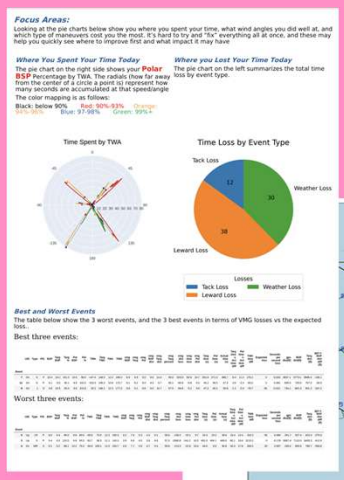
# Regatta-Playbook.com

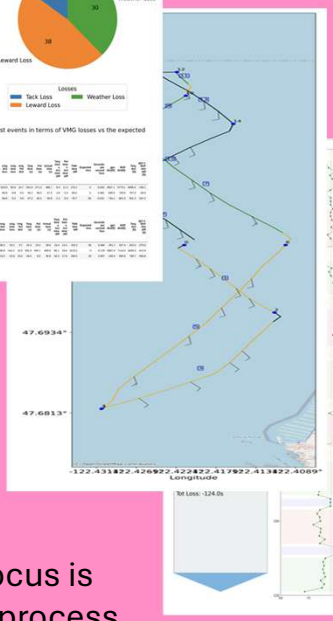
## Crew Guide

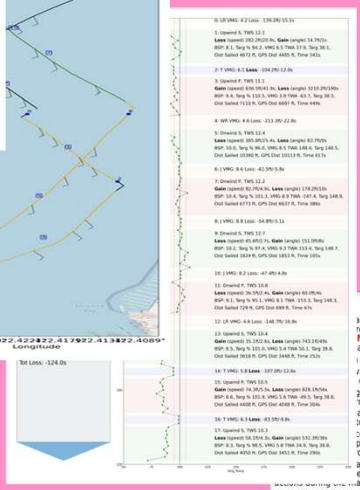
Your Race Report is the post race tool to help debrief after a race. The goal of the Race Report is to help you get to those “Critical few” things to address quickly using facts and data, instead of just “it felt” analysis. The goal is to use it, take the lessons learned and use them tomorrow. Here’s what’s in it:

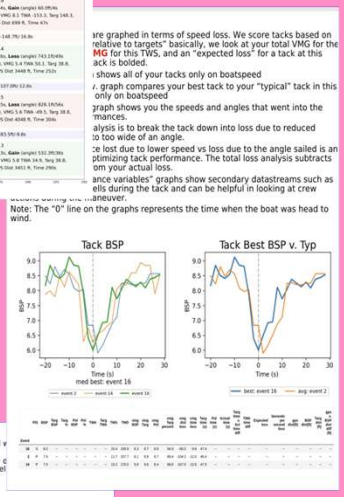
## Race Deep Dive:

- **Focus Areas**
- **Course Performance**
- **Race Recap**
- **Tack Comparisons**
- **Jibe Comparisons**
- **Rounding Comparisons**
- **Instrument QA**
- **Leg Details**

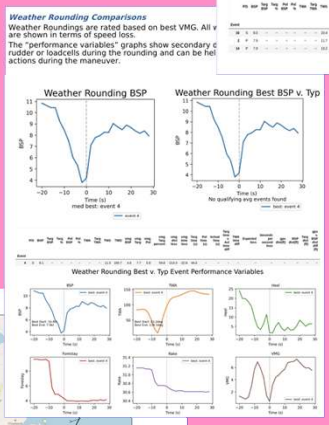


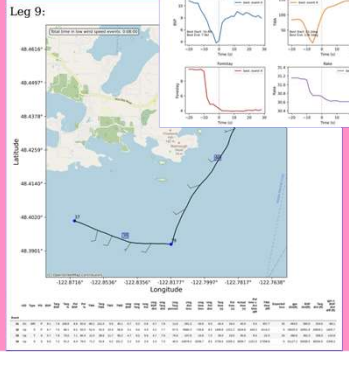






A note on how we process your data: Our focus is on team performance. This is not a perfect process. This is an automated system that tries to figure what happening by just looking at the data. Some conditions are difficult to deal with, and we do our best but ultimately recognize that in those conditions the data is not informative and is may be a hinderance to your performance. We don't know your actual racecourse, so we make it up from the data. This means that the recap you see is not always perfect. While the numbers we give you are quite reliable, sometimes the data sees things as significant that are not. Most of these events may be interesting to the navigator but they are not actionable by the team. Our focus is on team performance, not navigational efficiency so we by and large ignore these events. Combine that with some distracted driving, a huge duck or a penalty turn and sometimes we create events such as roundings that "big picture" aren't really mark roundings. Here are some of our list of event triggers and reasons we may ignore them:



