

```
In [1]: import os
import json
from report_analysis import analyze_session
from report_fact import process_all_run
from natsort import natsorted

summary_path = "summary_enriched.json"
base_dir = "./Data_Sailnord/Straight_lines"
```

**Only Upwind:**

```
In [2]: """ Scan de tous les dossier 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 natsorted(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}")

from natsort import natsorted
import os
import pandas as pd

summary_results = []

# Loop over all date folders
for date_folder in sorted(os.listdir(base_dir)):
    date_path = os.path.join(base_dir, date_folder)
    if not os.path.isdir(date_path):
        continue # Skip non-directories

# Loop over all run folders inside each date folder
for run_folder in sorted(os.listdir(date_path)):
    run_path = os.path.join(date_path, run_folder)
    if not os.path.isdir(run_path):
        continue # Skip non-directories

    try:
        process_all_run(
            run_path,
            summary_path,
            summary_results=summary_results,
            tot=False,
            onlyUpwind=True,
            onlyDownwind=False
        )
    except ValueError as e:
        print(f"Error processing {run_path}: {e}")

if summary_results:
    df_summary = pd.DataFrame(summary_results)
    display(df_summary.style.set_caption(
        "Summary of All Runs"
    ).format({
        "Avg Speed": "{:.2f}",
        "Forward Gain (m)": "{:.2f}",
        "VMG Gain (m)": "{:.2f}",
        "Avg VMG (Meters)": "{:.2f}",
        "Avg Heel (Degrees)": "{:.2f}",
        "Avg Side_Lines (Master)": "{:.2f}",
        "Avg Line_L (Master)": "{:.2f}"
    }).set_caption("Summary of All Runs"))
else:
    print("No valid runs to summarize.")
```

\*\*\*\*\*  
Processing run: 06\_06\_Run1  
\*\*\*\*\*

```
{'SOG_variation_boat1': 0.08000000000000001, 'SOG_variation_boat2': 0.0152285790161369, 'avg_boat1': 48.33048464904464, 'avg_boat2': 48.33048464904464, 'avg_SOG': 48.33048464904464, 'avg_heel': -0.4378737512381695, 'avg_SOG_boat2': 20.159586363824375, 'boat1_master_leeward': False, 'boat1_total_weight': 100.77, 'boat1_total_weight_streak1': 100.77, 'boat2_master_leeward': True, 'boat1_name': 'Karl Maeder', 'boat2_name': 'Gian Stragiotti', 'duration': 83.59299993515015, 'end_time': 1749221774.756, 'stability_score': 0.8076524199379818, 'start_time': 17492217091.163}
```

\*\*\*\*\*  
Interval 1: Upwind From 2025-06-06 13:48:11 to 2025-06-06 13:49:34 – 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)
TWS	7.234	7.232	5.204	5.204	9.394	9.395	836	837	1.289	1.289		
TWD	171.5	171.5	169.5	169.5	173.5	173.5	836	837	1.226	1.226		
SOG	20.16	20.44	19.1	18.4	22.2	22.3	836	837	0.618	0.906	Gian Stragiotti	Karl Maeder
VMG	13.34	13.55	10.02	9.711	16.49	17.37	836	837	1.225	1.418	Gian Stragiotti	Karl Maeder
COG	123	123.2	112.5	109.9	135.2	137	836	837	3.813	4.509	Karl Maeder	Karl Maeder
TWA_Abs	48.52	48.33	37.76	35.49	58.91	60.84	836	837	3.85	4.59		
Heel_Ind	53.89	54.96	34.4	37.6	76.1	72.4	836	837	5.86	6.097	Gian Stragiotti	Karl Maeder
Side_Lines	13.47	12.97	4.9	2.2	25.5	23.7	836	837	3.677	3.817	Karl Maeder	Karl Maeder
Line_C	110.9	113.8	71.8	71.9	141	152	836	833	11.52	12.23	Gian Stragiotti	Karl Maeder
Total_Lines	124.5	126.6	79.1	82.4	162.4	170.1	836	837	13.21	14.09	Gian Stragiotti	Karl Maeder

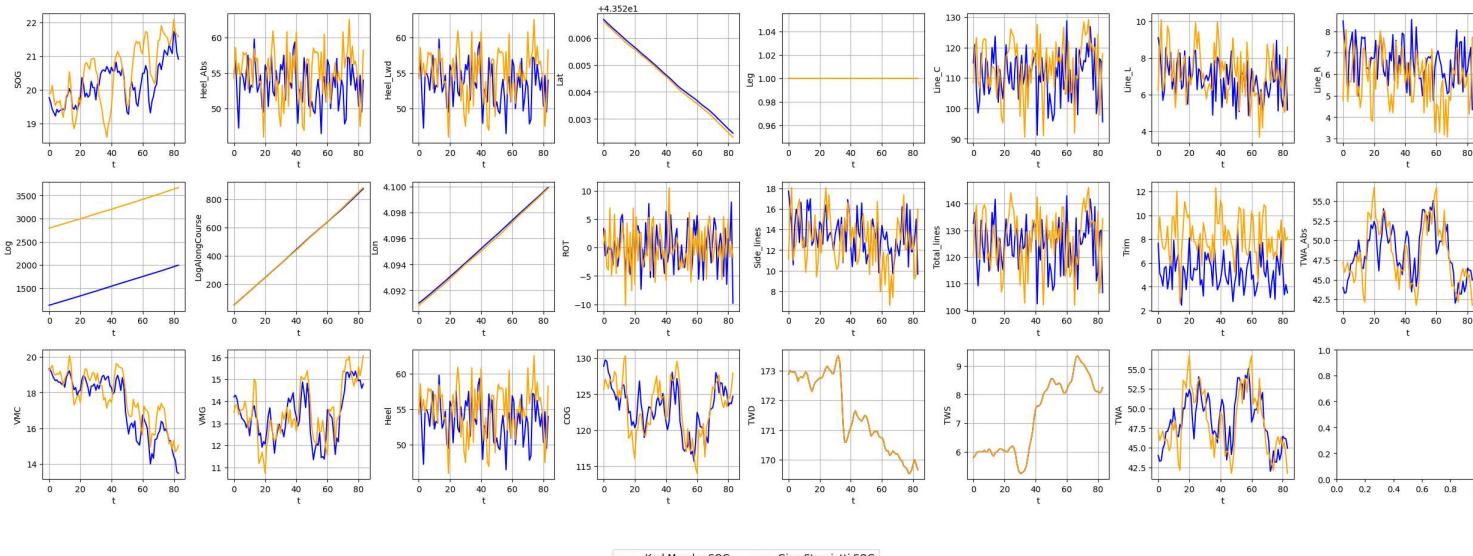
Distance Summary

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

Gain of Karl Maeder with respect to Gian Stragiotti

	Forward	Lateral	VMG
Initial Deficit	-7.208146	15.808054	6.523027
Final Deficit	4.362416	17.079623	15.684942
Total Gain	-11.70562	-19.99119	-9.161915
Gain per Minute	-0.314973	-1.436630	-0.584043

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



===== Processing run: 06\_06\_Run2 =====

```
{
  "SOG_variation_boat1": 0.9186844828922484,
  "SOG_variation_boat2": 0.8717597316888797,
  "avg_SOG_boat1": 58.89826233453671,
  "avg_TWD_boat1": 149.21844800000007,
  "avg_SOG_boat2": 20.580144044332128,
  "avg_SOG_boat2": 19.964981949458487,
  "boat1_master_leeward": true,
  "boat1_stick": "Alan Stoen",
  "boat1_total_weight": 106.77,
  "boat2_master_leeward": false,
  "boat2_stick": "Karl Maeder",
  "boat2_total_weight": 109.97500000000001,
  "duration": 8.27869999855591,
  "end_time": 1749218497.944,
  "start_time": 1749218497.944,
  "start_time_s": 1749218497.944
}
```

===== Interval 1: Upwind from 2025-06-06 14:00:14 to 2025-06-06 14:01:37 — 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)
TWS	8.026	8.027	7.1	7.1	8.7	8.7	831	829	0.472	0.4717		
TWD	181.5	181.5	176.4	176.4	184.8	184.8	831	829	2.406	2.402		
SOG	20.58	19.97	17.9	17.8	22.7	22	831	829	0.9186	0.8723	Gian Stragiotti	
VMG	10.57	9.936	2.002	5.209	15.39	13.17	831	829	1.908	1.438	Karl Maeder	
COG	122.6	121.4	99.6	108.4	137.2	131	831	829	5.155	4.124	Karl Maeder	
TWA	58.9	60.07	44.3	49.7	84.8	75.84	831	829	5.748	4.415	Karl Maeder	
Heel_Abd	54.62	53.87	29.5	34.5	69.9	73.9	831	829	6.067	5.794	Gian Stragiotti	
Side_lines	10.62	2.63	1.8	2.506	24.1	27.54	831	829	3.707	0.07152	Gian Stragiotti	
Line_C	111.5	113.1	61.8	81.7	162.3	146.3	826	829	13.32	10.84	Karl Maeder	
Total_lines	122.3	20.92	64.2	20.46	176.8	21.39	831	829	14.73	0.2698	Gian Stragiotti	

#### Distance Summary

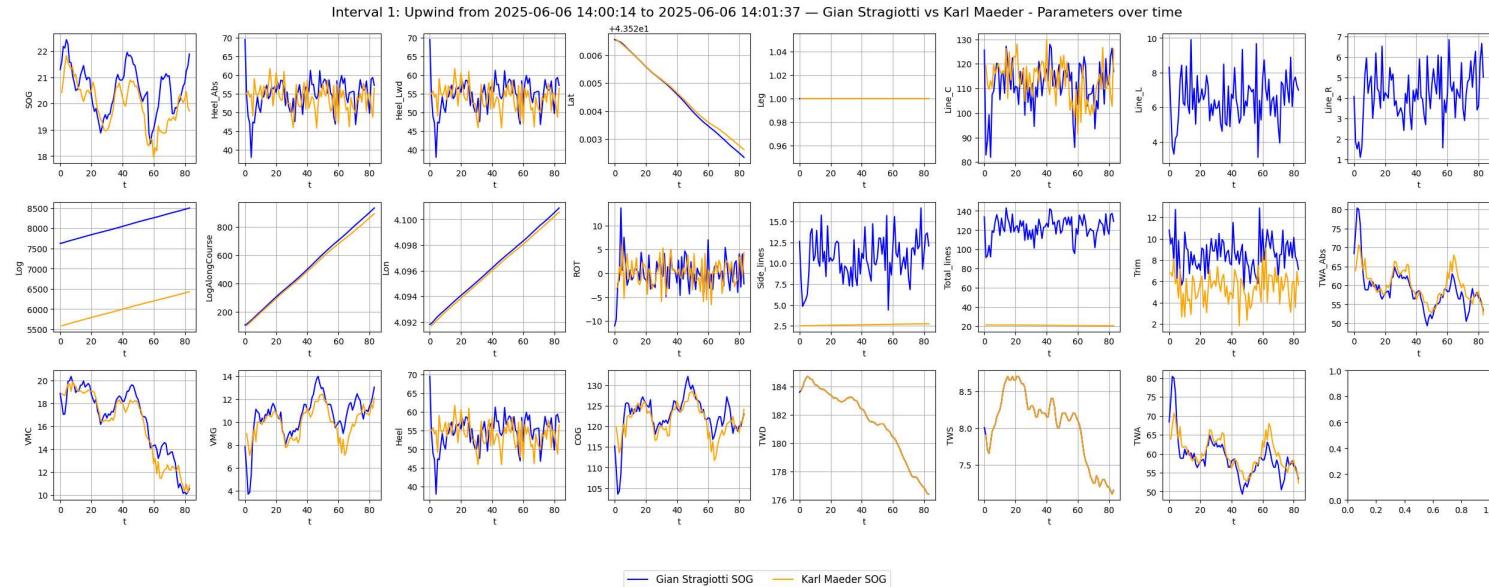
	Gian Stragiotti	Karl Maeder
Distance [m]	801.637147	851.906469
Straight Line [m]	876.008669	847.703283

Distance as Percentage of Straight Line [%] 100.642514 100.495832

Gain of Gian Stragiotti with respect to Karl Maeder

	Forward	Lateral	VMG
Initial Deficit	-11.636441	5.025575	-1.707969
Final Deficit	-40.117615	-11.787467	-30.820690
Total Gain	28.131173	16.613042	29.110921
Gain per Minute	20.592025	12.155910	21.047336

## MainReport



```
=====
Processing run: 86_86_Run
=====
```

```
{'SOG_variation_best1': 8.49800470895419437,
'SOG_variation_best2': 8.6792614824598278,
'avg_TWA_host1': 52.54139975845411,
'avg_TWA_host2': 52.8286973675545,
'avg_TWD_host1': 178.0000000000000227,
'avg_TWD_host2': 20.355541862880327,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_tilt': 77.77,
'boat2_master_leeward': True,
'boat2_name': 'Karl Maeder',
'boat2_tilt': 77.77,
'boat2_total_weight': 100.00000000000001,
'date_time': '2025-06-06 14:00:14',
'date_time_end': '2025-06-06 14:01:37',
'end_time': 1749219888.156,
'stability_score': 0.3702639355551277,
'start_time': 1749219888.156}
```

```
=====
Interval 1: Upwind from 2025-06-06 14:11:28 to 2025-06-06 14:12:58 — Karl Maeder vs Gian Stragiotti
=====
```

```
Run Statistics
```

Aug (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)
TWS	7.554	7.554	6.4	6.4	8.3	826	828	0.4126	0.4124			
TWD	178	178	174.1	174.1	182.9	826	828	2.827	2.827			
SOG	<b>20.36</b>	21.06	18.5	19.5	21.9	22	826	828	<b>0.6784</b>	<b>0.49</b>	Gian Stragiotti	Gian Stragiotti
VMG	<b>12.24</b>	12.24	8.308	7.939	15.3	16.57	826	828	1.409	<b>1.49</b>	Gian Stragiotti	Karl Maeder
COG	125.2	125.4	111.6	110.9	134.4	136.3	826	828	<b>4.57</b>	<b>4.502</b>	Gian Stragiotti	Gian Stragiotti
TWA_Abs	52.83	52.54	40.1	37.91	66.46	67.21	826	828	5.239	<b>5.133</b>		
Heel_Lwd	<b>53.86</b>	56.98	33.8	39.7	72.9	73.2	826	828	<b>5.705</b>	<b>6.264</b>	Gian Stragiotti	Gian Stragiotti
Side_Lines	<b>12.78</b>	<b>11.01</b>	4.2	2.8	24.4	24	826	828	<b>3.508</b>	<b>4.02</b>	Karl Maeder	Gian Stragiotti
Line_C	<b>111.9</b>	118.4	76.9	76.6	152.2	154.9	826	821	<b>12.97</b>	<b>10.9</b>	Gian Stragiotti	Gian Stragiotti
Total_Lines	<b>124.8</b>	129	82.4	82.1	171.3	165.5	826	828	<b>15.26</b>	<b>12.03</b>	Gian Stragiotti	Gian Stragiotti

Distance Summary

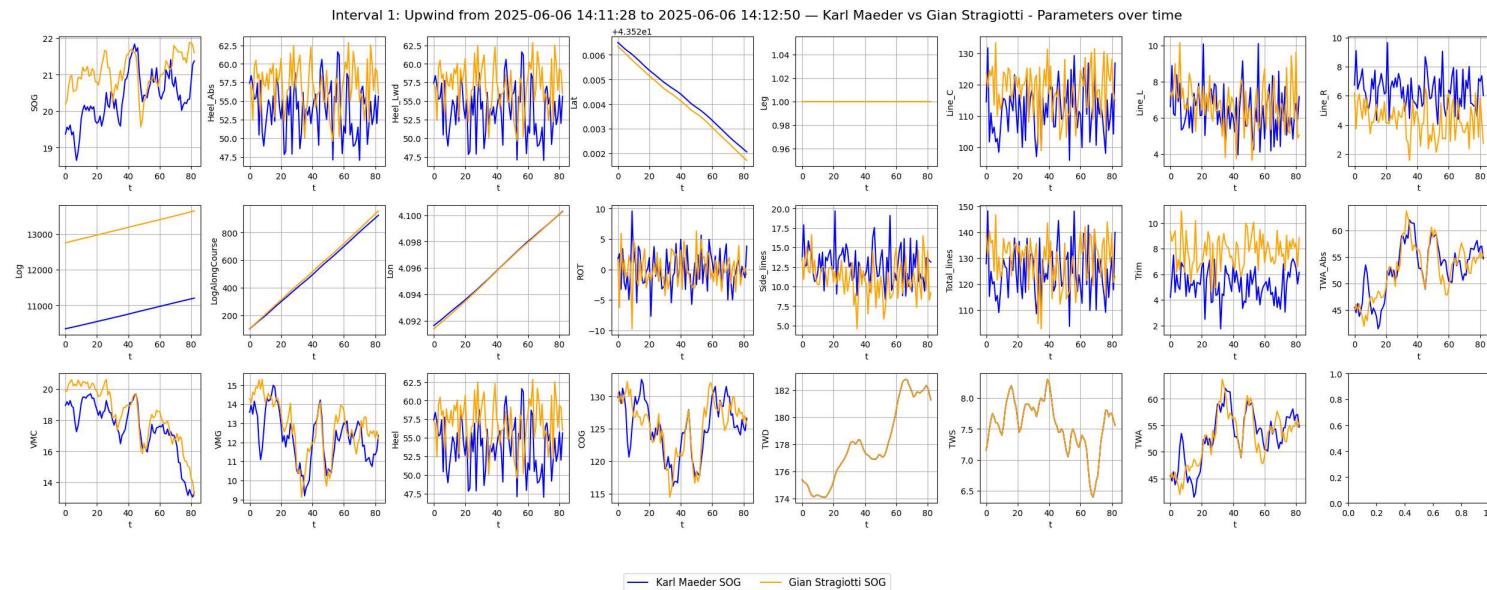
	Karl Maeder	Gian Stragiotti
Distance [m]	866.941594	898.997515
Straight Line [m]	862.221169	894.202707

Distance as Percentage of Straight Line [%] 100.547473 100.536210

Gain of Karl Maeder with respect to Gian Stragiotti

Forward	Lateral	VMG
-7099155	24.961832	15.600337
Initial Deficit		
Final Deficit	24.681399	29.951387
Total Gain	-11.960549	-4.952065
Gain per Minute	-332.45445	-3.001720
		-16.915463

## MainReport



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

```
{'SOG_variation_beat1': 8.7122666523594098,
 'SOG_variation_beat2': 8.712271779817456,
 'avg_TWA_beat1': 52.667271779817456,
 'avg_TWA_beat2': 52.53241598915989,
 'avg_COG_beat1': 19.742625169147405,
 'avg_COG_beat2': 19.742625169147405,
 'boat1_master_leeward': True,
 'boat1_name': 'Gian Stragiotti',
 'boat1_tdm': 10.77,
 'boat2_master_leeward': False,
 'boat2_name': 'Karl Maeder',
 'boat2_tdm': 10.77,
 'boat2_total_weight': 9750000000000001,
 'start_time': 1749219984931946,
 'end_time': 1749219984931946,
 'stability_score': 0.9631675127350817,
 'start_time': 1749219984931946}
```

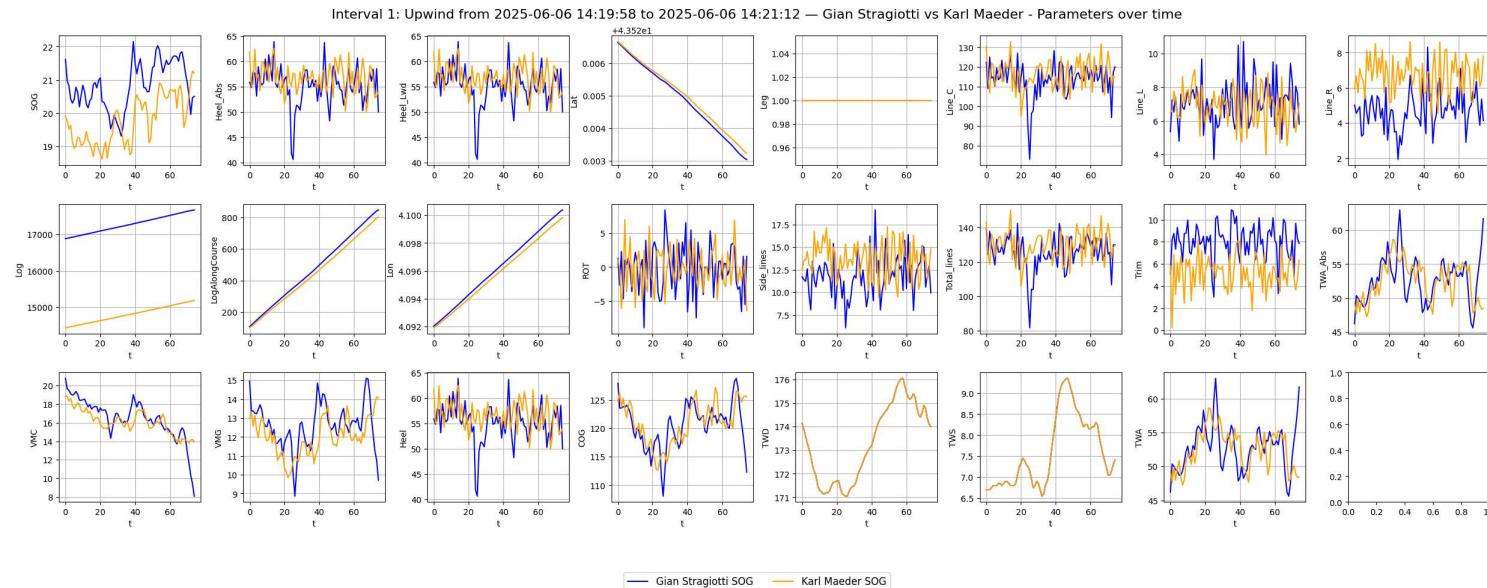
```
=====
Interval 1: Upwind from 2025-06-06 14:19:58 to 2025-06-06 14:21:12 — Gian Stragiotti vs Karl Maeder
=====
```

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)
TWS	7.593	7.594	6.504	6.506	9.396	739	738	0.8486	0.8485	
TWD	173.3	173.3	171	171	176.1	739	738	1.637	1.638	
SOG	20.83	19.74	19.1	18.5	22.3	739	738	0.7123	0.7277	Gian Stragiotti
VMG	12.62	12	8.2	8.03	16.21	739	738	1.247	1.086	Karl Maeder
COG	120.6	120.8	106	107.3	131.6	739	738	4.214	4.064	Karl Maeder
TWA_Abs	52.67	52.53	42.8	44.5	65.03	739	738	3.662	3.353	Karl Maeder
Heel_Lud	55.19	56.73	31.3	40.4	74.8	739	738	6.276	5.752	Karl Maeder
Side_Lines	11.82	18.62	2.2	5.6	26.1	739	738	3.608	3.51	Karl Maeder
Line_C	113.3	116	62.3	85.7	150.6	735	738	12.43	10.99	Karl Maeder
Total_Lines	125.4	129.6	75.1	94.5	160.7	176	739	13.49	12.52	Karl Maeder

## Distance Summary

	Gian Stragiotti	Karl Maeder
Distance [m]	792.390098	751.058332
Straight Line [m]	788.576683	747.458507
Distance as Percentage of Straight Line [%]	100.484597	100.481609
Gain of Gian Stragiotti with respect to Karl Maeder		
Forward	2.878835	-3.310205
Initial Deficit	-9.232465	-9.078835
Final Deficit	-50.321621	4.786736
Total Gain	41.099155	-1.907858
Gain per Minute	33.402196	-1.550968

## MainReport



```
=====
Processing run: 86_86_Run5
=====
```

```
{'SOG_variation_beat1': 8.5502899089942721,
'SOG_variation_beat2': 8.5485879849896449,
'avg_TWA_host1': 48.68512380123801,
'avg_TWA_host2': 48.25772299508863,
'avg_COG_host1': 11.48314883175523,
'avg_COG_host2': 11.48314883175523,
'boat1_master_leeward': True,
'boat1_name': "Karl Maeder",
'boat1_starting_twa': 95.95000000000001,
'boat2_master_leeward': False,
'boat2_name': "SenseBoard",
'boat2_total_weight': 8999999999999999,
'date': '2025-06-06T14:19:58Z',
'date_end': '2025-06-06T14:21:12Z',
'end_time': 1749228811.654,
'stability_score': 0.96281599595384037,
'start_time': 1749228730.46}
```

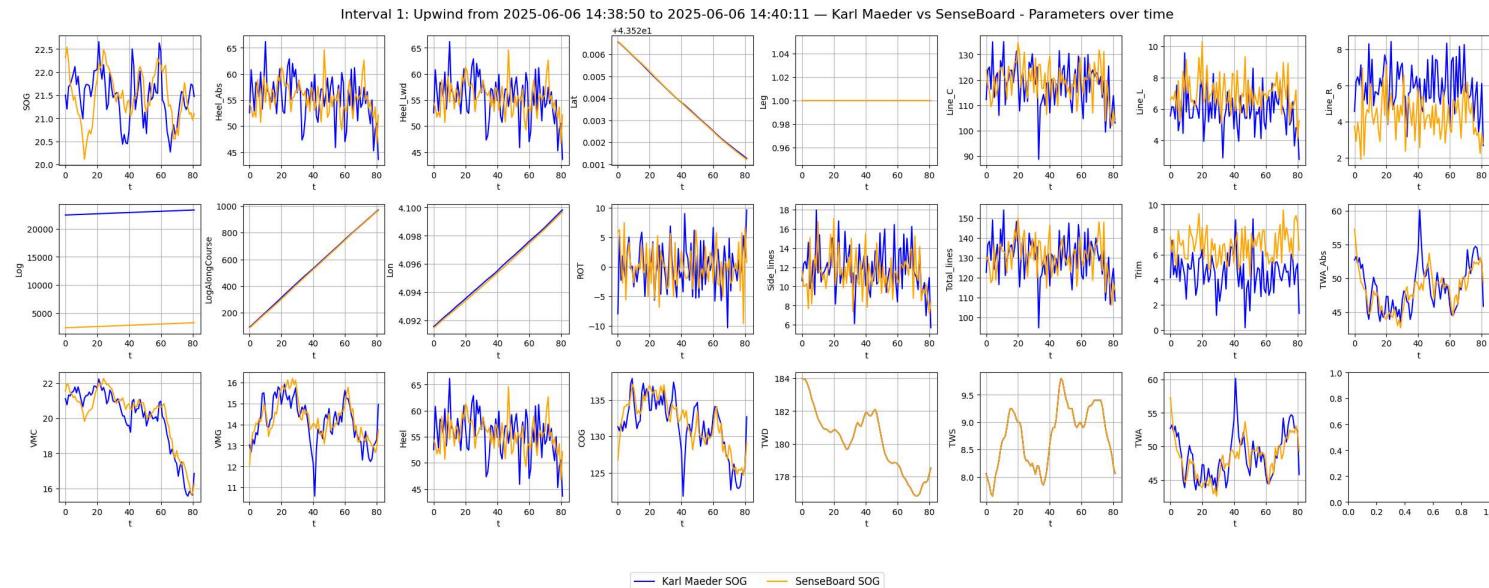
```
=====
Interval 1: Upwind from 2025-06-06 14:19:58 to 2025-06-06 14:21:12 — Karl Maeder vs SenseBoard
=====
```

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)
TWS	8.762	8.763	7.607	7.605	9.8	9.8	813	811	0.5466	0.5461		
TWD	180.1	180.1	176.8	176.8	184	184	813	811	1.892	1.888		
SOG	21.45	21.48	20	20	22.9	23.6	813	811	0.5503	0.5546	SenseBoard	Karl Maeder
VMG	14.13	14.28	9.293	11.62	17.47	17.12	813	811	1.188	1.024	SenseBoard	SenseBoard
COG	131.4	131.9	118	121.3	141.2	141.3	813	811	4.385	3.887	SenseBoard	SenseBoard
TWA_Abs	48.69	48.26	39.52	39.53	63.87	58.89	813	811	3.947	3.323		
Heel_Lvd	55.55	55.45	32.8	38	74.8	74.5	813	811	6.326	5.439	Karl Maeder	SenseBoard
Side_Lines	11.84	11.4	3.5	2.8	26	24.9	813	811	3.934	3.757	Karl Maeder	SenseBoard
Line_C	118.3	119.2	75.9	85	162.8	150.5	813	811	13.8	11.69	SenseBoard	SenseBoard
Total_Lines	130	130.4	80.3	90.7	177.2	174.7	813	811	15.66	13.42	SenseBoard	SenseBoard

## Distance Summary

	Karl Maeder	SenseBoard
Distance [m]	898.225740	896.927903
Straight Line [m]	894.110145	893.224327
Distance as Percentage of Straight Line [%]	100.460301	100.414630
Gain of Karl Maeder with respect to SenseBoard		
Forward		
Lateral		
VMG		
Initial Deficit	-5.636834	3.981248
Final Deficit	-6.534813	11.708492
Total Gain	0.897975	-7.727244
Gain per Minute	0.663580	-5.710208
	-3.850642	

## MainReport



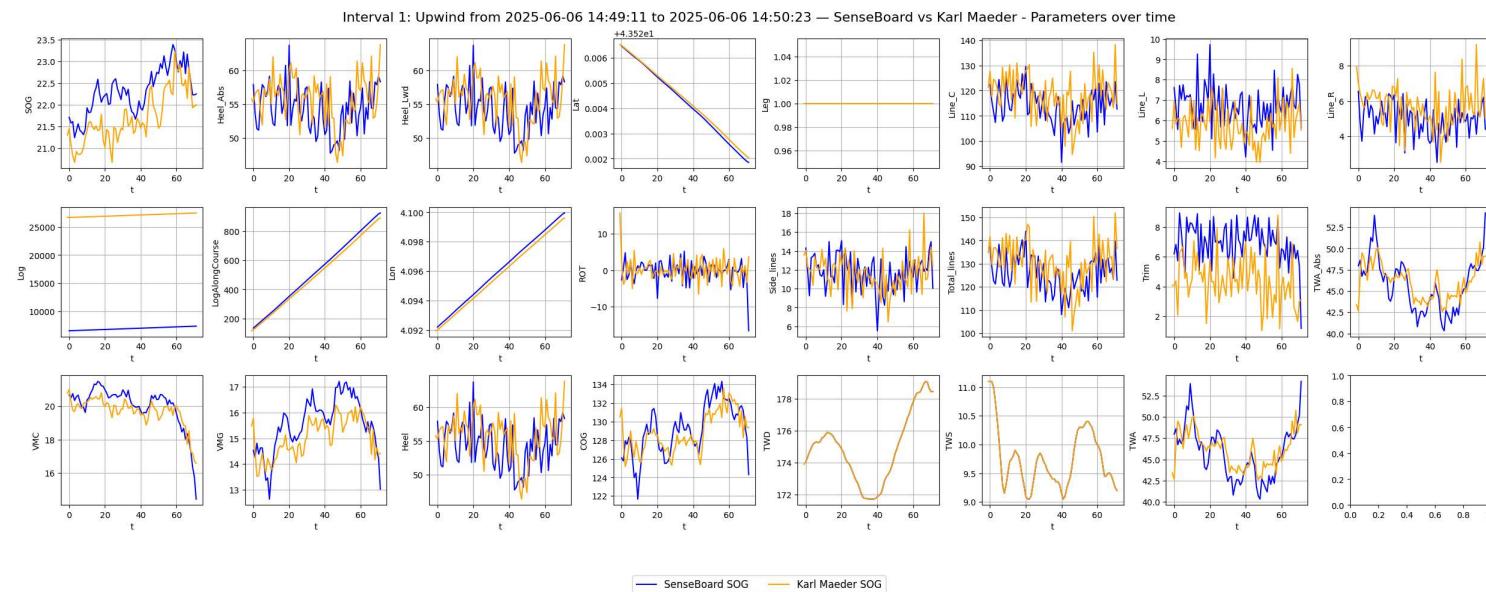
=====  
Processing run: 06\_06\_Run6

```
[{"SOG_variation": "boat1", "SOG_variation_hat": 0.6204771486351213, "SOG_variation_hat2": 0.5331351580461789, "avg_TWA_hat1": 46.85574989999999, "avg_TWA_hat2": 45.36245170303731, "avg_SOG_hat1": 21.702411767470592, "avg_SOG_hat2": 22.3008224489657, "is_boat_hat": False, "boat1_name": "Kahn Heider", "boat1_total_weight": 100.97590000000001, "boat2_name": "SenseBoard", "boat2_total_weight": 108.89999999999999, "end_time": 1749231423.255, "stability_score": 0.969285257499835, "start_time": 1749231351.961}
```

=====  
Interval 1: Upwind from 2025-06-06 14:49:11 to 2025-06-06 14:50:23 – 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)
TWS	9.733	9.734	9.004	9.004	11.1	11.1	712	714	0.4951	0.4974		
TWD	174.9	174.9	171.7	171.7	179.2	179.2	712	714	2.179	2.181		
SOG	22.3	21.7	21.1	20.5	23.5	23.5	712	714	0.5335	0.6025	SenseBoard	SenseBoard
VMG	15.57	15.04	11.81	12.69	18.17	17.19	712	714	1.105	0.8833	SenseBoard	Karl Maeder
COG	129.2	128.8	119.2	120.7	137.6	135.5	712	714	3.157	2.662	Karl Maeder	Karl Maeder
TWA_Abs	45.64	46.09	36.84	38.26	56.34	54.05	712	714	3.38	2.616		
Heel_Lwd	54.28	55.76	38.6	38.7	70.4	71.3	712	714	5.642	5.578	Karl Maeder	Karl Maeder
Side_Lines	11.68	11.54	3.1	4.2	25.6	25.8	712	714	3.634	3.497	SenseBoard	Karl Maeder
Line_C	114.2	118.3	69.8	71.2	149.3	154.9	710	714	12.2	13.28	Karl Maeder	SenseBoard
Total_Lines	115.0	120.1	99.1	76.4	159.4	170.5	712	714	17.36	14.77	Karl Maeder	SenseBoard

## MainReport



```
=====
Processing run: 86_86_Run7
=====
```

```
{'SOG_variation_host1': 8.8433998842982569,
'SOG_variation_host2': 8.726686604981968,
'avg_TWA_host1': 48.42436351875808,
'avg_TWA_host2': 47.254753518134715,
'avg_COG_host1': 135.821566424120995,
'avg_COG_host2': 21.57644242128893,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_weight': 9500000000000001,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_weight': 8999999999999999,
'date_start': '2025-06-06T14:49:11Z',
'date_end': '2025-06-06T14:50:23Z',
'end_time': 1749221958.56,
'stability_score': 0.8643827859484259,
'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
=====
```

## 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)
TWS	8.654	8.653	8.108	8.109	9.2	9.2	773	772	0.2658	0.2653		
TWD	184.2	184.2	179	179	187.3	187.3	773	772	2.234	2.236		
SOG	<b>21.42</b>	21.57	17.7	19.8	22.8	23	773	772	<b>0.8434</b>	<b>0.7324</b>	SenseBoard	SenseBoard
VMG	<b>14.2</b>	14.6	9.275	11.03	18.08	18.22	773	772	<b>1.47</b>	<b>1.471</b>	SenseBoard	Karl Maeder
COG	135.8	136.9	117.2	126.9	148.4	149.2	773	772	<b>4.293</b>	<b>4.003</b>	SenseBoard	SenseBoard
TWA_Abs	48.42	47.25	34.81	35.07	62.59	58.8	773	772	4.159	4.78		
Heel_Lvd	<b>53.07</b>	53.86	23.3	30.9	75.7	68.3	773	772	<b>6.961</b>	<b>5.867</b>	SenseBoard	SenseBoard
Side_Lines	<b>11.19</b>	11.22	2.7	2.7	28.1	24.2	773	772	<b>3.817</b>	<b>3.818</b>	SenseBoard	Karl Maeder
Line_C	<b>11.2</b>	11.22	41.7	65	152.8	147.4	773	771	<b>16.63</b>	<b>13.04</b>	SenseBoard	SenseBoard
Total_Lines	<b>12.3</b>	12.35	45	82	171.1	164.1	773	772	<b>18.01</b>	<b>14.64</b>	SenseBoard	SenseBoard

## Distance Summary

	Karl Maeder	SenseBoard
Distance [m]	852.057212	857.088102
Straight Line [m]	848.266453	853.420647

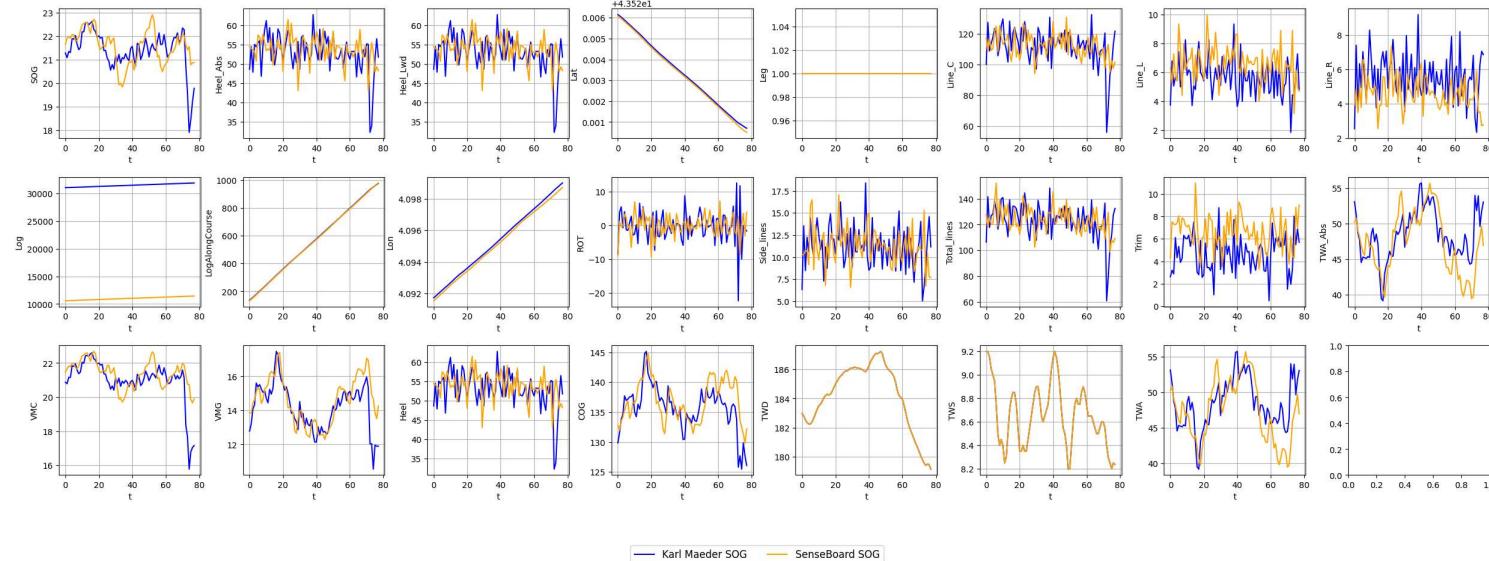
Distance as Percentage of Straight Line [%] 100.446883 100.429736

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
Initial Deficit	-5.003085	15.786889	8.489243
Final Deficit	-0.002812	32.467871	24.285909
Total Gain	-5.000271	-16.681985	-15.796666
Gain per Minute	-3.886424	-12.965168	-12.277838

## MainReport

Interval 1: Upwind from 2025-06-06 14:57:53 to 2025-06-06 14:59:10 — Karl Maeder vs SenseBoard - Parameters over time



=====  
Processing run: 06\_06\_Run8

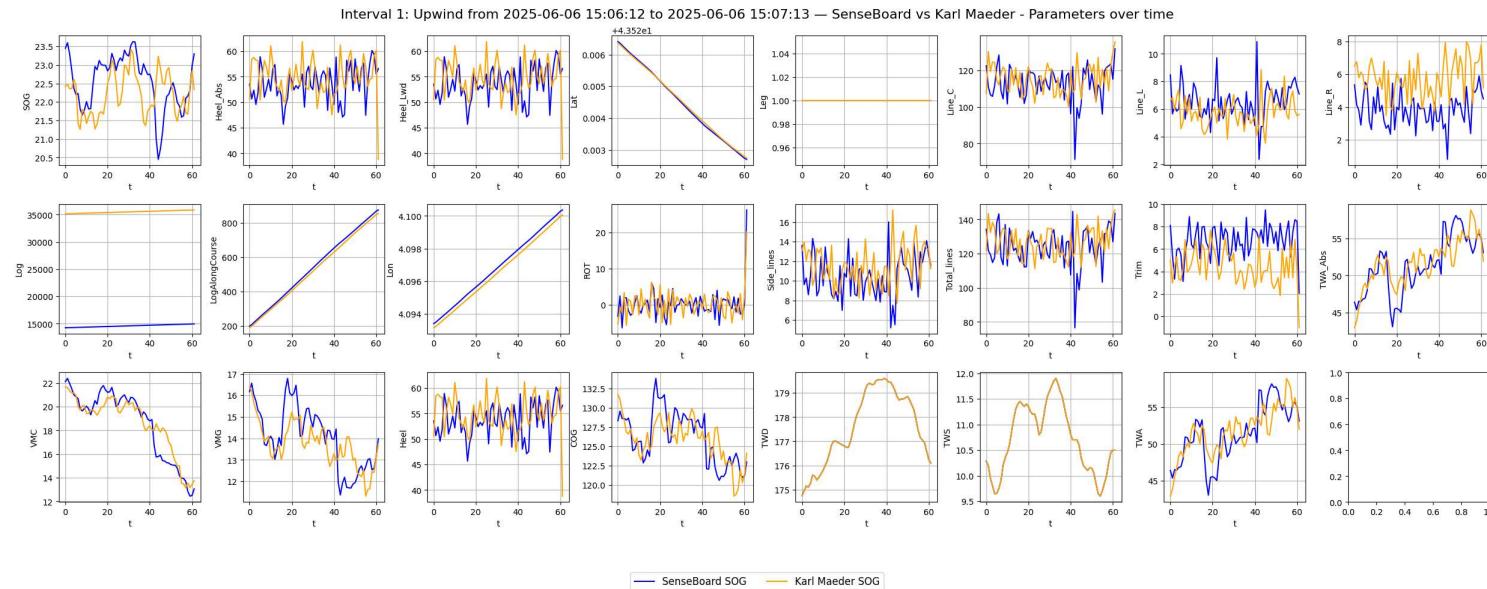
```
[{"boat_type": "SOG", "boat_id": "0_5939857807419251", "boat_name": "SOG_vibration_beat_2", "boat_weight": "0.7358542793803253", "avg_Tma_beat": "51.781526315579", "avg_Tmb_beat": "51.425705975957", "avg_Soe_beat": "22.2837284973684", "avg_Sob_beat": "22.531743421862635", "boat2_nester_leashed": "False", "boat2_nester_mixed": "Mixed", "boat2_total_weight": "100", "boat2_nester_weight": "0.8750000000000001", "boat2_nester_leashed": "True", "boat2_name": "Senseboard", "boat2_total_weight": "109.89999999999999", "duration": "6.698999999999999", "end_time": "1749280000000000000", "start_time": "174927999999999995", "stability": "0.8", "stability_min": "0.54031212289", "start_time": "-129^2372372.563"},
```

=====  
Interval 1: Upwind from 2025-06-06 15:06:12 to 2025-06-06 15:07:13 - 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)
TWS	10.71	10.71	9.513	9.515	11.9	11.9	606	608	0.6764	0.6756		
TWD	177.6	177.6	174.7	174.7	179.7	179.7	606	608	1.475	1.479		
SOG	22.33	22.2	20.4	19.8	23.7	23.5	606	608	0.7301	0.594	SenseBoard	Karl Maeder
VMG	14.03	13.71	9.408	10.26	17.63	17.37	606	608	1.551	1.139	SenseBoard	Karl Maeder
COG	126.2	125.8	114.2	115.4	136.2	135.8	606	608	3.803	3.191		
TWA_Abs	51.41	51.78	40.7	39.17	65.28	62	606	608	4.195	3.531		
Heel_Lwd	56.67	54.98	32.1	31.7	75.7	75.9	606	608	6.196	5.885	Karl Maeder	Karl Maeder
Side_Lines	10.43	11.58	1.7	4.2	27.5	24	606	608	3.923	3.565	Karl Maeder	Karl Maeder
Line_C	112.7	115.4	55	75.9	152.8	151.2	602	608	14.79	14.06	Karl Maeder	Karl Maeder
Front_Wheel	10.11	10.2	7.2	7.2	10.9	10.1	556	559	0.5001	0.498	Karl Maeder	Karl Maeder

total_lines		123.4	126.9	58.6
Distance Summary				
SenseBoard Karl Maeder				
Distance [m]				702.801188 694.299581
Straight Line [m]				700.120899 692.053828
<b>Distance as Percentage of Straight Line [%]</b>				
103.862841 100.324506				
Gain of SenseBoard with respect to Karl Maeder				
Forward		LateraL	VNG	MNG
<b>Initial Deficit</b> -14.300088 15.991388 3.580632				
<b>Final Deficit</b> -22.387969 18.870672 -5.462286				
<b>Total Gain</b> 8.087881 5.115116 9.042912				
Gain per Minute 8.020118 5.115116 9.067140				

## MainReport



Error processing .../Data\_SailInJord/Straight\_lines\06\_06\Interview and equipment: At least two CSV files are required.  
Error processing .../Data\_SailInJord/Straight\_lines\06\_06\senseboard\_log: At least two CSV files are required.

