

Dinah - Jeanneau One Design 35



Figure 1 - OSTAR 2009 Race



Figure 3 - Dinah In Cobh Harbour



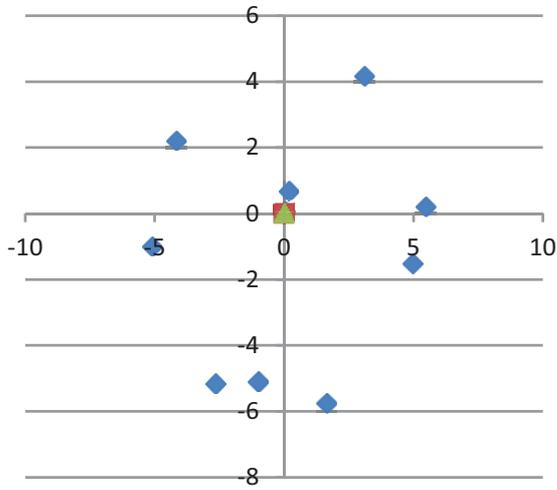
Figure 2 - A Jeanneau One Design 35



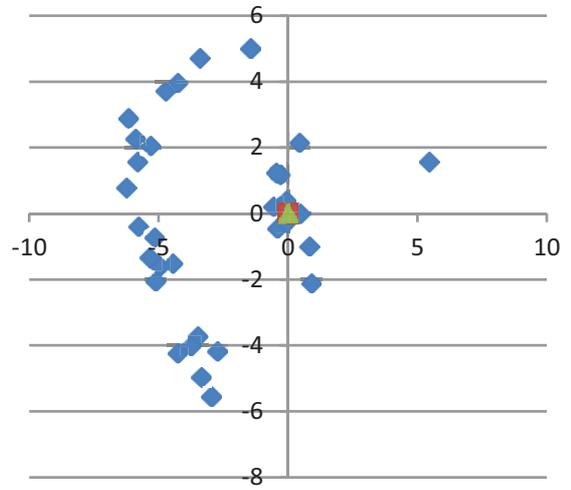
Figure 4 - Dinah's Crossing 05/07/2009 - 02/08/2009