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## Section 1: Focus Areas

**The left chart shows you where you spent your time today, colored by polar BSP performance. Were you slow on stbd today upwind? This sums it up for you.**

**The right chart shows you where you lost your time today by the type of maneuver. In this case, the leeward roundings need some attention.**

**Finally, the “best and worst” events tables show what was working well, and what wasn’t.**

### *Focus Areas:*

Looking at the pie charts below show you where you spent your time, what wind angles you did well at, and which type of maneuvers cost you the most. It’s hard to try and “fix” everything all at once, and these may help you quickly see where to improve first and what impact it may have

#### *Where You Spent Your Time Today*

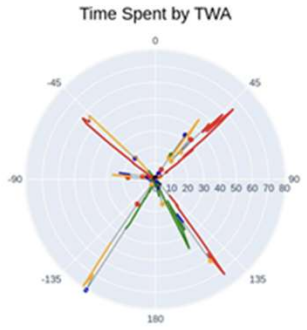
The pie chart on the right side shows your **Polar BSP** Percentage by TWA. The radials (how far away from the center of a circle a point is) represent how many seconds are accumulated at that speed/angle

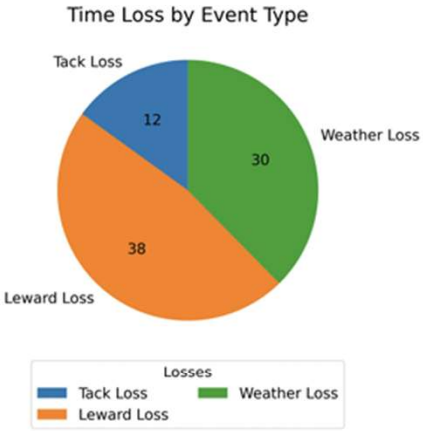
The color mapping is as follows:

Black: below 90%  Red: 90%-93%  Orange: 94%-96%  Blue: 97-98%  Green: 99%+

#### *Where you Lost Your Time Today*

The pie chart on the left summarizes the total time loss by event type.




#### *Best and Worst Events*

The table below show the 3 worst events, and the 3 best events in terms of VMG losses vs the expected loss..

Best three events:

| Event | UID | Type | PtS | BSP | Targ BSP | Targ % | Pol BSP | Pol % | TWA | Targ TWA | TWS | TWD | vmg BSP | vmg Targ | vmg Pol | vmg BSP dist | vmg Targ dist | vmg Targ percent | vmg dist loss | vmg time loss | vmg Pol dist | Targ time (s) | Pol time (s) | Actual time (s) | Targ time - Act time diff | Pol time - Act time diff | TWA time diff | Expected loss | Seconds per second loss | gpm dist(ft) | BSP dist(ft) | Targ dist (ft) | GPH x BSP dist diff (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | On | S | P | 10.4 | 10.2 | 101.3 | 10.6 | 96.0 | -147.4 | 148.9 | 12.2 | 166.4 | 8.9 | 8.9 | 9.0 | 9.0 | 10.4 | 99.6 | -529.8 | -50.9 | 10.7 | 391.6 | 371.3 | 386.7 | -6.4 | 11.2 | 178.2 | 0 | -0.024 | 6837.1 | 6773.1 | 6686.0 | -136.1 |
| 11 | On | S | P | 9.1 | 9.5 | 95.1 | 8.9 | 102.0 | -153.3 | 148.3 | 10.6 | 170.7 | 8.1 | 8.2 | 8.0 | 8.3 | 9.7 | 99.1 | -65.8 | -6.8 | 9.0 | 45.2 | 46.5 | 47.6 | 3.9 | -2.4 | -60.0 | 0 | 0.081 | 699.3 | 729.9 | 767.0 | -30.6 |
| 8 | On | J | S | 9.8 | 10.5 | 93.3 | 9.8 | 101.8 | 32.2 | 148.1 | 12.3 | 177.3 | 8.8 | 9.1 | 8.6 | 9.0 | 10.7 | 97.5 | -54.8 | -5.1 | 9.8 | 47.2 | 45.1 | 50.8 | -1.1 | -2.9 | -75.7 | 30 | -0.021 | 734.1 | 841.3 | 901.2 | -107.2 |