=====
Processing run: 07\_06\_Run1
=====

```
{
  "SOG_variation_boat1": 8.4742785884545244,
  "SOG_variation_boat1": 1.0122412358441399,
  "avg_TWA_boat1": 49.980738391297715,
  "avg_TWA_boat2": 49.980738391297715,
  "avg_Vmg_boat2": 50.378325688073396,
  "avg_SOG_boat2": 21.987786259541986,
  "avg_SOG_boat1": 21.987786259541986,
  "boat1_master_leeward": false,
  "boat1_name": "Gian Stragiotti",
  "boat1_total_weight": 108.19,
  "boat2_name": "Karl Maeder",
  "boat2_total_weight": 108.19,
  "boat1_tilt": 1.0000000000000001,
  "boat2_tilt": 1.0000000000000001,
  "end_time": 174297942.555,
  "stability_score": 0.9599531391568393,
  "start_time": 174296977.156
}
```

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

## Run Statistics

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

## Distance Summary

## Karl Maeder

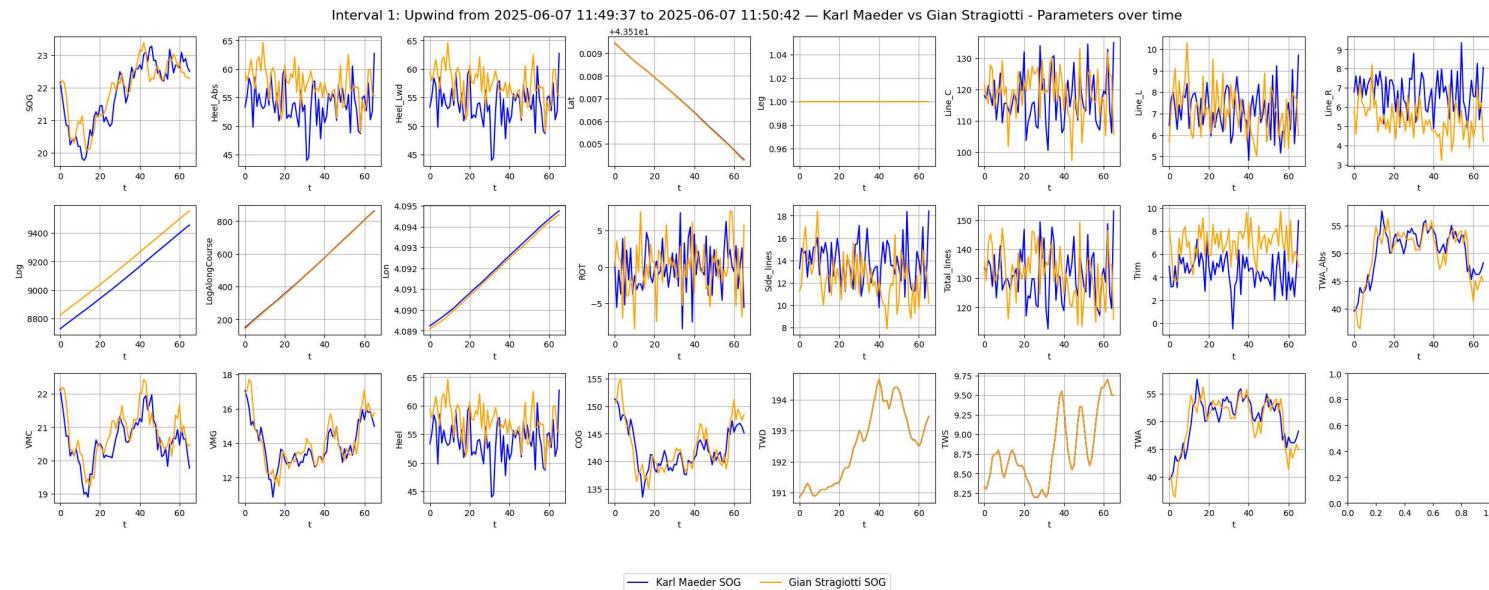
## Gian Stragiotti

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
-8.416052	8.109635	0.879899
Final Deficit	-4.988039	13.676549
Total Gain	-4.428014	-5.566914
Gain per Minute	-0.149781	-0.115082

## MainReport



```
=====
Processing run: 87_06_Run3
=====
```

```
{'SOG_variation_beat1': 8.6887969219394326,
'SOG_variation_beat2': 8.6887969219394326,
'avg_TWA_beat1': 48.8396641679169386,
'avg_TWA_beat2': 48.998265765765765,
'avg_SOG_beat1': 22.435917451277499,
'avg_SOG_beat2': 22.4359097451277493,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_weight': 97.00000000000001,
'boat2_master_leeward': False,
'boat2_name': 'Karl Maeder',
'boat2_total_weight': 97.00000000000001,
'date_time': '2025-06-07 11:49:37.1183',
'end_time': '2025-06-07 11:50:59.455',
'stability_score': 0.971830241349652,
'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)
TWS	8.67	8.67	7.806	7.807	9.4	9.4	667	666	0.4441	0.4444		
TWD	188.8	188.8	186.1	186.1	193.1	193.1	667	666	2.384	2.383		
SOG	22.74	22.48	21.3	21.4	24.6	24.2	667	666	0.6088	0.5116	Gian Stragiotti	Karl Maeder
VMG	15.19	14.74	11.89	12.01	18.96	17.55	667	666	1.249	0.9556	Gian Stragiotti	Karl Maeder
COG	140.8	139.8	133.2	131.9	152.2	150	667	666	2.994	2.999	Gian Stragiotti	Gian Stragiotti
TMA_Abs	48.03	.49	39.56	38.75	57.45	56.21	667	666	3.261	2.589		
Heel_Lwd	57.32	55.08	41.6	37.9	73.8	70	667	666	5.687	5.048	Gian Stragiotti	Karl Maeder
Side_lines	13.78	13.73	5.6	5.8	26.6	26.4	667	666	3.459	3.413	Gian Stragiotti	Karl Maeder
Line_C	121.1	119.1	84	77.8	161.5	159.9	665	666	10.91	12.07	Gian Stragiotti	Gian Stragiotti
Total_lines	134.7	132.8	100	92.7	170.8	180.2	667	666	12.08	13.37	Gian Stragiotti	Gian Stragiotti

## Distance Summary

	Gian Stragiotti	Karl Maeder
--	-----------------	-------------

Distance [m]	780.217541	770.272138
--------------	------------	------------

Straight Line [m]	777.931026	768.013464
-------------------	------------	------------

Distance as Percentage of Straight Line [%]	100.293923	100.294093
---	------------	------------

Gain of Gian Stragiotti with respect to Karl Maeder

Forward	Lateral	Vmg
---------	---------	-----

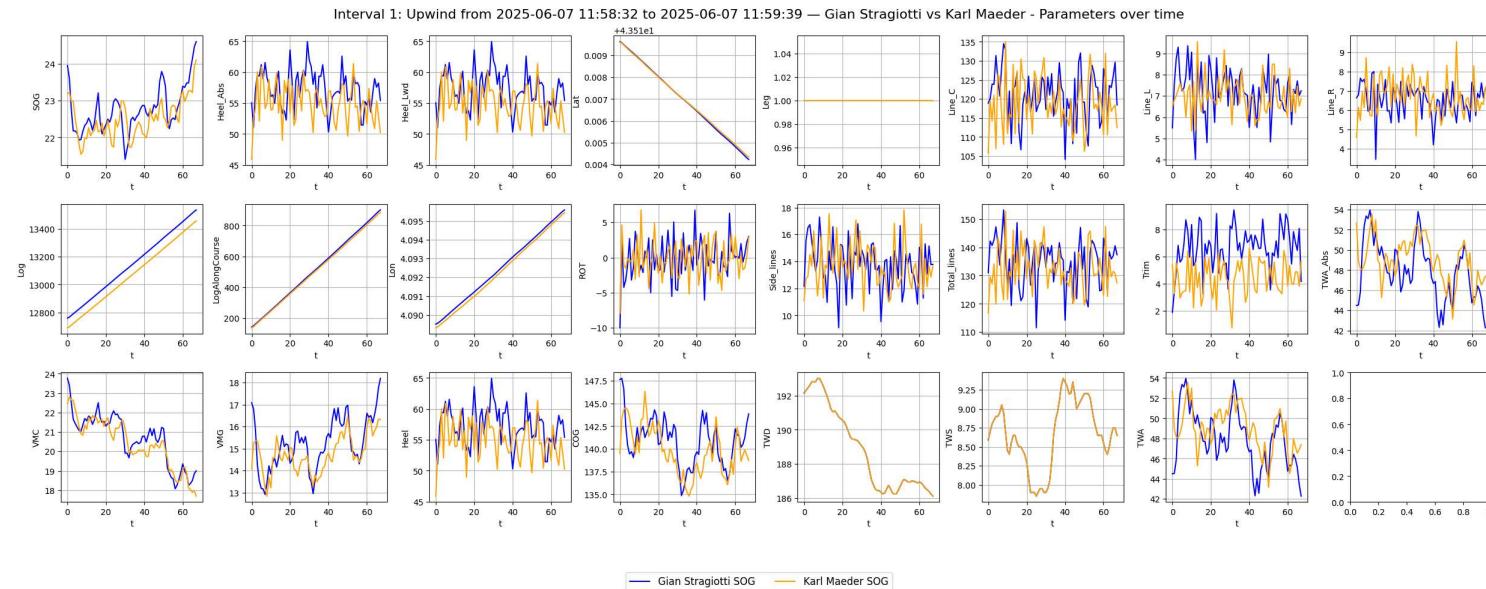
Initial Deficit	-7.111750	13.993113	5.648021
-----------------	-----------	-----------	----------

Final Deficit	-17.172246	10.91471	-10.672167
---------------	------------	----------	------------

Total Gain	10.060496	12.901642	16.320187
------------	-----------	-----------	-----------

Gain per Minute	9.063646	11.623275	14.703092
-----------------	----------	-----------	-----------

## MainReport



```
=====
Processing run: 87_06_Run
=====
```

```
{'SOG_variation_beat1': 8.0131639589427351,
'SOG_variation_beat2': 8.5512421454015869,
'avg_TWA_host1': 43.432824154589364,
'avg_TWA_host2': 44.034191935488375,
'avg_SOG_host1': 22.30998389594842,
'avg_SOG_host2': 22.30998389594842,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_weight': 182.0,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 182.0,
'date': '2025-06-07T11:58:32Z',
'end_time': 1745298544.164,
'stability_score': 0.9617234182036085,
'start_time': 1745298482.161}
```

```
=====
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)
TWS	9.364	9.364	8.806	8.806	9.894	9.894	620	0.2555	0.2553	
TWD	180.6	180.6	178.3	178.3	183.8	183.8	620	2.044	2.044	
SOG	<b>22.31</b>	22.38	21.2	21.1	23.7	24.4	620	0.5508	<b>0.8132</b>	Gian Stragiotti
VMG	<b>16</b>	16.21	12.12	14.08	18.28	18.4	620	<b>0.983</b>	<b>0.8443</b>	Gian Stragiotti
COG	136.6	137.2	127.6	130.4	145	146.3	620	<b>2.755</b>	<b>2.524</b>	Gian Stragiotti
TWA_Abs	44.03	43.43	36.2	32.01	55.68	52.72	620	3.586	3.436	Gian Stragiotti
Heel_Lvd	<b>53.6</b>	57.38	35.5	42	69.3	71.4	620	<b>5.727</b>	5.484	Gian Stragiotti
Line_C	<b>118.2</b>	122	82.8	78.4	149.4	146.9	620	<b>12.97</b>	10.75	Gian Stragiotti
Side_Lines	nan	14.41	nan	6.5	nan	24.2	nan	621	3.353	Gian Stragiotti
Total_Lines	nan	136.4	nan	101.8	nan	163.6	nan	621	10.66	Gian Stragiotti

Distance Summary

SenseBoard	Gian Stragiotti
Distance (m)	711.19478
Straight Line (m)	713.574304

Distance as Percentage of Straight Line (%) 100.306189 100.291895

Gain of SenseBoard with respect to Gian Stragiotti

Forward	Lateral	VMG
---------	---------	-----

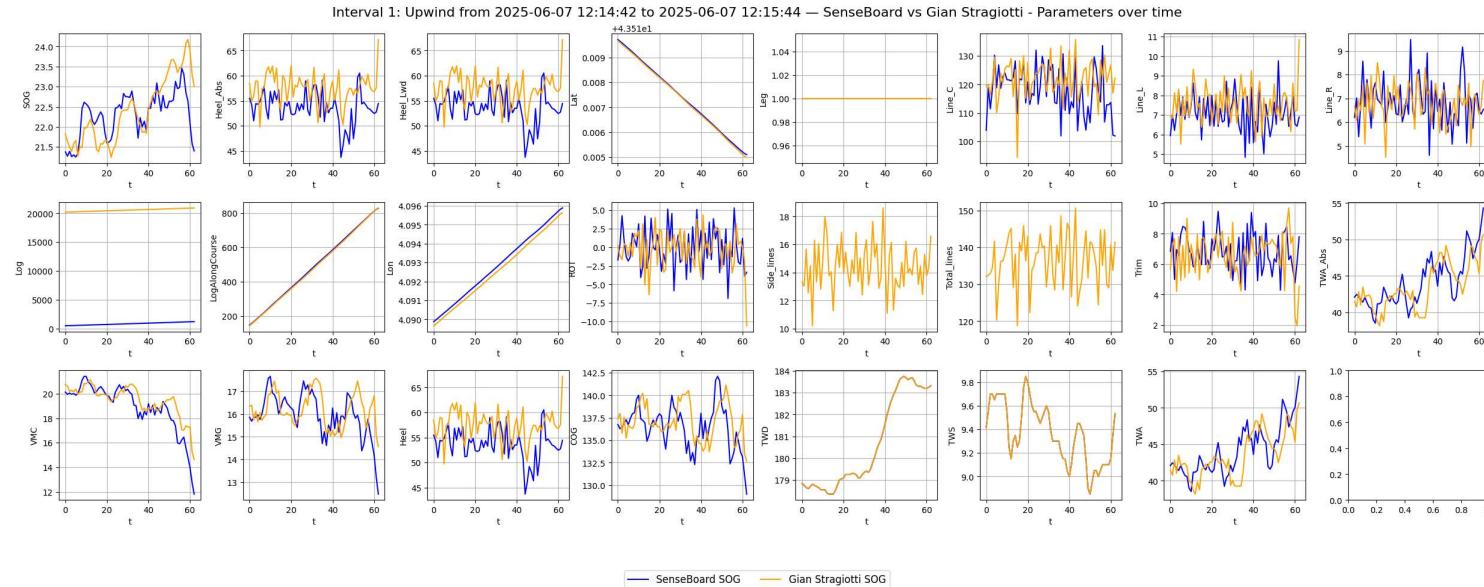
Initial Deficit	-6.990020	16.501216	5.006546
-----------------	-----------	-----------	----------

Final Deficit	-5.084044	23.725225	12.835958
---------------	-----------	-----------	-----------

Total Gain	-1.905975	-7.224009	-7.829410
------------	-----------	-----------	-----------

Gain per Minute	-3.786021	-7.002157	-7.588966
-----------------	-----------	-----------	-----------

## MainReport



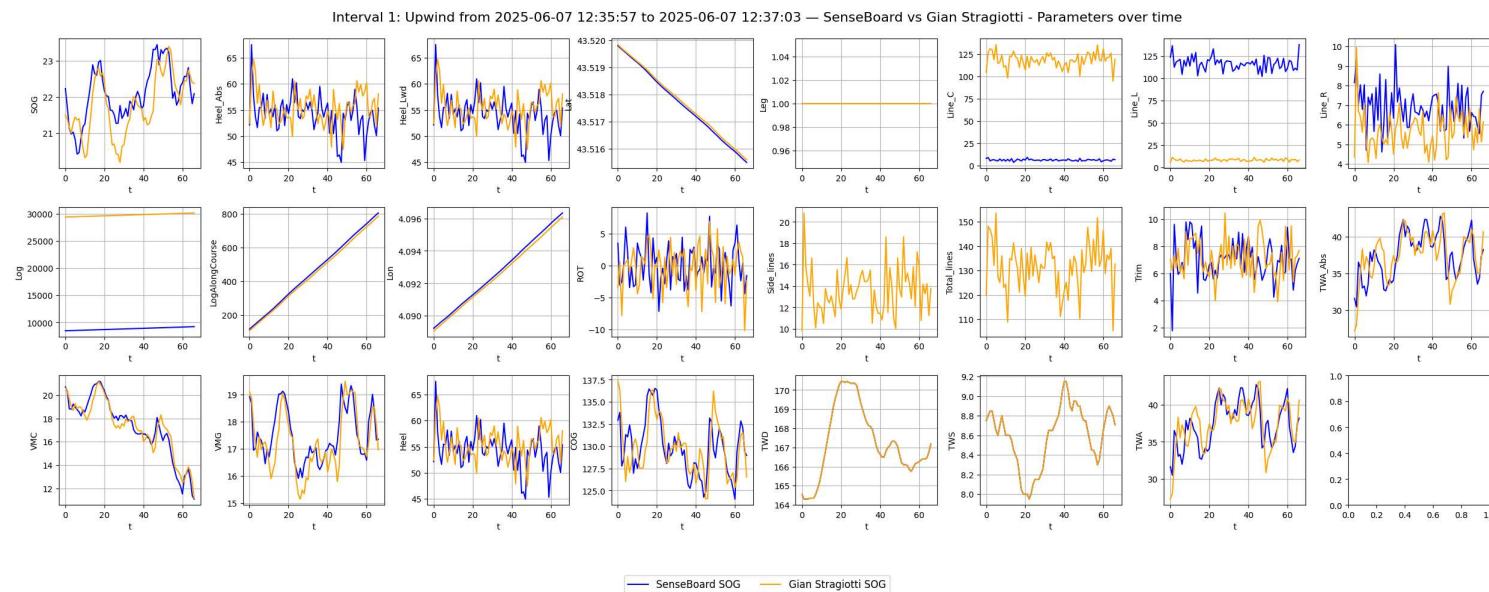
Error processing ..\Data\_Sailnjord\Straight\_lines\07\_06\07\_06\_Run4: No or insufficient intervals for run: 07\_06\_Run4

```
=====
Processing run: 07_06_Run5
=====
{'SOG_variation_boat1': 0.830039451075229,
 'SOG_variation_boat2': 0.748138436369988,
 'avg_TWAs': 17485999427795,
 'avg_TWAs_boat1': 37.373545590435,
 'avg_TWAs_boat2': 21.77249626389723,
 'avg_SOG_boat1': 22.079496243647233,
 'avg_SOG_boat2': 22.079496243647233,
 'boat1_mast_weight': 108.19,
 'boat1_name': 'Gian Stragiotti',
 'boat1_total_weight': 108.19,
 'boat2_mast_leech': True,
 'boat2_mast_weight': 108.19,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 108.19,
 'duration': 66.085999427795,
 'end_t': 12:35:57,
 'stability_start': 8.9434271538142162,
 'start_time': 174929957.058}
```

=====
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)
TWS	8.59	8.59	7.905	7.904	9.195	9.196	669	669	0.3084	0.3084		
TWD	167.3	167.3	164.3	164.3	170.5	170.5	669	669	1.873	1.873		
SOG	22.08	21.77	20.2	20.1	23.6	23.5	669	669	0.7493	0.83	SenseBoard	SenseBoard
VMG	17.52	17.27	15.14	14.5	20.05	20.04	669	669	1.039	1.176	SenseBoard	SenseBoard
COG	129.9	129.9	120.8	121.5	139.8	140.1	669	669	3.481	3.56	SenseBoard	SenseBoard
TWA_Abs	37.37	37.39	26.6	24.3	46.74	45.75	669	669	3.651	3.651		
Heel_Inv	54.24	55.45	36.5	37.3	75.9	72.4	669	669	6.248	6.017	Gian Stragiotti	Gian Stragiotti
Line_C	6452	1185	2.7	73.9	11.7	150.7	669	668	1.722	12.2	Gian Stragiotti	SenseBoard
Side_lines	nan	13.58	nan	5.1	nan	25.4	nan	669	nan	3.712		Tie
Total_lines	nan	131.7	nan	84.1	nan	173.2	nan	669	nan	13.75		
Distance Summary												
SenseBoard Gian Stragiotti												
Distance [m]	760.399316	750.221172										
Straight Line [m]	757.657655	747.261983										
Distance as Percentage of Straight Line [%]	100.361860	100.396004										
Gain of SenseBoard with respect to Gian Stragiotti												
Forward	Lateral	VMG										
Initial Deficit	-12.145715	4.349712	-7.017174									
Final Deficit	-22.539800	4.086554	-15.431558									
Total Gain	10.394085	0.263148	8.419815									
Gain per Minute	9.336004	0.2346361	7.562708									

## MainReport



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

```
{'SOG_variation_beat1': 6.6883810361886973,
'SOG_variation_beat2': 8.776825479529584,
'avg_TWA_beat1': 53.60865277777778,
'avg_TWA_beat2': 53.41760173913043,
'avg_COG_beat1': 13.750000000000001,
'avg_COG_beat2': 22.96642466666666697,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_weight': 89.9,
'boat1_weight_kg': 89.9,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 90.9,
'date_time': '2025-06-07 12:35:57',
'end_time': '174530463.756',
'stability_score': 0.958180675524912,
'start_time': '1749300466.267'}
```

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

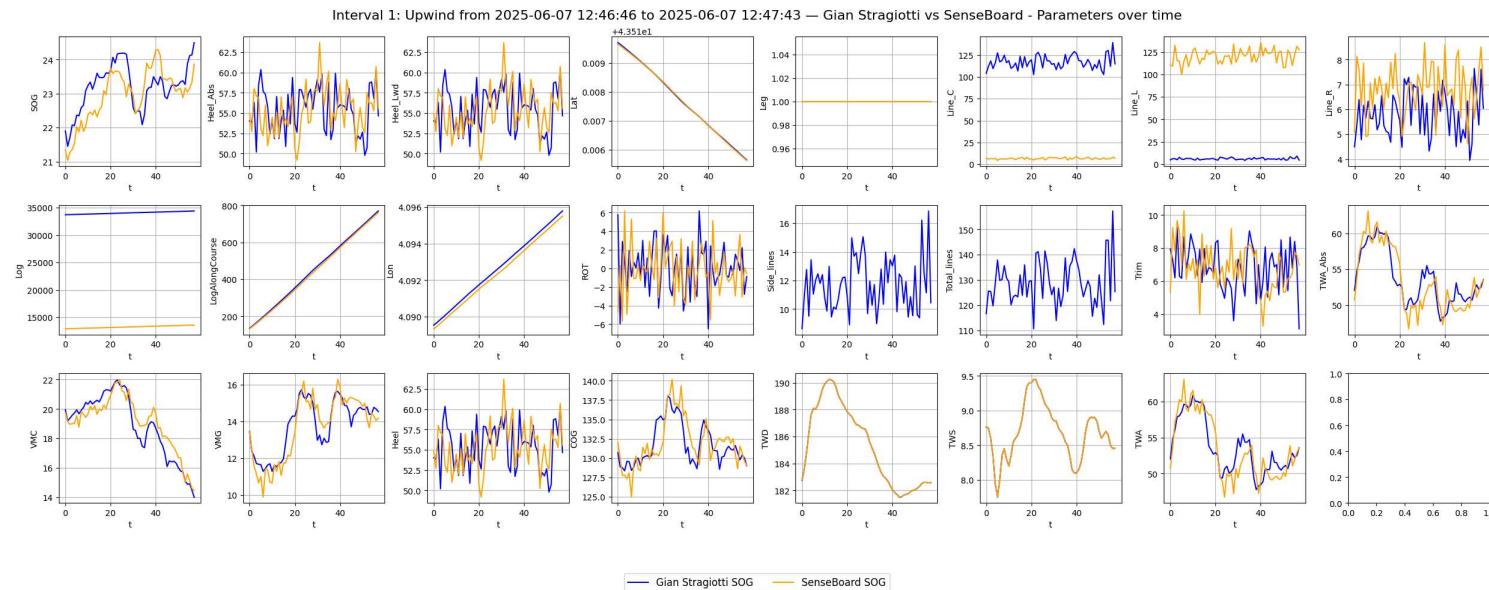
## Distance Summary

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

Gain of Gian Stragiotti with respect to SenseBoard

Forward	Lateral	VMG	
Initial Deficit	-7.359717	14.728960	7.351632
Final Deficit	-15.618877	16.651802	4.134837
Total Gain	8.029157	-1.922860	3.216796
Gain per Minute	0.379854	-0.2066878	0.3357299

## MainReport



```
=====
Processing run: 87_06_Run7
=====

{"SOG_variation_beat1": 1.0485250216595346,
 "SOG_variation_beat2": 0.7177639459613766,
 "avg_TWA_beat1": 48.16938733431517,
 "avg_TWA_beat2": 47.5461696165159165,
 "avg_SOG_beat1": 21.933493722680775,
 "avg_SOG_beat2": 21.933493722680775,
 "boat1_master_leeward": true,
 "boat1_name": "Karl Maeder",
 "boat1_tws": 18.000000000000001,
 "boat2_master_leeward": false,
 "boat2_name": "SenseBoard",
 "boat2_tws": 17.980000000000001,
 "boat2_total_weight": 100.00000000000001,
 "start_time": 174901208.532,
 "end_time": 1749301276.356,
 "stability_score": 0.46236363084159979,
 "start_time": 174901208.532}
```

```
=====
Interval 1: Upwind from 2025-06-07 13:08:08 to 2025-06-07 13:08:16 — 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)
TWS	9.164	9.164	7.5	7.5	10	10	679	678	0.644	0.6443		
TWD	181.5	181.5	174.9	174.9	186.7	186.7	679	678	4.269	4.271		
SOG	21.93	21.94	18.6	20.2	24.2	23.6	679	678	1.045	0.7182	SenseBoard	
VMG	14.49	14.69	9.382	10.25	20.41	19.25	679	678	2.678	2.352	SenseBoard	
COG	133.3	134	121.7	123.1	149.6	146.6	679	678	5.434	4.783	SenseBoard	
TWA_Abs	48.17	47.54	26.8	28.83	64.51	61.16	679	678	8.667	7.913	SenseBoard	
Heel_Lud	54.89	54.34	36	37.9	79.1	68	679	678	6.077	5.317	Karl Maeder	
Side_Lines	122.3	142.6	78.9	6.5	170.3	25.4	679	678	12.86	3.336	Karl Maeder	
Line_C	6.705	114.4	3	83	13.5	144.1	679	676	1.917	10.67	SenseBoard	
Total_Lines	129.5	178.6	85.1	92.6	175.7	168.1	679	678	13.62	12.21	Karl Maeder	

## Distance Summary

	Karl Maeder	SenseBoard
Distance [m]	767.001752	766.075156
Straight Line [m]	762.111677	761.957156

Distance as Percentage of Straight Line [%] 100.641648 100.540450

Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VMG
---------	---------	-----

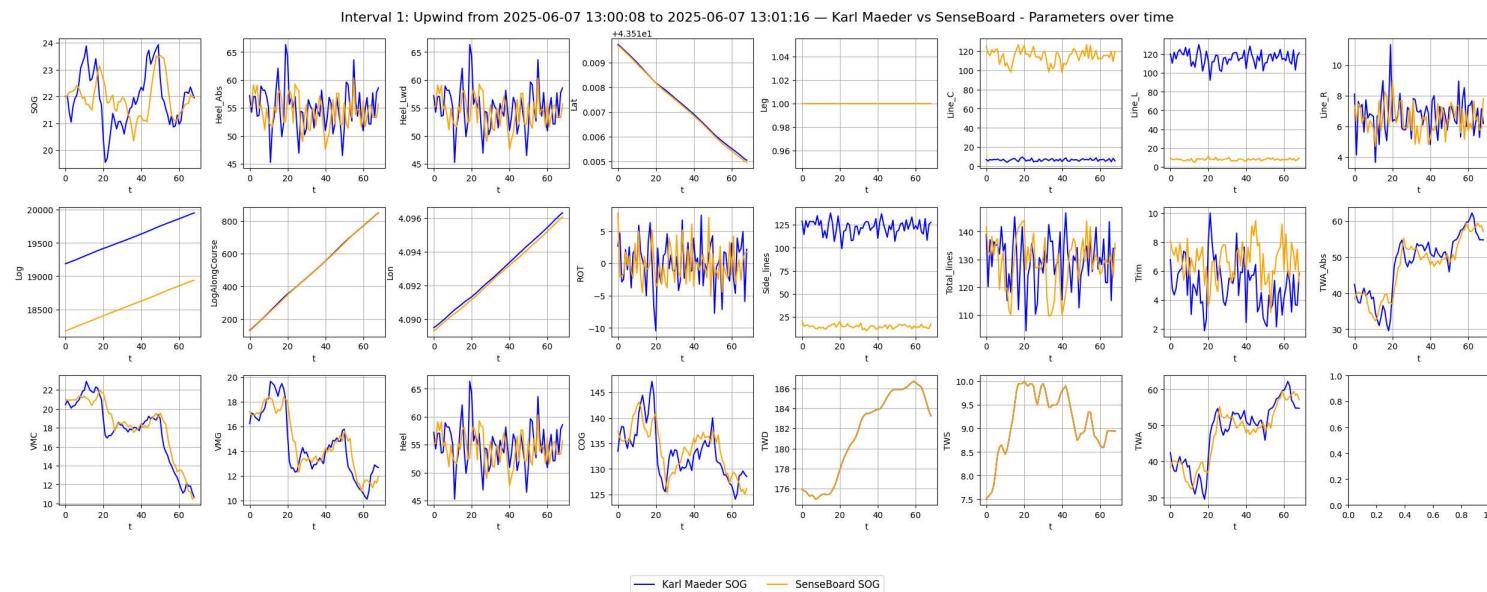
Initial Deficit	-7.964621	13.131171	4.474049
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Final Deficit	-8.155162	20.963207	10.183363
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Total Gain	0.190541	-2.783206	-5.709113
------------	----------	-----------	-----------

Gain per Minute	0.168611	-4.930597	-5.052191
-----------------	----------	-----------	-----------

## MainReport



```
=====
Processing run: 87_06_Run8
=====
```

```
{'SOG_variation_host1': 8.538671829582392,
'SOG_variation_host2': 8.589290769964135,
'avg_TWA_host1': 41.97196784569516,
'avg_TWA_host2': 41.89866612983225,
'avg_TWD_host1': 182.3,
'avg_TWD_host2': 182.3,
'avg_SOG_host1': 22.7405178488746,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_weight': 9500000000000001,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 6899999999999999,
'date': '2025-06-07 13:00:08',
'date_end': '2025-06-07 13:01:16',
'end_time': 1749301881.15,
'stability_score': 0.965564159321811,
'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
=====
```

	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)
TWD	9.53	9.53	7.804	7.805	10.7	10.7	620	622	0.7422	0.7422			
TWD	182.3	182.3	180.8	180.8	183.9	183.9	620	622	0.7432	0.7442			
SOG	22.75	22.52	21.4	21	24.3	23.5	620	622	0.5829	0.5331	SenseBoard	Karl Maeder	Tie
VMG	16.91	16.72	14.68	14.62	19.5	18.46	620	622	0.8005	0.6968	SenseBoard	Karl Maeder	Tie
COG	140.4	140.3	131.8	131.4	148.2	147.2	620	622	2.79	2.816	SenseBoard	SenseBoard	
TWA_Abs	41.89	41.97	33.77	34.66	49.72	50.31	620	622	2.821	2.875			
Heel_Lvd	53.69	55.6	34.3	42.4	70.7	71.9	620	622	5.444	5.214	Karl Maeder	Karl Maeder	Karl Maeder
Side_Lines	12.34	12.55	4.7	82.7	23.1	167.3	620	622	3.254	13.51	Karl Maeder	SenseBoard	Tie
Line_C	115.4	6.526	81.8	2.5	150.3	12.6	618	622	11.81	1.802	SenseBoard	Karl Maeder	Tie
Total_Lines	128	131.9	88.1	86.3	168.4	173.2	620	622	12.95	14	Karl Maeder	SenseBoard	Tie

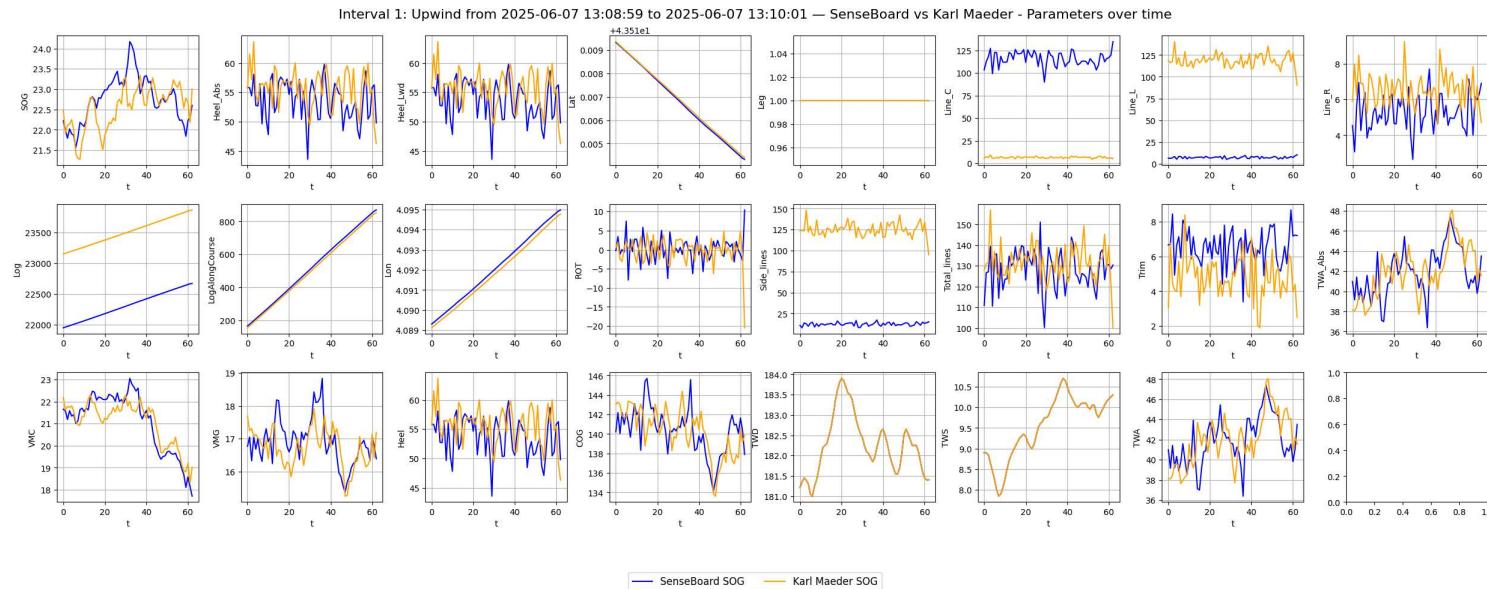
## Distance Summary

	SenseBoard	Karl Maeder
Distance (m)	725.583603	721.473547
Straight Line (m)	723.745011	719.574316

Distance as Percentage of Straight Line (%) 100.254039 100.263938  
Gain of SenseBoard with respect to Karl Maeder

	Forward	Lateral	VMG
Initial Deficit	-13.35776	8.429906	-4.224270
Final Deficit	-174.12319	7.068373	-8.242488
Total Gain	4.176543	1.361533	4.018218
Gain per Minute	4.048738	1.319869	3.895758

## MainReport



```
=====
Processing run: 87_06_Run9
=====
```

```
{'SOG_variation_beat1': 8.621826749403181,
'SOG_variation_beat2': 8.4469295841525167,
'avg_TWA_beat1': 37.234096260818,
'avg_TWA_beat2': 37.22738155802862,
'avg_SOG_beat1': 22.53688903820889,
'avg_SOG_beat2': 22.53688903820889,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_start_time': 174939229.058,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 8999999999999999,
'date': '2025-06-07',
'date_end': '2025-06-07T13:10:01Z',
'date_start': '2025-06-07T13:08:59Z',
'end_time': 174939229.46,
'stability_score': 0.9670551969484428,
'start_time': 174939229.658}
```

```
=====
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)
TWS	10.46	10.46	9.006	9.007	11.2	11.2	629	629	0.551	0.551		
TWD	181.4	181.4	178.9	178.9	183.9	183.9	629	629	1.344	1.344		
SOG	<b>22.49</b>	22.55	20.8	21.3	24.4	23.6	629	629	<b>0.6218</b>	<b>0.4474</b>	SenseBoard	SenseBoard
VMG	<b>17.86</b>	17.92	14.82	15.43	20.4	20.06	629	629	<b>0.9519</b>	<b>0.9083</b>	SenseBoard	SenseBoard
COG	144.2	144.2	136.6	138.5	151.7	151.5	629	629	<b>2.784</b>	<b>2.64</b>	SenseBoard	SenseBoard
TWA_Abs	37.23	37.23	28.3	28.63	46.2	45.37	629	629	3.679	3.3		
Heel_Lwd	55.59	<b>54.04</b>	39.2	38	71.7	67.6	629	629	<b>5.5</b>	<b>4.964</b>	Karl Maeder	SenseBoard
Side_lines	<b>124.4</b>	<b>129.9</b>	81.5	4.6	159.5	27.2	629	629	<b>14.1</b>	<b>3.918</b>	Karl Maeder	SenseBoard
Line_C	<b>6.319</b>	118.4	2.9	83.5	12.7	156.1	629	627	<b>1.858</b>	<b>11.86</b>	SenseBoard	Karl Maeder
Total_Lines	<b>130.6</b>	131.2	85.6	95.8	170.6	179.5	629	629	<b>14.84</b>	<b>13.17</b>	SenseBoard	SenseBoard

## Distance Summary

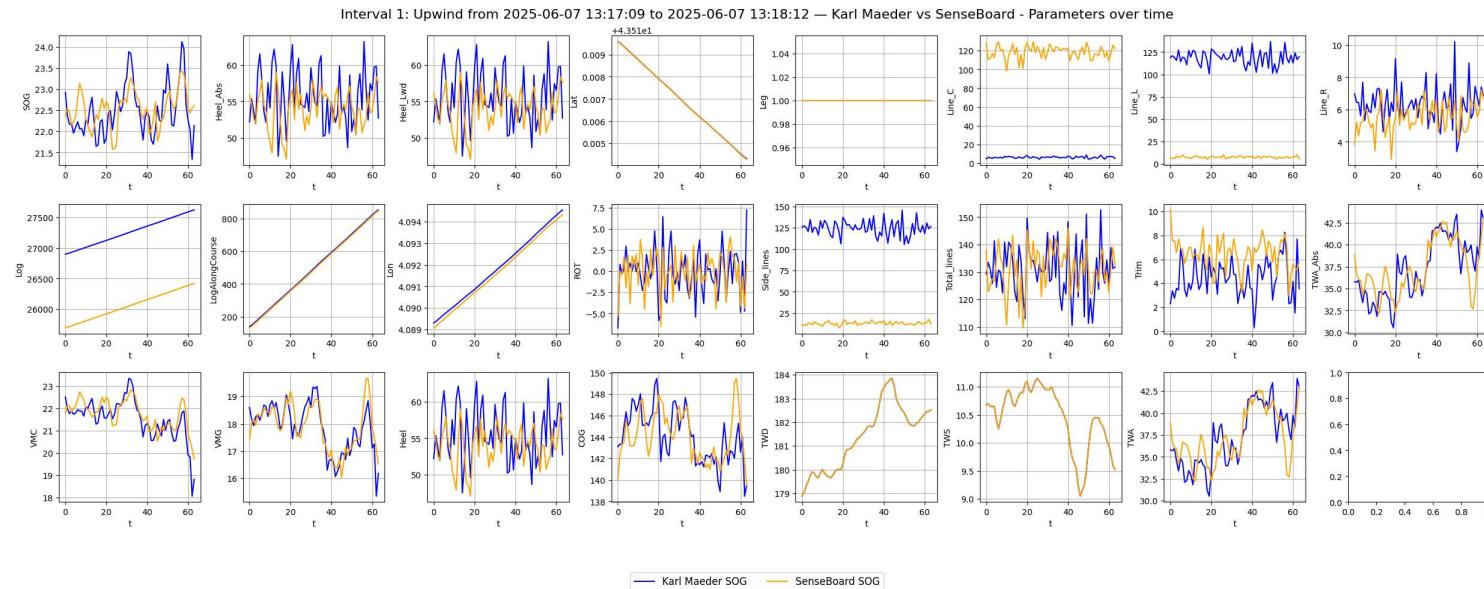
	Karl Maeder	SenseBoard
Distance [m]	726.770398	729.140682
Straight Line [m]	724.998072	727.514281

Distance as Percentage of Straight Line [%] 100.244459 100.223556

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
Initial Deficit	-0.739649	15.708549	1.750382
Final Deficit	-7.221112	16.024072	3.946482
Total Gain	-2.518537	-0.315523	-0.2196100
Gain per Minute	-2.406169	-0.301446	-0.098118

## MainReport



```
Error processing .../Data_Sailnjord/Straight_lines/07_06_07_06_Run10: No or insufficient intervals for run: 07_06_Run10
Error processing .../Data_Sailnjord/Straight_lines/07_06_07_06_Run11: Interview and equipment: At least two CSV files are required.
Error processing .../Data_Sailnjord/Straight_lines/07_06_senseboard_log: At least two CSV files are required.
Error processing .../Data_Sailnjord/Straight_lines/09_06_09_06_Run1: No or insufficient intervals for run: 09_06_Run1
Error processing .../Data_Sailnjord/Straight_lines/09_06_09_06_Run2: No or insufficient intervals for run: 09_06_Run2
Error processing .../Data_Sailnjord/Straight_lines/09_06_09_06_Run3: At least two CSV files are required.
```

```
=====
Processing run: 09_06_Run1
=====
```

```
{"SOG_variation_boat1": 8.3208416284414793,
 "SOG_variation_boat2": 8.41572383213897,
 "avg_TWA_boat1": 49.386181240863594,
 "avg_TWA_boat2": 49.80578988919719,
 "avg_SOG_boat1": 23.74688559377777,
 "avg_SOG_boat2": 23.76263653080393,
 "boat1_master_leeward": False,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 9750000000000001,
 "boat2_master_leeward": True,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 109.88999999999999,
 "duration": 174947218.65,
 "end_time": 174947218.65,
 "stability_score": 0.975644670411259,
 "start_time": 174947218.69}
```

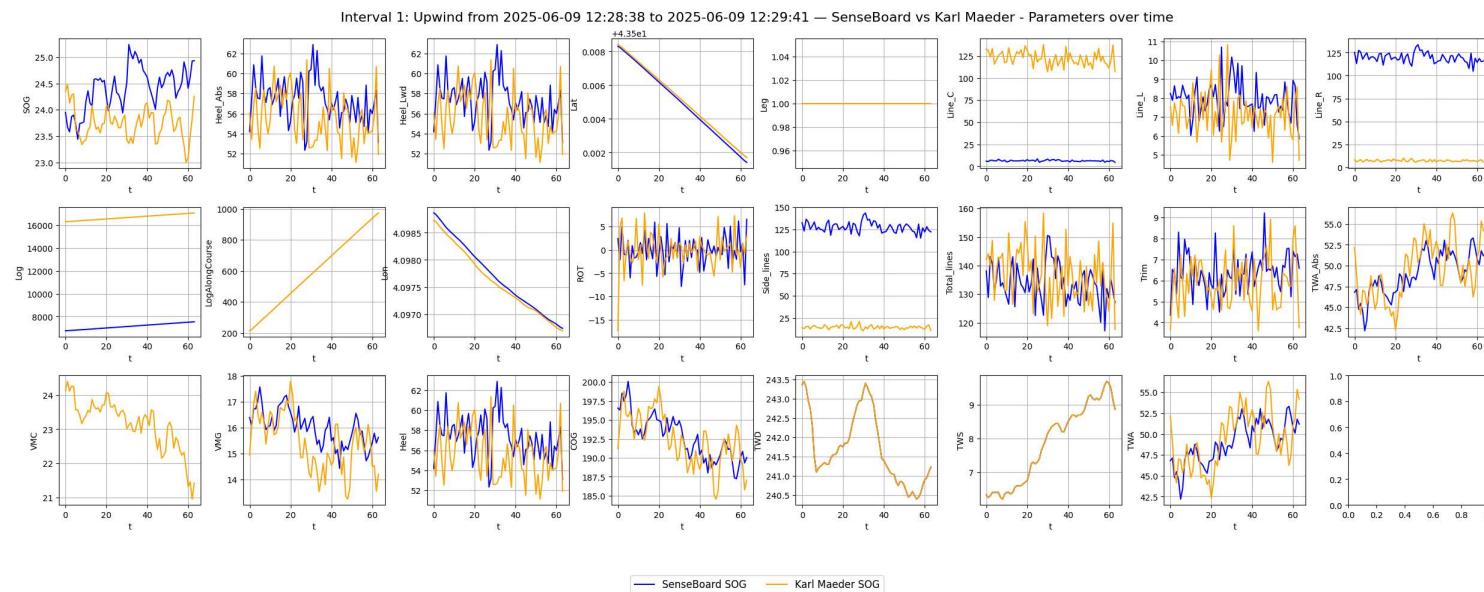
```
=====
Interval 1: Upwind From 2025-06-09 12:28:38 to 2025-06-09 12:29:41 — SenseBoard vs Karl Maeder
=====
```