Results of Real life Data and MATLAB VPP

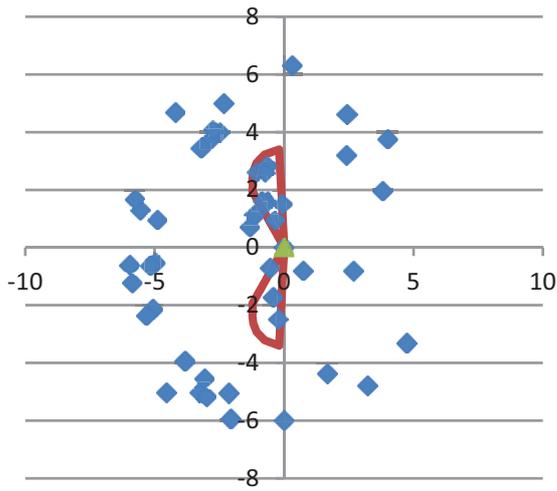
1 kts



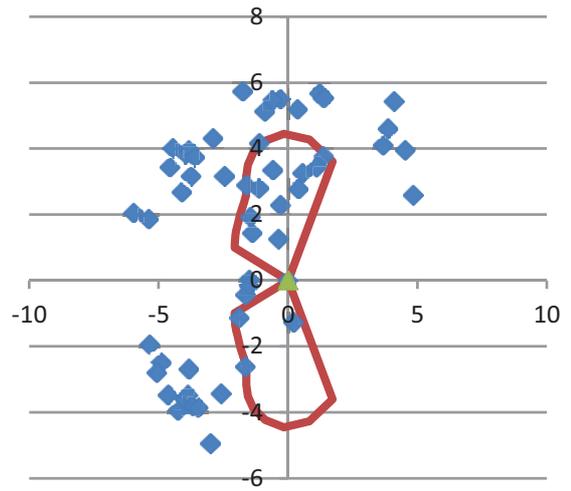
2 kts



3 kts

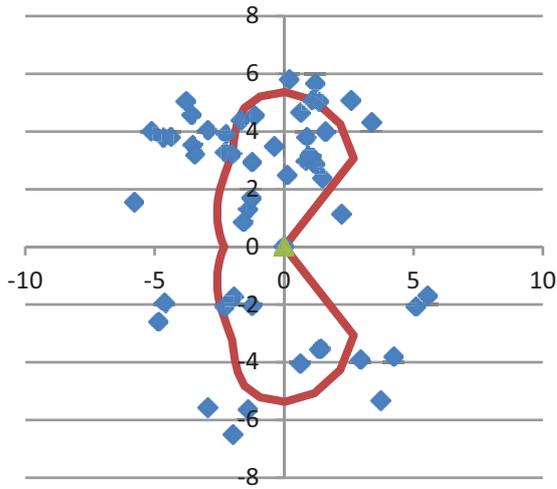


4 kts

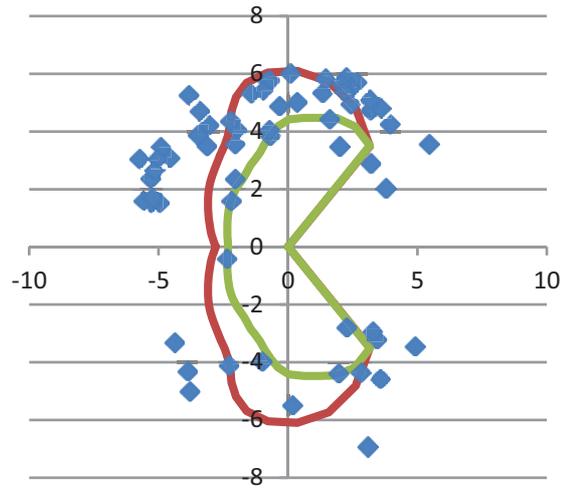


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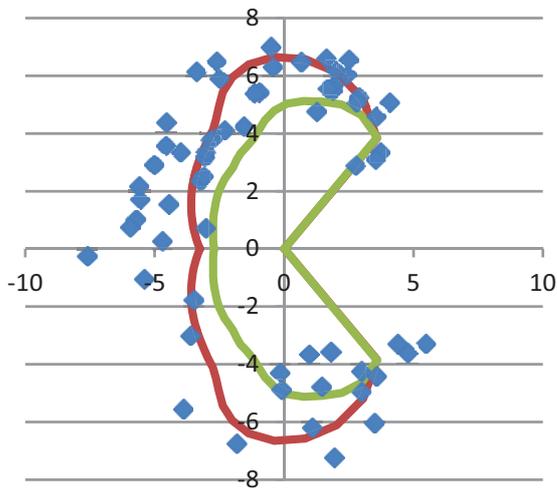
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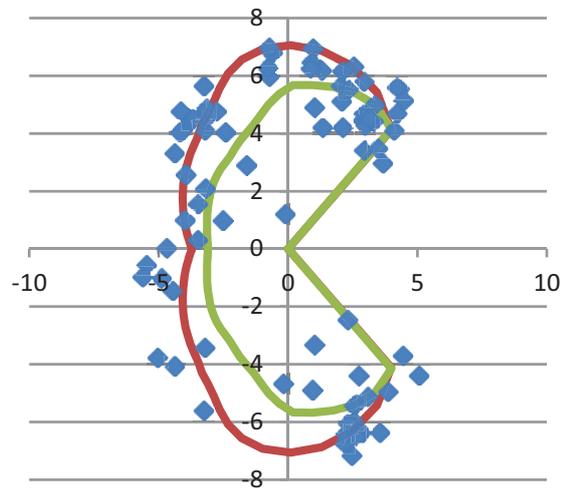