Worst three events:

| Event | UID | Type | PtS | BSP | Targ BSP | Targ % | Pol BSP | Pol % | TWA | Targ TWA | TWS | TWD | vmg BSP | vmg Targ | vmg Pol | vmg BSP dist | vmg Targ dist | vmg Targ percent | vmg dist loss | vmg time loss | vmg Pol dist | Targ time (s) | Pol time (s) | Actual time (s) | Targ time - Act time diff | Pol time - Act time diff | TWA time diff | Expected loss | Seconds per second loss | gpm dist(ft) | BSP dist(ft) | Targ dist (ft) | GPH x BSP dist diff (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Up | LR | P | 8.0 | 9.4 | 85.0 | 9.8 | 80.9 | -35.6 | 70.9 | 12.2 | 155.3 | 4.2 | 7.4 | 5.3 | 4.2 | 9.2 | 56.6 | -139.2 | -15.1 | 9.7 | 32.3 | 15.2 | 39.6 | 19.4 | 13.4 | 102.2 | 60 | 0.490 | 251.7 | 527.4 | 622.9 | -275.6 |
| 3 | Up | S | P | 9.4 | 8.5 | 110.5 | 9.8 | 95.5 | -63.7 | 38.5 | 11.1 | 143.3 | 3.9 | 6.8 | 4.0 | 3.9 | 8.6 | 57.0 | -2060.6 | -241.2 | 10.0 | 491.0 | 404.1 | 449.0 | -80.1 | 33.4 | 3210.2 | 0 | -0.178 | 6697.4 | 7110.0 | 6435.3 | -412.6 |
| 4 | On | WR | S | 8.1 | 9.2 | 88.1 | 10.2 | 79.3 | 64.8 | 100.1 | 11.5 | 150.7 | 4.6 | 7.7 | 5.8 | 4.7 | 9.4 | 59.8 | -213.3 | -22.8 | 10.4 | 44.0 | 9.6 | 50.8 | 30.3 | 17.8 | 200.2 | 20 | 0.597 | 165.0 | 695.6 | 769.7 | -530.6 |

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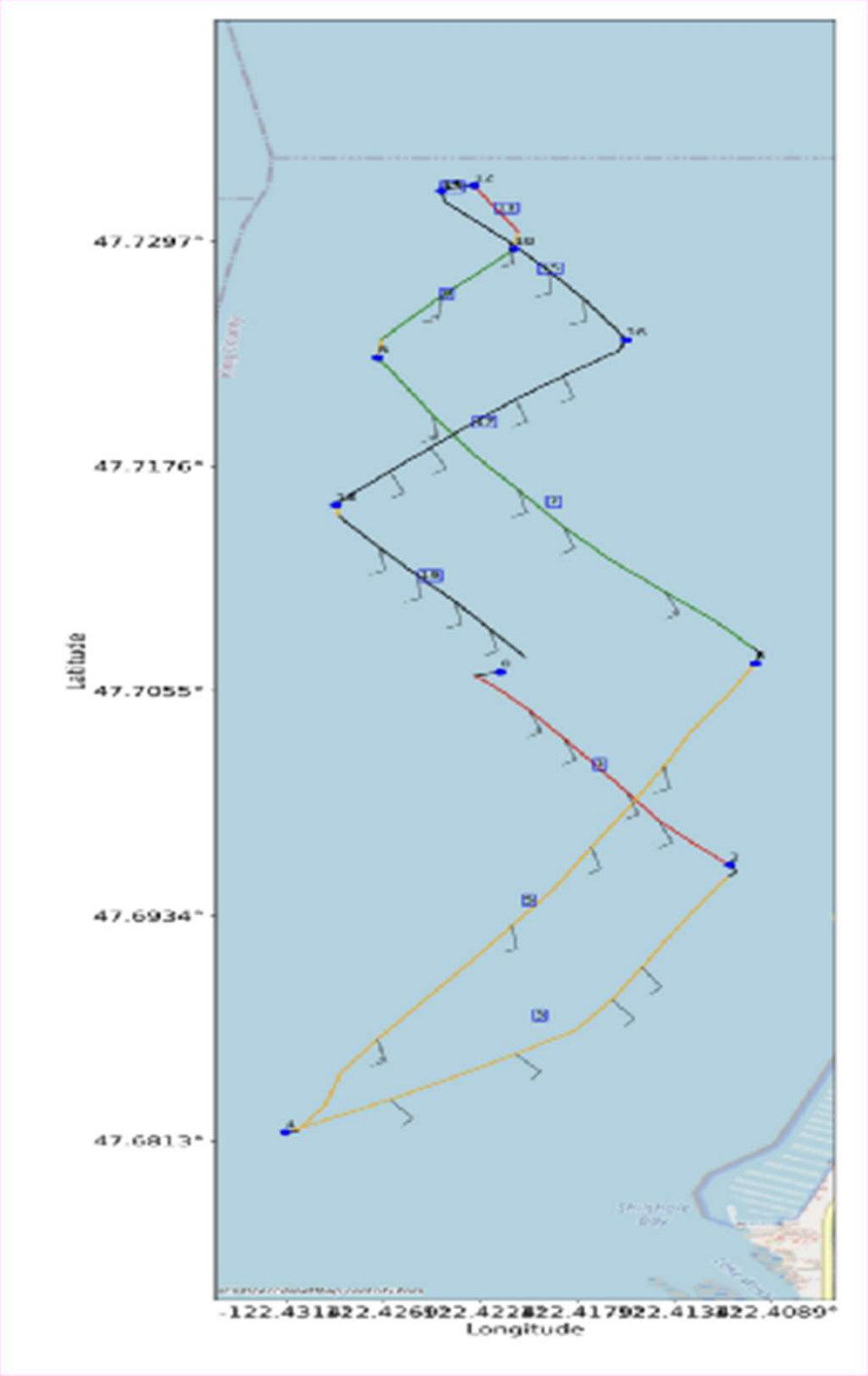
## Section 2: Course Performance