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)
TWS	7.869	7.871	6.111	6.108	9.7	9.7	628	629	1.15	1.149		
TWD	241.7	241.7	240.4	240.4	243.5	243.5	628	629	0.9002	0.8997		
SOG	24.41	23.74	23.3	22.9	25.4	24.6	628	629	0.4167	0.322	SenseBoard	
VMG	15.98	15.44	13.36	11.43	18.55	18.61	628	629	0.8759	1.237	SenseBoard	
COG	192.7	192.4	184.2	179.7	203.6	203.3	628	629	3.366	3.938	SenseBoard	
TWA_Abs	49.01	49.31	37.85	39.75	56.27	61.17	628	629	3.032	3.867		
Heel_Lvd	57.42	55.62	43.6	39.1	76.4	71.2	628	629	4.71	4.966	SenseBoard	
Side_lines	127.5	144.9	85.9	6.5	157.2	27.3	628	629	10.59	3.527	SenseBoard	
Line_C	6.443	122.3	1.7	92.7	11.6	155.1	626	629	1.721	12.06	Karl Maeder	
Total_lines	133.9	136.9	92	104	166.6	174.1	628	629	11.05	13.83	Karl Maeder	

## Distance Summary

	SenseBoard	Karl Maeder
Distance (m)	787.819286	767.900300
Straight Line (m)	786.484937	766.988862
Distance as Percentage of Straight Line (%)	100.169660	100.235142
Gain of SenseBoard with respect to Karl Maeder		
Forward		
Lateral		
VMG		
Initial Deficit	-901925.13.233392	4.139836
Final Deficit	-29.45150.10.318784	-11.526904
Total Gain	20.425918	3.004609
Gain per Minute	19.54595	2.875715
	14.995274	

## MainReport



Error processing ..\Data\_Salinjord\Straight\_lines\09\_06\09\_06\_Run5: No or insufficient intervals for run: 09\_06\_Run5

```
=====
Processing run: 09_06_Run6
=====
```

```
    "SOG_variation_host1": 0.513131418454907,
    "avg_SOG_host1": 8.4774325798055647,
    "avg_SOG_host2": 48.088000000000005,
    "avg_TWA_host1": 47.6598024217647,
    "avg_SOG_host1": 23.83839864757709,
    "avg_SOG_host2": 23.575477393535894,
    "boat1_name": "SenseBoard",
    "boat1_total_weight": 106.97500000000001,
    "boat1_total_weight": 106.97500000000001,
    "boat2_name": "Karl Maeder",
    "boat2_name": "Karl Maeder",
    "boat2_total_weight": 109.88999999999999,
    "boat2_total_weight": 109.88999999999999,
    "duration": 68.6,
    "end_t": 1749472208.452,
    "stability_score": 8.9744284774376893,
    "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
=====
```

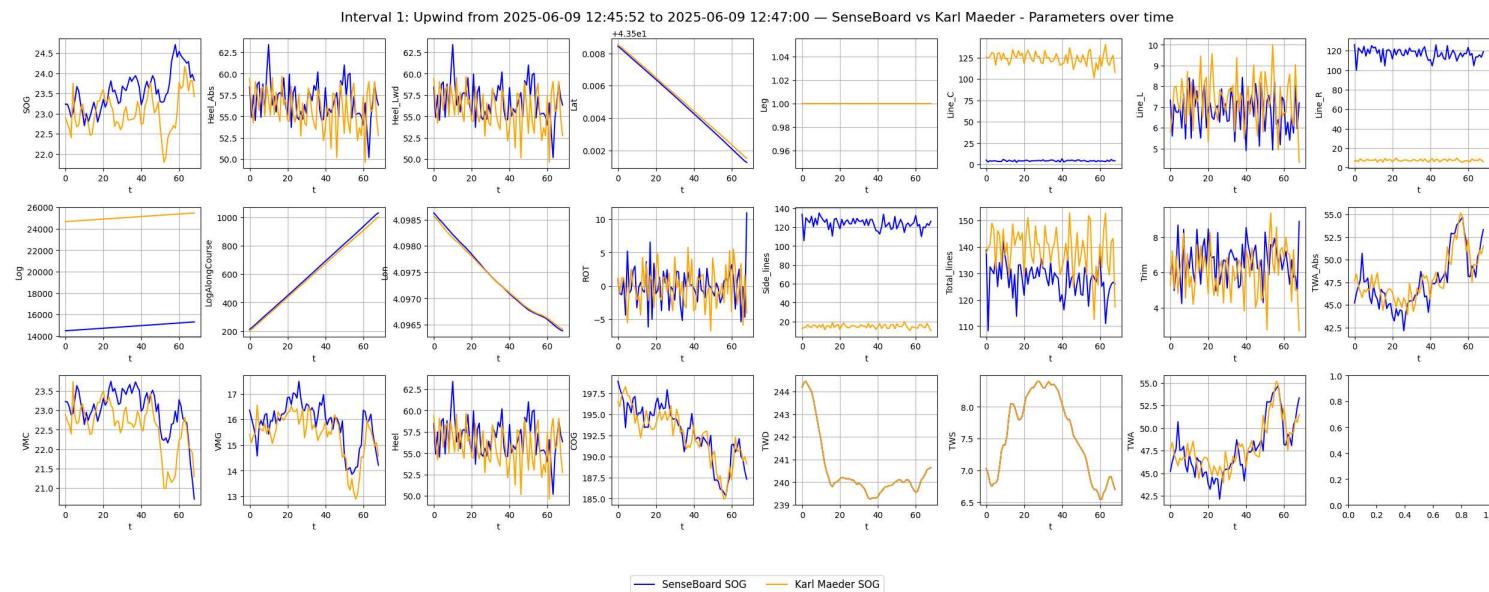
## Run Statistics

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)
TWS	7.562	7.561	6.504	6.504	8.4	8.4	680	681	0.6253	0.6257		
TWD	240.5	240.5	239.2	239.2	244.5	244.5	680	681	1.394	1.393		
SOG	23.58	23.05	22.6	21.7	24.8	26.5	680	681	0.4797	0.5131	SenseBoard	SenseBoard
VMG	15.84	15.39	12.91	11.71	18.13	18.77	680	681	0.9798	1.022	SenseBoard	SenseBoard
COG	192.9	192.5	182.9	181.3	201.3	202.2	680	681	3.714	3.526	Karl Maeder	Karl Maeder
TWA_Abs	47.66	48	40.53	40.77	57.09	58.79	680	681	3.404	3.084		
Heel_Inv	56.83	55.85	41.3	42.9	72.5	71.2	680	681	4.769	4.762	SenseBoard	Karl Maeder
Side_lines	123.8	14.83	93.5	6.5	144.5	25.5	680	681	9.65	3.377	SenseBoard	Karl Maeder
Line_C	4.271	124.1	0.5	90.3	8.9	157.7	676	681	1.607	11.75	Karl Maeder	SenseBoard
Total_lines	127.6	139.1	94.2	101.5	152.6	178.7	680	681	9.997	12.77	Karl Maeder	SenseBoard

## Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	824.671834	806.265647
Straight Line [m]	822.938608	804.62039
Distance as Percentage of Straight Line [%]	100.210614	100.189436
Gain of SenseBoard with respect to Karl Maeder		
Forward		
Lateral		
VMG		
Initial Deficit	-10.52774	7.784123
Final Deficit	-28.669785	3.907586
Total Gain	18.217011	3.876557
Gain per Minute	16.095847	3.425159
	13.373136	

## MainReport



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

```
{'SOG_variation_beat1': 8.527177338574329,
'SOG_variation_beat2': 8.48189816943384,
'avg_TWA_beat1': 49.1189975362319,
'avg_TWA_beat2': 47.88012354651163,
'avg_COG_beat1': 195.11899753623186,
'avg_COG_beat2': 22.5982898585872465,
'boat1_master_leeward': True,
'boat1_name': "Karl Maeder",
'boat1_start_time': 1749473644.561,
'boat2_master_leeward': False,
'boat2_name': "SenseBoard",
'boat2_start_time': 1749473644.561,
'boat2_total_weight': 8899999999999999,
'date': '2025-06-09T12:45:52Z',
'end_time': 174947713.441,
'stability_score': 0.9725286272449781,
'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)
TWS	7.202	7.202	6.604	7.8	7.8	690	688	0.2762	0.2764			
TWD	244.2	244.2	242.7	242.7	245.6	245.6	690	688	0.8767	0.8758		
SOG	<b>22.48</b>	22.59	20.1	20.3	24.8	26	690	688	<b>0.5272</b>	<b>0.5012</b>	SenseBoard	SenseBoard
VMG	<b>14.7</b>	15.15	11.93	12.15	17.65	18.66	690	688	<b>0.8061</b>	<b>0.9189</b>	SenseBoard	Karl Maeder
COG	195.1	196.4	187.2	186.2	207.8	205.9	690	688	<b>2.609</b>	<b>2.853</b>	Karl Maeder	Karl Maeder
TWA_Abs	49.12	47.8	37.67	36.8	56.67	58.1	690	688	2.63	3.111		
Heel_Lud	<b>54.62</b>	55.01	32.2	38.6	71.4	69.2	690	688	5.038	<b>5.25</b>	SenseBoard	Karl Maeder
Side_Lines	<b>13.92</b>	119.5	3.6	77.7	25.6	149.7	690	688	<b>3.511</b>	<b>11.54</b>	SenseBoard	Karl Maeder
Line_C	117.5	<b>4.57</b>	70	0.6	158.3	9	690	686	<b>12.86</b>	<b>1.536</b>	Karl Maeder	SenseBoard
Total_Lines	131.6	<b>124.1</b>	75.7	78.8	180.9	156.8	690	688	<b>14.39</b>	<b>12.25</b>	Karl Maeder	SenseBoard

## Distance Summary

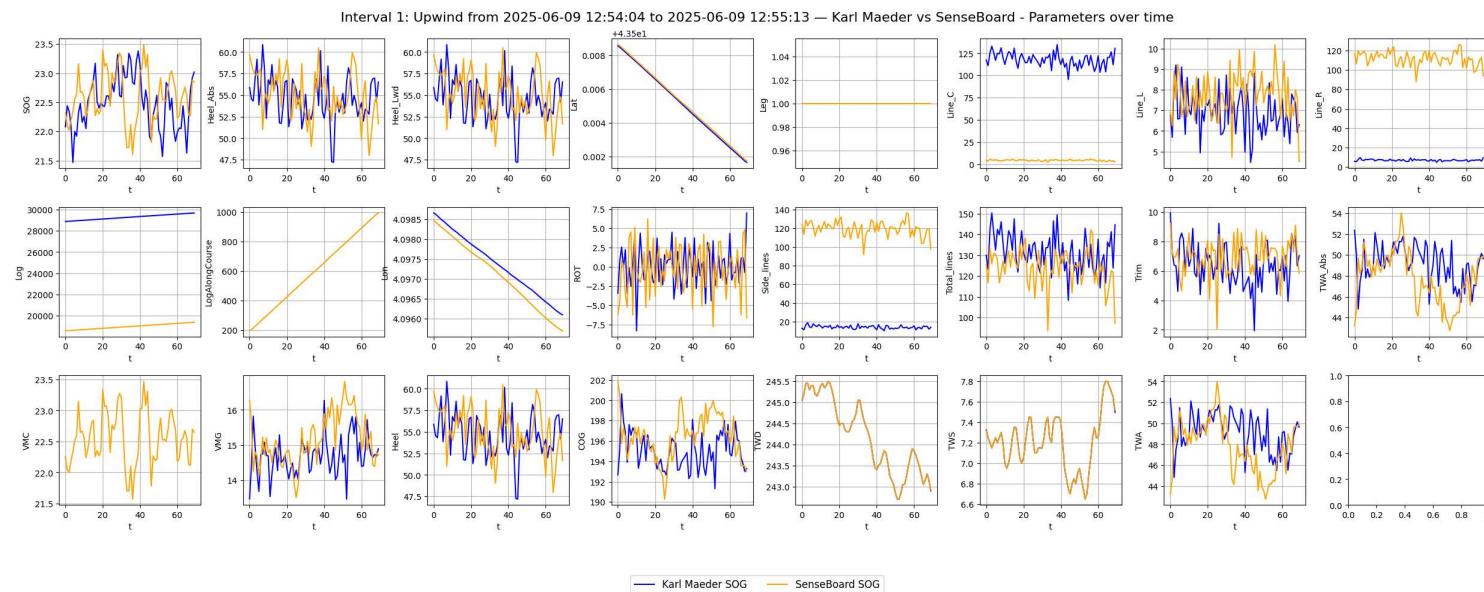
	Karl Maeder	SenseBoard
Distance [m]	798.269700	798.432173
Straight Line [m]	797.425401	798.436988

Distance as Percentage of Straight Line [%]: 100.105878 100.124642

Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VMG
Initial Deficit	-3.684170	17.054576
Final Deficit	-2.895893	34.193221
Total Gain	-0.788277	-17.137638
Gain per Minute	-0.686653	-14.928256
		-11.736419

## MainReport



```
=====
Processing run: p9_06_Run0
=====
```

```
{
  "SOG_variation_beat1": 8.0467710683012128,
  "SOG_variation_beat2": 8.5286783541190796,
  "avg_TWA_host1": 56.368471728594514,
  "avg_TWA_host2": 56.132697411083235,
  "avg_SOG_host1": 23.934894991322453,
  "avg_SOG_host2": 23.934894991322453,
  "boat1_master_leeward": False,
  "boat1_name": "Karl Maeder",
  "boat1_start_time": 174947426.852,
  "boat2_master_leeward": True,
  "boat2_name": "SenseBoard",
  "boat2_start_time": 174947426.852,
  "boat2_total_weight": 115.00000000000001,
  "start_time": 174947426.852,
  "end_time": 174947430.641,
  "stability_score": 0.9622094578570873,
  "start_time": 174947426.852
}
```

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

	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)
TWS	7.902	7.903	5.908	5.907	9.2	9.2	618	619	0.9396	0.939			
TWD	246.7	246.7	244	244	249.9	249.9	618	619	1.586	1.587			
SOG	23.95	22.99	22.5	20.7	26.7	27.6	618	619	0.5475	0.8468	SenseBoard	SenseBoard	SenseBoard
VMG	13.32	12.75	7.812	8.322	17.3	18.23	618	619	1.855	1.738	SenseBoard	Karl Maeder	Tie
COG	190.5	190.3	178.5	181.5	200.3	202.4	618	619	3.786	3.488	Karl Maeder	Karl Maeder	
TWA_Abs	56.13	56.37	46	43.81	70.5	67.45	618	619	4.81	4.238			
Heel_Lud	54.5	56.42	39.8	34.7	68.2	77.7	618	619	4.791	5.682	Karl Maeder	SenseBoard	Tie
Side_Lines	128.6	135.7	90.2	4.9	159	26.1	618	619	10.2	3.647	SenseBoard	Karl Maeder	Tie
Line_C	6.567	117.5	2.6	69.6	11.5	152.9	608	619	1.78	14.36	Karl Maeder	SenseBoard	Tie
Total_Lines	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
Distance (m)	760.515637 731.026984
Straight Line (m)	758.852487 729.796132

Distance as Percentage of Straight Line [%] 100.219166 100.182361

Gain of SenseBoard with respect to Karl Maeder

Forward	Lateral	VMG
---------	---------	-----

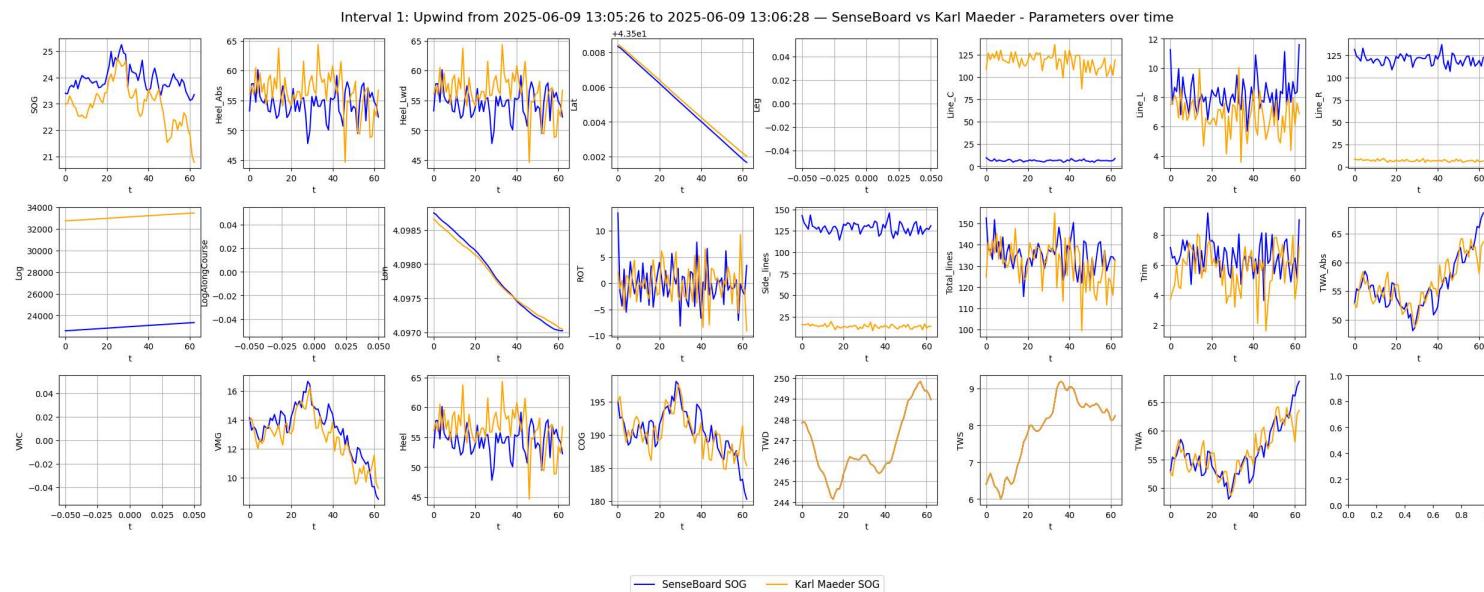
Initial Deficit	-10.94004	9.518713	1.804601
-----------------	-----------	----------	----------

Final Deficit	-40.57125	5.863274	-17.54858
---------------	-----------	----------	-----------

Total Gain	29.113031	3.655449	19.259459
------------	-----------	----------	-----------

Gain per Minute	28.309054	3.554492	18.727595
-----------------	-----------	----------	-----------

## MainReport



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

```
{'SOG_variation_beat1': 8.5431680589134581,
'SOG_variation_beat2': 8.6349614056417857,
'avg_TWA_beat1': 41.60781376744186,
'avg_TWA_beat2': 41.4441870451237264,
'avg_SOG_beat1': 22.687935935488373,
'avg_SOG_beat2': 22.687935935488373,
'boat1_master_leeward': True,
'boat1_name': "Karl Maeder",
'boat1_weight': 9500000000000001,
'boat2_master_leeward': False,
'boat2_name': "SenseBoard",
'boat2_total_weight': 8899999999999999,
'data_start_time': 1749479499123196,
'end_time': 1749479499123196,
'stability_score': 0.9464625758124971,
'start_time': 1749479499123196}
```

```
=====
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)
TWS	7.92	7.919	6.906	6.905	8.497	8.496	688	687	0.4616	0.4616		
TWD	229.8	229.8	227.8	227.8	232.5	232.5	688	687	1.214	1.214		
SOG	<b>22.31</b>	22.69	20.8	20.9	24.2	25	688	687	<b>0.5432</b>	<b>0.6853</b>	SenseBoard	Karl Maeder
VMG	<b>16.62</b>	16.98	12.43	13.15	19.91	19.87	688	687	<b>.109</b>	<b>0.9756</b>	SenseBoard	SenseBoard
COG	188.1	188.3	177.8	178.7	199	197.4	688	687	<b>3.946</b>	<b>3.226</b>	SenseBoard	SenseBoard
TWA_Abs	41.61	41.44	31.36	32.14	54.3	53.28	688	687	4.336	3.322		
Heel_Lvd	56.06	<b>55.5</b>	39	38.8	74.8	71.2	688	687	<b>5.117</b>	5.093	Karl Maeder	SenseBoard
Side_lines	<b>13.76</b>	128.4	5	70.7	26.1	159.1	688	687	<b>3.601</b>	<b>11.44</b>	SenseBoard	Karl Maeder
Line_C	118	<b>6.344</b>	82.6	1.8	155.2	11.5	688	687	<b>.125</b>	<b>1.706</b>	Karl Maeder	SenseBoard
Total_Lines	<b>131.5</b>	134.3	88.6	76.9	170.9	167.7	688	687	<b>14.35</b>	<b>11.82</b>	SenseBoard	SenseBoard

Distance Summary

	Karl Maeder	SenseBoard
Distance [m]	787.241036	802.900747

	Straight Line [m]	Distance as Percentage of Straight Line [%]
	785.367556	100.238548 100.156938

Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VMG
-6.88079	12.419923	3.102421

Initial Deficit	Final Deficit
9.420582	14.979547

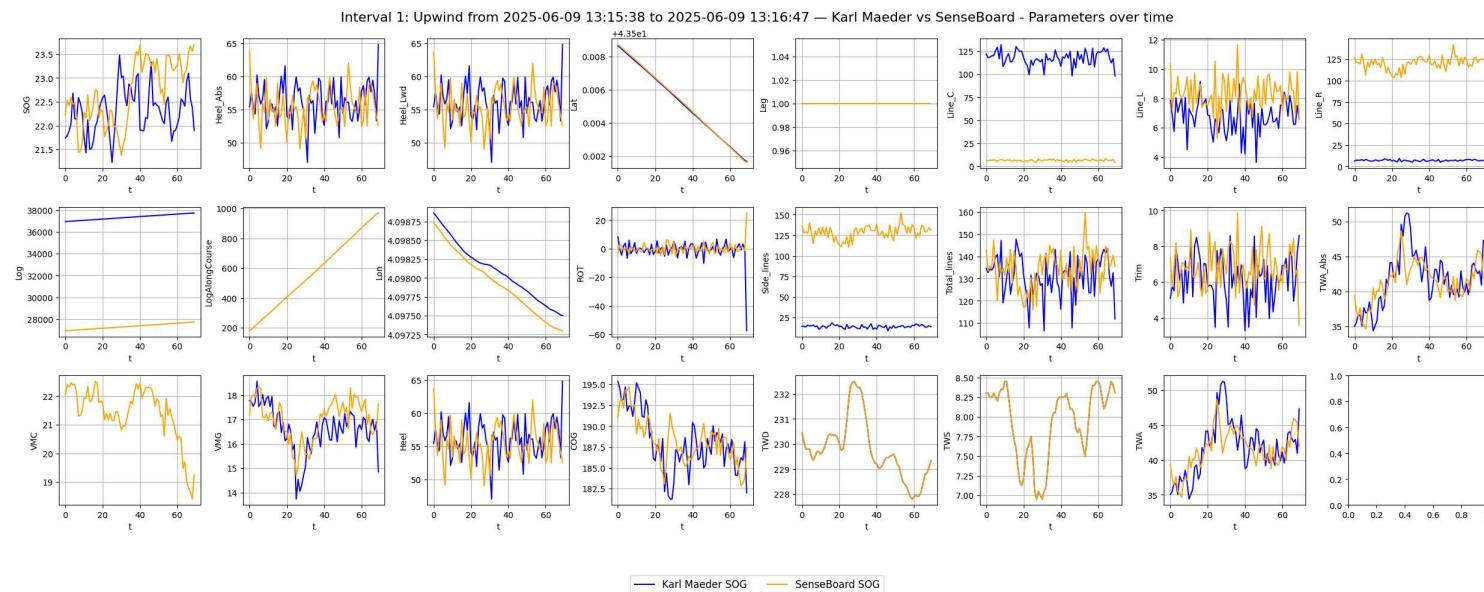
Total Gain
-16.301973

Gain per Minute
-14.238865

	Forward	Lateral	VMG
	-2.559624	-13.888283	

	Forward	Lateral	VMG
	-14.235740	-12.130917	

## MainReport



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

```
{'SOG_variation_best1': 8.417263062395289,
'SOG_variation_best2': 8.4660887940211628,
'avg_TWA_host1': 53.637613090212871,
'avg_TWA_host2': 53.313418300653595,
'avg_COG_host1': 182.353344288891356,
'avg_COG_host2': 23.53344288891356,
'boat1_master_leeward': False,
'boat1_name': "Karl Maeder",
'boat1_weight': 95.00000000000001,
'boat2_master_leeward': True,
'boat2_name': "SenseBoard",
'boat2_weight': 95.00000000000001,
'data_start_time': 1749473477.855,
'data_end_time': 1749473499.379655,
'end_time': 174947539.06,
'stability_score': 0.968558287592516,
'start_time': 1749473477.855}
```

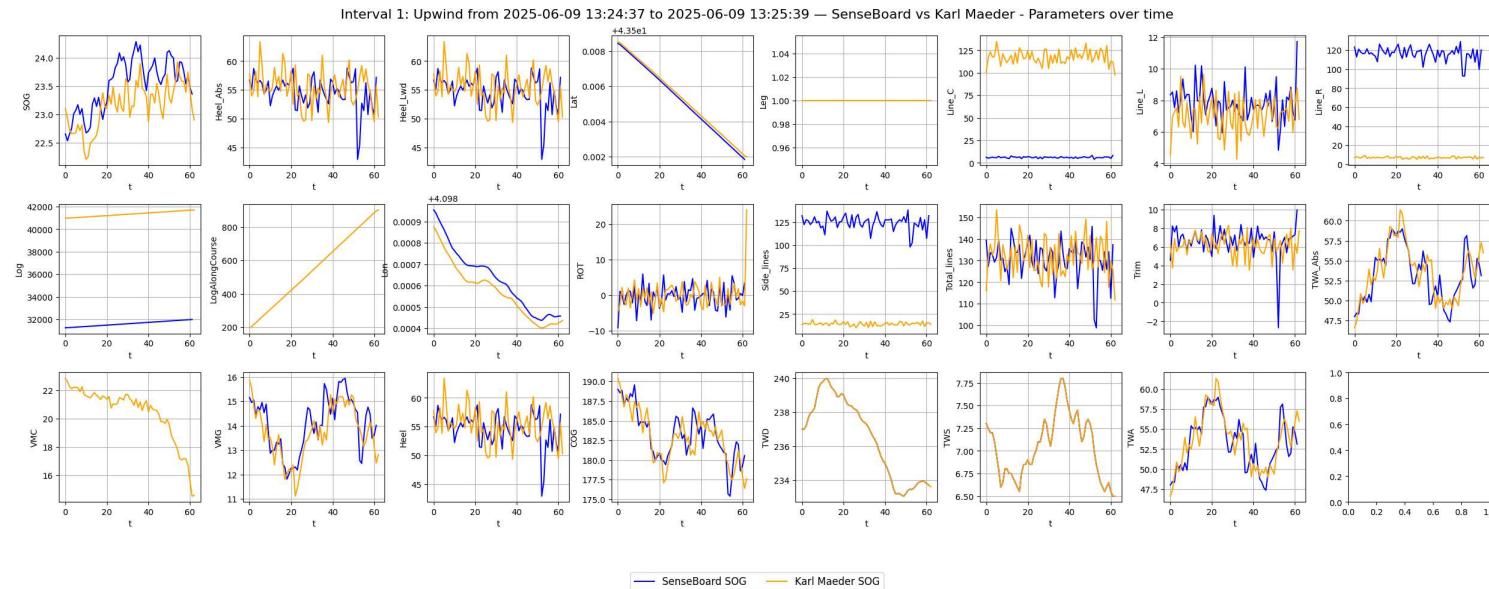
```
=====
Interval 1: Upwind from 2025-06-09 13:24:37 to 2025-06-09 13:25:39 — SenseBoard vs Karl Maeder
=====
```

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)
TWS	7.043	7.042	6.5	6.5	7.8	7.8	612	613	0.3462	0.3467
TWD	236.5	236.5	233	233	240.1	240.1	612	613	2.362	2.363
SOG	23.53	23.16	22.5	22.1	24.4	24	612	613	0.4665	0.4173 SenseBoard
VMG	14.03	13.7	10.9	9.926	17.25	16.57	612	613	1.247	1.201 SenseBoard
COG	183.2	182.9	172.5	173.5	192.5	193.1	612	613	3.571	3.589 SenseBoard
TWA_Abs	53.31	53.64	44.05	43.9	62.1	64.67	612	613	3.689	3.707
Heel_Lwd	54.6	55.45	33.4	37.6	69.1	71.5	612	613	5.223	5.225 Karl Maeder
Side_Lines	124.3	14.31	56.4	5.9	164.1	26	612	613	12.64	3.445 SenseBoard
Line_C	6.056	117.7	0.9	80	12.1	154.6	611	613	1.752	12.52 Karl Maeder
Total_Lines	130.5	132.4	57.6	91.5	176.2	176.8	612	613	13.39	13.79 Karl Maeder

## Distance Summary

	SenseBoard	Karl Maeder
Distance (m)	740.289207	729.599192
Straight Line (m)	738.87614	728.162169
Distance as Percentage of Straight Line (%)	100.191208	100.197348
Gain of SenseBoard with respect to Karl Maeder		
Forward		
Lateral		
VMG		
Initial Deficit	-11.181033	7.042555
Final Deficit	-2.1932300	2.772855
Total Gain	10.751267	4.269699
Gain per Minute	10.557536	4.192762
	9.669714	

## MainReport



=====  
Processing run: 09\_06\_Run11

=====  
Interval 1: UpWind from 2025-06-09 13:34:12 to 2025-06-09 13:35:19 – Karl Maeder vs SenseBoarv  
=====

### Run Statistics

Overall Performance Metrics												
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)
TWS	7.257	7.256	6.104	6.104	8	8	672	671	0.04089	0.04081		
TWD	232.4	232.4	230	230	2348	2348	672	671	1.056	1.052		
SOG	22.59	22.66	21.2	21.2	24.2	23.6	672	671	0.6937	0.6453	SenseBoard	SenseBoard
VMG	13.69	13.88	10.5	10.82	15.93	15.99	672	671	0.8706	0.82	SenseBoard	SenseBoard
COG	179.8	180.3	168.8	170.4	189.3	191.5	672	671	3.709	3.809	Karl Maeder	Karl Maeder
TWA_Abs	52.58	52.13	45	42.04	62.3	61.4	672	671	3.125	3.013		
Heel_Lwd	55.52	54.61	31.9	36.9	74.2	70.5	672	671	5.827	5.271	Karl Maeder	SenseBoard
Side_Lines	140.5	125.4	5.1	82.3	25.5	161.4	672	671	3.535	11.09	SenseBoard	Karl Maeder
Line_C	116	6.57	73	1.2	163.5	12.1	672	666	13.4	1.666	Karl Maeder	SenseBoard
Total_lines	130	112	82.5	83.5	182.6	162.1	672	671	15.1	11.54	SenseBoard	SenseBoard

## Distance Summary

---

Karl Maeder SenseBoard

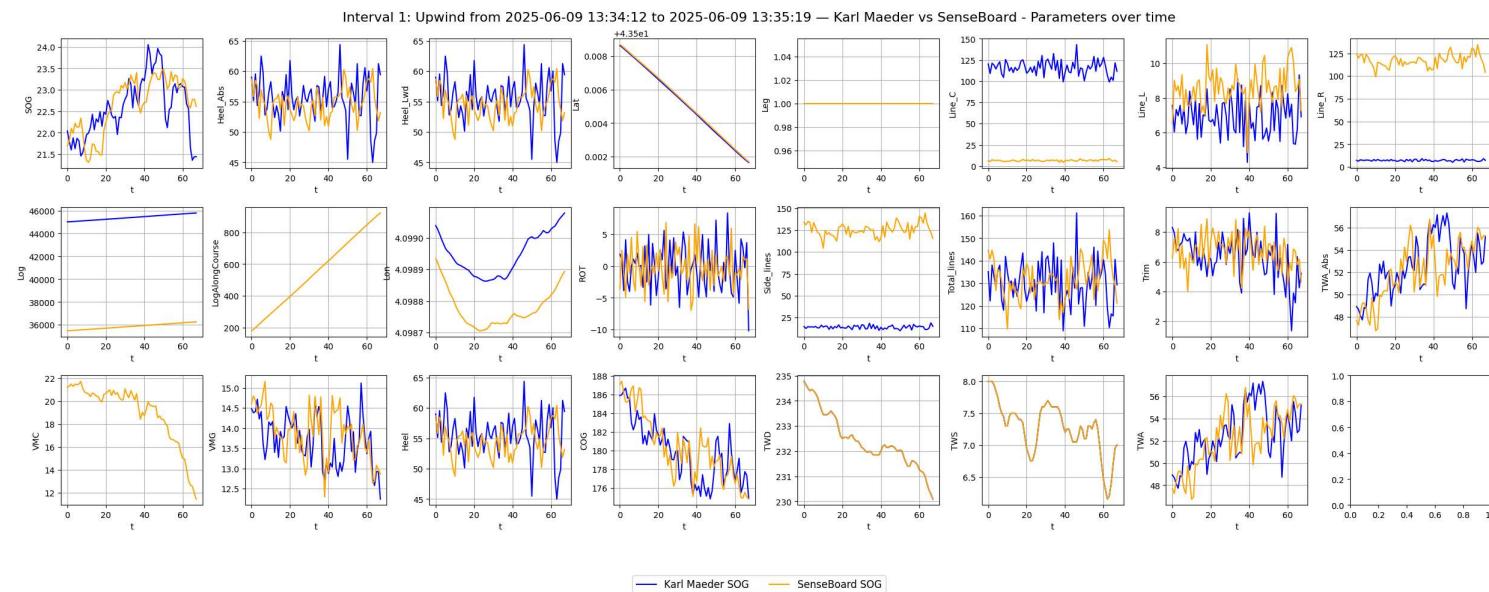
Distance (m) 779.659914 780.751685

Straight Line [m] 778.003259 779.012757

Distance as Percentage of Straight Line [%] 100.212937 100.223222

Gain of Karl Maeder with respect to SenseBoard			
	Forward	Lateral	VMG
<b>Initial Deficit</b>	-6.113330	4.680807	3.009949
<b>Final Deficit</b>	-5.18573	14.881461	8.707735
<b>Total Gain</b>	<b>-0.934746</b>	<b>-6.413374</b>	<b>-5.697786</b>
Gain per Minute	0.000323	5.737776	0.000550

## MainReport



Error processing .../Data\_SailInJord/Straight\_lines\09\_06\Interview and equipment: At least two CSV files are required.  
Error processing .../Data\_SailInJord/Straight\_lines\09\_06\senseboard\_log: At least two CSV files are required.

=====
Processing run: 18\_06\_Run1
=====

```
{
  "SOG_variation_boat1": 0.45399879639819,
  "SOG_variation_boat1": 0.34561180885996,
  "avg_TWA_boat1": 52.140115881814716,
  "avg_TWA_boat1": 52.140115881814716,
  "avg_Thm_boat2": 52.744499276944087,
  "avg_Thm_boat2": 52.744499276944087,
  "avg_SOG_boat1": 21.688283379746593,
  "avg_SOG_boat1": 21.688283379746593,
  "avg_SOG_boat2": 21.688283379746593,
  "avg_SOG_boat2": 21.688283379746593,
  "boat1_master_leeward": false,
  "boat1_name": "Gian Stragiotti",
  "boat1_total_weight": 106.195,
  "boat1_twin": true,
  "boat1_twin": true,
  "boat2_name": "SenseBoard",
  "boat2_total_weight": 102.89,
  "boat2_twin": false,
  "boat2_twin": false,
  "end_time": 1749558582.495,
  "end_time": 1749558582.495,
  "stability_score": 0.8966679129386898,
  "start_time": 1749558588.753
}
```

=====
Interval 1: Upwind From 2025-06-10 12:28:28 to 2025-06-10 12:29:42 — SenseBoard vs Gian Stragiotti
=====

Run Statistics												
Aug (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)
TWS	5.727	5.728	5.3	5.3	6.395	6.394	733	734	0.2397	0.24		
TWD	217.8	217.8	216.2	216.2	219.9	219.9	733	734	0.9808	0.9802		
SOG	21.45	21.69	20.6	18.5	22.3	23.5	733	734	0.3435	0.6537	Gian Stragiotti	SenseBoard Tie
VMG	12.97	13.29	10.79	10.71	15.03	15.44	733	734	0.7321	0.6944	Gian Stragiotti	Gian Stragiotti
COG	165.1	165.7	157.8	158.1	171.5	174.9	733	734	2.346	2.66	SenseBoard	SenseBoard
TWA_Abs	52.74	52.14	45.4	41.63	60.02	59.65	733	734	2.483	2.492		
Heel_Ind	56.55	60.31	39.2	41.6	73.9	73.8	733	734	5.587	5.519	Gian Stragiotti	Gian Stragiotti
Line_C	108.9	128.9	78.7	63.9	139.3	166.5	728	734	10.63	12.12	Gian Stragiotti	Gian Stragiotti
Side_lines	nan	17.01	nan	5.5	nan	28	nan	734	nan	3.627		SenseBoard Tie
Total_lines	nan	146.9	nan	70.3	nan	192.2	nan	734	nan	14.17		

## Distance Summary

SenseBoard	Gian Stragiotti
Distance [m]	807.584715
Straight Line [m]	820.362041

SenseBoard	Gian Stragiotti
Distance [m]	805.809014
Straight Line [m]	819.512621

SenseBoard	Gian Stragiotti
Distance as Percentage of Straight Line [%]	100.083740
Distance as Percentage of Straight Line [%]	100.103649

Gain of SenseBoard with respect to Gian Stragiotti

Forward	Lateral	VMG
---------	---------	-----

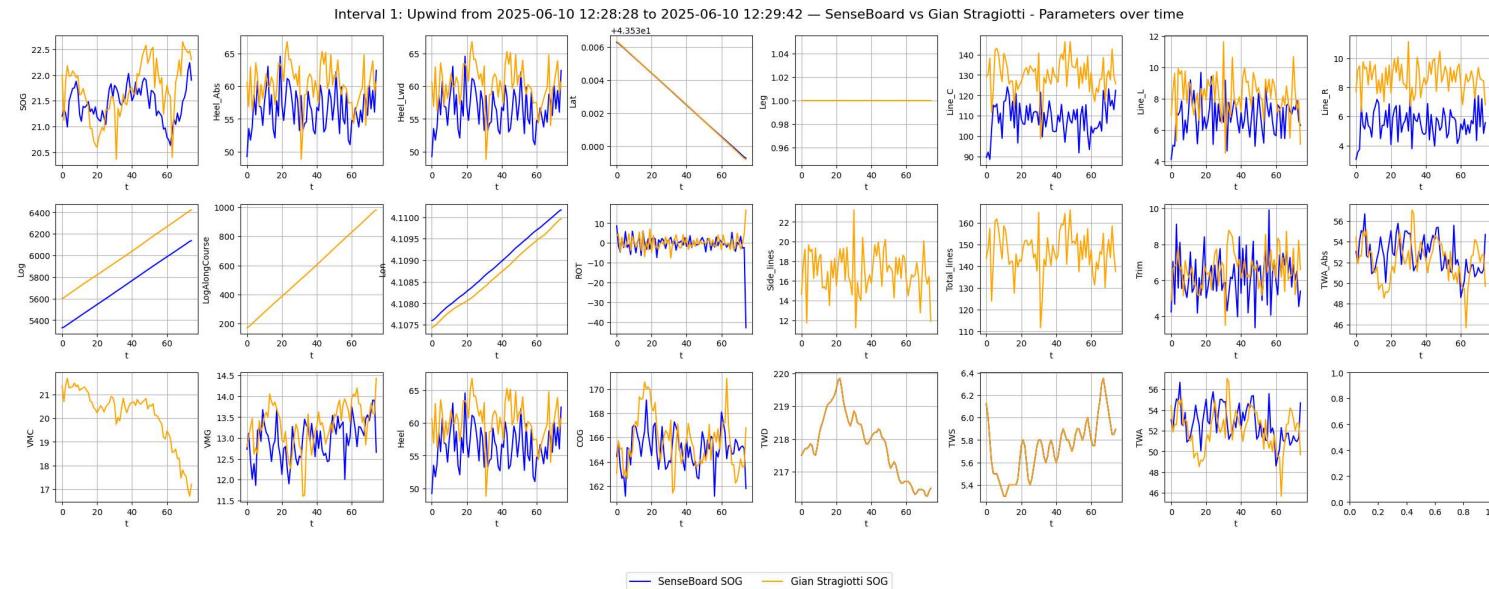
Initial Deficit	-8.420456	11.813367	4.305238
-----------------	-----------	-----------	----------

Final Deficit	4.186944	18.459492	17.227346
---------------	----------	-----------	-----------

Total Gain	-12.607399	-6.646125	-12.922108
------------	------------	-----------	------------

Gain per Minute	-10.335346	-5.448837	-10.593339
-----------------	------------	-----------	------------

## MainReport



```
=====
Processing run: 18_06_Run3
=====
```

```
{'SOG_variation_best1': 8.774178872277428,
'SOG_variation_best2': 8.6155188589560149,
'avg_TWA_host1': 52.30156270896463,
'avg_TWA_host2': 52.145245988707394,
'avg_COG_host1': 160.30000000000002,
'avg_COG_host2': 22.0511254801929462,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_tiller': 13.77,
'boat1_tiller_leeward': 13.44,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_tiller': 160.3,
'boat2_tiller_leeward': 160.4,
'boat2_total_weight': 182.99,
'date_start': '2025-06-10T12:28:28Z',
'date_end': '2025-06-10T12:29:42Z',
'end_time': 1745559854.755,
'stability_score': 0.9661567984326258,
'start_time': 1745538992.654}
```

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

Distance Summary

	Gian Stragiotti	SenseBoard
Distance [m]	727.587690	704.953620
Straight Line [m]	720.666128	699.717916

Distance as Percentage of Straight Line [%]

Gain of Gian Stragiotti with respect to SenseBoard

Forward	Lateral	VMG
-9.386246	7.919598	0.317705

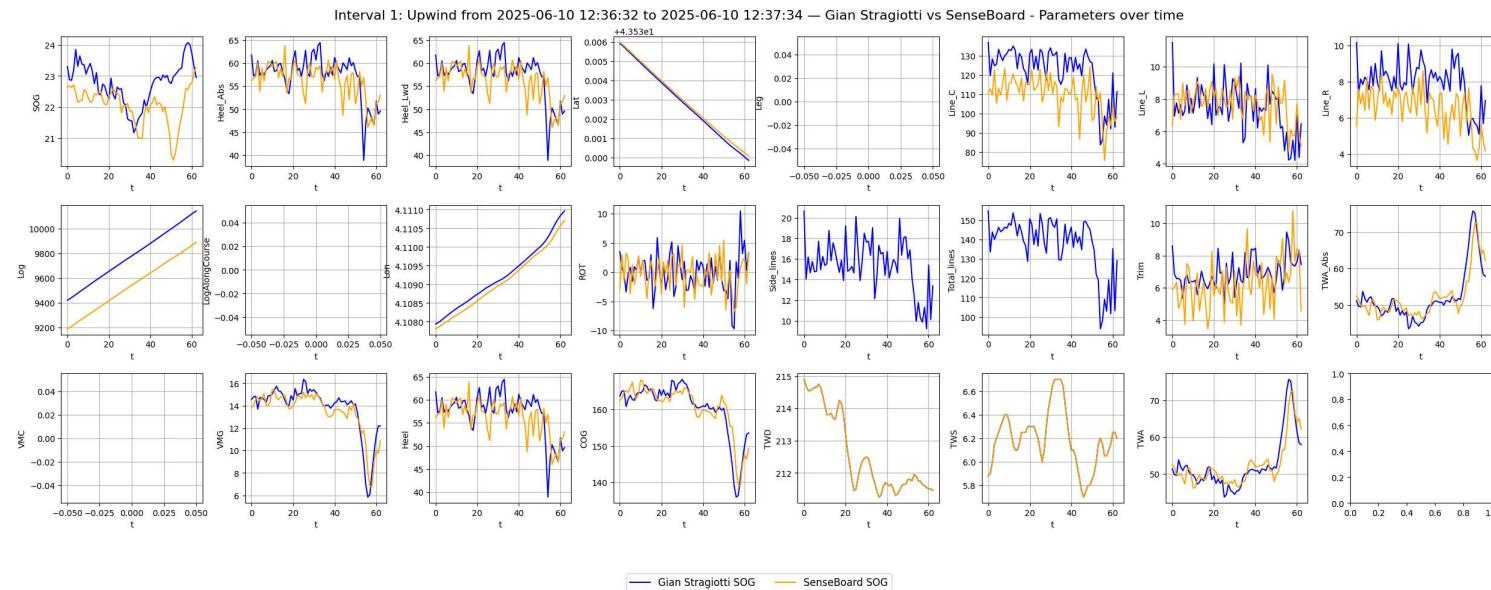
Initial Deficit

Final Deficit

Total Gain

Gain per Minute

## MainReport



```
=====
Processing run: 18_06_Run
=====
```

```
{'SOG_variation_best1': 8.7148280388054032,
'SOG_variation_best2': 8.5779364885443138,
'avg_TWA_host1': 49.9957884357864345,
'avg_TWA_host2': 50.876849710982654,
'avg_COG_host1': 159.04882154592998,
'avg_COG_host2': 22.045821545821045,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_tilt': 15.0,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 182.89,
'date_start': '2025-06-10 12:36:32',
'end_time': 1749559511.154,
'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)
TWS	6.147	6.147	5.4	5.4	6.9	6.9	692	0.4462	0.4459			
TWD	214.2	214.2	209.2	209.2	217.6	217.6	692	693	2.72	2.721		
SOG	22.05	22.05	22.1	20.3	20	23.3	25.1	692	693	0.5752	0.7148	Gian Stragiotti
VMG	15.9	15.9	14.18	10.87	11	16.63	17.24	692	693	1.024	1.201	Gian Stragiotti
COG	163.3	163.3	164.2	154	157.6	171.1	172.9	692	693	2.745	2.779	SenseBoard
TWA_Abs	50.88	50.88	50	41.31	41.37	60.25	58.5	692	693	2.929	3.69	
Heel_Lvd	56.59	56.59	59.9	26.2	46.1	70.9	73.1	692	693	5.756	4.456	Gian Stragiotti
Line_C	112.5	112.5	123.6	50.8	91.6	145.6	158.6	691	693	12.65	9.413	Gian Stragiotti
Side_lines	nan	nan	16.61	nan	7.1	nan	27.7	nan	693	nan	3.477	Gian Stragiotti
Total_lines	nan	nan	146.2	nan	107	nan	177.7	nan	693	nan	11.11	Gian Stragiotti

## Distance Summary

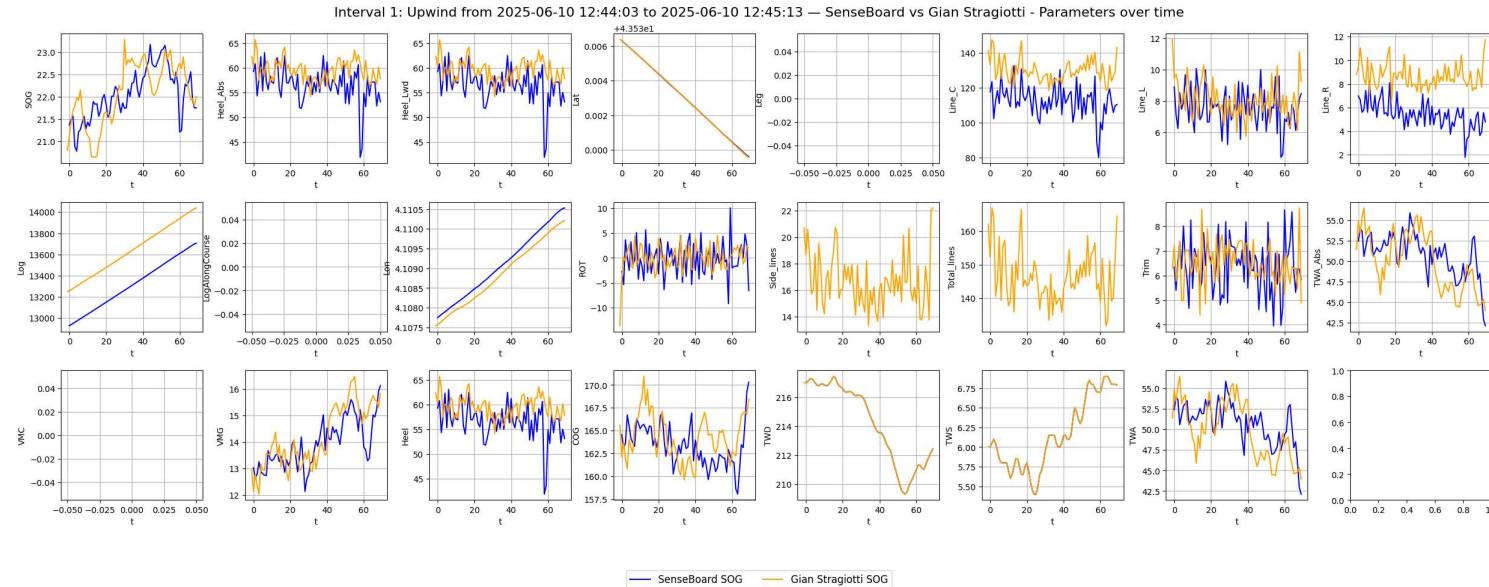
	SenseBoard	Gian Stragiotti
Distance (m)	783.636819	787.229994
Straight Line (m)	782.743025	786.299026

Distance as Percentage of Straight Line (%) 100.114417 100.118272

Gain of SenseBoard with respect to Gian Stragiotti:

	Forward	Lateral	VNG
Initial Deficit	-6.211923	14.128002	7.040871
Final Deficit	-2.707977	26.240558	18.648608
Total Gain	-4.503846	-12.112556	-11.607736
Gain per Minute	-0.042898	-0.519089	-0.080681

## MainReport



