In the Chat Room jeff7285 asked "Is it me or has this been a very difficult race?"

Racing on Lake Ontario can be tricky, challenging, when it involves the whole lake. Conditions are unique to their area and besides winds, include currents, wave actions and localized gusts that SOLers do not have to contend with but on-the-water boats face. As a result, what appear to be short-term advantages may lead you to a place you wished you had not gone!

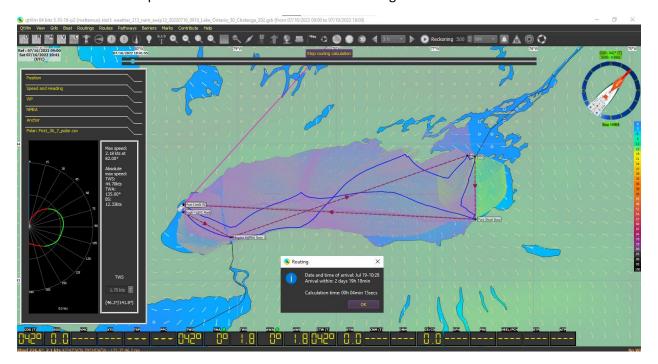
You may remember that last year **bonknhoot** said in the Chat Room the 2021 Race was "Snakes and Ladders" or as one SOLer commented "Chutes and Ladders".

Tropical air masses from the Gulf of Mexico are a major influence on the Lake in the summer. The cool lake surface air creates lake breezes particularly around built up areas. The western end of the Lake is influenced by the higher Niagara Escarpment and the channeling of the Dundas Valley and the funneling impact of the Niagara River. As we rounded the Niagara Mark and headed up to M9 and the north eastern end of the Lake we were sailing into an area highly influenced by the many straits, islands and the funnelling effect of the St. Lawrence River Valley. After rounding the Ford Shoal Buoy the on-thewater boats reported that they encountered squalls that made Sunday night and Monday tough going.

There were 63 boats racing on-the-water including 5 Beneteau 36.7's. All but one of them finished ahead of SOL leader **Vita_Maldita**. Their finishes would have been influenced by both favourable and unfavourable currents, sea conditions and local gusts and squalls not forecast by the NOAA WX's that we SOLers were sailing in. The modifications of the Polar being used by SOL to try and replicate the impact of sail changes may have also had an impact.

Pre-race Planning

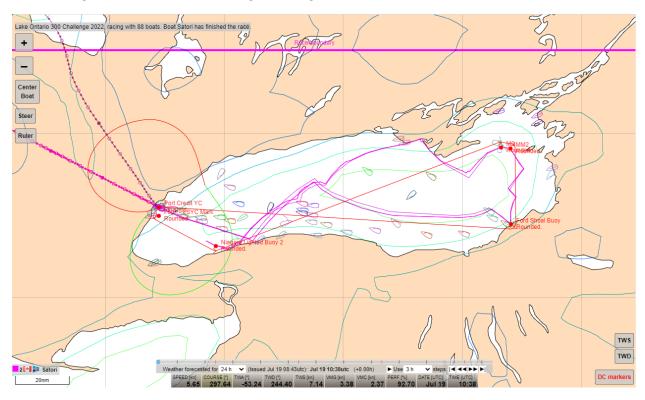
Prior to the Race I did a routing for **Satori** which showed that it was going to be a slow race with a duration after route optimization of 2d 18h 54m with an average BS of 4.4 knts.



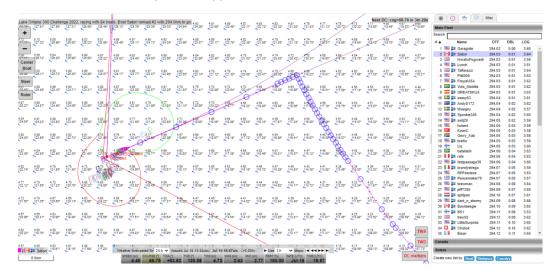
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The Race

Here is the route **Satori** sailed compared to the track of the winner **Vida_Maldita**. **Satori** actually finished in 2d 19h 55m 36s just 1h 1m 36s longer than the pre-race routing but using quite a different course along the south shore in both Leg 2 and Leg 6.