**This chart shows your tracks today, colored by either TARGET % or POLAR % .  The wind barbs show the direction and speed, and each event" is numbered so that you can refer to it later. This will be handy later**



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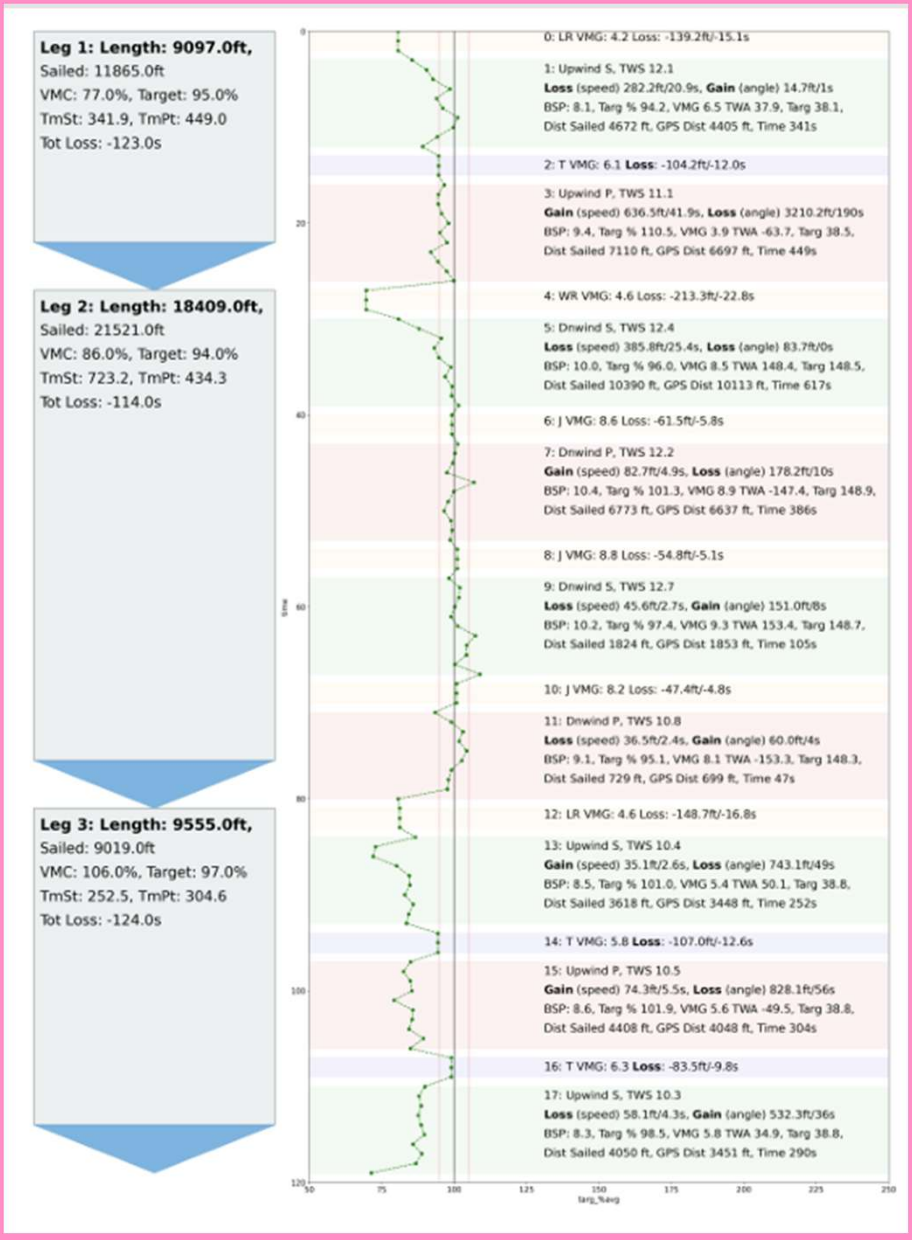
## Section 3: Race Recap