```
=====
Processing run: 18_06_Run4
=====
```

```
{'SOG_variation_beat1': 8.395458811078938,
'SOG_variation_beat2': 8.4432496653425174,
'avg_TWA_beat1': -135.3763558952435,
'avg_TWA_beat2': -135.3763558952435,
'avg_SOG_beat1': 25.47193912239932,
'avg_SOG_beat2': 25.47193912239932,
'boat1_master_leeward': True,
'boat1_name': 'Gian Stragiotti',
'boat1_weight': 182.89,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 182.89,
'date_time': '2025-06-10 12:44:03.2846',
'end_time': '1745560288.072',
'stability_score': 0.9735561098878598,
'start_time': '1745560154.753'}
```

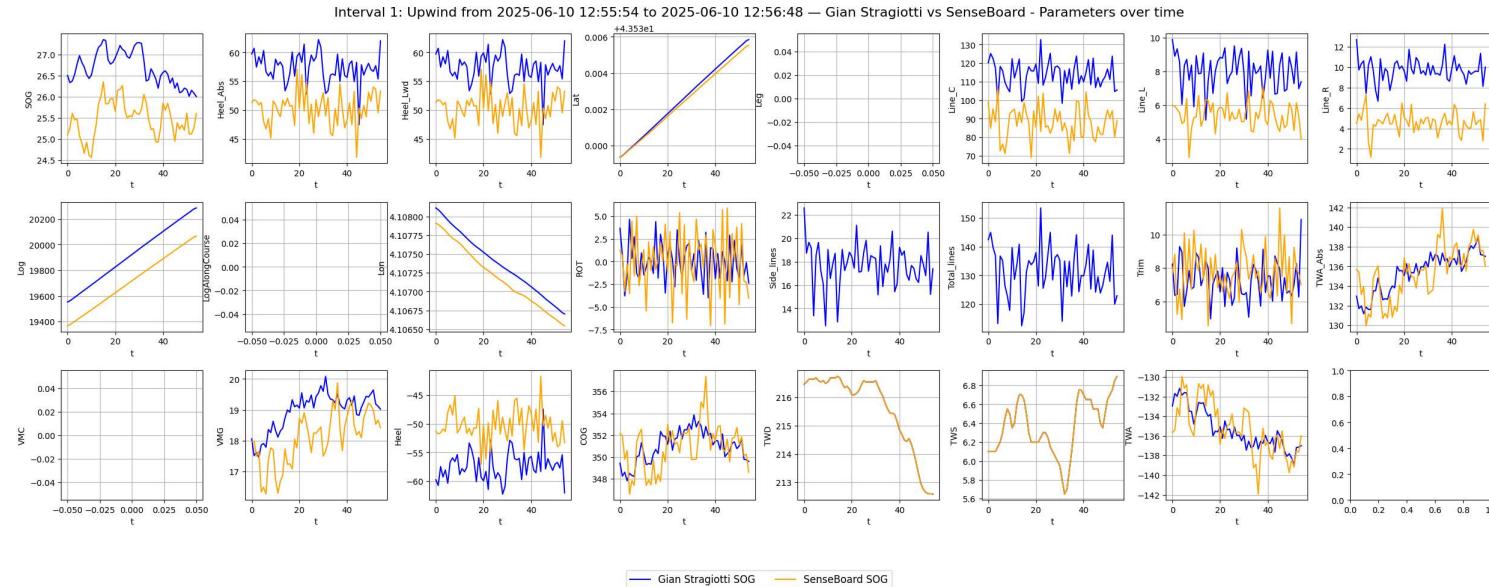
```
=====
Interval 1: Upwind from 2025-06-10 12:55:54 to 2025-06-10 12:56:48 — Gian Stragiotti vs SenseBoard
=====
```

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

## Distance Summary

	Gian Stragiotti	SenseBoard
Distance [m]	731.997505	697.945743
Straight Line [m]	731.584904	697.149990
Distance as Percentage of Straight Line [%]	100.056398	100.114144
Gain of Gian Stragiotti with respect to SenseBoard		
Forward	2.35607	16.402933
Lateral	9.845229	
VMG	35.488384	
Initial Deficit	2.35607	
Final Deficit	-32.45307	
Total Gain	34.501382	-1.547697
Gain per Minute	38.82489	-1.741627
		-28.856305

## MainReport



```
=====
Processing run: 19_06_Run5
=====
```

```
{'SOG_variation_best1': 8.588084748805898,
'SOG_variation_best2': 8.4464645246959844,
'avg_TWA_host1': 53.3645994324300156,
'avg_TWA_host2': 53.518688274509884,
'avg_COG_host1': 159.51595159515951,
'avg_COG_host2': 22.11337835235654,
'boat1_master_leeward': False,
'boat1_name': 'Gian Stragiotti',
'boat1_weight': 102.89,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 102.89,
'date': '2025-06-10 12:55:54',
'end_time': 1745568597.354,
'stability_score': 0.3663088809174583,
'start_time': 1745608536.155}
```

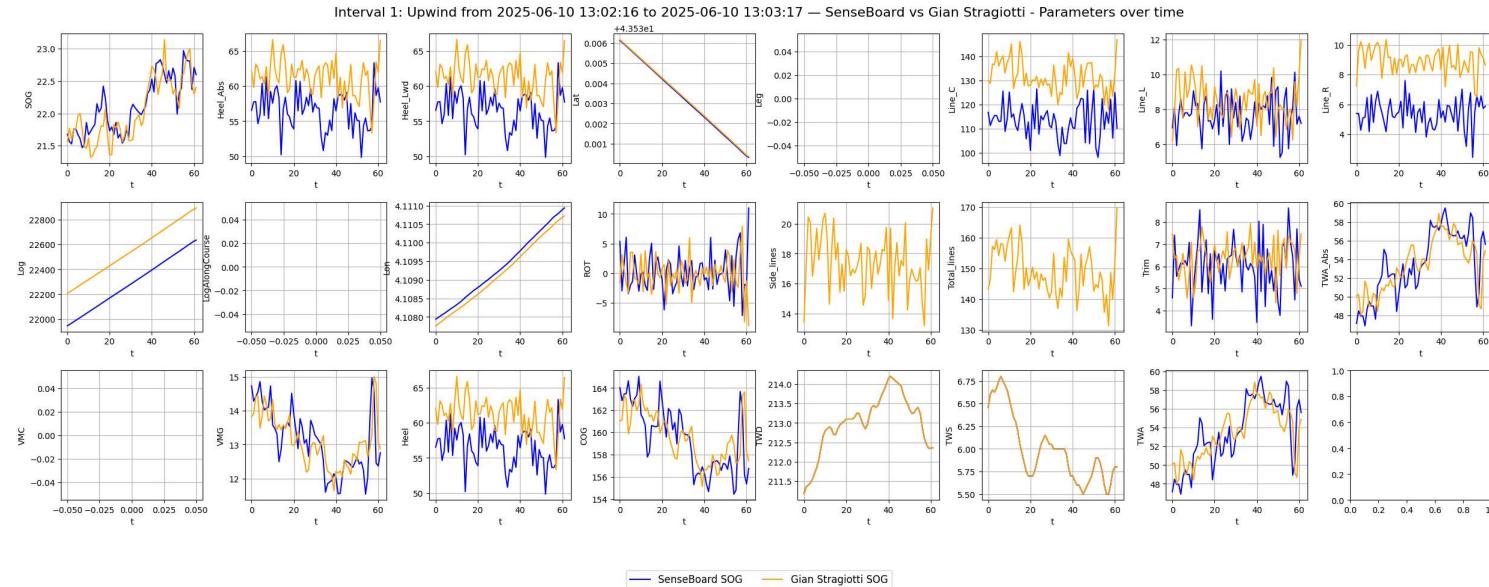
```
=====
Interval 1: Upwind from 2025-06-10 13:02:16 to 2025-06-10 13:03:17 — SenseBoard vs Gian Stragiotti
=====
```

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)
TWS	5.993	5.994	5.5	5.5	6.8	612	613	0.374	0.3742			
TWD	213	213	211.1	211	214.2	214.2	612	613	0.7288	0.7327		
SOG	22.12	22.03	21.4	21.2	23.1	26	612	613	0.4465	0.5026	SenseBoard	SenseBoard
VMG	13.11	13.11	10.67	10.79	16.35	16.28	612	613	1.065	0.8652	Gian Stragiotti	Gian Stragiotti
COG	159.5	159.7	151.7	152.7	169.3	167.7	612	613	3.353	2.634	Gian Stragiotti	Gian Stragiotti
TWA_Abs	53.52	53.36	42.2	44.7	61.7	61.23	612	613	3.847	3.13		
Heel_Lwd	56.53	61.18	42.4	44.4	71.9	76.2	612	613	5.091	4.615	Gian Stragiotti	Gian Stragiotti
Line_C	113.3	131.7	82	95.5	143.3	154.3	610	613	10.3	9.576	Gian Stragiotti	Gian Stragiotti
Side_Lines	nan	17.38	nan	7.5	nan	26.5	nan	613	nan	3.245	Gian Stragiotti	Gian Stragiotti
Total_Lines	nan	149	nan	107.2	nan	175.9	nan	613	nan	10.6		

## Distance Summary

	SenseBoard	Gian Stragiotti
Distance (m)	695.009054	693.543742
Straight Line (m)	693.806617	692.798079
Distance as Percentage of Straight Line (%)	100.173166	100.107631
Gain of SenseBoard with respect to Gian Stragiotti		
Forward	12.324496	4.216481
Lateral	14.385714	5.274337
VMG	-10.583620	-1.057856
Initial Deficit	-9.57332	-12.324496
Final Deficit	-10.583620	-14.385714
Total Gain	1.008300	-2.061240
Gain per Minute	0.990423	-2.024694
	-1.039100	

## MainReport



```
=====
Processing run: 18_06_Run
=====
```

```
{'SOG_variation_best1': 8.475864288128499,
'SOG_variation_best2': 8.459446733615736,
'avg_TWA_host1': 58.29920999999995,
'avg_TWA_host2': 51.89534557595993,
'avg_SOG_host1': 23.586166666666667,
'avg_SOG_host2': 23.586166666666667,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_tws': 59.95,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 8899999999999999,
'dart_id': 17495611880001288184,
'end_time': 1749561246.953,
'stability_score': 0.862181189963834,
'start_time': 1749561187.052}
```

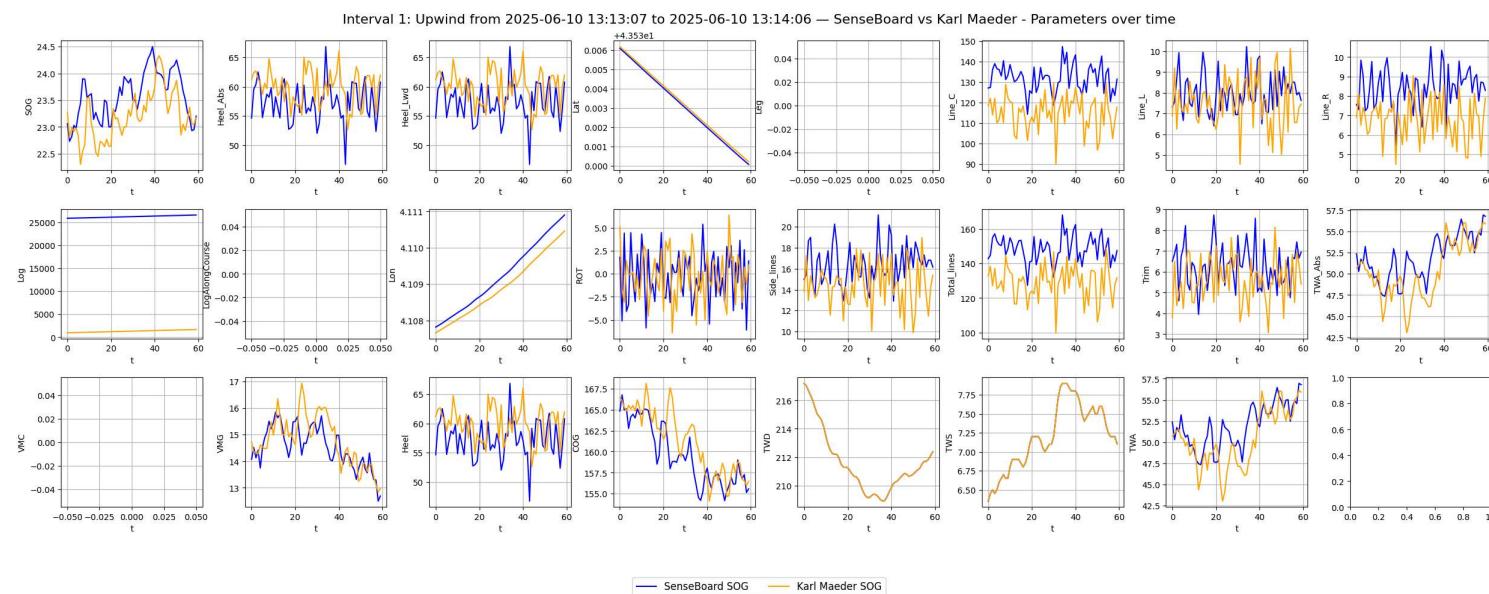
```
=====
Interval 1: Upwind from 2025-06-10 13:13:07 to 2025-06-10 13:14:06 — SenseBoard vs Karl Maeder
=====
```

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)
TWS	7.205	7.204	6.305	6.305	7.9	7.9	599	600	0.4269	0.4266
TWD	211.6	211.6	208.9	208.9	217.2	217.2	599	600	2.186	2.185
SOG	23.58	23.19	22.5	21.4	24.6	25.4	599	600	0.4903	0.4759
VMG	14.53	14.78	11.2	11.67	16.66	17.69	599	600	0.9165	1.04
COG	159.7	161.3	151.1	150.3	169.4	170.8	599	600	3.89	4.06
TWA_Abs	51.9	50.3	44.62	40.6	60.85	60.49	599	600	2.963	3.601
Heel_Lvd	57.36	59.91	36.3	47.1	74.3	71.5	599	600	5.346	4.493
Side_Lines	16.41	14.44	6.8	5.7	30.6	23.8	599	600	3.914	3.17
Line_C	131.8	114.9	90.5	71	156.4	144	599	596	11.32	11.3
Total_Lines	148.5	129	103.1	82.3	177.8	166.1	599	600	12.88	12.89

## Distance Summary

SenseBoard		Karl Maeder
Distance (m)	724992238	712743966
Straight Line (m)	723.322534	710.912367
Distance as Percentage of Straight Line (%)	100.230838	100.257641
Gain of SenseBoard with respect to Karl Maeder		
Forward		
Lateral		
VMG		
Initial Deficit	-13.48593	8.162728 -1.897499
Final Deficit	-26.53730	28.311512 6.148677
Total Gain	12.653796	-20.148783 -8.046176
Gain per Minute	12.695480	-20.215156 -8.072681

## MainReport



```
=====
Processing run: 18_06_Run
=====
```

```
{'SOG_variation_beat1': 8.486453473438918,
'SOG_variation_beat2': 8.477126846939634,
'avg_TWA_beat1': 52.9999842798746,
'avg_TWA_beat2': 52.4476637138146,
'avg_COG_beat1': 156.00000000000002,
'avg_COG_beat2': 22.73688227428899,
'boat1_master_leeward': True,
'boat1_name': "Karl Maeder",
'boat1_tws': 59.95,
'boat2_master_leeward': False,
'boat2_name': "SenseBoard",
'boat2_total_weight': 8899999999999999,
'date_time': '2025-06-10 13:13:07',
'day': 174556182155,
'stability_score': 0.967341362267599,
'start_time': 1745617444755}
```

```
=====
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)
TWS	7.974	7.974	7.444	7.456	8.6	8.6	679	678	0.2441	0.2434		
TWD	209	209	207.7	207.7	210.7	210.7	679	678	0.872	0.8716		
SOG	22.58	22.73	21.7	20.9	23.6	23.6	679	678	0.4065	0.48	SenseBoard	Karl Maeder
VMG	13.54	13.82	10.04	9.67	16.85	17.18	679	678	1.381	1.303	SenseBoard	SenseBoard
COG	156	156.6	145.6	147.2	166.6	167.4	679	678	3.962	3.603	SenseBoard	SenseBoard
TWA_Abs	52.99	52.45	41.22	40.5	64.25	63	679	678	4.588	4.126		
Heel_Lwd	58.32	57.19	40	39.4	72.9	73.3	679	678	4.553	5.233	Karl Maeder	Karl Maeder
Side_Lines	13.41	16.61	3.7	7.5	24.2	28.6	679	678	3.582	3.875	SenseBoard	Karl Maeder
Line_C	112.3	131	58.8	92.7	140.2	165.1	677	678	11.25	10.54	SenseBoard	SenseBoard
Total_Lines	125.4	147.7	68.5	102.9	159.1	178.1	679	678	12.78	12.23	SenseBoard	SenseBoard

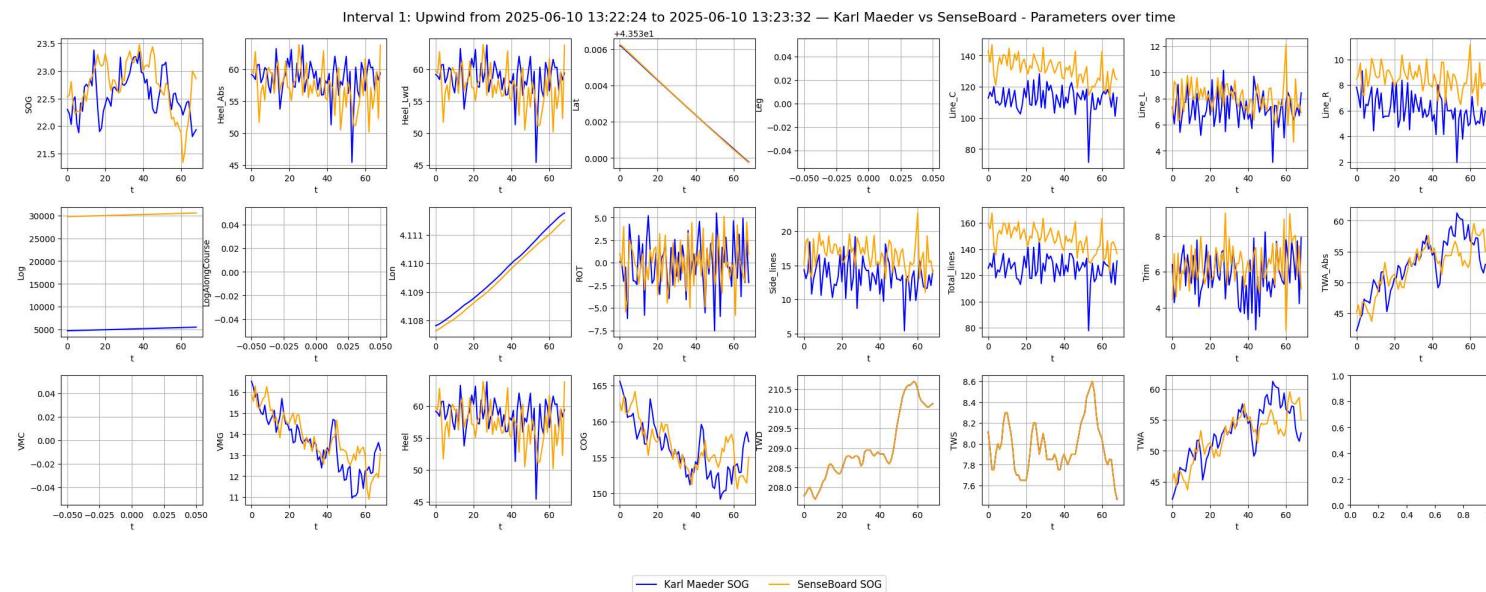
## Distance Summary

	Karl Maeder	SenseBoard
Distance [m]	786.369543	791.474082
Straight Line [m]	784.517576	789.913156

Distance as Percentage of Straight Line [%] 100.236064 100.197607  
Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VNG
-10.93459	11.063896	2.253799
Final Deficit	-5.545291	18.506026
Total Gain	-5.388168	-7.886767
Gain per Minute	-4.762920	-6.979440
	-8.403598	

## MainReport



```
=====
Processing run: 18_06_Run8
=====
```

```
{'SOG_variation_beat1': 8.51226995322216,
'SOG_variation_beat2': 8.3445298858429873,
'avg_TWA_host1': 46.96974481865892,
'avg_TWA_host2': 46.0218998451535,
'avg_COG_host1': 15.988888888888888,
'avg_COG_host2': 23.037958532695374,
'boat1_master_leeward': False,
'boat1_name': 'Karl Maeder',
'boat1_tiller': 100.95,
'boat2_master_leeward': True,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 8899999999999999,
'dart_id': 1749562065,
'date': '2025-06-10 13:22:24.1864',
'end_time': 1749562427.954,
'stability_score': 0.973803086827106,
'start_time': 1749562065.356}
```

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

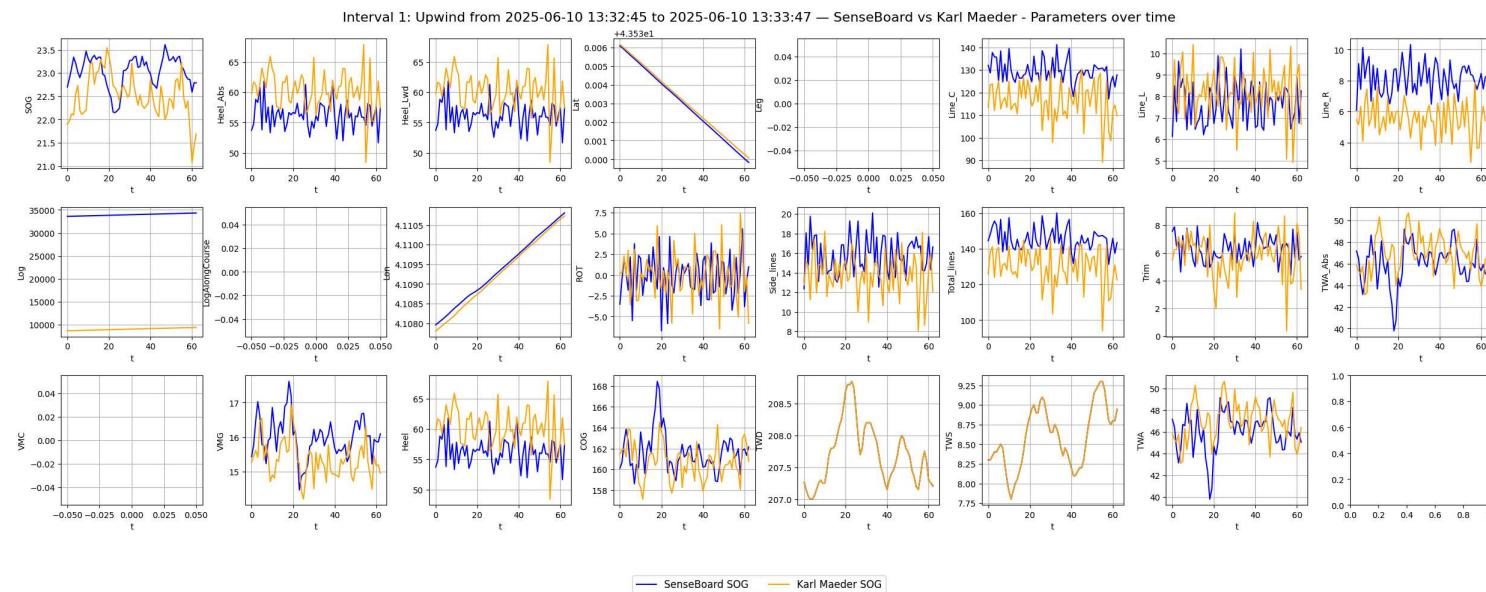
```
Run Statistics
```

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)
TWS	8.585	8.586	7.8	7.8	9.3	626	627	0.3886	0.3888			
TWD	207.7	207.7	207	207	208.9	626	627	0.4904	0.4906			
SOG	23.04	22.52	22.1	20.3	23.7	24	626	627	0.3448	0.5122	SenseBoard	SenseBoard
VMG	15.98	15.35	13.58	13.25	18.34	17.41	626	627	0.7226	0.7297	SenseBoard	SenseBoard
COG	161.7	160.7	156	153.2	171.1	168.9	626	627	2.389	2.366	Karl Maeder	Karl Maeder
TWA_Abs	46.02	46.96	37.14	39.1	52.09	54.01	626	627	2.336	2.412		
Heel_Lud	56.28	60.24	44	40.7	71.1	75.5	626	627	4.737	4.56	Karl Maeder	Karl Maeder
Side_lines	15.86	15.79	7.6	4	28.4	24.8	626	627	3.938	3.38	SenseBoard	Karl Maeder
Line_C	129.4	116.2	95.8	70	159.5	144.4	626	623	11	11.84	SenseBoard	SenseBoard
Total_lines	145.4	129.8	106.7	76.3	181.7	166.2	626	627	12.73	13.65	SenseBoard	SenseBoard

Distance Summary

SenseBoard		Karl Maeder	
Distance [m]	740.846275	725.101527	
Straight Line [m]	740.202673	724.487057	
Distance as Percentage of Straight Line [%]	100.086949	100.084814	
Gain of SenseBoard with respect to Karl Maeder			
Forward	Lateral	VMG	
Initial Deficit	-0.746829	9.227551	-0.822131
Final Deficit	-2.659782	-2.505528	-20.271965
Total Gain	15.850999	11.733079	19.449834
Gain per Minute	15.216959	11.263756	18.671641

## MainReport



```
=====
Processing run: 18_06_Run9
=====
```

```
{'SOG_variation_best1': 8.5459189734121826,
'SOG_variation_best2': 8.5352489328516277,
'avg_TWA_host1': 48.432365087541428,
'avg_TWA_host2': 48.93981012688822,
'avg_COG_host1': 162.20000000000002,
'avg_COG_host2': 23.246422322775363,
'boat1_master_leeward': True,
'boat1_name': 'Karl Maeder',
'boat1_weight': 595,
'boat2_master_leeward': False,
'boat2_name': 'SenseBoard',
'boat2_total_weight': 8899999999999999,
'date_time': '2025-06-10 13:32:45',
'dist_start': 0.0000000000000001,
'end_time': 1749562847.457,
'stability_score': 0.366584620353262,
'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)
TWS	9.045	9.047	7.452	7.471	10	10	663	662	0.6887	0.6864		
TWD	210.7	210.7	209.6	209.6	211.7	211.7	663	662	0.4885	0.4878		
SOG	<b>22.9</b>	23.24	21.6	21.9	24.3	24.3	663	662	<b>0.5458</b>	<b>0.5368</b>	SenseBoard	
VMG	<b>15.17</b>	15.24	12.67	12.43	17.82	17.31	663	662	<b>0.9745</b>	<b>0.7993</b>	SenseBoard	
COG	162.2	161.7	153.9	155.9	171.5	171.3	663	662	<b>3.202</b>	<b>2.657</b>	SenseBoard	
TWA_Abs	48.43	48.94	38.4	40.1	56.9	55.42	663	662	3.273	2.651		
Heel_Lvd	59.3	<b>56.7</b>	44.8	38.1	74.4	70.9	663	662	4.967	<b>4.979</b>	Karl Maeder	
Side_Lines	<b>11.37</b>	15.78	3.2	7.7	24	27.1	663	662	<b>3.7</b>	<b>3.74</b>	SenseBoard	
Line_C	<b>113.4</b>	130.2	68.5	89	151.1	160.1	661	662	<b>14.28</b>	<b>12.08</b>	SenseBoard	
Total_Lines	<b>124.8</b>	145.9	76.6	101.6	174.5	177.1	663	662	<b>15.74</b>	<b>13.3</b>	SenseBoard	

## Distance Summary

	Karl Maeder	SenseBoard
Distance (m)	779.433402	792.40518

Distance as Percentage of Straight Line [%] 100.155252 100.107642

Gain of Karl Maeder with respect to SenseBoard

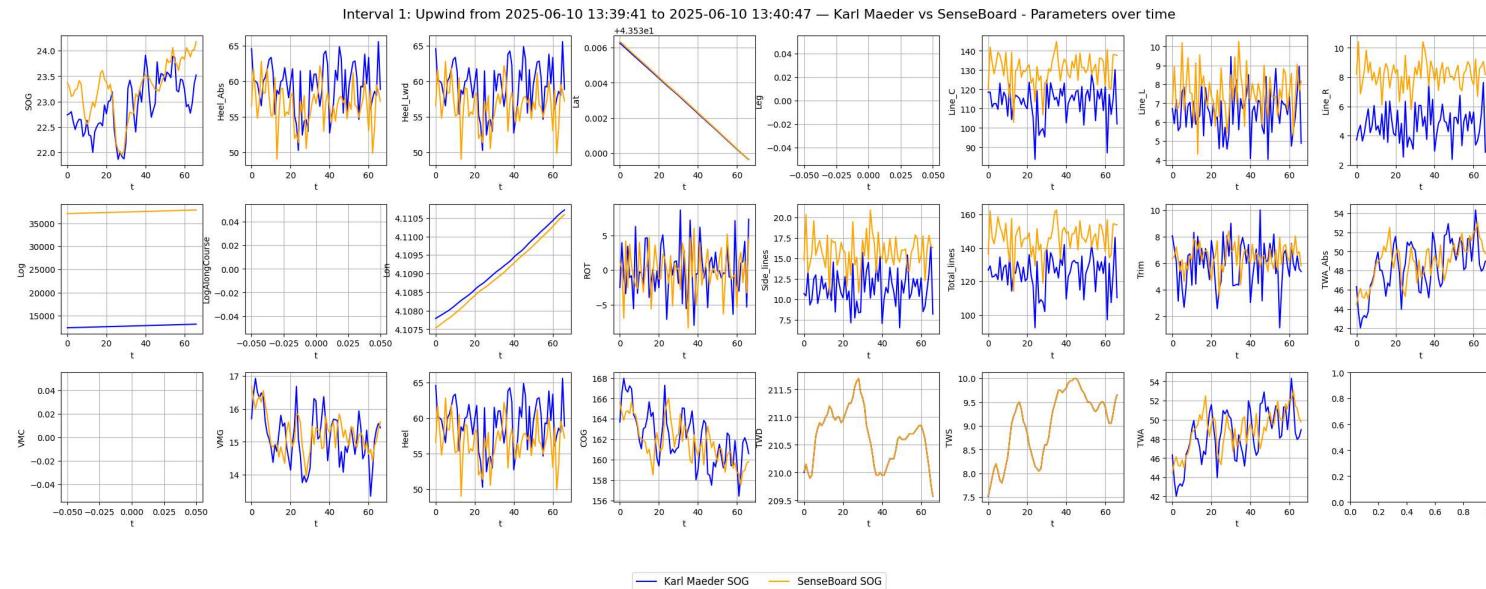
Forward	Lateral	VMG	
Initial Deficit	-14.876057	16.248072	2.286146

Final Deficit	-3.73576	9.429465	4.576203
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Total Gain	-11.40272	6.818606	-2.290058
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Gain per Minute	-10.097380	6.180286	-2.075675
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## MainReport



Summary of All Runs																																								
Run	Master	Slave	Space1	Lateral Gain (m)	Forward Gain (m)	VMG Gain (m)	Space2	Avg SOG (Master)	Avg SOG (Slave)	Winner Std SOG	Winner Overall SOG	Space3	Avg VMG (Master)	Avg VMG (Slave)	Winner Std VMG	Winner Overall VMG	Space4	Avg Heel (Master)	Avg Heel (Slave)	Winner Std Heel	Winner Overall Heel	Space5	Avg Side Lines (Master)	Winner Std Side Lines	Winner Overall Side Lines	Space6	Avg Line C (Master)	Winner Std Line C	Winner Overall Line C	Space7	Avg Total Lines (Master)	Winner Avg Total Lines	Winner Std Total Lines	Winner Overall Total Lines						
0	06_Run1 (Upwind)	Karl Maeder	Gian Stagiotti	-2.00	-1.57	-9.16	20.163278	20.473873	Gian Stagiotti	Karl Maeder	Tie	13.34	13.548399	Gian Stagiotti	Karl Maeder	Tie	53.39	54.962366	Gian Stagiotti	Karl Maeder	Tie	13.47	12.92968	Karl Maeder	Karl Maeder	Karl Maeder	110.92	113.777544	Gian Stagiotti	Karl Maeder	124.455370	126.646364	Gian Stagiotti	Karl Maeder	Tie					
1	06_Run2 (Upwind)	Gian Stagiotti	Karl Maeder	16.81	28.48	29.11	20.580144	19.965501	Gian Stagiotti	Karl Maeder	Tie	10.57	9.935747	Gian Stagiotti	Karl Maeder	Tie	54.62	53.874789	Gian Stagiotti	Karl Maeder	Tie	10.62	2.629963	Gian Stagiotti	Karl Maeder	Tie	111.46	111.061760	Karl Maeder	Karl Maeder	Karl Maeder	122.331134	20.923324	Gian Stagiotti	Karl Maeder	Tie				
2	06_Run3 (Upwind)	Karl Maeder	Gian Stagiotti	-4.95	-31.96	-23.26	20.360533	21.03164	Gian Stagiotti	Gian Stagiotti	Tie	12.24	12.759043	Gian Stagiotti	Karl Maeder	Tie	53.86	56.982367	Gian Stagiotti	Gian Stagiotti	Tie	12.78	11.011098	Karl Maeder	Gian Stagiotti	Gian Stagiotti	111.91	118.376487	Gian Stagiotti	Gian Stagiotti	124.762099	129.013455	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti					
3	06_Run4 (Upwind)	Gian Stagiotti	Karl Maeder	-1.91	41.09	23.40	20.830447	19.743631	Gian Stagiotti*	Gian Stagiotti*	Tie	12.62	11.996367	Gian Stagiotti*	Karl Maeder	Tie	55.19	56.730488	Gian Stagiotti*	Gian Stagiotti*	Tie	11.84	11.401544	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	113.33	116.021495	Karl Maeder	Karl Maeder	Karl Maeder	125.357827	129.569711	Karl Maeder	Karl Maeder	Karl Maeder				
4	06_Run5 (Upwind)	Karl Maeder	Gian Stagiotti*	-7.73	0.90	-5.21	21.452276	21.481628	Gian Stagiotti*	Karl Maeder	Tie	14.13	14.278989	Gian Stagiotti*	Gian Stagiotti*	Tie	55.55	55.446239	Gian Stagiotti*	Gian Stagiotti*	Tie	11.84	11.401544	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	118.30	119.218169	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*	129.968524	130.430490	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*				
5	06_Run6 (Upwind)	Gian Stagiotti	Karl Maeder	6.10	19.22	17.80	22.302107	21.702941	Gian Stagiotti*	Gian Stagiotti*	Tie	15.57	15.040384	Gian Stagiotti*	Karl Maeder	Tie	54.28	55.756162	Gian Stagiotti*	Gian Stagiotti*	Tie	11.68	11.542598	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*	114.21	118.320011	Karl Maeder	Karl Maeder	Karl Maeder	125.874531	130.117776	Karl Maeder	Karl Maeder	Karl Maeder				
6	06_Run7 (Upwind)	Karl Maeder	Gian Stagiotti*	-16.68	-5.00	-15.80	21.420957	21.572150	Gian Stagiotti*	Gian Stagiotti*	Tie	14.20	14.556789	Gian Stagiotti*	Karl Maeder	Tie	53.07	53.881606	Gian Stagiotti*	Gian Stagiotti*	Tie	11.19	11.224216	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*	112.05	112.170747	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*	122.980269	123.487237	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*				
7	06_Run8 (Upwind)	Gian Stagiotti	Karl Maeder	5.12	8.09	9.04	22.529703	22.203783	Gian Stagiotti*	Karl Maeder	Tie	14.03	13.771125	Gian Stagiotti*	Karl Maeder	Tie	53.67	54.975164	Gian Stagiotti*	Karl Maeder	Tie	10.43	11.579892	Karl Maeder	Karl Maeder	Karl Maeder	112.72	115.420576	Karl Maeder	Karl Maeder	Karl Maeder	123.416865	126.851375	Karl Maeder	Karl Maeder	Karl Maeder				
8	07_Run1 (Upwind)	Karl Maeder	Gian Stagiotti	-5.57	-3.43	-6.47	21.804893	21.907786	Gian Stagiotti	Gian Stagiotti	Tie	13.85	14.030395	Gian Stagiotti	Karl Maeder	Tie	53.74	57.268702	Gian Stagiotti	Gian Stagiotti	Tie	13.85	12.487774	Karl Maeder	Gian Stagiotti	Gian Stagiotti	116.95	119.271633	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti	130.876411	131.918127	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti				
9	07_Run2 (Upwind)	Gian Stagiotti	Karl Maeder	12.90	10.66	16.32	22.735232	22.480810	Gian Stagiotti	Karl Maeder	Tie	15.19	14.739947	Gian Stagiotti	Karl Maeder	Tie	57.32	55.707477	Gian Stagiotti	Karl Maeder	Tie	13.78	13.727498	Gian Stagiotti	Karl Maeder	Tie	121.10	120.053890	Gian Stagiotti	Karl Maeder	Gian Stagiotti	134.572525	132.764401	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti				
10	07_Run3 (Upwind)	Karl Maeder	Gian Stagiotti	7.22	-3.91	-7.83	23.311462	23.276812	Gian Stagiotti	Karl Maeder	Tie	16.00	16.205407	Gian Stagiotti	Gian Stagiotti	Tie	53.60	57.380354	Gian Stagiotti	Gian Stagiotti	Tie	11.80	11.917926	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti	118.20	121.970206	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti	136.389480	nan	nan	nan	nan				
11	07_Run5 (Upwind)	Karl Maeder	Gian Stagiotti	0.26	10.39	8.42	22.080568	21.772496	Karl Maeder	Karl Maeder	Tie	17.52	17.270902	Karl Maeder	Karl Maeder	Tie	54.24	55.454410	Karl Maeder	Karl Maeder	Tie	13.85	13.583522	Karl Maeder	Karl Maeder	Karl Maeder	6.45	118.506373	Karl Maeder	Karl Maeder	Karl Maeder	131.701404	nan	nan	nan	nan				
12	07_Run6 (Upwind)	Gian Stagiotti	Karl Maeder*	-1.92	8.03	3.22	23.195833	22.963478	Gian Stagiotti	Gian Stagiotti	Tie	13.75	13.671513	Gian Stagiotti	Gian Stagiotti	Tie	55.44	55.332317	Gian Stagiotti	Gian Stagiotti	Tie	11.76	nan	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti	117.15	6.701932	Karl Maeder	Karl Maeder	Karl Maeder	128.884575	nan	nan	nan	nan				
13	07_Run7 (Upwind)	Karl Maeder	Gian Stagiotti*	-7.83	0.19	-5.71	21.933873	21.935841	Gian Stagiotti*	Gian Stagiotti*	Tie	14.49	14.685239	Gian Stagiotti*	Gian Stagiotti*	Tie	54.89	54.344690	Gian Stagiotti*	Gian Stagiotti*	Tie	12.34	14.257130	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	6.70	114.399183	Karl Maeder	Karl Maeder	Karl Maeder	129.501951	128.80046	Karl Maeder	Gian Stagiotti*	Tie				
14	07_Run8 (Upwind)	Gian Stagiotti	Karl Maeder	1.36	4.18	4.02	22.749839	22.524920	Gian Stagiotti	Karl Maeder	Tie	16.91	16.718142	Gian Stagiotti	Karl Maeder	Tie	53.69	55.795659	Karl Maeder	Karl Maeder	Tie	12.34	125.479370	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	115.38	6.525998	Karl Maeder	Karl Maeder	Karl Maeder	127.967424	131.856627	Karl Maeder	Gian Stagiotti*	Tie				
15	07_Run9 (Upwind)	Karl Maeder	Gian Stagiotti*	-0.32	-2.52	-2.20	22.486645	22.534976	Gian Stagiotti*	Gian Stagiotti*	Tie	17.86	17.915781	Gian Stagiotti*	Gian Stagiotti*	Tie	55.59	54.039110	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	124.36	129.902400	Karl Maeder	Karl Maeder	Karl Maeder	6.32	118.432888	Karl Maeder	Karl Maeder	Karl Maeder	130.592506	131.200860	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*				
16	09_Run4 (Upwind)	Gian Stagiotti*	Karl Maeder	3.00	20.43	15.67	24.410510	23.740064	Gian Stagiotti*	Karl Maeder	Tie	15.98	15.443926	Gian Stagiotti*	Gian Stagiotti*	Tie	57.42	56.622734	Gian Stagiotti*	Gian Stagiotti*	Tie	12.75	14.489760	Karl Maeder	Karl Maeder	Karl Maeder	6.44	122.252181	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	133.944338	136.908397	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*				
17	09_Run6 (Upwind)	Gian Stagiotti*	Karl Maeder	3.88	18.22	15.14	23.575882	23.030840	Gian Stagiotti*	Gian Stagiotti*	Tie	15.84	15.391561	Gian Stagiotti*	Gian Stagiotti*	Tie	56.83	55.849046	Gian Stagiotti*	Gian Stagiotti*	Tie	12.80	14.833756	Karl Maeder	Karl Maeder	Karl Maeder	4.27	124.119536	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	127.649529	139.065197	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*				
18	09_Run7 (Upwind)	Karl Maeder	Gian Stagiotti*	-17.14	-0.79	-13.47	22.484493	22.593023	Gian Stagiotti*	Gian Stagiotti*	Tie	14.70	15.150701	Gian Stagiotti*	Karl Maeder	Tie	54.62	55.008140	Gian Stagiotti*	Gian Stagiotti*	Tie	13.92	119.549967	Karl Maeder	Karl Maeder	Karl Maeder	117.54	4.570007	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	131.566213	124.145301	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*				
19	09_Run8 (Upwind)	Gian Stagiotti	Karl Maeder	3.66	29.11	19.26	23.949191	23.987884	Gian Stagiotti*	Gian Stagiotti*	Tie	13.32	12.728905	Gian Stagiotti*	Karl Maeder	Tie	54.50	56.420194	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	128.55	13.570557	Karl Maeder	Karl Maeder	Karl Maeder	6.57	117.527661	131.141961	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*								
20	09_Run9 (Upwind)	Karl Maeder	Gian Stagiotti*	-2.56	-16.30	-13.89	22.307558	22.687336	Gian Stagiotti*	Karl Maeder	Tie	16.62	16.976945	Gian Stagiotti*	Gian Stagiotti*	Tie	56.06	55.504658	Karl Maeder	Karl Maeder	Gian Stagiotti*	13.76	128.376173	Karl Maeder	Karl Maeder	Karl Maeder	117.98	6.344277	131.486583	134.310355	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*							
21	09_Run10 (Upwind)	Gian Stagiotti*	Karl Maeder	4.27	10.75	9.85	23.533660	23.154565	Gian Stagiotti*	Karl Maeder	Tie	14.03	13.697034	Gian Stagiotti*	Karl Maeder	Tie	54.60	55.425612	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	124.34	14.310535	Karl Maeder	Karl Maeder	Karl Maeder	6.06	117.671307	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	130.459974	132.362235	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*				
22	09_Run11 (Upwind)	Karl Maeder	Gian Stagiotti*	-6.41	-0.99	-5.70	22.593027	22.665291	Gian Stagiotti*	Gian Stagiotti*	Tie	13.69	13.875920	Gian Stagiotti*	Gian Stagiotti*	Tie	55.52	54.609985	Karl Maeder	Karl Maeder	Gian Stagiotti*	14.03	125.393517	Karl Maeder	Karl Maeder	Karl Maeder	116.00	6.570356	Karl Maeder	Gian Stagiotti*	Gian Stagiotti*	129.959964	132.039134	Gian Stagiotti*	Gian Stagiotti*	Gian Stagiotti*				
23	10_Run1 (Upwind)	Karl Maeder	Gian Stagiotti	-6.65	-12.61	-12.92	21.446658	21.688283	Karl Maeder	Karl Maeder	Tie	12.97	13.290053	Gian Stagiotti	Gian Stagiotti	Tie	56.55	60.314578	Gian Stagiotti	Gian Stagiotti	Tie	17.013507	108.92	129.927960	Karl Maeder	Karl Maeder	Tie	nan	146.900147	nan	nan	nan	nan	nan	nan	nan	nan			
24	10_Run2 (Upwind)	Gian Stagiotti	Karl Maeder*	-2.29	20.97	10.79	22.768167	22.051262	Karl Maeder	Karl Maeder*	Tie	13.77	13.440212	Gian Stagiotti	Karl Maeder*	Tie	57.19	56.232637	Gian Stagiotti	Karl Maeder*	Tie	15.37	nan	122.28	109.816208	Karl Maeder	Karl Maeder*	Karl Maeder*	137.686682	nan	nan	nan	nan	nan	nan	nan	nan			
25	10_Run3 (Upwind)	Karl Maeder	Gian Stagiotti*	-12.11	-3.50	-11.61	22.050145	22.099278	Karl Maeder	Karl Maeder*	Tie	13.90	14.178003	Gian Stagiotti	Karl Maeder*	Tie	56.59	59.520779	Gian Stagiotti	Karl Maeder*	Tie	16.65	16.605658	Gian Stagiotti	Karl Maeder*	Gian Stagiotti*	112.50	129.587431	Karl Maeder	Karl Maeder*	Karl Maeder*	146.166860	nan	nan	nan	nan	nan	nan	nan	nan
26	10_Run4 (Upwind)	Gian Stagiotti	Karl Maeder*	-1.55	34.50	25.64	26.682397	25.474182	Gian Stagiotti	Gian Stagiotti	Tie	18.97	18.063334	Gian Stagiotti	Gian Stagiotti	Tie	57.23	57.218011	Gian Stagiotti	Gian Stagiotti	Tie	17.65	nan	113.96	87.725023	Gian Stagiotti	Gian Stagiotti	Gian Stagiotti	131.527464	nan	nan	nan	nan	nan	nan	nan	nan			
27	10_Run5 (Upwind)	Karl Maeder	Gian Stagiotti*	-2.06	1.01	-1.06	22.118464	22.025825	Gian Stagiotti*	Gian Stagiotti*	Tie	13.11	13.112914	Gian Stagiotti*	Gian Stagiotti*	Tie																								