Legs 1 & 2 — It was apparent to me right from the start that the course chosen to the Niagara Lighted Buoy 2 in the south east winds immediately after rounding of the Fogh LSYC Mark was likely to be important in the final placement. Since it might be perceived as being counter-intuitive it was likely to split the fleet and that is exactly what happened.

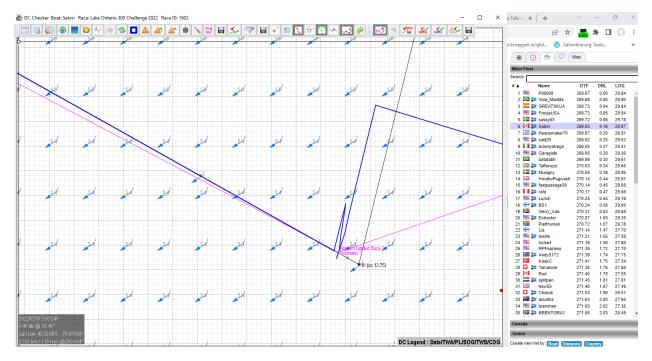


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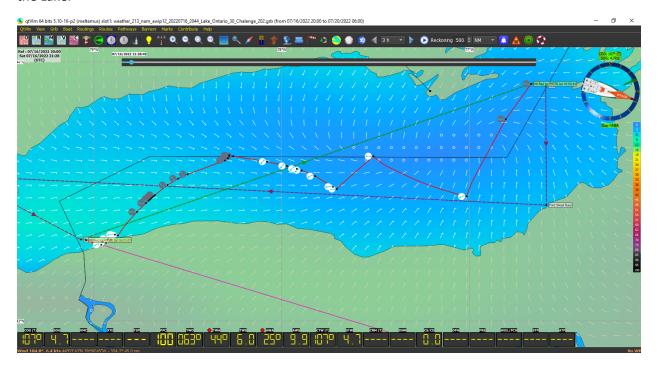
Satori started in 7th place but was 1st to round the Fogh LSYC Mark virtually tied with **Pit8008** and only slightly ahead of **FreyjaUSA** and 5 other boats including SOTP's **sailj29**. Only 11 boats tacked north east which included the usual suspects ranked highly in SOL and using Qt routing software. **Satori** stayed on this tack for 40 minutes before tacking to the Niagara Lighted Buoy 2.

I am not sure how the Race Organizers do this but the next WX was 1 minute before **Satori** was to round the Niagara Mark!!

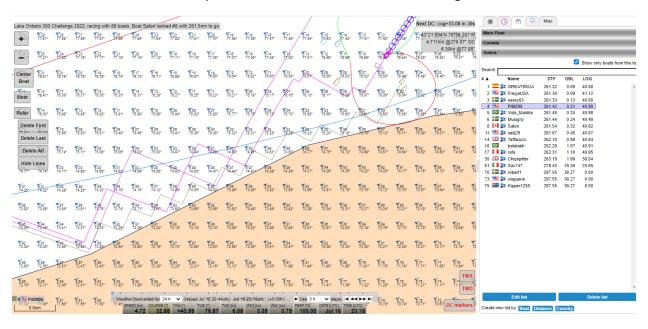
Approaching the Niagara Mark **Satori** was in 1st place but still virtually tied with **Pit8008** and only 0.1 nm ahead of **FreyjaUSA**. Here I was sitting at the helm for the rounding with the intention of intervening, when **Satori** had cleared the Mark, for a tighter rounding than my so called safe routing DC would provide. To my shock and dismay **Satori's** rounding DC fired early, probably only one crank of the Server, and I had to intervene to recover as quickly as possible by doing a 180 to get back to the Mark. In the process **Satori** went from 1st to 6th place in minutes and her DBL increased to 0.16 nms, leaving **Pit8008** tied for the lead with **Vida_Maldita**, who, as you know, eventually won the Race.