The Race Recap is our way of showing you your total race performance in a simple to understand way. Everything is measured against a  goal (the black vertical line) and you are either ahead of that goal (right of the line) or behind it (left of the line)  Details about each event is available in the boxes. The key takeaways from this are that your focus should be on those things that are on the left side. Simply scanning the Race Recap can get you to the 2 things you could do better for tomorrow. For example, in this race Leg 3 was slow, perhaps a sail change or gear change was in order before you went upwind?

Finally, if you see "gaps" in the green line, it's due to gaps in the data.



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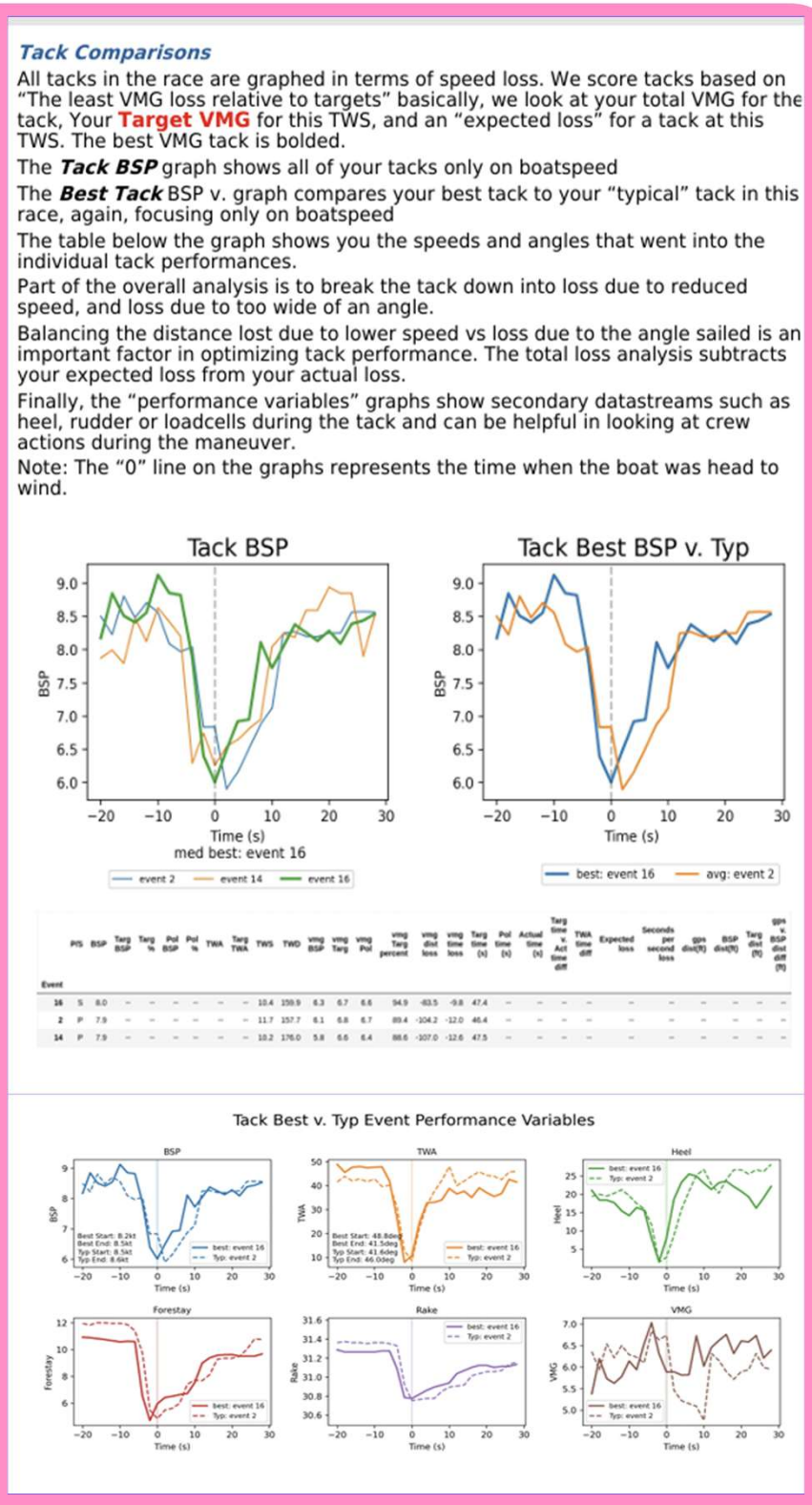
## Section 4: Tack/Jibe Comparisons

