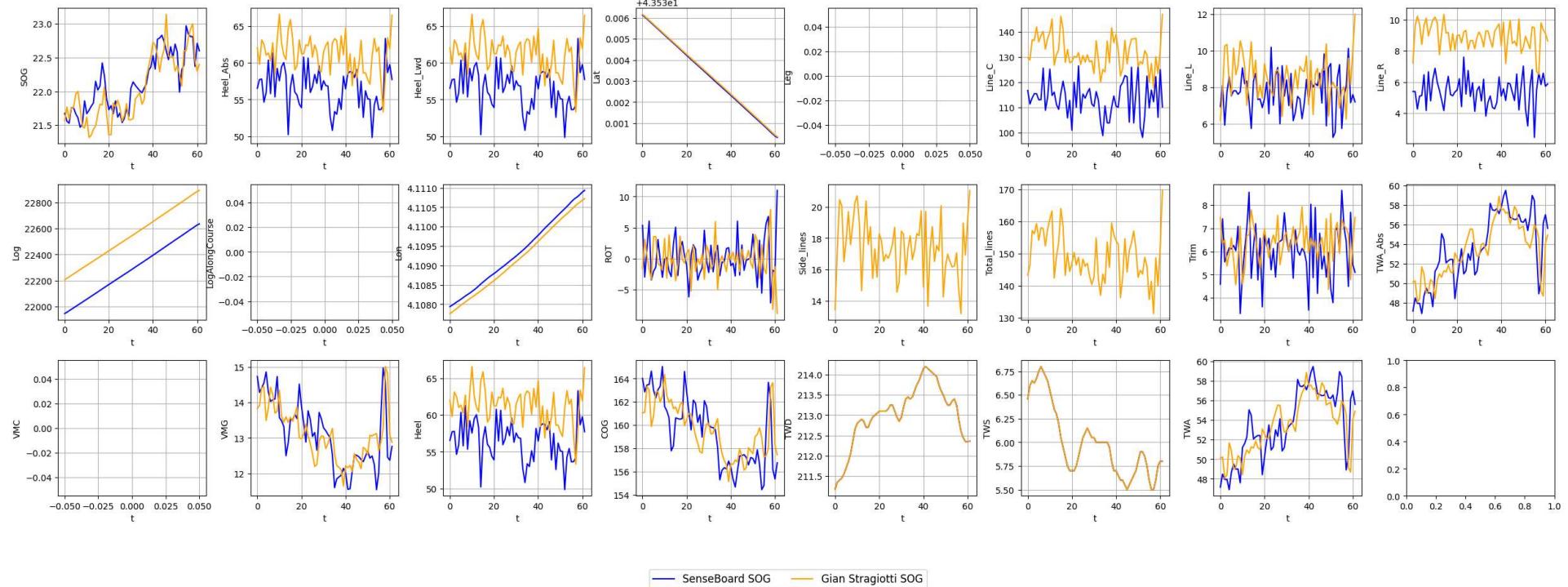
## Distance Summary

	SenseBoard	Gian Stragiotti
<b>Distance [m]</b>	695.008054	693.543742
<b>Straight Line [m]</b>	693.806617	692.798079
<b>Distance as Percentage of Straight Line [%]</b>	100.173166	100.107631

Gain of SenseBoard with respect to Gian Stragiotti

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-9.575329	12.324496	4.216481
<b>Final Deficit</b>	-10.583629	14.385736	5.274337
<b>Total Gain</b>	<b>-1.008300</b>	<b>2.061240</b>	<b>1.057856</b>
<b>Gain per Minute</b>	<b>-0.990423</b>	<b>2.024694</b>	<b>1.039100</b>

Interval 1: Upwind from 2025-06-10 13:02:16 to 2025-06-10 13:03:17 — SenseBoard vs Gian Stragiotti - Parameters over time



```
=====
Processing run: 10_06_Run6
=====
```

```
{'SOG_variation_boat1': 0.4758642081248499,
'SOG_variation_boat2': 0.45044067336619736,
'avg_TWA_boat1': 50.299209999999995,
'avg_TWA_boat2': 51.89534557595993,
'avg_SOG_boat1': 23.192,
'avg_SOG_boat2': 23.586166666666667,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 99.995,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 59.901000022888184,
'end_time': 1749561246.953,
'stability_score': 0.9621821189963834,
'start_time': 1749561187.052}
```

```
=====
Interval 1: Upwind from 2025-06-10 13:13:07 to 2025-06-10 13:14:06 – SenseBoard vs Karl Maeder
=====
```

## Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.205	7.204	6.305	6.305	7.9	7.9	599	600	0.4269	0.4266			
<b>TWD</b>	211.6	211.6	208.9	208.9	217.2	217.2	599	600	2.186	2.185			
<b>SOG</b>	<b>23.58</b>	<b>23.19</b>	22.5	21.4	24.6	25.4	599	600	<b>0.4503</b>	<b>0.4759</b>	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	<b>14.53</b>	<b>14.78</b>	11.2	11.67	16.66	17.69	599	600	<b>0.9165</b>	<b>1.04</b>	Karl Maeder	SenseBoard	Tie
<b>COG</b>	159.7	161.3	151.1	150.3	169.4	170.8	599	600	<b>3.89</b>	<b>4.06</b>		SenseBoard	SenseBoard
<b>TWA_Abs</b>	51.9	50.3	44.62	40.6	60.85	60.49	599	600	2.963	3.601			
<b>Heel_Lwd</b>	<b>57.36</b>	<b>59.91</b>	36.3	47.1	74.3	71.5	599	600	<b>5.346</b>	<b>4.493</b>	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	<b>16.41</b>	<b>14.44</b>	6.8	5.7	30.6	23.8	599	600	<b>3.914</b>	<b>3.17</b>	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	131.8	<b>114.9</b>	90.5	71	156.4	144	599	596	<b>11.32</b>	<b>11.3</b>	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	148.5	<b>129</b>	103.1	82.3	177.8	166.1	599	600	<b>12.88</b>	<b>12.89</b>	SenseBoard	SenseBoard	SenseBoard

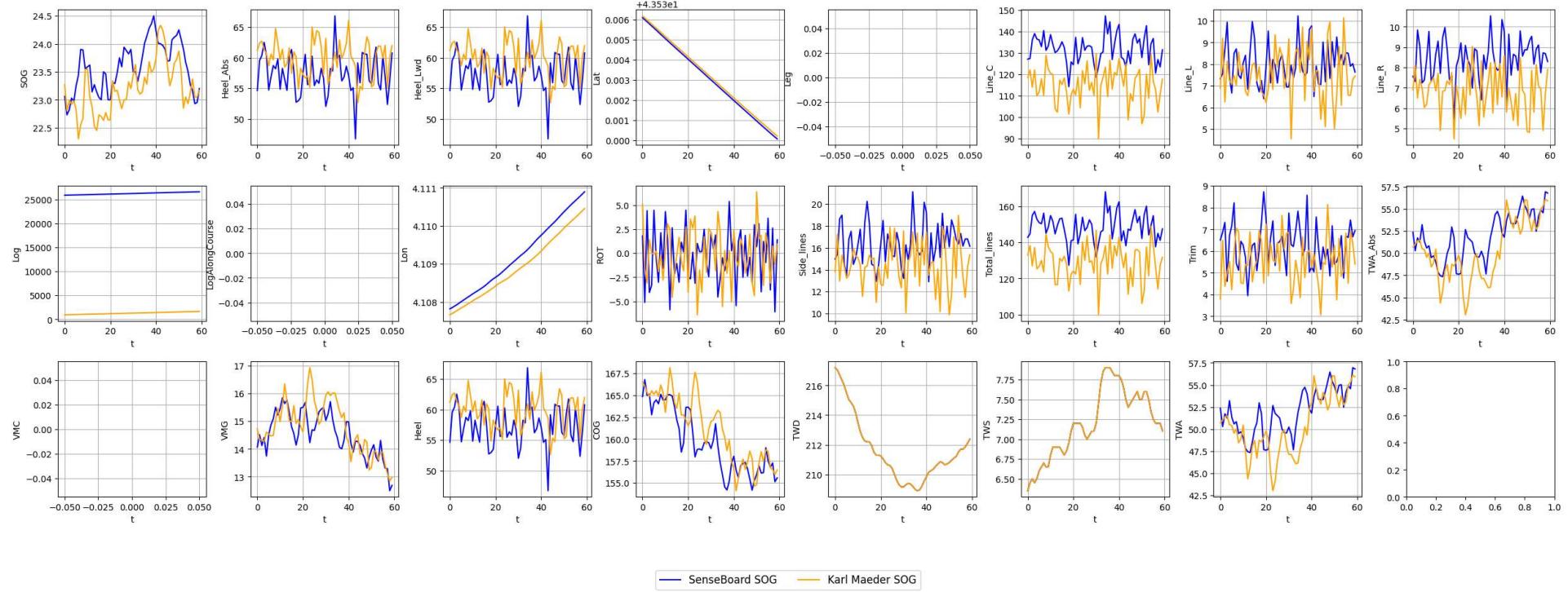
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	724.992238	712.743966
<b>Straight Line [m]</b>	723.322534	710.912367
<b>Distance as Percentage of Straight Line [%]</b>	100.230838	100.257641

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-13.483503	8.162728	-1.897499
<b>Final Deficit</b>	-26.137300	28.311512	6.148677
<b>Total Gain</b>	-12.653796	20.148783	8.046176
<b>Gain per Minute</b>	-12.695480	20.215156	8.072681

Interval 1: Upwind from 2025-06-10 13:13:07 to 2025-06-10 13:14:06 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 10_06_Run7
=====
```

```
{'SOG_variation_boat1': 0.4064534734530918,
'SOG_variation_boat2': 0.47771268469360634,
'avg_TWA_boat1': 52.990904270986746,
'avg_TWA_boat2': 52.44766371681416,
'avg_SOG_boat1': 22.583210603829162,
'avg_SOG_boat2': 22.736082474226805,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 99.995,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 67.7999995231628,
'end_time': 1749561812.555,
'stability_score': 0.9673413662267509,
'start_time': 1749561744.755}
```

```
=====
Interval 1: Upwind from 2025-06-10 13:22:24 to 2025-06-10 13:23:32 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.974	7.974	7.444	7.456	8.6	8.6	679	678	0.2441	0.2434			
<b>TWD</b>	209	209	207.7	207.7	210.7	210.7	679	678	0.872	0.8716			
<b>SOG</b>	22.58	22.73	21.7	20.9	23.6	23.6	679	678	0.4065	0.48	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	13.54	13.82	10.04	9.67	16.85	17.18	679	678	1.381	1.303	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	156	156.6	145.6	147.2	166.6	167.4	679	678	3.962	3.603		SenseBoard	SenseBoard
<b>TWA_Abs</b>	52.99	52.45	41.22	40.5	64.25	63	679	678	4.588	4.126			
<b>Heel_Lwd</b>	58.52	57.19	40	39.4	72.9	73.3	679	678	4.553	5.233	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	13.41	16.61	3.7	7.5	24.2	28.6	679	678	3.582	3.875	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	112.3	131	58.8	92.7	140.2	165.1	677	678	11.25	10.54	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	125.4	147.7	68.5	102.9	159.1	178.1	679	678	12.78	12.23	SenseBoard	SenseBoard	SenseBoard

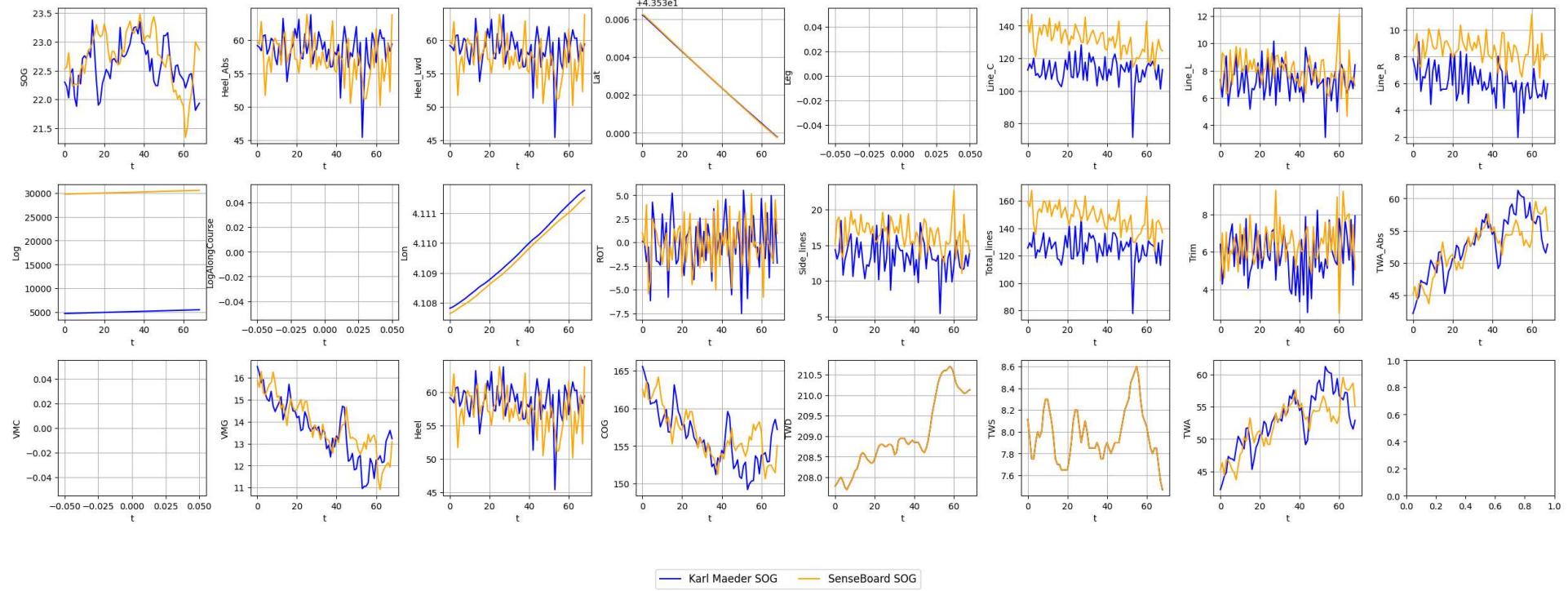
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	786.369543	791.474082
<b>Straight Line [m]</b>	784.517576	789.913156
<b>Distance as Percentage of Straight Line [%]</b>	100.236064	100.197607

## Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-10.933459	11.063896	2.253799
<b>Final Deficit</b>	-5.545291	18.950663	11.795065
<b>Total Gain</b>	5.388168	7.886767	9.541266
<b>Gain per Minute</b>	4.768290	6.979440	8.443598

Interval 1: Upwind from 2025-06-10 13:22:24 to 2025-06-10 13:23:32 — Karl Maeder vs SenseBoard - Parameters over time



```
=====
Processing run: 10_06_Run8
=====
```

```
{'SOG_variation_boat1': 0.5122266995322216,
'SOG_variation_boat2': 0.3443208505420073,
'avg_TWA_boat1': 46.96074481658692,
'avg_TWA_boat2': 46.02180990415335,
'avg_SOG_boat1': 22.51658692185008,
'avg_SOG_boat2': 23.037958532695374,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 99.995,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 62.598000049591064,
'end_time': 1749562427.954,
'stability_score': 0.9738003608627106,
'start_time': 1749562365.356}
```

```
=====
Interval 1: Upwind from 2025-06-10 13:32:45 to 2025-06-10 13:33:47 – SenseBoard vs Karl Maeder
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.585	8.586	7.8	7.8	9.3	9.3	626	627	0.3886	0.3888			
<b>TWD</b>	207.7	207.7	207	207	208.9	208.9	626	627	0.4904	0.4906			
<b>SOG</b>	23.04	22.52	22.1	20.3	23.7	24	626	627	0.3448	0.5122	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	15.98	15.35	13.58	13.25	18.34	17.41	626	627	0.7226	0.7297	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	161.7	160.7	156	153.2	171.1	168.9	626	627	2.389	2.366		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	46.02	46.96	37.14	39.1	52.09	54.01	626	627	2.336	2.412			
<b>Heel_Lwd</b>	56.28	60.24	44	40.7	71.1	75.5	626	627	4.737	4.56	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	15.86	13.79	7.6	4	28.4	24.8	626	627	3.938	3.38	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	129.4	116.2	95.8	70	159.5	144.4	626	623	11	11.84	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	145.4	129.8	106.7	76.3	181.7	166.2	626	627	12.73	13.65	SenseBoard	SenseBoard	SenseBoard

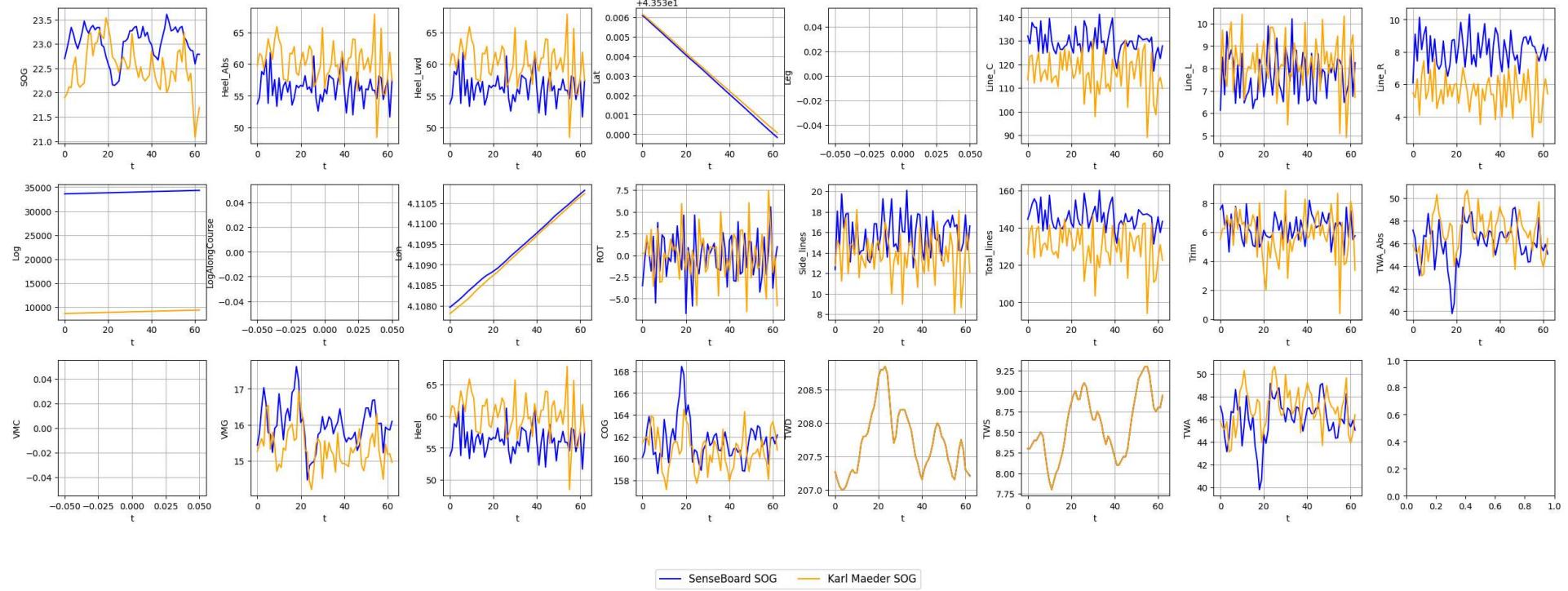
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	740.846275	725.101527
<b>Straight Line [m]</b>	740.202673	724.487057
<b>Distance as Percentage of Straight Line [%]</b>	100.086949	100.084814

## Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-10.746829	9.227551	-0.822131
<b>Final Deficit</b>	-26.597828	-2.505528	-20.271965
<b>Total Gain</b>	<b>-15.850999</b>	<b>-11.733079</b>	<b>-19.449834</b>
<b>Gain per Minute</b>	<b>-15.216959</b>	<b>-11.263756</b>	<b>-18.671841</b>

Interval 1: Upwind from 2025-06-10 13:32:45 to 2025-06-10 13:33:47 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 10_06_Run9
=====
```

```
{'SOG_variation_boat1': 0.5458190734121626,
'SOG_variation_boat2': 0.5352480320516277,
'avg_TWA_boat1': 48.43236500754148,
'avg_TWA_boat2': 48.93901812688822,
'avg_SOG_boat1': 22.90346907993967,
'avg_SOG_boat2': 23.240422322775263,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 99.995,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 66.19700002670288,
'end_time': 1749562847.457,
'stability_score': 0.9665584620353262,
'start_time': 1749562781.26}
```

```
=====
Interval 1: Upwind from 2025-06-10 13:39:41 to 2025-06-10 13:40:47 – Karl Maeder vs SenseBoard
=====
```

## Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.045	9.047	7.452	7.471	10	10	663	662	0.6887	0.6864			
<b>TWD</b>	210.7	210.7	209.6	209.6	211.7	211.7	663	662	0.4885	0.4878			
<b>SOG</b>	22.9	23.24	21.6	21.9	24.3	24.3	663	662	0.5458	0.5368	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	15.17	15.24	12.67	12.43	17.82	17.31	663	662	0.9745	0.7593	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	162.2	161.7	153.9	155.9	171.5	171.3	663	662	3.202	2.657			SenseBoard
<b>TWA_Abs</b>	48.43	48.94	38.4	40.1	56.9	55.42	663	662	3.273	2.651			
<b>Heel_Lwd</b>	59.3	56.7	44.8	38.1	74.4	70.9	663	662	4.967	4.979	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	11.37	15.78	3.2	7.7	24	27.1	663	662	3.7	3.74	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	113.4	130.2	68.5	89	151.1	160.1	661	662	14.28	12.08	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	124.8	145.9	76.6	101.6	174.5	177.1	663	662	15.74	13.3	SenseBoard	SenseBoard	SenseBoard

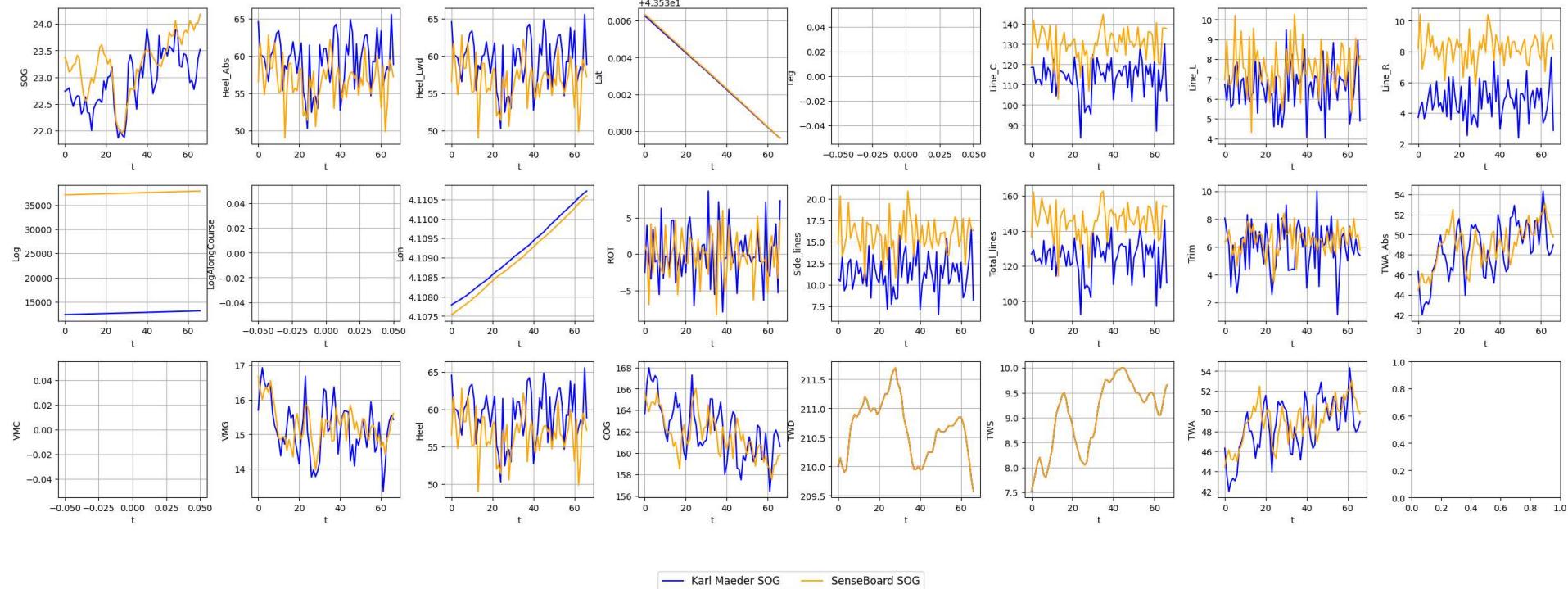
## Distance Summary

	Karl Maeder	SenseBoard
<b>Distance [m]</b>	779.433402	790.240518
<b>Straight Line [m]</b>	778.225191	789.390802
<b>Distance as Percentage of Straight Line [%]</b>	100.155252	100.107642

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-14.876057	16.248072	2.286146
<b>Final Deficit</b>	-3.735786	9.429465	4.576203
<b>Total Gain</b>	11.140272	-6.818606	2.290058
<b>Gain per Minute</b>	10.097380	-6.180286	2.075675

Interval 1: Upwind from 2025-06-10 13:39:41 to 2025-06-10 13:40:47 — Karl Maeder vs SenseBoard - Parameters over time



Error: At least two CSV files are required.

