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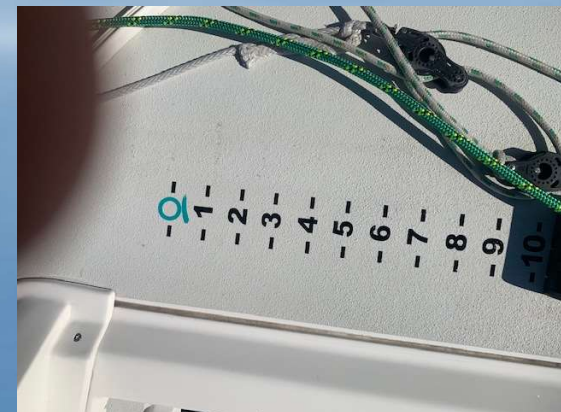
<https://www.quantumsails.com/en/resources-and-expertise/category/racing>



THE NEXT LEVEL SYSTEM SAILING ORC



SAILING WITH A SYSTEM



/ FIVE BUILDING BLOCKS



MARK



MEASURE



RECORD



EVALUATE



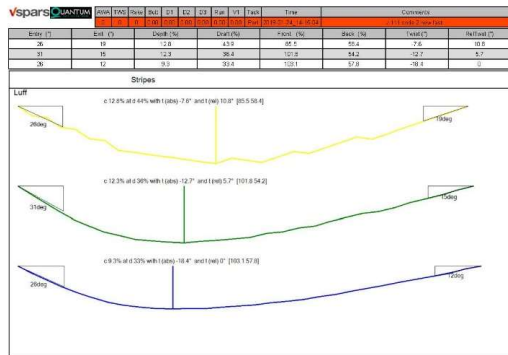
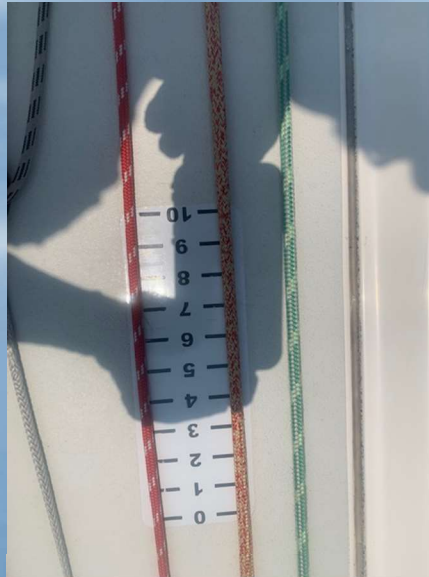
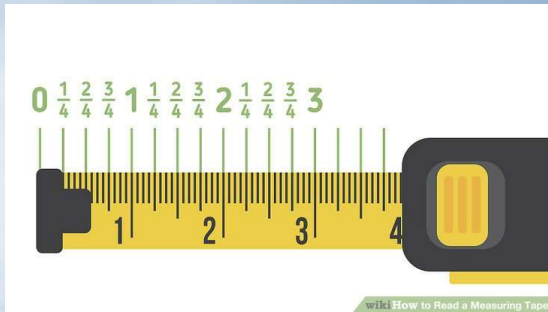
COMMUNICATE