For the comparisons, we overlay all of your tacks over each other to help you look for coinsittiency. For example, if you saw that the tack in event 14 was slower than the rest, you can compare it to the others.  You can see from the BSP chart that you started the tack normally, but then didn't begin accelerating until later than normal.  If you look at your "performance variables" you can see that your TWA got higher than normal quickly But your forestay was fully loaded, indicating that perhaps the mainsheet was a little too tight initially causing the boat to heel before it got moving.

Same comparisons are there for jibes as well



***Tack Comparisons***

All tacks in the race are graphed in terms of speed loss. We score tacks based on "The least VMG loss relative to targets" basically, we look at your total VMG for the tack, Your **Target VMG** for this TWS, and an "expected loss" for a tack at this TWS. The best VMG tack is bolded.

The ***Tack BSP*** graph shows all of your tacks only on boatspeed

The ***Best Tack*** BSP v. graph compares your best tack to your "typical" tack in this race, again, focusing only on boatspeed

The table below the graph shows you the speeds and angles that went into the individual tack performances.

Part of the overall analysis is to break the tack down into loss due to reduced speed, and loss due to too wide of an angle.

Balancing the distance lost due to lower speed vs loss due to the angle sailed is an important factor in optimizing tack performance. The total loss analysis subtracts your expected loss from your actual loss.

Finally, the "performance variables" graphs show secondary datastreams such as heel, rudder or loadcells during the tack and can be helpful in looking at crew actions during the maneuver.

Note: The "0" line on the graphs represents the time when the boat was head to wind.



| Event | PtS | BSP | Targ BSP | Targ % | Pol BSP | Pol % | TWA | Targ TWA | TWS | TWD | vmg BSP | vmg Targ | vmg Pol | vmg Targ percent | vmg dist loss | vmg time loss | Targ time (s) | Pol time (s) | Actual time (s) | Targ time v. Act time diff | TWA time diff | Expected loss | Seconds per second loss | gps dist(ft) | BSP dist(ft) | Targ dist (ft) | gps v. BSP dist diff (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | S | 8.0 | – | – | – | – | – | 10.4 | 159.9 | 6.3 | 6.7 | 6.6 | 94.9 | -63.5 | -9.8 | 47.4 | – | – | – | – | – | – | – | – | – | – | – |
| 2 | P | 7.9 | – | – | – | – | – | 11.7 | 157.7 | 6.1 | 6.8 | 6.7 | 89.4 | -104.2 | -12.0 | 46.4 | – | – | – | – | – | – | – | – | – | – | – |
| 14 | P | 7.9 | – | – | – | – | – | 10.2 | 176.0 | 5.8 | 6.6 | 6.4 | 88.6 | -107.0 | -12.6 | 47.5 | – | – | – | – | – | – | – | – | – | – | – |