```

    onlytypedInd=False,
    onlytypedEnd=True
)
except ValueError as e:
    print(f"Error processing {run_path}: {e}")

if summary_results:
    df_summary = pd.DataFrame(summary_results)
    display_df(df_summary,style=FormatStyle(
        "Table Gain (m)": "{:.3f}",
        "Forward Gain (m)": "{:.3f}",
        "VMG Gain (m)": "{:.3f}",
        "Avg Speed (m/s)": "{:.3f}",
        "Avg Heel (Master)": "{:.2f}",
        "Avg Side_lines (Master)": "{:.2f}",
        "Avg Line_C (Master)": "{:.2f}"
    )).set_caption("Summary of all runs")
else:
    print("No valid runs to summarize.")

```

\*\*\*\*\*  
Processing run: 86\_86\_Run1  
\*\*\*\*\*

Interval 2: Downwind  
\*\*\*\*\*  
{'SOG\_variation\_boat1': 8.936092397395782,  
 'SOG\_variation\_boat2': 1.036144348325972,  
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 'avg\_boat2': -123.7928264526484,  
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 'boat1\_master\_leeward': False,  
 'boat1\_name': 'Karl Maeder vs Gian Stragiotti',  
 'boat1\_total\_weight': 77,  
 'boat2\_master\_leeward': True,  
 'boat2\_name': 'Karl Maeder',  
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 'duration': 62.5290000531311,  
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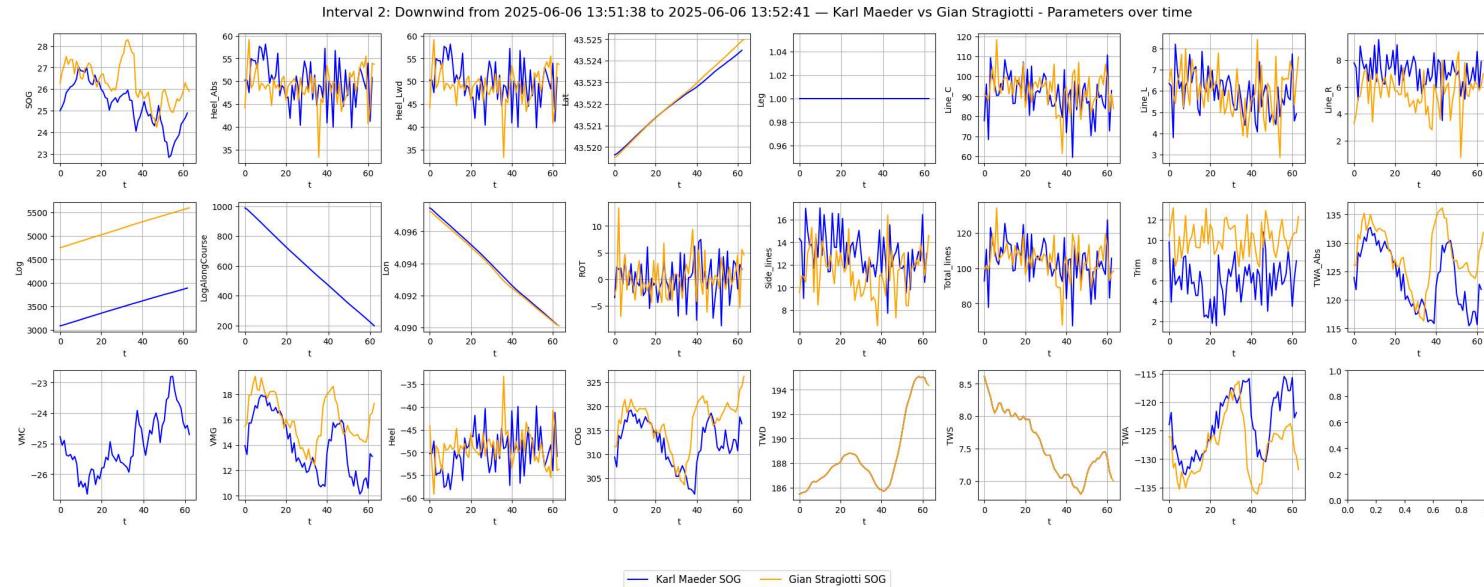
Processing: Interval 2: Downwind from 2025-06-06 13:51:38 to 2025-06-06 13:52:41 – Karl Maeder vs Gian Stragiotti

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

Run Statistics													
Aug (Karl Maeder)	Aug (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 (Aug)	Winner (StdDev)	Winner (Overall)	
TWS	7.553	7.552	6.8	6.8	8.624	623	624	0.4699	0.4701				
TWD	188.6	188.6	185.4	185.4	195.3	195.3	623	624	2.936	2.942			
SOG	25.26	26.31	22.6	24.2	27.4	28.3	623	624	1.039	0.9517	Gian Stragiotti	Gian Stragiotti	
VMG	14.03	16.05	8.383	11.48	19.98	20.2	623	624	2.489	1.967	Gian Stragiotti	Gian Stragiotti	
COG	312.4	316.5	297	301.4	323.7	327.8	623	624	5.206	5.294	Karl Maeder	Karl Maeder	
TWA_Abs	123.8	127.8	110.6	113.9	137.3	139.2	623	624	5.846	5.48			
Heel_lwd	49.8	49.9	28.3	17.1	72	67.3	623	624	7.787	6.69	Karl Maeder	Gian Stragiotti	
Side_lines	13.01	11.37	3.7	3.1	25.3	22.1	623	624	3.457	3.108	Karl Maeder	Gian Stragiotti	
Line_C	90.84	93.2	54.2	55.6	131.5	128.1	623	624	13.85	11.76	Gian Stragiotti	Gian Stragiotti	
Total_lines	104	104	104.5	59.7	61.9	153.5	151.1	623	624	15.9	12.79	Gian Stragiotti	Gian Stragiotti

Distance Summary		Karl Maeder	Gian Stragiotti
Distance (m)	808.825731	849.849420	
Straight Line (m)	804.354952	839.162531	
Distance as Percentage of Straight Line (%)	100.555822	100.555821	
Gain of Karl Maeder with respect to Gian Stragiotti			
Forward	Karl Maeder	Gian Stragiotti	
Lateral			
VMG			
Initial Deficit	3.142952	20.697345	15.451401
Final Deficit	36.00954	-36.463102	-50.331788
Total Gain	-32.866594	57.160447	65.783189
Gain per Minutt	-41.702581	55.136066	63.453392

## MainReport



```
=====
Processing run: 86_06_Run3
=====
```

```
=====
Interval 2: Downwind
=====
```

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  "avg_SOG": 23.9421787974848,
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  "avg_SOG_max": 23.9421787974848,
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  "boat2_total_weight": 106.97500000000001,
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  "end_time": "2025-06-06T13:52:41Z",
  "stability_score": 0.8093254072977828,
  "start_time": "1749218687.453"
}
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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
=====
```

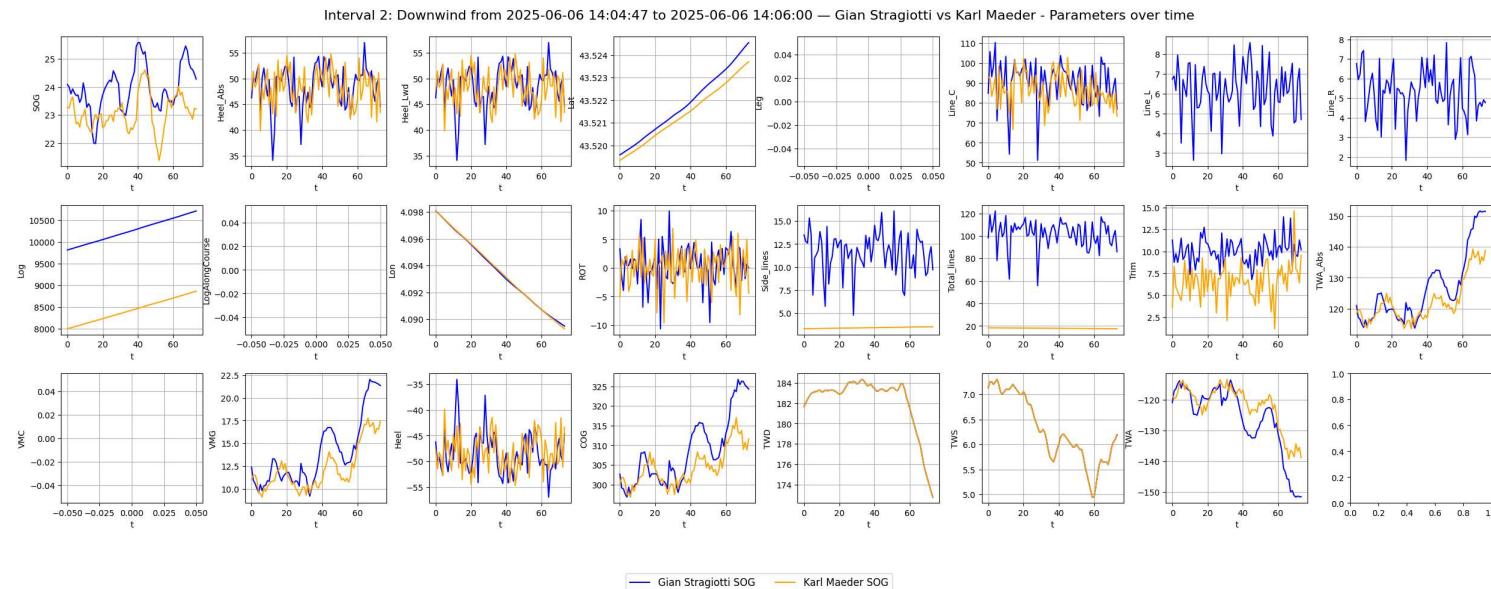
	Run Statistics												
	Avg (Gian Stragiotti)	Avg (Karl Maeder)	Min (Gian Stragiotti)	Min (Karl Maeder)	Max (Gian Stragiotti)	Max (Karl Maeder)	Count (Gian Stragiotti)	Count (Karl Maeder)	StdDev (Gian Stragiotti)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
TWS	6.278	6.278	4.904	4.904	7.3	7.3	735	734	0.6592	0.6597			
TWD	182.2	182.2	172.6	172.7	184.4	184.4	735	734	2.771	2.751			
SOG	23.94	23.08	21.9	21.2	25.7	24.7	735	734	0.8062	0.6555	Gian Stragiotti	Karl Maeder	Tie
VMG	13.91	12.18	8.276	6.846	22.48	19.05	735	734	3.684	2.503	Gian Stragiotti	Karl Maeder	Tie
COG	308.4	304.3	293.9	290.8	329.4	322.2	735	734	8.776	5.25	Karl Maeder	Karl Maeder	Karl Maeder
TWA_Abs	126.2	122.1	110	107.6	154	144.5	735	734	11.05	7.338			
Heel_lwd	48.52	40.22	25.6	29.4	69.4	70.4	735	734	6.962	7.099	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
Side_lines	11.49	3.429	2.2	3.32	20.1	3.539	735	734	2.821	0.06334	Gian Stragiotti	Karl Maeder	Tie
Line_C	90.41	86.71	41.6	61	127.3	119.8	731	734	12.56	11.41	Gian Stragiotti	Karl Maeder	Tie
Total_lines	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
Distance [m]	905.38644
Straight Line [m]	871.345408
Distance as Percentage of Straight Line [%]	101.366654
Gain of Gian Stragiotti with respect to Karl Maeder:	

Forward	Lateral	VMG
Initial Deficit	-16.617785	21.629820
Final Deficit	-46.033620	85.197677
Total Gain	-94.158135	-43.507657
Gain per Minute	24.044009	-51.959286

## MainReport



```
=====
Processing run: 86_86_Run0
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_boat1": 0.937984544588627,
 "SOG_variation_boat2": 0.9379845445886274,
 "avg_TWA_boat1": -141.14596918834864,
 "avg_TWA_boat2": -139.84990634920635,
 "avg_SOG_boat1": 25.69817432646593,
 "avg_SOG_boat2": 25.69817432646593,
 "avg_COG_boat1": 12.544889099069733,
 "avg_COG_boat2": 12.544889099069733,
 "boat1_master_leeward": False,
 "boat1_name": "Gian Stragiotti",
 "boat1_total_weight": 106.77,
 "boat2_name": "Karl Maeder",
 "boat2_total_weight": 106.77,
 "boat1_name": "Gian Stragiotti",
 "boat2_name": "Karl Maeder",
 "boat1_total_weight": 106.97500000000001,
 "boat2_total_weight": 106.97500000000001,
 "end_time": 1749219357.394,
 "stability_score": 0.954482981127863,
 "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)
TWS	7.999	7.998	7.046	7.036	8.995	8.996	630	631	0.5273	0.5283		
TWD	170.5	170.5	167	167	174.4	174.4	630	631	2.146	2.146		
SOG	24.96	25.69	22.7	23.7	26.4	27.9	630	631	0.7909	0.938	Gian Stragiotti	Karl Maeder
VMG	18.88	20.28	12.73	15.9	23.37	23.89	630	631	2.417	1.857	Gian Stragiotti	Gian Stragiotti
COG	310.3	313.6	294.7	299.9	326.5	330.1	630	631	7.694	7.688	Gian Stragiotti	Gian Stragiotti
TWA_Abs	139.8	143.1	122.6	129.1	158.3	162.3	630	631	8.429	8.523		
Heel_lvd	50.82	47.47	31.6	27.3	73.4	71.2	630	631	7.672	6.729	Karl Maeder	Gian Stragiotti
Side_lines	12.95	9.826	2.8	1.6	24.5	18.7	630	631	3.279	2.727	Karl Maeder	Gian Stragiotti
Line_C	90.8	89.02	59.8	62.7	132.3	115.1	630	625	13.68	9.999	Karl Maeder	Gian Stragiotti
Total_lines	103.7	99.15	67.6	68.8	155.2	131.8	630	631	15.51	10.51	Karl Maeder	Gian Stragiotti

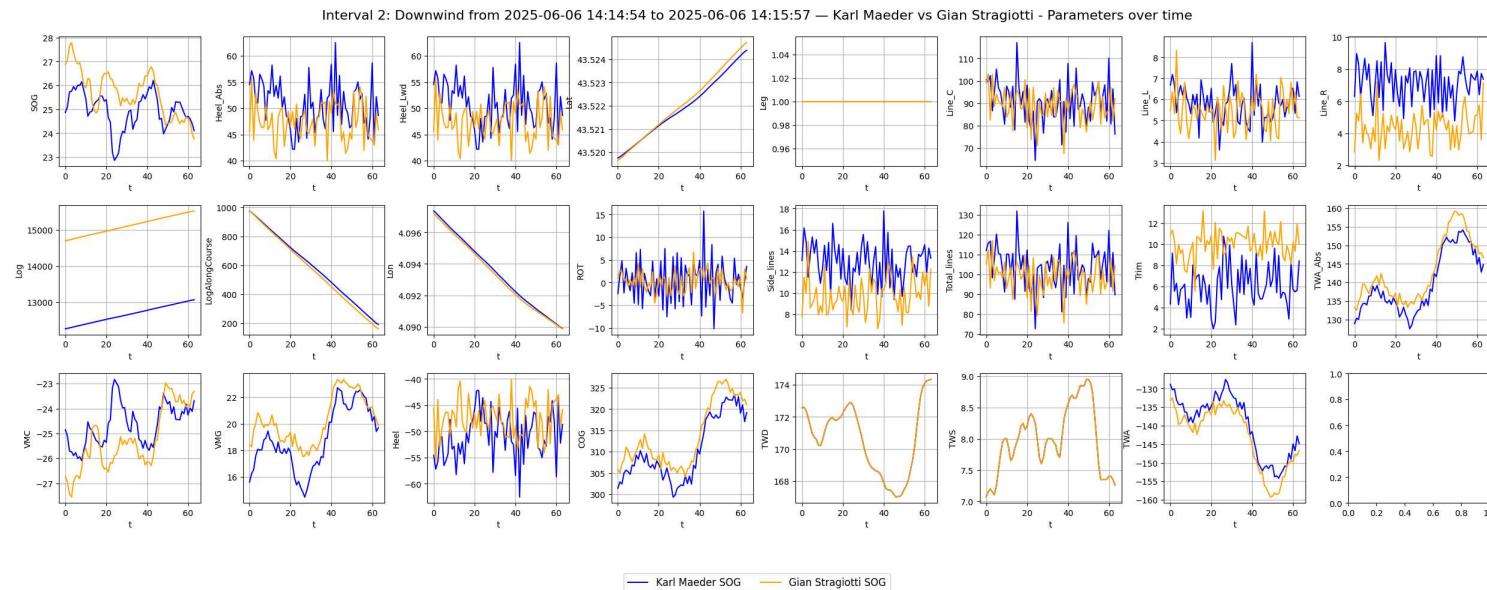
Distance Summary

Karl Maeder	Gian Stragiotti	
Distance (m)	808.282384	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	44.448697	-46.715240
Gain per Minute	-22.529685	42.402820	44.564271

## MainReport



```
=====
Processing run: 86_86_Bund
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_boat1": 1.2440294837729993,
 "SOG_variation_boat2": 1.24197934796181,
 "avg_TWA_boat1": -149.8215971541362,
 "avg_TWA_boat2": -149.710234899528853,
 "avg_SOG_boat1": 25.710234899528853,
 "avg_SOG_boat2": 25.710234899528853,
 "boat1_sog": 25.710234899528853,
 "boat2_sog": 25.710234899528853,
 "boat1_master_leeward": true,
 "boat1_name": "Gian Stragiotti",
 "boat1_total_weight": 106.77,
 "boat2_name": "Karl Maeder",
 "boat2_total_weight": 106.77,
 "boat1_sog": 25.710234899528853,
 "boat2_sog": 25.710234899528853,
 "end_time": 1749219859.859,
 "stability_score": 0.9548488156683271,
 "start_time": 1749219858.357}
```

```
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)
5.891	5.888	5	5	7.3	7.3	596	595	0.5345	0.5319			
TWD	165.4	165.4	160.7	160.7	168.4	596	595	2.249	2.251			
SOG	25.71	25.04	23.3	22.5	27.9	596	595	1.244	0.9483	Gian Stragiotti	Karl Maeder	Tie
VMG	22.14	21.52	18.31	16.44	26.77	596	595	2.086	1.457	Gian Stragiotti	Karl Maeder	Tie
COG	315.3	314.9	304	301.8	330.9	596	595	6.098	4.14	Karl Maeder	Karl Maeder	
TWA_Abs	149.8	149.4	137.9	137	165.1	596	595	5.835	4.081			
Heel_Iwd	46.54	46.07	24	30	63.7	596	595	7.04	7.04	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
Side_Lines	10.25	7.405	0.2	7.177	19.6	596	595	2.859	0.1321	Gian Stragiotti	Karl Maeder	Tie
Line_C	85.12	nan	42.7	nan	129.5	590	nan	12.49	nan			
Total_Lines	95.69	65.02	45.5	58.52	148.9	71.51	596	13.93	3.76	Gian Stragiotti	Karl Maeder	Tie

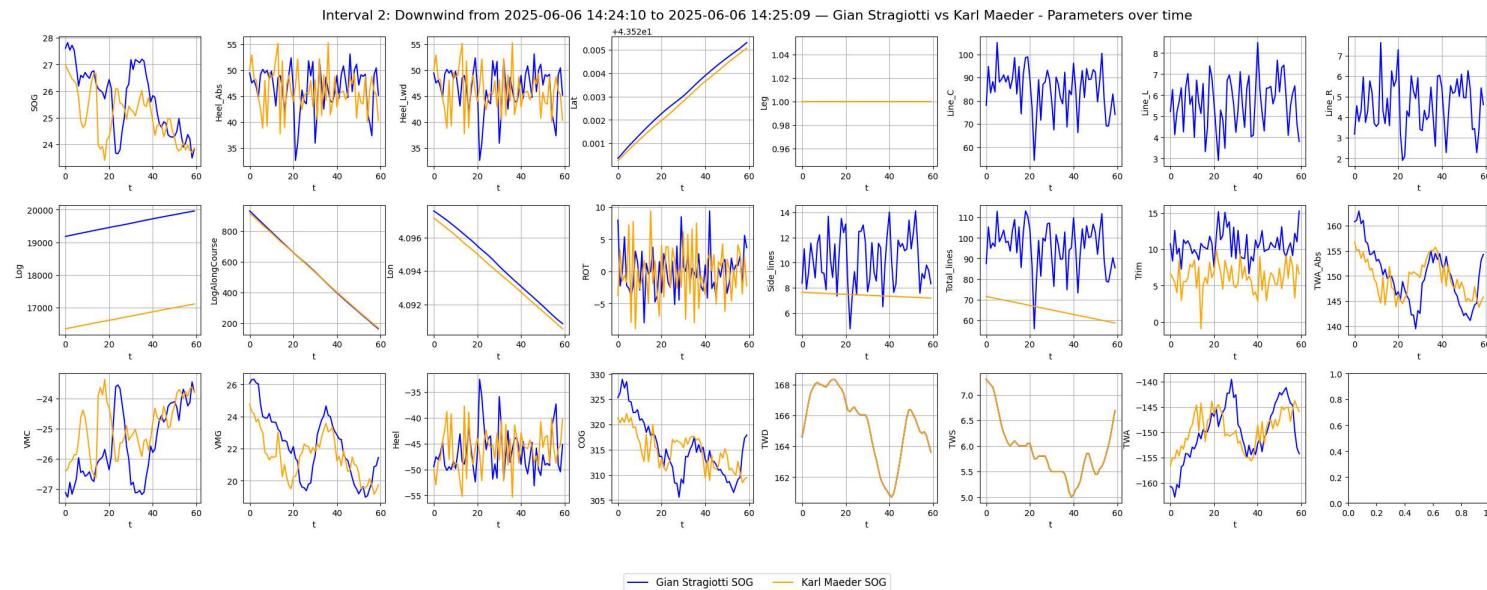
Distance Summary

Gian Stragiotti	Karl Maeder	
Distance [m]	786.49720	764.95053
Distance Line [m]	781.230950	761.991076
Distance as Percentage of Straight Line [%]	100.076420	100.388387

Gain of Gian Stragiotti with respect to Karl Maeder

Forward	Lateral	VMG
Initial Deficit	17.490820	31.346562
Final Deficit	-1.768006	37.748184
Total Gain	19.260951	-46.401627
Gain per Minute	19.427340	-46.455201
		-20.038902

## MainReport



```
=====
Processing run: 86_86_Run5
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_boat1": 0.5526799862831597,
 "SOG_variation_boat2": 0.5526799862831597,
 "avg_TWA_boat1": -152.9521598434962,
 "avg_TWA_boat2": -152.49173497156368,
 "avg_SOG_boat1": 26.41957471698111,
 "avg_SOG_boat2": 26.41957471698111,
 "boat1_master_leeward": true,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 97500000000000001,
 "boat2_master_leeward": false,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 109.88999999999999,
 "duration": 1402.228024282428,
 "end_time": 1749228975.454,
 "stability_score": 0.952807182252274,
 "start_time": 1749228933.563}
```

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

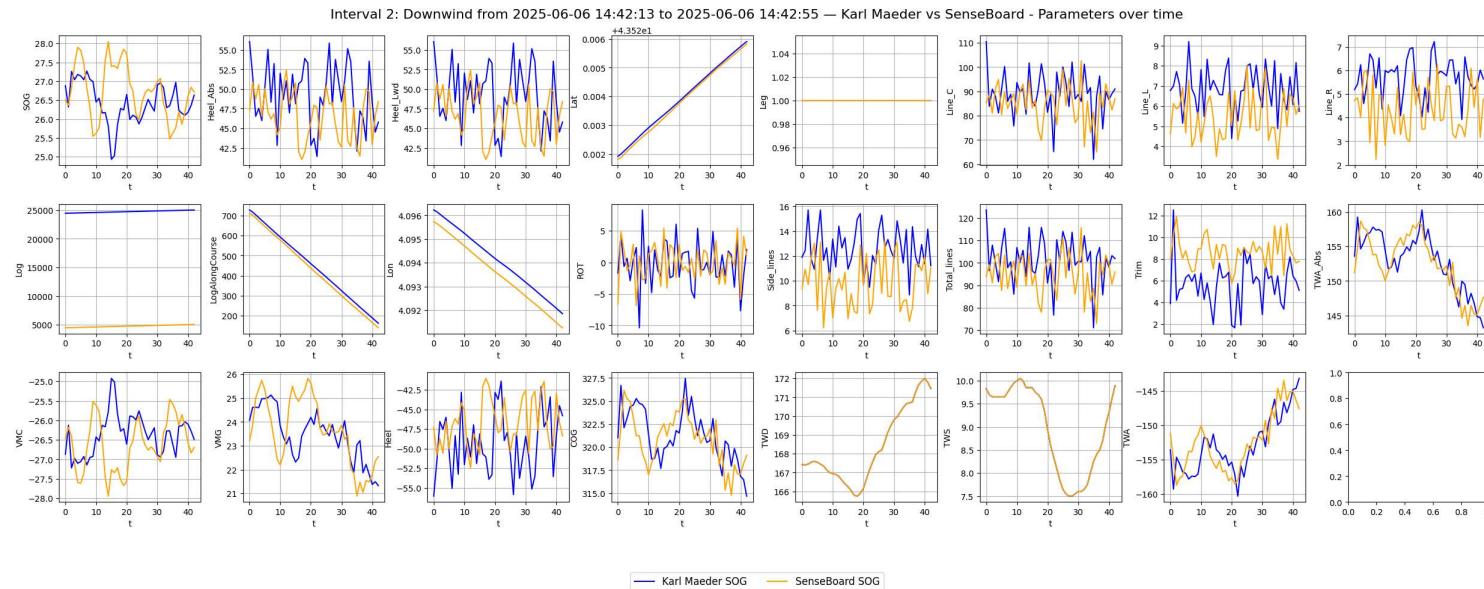
```
=====
Interval 2: Downwind from 2025-06-06 14:42:13 to 2025-06-06 14:42:55 – Karl Maeder vs SenseBoard
=====
```

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)
TWS	8.946	8.941	7.5	7.5	10.1	424	422	0.9215	0.9213			
TWD	168.4	168.3	165.7	165.7	172	424	422	1.935	1.934			
SOG	26.42	25.72	24.7	25.4	27.6	28.1	424	422	0.5527	0.727	SenseBoard	Karl Maeder
VMG	23.45	23.64	20.51	20.51	25.71	26.27	424	422	1.149	1.453	SenseBoard	Karl Maeder
COG	321.3	320.8	313.1	312.8	330.3	328.2	424	422	3.544	3.164	SenseBoard	SenseBoard
TWA_Abs	153	152.5	141.8	141.4	163.5	160.9	424	422	4.645	4.494		
Heel_Abd	49.14	46.65	31.6	31	72.7	65.6	424	422	7.347	6.249	Karl Maeder	SenseBoard
Side_lines	12.59	9.848	3.3	1.7	21.7	20.7	424	422	3.433	3.125	Karl Maeder	SenseBoard
Line_C	88.83	85.19	56.1	60.5	127.2	113.6	424	418	12.72	10.76	Karl Maeder	SenseBoard
Total_lines	101.4	95.15	65.6	68.1	145.9	134.3	424	422	14.42	11.76	Karl Maeder	SenseBoard

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	16.406014	38.570295
Lateral	2.927514	
VMG		
Initial Deficit	16.406014	38.570295
Final Deficit	21.598824	42.684510
Total Gain	-5.19881	-4.114215
Gain per Minute	-7.367256	-5.837008
	3.907207	

## MainReport



```
=====
Processing run: 86_86_Bund
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_boat1": 1.1345469133779522,
 "SOG_variation_boat2": 1.1345469133779523,
 "avg_TWA_boat1": -144.5994847396783,
 "avg_TWA_boat2": -145.07226936936935,
 "avg_VMA_boat1": -145.98812387917941,
 "avg_VMA_boat2": -145.98812387917941,
 "boat1": "SenseBoard",
 "boat1_master_leeward": false,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 9750000000000001,
 "boat2": "Karl Maeder",
 "boat2_leeward": true,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 109.88999999999999,
 "duration": 145.07226936936935,
 "end_time": 1749221546.368,
 "stability_score": 0.8421958135186284,
 "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)	
TWS	9.64	9.639	8.428	8.41	10.6	555	557	0.5012	0.5047				
TWD	169.6	169.6	166.8	166.8	173.4	555	557	2.253	2.253				
SOG	27.62	26.98	24.8	24.5	29.3	555	557	0.9536	1.135	SenseBoard	SenseBoard	SenseBoard	
VMG	22.61	21.97	16.9	17.62	26.3	555	557	1.489	1.325	SenseBoard	Karl Maeder	Tie	
COG	314.7	314.2	305.4	305.8	326.5	555	557	3.522	3.588	SenseBoard	SenseBoard	SenseBoard	
TWA_Abs	145.1	144.6	133	136	154.2	555	557	3.652	2.859				
Heel_lwd	48.27	48.88	24.8	30.8	65.2	555	557	7.28	7.24	Karl Maeder	Karl Maeder	Karl Maeder	
Side.Lines	11.73	13.4	3.5	4.8	22.4	555	557	3.28	3.682	Karl Maeder	SenseBoard	Tie	
Line_C	88.98	90.71	61.3	48.5	124.4	138.3	554	557	12.43	16.44	Karl Maeder	SenseBoard	Tie
Total.Lines	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	772.962590

	SenseBoard	Karl Maeder
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

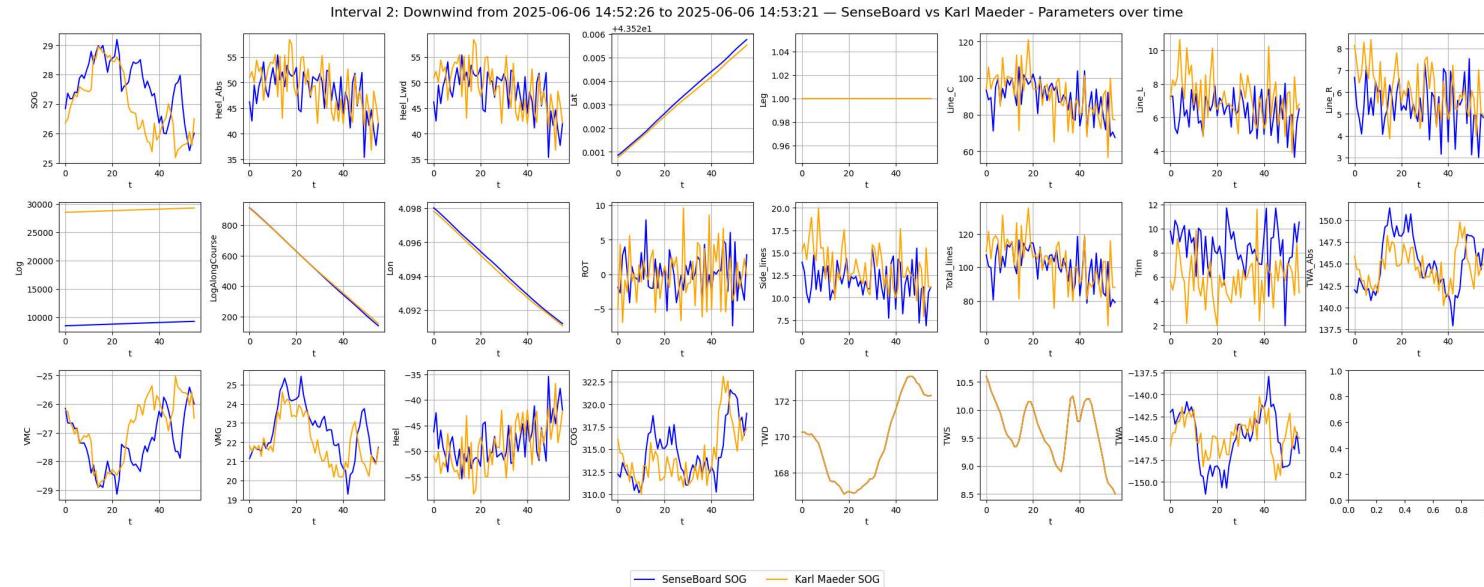
Forward	Lateral	VMG	
Initial Deficit	3.943722	18.775203	7.516319

Final Deficit	-10.571826	25.059584	23.442663
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Total Gain	14.515547	-7.030780	-15.926345
------------	-----------	-----------	------------

Gain per Minute	15.20242	-7.614289	-17.248126
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## MainReport



```
=====
Processing run: 86_86_Run7
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_host1": 0.6225253372636484,
 "SOG_variation_host2": 0.6225253372636484,
 "avg_TWA_host1": -149.69745418628805,
 "avg_TWA_host2": -148.15991231884058,
 "avg_VMG_host1": -148.15991231884058,
 "avg_VMG_host2": -149.69745418628805,
 "avg_SOG_host1": 27.19396135265781,
 "avg_SOG_host2": 27.19396135265781,
 "boat1_master_leeward": true,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 979500000000000001,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": false,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 109.88999999999999,
 "duration": 144222307.762,
 "end_time": 1749222307.762,
 "stability_score": 0.866107985234971,
 "start_time": 174922266.453}
```

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

Distance Summary

Karl Maeder	SenseBoard
578.401681	596.844633

Distance (m) 578.401681 596.844633

Straight Line (m) 576.755970 595.530310

Distance as Percentage of Straight Line (%) 100.285339 100.220968

Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VMG
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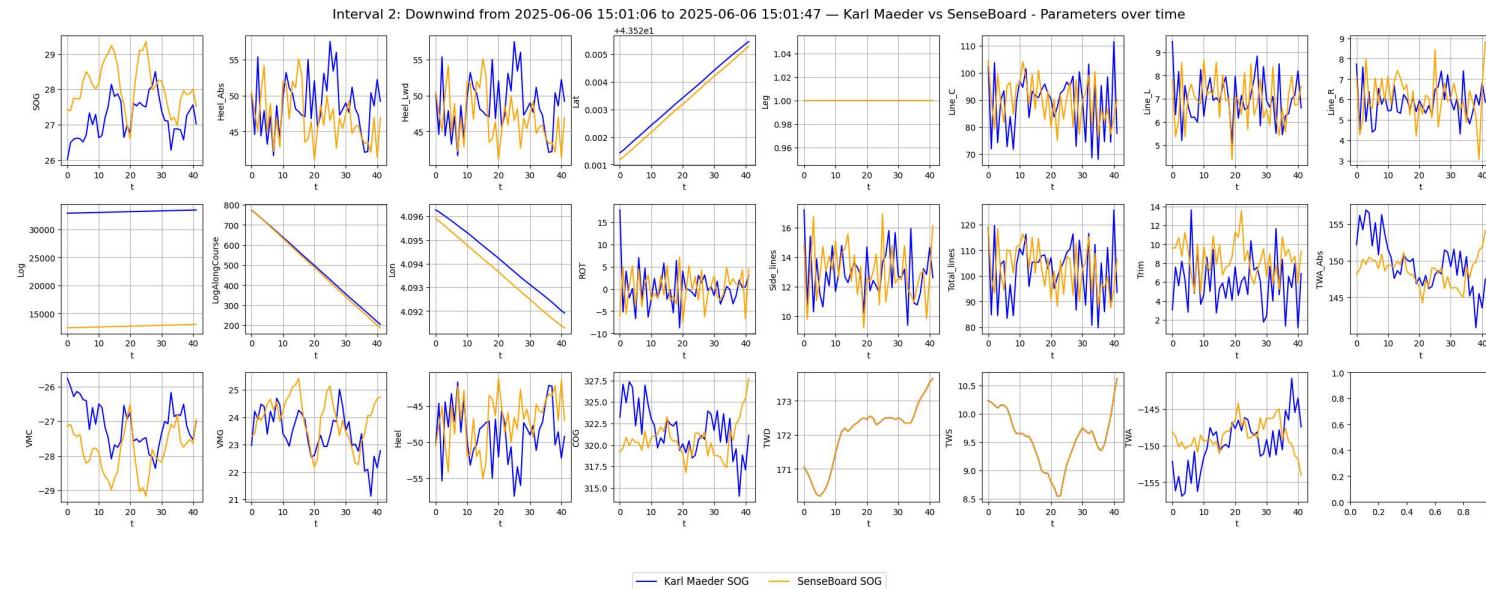
Initial Deficit	-2.578496	39.886937	22.351929
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Final Deficit	16.088603	50.693632	11.687887
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Total Gain	-18.667064	-0.805695	10.63342
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Gain per Minute	-27.113341	-15.996778	15.498034
-----------------	------------	------------	-----------

## MainReport



```
=====
Processing run: 86_06_Run8
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation": 0.05626411740758,
 "SOG_min": 26.0, "SOG_max": 29.8, "SOG_avg": 27.55341,
 "avg_TWA_host1": -156.702192788333,
 "avg_TWA_host2": -155.4054873769635,
 "avg_SOG_host1": 27.988028031333337,
 "avg_SOG_host2": 27.988028031333337,
 "boat1": "SenseBoard", "boat2": "Karl Maeder",
 "boat1_master_leeward": false,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 9750000000000001,
 "boat2": "SenseBoard", "boat2_weight": 10000000000000001,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 109.88999999999999,
 "duration": 38.0, "start_time": 174922558.053,
 "end_time": 174922558.453,
 "stability_score": 0.48613289964281,
 "start_time": 174922558.76}
```

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

Distance Summary

	SenseBoard	Karl Maeder
Distance (m)	552.292913	551.312824

	SenseBoard	Karl Maeder
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
---------	---------	-----

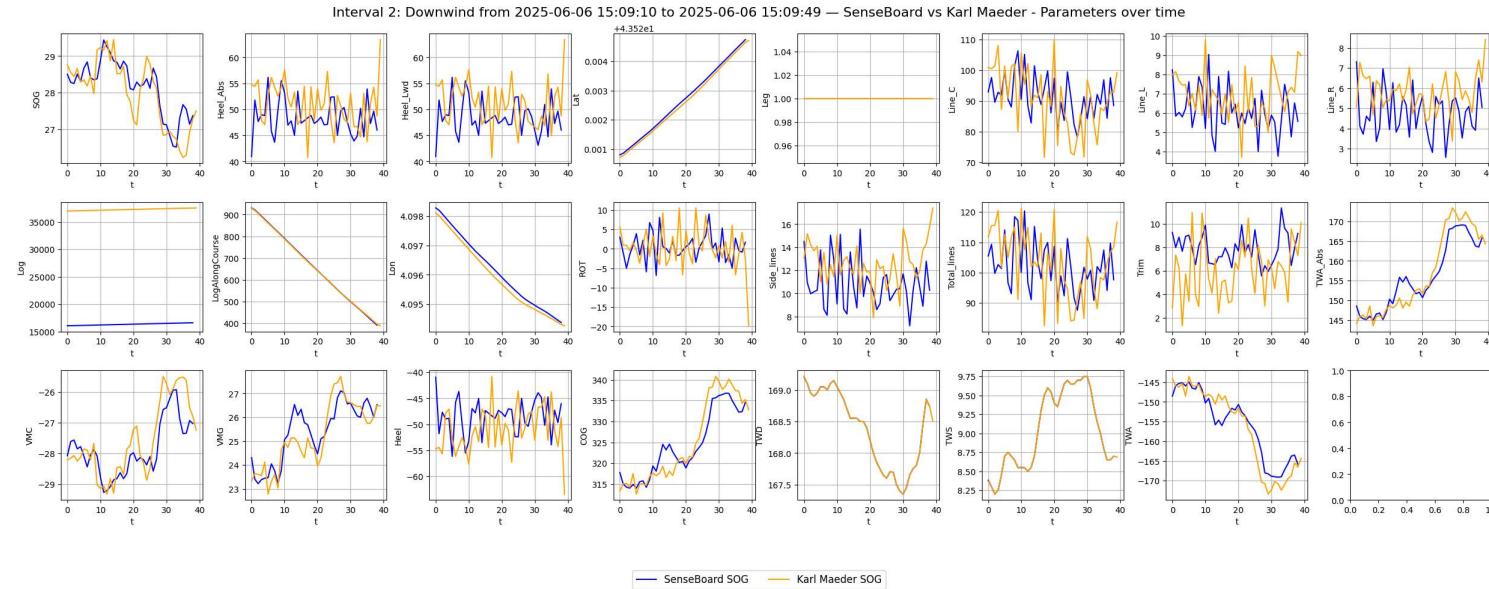
Initial Deficit	-0.270209	17.094216	7.216608
-----------------	-----------	-----------	----------

Final Deficit	-4.074166	10.543551	8.019081
---------------	-----------	-----------	----------

Total Gain	3.803957	6.550667	-0.804773
------------	----------	----------	-----------

Gain per Minute	5.990012	10.315199	-1.263638
-----------------	----------	-----------	-----------

## MainReport



Error processing .../Data\_SailinJord/Straight\_lines\06\_06\Interview and equipment: At least two CSV files are required.  
Error processing .../Data\_SailinJord/Straight\_lines\06\_06\senseboard\_log: At least two CSV files are required.

\*\*\*\*\*  
Processing run: 07\_06\_Run  
\*\*\*\*\*

Interval 2: Downwind