## Only Downwind:

```
In [3]: # Scan de tous les dossiers de date
for date_folder in sorted(os.listdir(base_dir)):
    date_path = os.path.join(base_dir, date_folder)

    # Scan de tous les runs dans chaque dossier de date
    for run_folder in sorted(os.listdir(date_path)):
        run_path = os.path.join(date_path, run_folder)
        try:
            process_all_run(run_path, summary_path, tot=False, onlyUpwind=False, onlyDownwind=True)
        except ValueError as e:
            print(f"Error: {e}")
```

```
=====
Processing run: 06_06_Run1
=====
```

```
-----
Interval 2: Downwind
-----
```

```
{'SOG_variation_boat1': 0.9516972397395702,
'SOG_variation_boat2': 1.0361443403525072,
'avg TWA boat1': -127.84945833333335,
'avg TWA boat2': -123.79282664526484,
'avg_SOG_boat1': 26.308173076923076,
'avg_SOG_boat2': 25.258974358974363,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.77,
'boat2_master_leeward': True,
'boat2_name': 'Karl Maeder',
'boat2_total_weight': 100.97500000000001,
'duration': 62.29200005531311,
'end_time': 1749217961.048,
'stability_score': 0.9568326026425789,
'start_time': 1749217898.756}
```

Processing: Interval 2: Downwind from 2025-06-06 13:51:38 to 2025-06-06 13:52:41 – Karl Maeder vs Gian Stragiotti

```
=====
Interval 2: Downwind from 2025-06-06 13:51:38 to 2025-06-06 13:52:41 – Karl Maeder vs Gian Stragiotti
=====
```

	Run Statistics												
	Avg (Karl Maeder)	Avg (Gian Stragiotti)	Min (Karl Maeder)	Min (Gian Stragiotti)	Max (Karl Maeder)	Max (Gian Stragiotti)	Count (Karl Maeder)	Count (Gian Stragiotti)	StdDev (Karl Maeder)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.553	7.552	6.8	6.8	8.624	8.624	623	624	0.4699	0.4701			
<b>TWD</b>	188.6	188.6	185.4	185.4	195.3	195.3	623	624	2.936	2.942			
<b>SOG</b>	25.26	26.31	22.6	24.2	27.4	28.3	623	624	1.039	0.9517	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	14.02	16.05	8.383	11.48	19.98	20.2	623	624	2.489	1.967	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	312.4	316.5	297	301.4	323.7	327.8	623	624	5.206	5.294	Karl Maeder	Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	123.8	127.8	110.6	113.9	137.3	139.2	623	624	5.846	5.48			
<b>Heel_Lwd</b>	49.8	48.99	28.3	17.1	72	67.3	623	624	7.787	6.69	Karl Maeder	Gian Stragiotti	Tie
<b>Side_lines</b>	13.01	11.37	3.7	3.1	25.3	22.1	623	624	3.457	3.108	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	90.84	93.2	54.2	55.6	131.5	129.1	623	621	13.85	11.76	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	104	104.5	59.7	61.9	153.5	151.1	623	624	15.9	12.79	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti

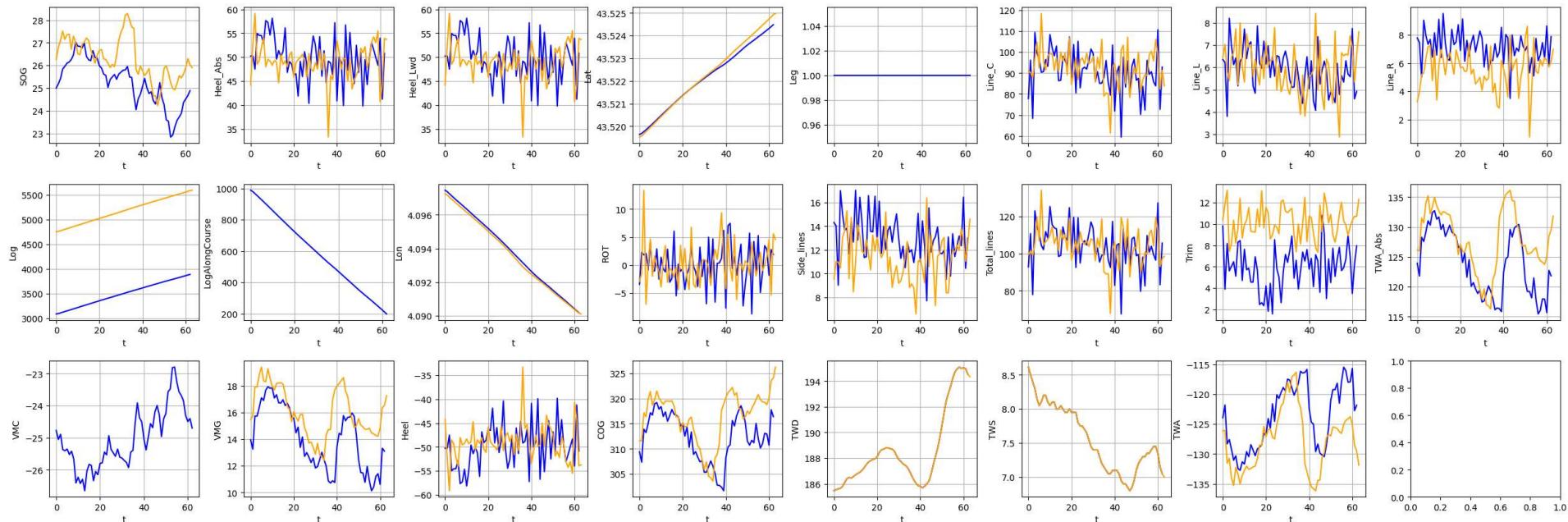
## Distance Summary

**Karl Maeder Gian Stragiotti****Distance [m]** 808.825731 843.849430**Straight Line [m]** 804.354952 839.162531**Distance as Percentage of Straight Line [%]** 100.555822 100.558521

Gain of Karl Maeder with respect to Gian Stragiotti

**Forward Lateral VMG****Initial Deficit** 3.142952 20.697345 15.451401**Final Deficit** 36.009546 -36.463102 -50.331788**Total Gain** 32.866594 -57.160447 -65.783189**Gain per Minute** 31.702581 -55.136036 -63.453392

Interval 2: Downwind from 2025-06-06 13:51:38 to 2025-06-06 13:52:41 — Karl Maeder vs Gian Stragiotti - Parameters over time



— Karl Maeder SOG — Gian Stragiotti SOG

```
=====
Processing run: 06_06_Run2
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.8062025534752273,  
'SOG_variation_boat2': 0.6564624907211762,  
'avg TWA boat1': -126.20847482993196,  
'avg TWA boat2': -122.11107220708448,  
'avg_SOG_boat1': 23.9421768707483,  
'avg_SOG_boat2': 23.076734693877555,  
'boat1_master_leeward': True,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 106.77,  
'boat2_master_leeward': False,  
'boat2_name': 'Karl Maeder',  
'boat2_total_weight': 100.97500000000001,  
'duration': 73.40499997138977,  
'end_time': 1749218760.858,  
'stability_score': 0.9693254072977828,  
'start_time': 1749218687.453}
```

Processing: Interval 2: Downwind from 2025-06-06 14:04:47 to 2025-06-06 14:06:00 – Gian Stragiotti vs Karl Maeder

```
=====  
Interval 2: Downwind from 2025-06-06 14:04:47 to 2025-06-06 14:06:00 – Gian Stragiotti vs Karl Maeder  
=====
```

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	6.278	6.278	4.904	4.904	7.3	7.3	735	734	0.6592	0.6597			
<b>TWD</b>	182.2	182.2	172.6	172.7	184.4	184.4	735	734	2.771	2.751			
<b>SOG</b>	23.94	23.08	21.9	21.2	25.7	24.7	735	734	0.8062	0.6555	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	13.91	12.18	8.276	6.846	22.48	19.05	735	734	3.684	2.503	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	308.4	304.3	293.9	290.8	329.4	322.2	735	734	8.776	5.25		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	126.2	122.1	110	107.6	154	144.5	735	734	11.05	7.338			
<b>Heel_Lwd</b>	48.52	48.22	25.6	29.4	69.4	70.4	735	734	6.962	7.099	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	11.49	3.429	2.2	3.32	20.1	3.539	735	734	2.821	0.06334	Gian Stragiotti	Karl Maeder	Tie
<b>Line_C</b>	90.41	86.71	41.6	61	127.3	119.8	731	734	12.56	11.41	Gian Stragiotti	Karl Maeder	Tie
<b>Total_lines</b>	101.9	17.91	45.6	17.49	138.4	18.32	735	734	13.82	0.239	Gian Stragiotti	Karl Maeder	Tie

## Distance Summary

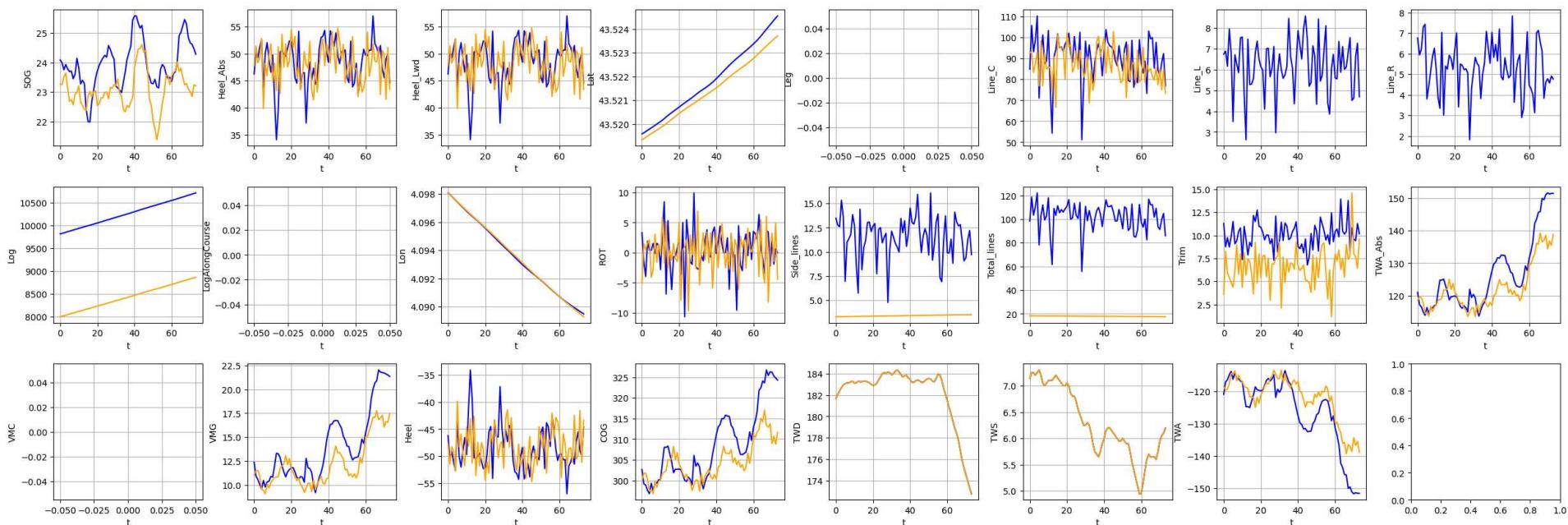
## Gian Stragiotti Karl Maeder

<b>Distance [m]</b>	905.398644	871.345408
<b>Straight Line [m]</b>	893.191805	866.004356
<b>Distance as Percentage of Straight Line [%]</b>	101.366654	100.616747

Gain of Gian Stragiotti with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-16.617785	21.629820	27.268773
<b>Final Deficit</b>	-46.033620	85.197677	95.942798
<b>Total Gain</b>	<b>-29.415835</b>	<b>63.567857</b>	<b>68.674025</b>
<b>Gain per Minute</b>	<b>-24.044004</b>	<b>51.959286</b>	<b>56.132981</b>

Interval 2: Downwind from 2025-06-06 14:04:47 to 2025-06-06 14:06:00 — Gian Stragiotti vs Karl Maeder - Parameters over time



— Gian Stragiotti SOG — Karl Maeder SOG

```
=====
Processing run: 06_06_Run3
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.9379808445806027,  
'SOG_variation_boat2': 0.7911030825617474,  
'avg TWA boat1': -143.14596038034864,  
'avg TWA boat2': -139.84990634920635,  
'avg_SOG_boat1': 25.69017432646593,  
'avg_SOG_boat2': 24.954992076069733,  
'boat1_master_leeward': False,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 106.77,  
'boat2_master_leeward': True,  
'boat2_name': 'Karl Maeder',  
'boat2_total_weight': 100.97500000000001,  
'duration': 62.99600005149841,  
'end_time': 1749219357.356,  
'stability_score': 0.9544882981127863,  
'start_time': 1749219294.36}
```

Processing: Interval 2: Downwind from 2025-06-06 14:14:54 to 2025-06-06 14:15:57 – Karl Maeder vs Gian Stragiotti

```
=====  
Interval 2: Downwind from 2025-06-06 14:14:54 to 2025-06-06 14:15:57 – Karl Maeder vs Gian Stragiotti  
=====
```

	Run Statistics												
	Avg (Karl Maeder)	Avg (Gian Stragiotti)	Min (Karl Maeder)	Min (Gian Stragiotti)	Max (Karl Maeder)	Max (Gian Stragiotti)	Count (Karl Maeder)	Count (Gian Stragiotti)	StdDev (Karl Maeder)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.999	7.998	7.046	7.036	8.995	8.996	630	631	0.5273	0.5283			
<b>TWD</b>	170.5	170.5	167	167	174.4	174.4	630	631	2.146	2.146			
<b>SOG</b>	24.96	25.69	22.7	23.7	26.4	27.9	630	631	0.7909	0.938	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	18.88	20.28	12.73	15.9	23.37	23.89	630	631	2.417	1.857	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	310.3	313.6	294.7	299.9	326.5	330.1	630	631	7.694	7.688		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	139.8	143.1	122.6	129.1	158.3	162.3	630	631	8.429	8.523			
<b>Heel_Lwd</b>	50.82	47.47	31.6	27.3	73.4	71.2	630	631	7.672	6.729	Karl Maeder	Gian Stragiotti	Tie
<b>Side_lines</b>	12.95	9.826	2.8	1.6	24.5	18.7	630	631	3.279	2.727	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	90.8	89.02	59.8	62.7	132.3	115.1	630	625	13.68	9.999	Karl Maeder	Gian Stragiotti	Tie
<b>Total_lines</b>	103.7	99.15	67.6	68.8	155.2	131.8	630	631	15.51	10.51	Karl Maeder	Gian Stragiotti	Tie

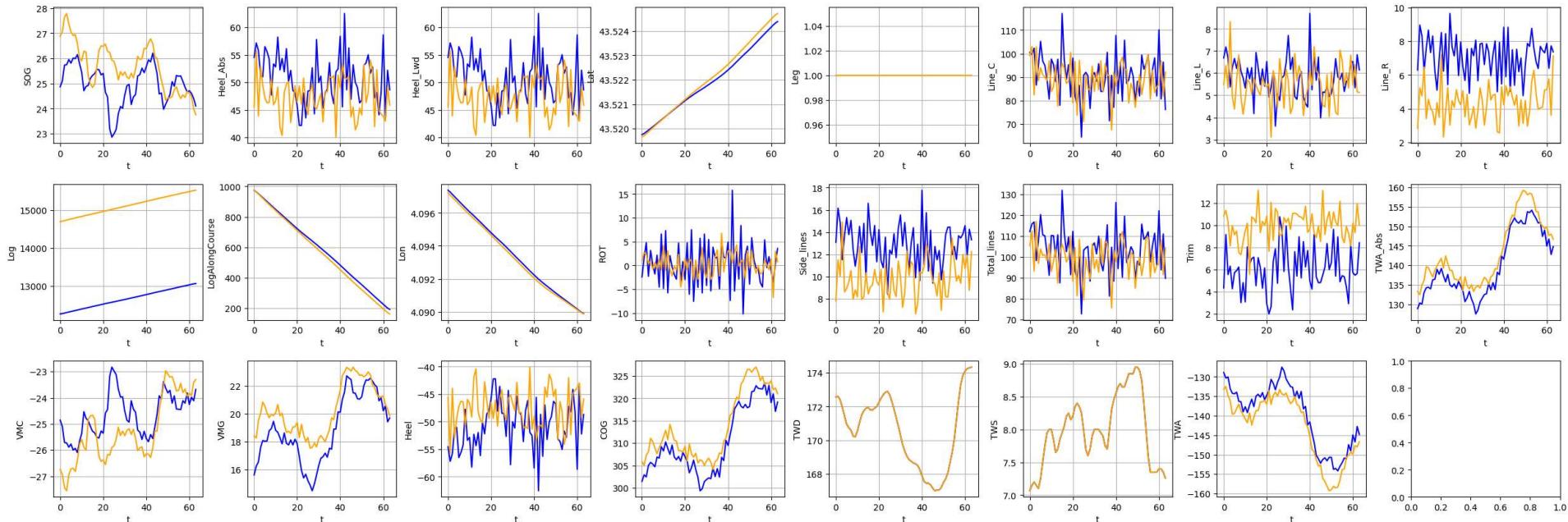
## Distance Summary

**Karl Maeder Gian Stragiotti****Distance [m]** 808.282584 833.036498**Straight Line [m]** 799.868656 824.678256**Distance as Percentage of Straight Line [%]** 101.051914 101.013516

Gain of Karl Maeder with respect to Gian Stragiotti

**Forward Lateral VMG****Initial Deficit** 1.624830 17.207800 9.855781**Final Deficit** 25.241948 -27.241097 -36.859458**Total Gain** 23.617118 -44.448897 -46.715240**Gain per Minute** 22.529685 -42.402280 -44.564271

Interval 2: Downwind from 2025-06-06 14:14:54 to 2025-06-06 14:15:57 — Karl Maeder vs Gian Stragiotti - Parameters over time



— Karl Maeder SOG — Gian Stragiotti SOG

```
=====
Processing run: 06_06_Run4
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 1.2440294837720993,  
'SOG_variation_boat2': 0.9417567404996181,  
'avg TWA boat1': -149.82159731543624,  
'avg TWA boat2': -149.42426890756303,  
'avg_SOG_boat1': 25.710234899328857,  
'avg_SOG_boat2': 25.048657718120804,  
'boat1_master_leeward': True,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 106.77,  
'boat2_master_leeward': False,  
'boat2_name': 'Karl Maeder',  
'boat2_total_weight': 100.97500000000001,  
'duration': 59.501999855041504,  
'end_time': 1749219909.859,  
'stability_score': 0.9548481156683271,  
'start_time': 1749219850.357}
```

Processing: Interval 2: Downwind from 2025-06-06 14:24:10 to 2025-06-06 14:25:09 – Gian Stragiotti vs Karl Maeder

```
=====  
Interval 2: Downwind from 2025-06-06 14:24:10 to 2025-06-06 14:25:09 – Gian Stragiotti vs Karl Maeder  
=====
```

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	5.891	5.888	5	5	7.3	7.3	596	595	0.5345	0.5319			
<b>TWD</b>	165.4	165.4	160.7	160.7	168.4	168.4	596	595	2.249	2.251			
<b>SOG</b>	25.71	25.04	23.3	22.5	27.9	27.2	596	595	1.244	0.9483	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	22.14	21.52	18.31	16.44	26.77	25.11	596	595	2.086	1.437	Gian Stragiotti	Karl Maeder	Tie
<b>COG</b>	315.3	314.9	304	301.8	330.9	325.1	596	595	6.088	4.14		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	149.8	149.4	137.9	137	165.1	160.3	596	595	5.835	4.081			
<b>Heel_Lwd</b>	46.54	46.07	24	30	63.7	63.5	596	595	7.04	7.043	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	10.25	7.405	0.2	7.177	19.6	7.633	596	595	2.859	0.1321	Gian Stragiotti	Karl Maeder	Tie
<b>Line_C</b>	85.12	nan	42.7	nan	129.5	nan	590	nan	12.49	nan			
<b>Total_lines</b>	95.69	65.02	45.5	58.52	148.9	71.51	596	595	13.93	3.76	Gian Stragiotti	Karl Maeder	Tie

## Distance Summary

## Gian Stragiotti Karl Maeder

<b>Distance [m]</b>	786.749720	764.950553
---------------------	------------	------------

<b>Straight Line [m]</b>	781.230950	761.991076
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<b>Distance as Percentage of Straight Line [%]</b>	100.706420	100.388387
--	------------	------------

Gain of Gian Stragiotti with respect to Karl Maeder

## Forward Lateral VMG

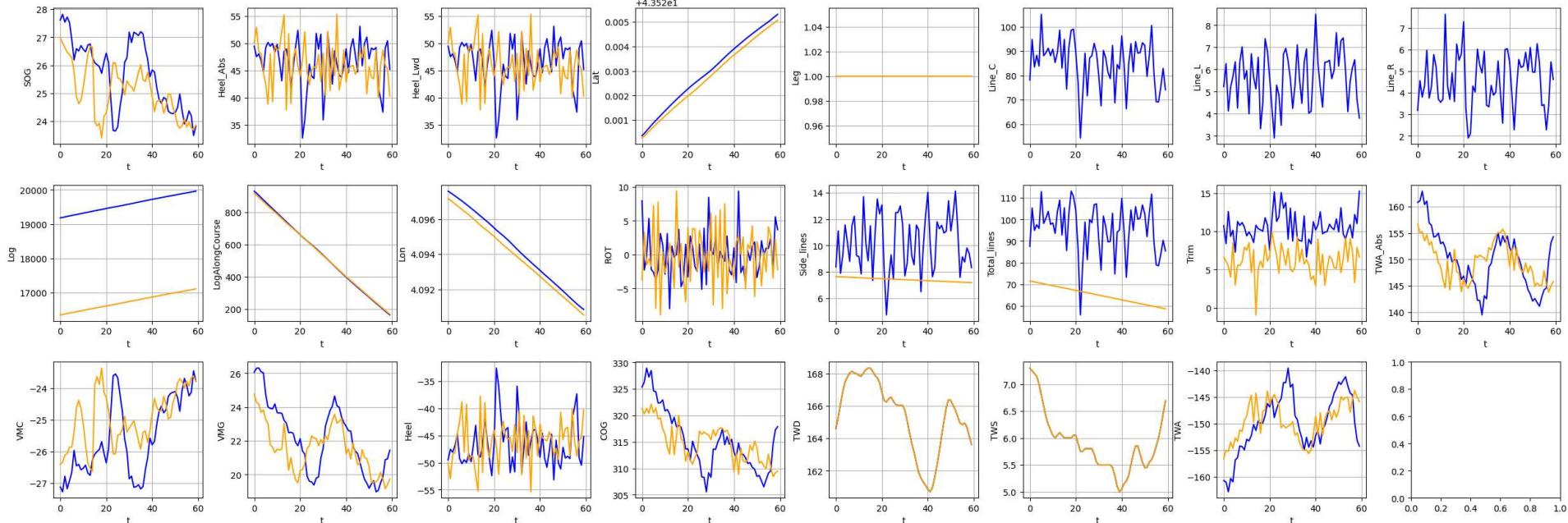
<b>Initial Deficit</b>	17.498028	31.346562	0.635020
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<b>Final Deficit</b>	-1.768066	37.748184	20.507500
----------------------	-----------	-----------	-----------

<b>Total Gain</b>	-19.266093	6.401622	19.872480
-------------------	------------	----------	-----------

<b>Gain per Minute</b>	-19.427340	6.455201	20.038802
------------------------	------------	----------	-----------

Interval 2: Downwind from 2025-06-06 14:24:10 to 2025-06-06 14:25:09 — Gian Stragiotti vs Karl Maeder - Parameters over time



— Gian Stragiotti SOG — Karl Maeder SOG

```
=====
Processing run: 06_06_Run5
=====
```

```
-----
Interval 2: Downwind
-----
{'SOG_variation_boat1': 0.5526799602831597,
 'SOG_variation_boat2': 0.7248894980165709,
 'avg TWA boat1': -152.95215094339622,
 'avg TWA boat2': -152.49173459715638,
 'avg_SOG_boat1': 26.419575471698113,
 'avg_SOG_boat2': 26.722169811320757,
 'boat1_master_leeward': True,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 100.97500000000001,
 'boat2_master_leeward': False,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.08999999999999,
 'duration': 42.29100012779236,
 'end_time': 1749220975.854,
 'stability_score': 0.962807102252274,
 'start_time': 1749220933.563}
```