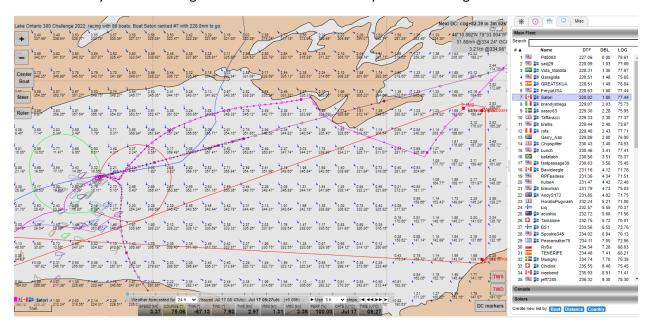
Leg 3 –Here is **Satori's** first routing to the M9 Mark after rounding the Niagara Mark which would change dramatically in future WX's and involved multiple tacks in head winds along the south shore of the Lake.



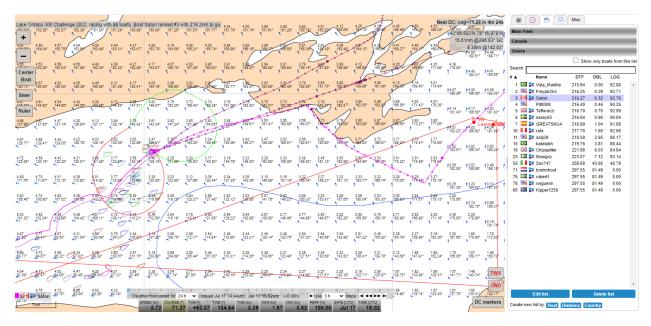
Multiple tacks were required in the head winds along the south shore and here is **Satori's** burgundy track that included 11 tacks compared to **Pit8008's** 19 tacks before heading north east to M9



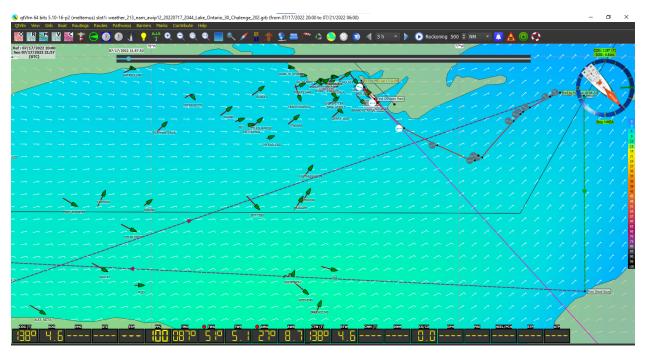
The next 2 WX's finds **Satori** sailing in north west winds and being routed up to the west shores of Prince Edward County before arriving at M9 1h 35m later than the previous routing.



In the next WX 17 Jul 14:45 UTC **Satori** is being routed to skim the south west shoreline of Prince Edward County in a south south east wind which caused me to intervene to eliminate the risk of multiple BBQ's and reduce the number of tacks and the associated PL.

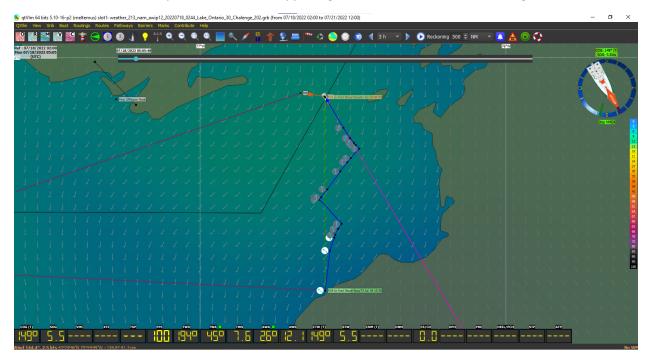


Here is a look at the spread of the fleet at 17 July 22:00 UTC. No explaining of the spread of the fleet. Some are sticking to the rhumbline but all have been coping with impact of local winds.