```
{"SOG_variation_boat1": 0.4785825112578562,
"SOG_variation_boat2": 0.4496869888184717,
"avg_TWD": 143.34558808471188,
"avg_TWA": -143.34558808471188,
"avg_SOG_boat1": 27.995974576271188,
"avg_SOG_boat2": 27.38818646440678,
"boat1_min_weight": 100.0,
"boat1_max_weight": 108.19,
"boat1_name": "Gian Stragiotti",
"boat1_total_weight": 108.19,
"boat2_min_weight": 100.0,
"boat2_name": "Karl Maeder",
"boat2_total_weight": 108.97500000000001,
"duration": 47.029999126134,
"end_t": 159297153234,
"stability_score": 0.964700439495513,
"start_time": 1592971514257}
```

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  
\*\*\*\*\*

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)
8.881	8.881	8.164	8.164	9.493	9.493	472	472	0.3235	0.3236			
188	188	185.1	185.1	190.3	190.3	472	472	1.402	1.402			
<b>SOG</b> <span style="color:red">27.39</span>	<span style="color:red">28</span>	26.6	26.7	28.5	29	472	472	<b>0.4476</b>	<span style="color:red">0.4785</span>	Gian Stragiotti	Karl Maeder	Tie
<b>VMG</b> <span style="color:red">21.92</span>	<span style="color:red">22.54</span>	17.45	19.39	25.38	25.82	472	472	<b>1.419</b>	<span style="color:red">1.216</span>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
331.3	331.7	319.3	324.9	340.6	340.2	472	472	<b>3.592</b>	<span style="color:red">2.938</span>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b> <span style="color:red">143.3</span>	<span style="color:red">143.8</span>	129.9	135.9	154.3	154.1	472	472	<b>4.311</b>	<span style="color:red">3.605</span>			
<b>Heel_Abd</b> <span style="color:red">49.73</span>	<span style="color:red">49.57</span>	27.2	35.1	70.9	68	472	472	<b>6.606</b>	<span style="color:red">5.874</span>	Karl Maeder	Gian Stragiotti	Tie
<b>Side_lines</b> <span style="color:red">13.26</span>	<span style="color:red">11.12</span>	4.8	3.8	23.3	17.8	472	472	<b>2.041</b>	<span style="color:red">2.788</span>	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b> <span style="color:red">91.1</span>	<span style="color:red">90.87</span>	62.9	64.4	121.7	115.2	472	466	<b>12.31</b>	<span style="color:red">9.783</span>	Karl Maeder	Gian Stragiotti	Tie
<b>Total_lines</b> <span style="color:red">104.3</span>	<span style="color:red">102</span>	71.5	73.5	140.9	125.5	472	472	<b>13.88</b>	<span style="color:red">10.49</span>	Karl Maeder	Gian Stragiotti	Tie

Distance Summary

Karl Maeder	Gian Stragiotti
663.3636464	678.715526
Straight Line [m]	661.464887
Total Distance [m]	677.104721

Distance as Percentage of Straight Line [%] 100.287026 100.237896

Gain of Karl Maeder with respect to Gian Stragiotti

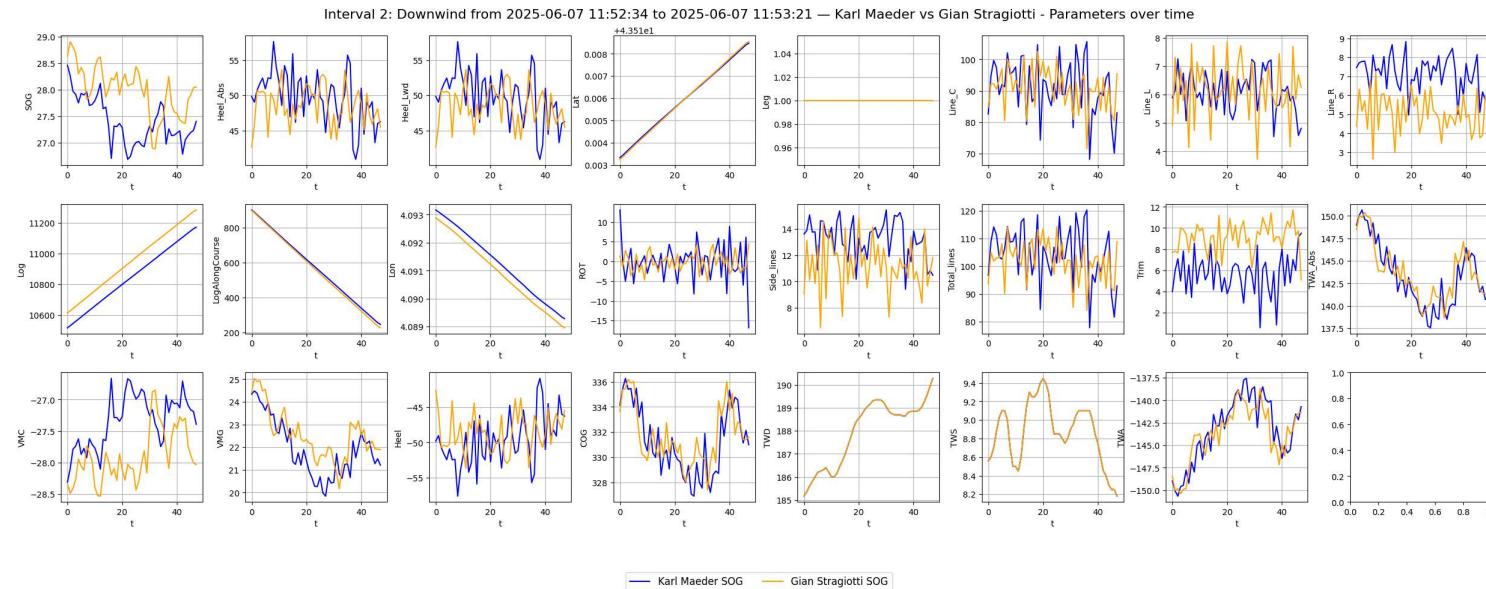
Forward	Lateral	VMG
3.698603	23.746003	11.208833

Initial Deficit	Final Deficit
19.345131	19.477505
-3.891851	

Total Gain	Gain per Minute
-15.645529	-19.931460
4.288467	5.437462
15.100684	19.236132

Gain per Minute -19.931460 5.437462 19.236132

## MainReport



```
=====
Processing run: 87_06_Run3
=====
```

```
Interval 2: Downwind
```

```
{
    "SOG_variation": 0.749455186979272,
    "SOG_min": 27.17,
    "SOG_max": 29.0,
    "avg_TWA": 157.740311211255,
    "avg_TWA_host1": -151.4023518218751,
    "avg_TWA_host2": -151.13577572016462,
    "avg_SOG": 27.1059485174538,
    "avg_SOG_min": 27.0959485174538,
    "avg_SOG_max": 27.1059485174538,
    "boat1_master_leeward": true,
    "boat1_name": "Gian Stragiotti",
    "boat1_total_weight": 108.19,
    "boat2_name": "Karl Maeder",
    "boat2_total_weight": 108.19,
    "boat1_name": "Gian Stragiotti",
    "boat2_name": "Karl Maeder",
    "boat1_total_weight": 108.97500000000001,
    "duration": 17429745.556,
    "end_time": 17429745.556,
    "stability_score": 0.954757384676734,
    "start_time": 17429706.957
}
```

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
=====
```

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)
8.583	8.585	7.605	7.606	9.8	9.8	487	486	0.6359	0.6359			
178.6	178.6	171.9	171.9	187.2	187.2	487	486	5.263	5.254			
<b>SOG</b>	<b>27.17</b>	<b>26.09</b>	<b>25.5</b>	<b>24.1</b>	<b>28.6</b>	<b>487</b>	<b>486</b>	<b>0.7945</b>	<b>1.165</b>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>VMG</b>	<b>23.8</b>	<b>22.81</b>	<b>19.1</b>	<b>17.19</b>	<b>26.55</b>	<b>487</b>	<b>486</b>	<b>1.558</b>	<b>1.814</b>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>COG</b>	<b>330</b>	<b>329.8</b>	<b>319.1</b>	<b>316.7</b>	<b>337.7</b>	<b>487</b>	<b>486</b>	<b>3.939</b>	<b>4.672</b>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>TWA_Abs</b>	<b>151.4</b>	<b>151.1</b>	<b>134.6</b>	<b>134.8</b>	<b>161.2</b>	<b>487</b>	<b>486</b>	<b>4.581</b>	<b>4.407</b>			
<b>Heel_lvd</b>	<b>46.28</b>	<b>44.61</b>	<b>27.3</b>	<b>27.1</b>	<b>65.2</b>	<b>487</b>	<b>486</b>	<b>6.573</b>	<b>6.251</b>	Gian Stragiotti	Karl Maeder	Tie
<b>Side_lines</b>	<b>10.95</b>	<b>12.59</b>	<b>1.4</b>	<b>4.2</b>	<b>17.1</b>	<b>487</b>	<b>486</b>	<b>2.549</b>	<b>3.113</b>	Karl Maeder	Gian Stragiotti	Tie
<b>Line_C</b>	<b>83.36</b>	<b>81.11</b>	<b>42.9</b>	<b>39.1</b>	<b>107.7</b>	<b>487</b>	<b>486</b>	<b>11.19</b>	<b>15.8</b>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti
<b>Total_lines</b>	<b>94.5</b>	<b>93.72</b>	<b>46.8</b>	<b>45.2</b>	<b>123.9</b>	<b>487</b>	<b>486</b>	<b>12.53</b>	<b>18.04</b>	Gian Stragiotti	Gian Stragiotti	Gian Stragiotti

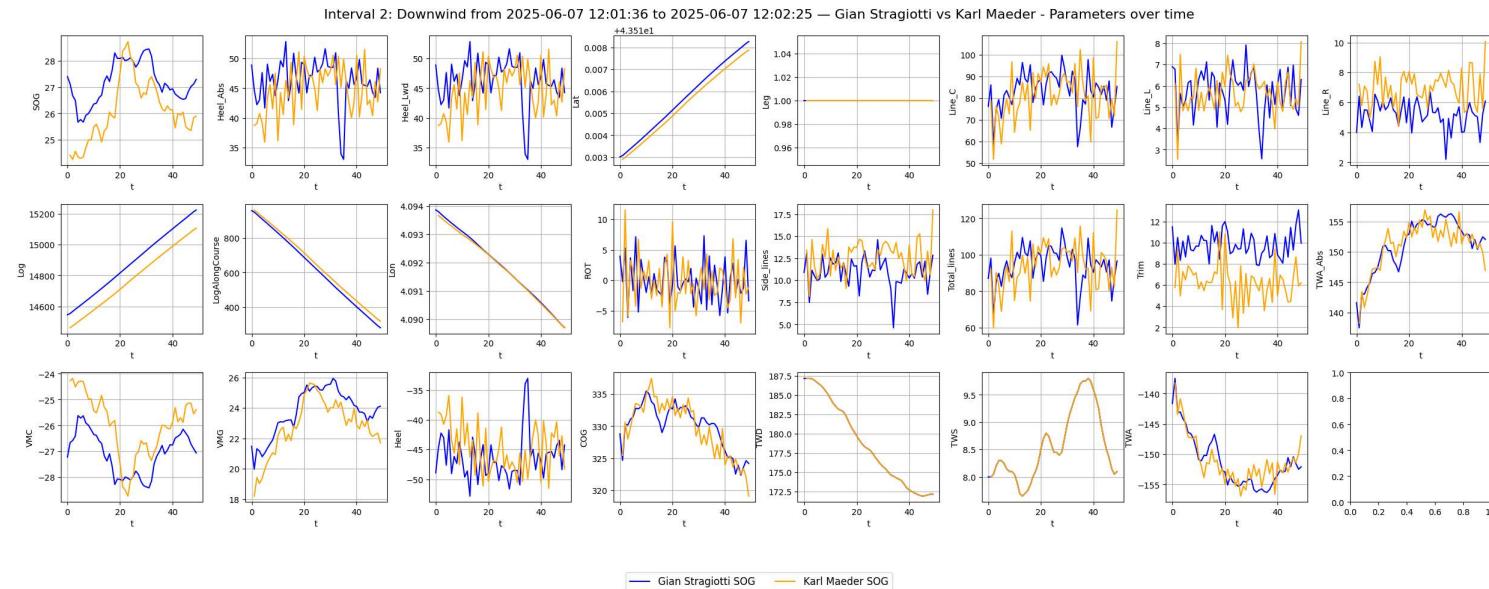
Distance Summary

Gian Stragiotti	Karl Maeder	
Distance [m]	679.699272	651.814482
Straight Line [m]	677.500446	649.001386
Distance as Percentage of Straight Line [%]	100.324550	100.433450

Gain of Gian Stragiotti with respect to Karl Maeder

Forward	Lateral	VMG
Initial Deficit	-9.669919	19.202149
Final Deficit	-37.608892	22.447526
Total Gain	28.51634	-3.245577
Gain per Minute	35.235860	-4.006555
		-32.858609

## MainReport



```
=====
Processing run: 87_06_Run0
=====
```

```
=====
Interval 2: Downwind
```

```
{
  "SOG_variation_host1": 1.24484742393798,
  "SOG_variation_host2": 0.9399393263959536,
  "avg_TWA_host1": -154.8599389671361,
  "avg_TWA_host2": -153.42456282352041,
  "avg_SOG_host1": 26.421301502347416,
  "avg_SOG_host2": 26.421301502347416,
  "boat1_mast_leeward": false,
  "boat1_name": "Gian Stragiotti",
  "boat1_total_weight": 108.19,
  "boat2_name": "SenseBoard",
  "boat2_total_weight": 102.89,
  "duration": 1.0000000000000002,
  "end_time": 1745298715.364,
  "stability_score": 0.94874862745743864,
  "start_time": 1745298672.858
}
```

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)
9.088	9.088	8.4	8.4	9.5	9.5	425	426	0.3011	0.3008			
TWD	169.7	169.7	168.1	173.1	173.1	425	426	1.209	1.207			
SOG	25.73	26.42	24.1	23.6	27.3	425	426	0.828	1.273	Gian Stragiotti	SenseBoard	Tie
VMG	23	23.66	19.4	19.53	26.21	425	426	1.291	1.626	Gian Stragiotti	SenseBoard	Tie
COG	323.4	323.8	313.8	310.1	332.1	335.1	425	426	3.538	4.585	SenseBoard	SenseBoard
TWA_Abs	153.6	154.1	141.2	137.3	163.8	167	425	426	4.158	5.375		
Heel_lvd	46.53	45.86	26.5	13.8	71.2	70.4	425	426	7.663	8.111	SenseBoard	SenseBoard
Line_C	83.89	84.06	43.8	21.5	120.1	115.8	425	426	12.96	15.3	Gian Stragiotti	SenseBoard
Side_Lines	nan	10.32	nan	1.2	nan	19.5	nan	426	nan	3.124		Tie
Total_Lines	nan	94.45	nan	23.3	nan	133.3	nan	426	nan	17.13		

Distance Summary

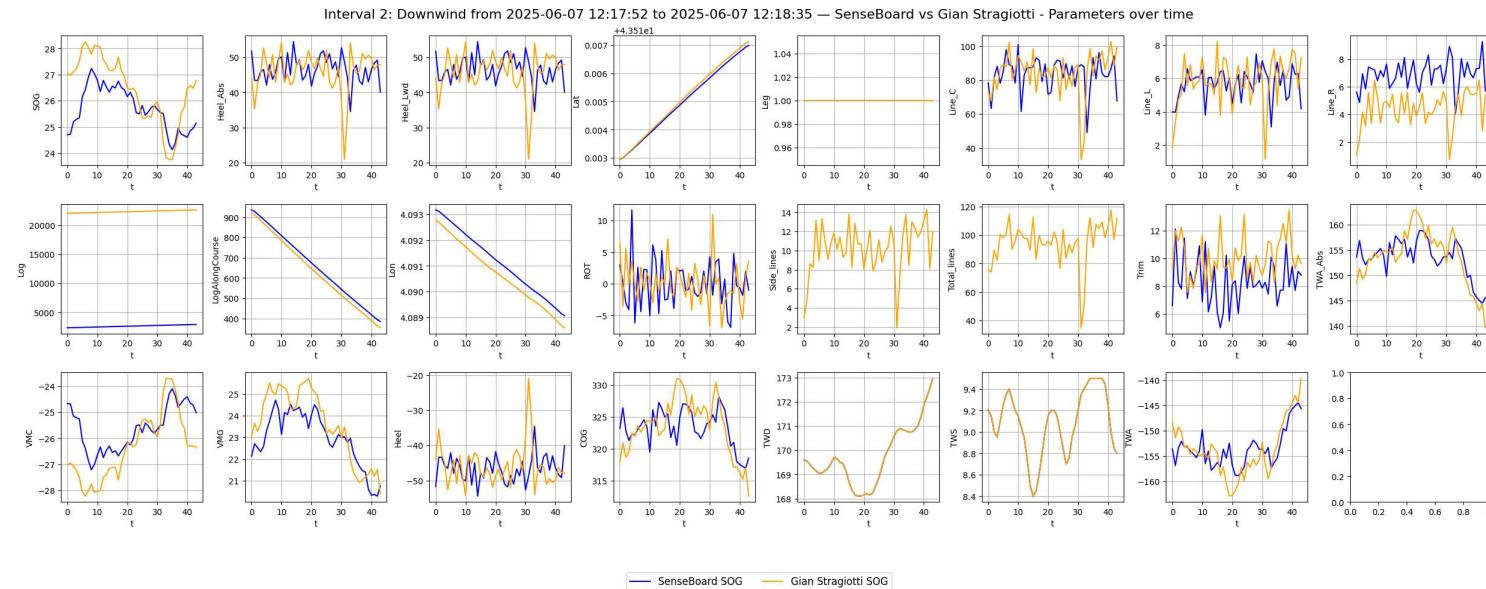
SenseBoard	Gian Stragiotti
Distance (m)	561.576450 578.146150
Straight Line (m)	559.979014 575.735115

Distance as Percentage of Straight Line [%] 100.285267 100.418775

Gain of Senseboard with respect to Gian Stragiotti

Forward	Lateral	VMG
Initial Deficit	19.09393 25.36552	-5.854248
Final Deficit	34.860714 21.6939081	-21.607764
Total Gain	-15.701316 3.672518	15.753116
Gain per Minute	-22.303923 5.196837	22.292185

## MainReport



Error processing ..\Data\_Sailnjord\Straight\_lines\07\_06\07\_06\_Run4: 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': 0.778771736235849,
 'avg_Ta_boat1': -142.7755752115717,
 'avg_Ta_boat2': -142.7755752115717,
 'avg_SOG_boat1': 26.671392428259866,
 'avg_SOG_boat2': 26.69359823399586,
 'boat1_master_leeward': False,
 'boat1_name': 'SenseBoard',
 'boat1_total_weight': 188.19,
 'boat2_master_leeward': True,
 'boat2_name': 'Gian Stragiotti',
 'boat2_total_weight': 182.89,
 'duration': 45.187000036239624,
 'end_time': 1745308002.263,
 'stability_score': 9.3616722121092284,
 'start_time': 174229957.476}
```

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)
TWS	7.829	7.829	6.109	6.109	9.995	9.996	452	453	0.9128	0.9118		
TWD	176.4	176.4	170.4	170.4	181.1	181.1	452	453	3.954	3.959		
SOG	<b>26.09</b>	26.67	23.8	24.5	27.3	28.1	452	453	<b>0.778</b>	0.7702	Gian Stragiotti	Gian Stragiotti
VMG	<b>20.72</b>	22	15.29	17.8	23.84	25.31	452	453	<b>1.669</b>	1.398	Gian Stragiotti	Gian Stragiotti
COG	319.2	322.4	305.1	310.6	329.3	332.6	452	453	<b>4.008</b>	<b>4.148</b>	SenseBoard	SenseBoard
TWA_Abs	142.8	146	129.2	132.2	152.9	158	452	453	4.891	5.327		
Heel_Abd	47.08	<b>45.20</b>	23.7	26.7	69.2	65.4	452	453	<b>7.146</b>	6.166	SenseBoard	Gian Stragiotti
Line_C	<b>6.971</b>	83.83	2.5	48.6	12.1	115	451	451	<b>1.752</b>	<b>12.93</b>	Gian Stragiotti	SenseBoard
Side_Lines	nan	10.15	nan	2.8	nan	20.1	nan	453	nan	2.776		
Total_Lines	nan	94.41	nan	53.1	nan	134	nan	453	nan	14.66		

## Distance Summary

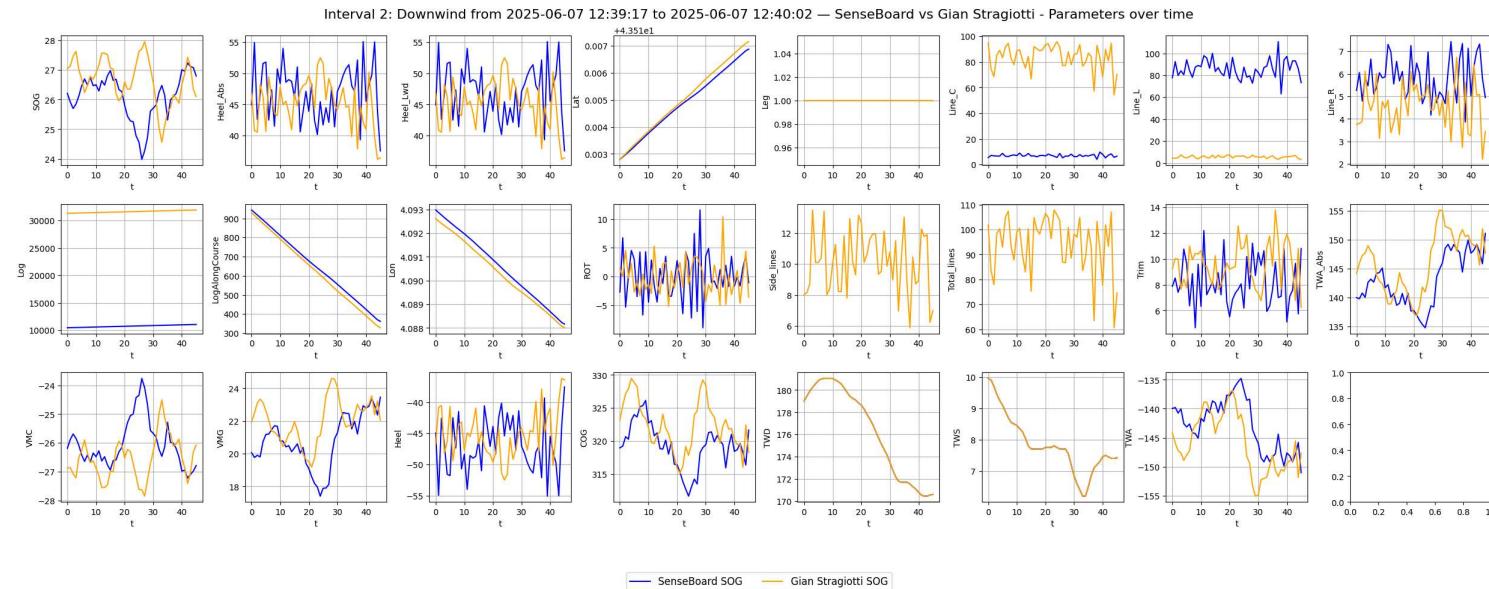
SenseBoard	Gian Stragiotti
Distance [m]	606.233191 619.950591
Straight Line [m]	604.034223 617.650654

Distance as Percentage of Straight Line [%] 100.364047 100.372369

Gain of SenseBoard with respect to Gian Stragiotti

Forward	Lateral	VMG	
Initial Deficit	19.734451	22.606593	-2.036539
Final Deficit	32.46077	-10.940665	-32.466094
Total Gain	<b>-12.263834</b>	33.547257	30.427555
Gain per Minute	<b>-0.6368817</b>	44.646337	40.494483

## MainReport



```
=====
Processing run: 87_06_Bund
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_host1": 0.568540326795657,
 "SOG_variation_host2": 0.568540326795657,
 "avg_TWA_host1": -141.9440981413612,
 "avg_TWA_host2": -142.37469473684212,
 "avg_SOG_host1": 28.251832460732884,
 "avg_SOG_host2": 28.251832460732884,
 "host1_mastervessel": true,
 "boat1_name": "Gian Stragiotti",
 "boat1_total_weight": 108.19,
 "boat1_center_of_gravity": 105,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 102.89,
 "boat2_center_of_gravity": 104.14,
 "end_time": 1749308652.26,
 "stability_score": 0.9171738279723844,
 "start_time": 1749308654.157}
```

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

Distance Summary

	Gian Stragiotti	SenseBoard
Distance [m]	554.517463	524.901041
Straight Line [m]	552.509493	523.32458
Distance as Percentage of Straight Line [%]	100.363427	100.301263

Gain of Gian Stragiotti with respect to SenseBoard

Forward	Lateral	VMG
-0.96259	11.059991	7.602313

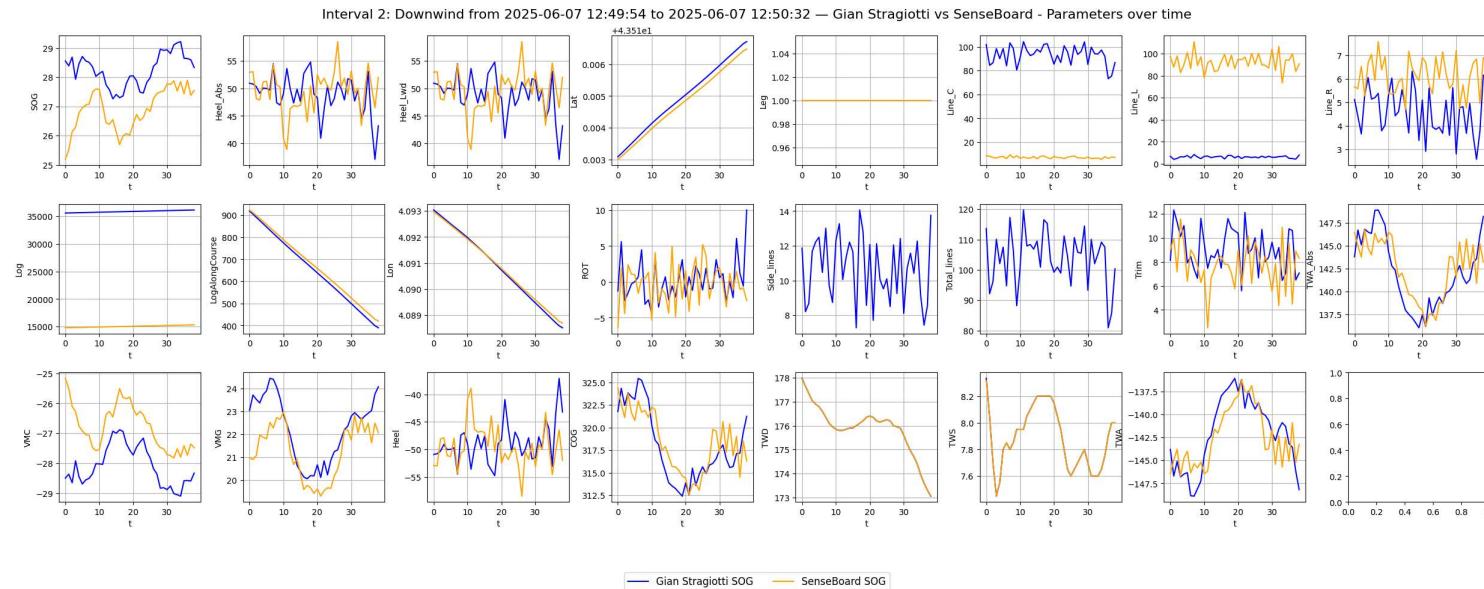
Initial Deficit	-0.96259	11.059991	7.602313
-----------------	----------	-----------	----------

Final Deficit	-30.19945	7.556306	28.437445
---------------	-----------	----------	-----------

Total Gain	-29.03686	3.503065	-20.035132
------------	-----------	----------	------------

Gain per Minute	-55.986435	5.517108	-32.809648
-----------------	------------	----------	------------

## MainReport



```
=====
Processing run: 87_06_Run7
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_host1": 0.6994768334928197,
 "SOG_variation_host2": 0.6994768334928531,
 "avg_TWA_host1": -143.4658109615386,
 "avg_TWA_host2": -142.24757084810917,
 "avg_SOG_host1": 26.33876952367923,
 "avg_SOG_host2": 26.33876952367923,
 "boat1": "Karl Maeder",
 "boat1_master_leeward": true,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 9750000000000001,
 "boat2": "SenseBoard",
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 109.88999999999999,
 "duration": 12.000000000000001,
 "end_time": 1749301457.157,
 "stability_score": 0.94960000030144912,
 "start_time": 1749301455.658}
```

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)
9.391	9.395	8	8	10.3	10.3	416	414	0.6166	0.6143			
176.1	176.1	170.8	170.8	179.4	179.4	416	414	2.469	2.461			
<b>SOG</b>	<b>26.33</b>	<b>26.25</b>	24.5	25.1	27.5	29.3	416	414	<b>0.6995</b>	<b>0.8072</b>	Karl Maeder	Karl Maeder
<b>VMG</b>	<b>20.95</b>	<b>20.73</b>	16.83	17.26	25.44	25.66	416	414	<b>2.067</b>	<b>1.631</b>	Karl Maeder	SenseBoard
<b>COG</b>	319.6	318.4	308.7	310.5	335.3	326.6	416	414	<b>5.781</b>	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_lvd</b>	49.2	<b>46.53</b>	34.5	28	64	69.7	416	414	<b>5.317</b>	<b>6.858</b>	Karl Maeder	Karl Maeder
<b>Side_lines</b>	94.58	<b>10.22</b>	62.8	2.9	133.5	17.8	416	414	<b>12.29</b>	<b>2.609</b>	Karl Maeder	SenseBoard
<b>Line_C</b>	<b>7.246</b>	82.29	3	57.1	14	117.5	416	412	1.75	<b>11.46</b>	SenseBoard	Karl Maeder
<b>Total_lines</b>	101.5	<b>92.38</b>	68.2	62.4	145.9	129.3	416	414	<b>12.93</b>	Karl Maeder	Karl Maeder	Karl Maeder

Distance Summary

Karl Maeder	SenseBoard
562.551935	557.987325

Distance [m]

Straight Line [m]

Distance as Percentage of Straight Line [%]

Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VGW
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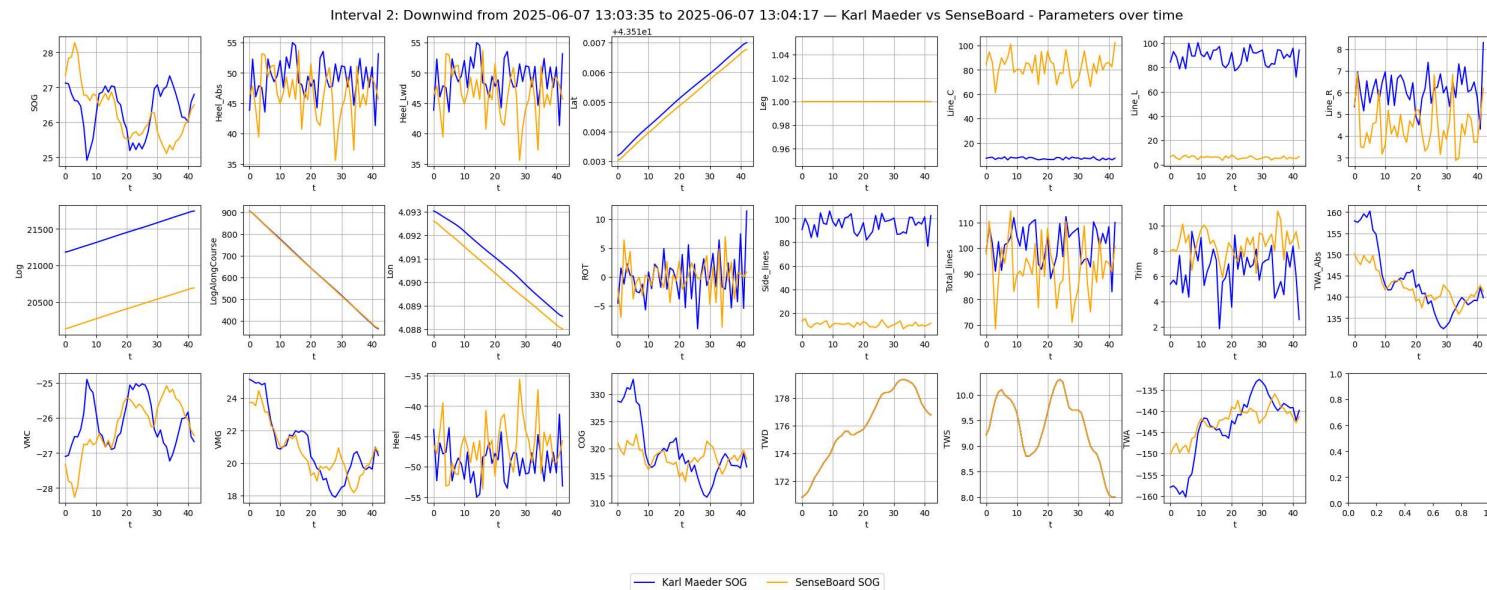
Initial Deficit	9.734838	38.017379	14.8147489
-----------------	----------	-----------	------------

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

Total Gain	2.464431	<b>-11.124854</b>	<b>-8.605983</b>
------------	----------	-------------------	------------------

Gain per Minute	3.563119	<b>-16.089725</b>	<b>-12.442685</b>
-----------------	----------	-------------------	-------------------

## MainReport



```
=====
Processing run: 87_06_Run8
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation": "host1": 0.8901860047187752,
"host1": 0.8901860047187752,
"host1": 0.8901860047187752,
"avg_TWA_host1": -148.0531070338983,
"avg_TWA_host1": -148.0531070338983,
"avg_TWA_host2": -147.58978510638302,
"avg_SOG_host2": 27.17982423728816,
"avg_SOG_host2": 27.17982423728816,
"host1_masterv": false,
"boat1_name": "Karl Maeder",
"boat1_total_weight": 9750000000000001,
"boat1_start_time": "2025-06-07 13:11:54",
"boat1_end_time": "2025-06-07 13:12:41",
"boat2_name": "SenseBoard",
"boat2_total_weight": 109.88999999999999,
"boat2_start_time": "2025-06-07 13:11:54",
"boat2_end_time": "2025-06-07 13:12:41",
"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)
TWS	10.13	10.13	8.405	8.406	11.99	11.99	470	472	1.042	1.041		
TWD	187.6	187.6	181.6	181.6	190.8	190.8	470	472	2.765	2.774		
SOG	27.66	27.38	26.3	25.5	29.3	28.8	470	472	0.8159	0.8092	SenseBoard	Karl Maeder
VMG	23.26	23.16	19.76	19.73	27.22	26.55	470	472	1.568	1.368	SenseBoard	Karl Maeder
COG	335.1	335.7	324.4	326.5	343.3	344.5	470	472	3.716	3.593		Karl Maeder
TWA_Abs	147.5	148.1	135.3	136.3	159.7	159.8	470	472	4.849	4.56		Karl Maeder
Heel_lwd	44.61	46.63	25.2	20.1	65.9	67.2	470	472	6.746	6.259	Karl Maeder	Karl Maeder
Side_lines	9.291	9.291	2.1	48.9	16.5	151.5	470	472	2.501	16.51	Karl Maeder	SenseBoard
Line_C	79.07	7.14	53.2	2.8	105.7	11.9	468	472	10.41	1.908	SenseBoard	Karl Maeder
Total_lines	88.45	100	58.5	57.6	113.4	163.4	470	472	11.34	17.68	Karl Maeder	SenseBoard

Distance Summary

SenseBoard	Karl Maeder	
Distance (m)	667.682968	663.296113
Straight Line (m)	665.732089	661.525287

Distance as Percentage of Straight Line (%) 100.239043 100.267688

Gain of SenseBoard with respect to Karl Maeder

Forward	Lateral	VMG
---------	---------	-----

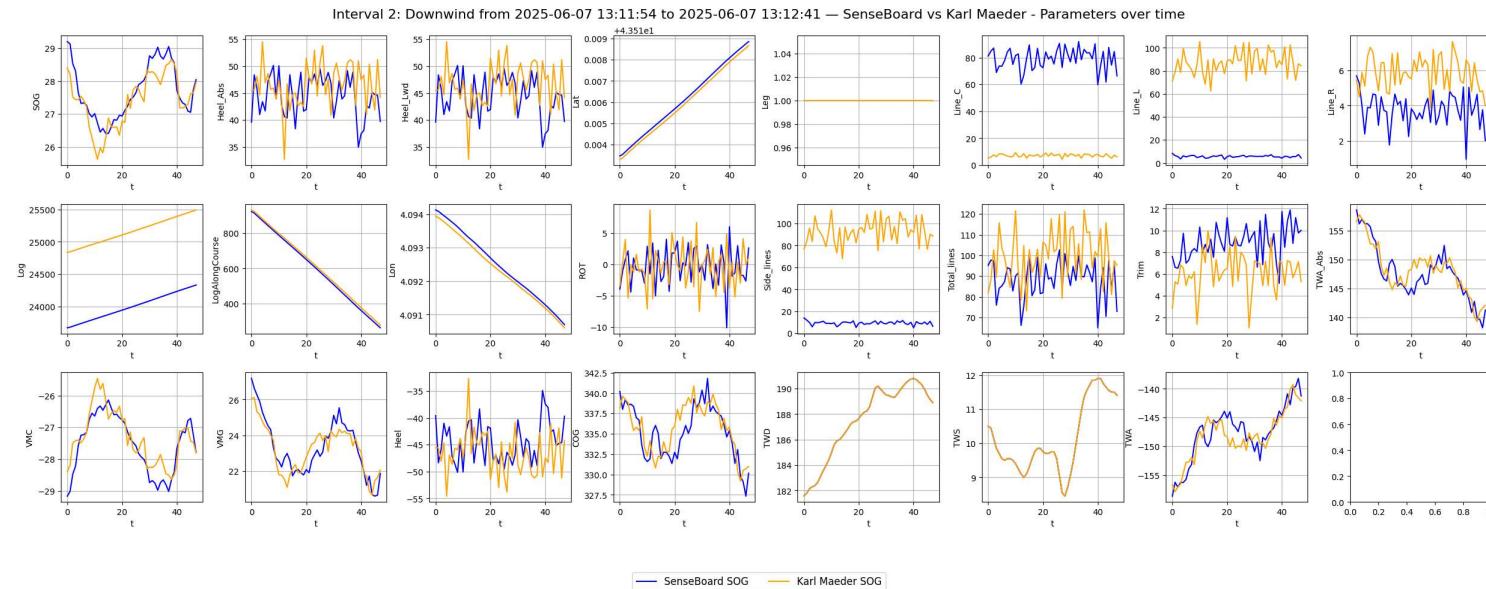
Initial Deficit	-10718171	21.286511	20.511183
-----------------	-----------	-----------	-----------

Final Deficit	-14955077	15.384098	20.878040
---------------	-----------	-----------	-----------

Total Gain	4.236956	6.044539	-0.326857
------------	----------	----------	-----------

Gain per Minute	5.420234	7.732721	-0.418145
-----------------	----------	----------	-----------

## MainReport



```
=====
Processing run: 87_06_Run0
=====
```

```
=====
Interval 2: Downwind
=====
```

```
{"SOG_variation_boat1": 0.463884244238816,
 "SOG_variation_boat2": 0.463884244238816,
 "avg_TWA_boat1": -147.3623982267575,
 "avg_TWA_boat2": -146.5883696145125,
 "avg_SOG_boat1": 28.447392980249432,
 "avg_SOG_boat2": 28.447392980249432,
 "avg_VMC_boat1": -27.5323293232933,
 "avg_VMC_boat2": -27.5323293232933,
 "boat1_master_leeward": true,
 "boat1_name": "Karl Maeder",
 "boat1_total_weight": 97500000000000001,
 "boat2_name": "SenseBoard",
 "boat2_total_weight": 1016,
 "boat2_total_weight_kg": 97500000000000001,
 "duration": 13:11:54-13:12:40,
 "end_time": 1749302448.498,
 "stability_score": 0.855175489517661,
 "start_time": 1749302396.448}
```

Processing: Interval 2: Downwind From 2025-06-07 13:19:56 to 2025-06-07 13:28:40 – Karl Maeder vs SenseBoard

```
=====
Interval 2: Downwind from 2025-06-07 13:19:56 to 2025-06-07 13:28:40 – 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)	
9.905	9.905	8.906	8.905	10.6	10.6	441	441	0.5114	0.5115				
186.2	186.2	179.3	179.3	195.8	195.8	441	441	5.045	5.045				
<b>SOG</b>	<b>28.45</b>	<b>28.58</b>	<b>27</b>	<b>26.9</b>	<b>29.8</b>	<b>30.2</b>	<b>441</b>	<b>441</b>	<b>0.6631</b>	<b>0.7518</b>	SenseBoard	Karl Maeder	Tie
23.85	23.74	19.63	21.36	26.5	26.27	441	441	1.215	1.027	Karl Maeder	SenseBoard	Tie	
333.5	332.8	323.8	323.4	343	339.5	441	441	3.237	2.55	SenseBoard	SenseBoard		
147.4	146.6	132.4	136	158.8	158.1	441	441	5.028	4.971				
49.54	46.13	32.4	26.7	65.7	66.8	441	441	5.904	5.844	Karl Maeder	SenseBoard	Tie	
95.58	<b>9.726</b>	62.7	1.1	135.8	19.9	441	441	13.38	2.958	Karl Maeder	SenseBoard	Tie	
<b>Line_C</b>	<b>7.23</b>	<b>84.97</b>	<b>2.7</b>	<b>47.8</b>	<b>12.2</b>	<b>115</b>	<b>441</b>	<b>439</b>	<b>1.933</b>	<b>10.86</b>	SenseBoard	Karl Maeder	Tie
Total_lines	102.7	<b>94.78</b>	66.1	51.6	146.5	130.1	441	441	13.94	11.77	Karl Maeder	SenseBoard	Tie

Distance Summary

Karl Maeder	SenseBoard
643.871252	645.818158

Distance [m]

Straight Line [m]

Distance as Percentage of Straight Line [%]

Gain of Karl Maeder with respect to SenseBoard

Forward	Lateral	VMG
0.655679	21.313906	10.940993

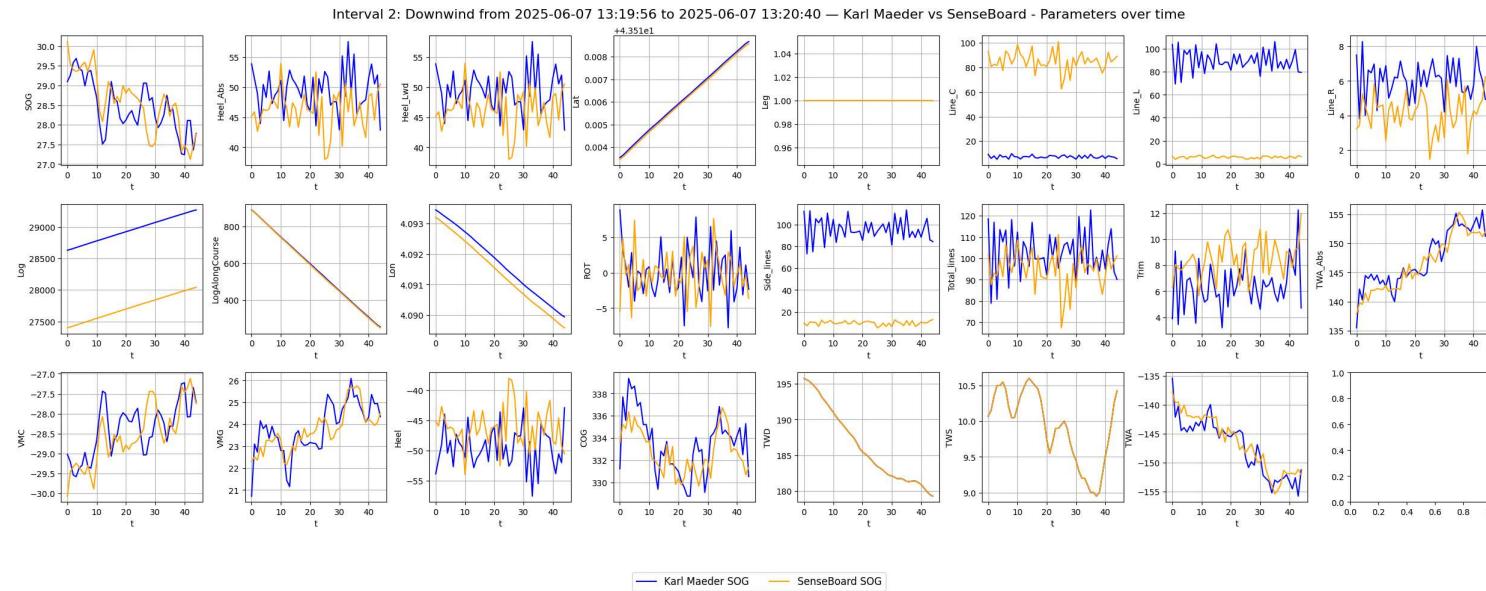
Initial Deficit

Final Deficit

Total Gain

Gain per Minute

## MainReport



```
Error processing .../Data_Sailnjord/Straight_lines\07_06\07_06_Run10
Error processing .../Data_Sailnjord/Straight_lines\07_06\07_06\Interval and equipment: At least two CSV files are required.
Error processing .../Data_Sailnjord/Straight_lines\07_06\senseboard_log: At least two CSV files are required.
Error processing .../Data_Sailnjord/Straight_lines\09_06\09_06_Run1: No or insufficient intervals for run: 09_06_Run1
Error processing .../Data_Sailnjord/Straight_lines\09_06\09_06_Run2: No or insufficient intervals for run: 09_06_Run2
Error processing .../Data_Sailnjord/Straight_lines\09_06\09_09_Run1: At least two CSV files are required.
```