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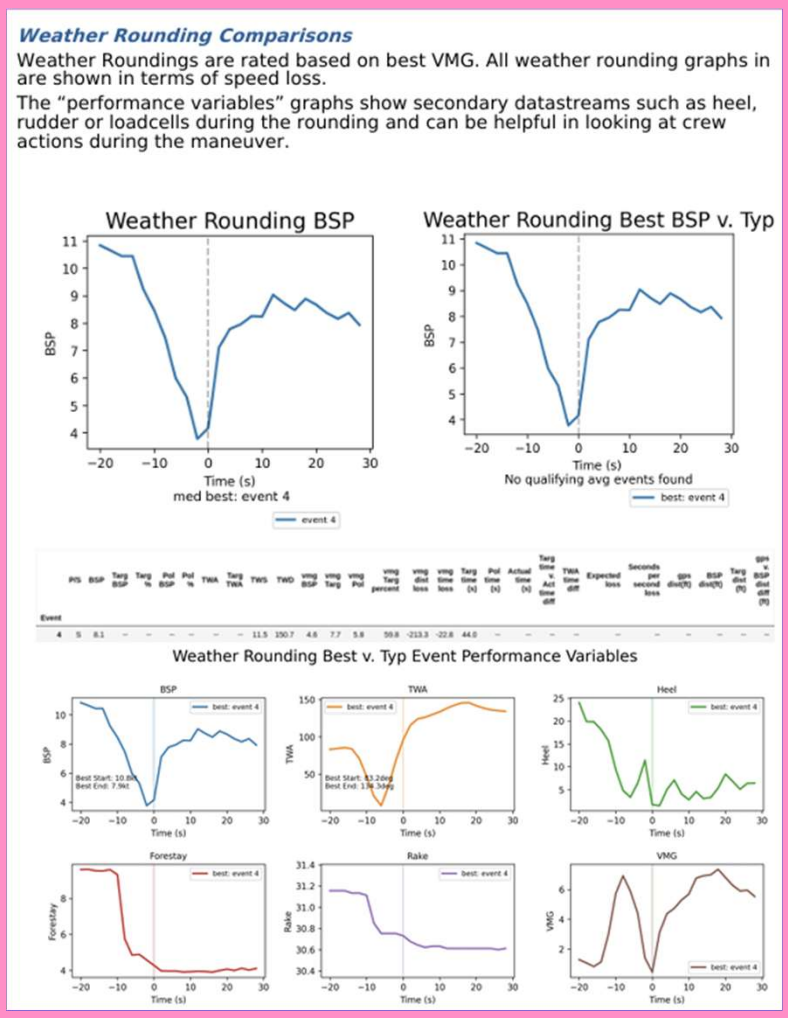
## Section 5: Rounding Comparisons

Roundings are mapped just like tacks & Jibes, This really helps with understanding how quickly you finished the maneuver and what really happened "at the mark". How long did it take you to get up to speed?  In this case, with only one weather rounding, it's hard to tell, but that's where the "ANALYSIS" function can help, by comparing all of your weather roundings.



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## Section 6: Instrument Data Quality

All of this analysis is based on the instruments recording what actually happened. The rata quality section help you understand the overall lever of confidence you should have in your data  It helps in understanding your real wind speeds and angles vs those reported, and what changes might be warranted to make them better in the future.

***Instrument Data Quality Assessment***

The following tables look at straight line data just prior and just after the tack events. This is typically around 20 seconds prior to the tack and 40 seconds after the tack and depends on your performance settings. The data is sorted by wind speed. This base data can be used to evaluate TWA correction tables, Wand offsets or compass issues.

### Upwind Data

The tables below presents your upwind data only The first table is an average of all qualifying tacks, while the table below it shows each tack individually. Tacks present a good opportunity to evaluate your masthead unit offset (MWA), TWA BSP and HDG calibrations

| | TWA In | TWA Out | dHdgCog In | dHdgCog Out |
|---|---|---|---|---|
| Port | -53.8 | 40.0 | -9.1 | 1.3 |
| Starboard | 45.5 | -43.2 | -0.6 | -9.6 |

| | Event # in | Event # out | TWS In | TWS Out | TWA In | TWA Out | TWA Diff | MWA In | MWA Out | HDG In | HDG Out | HDG Tack Angle | dHdgCog In | dHdgCog Out | TWA Tack Angle | Angle Difference | TWD In | TWD Out | TWD Shift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 3 | 7.8 | 10.9 | 52.2 | -50.8 | 103.0 | 22.5 | 24.9 | 93.1 | 162.0 | 68.9 | -4.0 | -10.0 | 103.0 | -34.1 | 140.3 | 113.2 | 27.1 |
| 1 | 13 | 15 | 9.2 | 10.7 | -59.1 | 41.2 | 100.3 | 25.4 | 19.4 | 164.7 | 82.8 | 82.0 | -11.0 | 1.3 | 100.3 | -18.4 | 106.9 | 119.2 | -12.3 |
| 2 | 11 | 13 | 11.2 | 10.3 | 47.7 | -42.7 | 90.3 | 22.4 | 23.3 | 79.8 | 154.5 | 74.7 | 3.3 | -6.2 | 90.3 | -15.6 | 122.3 | 112.2 | 10.1 |
| 3 | 15 | 17 | 11.3 | 12.9 | 39.2 | -41.6 | 80.8 | 17.0 | 20.1 | 90.8 | 157.8 | 67.0 | -0.7 | -9.8 | 80.8 | -13.8 | 125.8 | 117.7 | 8.1 |
| 4 | 23 | 25 | 11.5 | 13.9 | -48.4 | 38.7 | 87.2 | 21.2 | 21.0 | 171.1 | 103.7 | 67.3 | -7.2 | 1.3 | 87.2 | -19.8 | 124.8 | 137.1 | -12.3 |
| 5 | 25 | 27 | 12.7 | 10.9 | 42.9 | -37.8 | 80.7 | 23.5 | 20.0 | 101.7 | 167.9 | 66.2 | -0.9 | -12.6 | 80.7 | -14.6 | 139.5 | 135.6 | 3.9 |