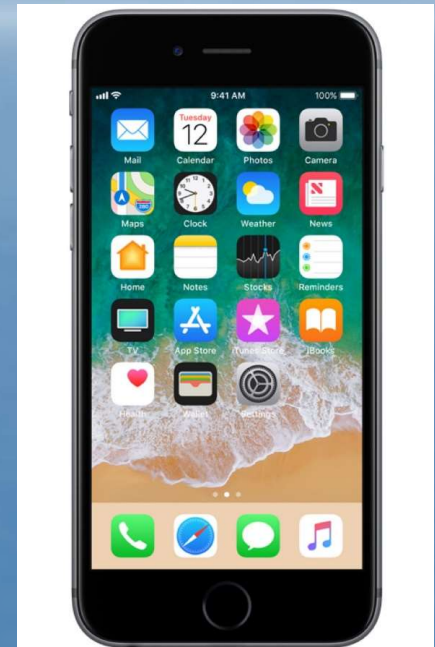
EVERYTHING IS MARKED



MEASURE



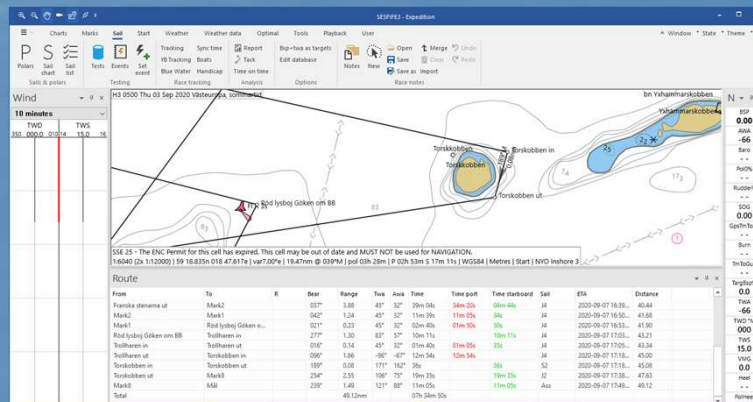
RECORD



RACE CHART



WIND S	BOAT SP	SAIL #
V 1	STB HD UPWIND	HEEL
D1	PT-HD UPWIND	TRIM
BACK STAY	STB-HD DOWN	WIND SHIFT
VANG	PT-HD DOWN	GATE CHOICE
JIB HALYARD	START LINE	MAIN PICTURE
MAIN HALYARD	MARK #1	GENOA PICTURE
JIB SHEET	MARK #2	PRE-RAC TALK
MAIN SHEET	CURRENT	POST-RA TALK



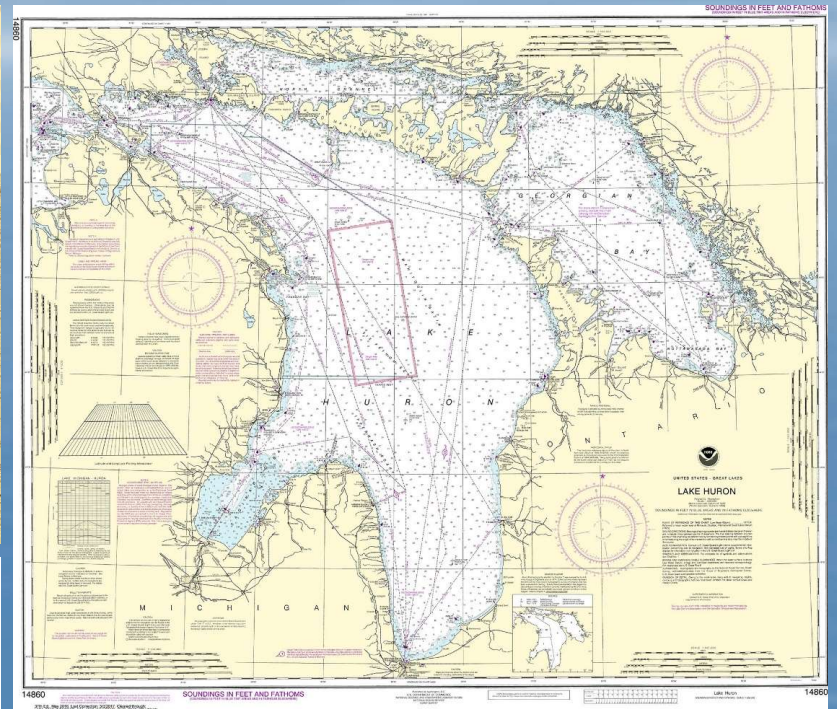
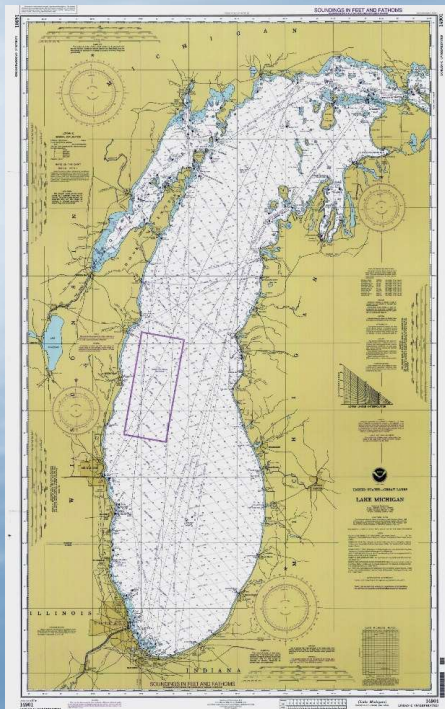
COMMUNICATE