```
=====
Processing run: 09_06_Run1
=====
```

```
=====
Interval 2: Downwind
=====
{'SOG_variation_boat1': 0.849627184813867,
 'SOG_variation_boat2': 0.52572000000000005,
 'avg_SOG_boat1': 27.6213963963964,
 'avg_SOG_boat2': 27.6213963963964,
 'boat1_leeward': False,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 109.97500000000001,
 'boat2_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 109.88999999999999,
 'duration': 44.19999999999999,
 'end_time': '2025-06-07T23:55:31Z',
 'start_time': '2025-06-07T23:55:31Z',
 'stability_score': 8.9623474927915188,
 '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
=====
```

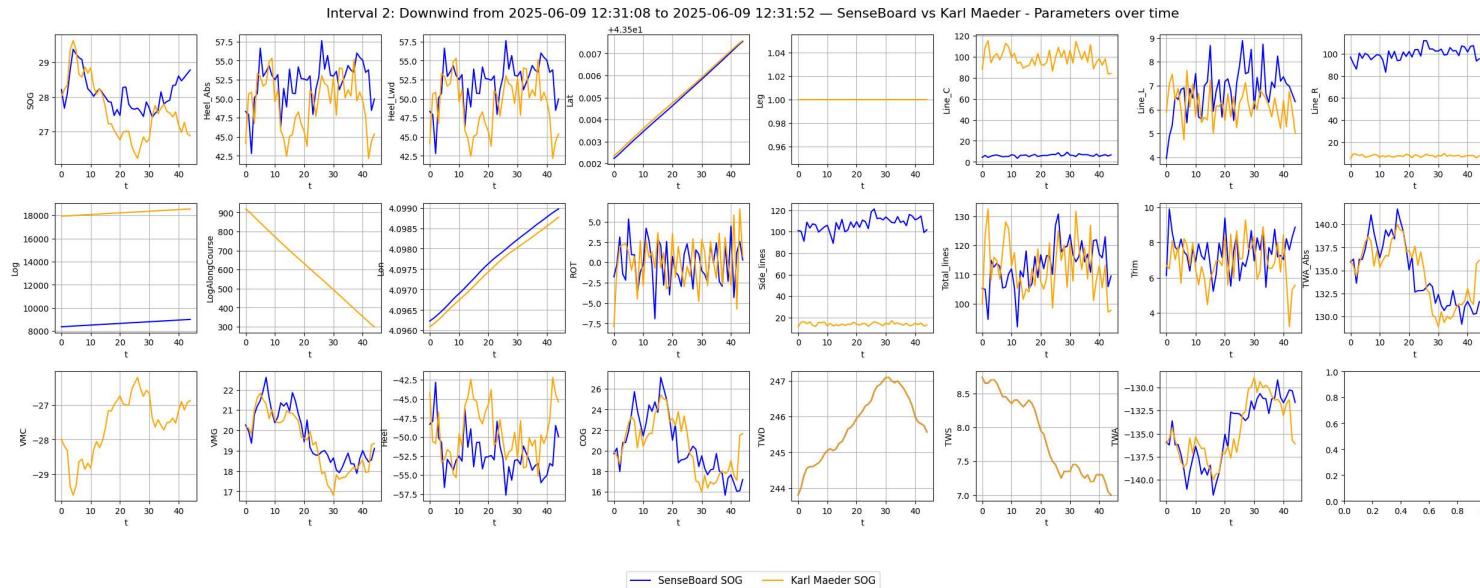
	Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)
TWS	7.861	7.859	7	7	8.764	8.764	443	444	0.5682	0.569			
TWD	245.8	245.8	243.8	243.8	247.1	247.1	443	444	0.9124	0.9117			
SOG	28.11	27.62	27.2	26.1	29.5	29.8	443	444	0.5262	0.8496	SenseBoard	SenseBoard	SenseBoard
VMG	19.74	19.38	16.61	14.59	23.07	22.76	443	444	1.461	1.535	SenseBoard	SenseBoard	SenseBoard
COG	20.53	20.44	11.9	9.2	29.4	27.3	443	444	3.431	3.222	Karl Maeder	Karl Maeder	Karl Maeder
TWA_Abs	134.7	134.6	126.2	123.4	143.9	142	443	444	3.892	3.698			
Heel_Lvd	52.31	49.4	32.3	33.6	65.3	63.1	443	444	5.335	5.706	SenseBoard	SenseBoard	SenseBoard
Side_Lines	107.1	13.94	75	6.5	128.3	22	443	444	8.781	2.695	SenseBoard	Karl Maeder	Tie
Line_C	6.126	98.77	0.2	74.8	15.7	133.9	442	444	2.376	11.01	Karl Maeder	SenseBoard	Tie
Total_Lines	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
Distance [m]	639.025352 629.036540
Straight Line [m]	637.470393 628.039306
Distance as Percentage of Straight Line [%]	100.181065 100.158785

	Forward	Lateral	VMG
Initial Deficit	6.589108	15.408385	4.902502
Final Deficit	-1.256093	16.558438	12.648029
Total Gain	9.845201	-11.150554	-7.745527
Gain per Minute	13.364223	-1.561124	-10.514053

Gain of SenseBoard with respect to Karl Maeder



Error processing .../Data\_Sailinjord/Straight\_lines\09\_06\09\_06\_Run5: No or insufficient intervals for run: 09\_06\_Run5

```
=====
Processing run: 09_06_Run5
=====
```

Interval 2: Downwind

```
{
  "SOG_variation_boat1": 0.956266476793272,
  "SOG_variation_boat2": 8.59200000000012783,
  "avg_TWD": 241.0,
  "avg_VMC": -137.8145331797961,
  "avg_TWA_boat1": 26.858227848181265,
  "avg_TWA_boat2": 27.347227839866245,
  "boat1_Maeder_Joining": false,
  "boat1_name": "Karl Maeder",
  "boat1_total_weight": 975000000000001,
  "boat2_Maeder_Joining": true,
  "boat2_name": "SenseBoard",
  "boat2_total_weight": 109.88999999999999,
  "duration": 47.9290861311,
  "end": 124.92321321,
  "stability_score": 0.47471714959874,
  "start_time": 174947314.965
}
```

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
=====
```

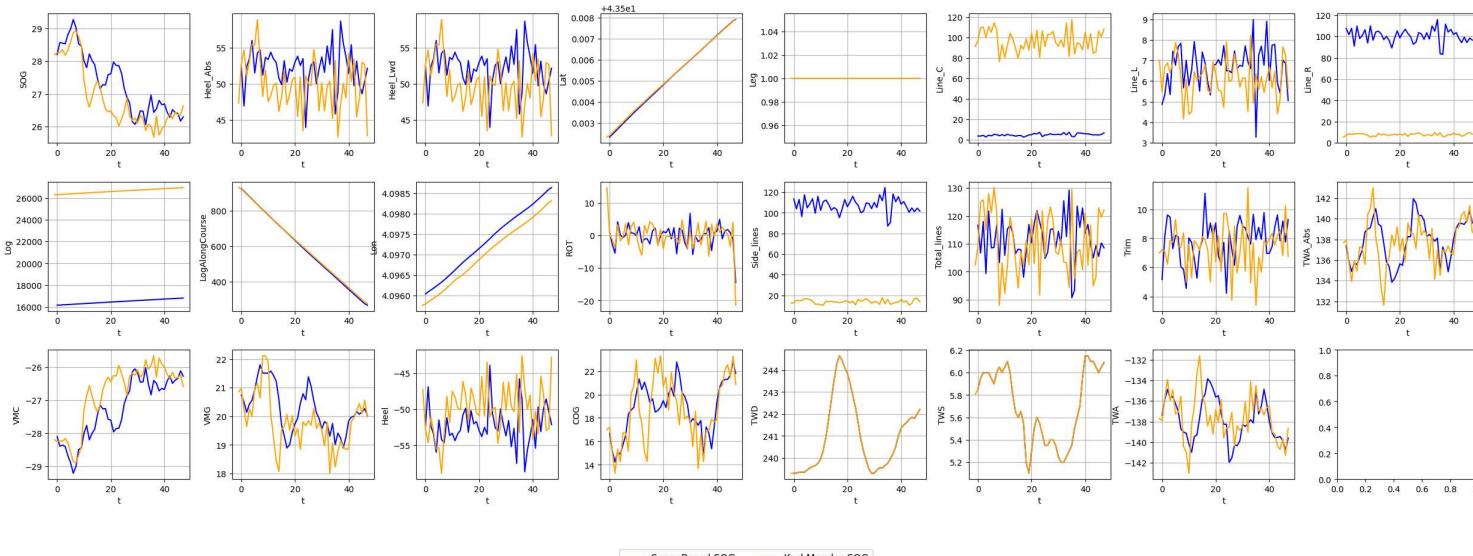
Run Statistics										
Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)
TWS	5.694	5.695	5.01	5.01	6.196	472	474	0.3288	0.3286	
TWD	241	241	239.3	239.3	244.7	472	474	1.635	1.634	
SOG	27.35	26.86	24.5	25.1	30.1	472	474	0.9583	0.9563	SenseBoard
VMG	20.24	19.8	16.9	16.18	23.29	23.23	472	474	1.003	Karl Maeder
COG	18.8	18.55	10.2	8.5	26.2	26.3	472	474	2.816	Tie
TWA_Abs	137.8	137.6	130.8	129.1	145.1	472	474	2.725	2.811	
Heel_Lvd	52.24	50.09	34.5	35.5	68.1	472	474	5.18	5.961	SenseBoard
Side_Lines	107.3	13.92	69.5	6.6	141.7	25.4	472	474	10.89	Karl Maeder
Line_C	4.909	95.85	0	68.4	10.7	130.2	469	474	2.099	Tie
Total_Lines	111.9	110.5	71.5	82.2	152.4	151.4	472	474	11.4	SenseBoard

#### Distance Summary

SenseBoard	Karl Maeder
Distance [m]	661.215301
Straight Line [m]	660.398203
Distance as Percentage of Straight Line [%]	100.123728

Gain of SenseBoard with respect to Karl Maeder			
	Forward	Lateral	VMG
<b>Initial Deficit</b>	0.125911	21.707538	14.483916
<b>Final Deficit</b>	-8.558183	24.074262	22.507972
<b>Total Gain</b>	8.684095	-2.366724	-8.024056
<b>Gain per Minute</b>	11.055734	-3.013080	-10.215438

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



=====  
Processing run: 09\_06\_Run7

```
Interval 2: Downwind  
  "S05_variation_beat": 0.3879709841556,  
  "S05_variation_beat2": 0.436275736866093,  
  "avg_TWA_beat": 340.39125,  
  "avg_TWA_beat2": 141.562545829397,  
  "avg_S06_beat": 27.727683954883717,  
  "avg_S06_beat2": 27.4674486465115,  
  "boat_name": "Tuna King",  
  "boat_name2": "True",  
  "boat_total_weight": 186.97590000000001,  
  "boat_master_leeward": False,  
  "boat_name3": "SenseBoard",  
  "boat_total_weight": 186.97590000000001,  
  "duration": 34.29388022125244,  
  "end_time": "2020-07-01T14:45:00Z",  
  "stability_zone": 0.731867204076343,  
  "start_time": "2019-07-13T13:36:00Z",  
  "time": 34.29388022125244
```

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

Due Statistics

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)
TWS	8.339	8.338	7.7	7.7	8.7	8.7	344	342	0.3631	0.337		
TWD	243.5	243.5	241.9	241.9	245.1	245.1	344	342	0.836	0.8335		
SOG	27.27	27.48	25.2	26.4	29.1	29.3	344	342	0.3076	0.4449	SenseBoard	Karl Maeder
VMG	21.57	21.6	18.35	19.13	23.89	24.31	344	342	0.9175	1.06	SenseBoard	Karl Maeder
COG	25.87	25.39	17	17.2	33.4	35.2	344	342	2.759	3.25		Karl Maeder
TWA_Abs	142.4	141.9	132.8	134.2	150.3	150.5	344	342	3.134	3.315		
Heel_Lwd	50.96	50.03	34.7	33.4	66.6	65.8	344	342	5.596	5.704	Karl Maeder	Karl Maeder
Side_Lines	14.8	102.1	7	57.5	22.4	129.3	344	342	2.544	11.59	SenseBoard	Karl Maeder
Line_C	98.66	5.231	72.5	0	132.2	10.4	344	342	11.84	2.004	Karl Maeder	SenseBoard
Total_lines	113.5	107.3	85.1	62.7	150.4	134.5	344	342	11.35	12.65	Karl Maeder	SenseBoard

### Total Miles

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

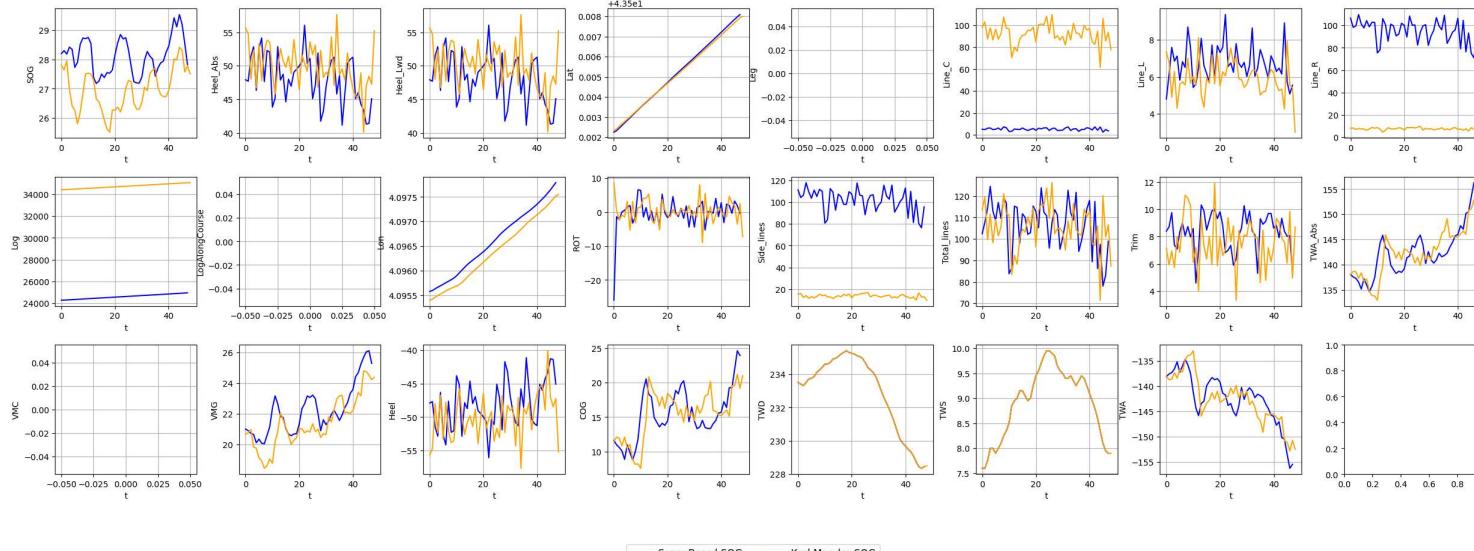
Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
Initial Deficit	-7.938432	20.909369	19.047316
Final Deficit	-7.818044	25.661175	21.851235
Total Gain	<span style="color:red">-0.120388</span>	<span style="color:red">-0.751807</span>	<span style="color:red">&gt;0.803919</span>
Gain per Minute	<span style="color:red">-0.210633</span>	<span style="color:red">-0.313899</span>	<span style="color:red">&gt;0.905815</span>

Gain of SenseBoard with respect to Karl Maeder		
Forward	Lateral	VMG
Initial Deficit	4.057963	16.652655
Final Deficit	-2.151571	16.750585
Total Gain	25.49534	-0.53200
Gain per Minute	32.871745	-0.667685
		-26.482715

Gain per Minute: 32.871745 -0.667685 -26.482715

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



\*\*\*\*\*  
Processing run: 09\_06\_Run0  
\*\*\*\*\*

.....  
Interval 2: Downwind.....  
{'SOG\_variation\_boat1': 1.0217895599533882,  
'SOG\_variation\_boat2': 0.9318197958491614,  
'avg\_Ths\_boat1': -141.57092949994823,  
'avg\_Ths\_boat2': -141.57092949994823,  
'avg\_SOG\_boat1': 26.245559844554545,  
'avg\_SOG\_boat2': 26.94680113172524,  
'boat1\_master\_leeward': True,  
'boat2\_master\_leeward': False,  
'boat1\_total\_wt\_kg': 100.97500000000001,  
'boat2\_total\_wt\_kg': 100.97500000000001,  
'boat1\_name': 'SenseBoard',  
'boat2\_name': 'Karl Maeder',  
'duration': 53.8829997327012},  
'end\_time': 1749475174.256,  
'stability\_score': 0.9458172931147468,  
'start\_time': 1749475128.453}

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)
TWS	7.045	7.045	6.4	6.4	7.996	539	539	0.466	0.4661			
TWD	235.4	235.4	233.5	233.5	237.7	539	539	0.7963	0.7963			
SOG	<b>26.24</b>	26.94	23.5	23.9	29.7	539	539	<b>1.022</b>	<b>0.9265</b>	SenseBoard	SenseBoard	SenseBoard
VMG	<b>20.53</b>	21.18	15.17	17.01	24.09	24.34	539	<b>1.838</b>	<b>1.477</b>	SenseBoard	SenseBoard	SenseBoard
COG	16.96	17.26	5.6	8.6	27.7	23.3	539	<b>3.935</b>	<b>2.801</b>	SenseBoard	SenseBoard	SenseBoard
TWA_Abs	141.6	141.9	129.3	132.8	152.4	149.1	539	539	4.406	3.139		
Heel_lnd	<b>48.89</b>	<b>46.85</b>	18.9	21.9	66.7	63.3	539	<b>5.565</b>	<b>7.083</b>	Karl Maeder	SenseBoard	Tie
Side_lines	<b>13.47</b>	<b>100.3</b>	2.4	43	20.8	129.6	539	<b>2.767</b>	<b>14</b>	SenseBoard	Karl Maeder	Tie
Line_C	90.08	<b>9.556</b>	36.9	0	120.5	11.3	539	<b>12.47</b>	<b>1.85</b>	Karl Maeder	SenseBoard	Tie
Total_lines	<b>103.4</b>	106	42.2	43	138.6	138.8	539	<b>14.12</b>	<b>15.04</b>	SenseBoard	Karl Maeder	Tie

#### Distance Summary

Karl Maeder	SenseBoard
-------------	------------

Distance [m] 725.368854 743.841623

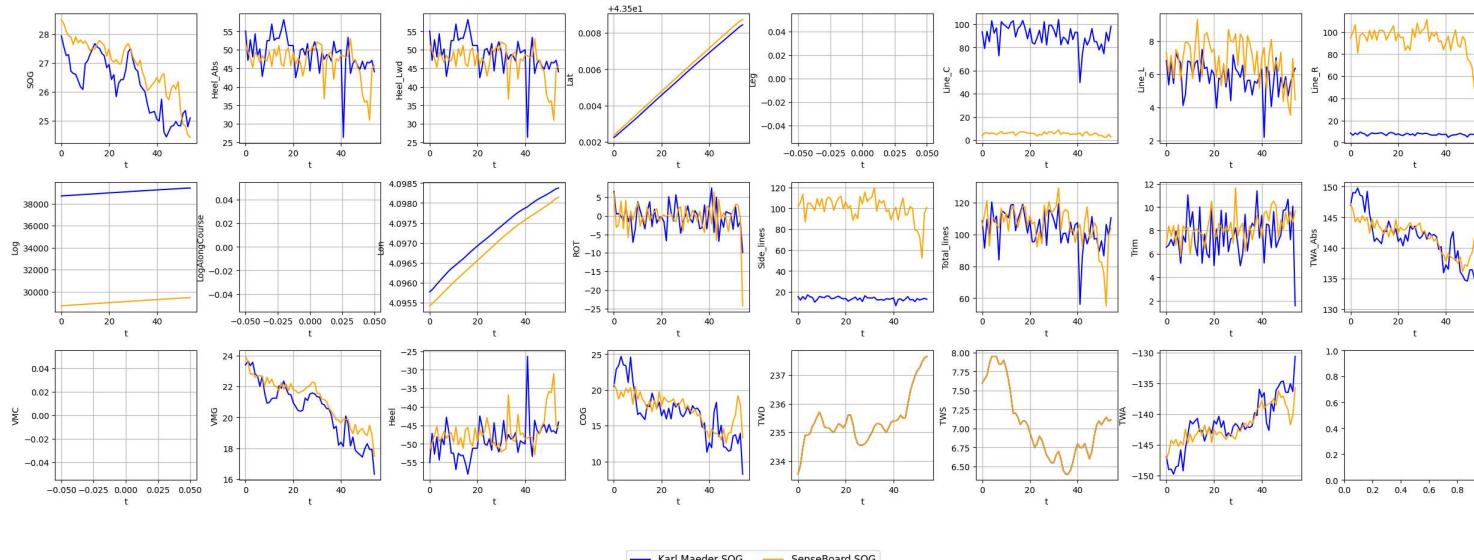
Straight Line [m] 723.667963 742.950370

Distance as Percentage of Straight Line [%] 100.235037 100.119961

Gain of Karl Maeder with respect to SenseBoard

	Forward	Lateral	VMG
Initial Deficit	5767867	31.035619	14.771746
Final Deficit	25.063841	27.297744	-2.667518
Total Gain	-19.395974	3.737875	17.439364
Gain per Minute	-21.18474	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

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

```
=====
Interval 2: Downwind
=====
{'SOG_variation_start': 0.5265769585598086,
 'SOG_variation_end': 0.55614916799975,
 'avg_Thk_boat1': -141.557410821643,
 'avg_Thk_boat2': -158.00000000000002,
 'avg_Twd_boat1': 26.795000000000002,
 'avg_Twd_boat2': 27.0555118228440887,
 'boat1_master_leeward': False,
 'boat1_total_wt_kg': 109.97500000000001,
 'boat2_master_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_wt_kg': 109.97500000000001,
 'duration': 49.820000457737,
 '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

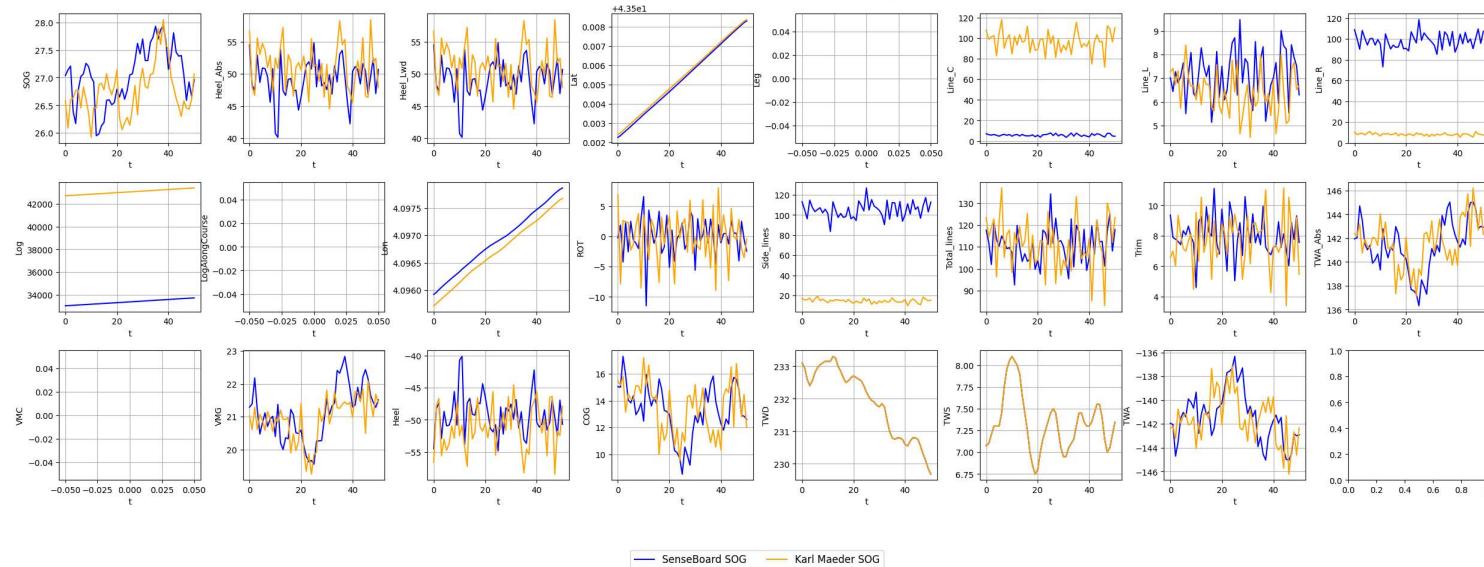
Avg (SenseBoard)	Avg (Karl Maeder)	Min (SenseBoard)	Min (Karl Maeder)	Max (SenseBoard)	Max (Karl Maeder)	Count (SenseBoard)	Count (Karl Maeder)	StdDev (SenseBoard)	StdDev (Karl Maeder)	Winner (Avg)	Winner (StdDev)	Winner (Overall)	
TWS	7.338	7.338	6.704	6.704	8.1	498	499	0.329	0.3289				
TWD	231.9	231.9	229.7	228.7	233.4	498	499	1.025	1.025				
SOG	27.05	26.75	24.4	24.5	28.4	498	499	0.5647	0.5766	SenseBoard	Karl Maeder	Tie	
VMG	21.1	20.92	18.4	17.89	23.43	23.05	498	499	1.01	0.8914	SenseBoard	Karl Maeder	Tie
COG	13.27	13.48	5.6	4.1	22.8	498	499	2.697	2.863	SenseBoard	SenseBoard	SenseBoard	
TWA_Abs	141.4	141.6	133	133.3	148.7	498	499	2.891	2.927				
Heel_lvd	49.04	51.16	32.8	31.7	63.8	69.8	498	499	5.224	6.16	Karl Maeder	SenseBoard	Tie
Side_lines	105	14.63	51.4	5.9	146.8	23.2	498	499	12.33	3.089	SenseBoard	Karl Maeder	Tie
Line_C	5.729	96.57	0	60.7	10.3	132.7	498	499	1.94	12.81	Karl Maeder	SenseBoard	Tie
Total_lines	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	685.13073
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	Vertical
<b>Initial Deficit</b>	11.252680	20.176281	3.810000
<b>Final Deficit</b>	4.218207	16.832598	7.216464
<b>Total Gain</b>	7.034473	3.343683	-3.406464
<b>Gain per Minute</b>	8.492493	4.036721	-4.112434

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



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

```
    'Interval_5_board': [
        {'SOG_variation_board': 8.55984323245289,
         'SOG_variation_board2': 1.30186479623148,
         'avg_TWA_board': -141.1524986963947,
         'avg_TWA_board2': -144.05566562377642,
         'avg_SOG_board': 25.4574952516698,
         'avg_SOG_board2': 25.4574952516698,
         'boat_name': 'Karl Maeder',
         'boat_total_weight': 100.97500000000001,
         'boat_master_weight': False,
         'boat_name': 'Senseboard',
         'boat_total_weight': 115.88999999999999,
         'boat_name': 'Senseboard',
         'end_time': 1749475632.256,
         'stability_score': 0.96221858858876,
         'start_time': 1749475632.256}
```

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

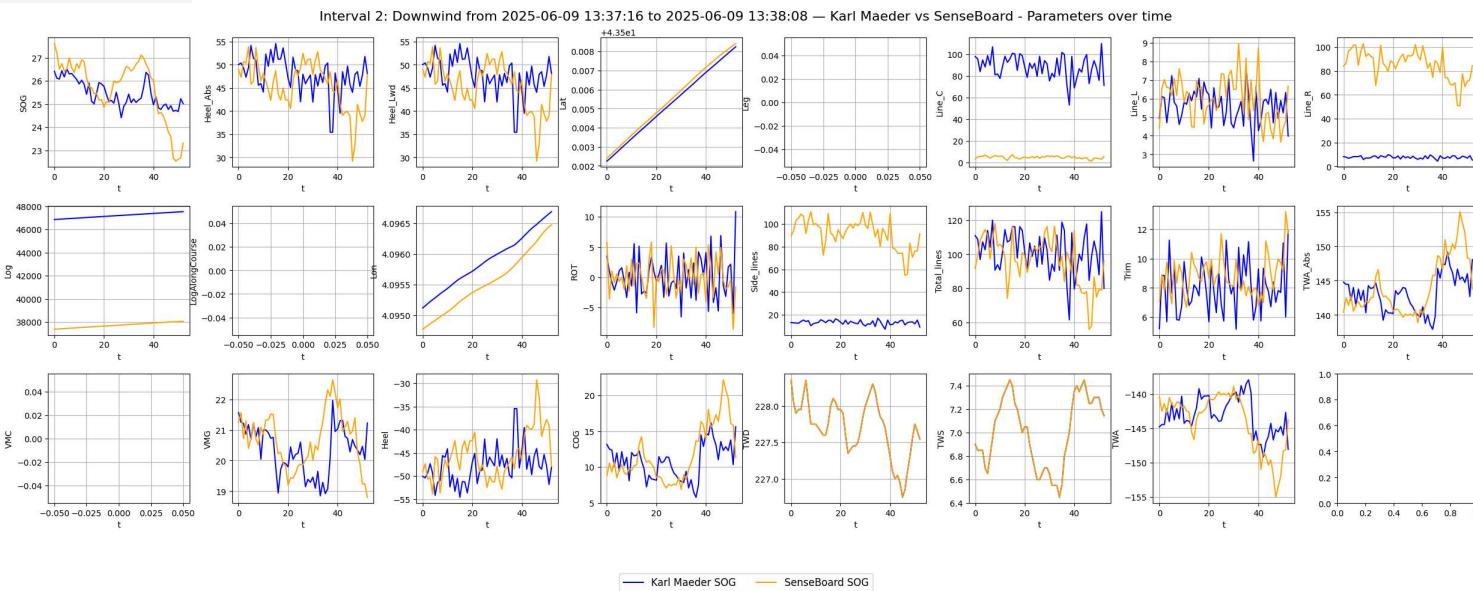
### Run Statistics

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

## Distance Summary

Distance Summary		
	Karl Maeder	SenseBoard
Distance [m]	688.421640	692.360352
Straight Line [m]	687.459131	690.486777

Gain of Karl Maeder with respect to SenseBoard		
Forward	Lateral	VMG
Initial Deficit	11.678188	30.330984
Final Deficit	14.641676	21.172340
Total Gain	-9.963488	9.158641
Gain per Minute	-0.390661	0.447917
Gain per Minute	8.937390	



Error processing ..\Data\_Sailnjord\Straight\_lines\09\_06\Interview and equipment: At least two CSV files are required.  
Error processing ..\Data\_Sailnjord\Straight\_lines\09\_06\senseboard\_log: At least two CSV files are required.

=====  
Processing run: 18\_06\_Run1  
=====

Interval 2: Downwind  
{  
'boat1': 'Gian Stragiotti',  
'boat1\_sailor': 'Gian Stragiotti',  
'SOG\_variation': '0.460793462597199',  
'avg\_TWA\_boat1': '8.421985320467075',  
'avg\_TWA\_boat2': '-124.374599163934',  
'avg\_TWA\_boat2': '-125.176262773723',  
'avg\_VHC\_boat1': '0.893852313198',  
'avg\_VHC\_boat2': '25.9585856464983',  
'boat1\_master\_leeward': 'False',  
'boat1\_name': 'Gian Stragiotti',  
'boat1\_total\_weight': '102.89',  
'boat2': 'SenseBoard',  
'boat2\_master\_leeward': 'True',  
'boat2\_name': 'SenseBoard',  
'boat2\_total\_weight': '102.89',  
'date\_start': '2025-06-09T13:37:16Z',  
'end\_time': '1749558732.858',  
'stability\_score': '0.97308599562174268',  
'start\_time': '174955878.073'}

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)
TWS	5.65	5.65	5.4	5.4	6	6	548	549	0.1418	0.1418		
TWD	218.5	218.4	216.9	216.9	219.6	219.6	548	549	0.8393	0.8411		
SOG	25.47	26.09	24.2	25.2	26.7	26.8	548	549	0.4216	0.3463	Gian Stragiotti	Gian Stragiotti
VMG	14.64	14.71	10.19	11.72	18.24	18.43	548	549	1.12	1.254	Gian Stragiotti	Gian Stragiotti
COG	343.6	342.8	333.6	336.3	354.2	351.4	548	549	3.314	2.747	Gian Stragiotti	Gian Stragiotti
TWA_Abs	125.2	124.4	114.8	117.6	137.1	134.5	548	549	3.884	3.276		
Heel_Ind	53.01	56.15	37.3	42.5	72.7	66.5	548	549	5.839	4.134	Gian Stragiotti	Gian Stragiotti
Line_C	93.55	114.3	70.5	80.8	119.6	140.1	547	549	9.577	9.461	Gian Stragiotti	Gian Stragiotti
Side_Lines	nan	16.67	nan	8.3	nan	24.6	549	nan	3.195	nan	Gian Stragiotti	Gian Stragiotti
Total_Lines	nan	130.9	nan	92.9	nan	157.9	548	549	nan	10.88		

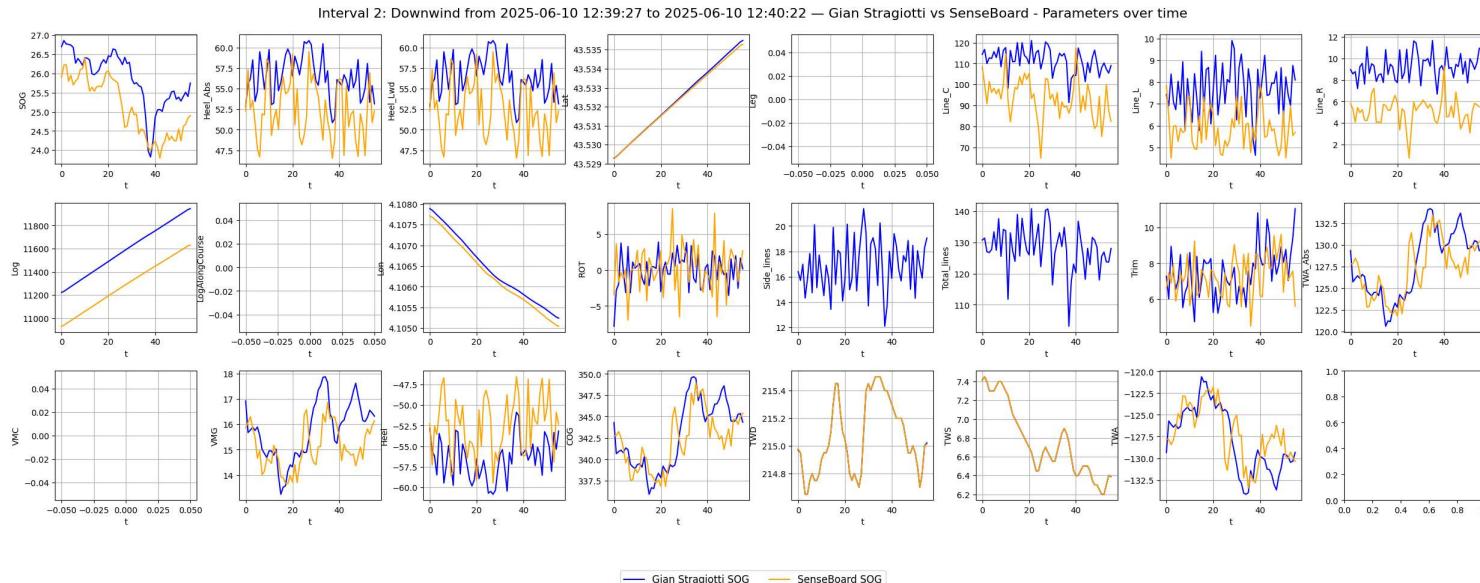
#### Distance Summary

SenseBoard	Gian Stragiotti
Distance [m]	716.692440
Straight Line [m]	735.526408
Distance as Percentage of Straight Line [%]	100.167345
	100.111010

	Forward	Lateral	VMG
Initial Deficit	18135349	35.546136	18.607269
Final Deficit	37.300110	46.519265	16.372411
Total Gain	-79.164761	-0.773128	2.234858
Gain per Minute	-21.019754	-1.181580	2.451174

	Forward	Lateral	VMG
Initial Deficit	6478441	13.09265	6.390153
Final Deficit	-17.247769	21.673518	27.096261
Total Gain	23.726210	-9.481253	-21.306127
Gain per Minute	26.172944	-9.466183	-23.503293

Gain of Gian Stragiotti with respect to SenseBoard



Gian Stragiotti SOG      SenseBoard SOG

\*\*\*\*\*  
Processing run: 10\_06\_Run3  
\*\*\*\*\*

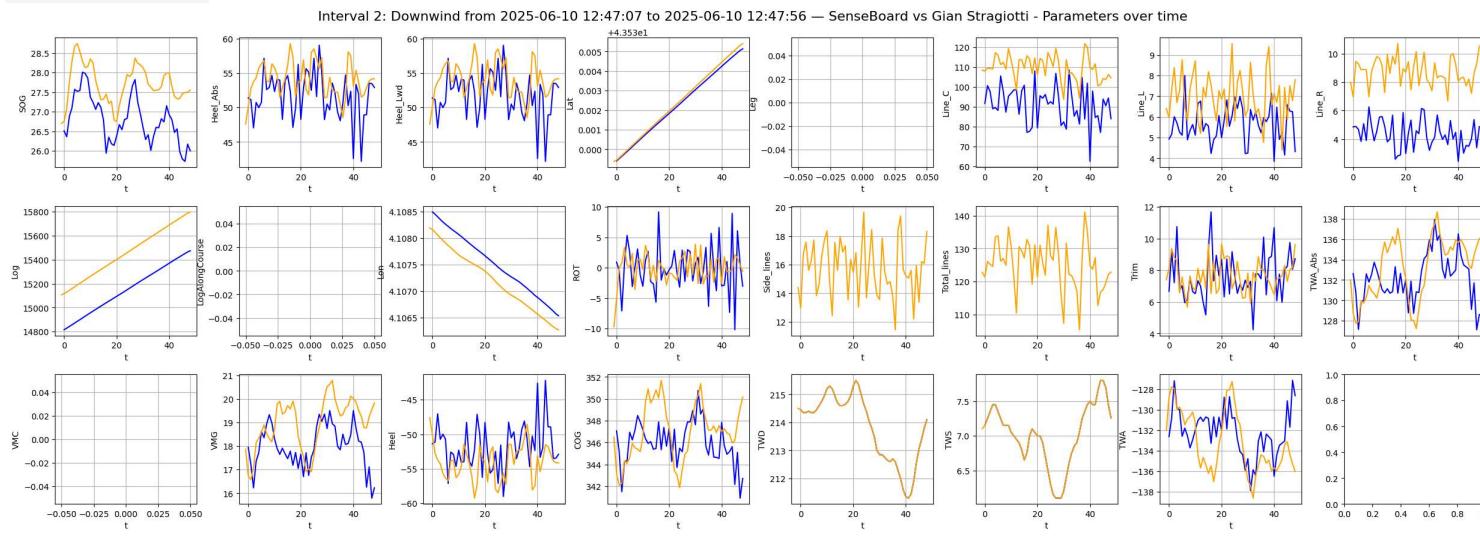
.....  
Interval 2: Downwind.....  
'SOG\_variation\_b0tt': 8.48752412396835,  
'SOG\_variation\_b0tt': 0.596761382484319,  
'avg\_Ths\_b0tt': -133.1729546391397526,  
'avg\_Ths\_b0tt': -133.1729546391397526,  
'avg\_SOG\_b0tt': -1.72821237735372,  
'avg\_SOG\_b0tt': -1.72821237735372,  
'avg\_SOG\_b0tt': 26.803595154639176,  
'boat1\_master\_leeward': False,  
'boat1\_name': 'Gian Stragiotti',  
'boat1\_total\_weight': 199,  
'boat2\_master\_leeward': True,  
'boat2\_name': 'SenseBoard',  
'boat2\_total\_weight': 199.89,  
'duration': 48.81800002288184,  
'end\_time': 17459559676.354,  
'stability\_score': 0.970534801199097,  
'start\_time': 17459539627.953}

Processing: Interval 2: Downwind From 2025-06-10 12:47:07 to 2025-06-10 12:47:50 – 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)
TWS	7.01	7.011	6.1	6.1	7.8	7.8	484	485	0.4529	0.4524		
TWD	213.8	213.8	211.3	211.3	215.5	215.5	484	485	1.215	1.215		
SOG	26.8	27.73	25.1	26.6	28.1	28.8	484	485	0.5972	0.4878	Gian Stragiotti	Gian Stragiotti
VMG	18	18.94	14.43	16.05	20.83	21.34	484	485	1.066	1.123	Gian Stragiotti	SenseBoard
COG	346	347	337.2	340.5	352.4	353.4	484	485	2.588	2.751	SenseBoard	SenseBoard
TWA_Abs	132.2	133.2	123.7	125.7	141	140.7	484	485	2.869	3.162		
Heel_Lnd	51.72	54.12	30.1	40.6	69.8	66.3	484	485	6.174	4.001	Gian Stragiotti	Gian Stragiotti
Line_C	91.25	109.5	50.7	88.4	125.5	136.2	484	485	12.21	8.561	Gian Stragiotti	Gian Stragiotti
Side_lines	nan	15.73	nan	6.9	nan	24.9	nan	485	nan	3.243	nan	Gian Stragiotti
Total_lines	nan	125.2	nan	99.1	nan	154.6	nan	485	nan	10.07	nan	
Distance Summary												
SenseBoard Gian Stragiotti												
Distance [m]	666.083542	690.970285										
Straight Line [m]	665.408593	690.171508										
Distance as Percentage of Straight Line [%]	100.101434	100.115736										

	Forward	Lateral	VMG
Initial Deficit	9.509058	24.141362	11.477343
Final Deficit	34.234486	13.273442	-13.191352
Total Gain	-47.75458	10.867920	24.668695
Gain per Minute	-30.721178	13.503317	30.650688



```
=====
Processing run: 10_06_Run4
=====
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```
=====
Interval 2: Downwind
=====
{'SOG_variation_boat1': 0.25389015564943,
 'SOG_variation_boat2': 0.2897555698914087,
 'avg_Tha_boat1': 55.89349528214971,
 'avg_Tha_boat2': 54.93533461538461,
 'avg_SOG_boat1': 23.24388180422267,
 'avg_SOG_boat2': 23.24388180422267,
 'boat1_master_leeward': True,
 'boat2_master_leeward': False,
 'boat1_name': 'SenseBoard',
 'boat2_name': 'Gian Stragiotti',
 'boat1_total_weight': 199,
 'boat2_total_weight': 199,
 'duration': 51.58999917857495,
 'end_time': 1745656802.846,
 'stability_score': 0.973918519280143,
 'start_time': 174559968.055}
```

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)
TWS	5.924	5.924	5.2	5.2	6.496	6.495	521	520	0.3552	0.3555		
TWD	209.5	209.5	208.1	208.1	212.5	212.5	521	520	0.9027	0.894		
SOG	23.94	23.24	21.7	22.6	24.6	24.2	521	520	0.2539	0.3918	Gian Stragiotti	Gian Stragiotti
VMG	13.41	13.32	10.85	10.83	15.89	15.67	521	520	0.9177	1.01	Gian Stragiotti	Gian Stragiotti
COG	153.6	154.6	147.2	147.2	160.4	161.5	521	520	2.116	2.845	Gian Stragiotti	Gian Stragiotti
TWA_Abs	55.89	54.94	47.91	47.52	62.88	64.53	521	520	2.657	3.262		
Heel_lvd	99.9	58.43	43.4	45.4	72.6	73	521	520	4.684	4.389	Gian Stragiotti	SenseBoard
Side_lines	16.5	nan	9.9	nan	28.3	nan	521	nan	3.37	nan		
Line_C	131.2	118.8	102.6	84.5	160	147.5	521	519	10.29	9.833	Gian Stragiotti	SenseBoard
Total_lines	147.7	nan	117.9	nan	177.2	nan	521	nan	11.51	nan		

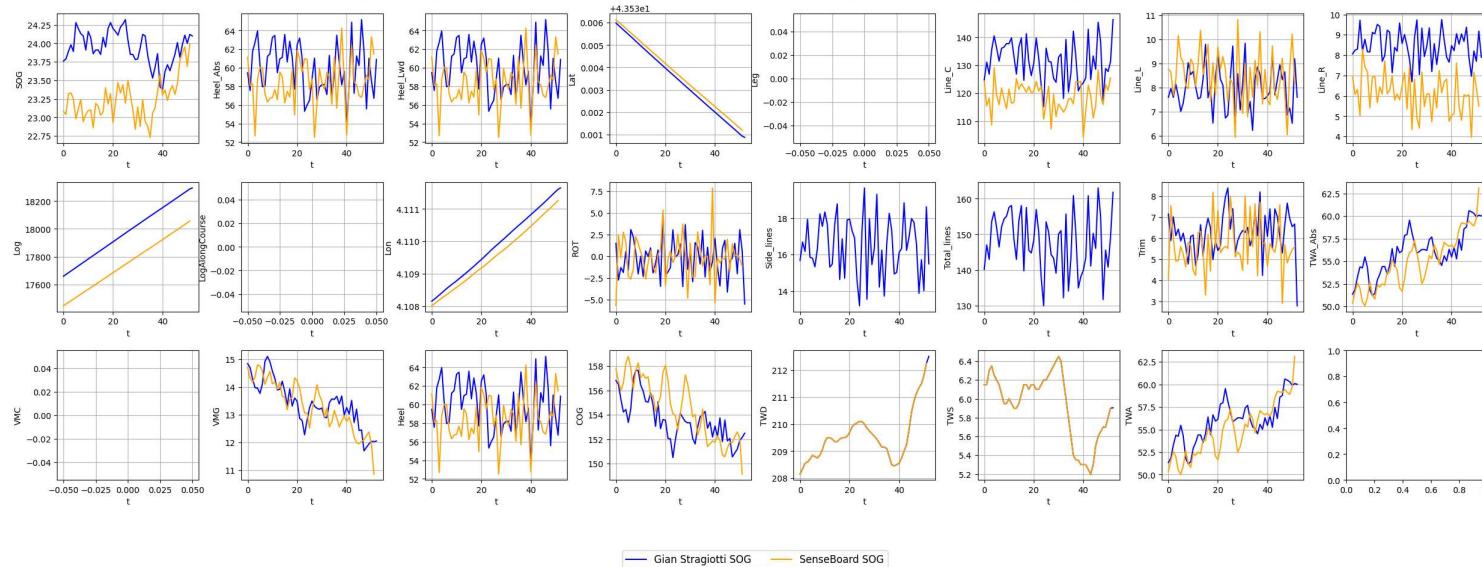
#### Distance Summary

	Gian Stragiotti	SenseBoard
Distance [m]	640.521969	620.834396
Straight Line [m]	640.087072	620.058025
Distance as Percentage of Straight Line [%]	100.067943	100.125209

## MainReport

Gain of Gian Stragiotti with respect to SenseBoard			
	Forward	Lateral	VM
<b>Initial Deficit</b>	-20.053471	2.380364	-9.27369
<b>Final Deficit</b>	-40.161156	11.912659	-12.65601
<b>Total Gain</b>	20.107684	<b>-9.532295</b>	3.38231
<b>Gain per Minute</b>	23.205191	<b>-11.000/06</b>	3.90335

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



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