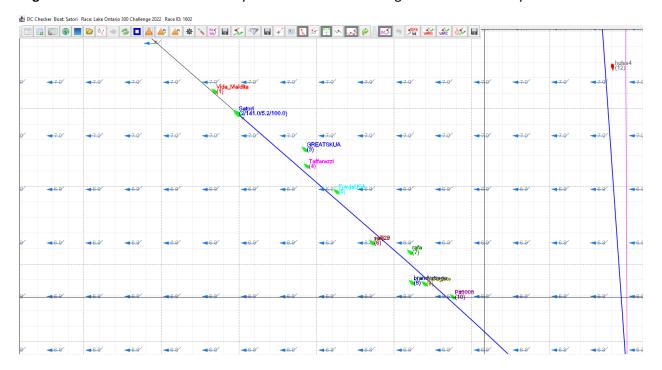


As SOLers crossed the Lake from Niagara to M9 the winds veered from E to SW to N to SSE to SE to E to SSE! Looking at the wind conditions ahead was critical. Snakes and ladders!!

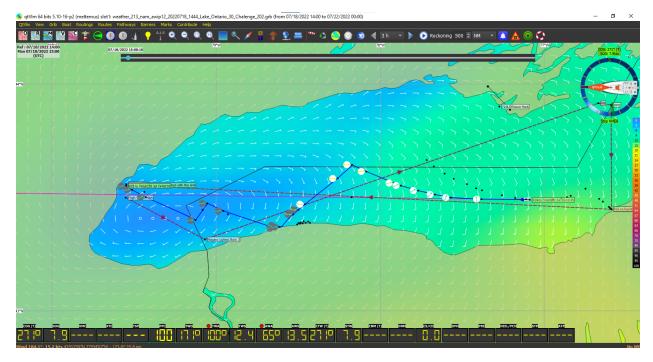
Legs 3 & 4 —Here is **Satori's** route to Ford Shoal Buoy after rounding M9. Unfortunately **Pitt8008**, who was 1st, failed to round M9 and recovered to 10th place. **FreyjaUSA**, who was 4th, also failed to round M9 and recovered to 7th place. What was happening with these failed mark roundings?



Leg 5 – Positions of the leaders 18 July 11:31 UTC after rounding the Ford Shoal Buoy.

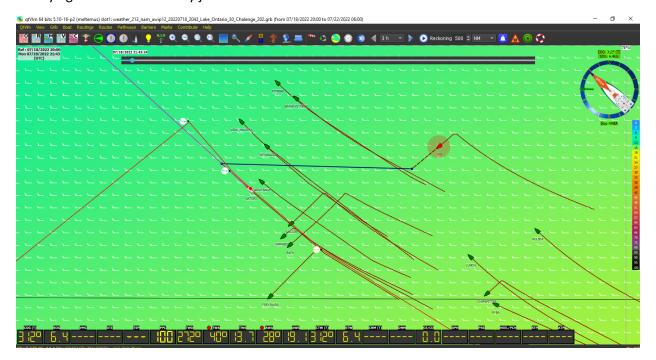


WX 18 July 14:45 UTC route R26 Blue to PRT Finish ETA 16 July 08:52 UTC. Only an 11 min improvement but a significant shift in the wind drawing us to the west with the counter-clockwise wind centred around Blue Goo just north and west of Niagara with less time tacking along the south shore. The unconnected black dots are the POI's of the previous routing. So you see the change moving west and the favourable elimination of some of the tacks along the south shore.