Processing: Interval 2: Downwind from 2025-06-06 14:42:13 to 2025-06-06 14:42:55 – Karl Maeder vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-06 14:42:13 to 2025-06-06 14:42:55 – Karl Maeder vs SenseBoard
=====
```

	Run Statistics												
	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.946	8.941	7.5	7.5	10.1	10.1	424	422	0.9215	0.9213			
<b>TWD</b>	168.4	168.3	165.7	165.7	172	172	424	422	1.935	1.934			
<b>SOG</b>	26.42	26.72	24.7	25.4	27.6	28.1	424	422	0.5527	0.727	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	23.45	23.64	20.51	20.51	25.71	26.27	424	422	1.149	1.453	SenseBoard	Karl Maeder	Tie
<b>COG</b>	321.3	320.8	313.1	312.8	330.3	328.2	424	422	3.544	3.164		SenseBoard	SenseBoard
<b>TWA_Abs</b>	153	152.5	141.8	141.4	163.5	160.9	424	422	4.645	4.494			
<b>Heel_Lwd</b>	49.14	46.65	31.6	31	72.7	65.6	424	422	7.347	6.249	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	12.59	9.848	3.3	1.7	21.7	20.7	424	422	3.433	3.125	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	88.83	85.19	56.1	60.5	127.2	113.6	424	418	12.72	10.76	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	101.4	95.15	65.6	68.1	145.9	134.3	424	422	14.42	11.76	Karl Maeder	SenseBoard	Tie

## Distance Summary

## Karl Maeder SenseBoard

Distance [m] 574.781617 579.833110

Straight Line [m] 573.073401 578.283949

Distance as Percentage of Straight Line [%] 100.298080 100.267889

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

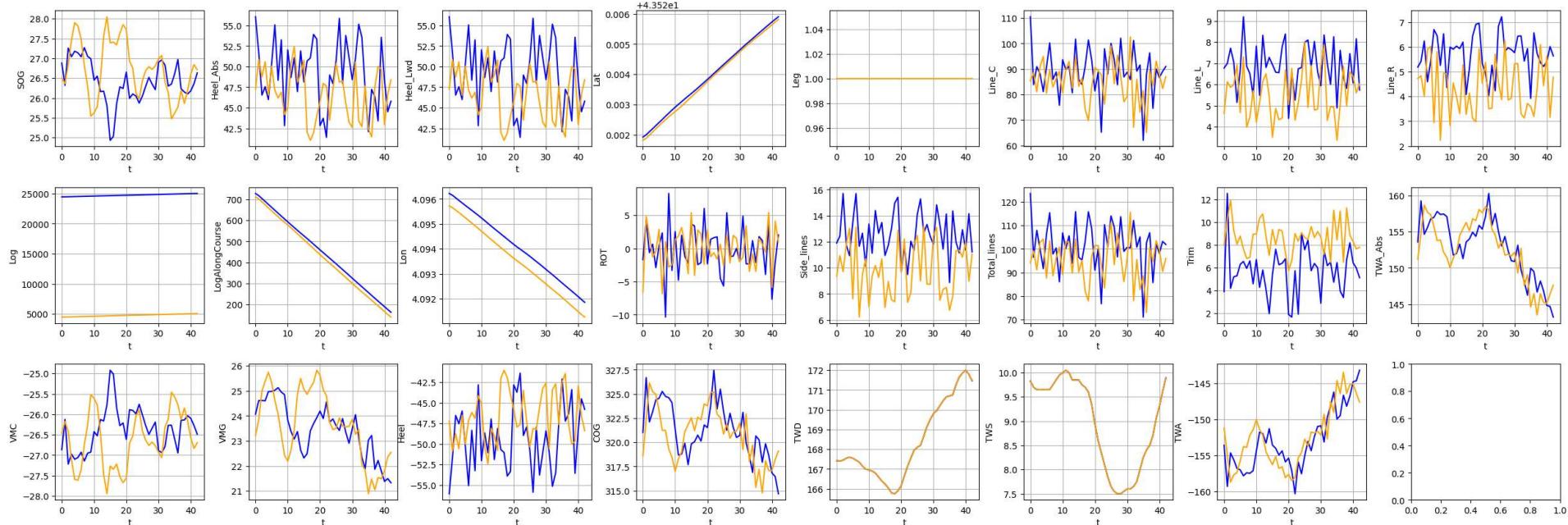
Initial Deficit 16.406014 38.570295 2.927514

Final Deficit 21.598824 42.684510 0.173519

Total Gain 5.192811 4.114215 -2.753995

Gain per Minute 7.367256 5.837008 -3.907207

Interval 2: Downwind from 2025-06-06 14:42:13 to 2025-06-06 14:42:55 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

```
=====
Processing run: 06_06_Run6
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 1.1345469133779522,  
'SOG_variation_boat2': 0.95609938547161,  
'avg TWA boat1': -144.59948473967685,  
'avg TWA boat2': -145.07276936936935,  
'avg_SOG_boat1': 26.98312387791741,  
'avg_SOG_boat2': 27.60682226211849,  
'boat1_master_leeward': False,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.97500000000001,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.08999999999999,  
'duration': 55.58399987220764,  
'end_time': 1749221601.952,  
'stability_score': 0.9421958135106284,  
'start_time': 1749221546.368}
```

Processing: Interval 2: Downwind from 2025-06-06 14:52:26 to 2025-06-06 14:53:21 – SenseBoard vs Karl Maeder

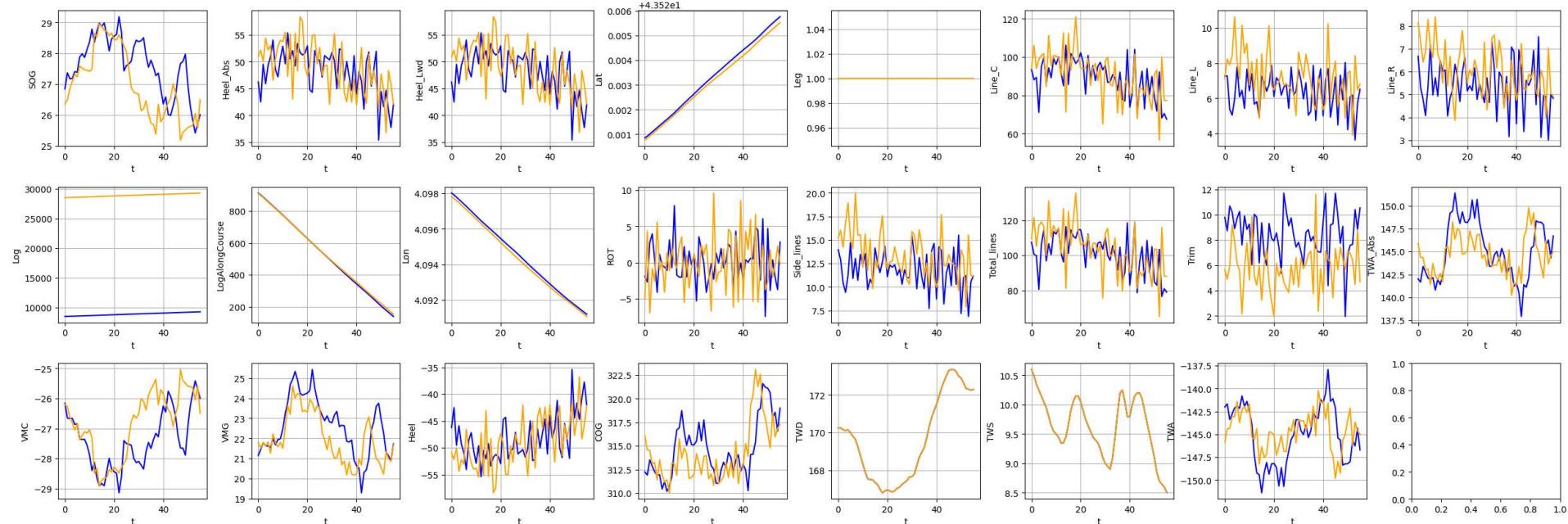
```
=====  
Interval 2: Downwind from 2025-06-06 14:52:26 to 2025-06-06 14:53:21 – SenseBoard vs Karl Maeder  
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.64	9.639	8.428	8.41	10.6	10.6	555	557	0.5012	0.5047			
<b>TWD</b>	169.6	169.6	166.8	166.8	173.4	173.4	555	557	2.253	2.253			
<b>SOG</b>	27.62	26.98	24.8	24.5	29.3	29.7	555	557	0.9536	1.135	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	22.61	21.97	16.9	17.62	26.3	25.11	555	557	1.489	1.325	SenseBoard	Karl Maeder	Tie
<b>COG</b>	314.7	314.2	305.4	305.8	326.5	326.8	555	557	3.522	3.588		SenseBoard	SenseBoard
<b>TWA_Abs</b>	145.1	144.6	133	136	154.2	153.4	555	557	3.652	2.859			
<b>Heel_Lwd</b>	48.27	48.88	24.8	30.8	65.2	69.1	555	557	7.28	7.224	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	11.73	13.4	3.5	4.8	22.4	24	555	557	3.28	3.682	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	88.98	90.71	61.3	48.5	124.4	138.3	554	557	12.43	16.44	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	100.7	103.5	67	57.8	146.8	146.9	555	557	13.7	18.08	Karl Maeder	SenseBoard	Tie

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	787.418331	772.982590
Straight Line [m]	785.099539	770.630723
Distance as Percentage of Straight Line [%]	100.295350	100.305187
Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
Initial Deficit	3.943722	18.775203
Final Deficit	-10.571826	25.805984
Total Gain	-14.515547	7.030780
Gain per Minute	-15.720242	7.614289
	17.248126	

Interval 2: Downwind from 2025-06-06 14:52:26 to 2025-06-06 14:53:21 — SenseBoard vs Karl Maeder - Parameters over time



```
=====
Processing run: 06_06_Run7
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.6062525372636404,  
'SOG_variation_boat2': 0.6829045058127635,  
'avg TWA boat1': -149.69734541062803,  
'avg TWA boat2': -148.5991231884058,  
'avg_SOG_boat1': 27.19396135265701,  
'avg_SOG_boat2': 28.07246376811594,  
'boat1_master_leeward': True,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.9750000000001,  
'boat2_master_leeward': False,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.0899999999999,  
'duration': 41.30900001525879,  
'end_time': 1749222107.762,  
'stability_score': 0.9661079805234971,  
'start_time': 1749222066.453}
```

Processing: Interval 2: Downwind from 2025-06-06 15:01:06 to 2025-06-06 15:01:47 – Karl Maeder vs SenseBoard

```
=====  
Interval 2: Downwind from 2025-06-06 15:01:06 to 2025-06-06 15:01:47 – Karl Maeder vs SenseBoard  
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.546	9.546	8.412	8.413	10.73	10.73	414	414	0.4883	0.4883			
<b>TWD</b>	172.1	172.1	170.2	170.2	173.7	173.7	414	414	0.9087	0.9086			
<b>SOG</b>	27.19	28.07	25.8	26	28.9	29.4	414	414	0.6063	0.6783	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	23.41	23.94	20.58	21.18	25.78	26.01	414	414	0.9546	0.9684	SenseBoard	Karl Maeder	Tie
<b>COG</b>	321.8	320.7	311.9	313.8	331.5	331.5	414	414	3.516	2.845		SenseBoard	SenseBoard
<b>TWA_Abs</b>	149.7	148.6	138.8	141.4	160.7	157.8	414	414	4.103	2.783			
<b>Heel_Lwd</b>	48.72	46.89	29.8	28.7	68.9	65.1	414	414	6.888	6.582	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	12.85	13.01	4.3	5.5	24.2	20.8	414	414	3.22	2.809	SenseBoard	SenseBoard	SenseBoard
<b>Line_C</b>	88.82	89.44	52	61.6	134.5	122.7	414	413	16.26	11.12	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	102	102.7	61.7	70.4	154.3	139.4	414	414	17.49	11.89	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

## Karl Maeder SenseBoard

Distance [m] 578.401681 596.844633

Straight Line [m] 576.755970 595.530310

Distance as Percentage of Straight Line [%] 100.285339 100.220698

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

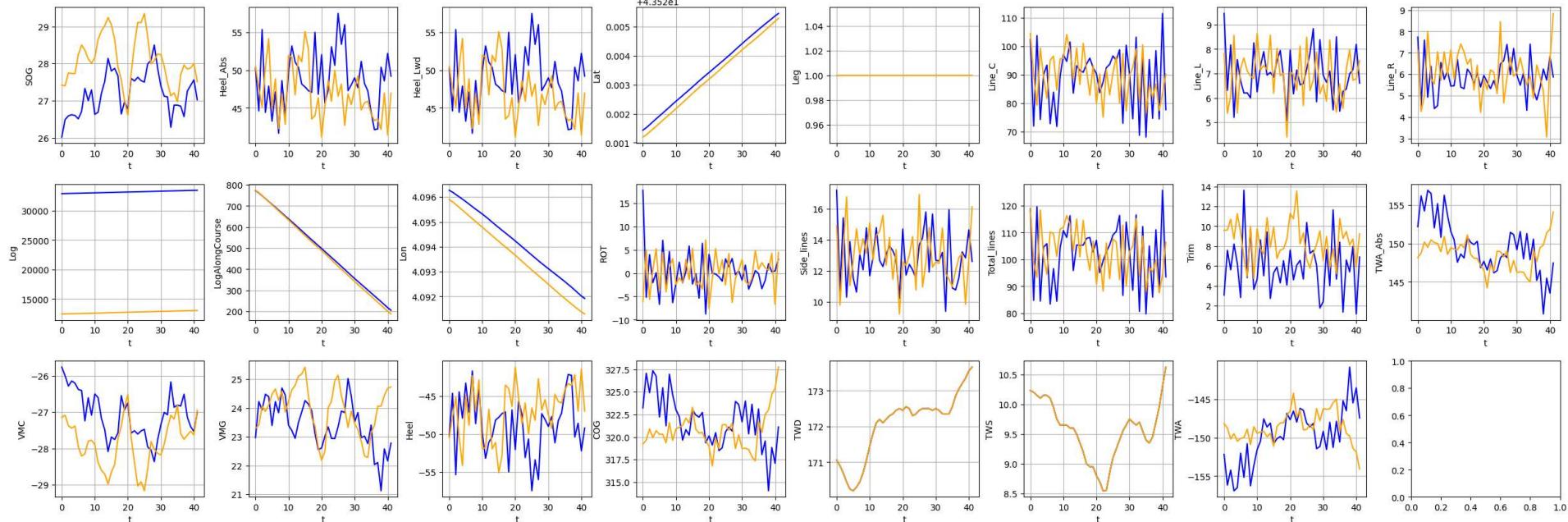
Initial Deficit -2.578480 39.886937 22.351829

Final Deficit 16.088603 50.693632 11.687887

Total Gain 18.667084 10.806695 -10.663942

Gain per Minute 27.113341 15.696378 -15.489034

Interval 2: Downwind from 2025-06-06 15:01:06 to 2025-06-06 15:01:47 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

```
=====
Processing run: 06_06_Run8
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.9550264111740758,  
'SOG_variation_boat2': 0.7404229243755341,  
'avg TWA boat1': -156.70291927083335,  
'avg TWA boat2': -155.94574083769635,  
'avg_SOG_boat1': 27.98802083333337,  
'avg_SOG_boat2': 28.154947916666668,  
'boat1_master_leeward': False,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.9750000000001,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.0899999999999,  
'duration': 38.2929998283386,  
'end_time': 1749222589.053,  
'stability_score': 0.9486132309964281,  
'start_time': 1749222550.76}
```

Processing: Interval 2: Downwind from 2025-06-06 15:09:10 to 2025-06-06 15:09:49 – SenseBoard vs Karl Maeder

```
=====  
Interval 2: Downwind from 2025-06-06 15:09:10 to 2025-06-06 15:09:49 – SenseBoard vs Karl Maeder  
=====
```

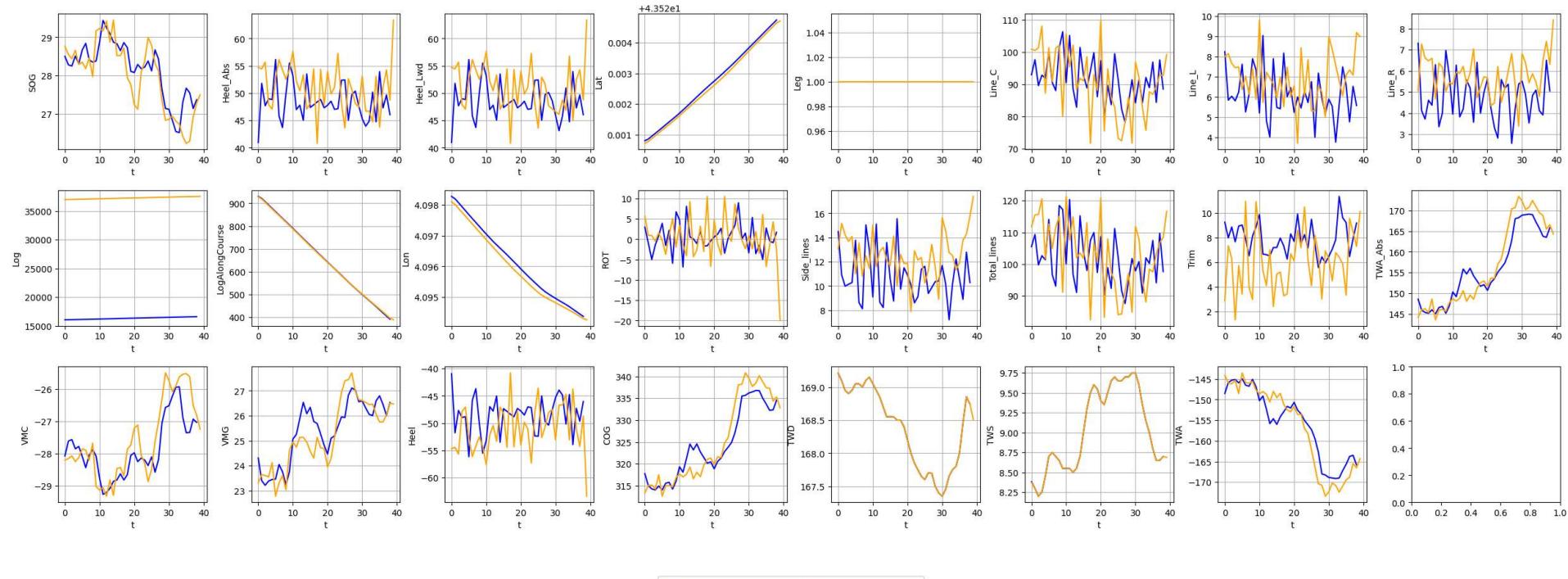
#### Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.05	9.048	8.2	8.2	9.796	9.796	382	384	0.5082	0.5084			
<b>TWD</b>	168.4	168.4	167.3	167.3	169.2	169.2	382	384	0.5978	0.598			
<b>SOG</b>	28.16	27.99	26.3	26.1	29.6	30	382	384	0.7433	0.955	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	25.4	25.24	21.94	20.66	27.7	27.94	382	384	1.262	1.415	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	324.3	325	309.5	307.5	340.9	344.4	382	384	7.992	9.97			SenseBoard
<b>TWA_Abs</b>	155.9	156.7	140.3	138.5	173.3	176.7	382	384	8.429	10.43			
<b>Heel_Lwd</b>	48.72	51.3	32.9	33.9	70.9	68.3	366	313	6.308	6.519	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	10.72	12.56	2.6	5.2	19.6	21.9	382	384	3.073	3.17	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	91.5	90.27	66.2	57.6	128.8	132.2	379	384	10.43	14.21	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	101.9	102.9	72.5	67.7	143.2	145.1	382	384	11.88	15.58	Karl Maeder	SenseBoard	Tie

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	552.292913	551.312824
Straight Line [m]	546.427517	542.647379
Distance as Percentage of Straight Line [%]	101.073408	101.596883
Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
<b>Initial Deficit</b>	-0.270209	17.094218
<b>Final Deficit</b>	-4.074166	10.543551
<b>Total Gain</b>	<b>-3.803957</b>	<b>-6.550667</b>
<b>Gain per Minute</b>	<b>-5.990012</b>	<b>-10.315199</b>
		<b>1.263638</b>

Interval 2: Downwind from 2025-06-06 15:09:10 to 2025-06-06 15:09:49 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

Error: At least two CSV files are required.

=====

Processing run: 07\_06\_Run1

=====

-----

Interval 2: Downwind

-----

```
{'SOG_variation_boat1': 0.4785025112578562,
 'SOG_variation_boat2': 0.44908609081104717,
 'avg_TWA_boat1': -143.7616779661017,
 'avg_TWA_boat2': -143.34568008474577,
 'avg_SOG_boat1': 27.995974576271188,
 'avg_SOG_boat2': 27.388771186440678,
 'boat1_master_leeward': False,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 108.19,
 'boat2_master_leeward': True,
 'boat2_name': 'Karl Maeder',
 'boat2_total_weight': 100.97500000000001,
 'duration': 47.1029999256134,
 'end_time': 1749297201.36,
 'stability_score': 0.9647004339495513,
 'start_time': 1749297154.257}
```

Processing: Interval 2: Downwind from 2025-06-07 11:52:34 to 2025-06-07 11:53:21 – Karl Maeder vs Gian Stragiotti

=====

Interval 2: Downwind from 2025-06-07 11:52:34 to 2025-06-07 11:53:21 – Karl Maeder vs Gian Stragiotti

=====

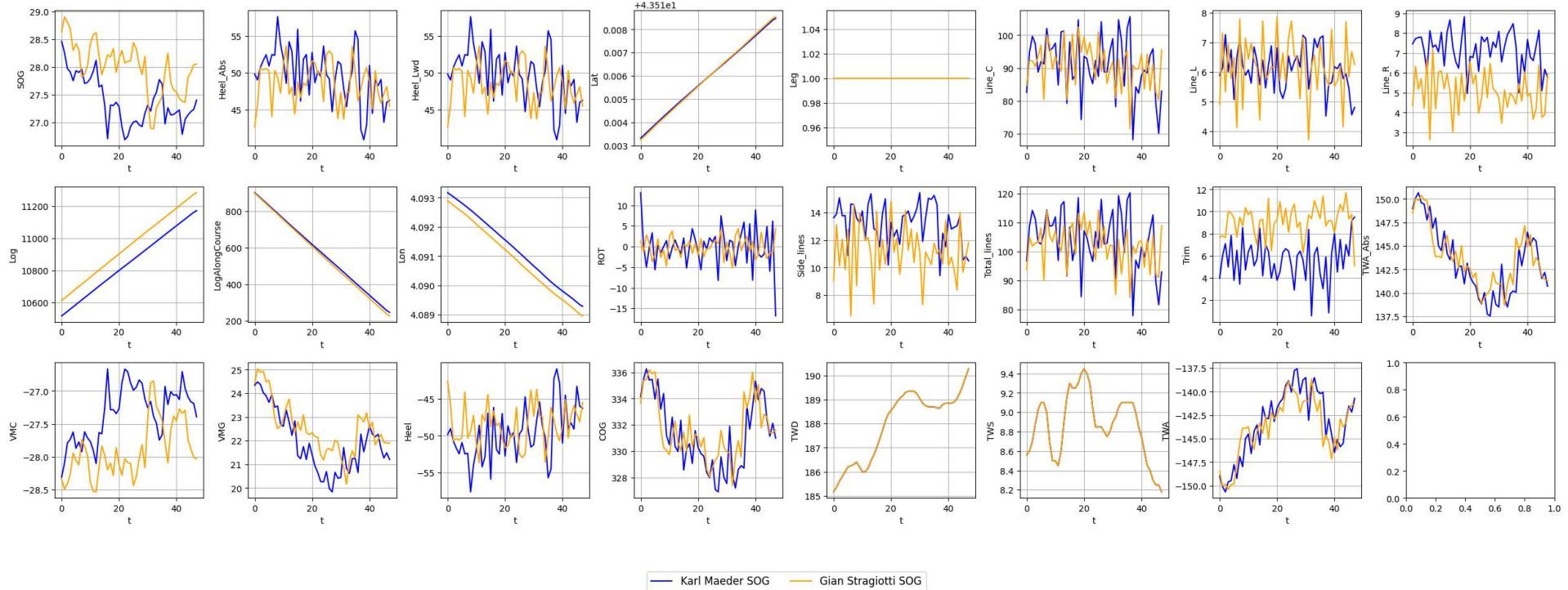
## MainReport

	Run Statistics												
	Avg (Karl Maeder)	Avg (Gian Stragiotti)	Min (Karl Maeder)	Min (Gian Stragiotti)	Max (Karl Maeder)	Max (Gian Stragiotti)	Count (Karl Maeder)	Count (Gian Stragiotti)	StdDev (Karl Maeder)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.881	8.881	8.164	8.164	9.493	9.493	472	472	0.3235	0.3236			
<b>TWD</b>	188	188	185.1	185.1	190.3	190.3	472	472	1.402	1.402			
<b>SOG</b>	27.39	28	26.6	26.7	28.5	29	472	472	0.4476	0.4785	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b>	21.92	22.54	17.45	19.39	25.38	25.82	472	472	1.419	1.216	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	331.3	331.7	319.3	324.6	340.6	340.2	472	472	3.592	2.938		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	143.3	143.8	129.9	135.9	154.3	154.1	472	472	4.311	3.605			
<b>Heel_Lwd</b>	49.73	48.57	27.2	35.1	70.9	68	472	472	6.606	5.874	Karl Maeder	Gian Stragiotti	Tie
<b>Side_lines</b>	13.26	11.22	4.8	3.8	23.3	17.8	472	472	3.047	2.788	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	91.1	90.87	62.9	64.4	121.7	115.2	472	466	12.31	9.783	Karl Maeder	Gian Stragiotti	Tie
<b>Total_lines</b>	104.3	102	71.5	73.5	140.9	125.5	472	472	13.88	10.49	Karl Maeder	Gian Stragiotti	Tie

## Distance Summary

	Karl Maeder	Gian Stragiotti
<b>Distance [m]</b>	663.363464	678.715526
<b>Straight Line [m]</b>	661.464887	677.104721
<b>Distance as Percentage of Straight Line [%]</b>	100.287026	100.237896
Gain of Karl Maeder with respect to Gian Stragiotti		
<b>Forward</b>	3.698603	23.746003
<b>Lateral</b>	19.345131	19.477505
<b>VMG</b>	-3.891851	
<b>Initial Deficit</b>	15.646529	-4.268498
<b>Final Deficit</b>	-15.100684	
<b>Total Gain</b>	19.931460	-5.437462
<b>Gain per Minute</b>	-19.236132	

Interval 2: Downwind from 2025-06-07 11:52:34 to 2025-06-07 11:53:21 — Karl Maeder vs Gian Stragiotti - Parameters over time



Error: No or insufficient intervals for run: 07\_06\_Run10

=====

Processing run: 07\_06\_Run2

=====

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Interval 2: Downwind

-----