```
Interval 2. 0.004464
[{"SOG_variation": "boat1", "SOG_variation_weight": 0.661275652373244,
 "SOG_variation_weight2": 0.686255768892934,
 "avg_TWA": boat1, "avg_TWA_weight": -138.37261169102297,
 "avg_TWA_weight2": 188.34897395459064,
 "avg_SOG": boat1, "avg_SOG_weight": 229.69633420252775,
 "avg_SOG_weight2": 209.70000000000002,
 "boat1_minister_leeward": False,
 "boat1_name": "Gian Stragiotti",
 "boat1_total_weight": 106.395,
 "boat2_master_leeward": True,
 "boat2_name": "Senseboard",
 "boat2_total_weight": 102.89,
 "end_time": 47.988000000000005,
 "end_time2": 47.988000000000005,
 "end_time3": 177.95680711356,
 "start_time": 174.9565627452175,
 "start_time2": 174.9565627452175,
 "start_time3": 174.9565627452175} ]
```

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)
TWS	6.515	6.515	5.8	5.8	7	7	479	479	0.3227	0.3227		
TWD	210	210	209.3	209.3	211	211	479	479	0.4334	0.4335		
SOG	26.64	27.1	25.1	25.8	28	28.4	479	479	0.6851	0.6613	Gian Stragiotti	Gian Stragiotti
VMG	20.03	20.36	17.2	18.54	22.19	22.48	479	479	0.8952	0.7942	Gian Stragiotti	Gian Stragiotti
COS	348.9	348.9	341.4	341.7	356.1	357.5	479	479	2.79	3.146	SenseBoard	SenseBoard
TMA_Abs	138.8	138.9	131.9	131.5	146	147.3	479	479	2.849	3.355		
Heel_Inv	\$3.63	\$4.69	37.3	43	69.1	67.1	479	479	5.723	4.162	Gian Stragiotti	Gian Stragiotti
Line_C	92.85	110.4	62.9	85.6	121.2	139.7	478	479	10.94	10.95	Gian Stragiotti	SenseBoard
Side_Lines	nan	16.73	nan	7.2	nan	25.3	nan	479	nan	3.217		Tie
Total_lines	nan	127	nan	94.9	nan	160.4	nan	479	nan	12.36		

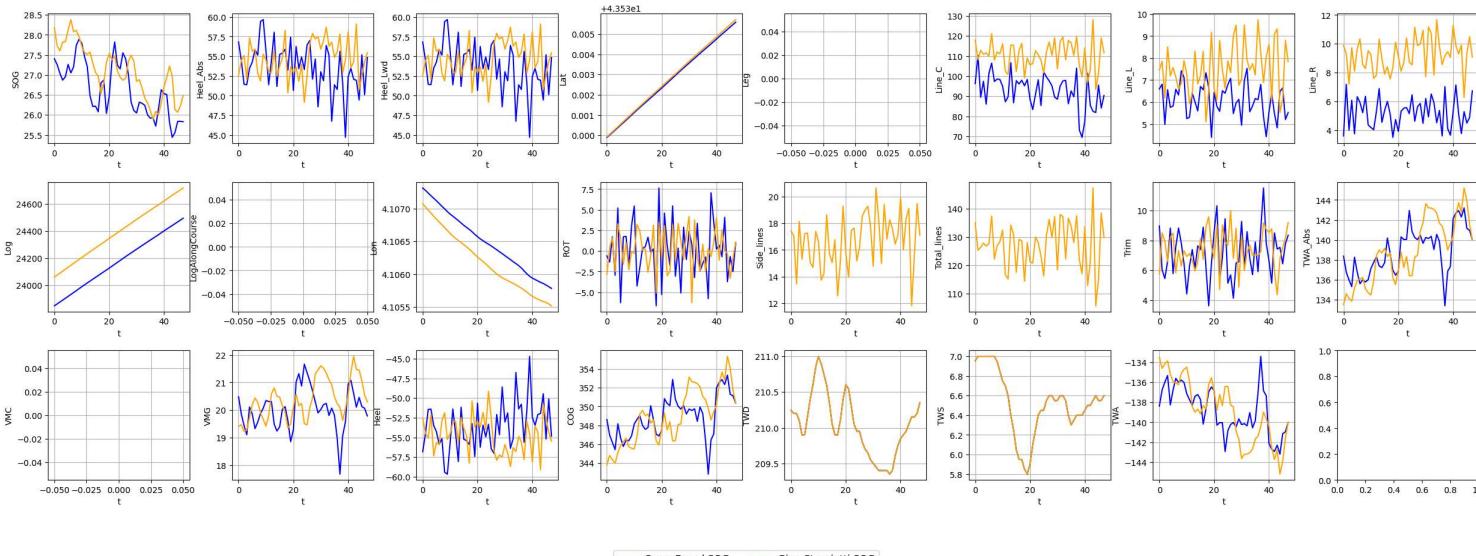
#### Disease Summary

Distance Summary		
	SenseBoard	Gian Stragiotti
Distance [m]	654.891622	665.931151
Straight Line [m]	654.117200	664.930507
Distance as Percentage of Straight Line [%]	100.110202	100.150400

Gain of SenseBoard with respect to Gian Stragiotti

	Forward	Lateral	VMG
Initial Deficit	7.480278	17.974449	6.197097
Final Deficit	18.313246	18.104044	-1.850038
Total Gain	-0.032968	-0.165996	0.047135
Gain per Minute	-0.13599006	-0.208381	0.10101852

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



\*\*\*\*\*  
Processing run: 10\_06\_Run6  
\*\*\*\*\*

.....  
Interval 2: Downwind .....  
(SOG\_variation\_boat1': 0.433173795500071,  
'SOG\_variation\_boat2': 0.6449390318040755,  
'avg\_Tha\_boat1': -139.59800407281325,  
'avg\_Tha\_boat2': -139.792725304835,  
'avg\_SOG\_boat1': 26.3823820352546107,  
'avg\_SOG\_boat2': 26.924822699853546,  
'boat1\_master\_leeward': False,  
'boat1\_name': 'Karl Maeder',  
'boat1\_total\_wt\_kg': 99.995,  
'boat2\_master\_leeward': True,  
'boat2\_name': 'SenseBoard',  
'boat2\_total\_wt\_kg': 88.88888888888888,  
'duration': 42.2139998684856,  
'end\_time': 174561405.263,  
'stability\_score': 0.967475620226159,  
'start\_time': 174561363.049)

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)
TWS	7.745	7.745	6.8	6.8	8.696	422	423	0.6107	0.6101			
TWD	210.7	210.7	209.3	209.3	212.3	422	423	0.8839	0.8839			
SOG	<b>26.92</b>	<b>27.28</b>	24.6	26.1	27.8	28	422	423	<b>0.6459</b>	<b>0.4334</b>	Karl Maeder	Karl Maeder
VMG	<b>20.23</b>	<b>20.77</b>	17.13	17.99	22.17	22.46	422	423	<b>0.7668</b>	<b>0.7704</b>	Karl Maeder	Karl Maeder
COG	349.4	350.3	343.1	344.8	358.4	357.1	422	423	<b>2.283</b>	<b>2.09</b>	Karl Maeder	Karl Maeder
TWA_Abs	138.8	139.6	131.6	133.4	146.4	145.9	422	423	2.225	2.034		
Heel_lnd	54.75	<b>50.48</b>	33.7	33.7	71.4	61.5	422	423	<b>6.421</b>	<b>4.966</b>	SenseBoard	Karl Maeder
Side_lines	16.99	<b>11.56</b>	6.8	2.6	25.1	19.8	422	423	<b>3.147</b>	<b>2.991</b>	SenseBoard	Karl Maeder
Line_C	107.5	<b>90.36</b>	78.1	54.4	140.7	116.6	422	423	<b>11.15</b>	<b>11.76</b>	SenseBoard	SenseBoard
Total_lines	124.6	<b>102.5</b>	87.4	61	155	133.5	422	423	<b>12.63</b>	<b>13.49</b>	SenseBoard	SenseBoard

#### Distance Summary

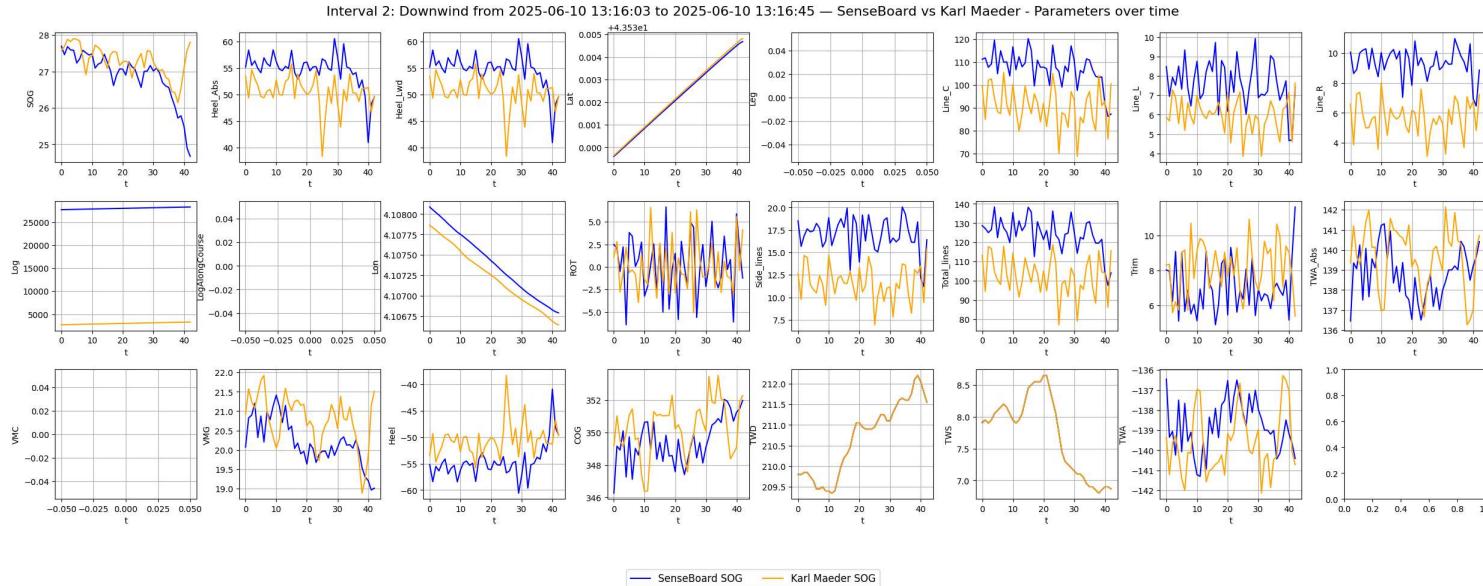
SenseBoard	Karl Maeder	
Distance [m]	582.084016	592.157245

Straight Line [m]	
581.625415	591.762948

Distance as Percentage of Straight Line (%) 100.078848 100.066631

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

Gain of SenseBoard with respect to Karl Maeder



\*\*\*\*\*  
Processing run: 10\_06\_Run7  
\*\*\*\*\*

\*\*\*\*\*  
Interval 2: Downwind  
{'SOG\_variation\_start': 0.481249568288439,  
 'SOG\_variation\_end': 0.4895425115647436,  
 'avg\_The\_boat1': -140.14265468715998,  
 'avg\_The\_boat2': 84738984375,  
 'avg\_SOG\_start': 27.22389813215,  
 'avg\_SOG\_end': 27.58359375,  
 'boat1\_master\_leeward': True,  
 'boat1\_name': 'Karl Maeder',  
 'boat1\_total\_wt\_kg': 89.995,  
 'boat2\_master\_leeward': False,  
 'boat2\_name': 'SenseBoard',  
 'boat2\_total\_wt\_kg': 88.99999999999999,  
 'duration': 51.1859994653424,  
 'end\_time': 174561975.263,  
 'stability\_score': 8.9756249657851376,  
 'start\_time': 174561924.157}

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)
TWS	7.349	7.349	6.7	6.7	7.896	7.896	512	512	0.3178	0.3177		
TWD	208.9	208.9	207.7	207.7	210.2	210.2	512	512	0.7588	0.7588		
SOG	<b>27.22</b>	27.58	26.4	26.6	28.5	28.5	512	512	<b>0.5013</b>	<b>0.4832</b>	SenseBoard	
VMG	<b>20.88</b>	21.35	19.1	18.68	22.53	23.37	512	512	<b>0.6006</b>	<b>0.9401</b>	SenseBoard	
COG	349.1	349.8	343.5	342	354.4	356.9	512	512	1.929	<b>2.892</b>	Karl Maeder	
TWA_Abs	140.1	140.8	134	131.8	146	148.5	512	512	2.112	3.222		
Heel_lwd	<b>51.11</b>	54.77	35.2	35.9	66.8	70.3	512	512	<b>5.039</b>	<b>5.97</b>	SenseBoard	
Side_lines	<b>10.59</b>	17.36	0.9	7.7	20.4	27.1	512	512	<b>2.921</b>	<b>2.925</b>	Karl Maeder	
Line_C	<b>88.82</b>	109.6	61.2	77.9	127.8	156.3	510	512	<b>11.67</b>	<b>10.5</b>	SenseBoard	
Total_lines	<b>99.36</b>	127	64.4	88.4	138.5	179.3	512	512	<b>13.13</b>	11.18	SenseBoard	

#### Distance Summary

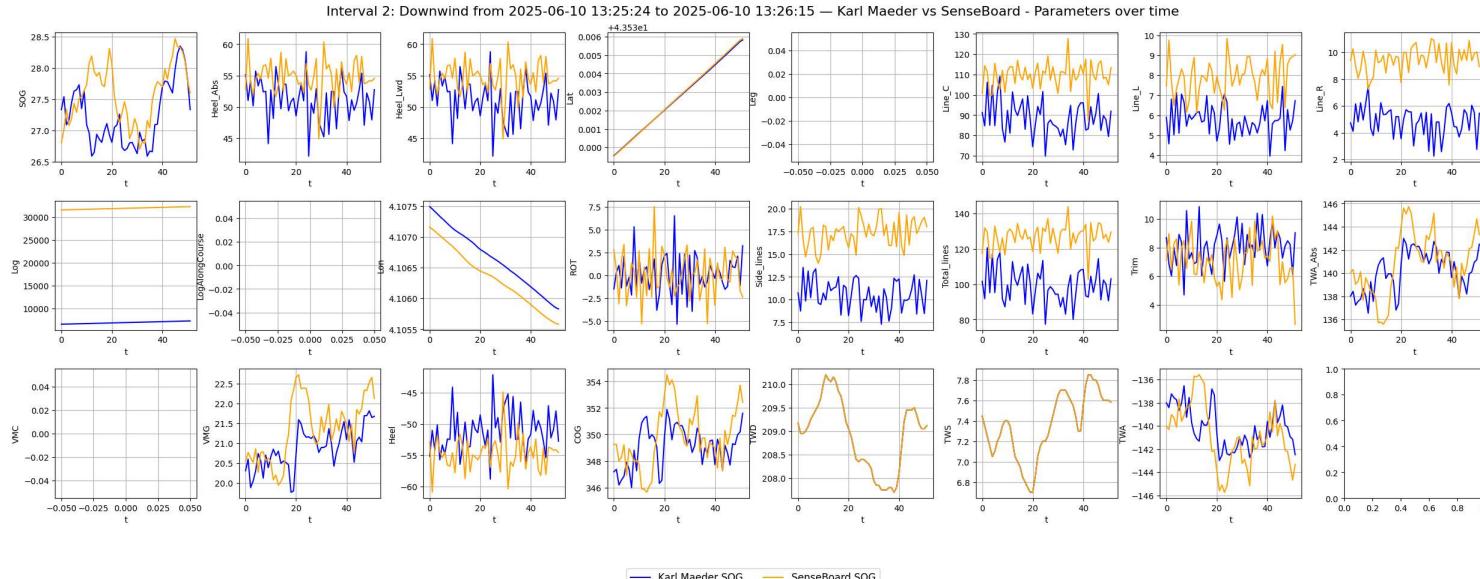
	Karl Maeder	SenseBoard
Distance [m]	715.517392	725.10961

Distance Line [m]	715.111526	724.75972
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Distance as Percentage of Straight Line [%]	100.056756	100.129004
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	Forward	Lateral	VMG
Initial Deficit	2.480150	27.140833	15.490533
Final Deficit	12.110298	18.012490	22.47645
Total Gain	-9.630148	9.128393	13.242708
Gain per Minute	-11.306987	10.717011	15.547342

Gain of Karl Maeder with respect to SenseBoard



=====  
Processing run: 10\_06\_Run8  
=====

```
=====
Interval 2: Downwind
=====
{'SOG_variation_b0tt': 0.33991825923819,
 'SOG_variation_b0tt2': 0.4688635340483267,
 'avg_Th_b0tt': -141.7488333333332,
 'avg_Th_b0tt2': -141.8634728833473,
 'avg_Ldm_b0tt': 27.335344766666667,
 'avg_SOG_b0tt': 27.5,
 'boat1_master_leeward': False,
 'boat1_name': 'Karl Maeder',
 'boat1_total_weight': 89.995,
 'boat2_master_leeward': True,
 'boat2_name': 'SenseBoard',
 'boat2_total_weight': 88.00000000000001,
 'duration': 47.89499998926514,
 'end_time': 1749562585.552,
 'stability_score': 0.96791813085577,
 '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)
TWS	7.551	7.552	7.2	7.2	8.096	6.095	478	480	0.2323	0.2326		
TWD	207	207	206.3	206.3	207.8	207.8	478	480	0.4054	0.4075		
SOG	27.5	27.33	26.4	26	28.6	28.5	478	480	0.4638	0.5399	SenseBoard	SenseBoard
VMG	21.6	21.44	19.39	18.79	23.31	23.89	478	480	0.6685	0.961	SenseBoard	SenseBoard
COG	348.8	348.8	343	339.4	353.3	356.1	478	480	1.891	2.959	SenseBoard	SenseBoard
TWA_Abs	141.8	141.7	135.9	132.9	147.5	148.6	478	480	1.903	2.928		
Heel_lwd	54.21	49.14	39.2	31.2	70.7	66.2	478	480	5.447	5.842	SenseBoard	SenseBoard
Side_lines	17.15	10.82	6.3	3	26.8	20.9	478	480	3.285	2.951	SenseBoard	Karl Maeder
Line_C	108.3	87.03	78.4	60.8	133.9	125.3	478	479	9.369	13.13	SenseBoard	SenseBoard
Total_lines	125.4	97.63	91.1	64.5	153.8	140.2	478	480	10.79	14.63	SenseBoard	SenseBoard

#### Distance Summary

	SenseBoard	Karl Maeder
Distance [m]	674.578757	673.655103
Straight Line [m]	674.305252	672.759926

Distance as Percentage of Straight Line [%] 100.055391 100.133060

	Forward	Lateral	VMG
Initial Deficit	8.177704	14.50031	2.538615
Final Deficit	6.627672	15.843137	4.587296
Total Gain	1.550032	-1.343107	-0.04681
Gain per Minute	1.949808	-1.688513	-0.577065

Gain of SenseBoard with respect to Karl Maeder

Forward Lateral VMG

Initial Deficit 8.177704 14.50031 2.538615

Final Deficit 6.627672 15.843137 4.587296

Total Gain 1.550032 -1.343107 -0.04681

Gain per Minute 1.949808 -1.688513 -0.577065

Gain of SenseBoard with respect to Karl Maeder

Forward Lateral VMG

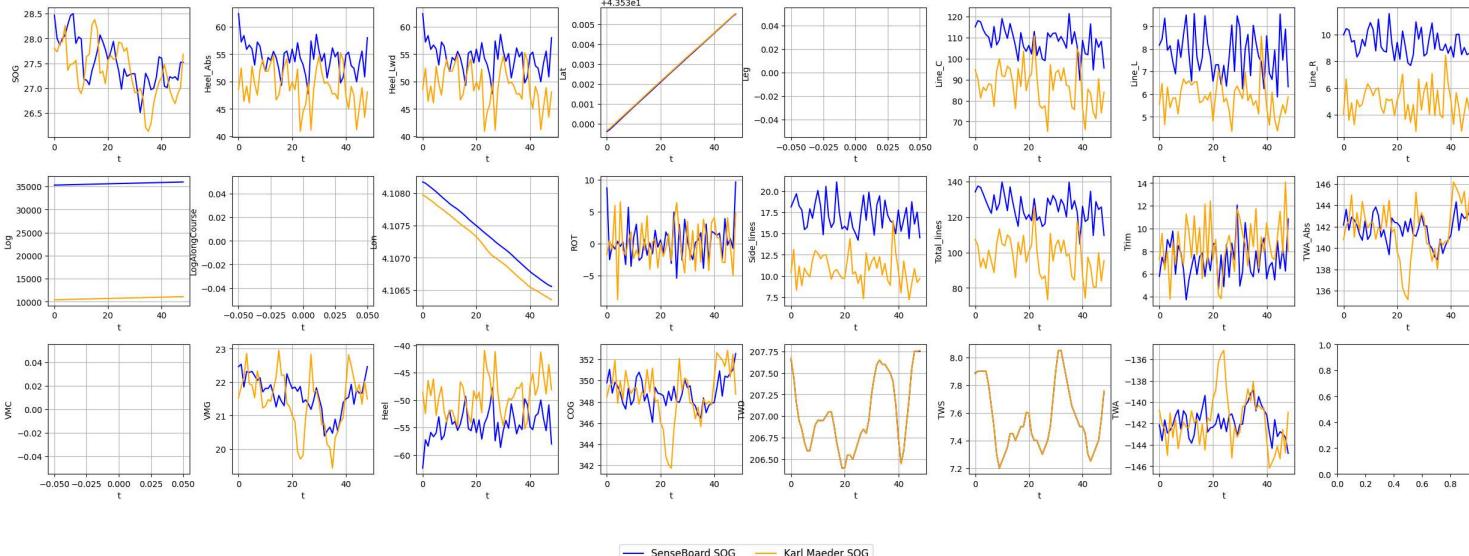
Initial Deficit 8.177704 14.50031 2.538615

Final Deficit 6.627672 15.843137 4.587296

Total Gain 1.550032 -1.343107 -0.04681

Gain per Minute 1.949808 -1.688513 -0.577065

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
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=====
Interval 2: Downwind
=====

```
{
  "SOG_variation_start": 8.478337953488632,
  "SOG_variation_end": 8.478337953488632,
  "avg_Ths_boat": -141.9629455789715896,
  "avg_Tha_boat": 0.4898455789715896,
  "avg_SOG_boat": 34.84073931623934,
  "avg_VMG_boat": 26.9723821623934,
  "avg_COG_boat": 27.57255319148936,
  "boat1_SOG_boat": 27.57255319148936,
  "boat1_master_leeward": true,
  "boat1_name": "Karl Maeder",
  "boat1_total_wt_kg": 99.995,
  "boat2_master_leeward": false,
  "boat2_name": "SenseBoard",
  "boat2_total_wt_kg": 88.00000000000001,
  "duration": 46.88299897083174,
  "end_time": 1749562995.342,
  "stability_score": 8.972312641797767,
  "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)
TWS	8.798	8.801	7.7	7.7	10.2	470	468	0.8433	0.844			
TWD	208	208	207.4	207.4	208.6	470	468	0.2684	0.2689			
SOG	<b>26.97</b>	<b>27.57</b>	25.2	26.4	28.5	470	468	<b>0.6785</b>	<b>0.4882</b>	SenseBoard	SenseBoard	SenseBoard
VMG	<b>21.23</b>	<b>21.72</b>	18.95	19.41	23.1	470	468	<b>0.8641</b>	<b>0.8715</b>	Karl Maeder	Karl Maeder	Tie
COG	350	350.1	344.7	343.2	355.4	470	468	<b>2.189</b>	<b>2.459</b>	Karl Maeder	Karl Maeder	Karl Maeder
TWA_Abs	142	142	136.3	134.9	147.4	470	468	2.308	2.488			
Heel_lvd	<b>49.3</b>	<b>53.16</b>	7	36.5	63.7	470	468	<b>6.641</b>	<b>5.855</b>	SenseBoard	SenseBoard	SenseBoard
Side_lines	<b>9.907</b>	<b>16.24</b>	1	8.8	19	470	468	<b>3.064</b>	<b>2.572</b>	SenseBoard	SenseBoard	SenseBoard
Line_C	<b>84.83</b>	<b>106.1</b>	39.4	67.7	117.2	470	468	<b>12.29</b>	<b>11.18</b>	SenseBoard	SenseBoard	SenseBoard
Total_lines	<b>94.69</b>	<b>122.4</b>	50	78.7	130.3	470	468	<b>14.15</b>	<b>12.07</b>	SenseBoard	SenseBoard	SenseBoard

Distance Summary

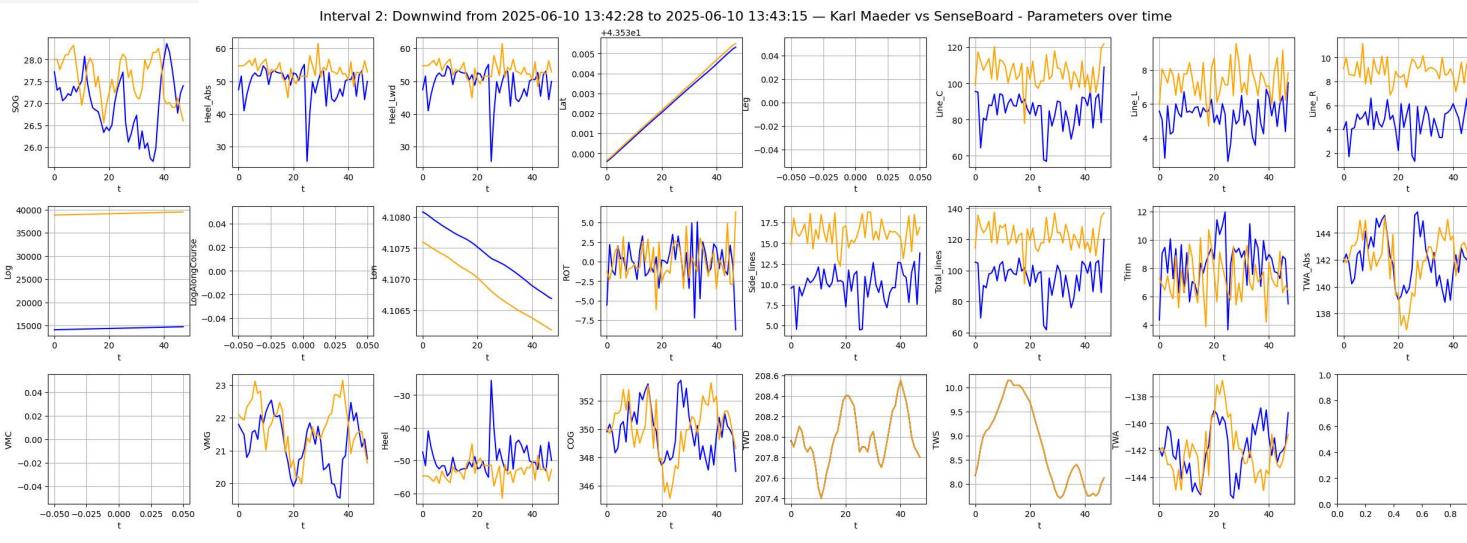
	Karl Maeder	SenseBoard
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Distance [m] 650.573241 662.100228

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
Final Deficit	25.666220	36.176934
Total Gain	-11.405877	1.026839
Gain per Minute	-14.597031	1.314129
		12.306523



Error processing ..\Data\_Sailnjord\Straight\_lines\10\_06\10\_06\_Run10: No or insufficient intervals for run: 10\_06\_Run10  
Error processing ..\Data\_Sailnjord\Straight\_lines\10\_06\Interview and equipment: At least two CSV files are required.  
Error processing ..\Data\_Sailnjord\Straight\_lines\10\_06\senseboard\_log: At least two CSV files are required.

Summary of All Runs																																				
Run	Master	Slave	Space1	Lateral Gain (m)	Forward Gain (m)	VMG Gain (m)	Space2	Avg SOG (Master)	Avg SOG (Slave)	Winner Std SOG	Winner Overall SOG	Space3	Avg VMG (Master)	Avg VMG (Slave)	Winner Std VMG	Winner Overall VMG	Space4	Avg Heel (Master)	Avg Heel (Slave)	Winner Std Heel	Winner Overall Heel	Space5	Avg Side Lines (Master)	Winner Avg Side Lines	Winner Std Side Lines	Winner Overall Side Lines	Space6	Avg Line C (Master)	Avg Line C (Slave)	Winner Std Line C	Winner Overall Line C	Space7	Avg Total Lines (Master)	Avg Total Lines (Slave)	Winner Std Total Lines	Winner Overall Total Lines
0	06_06_Run1 (Downwind)	Karl Maeder	Gian Stregotti	57.16	-32.87	65.78	25.260674	26.308173	Gian Stregotti	Gian Stregotti	14.02	16.050314	Gian Stregotti	Gian Stregotti	49.80	48.993269	Karl Maeder	Gian Stregotti	Tie	13.01	11.370284	Karl Maeder	Gian Stregotti	Tie	90.84	93.202113	Gian Stregotti	Gian Stregotti	103.963753	104.516880	Gian Stregotti	Gian Stregotti				
1	06_06_Run2 (Downwind)	Gian Stregotti	Karl Maeder	-63.57	29.42	-68.67	23.942177	23.077657	Gian Stregotti	Karl Maeder	13.91	12.17666	Gian Stregotti	Karl Maeder	48.52	48.222616	Gian Stregotti	Gian Stregotti	Tie	11.49	3.429450	Gian Stregotti	Karl Maeder	Tie	90.41	86.709879	Gian Stregotti	Gian Stregotti	101.877109	17.097087	Gian Stregotti	Karl Maeder				
2	06_06_Run3 (Downwind)	Karl Maeder	Gian Stregotti	44.45	-23.62	46.72	24.957937	25.2690174	Gian Stregotti	Karl Maeder	18.88	20.284563	Gian Stregotti	Gian Stregotti	50.82	47.465610	Karl Maeder	Gian Stregotti	Tie	12.95	9.825884	Karl Maeder	Gian Stregotti	Tie	90.80	89.015603	Karl Maeder	Gian Stregotti	103.670492	99.150277	Karl Maeder	Gian Stregotti				
3	06_06_Run4 (Downwind)	Gian Stregotti	Karl Maeder	-6.40	19.27	-19.87	25.710235	25.041849	Gian Stregotti	Karl Maeder	22.14	21.519069	Gian Stregotti	Karl Maeder	46.54	46.067563	Gian Stregotti	Gian Stregotti	Tie	10.25	7.404934	Gian Stregotti	Karl Maeder	Tie	85.12	nan	Gian Stregotti	Gian Stregotti	95.694326	65.017605	Gian Stregotti	Karl Maeder				
4	06_06_Run5 (Downwind)	Karl Maeder	Gian Stregotti*	-4.11	-5.19	2.75	26.419575	26.727252	Gian Stregotti*	Karl Maeder	23.45	23.644052	Gian Stregotti*	Karl Maeder	49.14	46.651422	Karl Maeder	Gian Stregotti*	Tie	12.59	9.847931	Karl Maeder	Gian Stregotti*	Tie	88.83	85.192019	Karl Maeder	Gian Stregotti*	101.401443	95.146851	Karl Maeder	Gian Stregotti*				
5	06_06_Run6 (Downwind)	Gian Stregotti	Karl Maeder	-7.03	14.52	-15.93	27.615495	26.983124	Gian Stregotti	Gian Stregotti*	22.61	21.973702	Gian Stregotti	Karl Maeder	48.27	48.880610	Karl Maeder	Karl Maeder	Tie	11.73	13.395442	Karl Maeder	Gian Stregotti	Tie	88.98	90.709417	Karl Maeder	Gian Stregotti	100.726977	103.181303	Karl Maeder	Gian Stregotti*				
6	06_06_Run7 (Downwind)	Karl Maeder	Gian Stregotti*	-10.81	-18.67	10.66	27.193961	28.074340	Gian Stregotti*	Karl Maeder	23.41	23.359318	Gian Stregotti*	Karl Maeder	48.72	46.892271	Karl Maeder	Gian Stregotti*	Tie	12.85	13.011940	Gian Stregotti*	Gian Stregotti*	Tie	88.82	89.436678	Gian Stregotti*	Gian Stregotti*	102.009313	102.26048	Gian Stregotti*	Gian Stregotti*				
7	06_06_Run8 (Downwind)	Gian Stregotti	Karl Maeder	6.55	3.80	-0.80	28.156806	27.5988021	Gian Stregotti	Gian Stregotti*	25.40	25.253898	Gian Stregotti	Gian Stregotti*	48.72	51.300000	Karl Maeder	Gian Stregotti*	Tie	10.72	12.562930	Karl Maeder	Gian Stregotti*	Tie	91.50	90.272216	Gian Stregotti*	Gian Stregotti*	101.92928	102.98607	Karl Maeder	Gian Stregotti*				
8	07_06_Run1 (Downwind)	Karl Maeder	Gian Stregotti	4.27	-15.65	15.10	27.388771	27.595957	Gian Stregotti	Karl Maeder	21.92	22.541644	Gian Stregotti	Gian Stregotti	49.73	48.573093	Karl Maeder	Gian Stregotti	Tie	13.26	11.216286	Karl Maeder	Gian Stregotti	Tie	91.10	90.874356	Karl Maeder	Gian Stregotti	102.25148	102.019746	Karl Maeder	Gian Stregotti				
9	07_06_Run2 (Downwind)	Gian Stregotti	Karl Maeder	-3.25	28.54	-26.61	27.169405	26.093210	Gian Stregotti	Gian Stregotti	23.80	22.812957	Gian Stregotti	Gian Stregotti	46.28	44.613580	Karl Maeder	Karl Maeder	Tie	10.95	12.588352	Karl Maeder	Gian Stregotti	Tie	83.36	81.111107	Gian Stregotti	Gian Stregotti	94.496918	93.720850	Gian Stregotti	Gian Stregotti				
10	07_06_Run3 (Downwind)	Karl Maeder	Gian Stregotti	3.67	-15.76	15.75	25.730588	26.421362	Gian Stregotti	Karl Maeder	23.00	23.657282	Gian Stregotti	Karl Maeder	46.53	45.862911	Karl Maeder	Karl Maeder	Tie	nan	10.324242	Karl Maeder	Karl Maeder	Tie	83.89	84.058504	Karl Maeder	Karl Maeder	94.453294	nan	Gian Stregotti	Gian Stregotti				
11	07_06_Run5 (Downwind)	Karl Maeder	Gian Stregotti	33.55	-12.73	30.43	26.091593	26.671302	Gian Stregotti	Gian Stregotti	20.72	21.998424	Gian Stregotti	Gian Stregotti	47.08	45.281236	Karl Maeder	Gian Stregotti	Tie	nan	10.147490	Gian Stregotti	Karl Maeder	Tie	6.97	83.825831	Gian Stregotti	Karl Maeder	94.410594	nan	Gian Stregotti	Gian Stregotti				
12	07_06_Run6 (Downwind)	Gian Stregotti	Karl Maeder	3.50	29.20	-20.84	28.251832	26.688795	Gian Stregotti	Gian Stregotti	22.20	21.259163	Gian Stregotti	Karl Maeder	48.96	49.404737	Karl Maeder	Gian Stregotti	Tie	10.61	nan	Gian Stregotti	Karl Maeder	Tie	93.25	7.268732	Gian Stregotti	Karl Maeder	104.041395	nan	Gian Stregotti	Gian Stregotti				
13	07_06_Run7 (Downwind)	Karl Maeder	Gian Stregotti*	-11.13	2.46	-8.61	26.330769	26.253140	Karl Maeder	Karl Maeder	20.95	20.734920	Karl Maeder	Gian Stregotti*	49.20	46.534300	Karl Maeder	Karl Maeder	Tie	94.58	10.219498	Karl Maeder	Gian Stregotti*	Tie	7.25	82.286262	Karl Maeder	Karl Maeder	101.483154	92.383227	Karl Maeder	Karl Maeder	Karl Maeder	Karl Maeder		
14	07_06_Run8 (Downwind)	Gian Stregotti	Karl Maeder	6.04	4.24	-0.33	27.659511	27.379025	Gian Stregotti	Karl Maeder	23.06	23.610695	Gian Stregotti	Karl Maeder	44.61	46.628814	Karl Maeder	Karl Maeder	Tie	9.29	9.920939	Karl Maeder	Gian Stregotti*	Tie	79.07	7.140237	Gian Stregotti	Karl Maeder	88.451991	100.022377	Karl Maeder	Gian Stregotti*	Tie	Tie		
15	07_06_Run9 (Downwind)	Karl Maeder	Gian Stregotti*	-9.22	-2.31	-3.03	28.447392	28.575510	Gian Stregotti	Karl Maeder	23.85	23.737897	Gian Stregotti	Karl Maeder	49.54	46.131519	Karl Maeder	Gian Stregotti*	Tie	95.58	9.726070	Karl Maeder	Gian Stregotti*	Tie	7.23	84.971009	Gian Stregotti	Karl Maeder	102.670615	94.782821	Karl Maeder	Gian Stregotti*	Tie	Tie		
16	09_06_Run4 (Downwind)	Gian Stregotti	Karl Maeder	-1.15	9.85	-7.75	28.114898	27.621396	Gian Stregotti	Gian Stregotti*	19.74	19.378182	Gian Stregotti	Gian Stregotti*	52.31	49.395495	Gian Stregotti	Gian Stregotti*	Tie	107.12	13.936059	Karl Maeder	Gian Stregotti*	Tie	6.13	98.774399	Karl Maeder	Gian Stregotti*	113.463630	112.836946	Gian Stregotti*	Gian Stregotti*	Gian Stregotti*	Gian Stregotti*		
17	09_06_Run6 (Downwind)	Gian Stregotti	Karl Maeder	-2.37	8.68	-8.02	27.351483	26.858228	Gian Stregotti	Karl Maeder	20.24	19.796665	Gian Stregotti	Gian Stregotti*	52.24	50.088819	Gian Stregotti	Gian Stregotti*	Tie	107.33	13.923437	Karl Maeder	Gian Stregotti*	Tie	4.91	96.854631	Karl Maeder	Gian Stregotti*	Tie	111.867886	110.301513	Gian Stregotti*	Gian Stregotti*	Gian Stregotti*	Gian Stregotti*	
18	09_06_Run7 (Downwind)	Karl Maeder	Gian Stregotti*	-4.75	-0.12	-2.80	27.721040	27.488107	Gian Stregotti	Karl Maeder	21.57	21.597520	Gian Stregotti	Karl Maeder	50.98	50.055146	Karl Maeder	Karl Maeder	Tie	14.80	102.117292	Gian Stregotti	Karl Maeder	Tie	98.66	5.231447	Karl Maeder	Gian Stregotti*	Tie	113.488933	107.437116	Karl Maeder	Gian Stregotti*	Tie	Tie	
19	09_06_Run8 (Downwind)	Gian Stregotti	Karl Maeder	-0.52	25.75	-20.74	28.132484	26.936998	Gian Stregotti	Gian Stregotti*	22.23	21.307463	Gian Stregotti	Karl Maeder	48.06	49.810359	Karl Maeder	Gian Stregotti*	Tie	101.72	13.657877	Karl Maeder	Gian Stregotti*	Tie	5.25	91.956488	Karl Maeder	Gian Stregotti*	Tie	106.641800	105.773674	Gian Stregotti*	Karl Maeder	Tie	Tie	
20	09_06_Run9 (Downwind)	Karl Maeder	Gian Stregotti*	3.74	-19.30	17.44	26.241558	26.942115	Gian Stregotti	Gian Stregotti*	20.53	21.179755	Gian Stregotti	Karl Maeder	48.89	46.848794	Karl Maeder	Karl Maeder	Tie	13.47	100.319490	Karl Maeder	Gian Stregotti*	Tie	90.08	5.555509	Karl Maeder	Gian Stregotti*	Tie	103.421163	105.951386	Karl Maeder	Gian Stregotti*	Tie	Tie	
21	09_06_Run10 (Downwind)	Gian Stregotti	Karl Maeder	3.34	7.03	-3.41	27.047791	26.750902	Gian Stregotti	Karl Maeder	21.10	20.922810	Gian Stregotti	Karl Maeder	49.04	51.162725	Karl Maeder	Gian Stregotti*	Tie	104.96	14.632385	Karl Maeder	Gian Stregotti*	Tie	5.73	96.570128	Karl Maeder	Gian Stregotti*	Tie	110.807434	111.167142	Karl Maeder	Gian Stregotti*	Tie	Tie	
22	09_06_Run11 (Downwind)	Karl Maeder	Gian Stregotti*	9.16	-2.96	7.87	25.457495	25.685741	Gian Stregotti	Karl Maeder	20.33	20.698863	Gian Stregotti	Karl Maeder	47.79	45.540304	Karl Maeder	Karl Maeder	Tie	13.27	91.389572	Karl Maeder	Gian Stregotti*	Tie	88.24	4.579802	Karl Maeder	Gian Stregotti*	Tie	101.510603	96.958441	Karl Maeder	Gian Stregotti*	Tie	Tie	
23	10_06_Run1 (Downwind)	Karl Maeder	Gian Stregotti	-10.77	-19.16	2.23	25.467153	26.093625	Gian Stregotti	Gian Stregotti	14.64	14.710302	Gian Stregotti	Gian Stregotti	53.01	56.146812	Gian Stregotti	Gian Stregotti	Tie	nan	16.673468	Gian Stregotti	Gian Stregotti	Tie	93.55	114.335929	Gian Stregotti	Gian Stregotti	nan	130.926743	Gian Stregotti	Gian Stregotti	Tie	Tie		
24	10_06_Run2 (Downwind)	Gian Stregotti	Karl Maeder	-8.58	23.73	-21.31	25.846055	25.105341	Gian Stregotti	Gian Stregotti	15.75	15.060517	Gian Stregotti	Karl Maeder	56.53	52.430387	Gian Stregotti	Gian Stregotti	Tie	16.89	nan	Gian Stregotti	Gian Stregotti	Tie	111.33	93.584185	Gian Stregotti	Gian Stregotti	Tie	128.286077	nan	Gian Stregotti	Gian Stregotti	Tie	Tie	
25	10_06_Run3 (Downwind)	Karl Maeder	Gian Stregotti	10.87	-24.73	24.67	26.804545	27.728041	Gian Stregotti	Gian Stregotti	18.00	18.490142	Gian Stregotti	Karl Maeder	51.72	54.120412	Gian Stregotti	Gian Stregotti	Tie	nan	15.727478	Gian Stregotti	Gian Stregotti	Tie	91.25	109.542019	Gian Stregotti	Gian Stregotti	Tie	nan	125.172466	Gian Stregotti	Gian Stregotti	Tie	Tie	
26	10_06_Run4 (Downwind)	Gian Stregotti	Karl Maeder	-9.53	20.11	3.38	23.940883	23.224423	Gian Stregotti	Gian Stregotti	13.41	13.324895	Gian Stregotti	Gian Stregotti	59.90	58.426731	Karl Maeder	Karl Maeder	Tie	16.50	nan	Gian Stregotti	Karl Maeder	Tie	131.21	118.754412	Gian Stregotti	Karl Maeder	Tie	147.675403	nan	Gian Stregotti	Karl Maeder	Tie	Tie	
27	10_06_Run5 (Downwind)	Karl Maeder	Gian Stregotti	-0.17	-10.83	8.05	26.641127	27.096033	Karl Maeder	Karl Maeder	20.05	20.358021	Karl Maeder	Karl Maeder	53.63	54.696065	Gian Stregotti	Gian Stregotti	Tie	16.727263	nan	Gian Stregotti	Karl Maeder	Tie	92.85	110.449384	Gian Stregotti	Karl Maeder	Tie	nan	126.97846	Gian Stregotti	Karl Maeder	Tie	Tie	
28	10_06_Run6 (Downwind)	Gian Stregotti	Karl Maeder	8.34	-10.10	13.09	26.922749	27.282270	Karl Maeder	Karl Maeder	20.23	20.765215	Karl Maeder	Karl Maeder	54.75	50.484634	Gian Stregotti	Gian Stregotti	Tie	16.99	11.562678	Gian Stregotti	Karl Maeder	Tie												