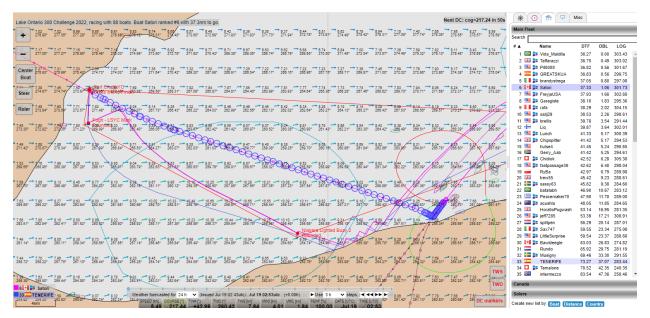


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Freyja, rafa, Garagiste and sailj29 have all tacked into higher winds to try and improve their positions by leaving the parade, notwithstanding that is not the route QT recommended for Satori. You know how this can unnerve you. Now I am second guessing Qt! Should Satori cover the competition? Qt had done Satori well to this point so I let the competition go, as did Vida_Maldita and Pit8008 who were more important for Satori to cover. Note Satori's position is to windward which proved tactically critical in staying ahead of Pit8008 by just under 2 minutes at the Finish Line.

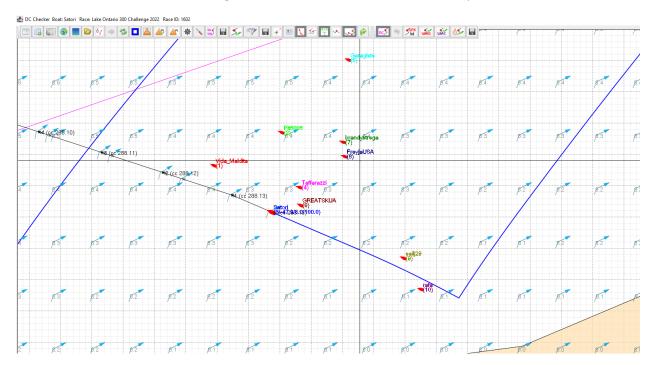


Here is **Satori's** routing just before the tack to the PRT end of the Finish Line. The Server placement of **Satori** is 6th based on DTF as the seagull flies without the Server considering the impact of the routing on BS and TWA. You only know your true placement at the Finish Line and some mark roundings.

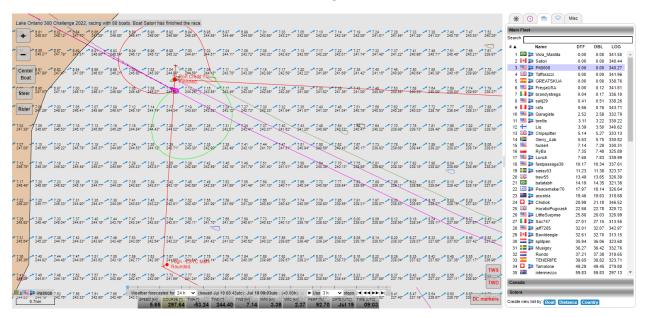


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The leaders after the tack from the south shore to the Finish Line. **Satori** is 3rd but likely to finish ahead of **Pit8008**, who has made a marvelous recovery. The angle of the Finish Line provides an advantage to **Satori** at the PRT end, as does being to windward, while **Pit8008** is farther up the Line.



The Finish and Satori is 2nd. You can see the advantage at the PRT end of the Finish Line.



Satori was 4 mins 57 secs behind **Vida_Maldita**, who did an excellent job of keeping the lead, and 1 min 58 secs ahead of **Pitt8008** who came back from a missed rounding just like **Satori**. **FreyjaUSA** finished 6th after also missing a rounding! **Top Ten** finished within 43m 42s of the Leader.

Great race. Thanks to all you 70 SOLers who raced.

John/Satori July 21st, 2022