VMC NEXT LEVEL



PLAN



THE BEGINNING

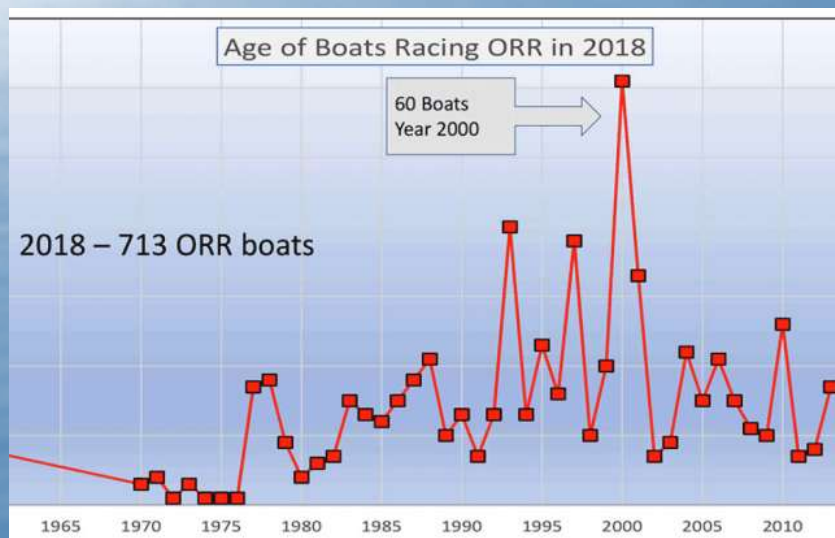


Transpacific Yacht Club
Transpac Honolulu Race

July 13, 2021



ORC *world leader in rating technology*



ORC - AL DECLERCQ


- **Have your sail measurements updated**
- Main
- Largest Headsail
- Largest Symmetrical
- Largest A-Sail
- Any A-sail or S-sail with a mid girth of 85% or smaller than the foot length.
-
-
- **Get your ORC certificate early**
- When you receive your certificate email it along with your 2020 ORR & PHRF certificates to your sailmaker to review for accuracy.
-
- **Review Sail limitations with your sailmaker.**
- Some boats will be allowed one less spinnaker than in ORR
-
- **Penalty Sails**
- Free Flying Headsails set forward of the headstay
- Large Roach Headsails
- A-sails or S-sail with a mid girth less than 85%

orc.org - Bing


ORC - World Leader in Rating Technology

https://www.orc.org/index.asp

☆ ☆



world leader in rating technology



ORC Rules and Regulations - 2020 editions available now

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FREE DIGITAL ACCESS TO SEAHORSE


All ORC certificate holders have FREE bi-monthly access

Latest news



Preliminary dates set for 2022 Vic-Maui Race

Sailors, of all adventurers, know that it is darkest just before the dawn. We are currently deep in the clutches of a global pandemic, but the long term forecast is improving - including treatments and vaccines appearing on the horizon. And so we are ramping up preparations for the next Victoria to Maui Race in July 2022 [More ...](#)



Eight bells: Dave Irish

David H. Irish passed away peacefully in his home in Harbor Springs, Michigan, at the age of 83. He is survived by his wife Ann, four children, 11 grandchildren, 4 great-grandchildren, and numerous nieces and nephews. From his home base in upper Michigan, where water turns to ice almost half the year, [More ...](#)

Ten weeks to go to New Zealand Millennium Cup

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1/18/2021

21

ORC CERTIFICATE



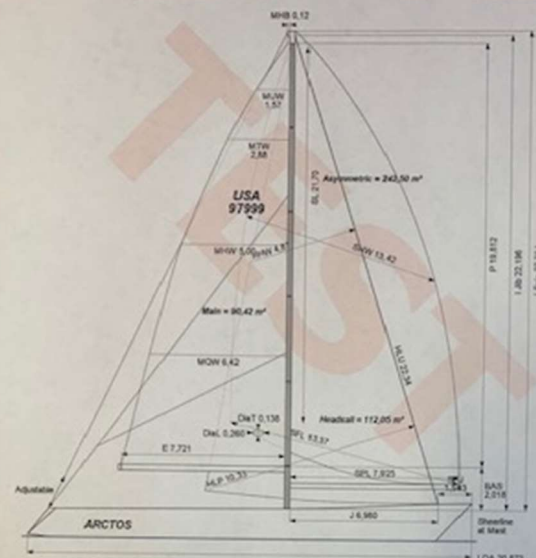
2020 ORC Club Certificate Appendix

BOAT	Name	ARCTOS	Certificate Number	US6587
	Sail Nr	USA-97999	Issued On	23/11/2020

TIME ALLOWANCES								
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	
Boat VMG	742.8	611.8	557.8	530.7	517.1	508.7	494.6	
52°	474.4	398.8	374.7	364.5	358.5	356.2	346.4	
60°	439.5	377.5	360.3	351.2	344.9	340.8	329.5	
75°	410.9	362.7	343.3	330.5	322.0	316.2	309.0	
90°	410.6	360.6	336.4	316.1	304.2	295.7	285.3	
110°	457.5	380.2	350.5	327.3	306.1	286.8	257.7	
120°	498.0	394.2	351.5	323.2	304.9	288.9	256.4	
135°	557.1	433.0	369.7	339.3	309.3	282.6	242.1	
150°	670.4	519.1	428.7	378.1	348.0	319.4	267.4	
Run VMG	774.1	599.4	495.0	436.6	398.9	369.7	308.8	

Selected Courses								
Windward / Leeward	758.5	605.6	526.4	483.7	458.0	439.2	401.7	
Circular Random	620.9	499.8	434.7	396.4	371.7	353.9	326.6	
Coastal / Long Distance	760.0	567.1	470.6	414.2	383.1	356.9	310.6	
Non Spinnaker	657.1	526.9	455.8	413.2	385.4	365.8	338.0	