```
{'SOG_variation_boat1': 0.7945210106979272,
 'SOG_variation_boat2': 1.1674746323131255,
 'avg_TWA_boat1': -151.40243531827517,
 'avg_TWA_boat2': -151.13577572016462,
 'avg_SOG_boat1': 27.1694045174538,
 'avg_SOG_boat2': 26.0905544147844,
 'boat1_master_leeward': True,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 108.19,
 'boat2_master_leeward': False,
 'boat2_name': 'Karl Maeder',
 'boat2_total_weight': 100.97500000000001,
 'duration': 48.6010000705719,
 'end_time': 1749297745.558,
 'stability_score': 0.9547757384676734,
 'start_time': 1749297696.957}
```

Processing: Interval 2: Downwind from 2025-06-07 12:01:36 to 2025-06-07 12:02:25 – Gian Stragiotti vs Karl Maeder

=====

Interval 2: Downwind from 2025-06-07 12:01:36 to 2025-06-07 12:02:25 – Gian Stragiotti vs Karl Maeder

=====

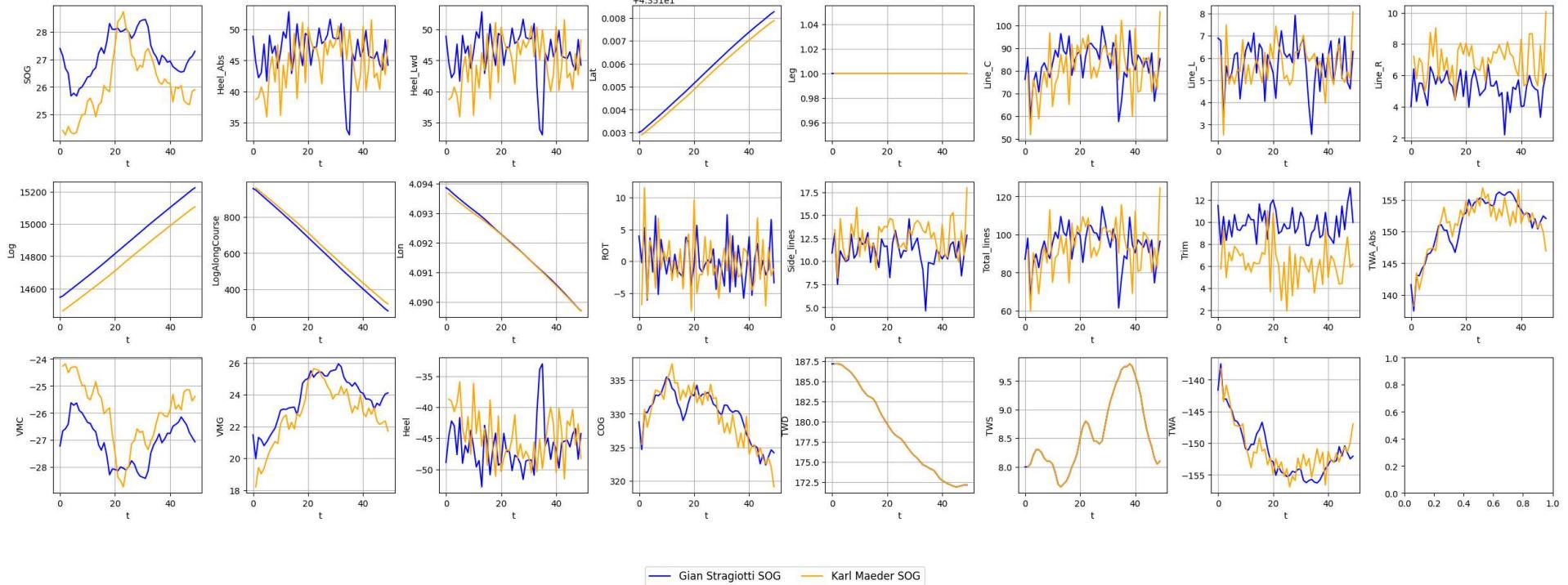
## MainReport

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.583	8.585	7.605	7.606	9.8	9.8	487	486	0.6359	0.6359			
<b>TWD</b>	178.6	178.6	171.9	171.9	187.2	187.2	487	486	5.263	5.254			
<b>SOG</b>	27.17	26.09	25.5	24.1	28.6	28.9	487	486	0.7945	1.165	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	23.8	22.81	19.1	17.19	26.55	26.32	487	486	1.558	1.814	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	330	329.8	319.1	316.7	337.7	340.6	487	486	3.939	4.672		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	151.4	151.1	134.6	134.8	161.2	160.4	487	486	4.581	4.407			
<b>Heel_Lwd</b>	46.28	44.61	27.3	27.1	65.2	61.5	487	486	6.573	6.251	Gian Stragiotti	Karl Maeder	Tie
<b>Side_lines</b>	10.95	12.59	1.4	4.2	17.1	25.1	487	486	2.549	3.313	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	83.36	81.11	42.9	39.1	107.7	122.5	487	486	11.19	15.8	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	94.5	93.72	46.8	45.2	123.9	138.4	487	486	12.53	18.04	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti

## Distance Summary

	Gian Stragiotti	Karl Maeder
<b>Distance [m]</b>	679.699272	651.814482
<b>Straight Line [m]</b>	677.500446	649.001386
<b>Distance as Percentage of Straight Line [%]</b>	100.324550	100.433450
Gain of Gian Stragiotti with respect to Karl Maeder		
<b>Forward</b>	19.202149	17.151217
<b>Lateral</b>	-9.066958	
<b>VMG</b>		43.764970
<b>Initial Deficit</b>	-37.608592	
<b>Final Deficit</b>	-28.541634	
<b>Total Gain</b>	3.245377	26.613753
<b>Gain per Minute</b>	-35.235860	4.006555
		32.855809

Interval 2: Downwind from 2025-06-07 12:01:36 to 2025-06-07 12:02:25 — Gian Stragiotti vs Karl Maeder - Parameters over time



```
=====
Processing run: 07_06_Run3
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 1.272584780791708,  
'SOG_variation_boat2': 0.8302888435095636,  
'avg TWA boat1': -154.05993896713616,  
'avg TWA boat2': -153.6456282352941,  
'avg_SOG_boat1': 26.421361502347416,  
'avg_SOG_boat2': 25.72840375586854,  
'boat1_master_leeward': False,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 108.19,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 102.89,  
'duration': 42.50600004196167,  
'end_time': 1749298715.364,  
'stability_score': 0.948748627453864,  
'start_time': 1749298672.858}
```

Processing: Interval 2: Downwind from 2025-06-07 12:17:52 to 2025-06-07 12:18:35 – SenseBoard vs Gian Stragiotti

```
=====  
Interval 2: Downwind from 2025-06-07 12:17:52 to 2025-06-07 12:18:35 – SenseBoard vs Gian Stragiotti
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.088	9.088	8.4	8.4	9.5	9.5	425	426	0.3011	0.3008			
<b>TWD</b>	169.7	169.7	168.1	168.1	173.1	173.1	425	426	1.209	1.207			
<b>SOG</b>	25.73	26.42	24.1	23.6	27.3	28.3	425	426	0.828	1.273	Gian Stragiotti	SenseBoard	Tie
<b>VMG</b>	23	23.66	19.4	19.53	25.43	26.21	425	426	1.291	1.626	Gian Stragiotti	SenseBoard	Tie
<b>COG</b>	323.4	323.8	313.8	310.1	332.1	335.1	425	426	3.538	4.585		SenseBoard	SenseBoard
<b>TWA_Abs</b>	153.6	154.1	141.2	137.3	163.8	167	425	426	4.158	5.375			
<b>Heel_Lwd</b>	46.53	45.86	26.5	13.8	71.2	70.4	425	426	7.663	8.111	SenseBoard	SenseBoard	SenseBoard
<b>Line_C</b>	83.89	84.06	43.8	21.5	120.1	115.8	425	425	12.96	15.3	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	nan	10.32	nan	1.2	nan	19.5	nan	426	nan	3.124			
<b>Total_lines</b>	nan	94.45	nan	23.3	nan	133.3	nan	426	nan	17.13			

## Distance Summary

## SenseBoard Gian Stragiotti

<b>Distance [m]</b>	561.576450	578.146150
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<b>Straight Line [m]</b>	559.979014	575.735115
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<b>Distance as Percentage of Straight Line [%]</b>	100.285267	100.418775
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Gain of SenseBoard with respect to Gian Stragiotti

## Forward Lateral VMG

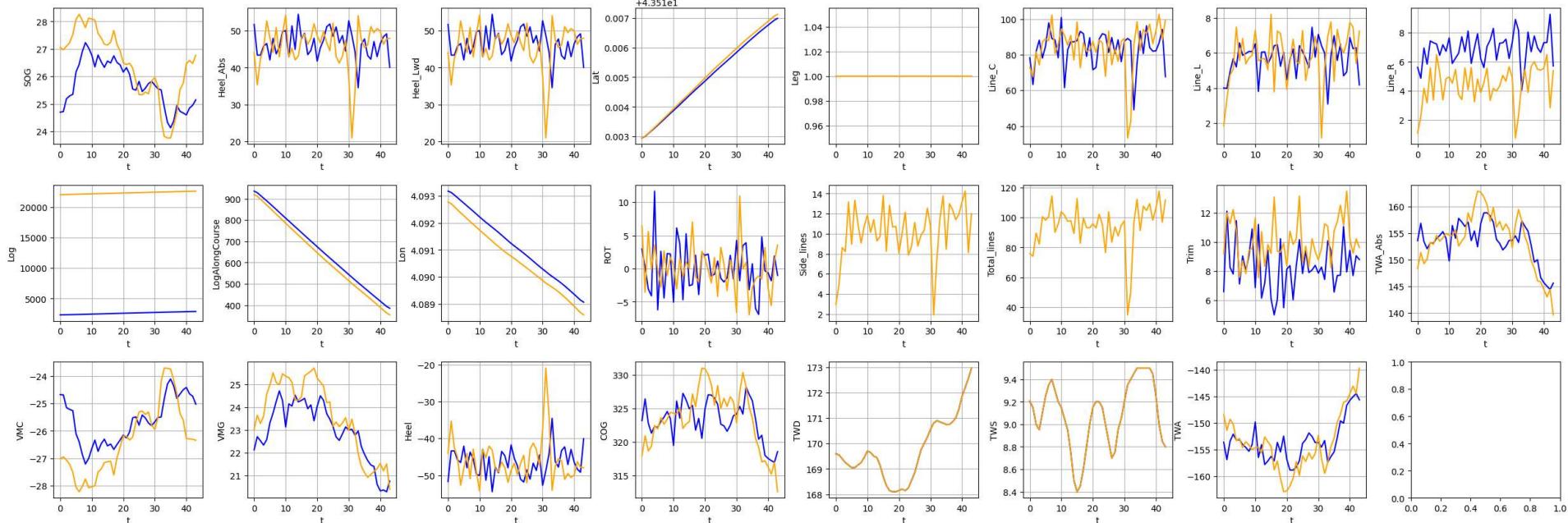
<b>Initial Deficit</b>	19.099398	25.365599	-5.854248
------------------------	-----------	-----------	-----------

<b>Final Deficit</b>	34.860714	21.693081	-21.607764
----------------------	-----------	-----------	------------

<b>Total Gain</b>	15.761316	-3.672518	-15.753516
-------------------	-----------	-----------	------------

<b>Gain per Minute</b>	22.303223	-5.196837	-22.292185
------------------------	-----------	-----------	------------

Interval 2: Downwind from 2025-06-07 12:17:52 to 2025-06-07 12:18:35 — SenseBoard vs Gian Stragiotti - Parameters over time



— SenseBoard SOG — Gian Stragiotti SOG

Error: No or insufficient intervals for run: 07\_06\_Run4

=====  
Processing run: 07\_06\_Run5  
=====

-----  
Interval 2: Downwind  
-----

```
{'SOG_variation_boat1': 0.7701955440236677,
'SOG_variation_boat2': 0.778771773625049,
'avg_TWA_boat1': -145.96590286975717,
'avg_TWA_boat2': -142.77557522123894,
'avg_SOG_boat1': 26.671302428256066,
'avg_SOG_boat2': 26.09359823399559,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 108.19,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 45.187000036239624,
'end_time': 174930002.263,
'stability_score': 0.9616737321092284,
'start_time': 1749299957.076}
```

Processing: Interval 2: Downwind from 2025-06-07 12:39:17 to 2025-06-07 12:40:02 – SenseBoard vs Gian Stragiotti

=====  
Interval 2: Downwind from 2025-06-07 12:39:17 to 2025-06-07 12:40:02 – SenseBoard vs Gian Stragiotti  
=====

	Run Statistics												
	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.83	7.829	6.109	6.109	9.995	9.996	452	453	0.9128	0.9118			
<b>TWD</b>	176.4	176.4	170.4	170.4	181.1	181.1	452	453	3.954	3.959			
<b>SOG</b>	26.09	26.67	23.8	24.5	27.3	28.1	452	453	0.778	0.7702	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	20.72	22	15.29	17.8	23.84	25.31	452	453	1.669	1.398	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	319.2	322.4	305.1	310.6	329.3	332.6	452	453	4.008	4.148		SenseBoard	SenseBoard
<b>TWA_Abs</b>	142.8	146	129.2	132.2	152.9	158	452	453	4.891	5.327			
<b>Heel_Lwd</b>	47.08	45.28	23.7	26.7	69.2	65.4	452	453	7.146	6.766	SenseBoard	Gian Stragiotti	Tie
<b>Line_C</b>	6.971	83.83	2.5	48.6	12.1	115	451	451	1.752	12.93	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	nan	10.15	nan	2.8	nan	20.1	nan	453	nan	2.776			
<b>Total_lines</b>	nan	94.41	nan	53.1	nan	134	nan	453	nan	14.66			

## Distance Summary

## SenseBoard Gian Stragiotti

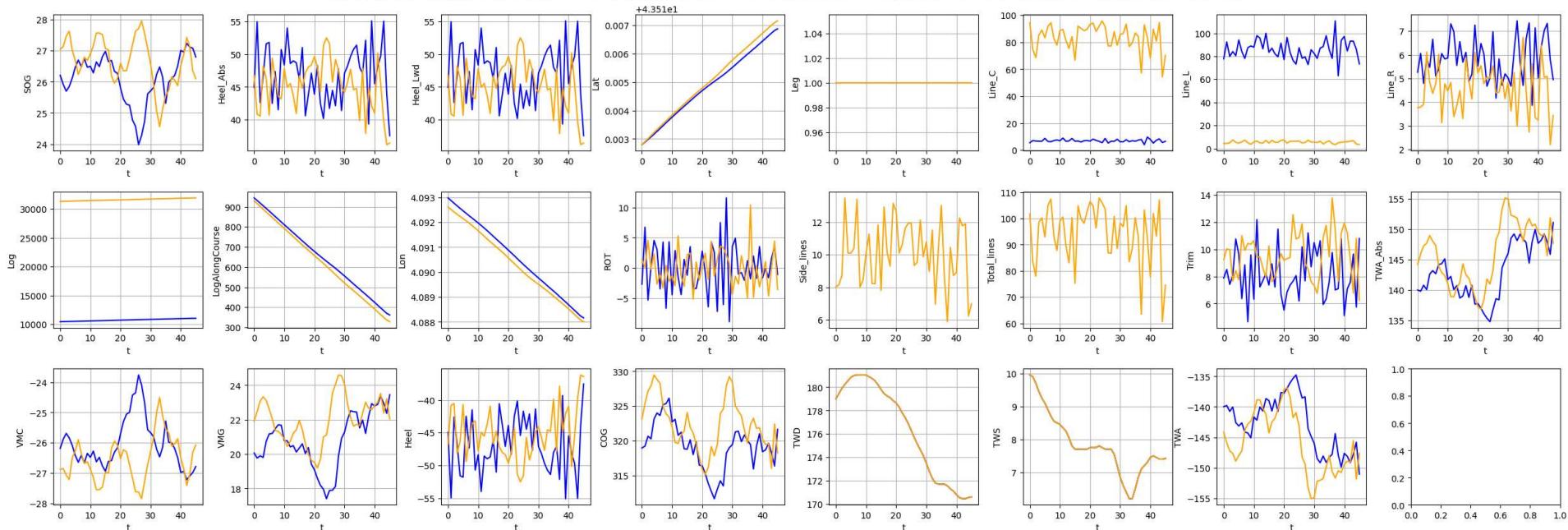
<b>Distance [m]</b>	606.233191	619.950591
<b>Straight Line [m]</b>	604.034223	617.650654
<b>Distance as Percentage of Straight Line [%]</b>	100.364047	100.372369

Gain of SenseBoard with respect to Gian Stragiotti

## Forward Lateral VMG

<b>Initial Deficit</b>	19.734451	22.606593	-2.038539
<b>Final Deficit</b>	32.460775	-10.940665	-32.466094
<b>Total Gain</b>	12.726324	-33.547257	-30.427555
<b>Gain per Minute</b>	16.936817	-44.646337	-40.494483

Interval 2: Downwind from 2025-06-07 12:39:17 to 2025-06-07 12:40:02 — SenseBoard vs Gian Stragiotti - Parameters over time



— SenseBoard SOG — Gian Stragiotti SOG

```
=====
Processing run: 07_06_Run6
=====
```

```
-----
Interval 2: Downwind
-----
```

```
{'SOG_variation_boat1': 0.5685403267056057,
'SOG_variation_boat2': 0.7157496418777685,
'avg TWA boat1': -141.94490314136124,
'avg TWA boat2': -142.37469473684212,
'avg_SOG_boat1': 28.251832460732984,
'avg_SOG_boat2': 26.881937172774872,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 108.19,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 38.1029999256134,
'end_time': 1749300632.26,
'stability_score': 0.9717130279723044,
'start_time': 1749300594.157}
```

Processing: Interval 2: Downwind from 2025-06-07 12:49:54 to 2025-06-07 12:50:32 – Gian Stragiotti vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-07 12:49:54 to 2025-06-07 12:50:32 – Gian Stragiotti vs SenseBoard
=====
```

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (SenseBoard)	Min (Gian Stragiotti)	Min (SenseBoard)	Max (Gian Stragiotti)	Max (SenseBoard)	Count (Gian Stragiotti)	Count (SenseBoard)	StdDev (Gian Stragiotti)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.88	7.878	7.405	7.405	8.453	8.422	382	380	0.2291	0.2277			
<b>TWD</b>	175.9	175.9	173	173.1	178.1	178.1	382	380	0.9957	0.9805			
<b>SOG</b>	28.25	26.89	27.1	25.1	29.4	28	382	380	0.5685	0.7111	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	22.2	21.26	19.29	18.35	25.1	23.84	382	380	1.442	1.283	Gian Stragiotti	SenseBoard	Tie
<b>COG</b>	317.9	318.3	309.7	309.8	328	327	382	380	4.162	3.716	SenseBoard	SenseBoard	
<b>TWA_Abs</b>	141.9	142.4	133.3	133.5	151	149.7	382	380	4.02	3.616			
<b>Heel_Lwd</b>	48.96	49.4	30.2	23.6	62.9	69.4	382	380	5.743	7.015	SenseBoard	Gian Stragiotti	Tie
<b>Side_lines</b>	10.61	nan	2.2	nan	18.6	nan	382	nan	3.239	nan			
<b>Line_C</b>	93.25	7.269	66.7	2.6	115.5	12.2	381	380	10.04	1.69	Gian Stragiotti	SenseBoard	Tie
<b>Total_lines</b>	104	nan	73.5	nan	131.1	nan	382	nan	11.22	nan			

## Distance Summary

## Gian Stragiotti SenseBoard

<b>Distance [m]</b>	554.517463	524.901041
---------------------	------------	------------

<b>Straight Line [m]</b>	552.509493	523.324458
--------------------------	------------	------------

<b>Distance as Percentage of Straight Line [%]</b>	100.363427	100.301263
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Gain of Gian Stragiotti with respect to SenseBoard

## Forward Lateral VMG

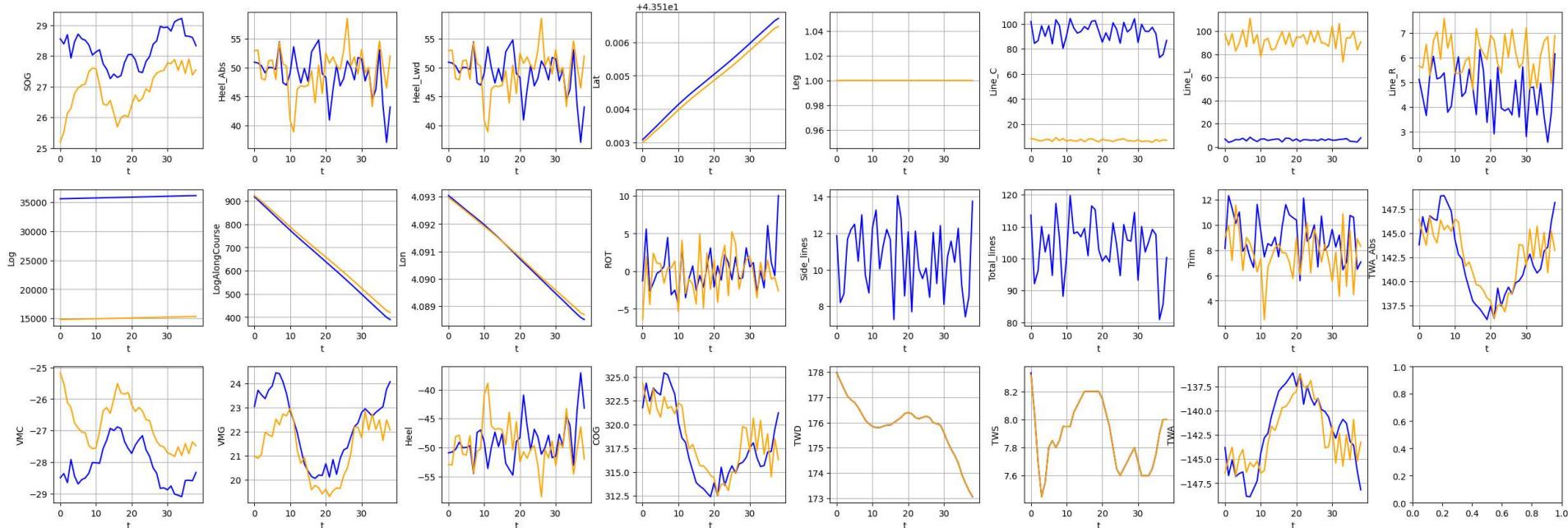
<b>Initial Deficit</b>	-0.996259	11.059991	7.602313
------------------------	-----------	-----------	----------

<b>Final Deficit</b>	-30.199945	7.556306	28.437445
----------------------	------------	----------	-----------

<b>Total Gain</b>	-29.203686	-3.503685	20.835132
-------------------	------------	-----------	-----------

<b>Gain per Minute</b>	-45.986435	-5.517180	32.808648
------------------------	------------	-----------	-----------

Interval 2: Downwind from 2025-06-07 12:49:54 to 2025-06-07 12:50:32 — Gian Stragiotti vs SenseBoard - Parameters over time



```
=====
Processing run: 07_06_Run7
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.6994768334928197,  
'SOG_variation_boat2': 0.8057898398385431,  
'avg TWA boat1': -143.46581009615386,  
'avg TWA boat2': -142.24757004830917,  
'avg_SOG_boat1': 26.33076923076923,  
'avg_SOG_boat2': 26.25721153846154,  
'boat1_master_leeward': True,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.97500000000001,  
'boat2_master_leeward': False,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.08999999999999,  
'duration': 41.49900007247925,  
'end_time': 1749301457.157,  
'stability_score': 0.9490600930144912,  
'start_time': 1749301415.658}
```

Processing: Interval 2: Downwind from 2025-06-07 13:03:35 to 2025-06-07 13:04:17 – Karl Maeder vs SenseBoard

```
=====  
Interval 2: Downwind from 2025-06-07 13:03:35 to 2025-06-07 13:04:17 – Karl Maeder vs SenseBoard  
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.391	9.395	8	8	10.3	10.3	416	414	0.6166	0.6143			
<b>TWD</b>	176.1	176.1	170.8	170.8	179.4	179.4	416	414	2.469	2.461			
<b>SOG</b>	26.33	26.25	24.5	25.1	27.5	29.3	416	414	0.6995	0.8072	Karl Maeder	Karl Maeder	Karl Maeder
<b>VMG</b>	20.95	20.73	16.83	17.26	25.44	25.66	416	414	2.067	1.631	Karl Maeder	SenseBoard	Tie
<b>COG</b>	319.6	318.4	308.7	310.5	335.3	326.6	416	414	5.781	2.46		SenseBoard	SenseBoard
<b>TWA_Abs</b>	143.5	142.2	130.1	132.6	162.7	154.3	416	414	7.922	3.89			
<b>Heel_Lwd</b>	49.2	46.53	34.5	28	64	69.7	416	414	5.317	6.858	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	94.58	10.22	62.8	2.9	133.5	17.8	416	414	12.29	2.609	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	7.246	82.29	3	57.1	14	117.5	416	412	1.75	11.46	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	101.5	92.38	68.2	62.4	145.9	129.3	416	414	12.78	12.93	Karl Maeder	Karl Maeder	Karl Maeder

## Distance Summary

## Karl Maeder SenseBoard

Distance [m]	562.551935	557.987325
--------------	------------	------------

Straight Line [m]	559.011743	556.693566
-------------------	------------	------------

Distance as Percentage of Straight Line [%]	100.633295	100.232401
---	------------	------------