### Downwind Data

The tables below presents your downwind data only The first table is an average of all qualifying jibes, while the table below it shows each jibe individually. Jibes present a good opportunity to evaluate your TWA, BSP and HDG calibrations

| | TWA In | TWA Out | dHdgCog In | dHdgCog Out |
|---|---|---|---|---|
| Port | -153.5 | 153.4 | 6.2 | -79.6 |
| Starboard | 140.7 | -145.5 | -321.3 | 8.1 |

| | Event # in | Event # out | TWS In | TWS Out | TWA In | TWA Out | TWA Diff | HDG In | HDG Out | HDG Jibe Angle | dHdgCog In | dHdgCog Out | TWA Jibe Angle | Angle Difference | TWD In | TWD Out | TWD Shift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 17 | 19 | 10.6 | 10.1 | 140.7 | -145.5 | 286.1 | 30.4 | 275.2 | 115.2 | -321.3 | 8.1 | 73.9 | 41.3 | 146.5 | 131.5 | 15.0 |
| 1 | 19 | 21 | 13.8 | 17.6 | -152.3 | 151.6 | 303.8 | 274.2 | 179.7 | 94.5 | 6.1 | -167.6 | 56.2 | 38.3 | 125.6 | 152.1 | -26.5 |
| 2 | 7 | 9 | 14.5 | 11.0 | -154.7 | 155.1 | 309.8 | 287.0 | 347.7 | 60.7 | 6.2 | 8.3 | 50.2 | 10.5 | 134.7 | 147.6 | -12.9 |

### Rounding Data

The tables below presents your rounding data only The first table is an average of all qualifying events, while the table below it shows each event individually. Roundings are a good opportunity to look for wind speed changes due to upwash or incorrect TWA corrections.

| | TWS In | TWS Out | dHdgCog In | dHdgCog Out |
|---|---|---|---|---|
| Port | 9.8 | 10.3 | -7.5 | -42.6 |
| Starboard | 11.5 | 10.6 | -4.1 | 0.6 |

| | Event # in | Event # out | TWS In | TWS Out | Type | dHdgCog In | dHdgCog Out | TWD In | TWD Out | TWD Shift | BSP In | SOG In | dBspSog In | BSP Out | SOG Out | DBspSog Out |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 21 | 23 | 9.2 | 10.3 | LR | 10.7 | 0.2 | 133.4 | 126.5 | 6.9 | 6.6 | 6.5 | -0.1 | 7.8 | 6.7 | -1.1 |
| 1 | 0 | 1 | 9.8 | 9.9 | LR | -14.8 | -42.8 | 113.8 | 130.2 | -16.4 | 5.4 | 5.2 | -0.2 | 8.2 | 8.7 | 0.5 |
| 0 | 3 | 5 | 10.4 | 10.3 | WR | -25.6 | -85.5 | 111.9 | 135.6 | -23.7 | 8.2 | 7.5 | -0.7 | 8.7 | 8.8 | 0.1 |
| 2 | 5 | 7 | 11.9 | 11.6 | LR | 2.4 | 44.1 | 146.6 | 138.0 | 8.6 | 8.9 | 9.1 | 0.2 | 7.2 | 7.5 | 0.3 |
| 3 | 9 | 11 | 12.7 | 10.2 | LR | 0.1 | 0.5 | 149.5 | 118.5 | 31.0 | 9.3 | 9.6 | 0.3 | 6.8 | 6.5 | -0.3 |

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## Section 7: Leg Details

Sometimes getting a closer look at the individual legs can help understand specific issues. This is especially true when you have a multi lap course and the tracks all overlay. This view breaks down each leg and the performance of each event within it.