Velocity Prediction in Knots for True Wind Speeds								
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	
Boat Angles	45.0°	43.1°	41.6°	40.1°	39.4°	39.0°	38.8°	
Boat VMG	4.85	5.88	6.45	6.78	6.98	7.08	7.28	
52°	7.59	9.03	9.61	9.88	10.04	10.11	10.39	
60°	8.19	9.54	9.99	10.25	10.44	10.56	10.92	
75°	8.76	9.93	10.49	10.89	11.18	11.39	11.65	
90°	8.77	9.98	10.70	11.39	11.84	12.17	12.62	
110°	7.87	9.47	10.27	11.00	11.76	12.55	13.97	
120°	7.23	9.13	10.24	11.14	11.81	12.46	14.04	
135°	6.46	8.31	9.74	10.61	11.64	12.74	14.87	
150°	5.37	6.93	8.40	9.52	10.35	11.27	13.46	
Run VMG	4.65	6.01	7.27	8.25	9.03	9.74	11.66	
Gybe Angles	141.0°	141.9°	144.0°	150.0°	155.0°	152.0°	147.3°	



BOAT	GPH	HULL
Name ARCTOS	448.1	LOA 20.873m
Sail Nr USA-97999		MS 4.621m
		Draft 3.179m
		Displacement 11,223kg
CLASS		IMS Division Performance
Class AND70		Dynamic Air 2.066%
Designer ANDREWS		Construction Cored
Builder DENCHO		Armed Core No
Series 051992		Carbon Rudder Yes
Age Date 051992		Light Standalone No
Age Allowance 0.487%		
		MSL 18.131m VCCO -0.028m SW 48.6kg/m
		RL 15.830m VCCO -0.028m WS 49.34m
		LSMO 17.877m Displacement/Length ratio 2.0356
COMMENTS		Water Ballast 0 Trim Tab No
5 GAL OF FUEL F80 ADJ SCALE = 25220lbs W 5 GAL FUEL		BLR Index 0.0006
PROPELLER		CENTERBOARD
Insulation Spst	PRD 0.467	
Type Folding 2 blades	PPA 0.119	N/A
	PPA 0.0028	
SCORING OPTIONS		
	COASTAL / LONG DISTANCE	WINDWARD / LEEWARD
Time on Distance	438.1	498.6
Time on Time	1.3695	1.3538
Triple Number	Low Medium High	Low Medium High
Time on Distance	515.9 396.8 346.5	682.0 501.6 429.8
Time on Time	1.3083 1.7012 1.9480	0.9897 1.3456 1.5704



2020
ORC Club
Certificate

Rating Office

Offshore
Racing
Congress



Certificate
Number US6587
Issued On 23/11/2020
ORC Ref NA
VPP Ver 2020 1.82
Invalid for Racing

Crew Weight
Default 1,551kg
Maximum 1,551kg
Minimum 1,163kg
When applied by the Ruler and SI
Non Manual Per No

Special Scoring
ToD ToT
Non Spin GPH 438.1 1.2796
Non Spin GPH 482.6 1.2970

Sails Limitations
Headsails 8 Spinnakers 6

Spinnaker configuration
Symmetric: No
Asymmetric: Yes 242.50
Flying J/S: No
Spin Pole: Yes