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

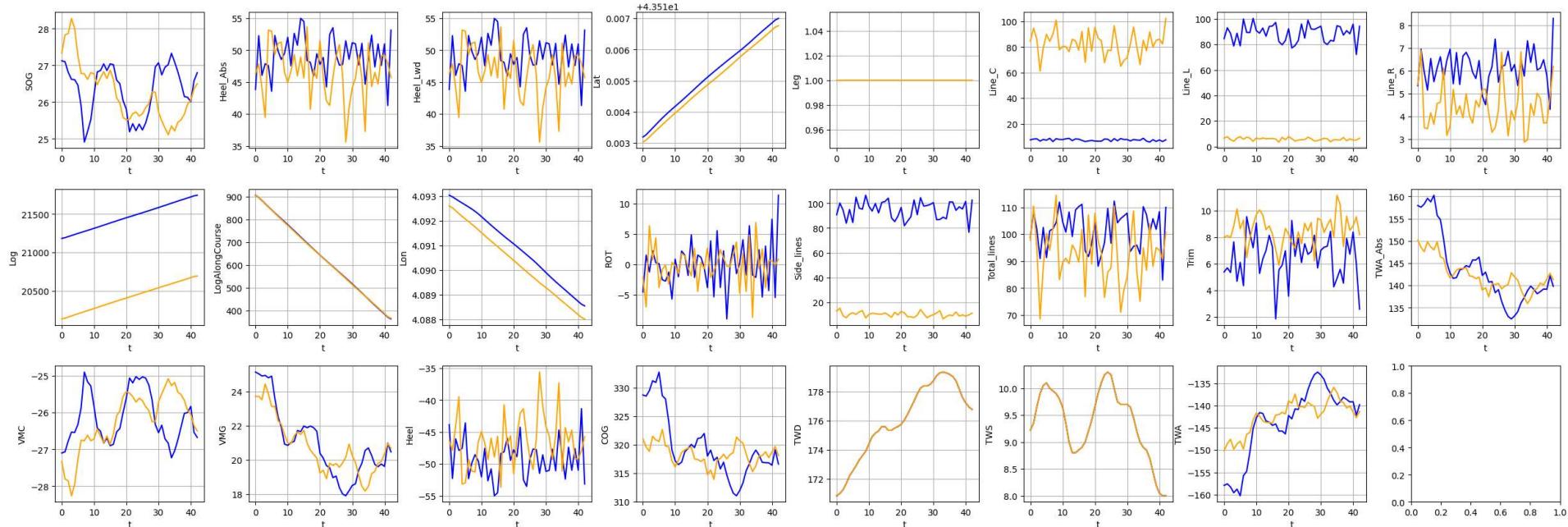
Initial Deficit	9.734838	38.017379	14.814789
-----------------	----------	-----------	-----------

Final Deficit	7.270406	49.145837	23.420772
---------------	----------	-----------	-----------

Total Gain	-2.464431	11.128458	8.605983
------------	-----------	-----------	----------

Gain per Minute	-3.563119	16.089725	12.442685
-----------------	-----------	-----------	-----------

Interval 2: Downwind from 2025-06-07 13:03:35 to 2025-06-07 13:04:17 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

```
=====
Processing run: 07_06_Run8
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.8091860497107752,  
'SOG_variation_boat2': 0.8184785351654248,  
'avg TWA boat1': -148.05330720338983,  
'avg TWA boat2': -147.50978510638302,  
'avg_SOG_boat1': 27.379025423728816,  
'avg_SOG_boat2': 27.6625,  
'boat1_master_leeward': False,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.9750000000001,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.0899999999999,  
'duration': 47.09400010108948,  
'end_time': 1749301961.953,  
'stability_score': 0.9616375431561365,  
'start_time': 1749301914.859}
```

Processing: Interval 2: Downwind from 2025-06-07 13:11:54 to 2025-06-07 13:12:41 – SenseBoard vs Karl Maeder

```
=====  
Interval 2: Downwind from 2025-06-07 13:11:54 to 2025-06-07 13:12:41 – SenseBoard vs Karl Maeder  
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	10.13	10.13	8.405	8.406	11.99	11.99	470	472	1.042	1.041			
<b>TWD</b>	187.6	187.6	181.6	181.6	190.8	190.8	470	472	2.765	2.774			
<b>SOG</b>	27.66	27.38	26.3	25.5	29.3	28.8	470	472	0.8159	0.8092	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	23.26	23.16	19.76	19.73	27.22	26.55	470	472	1.568	1.368	SenseBoard	Karl Maeder	Tie
<b>COG</b>	335.1	335.7	324.4	326.5	343.3	344.5	470	472	3.716	3.593		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	147.5	148.1	135.3	136.3	159.7	159.8	470	472	4.849	4.56			
<b>Heel_Lwd</b>	44.61	46.63	25.2	20.1	65.9	67.2	470	472	6.746	6.259	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	9.291	92.91	2.1	48.9	16.5	151.5	470	472	2.501	16.51	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	79.07	7.14	53.2	2.8	105.7	11.9	468	472	10.41	1.908	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	88.45	100	58.5	57.6	113.4	163.4	470	472	11.34	17.68	Karl Maeder	SenseBoard	Tie

## Distance Summary

## SenseBoard Karl Maeder

Distance [m] 667.682968 663.296113

Straight Line [m] 665.732089 661.525287

Distance as Percentage of Straight Line [%] 100.293043 100.267688

Gain of SenseBoard with respect to Karl Maeder

## Forward Lateral VMG

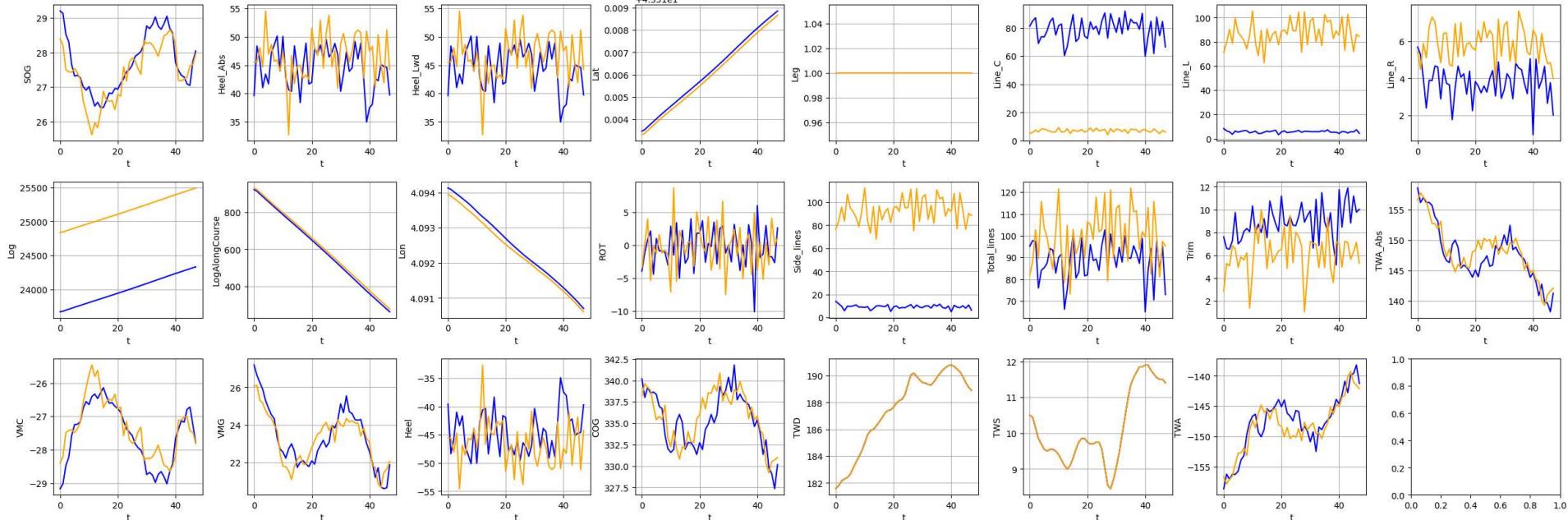
Initial Deficit -10.718171 21.428638 20.551183

Final Deficit -14.955077 15.384098 20.878040

Total Gain -4.236906 -6.044539 0.326857

Gain per Minute -5.420234 -7.732721 0.418145

Interval 2: Downwind from 2025-06-07 13:11:54 to 2025-06-07 13:12:41 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

```
=====
Processing run: 07_06_Run9
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.6630842211928816,  
'SOG_variation_boat2': 0.7550342961025506,  
'avg TWA boat1': -147.36239002267575,  
'avg TWA boat2': -146.5883696145125,  
'avg_SOG_boat1': 28.447392290249432,  
'avg_SOG_boat2': 28.581179138321993,  
'boat1_master_leeward': True,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.97500000000001,  
'boat2_master_leeward': False,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.08999999999999,  
'duration': 44.01100015640259,  
'end_time': 1749302440.459,  
'stability_score': 0.9651754089517661,  
'start_time': 1749302396.448}
```

Processing: Interval 2: Downwind from 2025-06-07 13:19:56 to 2025-06-07 13:20:40 – Karl Maeder vs SenseBoard

```
=====  
Interval 2: Downwind from 2025-06-07 13:19:56 to 2025-06-07 13:20:40 – Karl Maeder vs SenseBoard  
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	9.905	9.905	8.906	8.905	10.6	10.6	441	441	0.5114	0.5115			
<b>TWD</b>	186.2	186.2	179.3	179.3	195.8	195.8	441	441	5.045	5.045			
<b>SOG</b>	28.45	28.58	27	26.9	29.8	30.2	441	441	0.6631	0.7518	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	23.85	23.74	19.63	21.36	26.5	26.27	441	441	1.215	1.027	Karl Maeder	SenseBoard	Tie
<b>COG</b>	333.5	332.8	323.8	325.4	343	339.5	441	441	3.237	2.55		SenseBoard	SenseBoard
<b>TWA_Abs</b>	147.4	146.6	132.4	136	158.8	158.1	441	441	5.028	4.971			
<b>Heel_Lwd</b>	49.54	46.13	32.4	26.7	65.7	66.8	441	441	5.904	5.844	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	95.58	9.726	62.7	1.1	135.8	19.9	441	441	13.38	2.958	Karl Maeder	SenseBoard	Tie
<b>Line_C</b>	7.23	84.97	2.7	47.8	12.2	115	441	439	1.933	10.86	SenseBoard	Karl Maeder	Tie
<b>Total_lines</b>	102.7	94.78	66.1	51.6	146.5	130.1	441	441	13.94	11.77	Karl Maeder	SenseBoard	Tie

## Distance Summary

## Karl Maeder SenseBoard

Distance [m] 643.871252 645.818158

Straight Line [m] 642.292491 644.671553

Distance as Percentage of Straight Line [%] 100.245801 100.177859

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

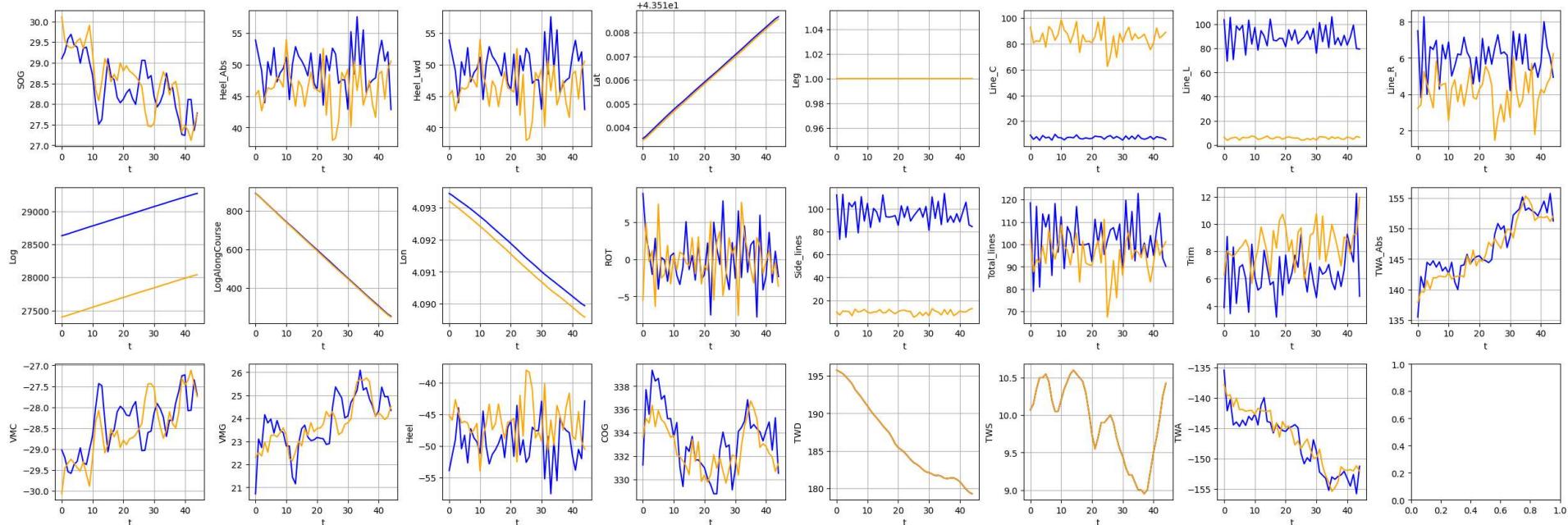
Initial Deficit 0.656779 21.313905 10.940993

Final Deficit 2.968152 30.533484 13.966421

Total Gain 2.311372 9.219580 3.025428

Gain per Minute 3.151084 12.569012 4.124553

Interval 2: Downwind from 2025-06-07 13:19:56 to 2025-06-07 13:20:40 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

Error: At least two CSV files are required.  
Error: No or insufficient intervals for run: 09\_06\_Run1

```
=====
Processing run: 09_06_Run10
=====
```

-----  
Interval 2: Downwind

```
{'SOG_variation_boat1': 0.5265769855048806,
'SOG_variation_boat2': 0.556149167909675,
'avg TWA boat1': -141.5574108216433,
'avg TWA boat2': -141.35800401606423,
'avg_SOG_boat1': 26.750901803607217,
'avg_SOG_boat2': 27.055511022044087,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.9750000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.08999999999999,
'duration': 49.80200004577637,
'end_time': 1749475704.256,
'stability_score': 0.967040276958964,
'start_time': 1749475654.454}
```

Processing: Interval 2: Downwind from 2025-06-09 13:27:34 to 2025-06-09 13:28:24 – SenseBoard vs Karl Maeder

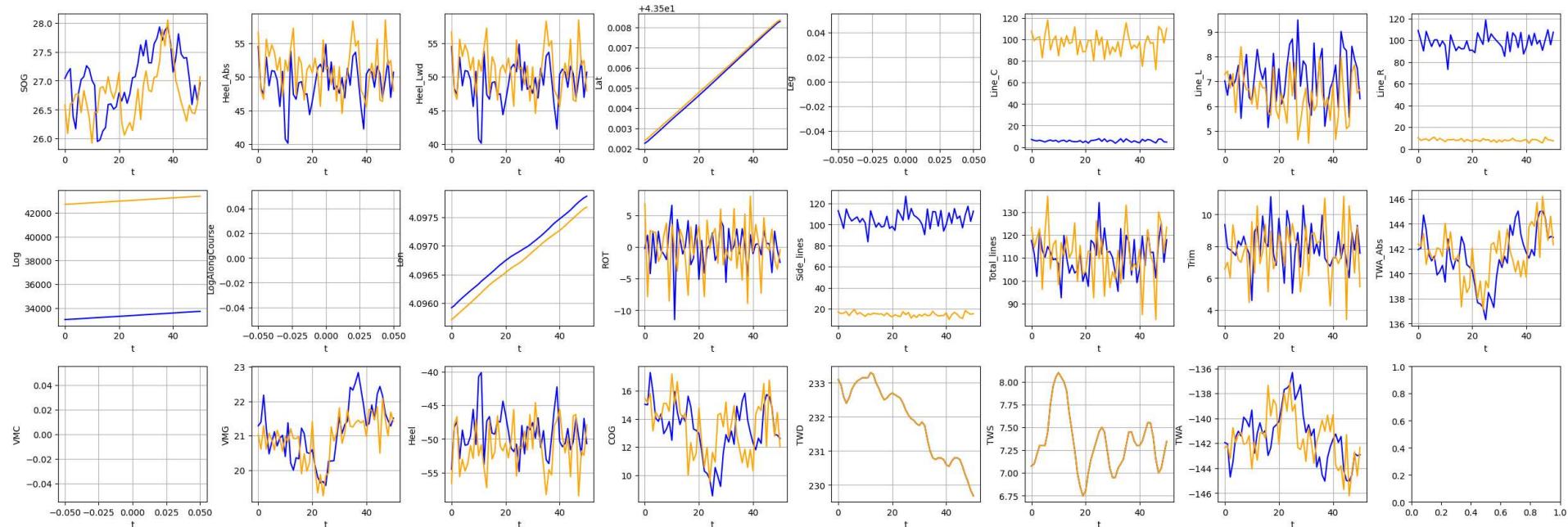
```
=====
Interval 2: Downwind from 2025-06-09 13:27:34 to 2025-06-09 13:28:24 – SenseBoard vs Karl Maeder
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.338	7.338	6.704	6.704	8.1	8.1	498	499	0.329	0.3289			
<b>TWD</b>	231.9	231.9	229.7	229.7	233.4	233.4	498	499	1.025	1.025			
<b>SOG</b>	27.05	26.75	24.4	24.5	28.4	28.3	498	499	0.5647	0.5266	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	21.1	20.92	18.4	17.89	23.43	23.05	498	499	1.01	0.8914	SenseBoard	Karl Maeder	Tie
<b>COG</b>	13.27	13.48	5.6	4.1	22.8	20.5	498	499	2.697	2.863		SenseBoard	SenseBoard
<b>TWA_Abs</b>	141.4	141.6	133	133.3	149.7	148.9	498	499	2.891	2.927			
<b>Heel_Lwd</b>	49.04	51.16	32.8	31.7	63.8	69.8	498	499	5.224	6.16	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	105	14.63	51.4	5.9	146.8	23.2	498	499	12.33	3.089	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	5.729	96.57	0	60.7	10.3	132.7	498	499	1.94	12.81	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	110.8	111.2	54.6	72.3	155.7	149	498	499	12.87	14.44	Karl Maeder	SenseBoard	Tie

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	692.346612	685.413073
Straight Line [m]	691.578962	684.565694
Distance as Percentage of Straight Line [%]	100.111000	100.123784
Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
<b>Initial Deficit</b>	11.252680	20.176281
<b>Final Deficit</b>	4.218207	16.832598
<b>Total Gain</b>	-7.034473	-3.343683
<b>Gain per Minute</b>	-8.492493	-4.036721
	4.112436	

Interval 2: Downwind from 2025-06-09 13:27:34 to 2025-06-09 13:28:24 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

```
=====
Processing run: 09_06_Run11
=====
```

```
-----
Interval 2: Downwind
-----
```

```
{'SOG_variation_boat1': 0.595943023245209,
'SOG_variation_boat2': 1.301806479623148,
'avg TWA boat1': -143.12540796963947,
'avg TWA boat2': -144.06554562737642,
'avg_SOG_boat1': 25.45749525616698,
'avg_SOG_boat2': 25.68709677419355,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.97500000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.08999999999999,
'duration': 52.59599995613098,
'end_time': 1749476288.852,
'stability_score': 0.9622185408950876,
'start_time': 1749476236.256}
```

Processing: Interval 2: Downwind from 2025-06-09 13:37:16 to 2025-06-09 13:38:08 – Karl Maeder vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-09 13:37:16 to 2025-06-09 13:38:08 – Karl Maeder vs SenseBoard
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.009	7.008	6.405	6.404	7.496	7.496	527	526	0.3006	0.3008			
<b>TWD</b>	227.7	227.7	226.7	226.7	228.5	228.5	527	526	0.3898	0.3902			
<b>SOG</b>	25.46	25.69	23.9	22.4	26.7	28.1	527	526	0.5959	1.295	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	20.33	20.7	17.28	18.02	22.64	23.14	527	526	0.9043	1.015	SenseBoard	Karl Maeder	Tie
<b>COG</b>	10.82	11.76	1.9	3.4	18.8	24.2	527	526	3.035	4.303		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	143.1	144.1	133.9	135.7	151.8	157	527	526	3.224	4.52			
<b>Heel_Lwd</b>	47.79	45.54	17.7	24.3	65.8	63.3	527	526	6.722	7.073	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	13.27	91.39	4.2	50.2	22.6	127.3	527	526	2.922	14.83	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	88.24	4.58	45.1	0	136.2	9.2	527	524	14.16	1.713	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	101.5	96.1	51.3	50.6	149.6	132.2	527	526	16.05	15.94	Karl Maeder	SenseBoard	Tie

## Distance Summary

## Karl Maeder SenseBoard

<b>Distance [m]</b>	688.421640	692.360352
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<b>Straight Line [m]</b>	687.459131	690.486777
--------------------------	------------	------------

<b>Distance as Percentage of Straight Line [%]</b>	100.140010	100.271341
--	------------	------------

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

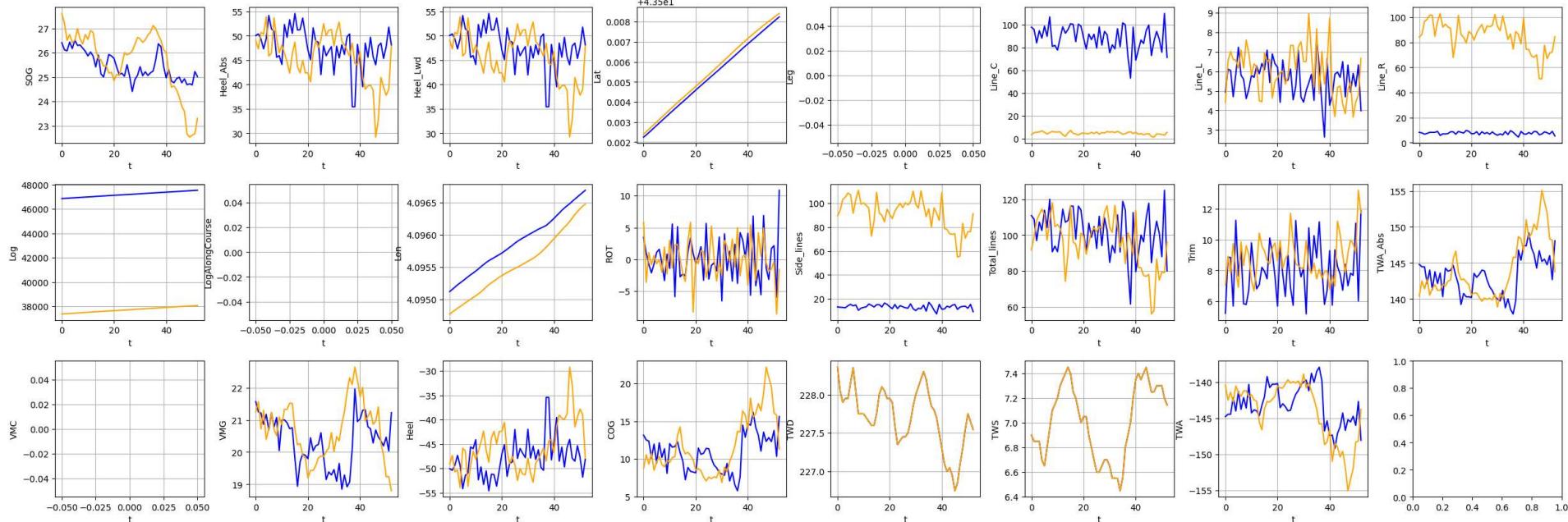
<b>Initial Deficit</b>	11.678188	30.330984	8.858563
------------------------	-----------	-----------	----------

<b>Final Deficit</b>	14.641676	21.172340	0.992138
----------------------	-----------	-----------	----------

<b>Total Gain</b>	2.963488	-9.158644	-7.866424
-------------------	----------	-----------	-----------

<b>Gain per Minute</b>	3.380661	-10.447917	-8.973790
------------------------	----------	------------	-----------

Interval 2: Downwind from 2025-06-09 13:37:16 to 2025-06-09 13:38:08 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

Error: No or insufficient intervals for run: 09\_06\_Run2  
 Error: At least two CSV files are required.