Class Division Length
CDL = 17.015

Stability (Measured)
Line Positive Stab.: 115.8°
Stability Index: 120.5

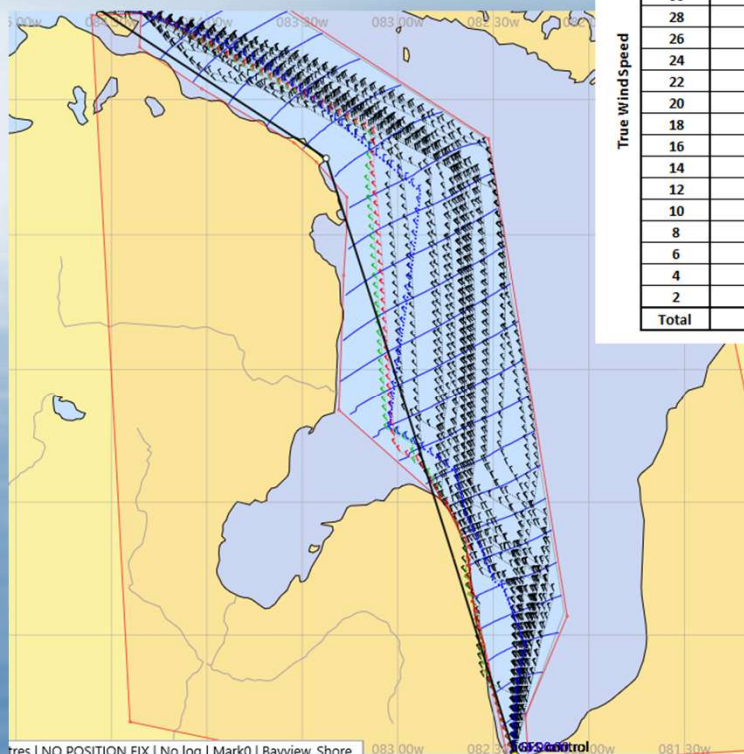
Owner

ORC AND CODE 0 ASYMMETRICAL SAILS

□



HISTORY



Bayview Mac Race 2020 - Shore Course w/ COVID-19 restrictions

POLAR GL 52 Heartbreaker

Min time	18h 30m 29s
Mean time	1d 00h 57m 29s
Max time	1d 05h 08m 28s
Mean distance	211.59nm

	True Wind Angle																		Total
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
40																			
38																			
36																			
34																			
32																			
30																			
28																			
26																			
24																			
22																			
20																			
18																			
16																			
14																			
12																			
10																			
8																			
6																			
4																			
2																			
Total																			



NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



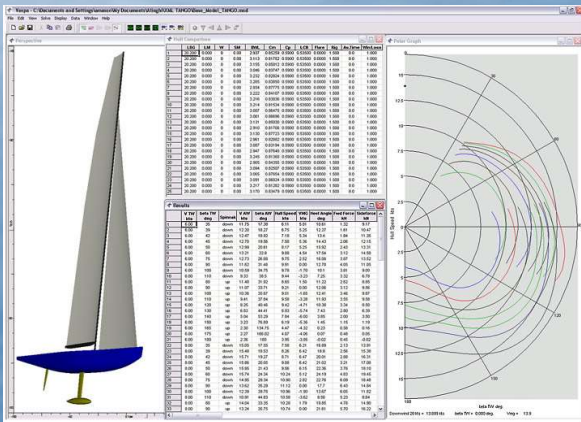
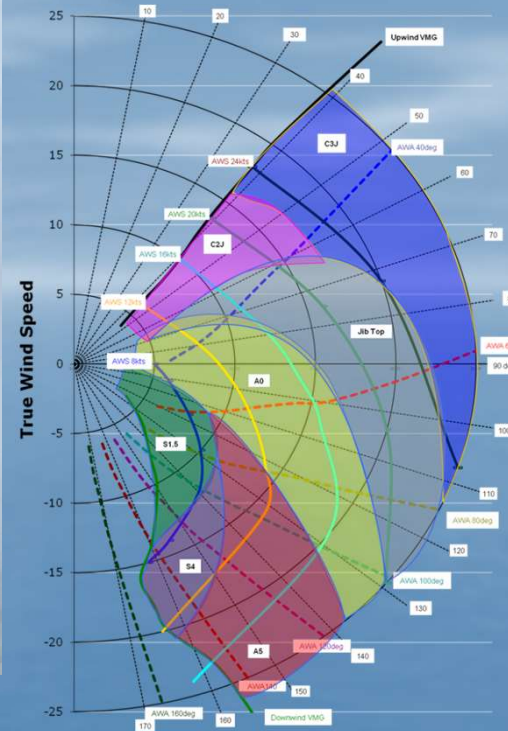
TRANSPAC 2008-2017: HEAT MAP