```
=====
Processing run: 09_06_Run4
=====
```

-----  
 Interval 2: Downwind

```
{'SOG_variation_boat1': 0.849627104813067,
 'SOG_variation_boat2': 0.5257048959698549,
 'avg TWA boat1': -134.64182882882884,
 'avg TWA boat2': -134.72823702031604,
 'avg_SOG_boat1': 27.6213963963964,
 'avg_SOG_boat2': 28.11644144144144,
 'boat1_master_leeward': False,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 106.97500000000001,
 'boat2_master_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.08999999999999,
 'duration': 44.29400014877319,
 'end_time': 1749472312.65,
 'stability_score': 0.9623474927915108,
 'start_time': 1749472268.356}
```

Processing: Interval 2: Downwind from 2025-06-09 12:31:08 to 2025-06-09 12:31:52 – SenseBoard vs Karl Maeder

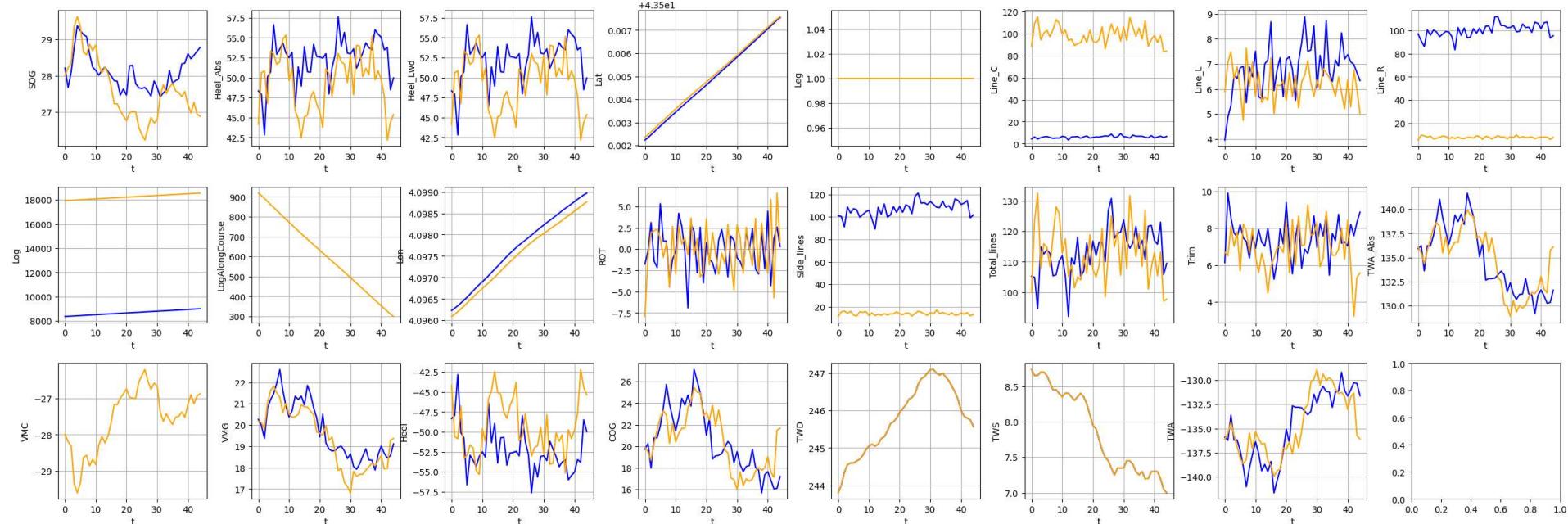
```
=====
Interval 2: Downwind from 2025-06-09 12:31:08 to 2025-06-09 12:31:52 – SenseBoard vs Karl Maeder
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.861	7.859	7	7	8.764	8.764	443	444	0.5682	0.569			
<b>TWD</b>	245.8	245.8	243.8	243.8	247.1	247.1	443	444	0.9124	0.9117			
<b>SOG</b>	28.11	27.62	27.2	26.1	29.5	29.8	443	444	0.5262	0.8496	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	19.74	19.38	16.61	14.59	23.07	22.76	443	444	1.461	1.535	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	20.53	20.44	11.9	9.2	29.4	27.3	443	444	3.431	3.222		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	134.7	134.6	126.2	123.4	143.9	142	443	444	3.892	3.698			
<b>Heel_Lwd</b>	52.31	49.4	32.3	33.6	65.3	63.1	443	444	5.335	5.706	SenseBoard	SenseBoard	SenseBoard
<b>Side_lines</b>	107.1	13.94	75	6.5	128.3	22	443	444	8.781	2.695	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	6.126	98.77	0.2	74.8	15.7	133.9	442	444	2.326	11.01	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	113.5	112.8	75.2	85.4	140.1	151	443	444	10.03	12.32	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	639.025352	629.036540
<b>Straight Line [m]</b>	637.870393	628.039306
<b>Distance as Percentage of Straight Line [%]</b>	100.181065	100.158785
Gain of SenseBoard with respect to Karl Maeder		
<b>Forward</b>	8.589108	15.408385
<b>Lateral</b>	-1.256093	16.558438
<b>VMG</b>	<b>Total Gain</b>	<b>7.745527</b>
<b>Gain per Minute</b>	<b>-9.845201</b>	<b>1.150054</b>
<b>Gain per Minute</b>	<b>-13.364223</b>	<b>1.561124</b>
<b>Gain per Minute</b>	<b>10.514053</b>	

Interval 2: Downwind from 2025-06-09 12:31:08 to 2025-06-09 12:31:52 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

Error: No or insufficient intervals for run: 09\_06\_Run5

=====  
Processing run: 09\_06\_Run6  
=====

-----  
Interval 2: Downwind  
-----

```
{'SOG_variation_boat1': 0.9562666476793272,
'SOG_variation_boat2': 0.9439934006012783,
'avg_TWA_boat1': -137.5699430379747,
'avg_TWA_boat2': -137.814531779661,
'avg_SOG_boat1': 26.858227848101265,
'avg_SOG_boat2': 27.347257383966245,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 106.97500000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.08999999999999,
'duration': 47.29200005531311,
'end_time': 1749473362.253,
'stability_score': 0.947487140959874,
'start_time': 1749473314.961}
```

Processing: Interval 2: Downwind from 2025-06-09 12:48:34 to 2025-06-09 12:49:22 – SenseBoard vs Karl Maeder

=====  
Interval 2: Downwind from 2025-06-09 12:48:34 to 2025-06-09 12:49:22 – SenseBoard vs Karl Maeder  
=====

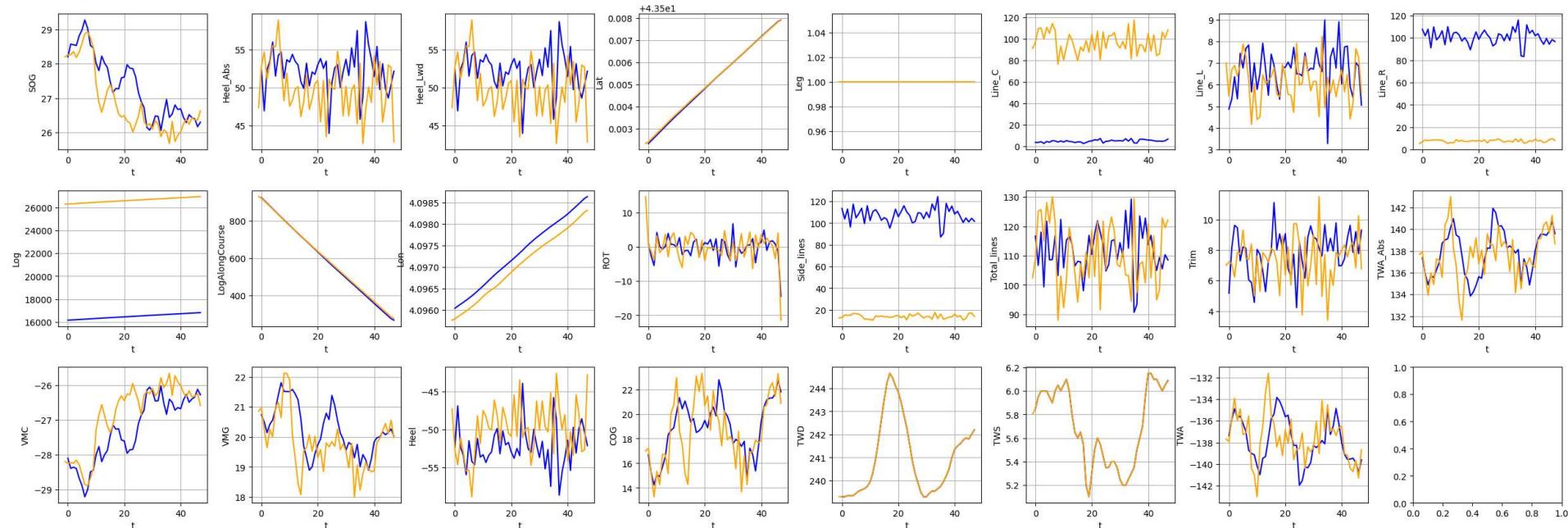
Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	5.694	5.695	5.01	5.01	6.196	6.196	472	474	0.3288	0.3286			
<b>TWD</b>	241	241	239.3	239.3	244.7	244.7	472	474	1.635	1.634			
<b>SOG</b>	27.35	26.86	24.5	25.1	30.1	29.6	472	474	0.9583	0.9563	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	20.24	19.8	16.9	16.18	23.29	23.23	472	474	1.003	1.073	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	18.8	18.55	10.2	8.5	26.2	26.3	472	474	2.816	3.282			
<b>TWA_Abs</b>	137.8	137.6	130.8	129.1	145.1	145.9	472	474	2.725	2.811			
<b>Heel_Lwd</b>	52.24	50.09	34.5	35.5	68.1	66.3	472	474	5.18	5.961	SenseBoard	SenseBoard	SenseBoard
<b>Side_lines</b>	107.3	13.92	69.5	6.6	141.7	25.4	472	474	10.89	2.91	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	4.909	96.85	0	68.4	10.7	130.2	469	474	2.099	13.06	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	111.9	110.3	71.5	82.2	152.4	151.4	472	474	11.4	14.04	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	661.215301	652.802042
Straight Line [m]	660.398203	651.731524
Distance as Percentage of Straight Line [%]	100.123728	100.164258
Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
<b>Initial Deficit</b>	0.125911	21.707538
<b>Final Deficit</b>	-8.558183	24.074262
<b>Total Gain</b>	<b>-8.684095</b>	<b>2.366724</b>
<b>Gain per Minute</b>	<b>-11.055734</b>	<b>3.013080</b>
		<b>10.215438</b>

Interval 2: Downwind from 2025-06-09 12:48:34 to 2025-06-09 12:49:22 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

```
=====
Processing run: 09_06_Run7
=====
```

```
-----
Interval 2: Downwind
-----
```

```
{'SOG_variation_boat1': 0.3075979509419556,
'SOG_variation_boat2': 0.4363757068660953,
'avg TWA boat1': -142.399125,
'avg TWA boat2': -141.92563450292397,
'avg_SOG_boat1': 27.270639534883717,
'avg_SOG_boat2': 27.467441860465115,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 106.9750000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 109.0899999999999,
'duration': 34.29300022125244,
'end_time': 1749473827.653,
'stability_score': 0.9731867204076343,
'start_time': 1749473793.36}
```

Processing: Interval 2: Downwind from 2025-06-09 12:56:33 to 2025-06-09 12:57:07 – Karl Maeder vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-09 12:56:33 to 2025-06-09 12:57:07 – Karl Maeder vs SenseBoard
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.339	8.338	7.7	7.7	8.7	8.7	344	342	0.3361	0.337			
<b>TWD</b>	243.5	243.5	241.9	241.9	245.1	245.1	344	342	0.836	0.8335			
<b>SOG</b>	27.27	27.48	25.2	26.4	29.1	29.3	344	342	0.3076	0.4449	SenseBoard	Karl Maeder	Tie
<b>VMG</b>	21.57	21.6	18.35	19.13	23.89	24.31	344	342	0.9175	1.06	SenseBoard	Karl Maeder	Tie
<b>COG</b>	25.87	25.39	17	17.2	33.4	35.2	344	342	2.759	3.25		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	142.4	141.9	132.8	134.2	150.3	150.5	344	342	3.134	3.315			
<b>Heel_Lwd</b>	50.98	50.03	34.7	33.4	66.6	65.8	344	342	5.596	5.704	Karl Maeder	Karl Maeder	Karl Maeder
<b>Side_lines</b>	14.8	102.1	7	57.5	22.4	129.3	344	342	2.544	11.59	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	98.66	5.231	72.5	0	132.2	10.4	344	342	11.84	2.004	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	113.5	107.3	85.1	62.7	150.4	134.5	344	342	13.35	12.55	Karl Maeder	SenseBoard	Tie

## Distance Summary

## Karl Maeder SenseBoard

Distance [m]	481.306534	481.661093
--------------	------------	------------

Straight Line [m]	480.752082	480.885773
-------------------	------------	------------

Distance as Percentage of Straight Line [%]	100.115330	100.161228
---	------------	------------

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

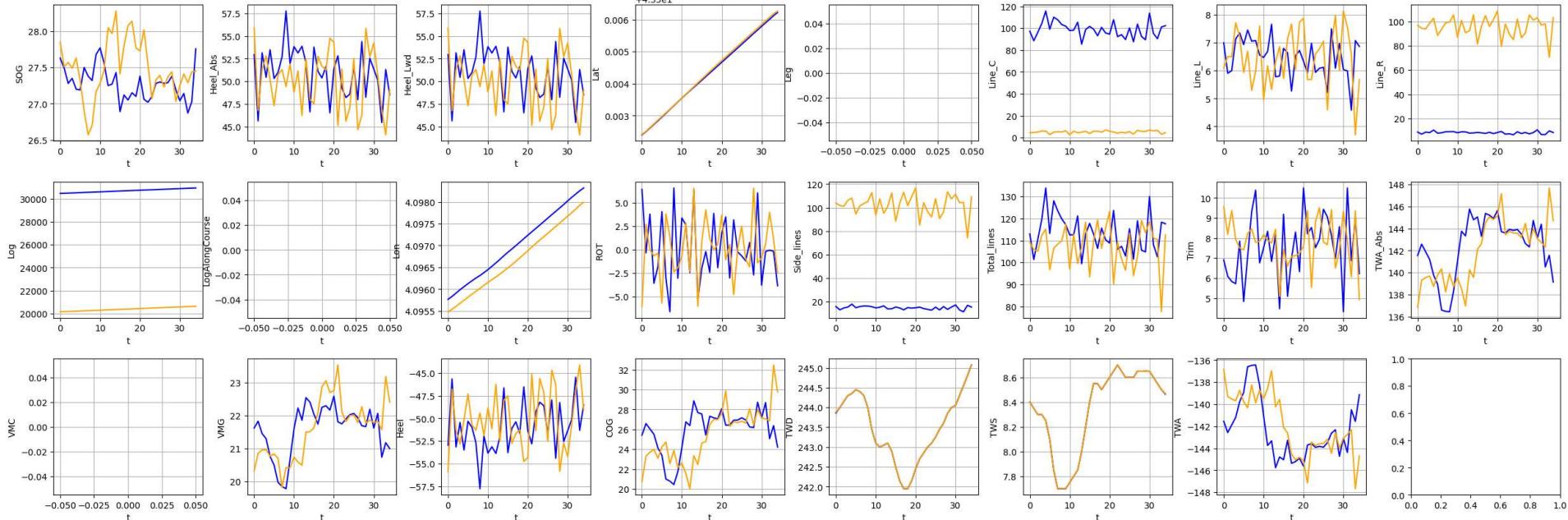
<b>Initial Deficit</b>	-7.938432	20.909369	19.047316
------------------------	-----------	-----------	-----------

<b>Final Deficit</b>	-7.818044	25.661175	21.851235
----------------------	-----------	-----------	-----------

<b>Total Gain</b>	0.120388	4.751807	2.803919
-------------------	----------	----------	----------

<b>Gain per Minute</b>	0.210635	8.313895	4.905815
------------------------	----------	----------	----------

Interval 2: Downwind from 2025-06-09 12:56:33 to 2025-06-09 12:57:07 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

```
=====
Processing run: 09_06_Run8
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.7666824539305778,  
'SOG_variation_boat2': 0.6466930633281409,  
'avg TWA boat1': -142.5215644820296,  
'avg TWA boat2': -142.49367940552017,  
'avg_SOG_boat1': 26.936997885835094,  
'avg_SOG_boat2': 28.12811839323467,  
'boat1_master_leeward': False,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 100.97500000000001,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 115.08999999999999,  
'duration': 47.19899998474121,  
'end_time': 174947451.045,  
'stability_score': 0.9627796173107166,  
'start_time': 1749474493.854}
```

Processing: Interval 2: Downwind from 2025-06-09 13:08:13 to 2025-06-09 13:09:01 – SenseBoard vs Karl Maeder

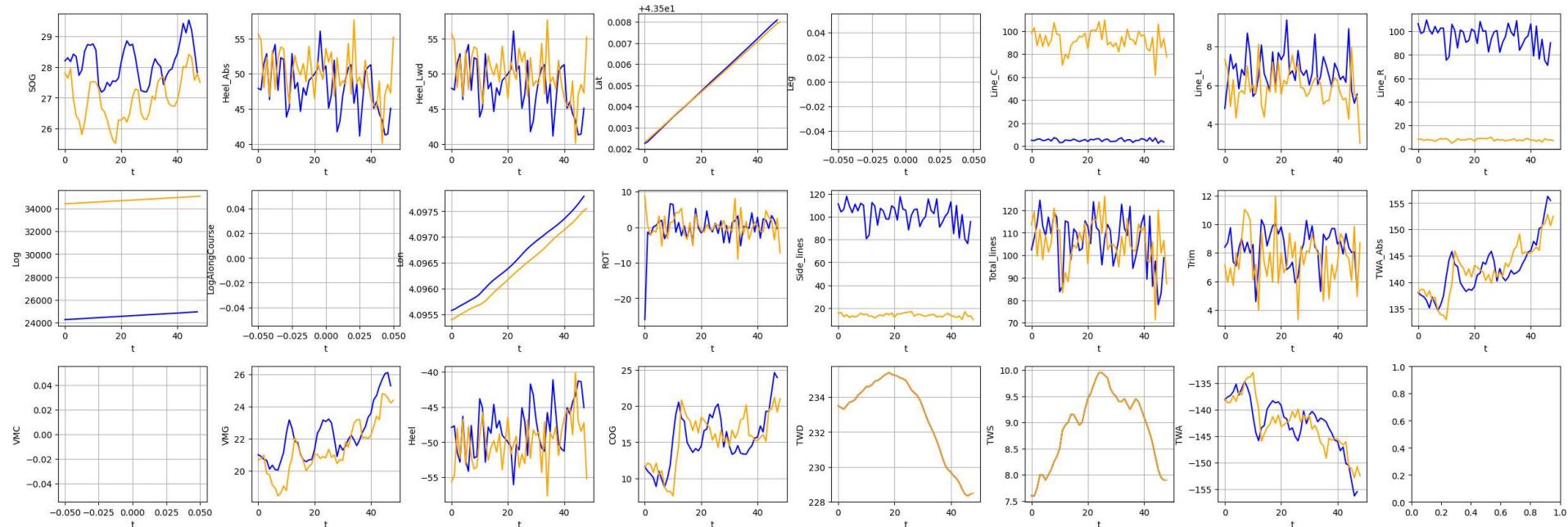
```
=====  
Interval 2: Downwind from 2025-06-09 13:08:13 to 2025-06-09 13:09:01 – SenseBoard vs Karl Maeder  
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.949	8.944	7.6	7.6	9.995	9.996	471	473	0.6708	0.6739			
<b>TWD</b>	233	232.9	228.3	228.3	235.4	235.4	471	473	2.279	2.284			
<b>SOG</b>	28.13	26.94	26.9	24.7	29.7	28.9	471	473	0.6494	0.7667	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	22.23	21.31	18.77	17.13	27.28	25.46	471	473	1.702	1.679	SenseBoard	Karl Maeder	Tie
<b>COG</b>	15.45	15.47	5.5	5.6	26.8	25.6	471	473	4.092	3.838		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	142.5	142.5	131.4	131.3	158.3	155.5	471	473	5.244	4.934			
<b>Heel_Lwd</b>	48.06	49.81	33.4	34.7	63	66.2	471	473	5.803	5.809	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	101.7	13.66	60.4	4.7	133.6	23.9	471	473	13.64	2.945	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	5.246	91.96	0	56.2	10.2	123.8	469	473	1.913	12.42	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	106.6	105.8	62.8	64	138.7	142.7	471	473	14.13	13.57	SenseBoard	Karl Maeder	Tie

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	679.904964	653.947489
Straight Line [m]	678.178992	652.472263
Distance as Percentage of Straight Line [%]	100.254501	100.226098
Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
<b>Initial Deficit</b>	4.097963	16.262065
<b>Final Deficit</b>	-21.651571	16.785085
<b>Total Gain</b>	<b>-25.749534</b>	<b>0.523020</b>
<b>Gain per Minute</b>	<b>-32.871745</b>	<b>0.667685</b>
		<b>26.482715</b>

Interval 2: Downwind from 2025-06-09 13:08:13 to 2025-06-09 13:09:01 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

```
=====
Processing run: 09_06_Run9
=====
```

```
-----
Interval 2: Downwind
-----
```

```
{'SOG_variation_boat1': 1.0217059599533802,
'SOG_variation_boat2': 0.9318197050401614,
'avg TWA boat1': -141.57092949907235,
'avg TWA boat2': -141.8663840445269,
'avg_SOG_boat1': 26.241558441558443,
'avg_SOG_boat2': 26.94601113172542,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_total_weight': 100.9750000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 115.0899999999999,
'duration': 53.80299997329712,
'end_time': 1749475174.256,
'stability_score': 0.9458172931147468,
'start_time': 1749475120.453}
```

Processing: Interval 2: Downwind from 2025-06-09 13:18:40 to 2025-06-09 13:19:34 – Karl Maeder vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-09 13:18:40 to 2025-06-09 13:19:34 – Karl Maeder vs SenseBoard
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.045	7.045	6.4	6.4	7.996	7.996	539	539	0.466	0.4661			
<b>TWD</b>	235.4	235.4	233.5	233.5	237.7	237.7	539	539	0.7963	0.7963			
<b>SOG</b>	26.24	26.94	23.5	23.9	29.7	28.6	539	539	1.022	0.9265	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	20.53	21.18	15.17	17.01	24.09	24.34	539	539	1.838	1.477	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	16.96	17.26	5.6	8.6	27.7	23.3	539	539	3.935	2.801			SenseBoard
<b>TWA_Abs</b>	141.6	141.9	129.3	132.8	152.4	149.1	539	539	4.406	3.139			
<b>Heel_Lwd</b>	48.89	46.85	18.9	21.9	66.7	63.3	539	539	7.083	6.565	Karl Maeder	SenseBoard	Tie
<b>Side_lines</b>	13.47	100.3	2.4	43	20.8	129.6	539	539	2.767	14	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	90.08	5.556	36.9	0	120.5	11.3	539	538	12.47	1.85	Karl Maeder	SenseBoard	Tie
<b>Total_lines</b>	103.4	106	42.2	43	138.6	138.8	539	539	14.12	15.04	SenseBoard	Karl Maeder	Tie

## Distance Summary

## Karl Maeder SenseBoard

<b>Distance [m]</b>	725.368854	743.841623
---------------------	------------	------------

<b>Straight Line [m]</b>	723.667963	742.950370
--------------------------	------------	------------

<b>Distance as Percentage of Straight Line [%]</b>	100.235037	100.119961
--	------------	------------

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

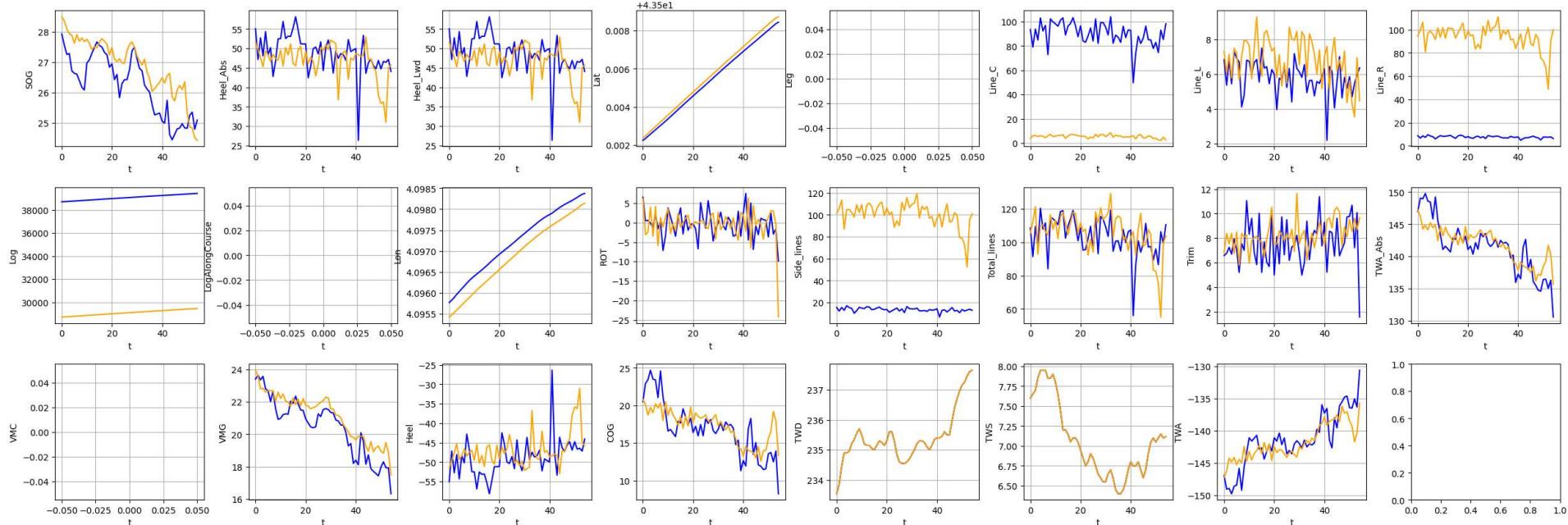
<b>Initial Deficit</b>	5.767867	31.035619	14.771746
------------------------	----------	-----------	-----------

<b>Final Deficit</b>	25.063841	27.297744	-2.667518
----------------------	-----------	-----------	-----------

<b>Total Gain</b>	19.295974	-3.737875	-17.439264
-------------------	-----------	-----------	------------

<b>Gain per Minute</b>	21.518474	-4.168401	-19.447909
------------------------	-----------	-----------	------------

Interval 2: Downwind from 2025-06-09 13:18:40 to 2025-06-09 13:19:34 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

Error: At least two CSV files are required.

```
=====
Processing run: 10_06_Run1
=====
```

```
-----
Interval 2: Downwind
-----
```

```
{'SOG_variation_boat1': 0.3462723462527339,
'SOG_variation_boat2': 0.42120353204467675,
'avg_TWA_boat1': -124.37445901639343,
'avg_TWA_boat2': -125.1762262773723,
'avg_SOG_boat1': 26.093624772313298,
'avg_SOG_boat2': 25.469581056466303,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.195,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 54.78699994087219,
'end_time': 1749558732.858,
'stability_score': 0.9730459562174268,
'start_time': 1749558678.071}
```

Processing: Interval 2: Downwind from 2025-06-10 12:31:18 to 2025-06-10 12:32:12 – SenseBoard vs Gian Stragiotti

```
=====
Interval 2: Downwind from 2025-06-10 12:31:18 to 2025-06-10 12:32:12 – SenseBoard vs Gian Stragiotti
=====
```

Run Statistics

	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	5.65	5.65	5.4	5.4	6	6	548	549	0.1418	0.1418			
<b>TWD</b>	218.5	218.4	216.9	216.9	219.6	219.6	548	549	0.8393	0.8411			
<b>SOG</b>	25.47	26.09	24.2	25.2	26.7	26.8	548	549	0.4216	0.3463	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	14.64	14.71	10.19	11.72	18.24	18.43	548	549	1.412	1.254	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	343.6	342.8	333.6	336.3	354.2	351.4	548	549	3.314	2.747		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	125.2	124.4	114.8	117.6	137.1	134.5	548	549	3.884	3.276			
<b>Heel_Lwd</b>	53.01	56.15	37.3	42.5	72.7	66.5	548	549	5.839	4.134	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	93.55	114.3	70.5	80.8	119.6	140.1	547	549	9.527	9.461	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	nan	16.67	nan	8.3	nan	24.6	nan	549	nan	3.195			
<b>Total_lines</b>	nan	130.9	nan	92.9	nan	157.9	nan	549	nan	10.88			

## Distance Summary

## SenseBoard Gian Stragiotti

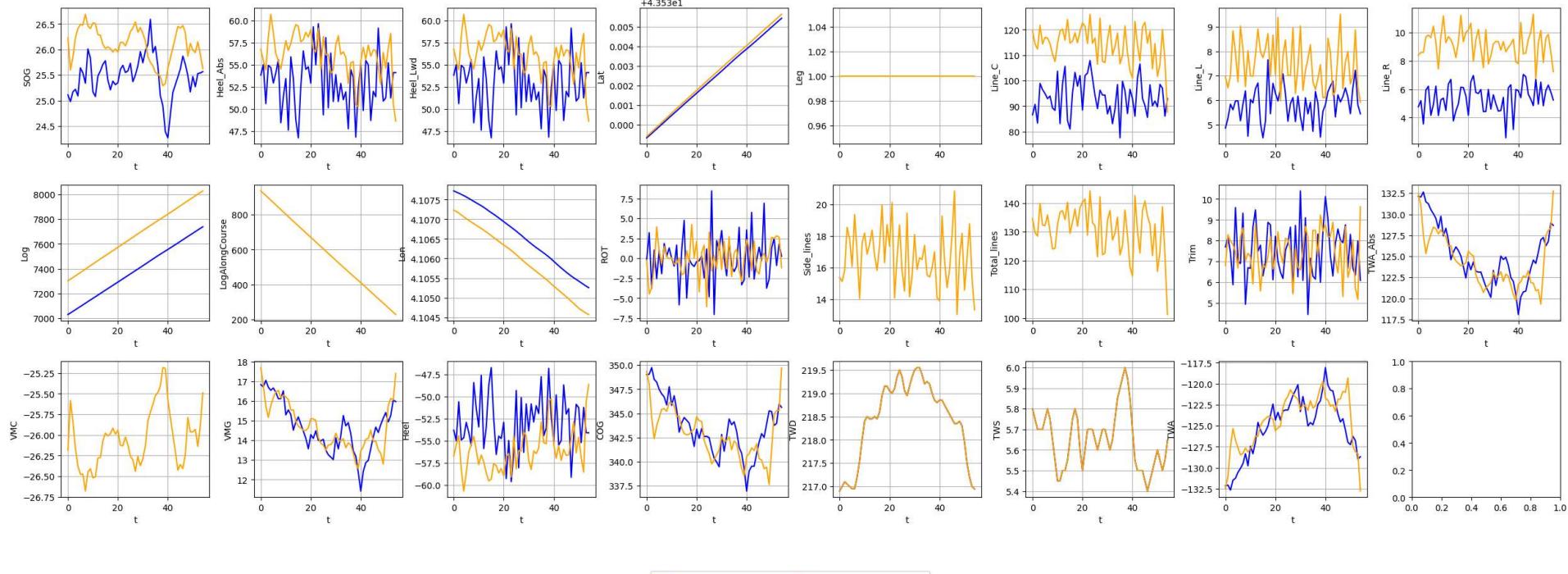
<b>Distance [m]</b>	716.692440	735.526488
<b>Straight Line [m]</b>	715.495093	734.710887
<b>Distance as Percentage of Straight Line [%]</b>	100.167345	100.111010

Gain of SenseBoard with respect to Gian Stragiotti

## Forward Lateral VMG

<b>Initial Deficit</b>	18.135349	35.546136	18.607269
<b>Final Deficit</b>	37.300110	46.319265	16.372411
<b>Total Gain</b>	19.164761	10.773128	-2.234858
<b>Gain per Minute</b>	21.019754	11.815880	-2.451174

Interval 2: Downwind from 2025-06-10 12:31:18 to 2025-06-10 12:32:12 — SenseBoard vs Gian Stragiotti - Parameters over time



Error: No or insufficient intervals for run: 10\_06\_Run10

=====

Processing run: 10\_06\_Run2

=====

-----

Interval 2: Downwind

-----

```
{'SOG_variation_boat1': 0.7194692927018169,
'SOG_variation_boat2': 0.7702815382301164,
'avg_TWA_boat1': -127.73065321100918,
'avg_TWA_boat2': -127.0197661141805,
'avg_SOG_boat1': 25.846055045871555,
'avg_SOG_boat2': 25.106972477064218,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_total_weight': 106.195,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'duration': 54.39100003242493,
'end_time': 1749559222.144,
'stability_score': 0.9627767974222723,
'start_time': 1749559167.753}
```

Processing: Interval 2: Downwind from 2025-06-10 12:39:27 to 2025-06-10 12:40:22 – Gian Stragiotti vs SenseBoard

=====

Interval 2: Downwind from 2025-06-10 12:39:27 to 2025-06-10 12:40:22 – Gian Stragiotti vs SenseBoard

=====

#### Run Statistics

	Avg (Gian Stragiotti)	Avg (SenseBoard)	Min (Gian Stragiotti)	Min (SenseBoard)	Max (Gian Stragiotti)	Max (SenseBoard)	Count (Gian Stragiotti)	Count (SenseBoard)	StdDev (Gian Stragiotti)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	6.754	6.754	6.2	6.2	7.496	7.495	545	543	0.3697	0.3689			
<b>TWD</b>	215.1	215.1	214.6	214.6	215.5	215.5	545	543	0.2693	0.2697			
<b>SOG</b>	25.85	25.11	23.4	23.6	26.9	26.5	545	543	0.7195	0.7701	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	15.75	15.06	12.67	12.47	18.39	17.94	545	543	1.215	1.039	Gian Stragiotti	SenseBoard	Tie
<b>COG</b>	342.8	342.1	334.7	334.2	351.5	352.6	545	543	4.123	3.705		SenseBoard	SenseBoard
<b>TWA_Abs</b>	127.7	127	119.3	119.4	136	137.2	545	543	4.018	3.645			
<b>Heel_Lwd</b>	56.53	52.43	43	33.7	68.6	70.1	545	543	4.299	5.9	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	16.89	nan	6.7	nan	26.1	nan	545	nan	3.233	nan			
<b>Line_C</b>	111.3	93.58	87.3	59.7	141.3	128.1	545	541	9.186	11.3	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	128.3	nan	97.8	nan	163.2	nan	545	nan	10.82	nan			

## Distance Summary

## Gian Stragiotti SenseBoard

<b>Distance [m]</b>	723.409288	699.392828
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<b>Straight Line [m]</b>	721.542059	697.925511
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<b>Distance as Percentage of Straight Line [%]</b>	100.258783	100.210240
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Gain of Gian Stragiotti with respect to SenseBoard

## Forward Lateral VMG

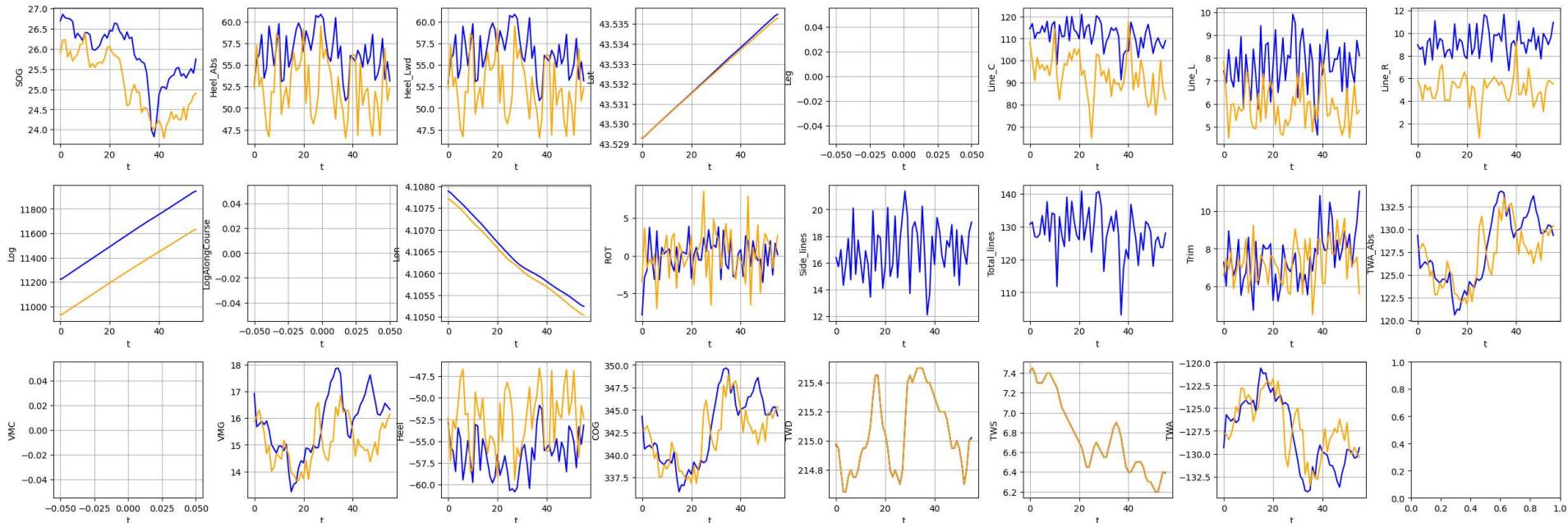
<b>Initial Deficit</b>	6.478441	13.092265	6.390153
------------------------	----------	-----------	----------

<b>Final Deficit</b>	-17.247769	21.673518	27.696281
----------------------	------------	-----------	-----------

<b>Total Gain</b>	-23.726210	8.581253	21.306127
-------------------	------------	----------	-----------

<b>Gain per Minute</b>	-26.172944	9.466183	23.503293
------------------------	------------	----------	-----------

Interval 2: Downwind from 2025-06-10 12:39:27 to 2025-06-10 12:40:22 — Gian Stragiotti vs SenseBoard - Parameters over time



— Gian Stragiotti SOG — SenseBoard SOG

```
=====
Processing run: 10_06_Run3
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.48782414350891035,  
'SOG_variation_boat2': 0.5967613024843319,  
'avg TWA boat1': -133.17295463917526,  
'avg TWA boat2': -132.24709917355372,  
'avg_SOG_boat1': 27.7280412371134,  
'avg_SOG_boat2': 26.803505154639176,  
'boat1_master_leeward': False,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 106.195,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 102.89,  
'duration': 48.401000022888184,  
'end_time': 1749559676.354,  
'stability_score': 0.970534801199097,  
'start_time': 1749559627.953}
```

Processing: Interval 2: Downwind from 2025-06-10 12:47:07 to 2025-06-10 12:47:56 – SenseBoard vs Gian Stragiotti

```
=====  
Interval 2: Downwind from 2025-06-10 12:47:07 to 2025-06-10 12:47:56 – SenseBoard vs Gian Stragiotti  
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.01	7.011	6.1	6.1	7.8	7.8	484	485	0.4529	0.4524			
<b>TWD</b>	213.8	213.8	211.3	211.3	215.5	215.5	484	485	1.215	1.215			
<b>SOG</b>	26.8	27.73	25.1	26.6	28.1	28.8	484	485	0.5972	0.4878	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	18	18.94	14.43	16.05	20.83	21.34	484	485	1.066	1.123	Gian Stragiotti	SenseBoard	Tie
<b>COG</b>	346	347	337.2	340.5	352.4	353.4	484	485	2.588	2.751		SenseBoard	SenseBoard
<b>TWA_Abs</b>	132.2	133.2	123.7	125.7	141	140.7	484	485	2.869	3.162			
<b>Heel_Lwd</b>	51.72	54.12	30.1	40.6	69.8	66.3	484	485	6.174	4.061	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	91.25	109.5	50.7	88.4	125.5	136.2	484	485	12.21	8.561	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Side_lines</b>	nan	15.73	nan	6.9	nan	24.9	nan	485	nan	3.243			
<b>Total_lines</b>	nan	125.2	nan	99.1	nan	154.6	nan	485	nan	10.07			

## Distance Summary

## SenseBoard Gian Stragiotti

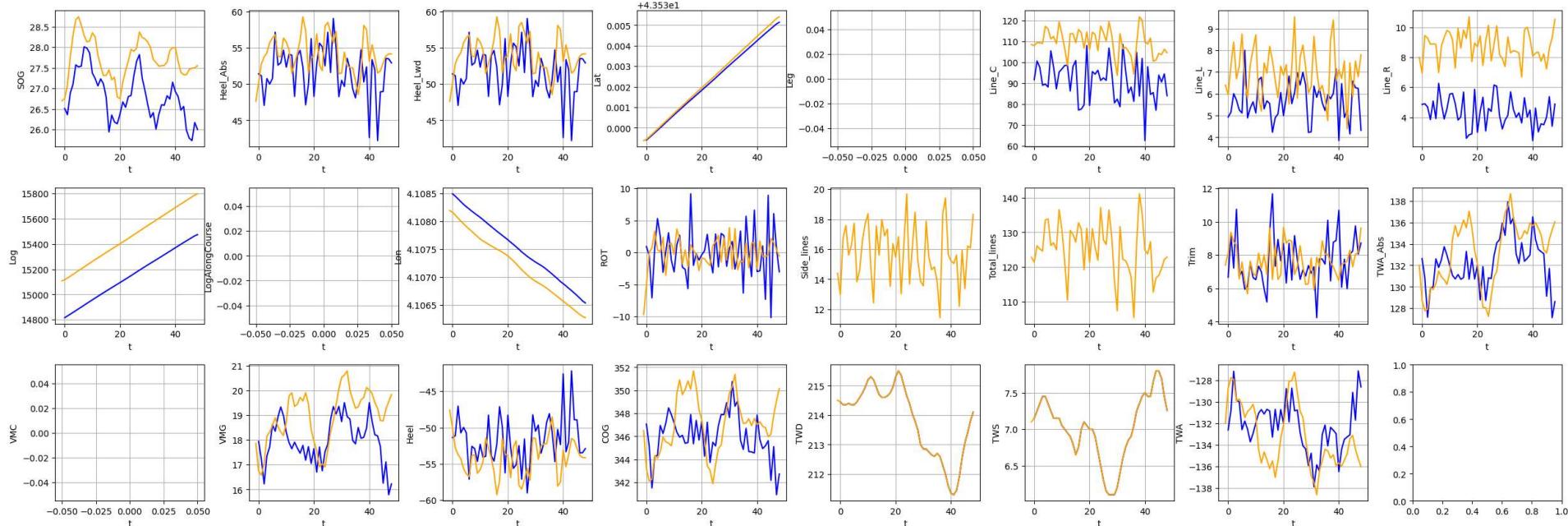
<b>Distance [m]</b>	666.083542	690.970285
<b>Straight Line [m]</b>	665.408593	690.171508
<b>Distance as Percentage of Straight Line [%]</b>	100.101434	100.115736

Gain of SenseBoard with respect to Gian Stragiotti

## Forward Lateral VMG

<b>Initial Deficit</b>	9.509058	24.141362	11.477343
<b>Final Deficit</b>	34.234486	13.273442	-13.191352
<b>Total Gain</b>	24.725428	-10.867920	-24.668695
<b>Gain per Minute</b>	30.721178	-13.503317	-30.650688

Interval 2: Downwind from 2025-06-10 12:47:07 to 2025-06-10 12:47:56 — SenseBoard vs Gian Stragiotti - Parameters over time



— SenseBoard SOG — Gian Stragiotti SOG

```
=====
Processing run: 10_06_Run4
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.253889716586543,  
'SOG_variation_boat2': 0.2897555698691407,  
'avg TWA boat1': 55.89349328214971,  
'avg TWA boat2': 54.93533461538461,  
'avg_SOG_boat1': 23.940882917466407,  
'avg_SOG_boat2': 23.243186180422267,  
'boat1_master_leeward': True,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 106.195,  
'boat2_master_leeward': False,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 102.89,  
'duration': 51.990999937057495,  
'end_time': 1749560020.046,  
'stability_score': 0.973918519280143,  
'start_time': 1749559968.055}
```

Processing: Interval 2: Downwind from 2025-06-10 12:52:48 to 2025-06-10 12:53:40 – Gian Stragiotti vs SenseBoard

```
=====  
Interval 2: Downwind from 2025-06-10 12:52:48 to 2025-06-10 12:53:40 – Gian Stragiotti vs SenseBoard  
=====
```

	Run Statistics												
	Avg (Gian Stragiotti)	Avg (SenseBoard)	Min (Gian Stragiotti)	Min (SenseBoard)	Max (Gian Stragiotti)	Max (SenseBoard)	Count (Gian Stragiotti)	Count (SenseBoard)	StdDev (Gian Stragiotti)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	5.924	5.924	5.2	5.2	6.496	6.495	521	520	0.3552	0.3555			
<b>TWD</b>	209.5	209.5	208.1	208.1	212.5	212.5	521	520	0.9027	0.894			
<b>SOG</b>	23.94	23.24	21.7	22.6	24.6	24.2	521	520	0.2539	0.2918	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	13.41	13.32	10.85	10.32	15.89	15.67	521	520	0.9177	1.01	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	153.6	154.6	147.2	147.2	160.4	161.5	521	520	2.116	2.845		Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	55.89	54.94	47.91	47.52	62.88	64.53	521	520	2.657	3.262			
<b>Heel_Lwd</b>	59.9	58.43	43.4	45.4	72.6	73	521	520	4.684	4.389	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	16.5	nan	9.9	nan	28.3	nan	521	nan	3.37	nan			
<b>Line_C</b>	131.2	118.8	102.6	84.5	160	147.5	521	519	10.29	9.833	Gian Stragiotti	SenseBoard	Tie
<b>Total_lines</b>	147.7	nan	117.9	nan	177.2	nan	521	nan	11.51	nan			

## Distance Summary

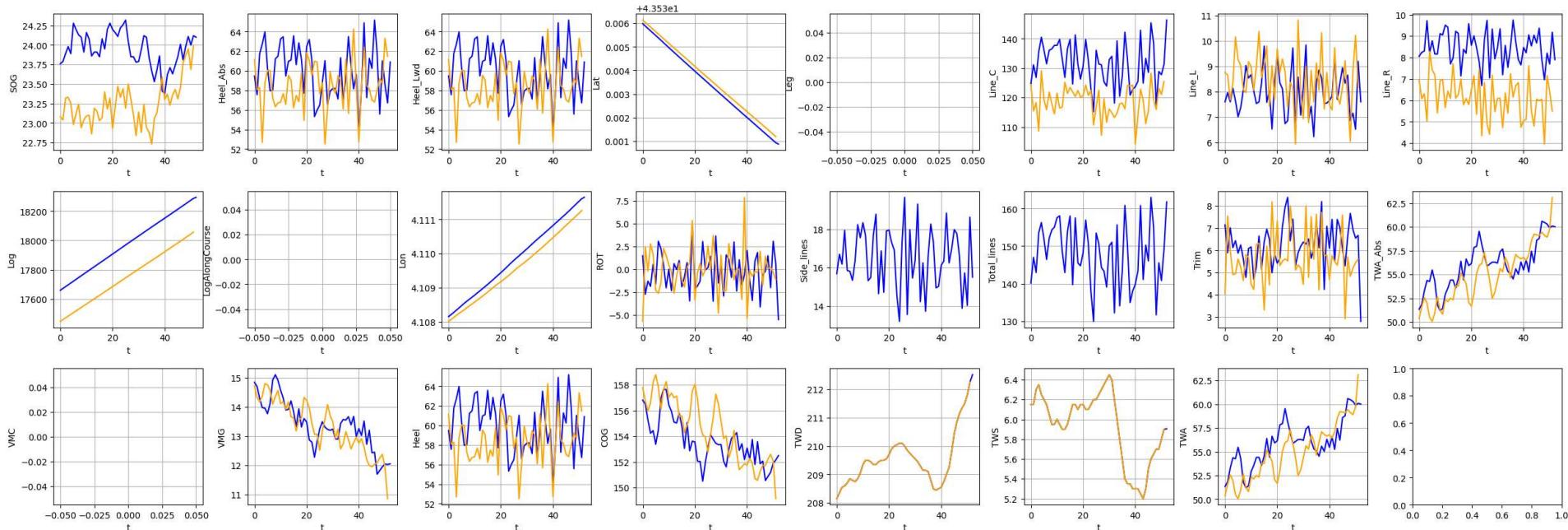
## Gian Stragiotti SenseBoard

<b>Distance [m]</b>	640.521969	620.834396
<b>Straight Line [m]</b>	640.087072	620.058025
<b>Distance as Percentage of Straight Line [%]</b>	100.067943	100.125209

Gain of Gian Stragiotti with respect to SenseBoard

	Forward	Lateral	VMG
<b>Initial Deficit</b>	-20.053471	2.380364	-9.273697
<b>Final Deficit</b>	-40.161156	11.912659	-12.656015
<b>Total Gain</b>	<b>-20.107684</b>	<b>9.532295</b>	<b>-3.382318</b>
<b>Gain per Minute</b>	<b>-23.205191</b>	<b>11.000706</b>	<b>-3.903350</b>

Interval 2: Downwind from 2025-06-10 12:52:48 to 2025-06-10 12:53:40 — Gian Stragiotti vs SenseBoard - Parameters over time



— Gian Stragiotti SOG — SenseBoard SOG

```
=====
Processing run: 10_06_Run5
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.661275652373244,  
'SOG_variation_boat2': 0.6862557608982934,  
'avg TWA boat1': -138.87261169102297,  
'avg TWA boat2': -138.84397703549064,  
'avg_SOG_boat1': 27.096033402922757,  
'avg_SOG_boat2': 26.642797494780798,  
'boat1_master_leeward': False,  
'boat1_name': 'Gian Stragiotti',  
'boat1_total_weight': 106.195,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 102.89,  
'duration': 47.79900002479553,  
'end_time': 1749560771.956,  
'stability_score': 0.9616481492402572,  
'start_time': 1749560724.157}
```