EACH CELL SHOWS THE AVERAGE % OF EACH RACE SPENT AT THE CORRESPONDING TWA/TWS COMBINATION

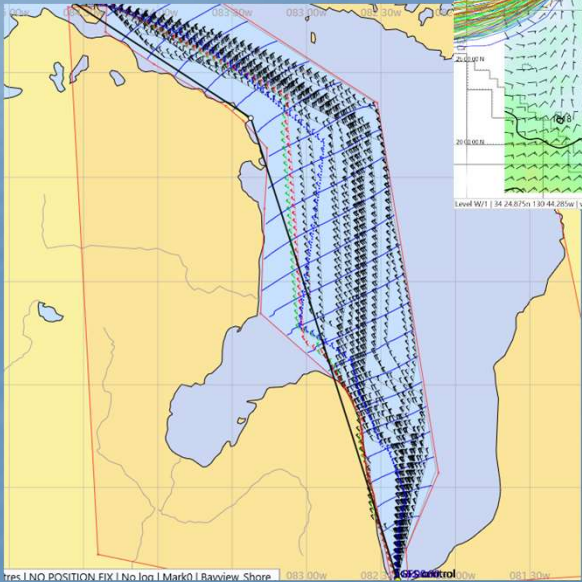
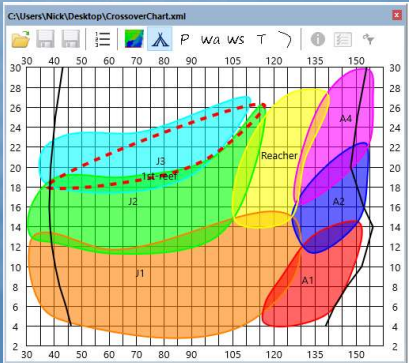
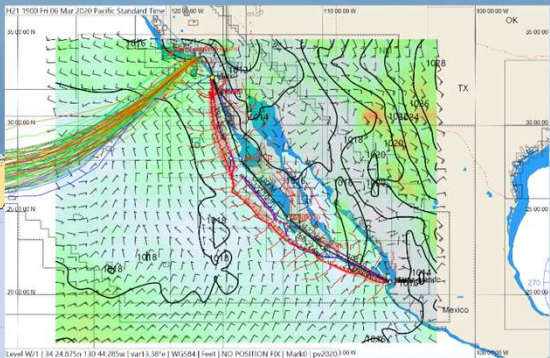
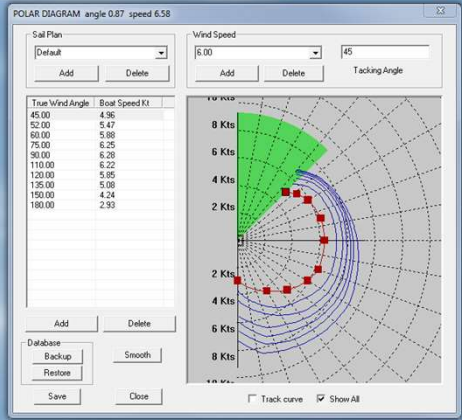
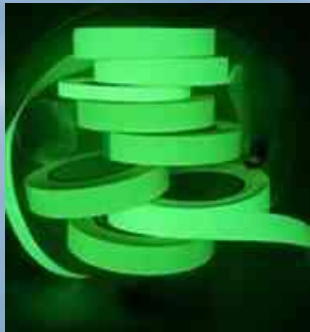
10 YEAR STUDY AT 25 ROUTES/YEAR

tw\ts\ts	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	tw\ts\ts
40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40
38	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38
36	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	36
34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34
32	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32
30	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30
28	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	28
26	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	26
24	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	24
22	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	1.9%	0.0%	0.0%	0.0%	22
20	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	1.1%	5.5%	0.0%	0.0%	0.0%	20
18	0.0%	0.0%	0.1%	0.1%	0.1%	0.3%	0.3%	0.4%	0.4%	0.7%	2.5%	4.9%	4.8%	0.0%	0.0%	18
16	0.0%	0.2%	0.1%	0.1%	0.2%	0.2%	0.3%	0.4%	0.8%	1.7%	3.8%	4.8%	4.4%	1.4%	0.0%	16
14	0.0%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%	0.9%	2.4%	4.0%	4.3%	3.4%	1.4%	0.0%	14
12	0.0%	0.8%	0.3%	0.4%	0.3%	0.3%	0.4%	0.4%	0.9%	2.5%	2.6%	2.7%	2.6%	0.0%	0.0%	12
10	0.0%	0.9%	0.6%	0.6%	0.4%	0.4%	0.5%	0.5%	0.9%	1.7%	1.3%	1.7%	0.6%	0.0%	0.0%	10
8	0.0%	0.7%	0.4%	0.4%	0.4%	0.4%	0.3%	0.6%	0.8%	0.8%	0.8%	1.0%	0.0%	0.0%	0.0%	8
6	0.0%	0.5%	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.6%	0.5%	0.2%	0.4%	0.0%	0.0%	0.0%	6
4	0.0%	0.3%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.3%	0.0%	0.0%	0.0%	4
2	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	2