Processing: Interval 2: Downwind from 2025-06-10 13:05:24 to 2025-06-10 13:06:11 – SenseBoard vs Gian Stragiotti

```
=====  
Interval 2: Downwind from 2025-06-10 13:05:24 to 2025-06-10 13:06:11 – SenseBoard vs Gian Stragiotti  
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Gian Stragiotti)	Min (SenseBoard)	Min (Gian Stragiotti)	Max (SenseBoard)	Max (Gian Stragiotti)	Count (SenseBoard)	Count (Gian Stragiotti)	StdDev (SenseBoard)	StdDev (Gian Stragiotti)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	6.515	6.515	5.8	5.8	7	7	479	479	0.3227	0.3227			
<b>TWD</b>	210	210	209.3	209.3	211	211	479	479	0.4334	0.4335			
<b>SOG</b>	26.64	27.1	25.1	25.8	28	28.4	479	479	0.6851	0.6613	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	20.03	20.36	17.2	18.54	22.19	22.48	479	479	0.8952	0.7942	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	348.9	348.9	341.4	341.7	356.1	357.5	479	479	2.79	3.146		SenseBoard	SenseBoard
<b>TWA_Abs</b>	138.8	138.9	131.9	131.5	146	147.3	479	479	2.849	3.355			
<b>Heel_Lwd</b>	53.63	54.69	37.3	43	69.1	67.1	479	479	5.723	4.162	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Line_C</b>	92.85	110.4	62.9	85.6	121.2	139.7	478	479	10.94	10.95	Gian Stragiotti	SenseBoard	Tie
<b>Side_lines</b>	nan	16.73	nan	7.2	nan	25.3	nan	479	nan	3.217			
<b>Total_lines</b>	nan	127	nan	94.9	nan	160.4	nan	479	nan	12.36			

## Distance Summary

## SenseBoard Gian Stragiotti

<b>Distance [m]</b>	654.891622	665.931151
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<b>Straight Line [m]</b>	654.117200	664.930507
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<b>Distance as Percentage of Straight Line [%]</b>	100.118392	100.150488
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Gain of SenseBoard with respect to Gian Stragiotti

## Forward Lateral VMG

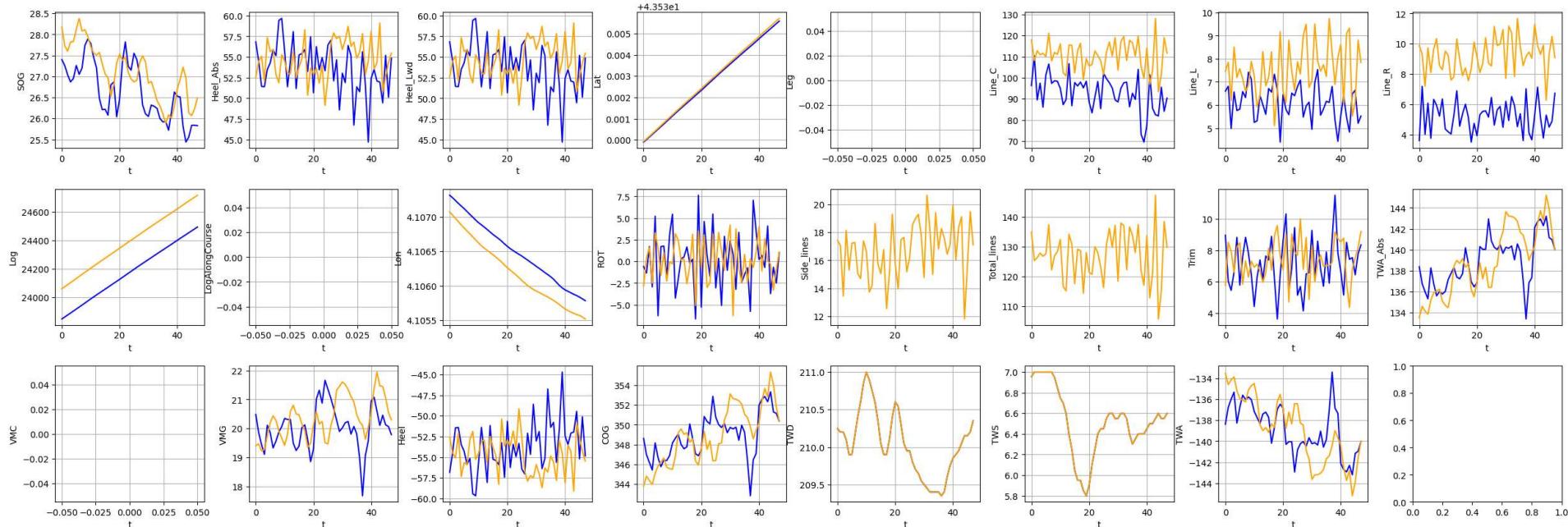
<b>Initial Deficit</b>	7.480278	17.974449	6.197097
------------------------	----------	-----------	----------

<b>Final Deficit</b>	18.313246	18.140444	-1.850038
----------------------	-----------	-----------	-----------

<b>Total Gain</b>	10.832968	0.165996	-8.047135
-------------------	-----------	----------	-----------

<b>Gain per Minute</b>	13.599006	0.208381	-10.101852
------------------------	-----------	----------	------------

Interval 2: Downwind from 2025-06-10 13:05:24 to 2025-06-10 13:06:11 — SenseBoard vs Gian Stragiotti - Parameters over time



— SenseBoard SOG — Gian Stragiotti SOG

```
=====
Processing run: 10_06_Run6
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.433373795501071,  
'SOG_variation_boat2': 0.6449390318040755,  
'avg TWA boat1': -139.59860047281325,  
'avg TWA boat2': -138.77927251184835,  
'avg_SOG_boat1': 27.282269503546107,  
'avg_SOG_boat2': 26.92482269503546,  
'boat1_master_leeward': False,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 99.995,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.08999999999999,  
'duration': 42.21399998664856,  
'end_time': 1749561405.263,  
'stability_score': 0.9674756220226159,  
'start_time': 1749561363.049}
```

Processing: Interval 2: Downwind from 2025-06-10 13:16:03 to 2025-06-10 13:16:45 – SenseBoard vs Karl Maeder

```
=====  
Interval 2: Downwind from 2025-06-10 13:16:03 to 2025-06-10 13:16:45 – SenseBoard vs Karl Maeder  
=====
```

	Run Statistics												
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.745	7.745	6.8	6.8	8.696	8.696	422	423	0.6107	0.6101			
<b>TWD</b>	210.7	210.7	209.3	209.3	212.3	212.3	422	423	0.8839	0.8839			
<b>SOG</b>	26.92	27.28	24.6	26.1	27.8	28	422	423	0.6459	0.4334	Karl Maeder	Karl Maeder	Karl Maeder
<b>VMG</b>	20.23	20.77	17.13	17.99	22.17	22.46	422	423	0.7868	0.7704	Karl Maeder	Karl Maeder	Karl Maeder
<b>COG</b>	349.4	350.3	343.1	344.8	358.4	357.1	422	423	2.283	2.09			Karl Maeder
<b>TWA_Abs</b>	138.8	139.6	131.6	133.4	146.4	145.9	422	423	2.225	2.034			
<b>Heel_Lwd</b>	54.75	50.48	33.7	33.7	71.4	61.5	422	423	6.421	4.986	SenseBoard	Karl Maeder	Tie
<b>Side_lines</b>	16.99	11.56	6.8	2.6	25.1	19.8	422	423	3.147	2.991	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	107.5	90.36	78.1	54.4	140.7	116.6	422	422	11.15	11.76	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	124.6	102.3	87.4	61	155	133.5	422	423	12.63	13.49	SenseBoard	SenseBoard	SenseBoard

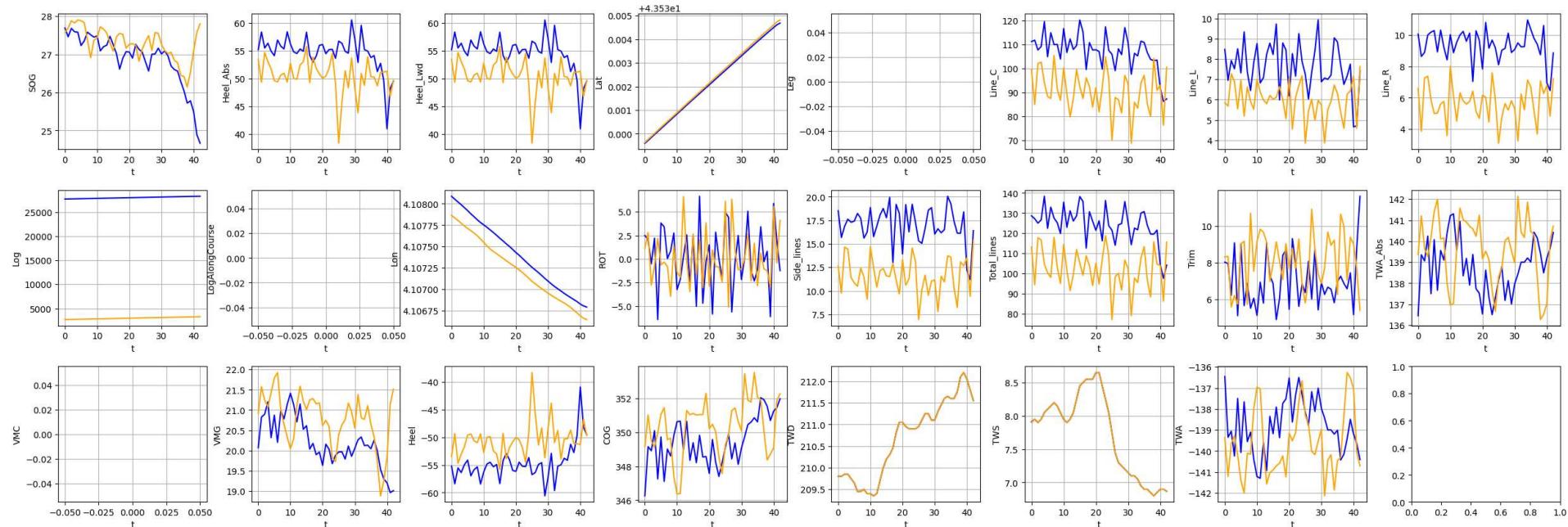
## Distance Summary

	SenseBoard	Karl Maeder
<b>Distance [m]</b>	582.084016	592.157245
<b>Straight Line [m]</b>	581.625415	591.762948
<b>Distance as Percentage of Straight Line [%]</b>	100.078848	100.066631

Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
<b>Initial Deficit</b>	6.635758	17.202935	6.344832
<b>Final Deficit</b>	16.733575	8.860734	-6.747699
<b>Total Gain</b>	10.097817	-8.342200	-13.092531
<b>Gain per Minute</b>	14.391531	-11.889404	-18.659632

Interval 2: Downwind from 2025-06-10 13:16:03 to 2025-06-10 13:16:45 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

```
=====
Processing run: 10_06_Run7
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.5013496568388439,  
'SOG_variation_boat2': 0.48395425116547436,  
'avg TWA boat1': -140.14205468749998,  
'avg TWA boat2': -140.84758984375,  
'avg_SOG_boat1': 27.2220703125,  
'avg_SOG_boat2': 27.58359375,  
'boat1_master_leeward': True,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 99.995,  
'boat2_master_leeward': False,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.08999999999999,  
'duration': 51.10599994659424,  
'end_time': 1749561975.263,  
'stability_score': 0.9756249057051376,  
'start_time': 1749561924.157}
```

Processing: Interval 2: Downwind from 2025-06-10 13:25:24 to 2025-06-10 13:26:15 – Karl Maeder vs SenseBoard

```
=====  
Interval 2: Downwind from 2025-06-10 13:25:24 to 2025-06-10 13:26:15 – Karl Maeder vs SenseBoard  
=====
```

#### Run Statistics

	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.349	7.349	6.7	6.7	7.896	7.896	512	512	0.3178	0.3177			
<b>TWD</b>	208.9	208.9	207.7	207.7	210.2	210.2	512	512	0.7588	0.7588			
<b>SOG</b>	27.22	27.58	26.4	26.6	28.5	28.5	512	512	0.5013	0.4832	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	20.88	21.35	19.1	18.68	22.53	23.37	512	512	0.6006	0.9401	SenseBoard	Karl Maeder	Tie
<b>COG</b>	349.1	349.8	343.5	342	354.4	356.9	512	512	1.929	2.892		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	140.1	140.8	134	131.8	146	148.5	512	512	2.112	3.222			
<b>Heel_Lwd</b>	51.11	54.72	35.2	35.9	66.8	70.3	512	512	5.039	5.97	SenseBoard	Karl Maeder	Tie
<b>Side_lines</b>	10.59	17.36	0.9	7.7	20.4	27.1	512	512	2.921	2.925	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	88.82	109.6	61.2	77.9	127.8	156.3	510	512	11.67	10.5	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	99.36	127	64.4	88.4	138.5	179.3	512	512	13.13	11.18	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

Karl Maeder SenseBoard

Distance [m] 715.517392 725.710961

Straight Line [m] 715.111526 724.775972

Distance as Percentage of Straight Line [%] 100.056756 100.129004

Gain of Karl Maeder with respect to SenseBoard

Forward Lateral VMG

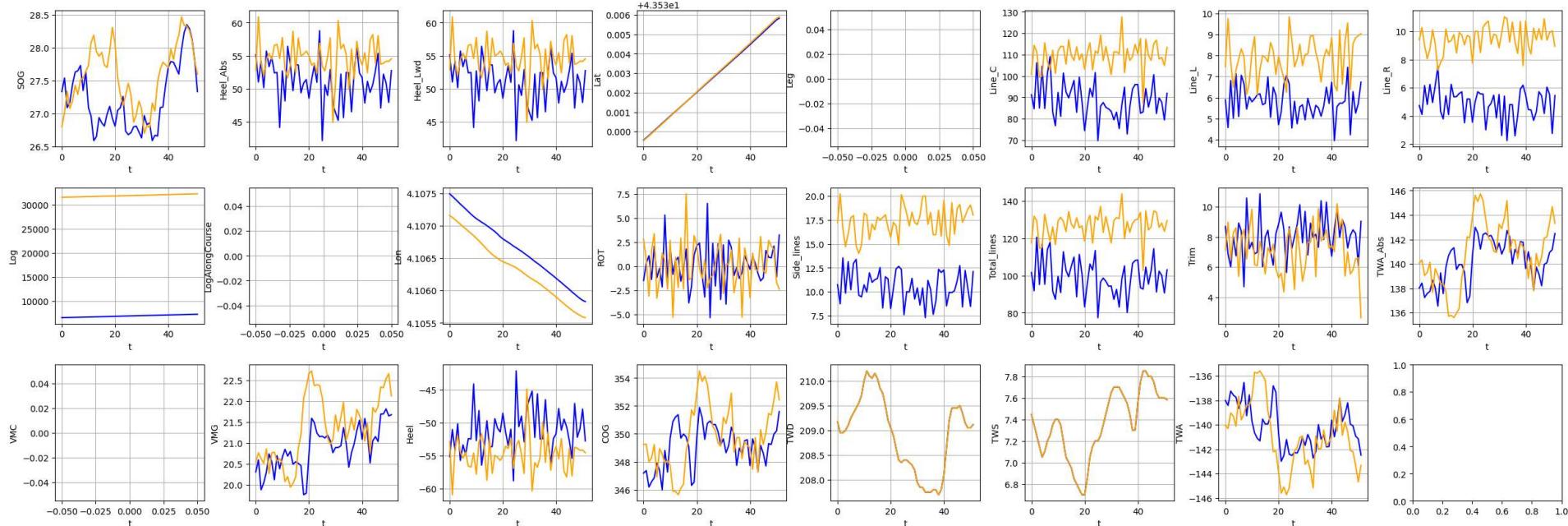
Initial Deficit 2.480150 27.140883 15.490353

Final Deficit 12.110298 18.012490 2.247645

Total Gain 9.630148 -9.128393 -13.242708

Gain per Minute 11.306087 -10.717011 -15.547342

Interval 2: Downwind from 2025-06-10 13:25:24 to 2025-06-10 13:26:15 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

```
=====
Processing run: 10_06_Run8
=====
```

```
-----  
Interval 2: Downwind  
-----
```

```
{'SOG_variation_boat1': 0.5399102592381619,  
'SOG_variation_boat2': 0.4688635040032667,  
'avg TWA boat1': -141.74818333333332,  
'avg TWA boat2': -141.80634728033473,  
'avg_SOG_boat1': 27.33354166666667,  
'avg_SOG_boat2': 27.5,  
'boat1_master_leeward': False,  
'boat1_name': 'Karl Maeder',  
'boat1_total_weight': 99.995,  
'boat2_master_leeward': True,  
'boat2_name': 'SenseBoard',  
'boat2_total_weight': 109.08999999999999,  
'duration': 47.89499998926514,  
'end_time': 1749562585.552,  
'stability_score': 0.967918113005577,  
'start_time': 1749562537.657}
```

Processing: Interval 2: Downwind from 2025-06-10 13:35:37 to 2025-06-10 13:36:25 – SenseBoard vs Karl Maeder

```
=====  
Interval 2: Downwind from 2025-06-10 13:35:37 to 2025-06-10 13:36:25 – SenseBoard vs Karl Maeder  
=====
```

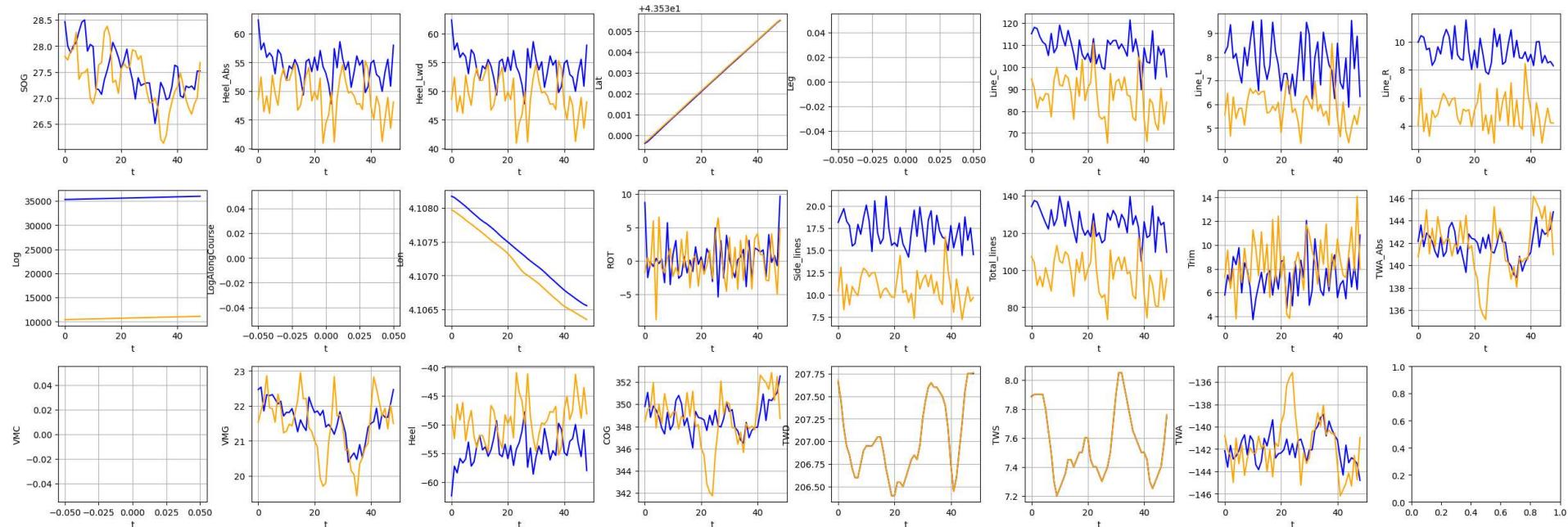
#### Run Statistics

	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	7.551	7.552	7.2	7.2	8.096	8.095	478	480	0.2323	0.2326			
<b>TWD</b>	207	207	206.3	206.3	207.8	207.8	478	480	0.4054	0.4075			
<b>SOG</b>	27.5	27.33	26.4	26	28.6	28.5	478	480	0.4638	0.5399	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	21.6	21.44	19.39	18.79	23.31	23.89	478	480	0.6685	0.961	SenseBoard	SenseBoard	SenseBoard
<b>COG</b>	348.8	348.8	343	339.4	355.3	356.1	478	480	1.891	2.959			SenseBoard
<b>TWA_Abs</b>	141.8	141.7	135.9	132.9	147.5	148.6	478	480	1.903	2.928			
<b>Heel_Lwd</b>	54.21	49.14	39.2	31.2	70.7	66.2	478	480	5.447	5.842	SenseBoard	SenseBoard	SenseBoard
<b>Side_lines</b>	17.15	10.82	6.3	3	26.8	20.9	478	480	3.285	2.951	SenseBoard	Karl Maeder	Tie
<b>Line_C</b>	108.3	87.03	78.4	60.8	133.9	125.3	478	479	9.369	13.13	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	125.4	97.63	91.1	64.5	153.8	140.2	478	480	10.79	14.63	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	674.678757	673.655103
Straight Line [m]	674.305252	672.759926
Distance as Percentage of Straight Line [%]	100.055391	100.133060
Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
Initial Deficit	8.177704	14.500031
Final Deficit	6.627672	15.843137
Total Gain	-1.550032	1.343107
Gain per Minute	-1.949808	1.689513
	2.577065	

Interval 2: Downwind from 2025-06-10 13:35:37 to 2025-06-10 13:36:25 — SenseBoard vs Karl Maeder - Parameters over time



— SenseBoard SOG — Karl Maeder SOG

```
=====
Processing run: 10_06_Run9
=====
```

```
-----
Interval 2: Downwind
-----
{'SOG_variation_boat1': 0.6785337953400632,
 'SOG_variation_boat2': 0.48984557892715896,
 'avg TWA boat1': -141.96290425531916,
 'avg TWA boat2': -142.04973931623934,
 'avg_SOG_boat1': 26.97276595744681,
 'avg_SOG_boat2': 27.57255319148936,
 'boat1_master_leeward': True,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 99.995,
 'boat2_master_leeward': False,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.08999999999999,
 'duration': 46.882999897003174,
 'end_time': 1749562995.342,
 'stability_score': 0.9723012641797767,
 'start_time': 1749562948.459}
```

Processing: Interval 2: Downwind from 2025-06-10 13:42:28 to 2025-06-10 13:43:15 – Karl Maeder vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-10 13:42:28 to 2025-06-10 13:43:15 – Karl Maeder vs SenseBoard
=====
```

	Run Statistics												
	Avg (Karl Maeder)	Avg (SenseBoard)	Min (Karl Maeder)	Min (SenseBoard)	Max (Karl Maeder)	Max (SenseBoard)	Count (Karl Maeder)	Count (SenseBoard)	StdDev (Karl Maeder)	StdDev (SenseBoard)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
<b>TWS</b>	8.798	8.801	7.7	7.7	10.2	10.2	470	468	0.8433	0.844			
<b>TWD</b>	208	208	207.4	207.4	208.6	208.6	470	468	0.2684	0.2689			
<b>SOG</b>	26.97	27.57	25.2	26.4	28.5	28.4	470	468	0.6785	0.4882	SenseBoard	SenseBoard	SenseBoard
<b>VMG</b>	21.23	21.72	18.95	19.41	23.1	23.6	470	468	0.8641	0.8715	SenseBoard	Karl Maeder	Tie
<b>COG</b>	350	350.1	344.7	343.2	355.4	355.4	470	468	2.189	2.459		Karl Maeder	Karl Maeder
<b>TWA_Abs</b>	142	142	136.3	134.9	147.4	147.5	470	468	2.308	2.488			
<b>Heel_Lwd</b>	49.3	53.36	7	36.5	63.7	68.5	470	468	6.641	5.855	SenseBoard	SenseBoard	SenseBoard
<b>Side_lines</b>	9.907	16.24	1	8.8	19	23.4	470	468	3.064	2.572	SenseBoard	SenseBoard	SenseBoard
<b>Line_C</b>	84.83	106.1	39.4	67.7	117.2	144.8	470	468	12.29	11.18	SenseBoard	SenseBoard	SenseBoard
<b>Total_lines</b>	94.69	122.4	50	78.7	130.3	164.9	470	468	14.15	12.07	SenseBoard	SenseBoard	SenseBoard

## Distance Summary

## Karl Maeder SenseBoard

Distance [m] 650.573241 662.100228

Straight Line [m] 650.099856 661.484797

Distance as Percentage of Straight Line [%] 100.072817 100.093038

Gain of Karl Maeder with respect to SenseBoard

## Forward Lateral VMG

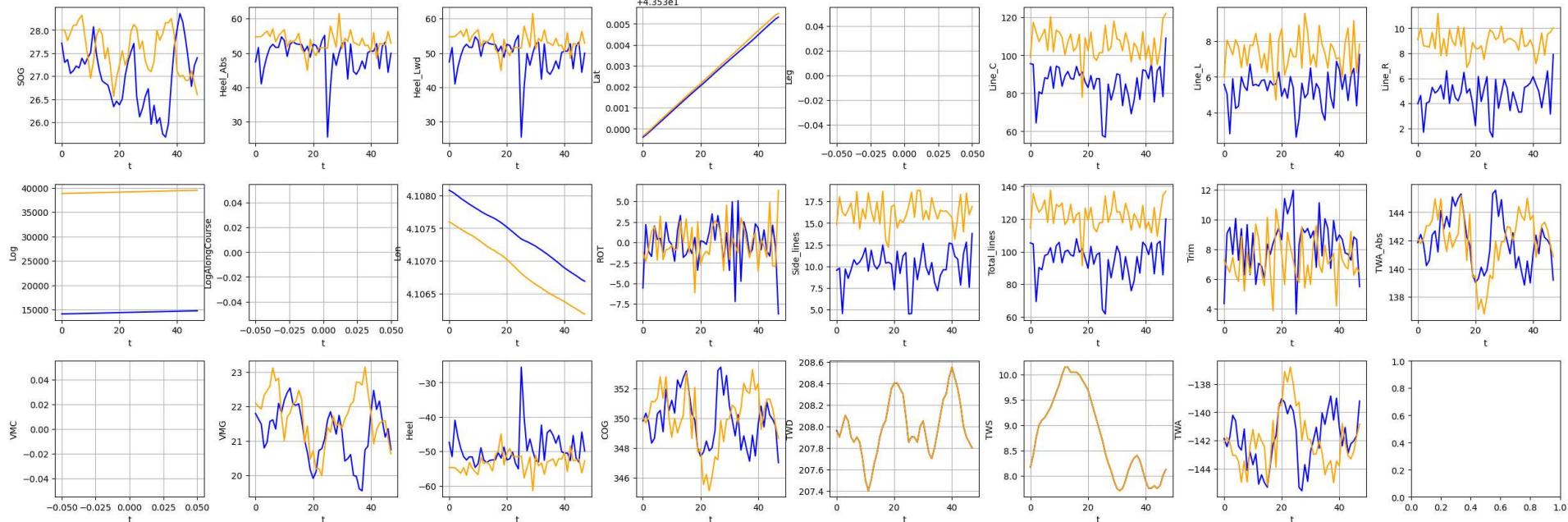
Initial Deficit 14.260343 37.203773 11.692301

Final Deficit 25.666220 36.176934 2.076189

Total Gain 11.405877 -1.026839 -9.616112

Gain per Minute 14.597031 -1.314129 -12.306523

Interval 2: Downwind from 2025-06-10 13:42:28 to 2025-06-10 13:43:15 — Karl Maeder vs SenseBoard - Parameters over time



— Karl Maeder SOG — SenseBoard SOG

Error: At least two CSV files are required.