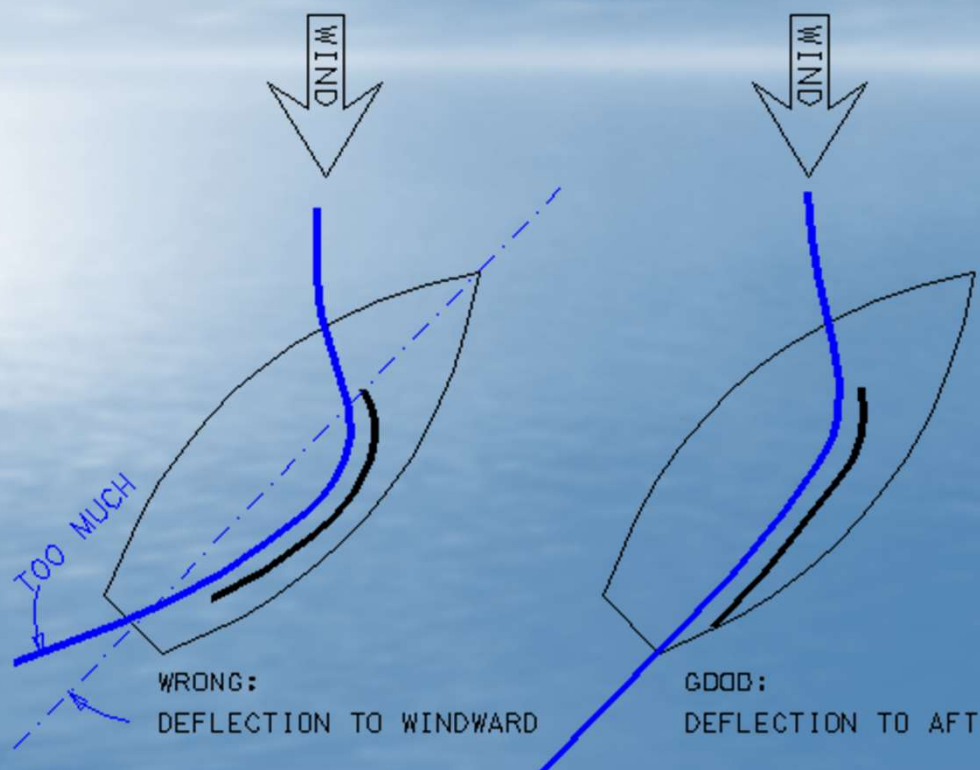
PIECES



THE PROCESS



VMC FASTER THAN VMG



TWS TWA V VMG Heel Reef Flat AWS AWA Lee Sail Flot

12.0	30.0	5.735	4.966	18.1	1.000	0.746	17.11	19.5	4.77	Up	FIAL	
12.0	33.0	6.261	5.251	19.4	1.000	0.731	17.45	20.7	4.17	Up	FIAL	
12.0	36.0	6.683	5.407	20.3	1.000	0.721	17.68	22.0	3.76	Up	FIAL	
12.0	39.0	7.033	5.465	21.1	1.000	0.717	17.81	23.3	3.46	Up	FIAL	
OptUp >	12.0	39.2	7.051	5.463	21.2	1.000	0.717	17.81	23.4	3.44	Up	FIAL
12.0	42.0	7.304	5.428	21.7	1.000	0.717	17.86	24.7	3.25	Up	FIAL	
12.0	45.0	7.511	5.311	22.1	1.000	0.724	17.82	26.2	3.10	Up	FIAL	

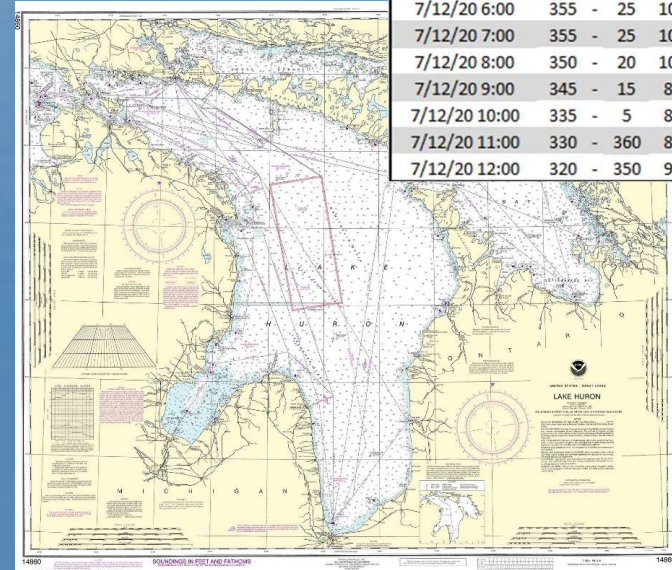
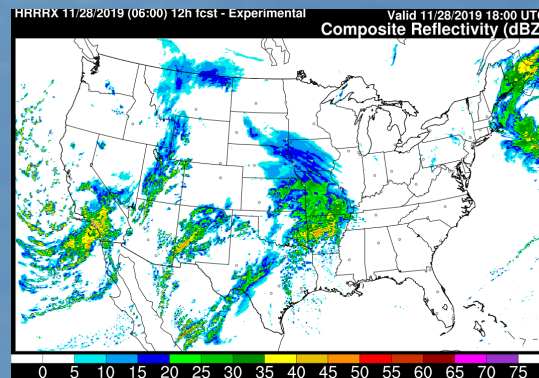
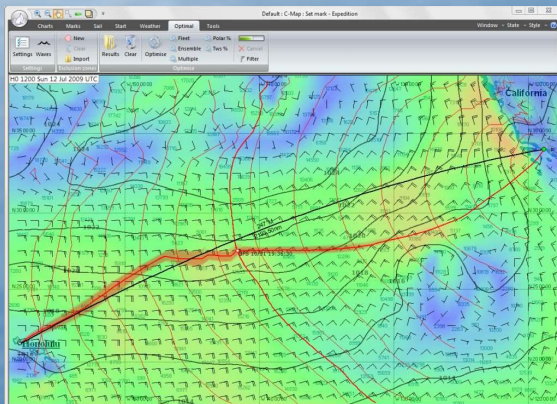
Farr 40 Downwind:

12.0	130.0	9.233	-5.935	15.4	1.000	1.000	8.99	80.3	1.15	Dn	FIAL	
12.0	135.0	9.096	-6.432	11.2	1.000	1.000	8.35	85.8	0.93	Dn	FIAL	
12.0	140.0	8.884	-6.806	8.1	1.000	1.000	7.64	92.3	0.75	Dn	FIAL	
12.0	150.0	8.354	-7.235	3.8	1.000	1.000	6.32	108.8	0.42	Dn	FIAL	
OptDn >	12.0	154.1	8.086	7.276	2.5	1.000	1.000	5.89	117.4	0.31	Dn	FIAL
12.0	160.0	7.673	-7.211	1.3	1.000	1.000	5.46	131.3	0.20	Dn	FIAL	
12.0	170.0	7.092	-6.984	0.5	1.000	1.000	5.16	156.2	0.09	Dn	FIAL	

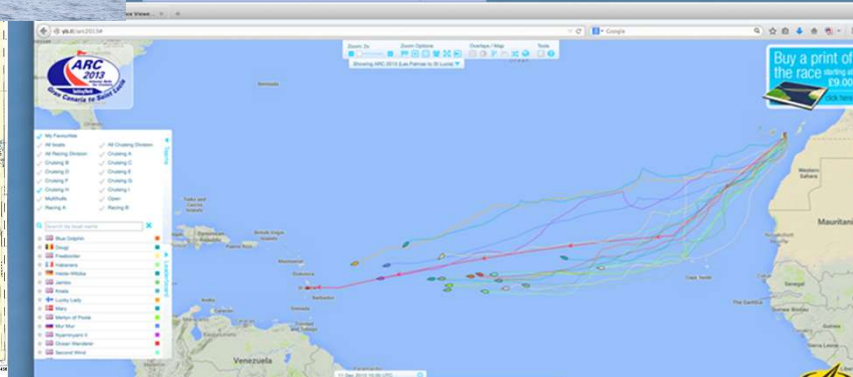
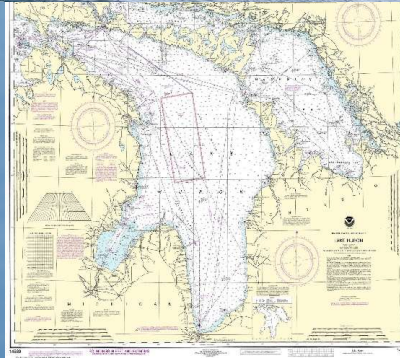
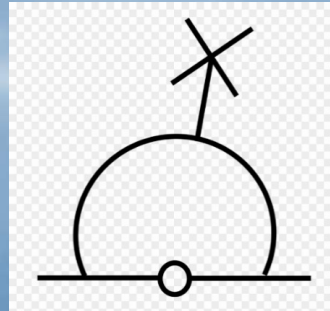
RACE DAY



Local Time	TWD(M)	TWS(kts)	Wave (m)
7/11/20 12:00	310 - 340	11 - 15	0 - 0
7/11/20 13:00	320 - 350	11 - 15	0.5 - 1
7/11/20 14:00	320 - 350	10 - 14	0.5 - 1
7/11/20 15:00	330 - 360	10 - 14	0.5 - 1
7/11/20 16:00	335 - 5	8 - 12	0.5 - 1
7/11/20 17:00	340 - 10	7 - 11	0.5 - 1
7/11/20 18:00	340 - 10	6 - 10	0.5 - 1
7/11/20 19:00	330 - 360	5 - 9	0.5 - 1
7/11/20 20:00	330 - 360	6 - 10	0.5 - 1
7/11/20 21:00	335 - 5	11 - 15	0.5 - 1
7/11/20 22:00	335 - 5	12 - 16	0.5 - 1
7/11/20 23:00	330 - 360	12 - 16	0.5 - 1
7/12/20 0:00	320 - 350	14 - 18	0.5 - 1
7/12/20 1:00	320 - 350	16 - 20	0.5 - 1
7/12/20 2:00	315 - 345	16 - 20	0.5 - 1
7/12/20 3:00	310 - 340	14 - 18	0.5 - 1
7/12/20 4:00	320 - 350	11 - 15	0.5 - 1
7/12/20 5:00	340 - 10	10 - 14	0.5 - 1
7/12/20 6:00	355 - 25	10 - 14	0.5 - 1
7/12/20 7:00	355 - 25	10 - 14	0.5 - 1
7/12/20 8:00	350 - 20	10 - 14	0.5 - 1
7/12/20 9:00	345 - 15	8 - 12	0.5 - 1
7/12/20 10:00	335 - 5	8 - 12	0.5 - 1
7/12/20 11:00	330 - 360	8 - 12	0.5 - 1
7/12/20 12:00	320 - 350	9 - 13	0.5 - 1



THE RACE



POST RACE



THANK YOU