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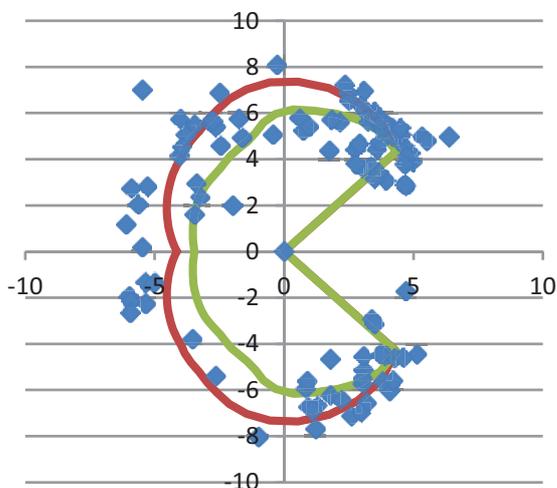
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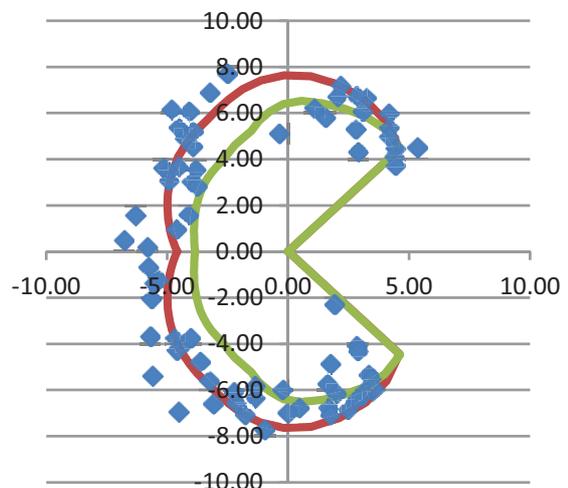
8 kts



9 kts

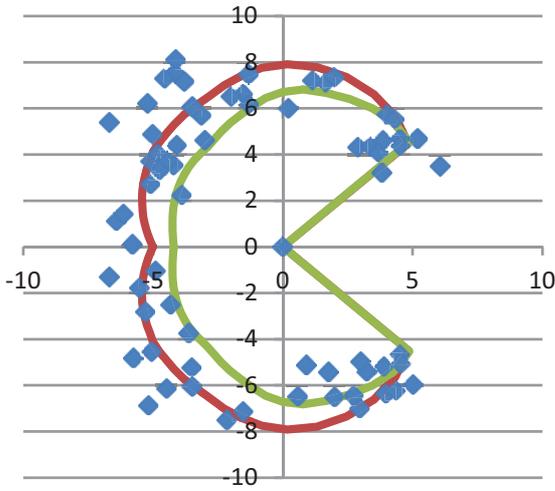


10 kts

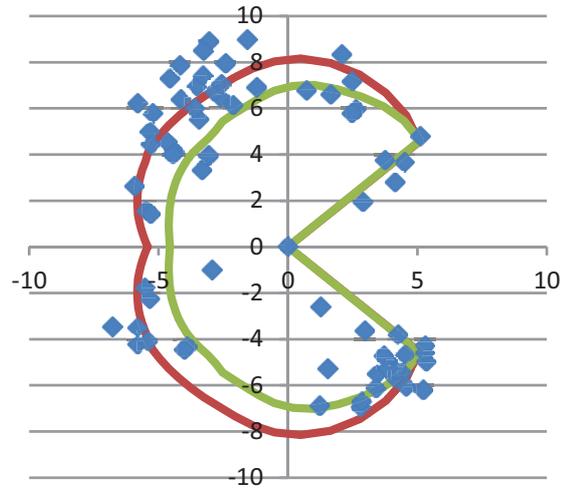


Results of Real life Data and MATLAB VPP

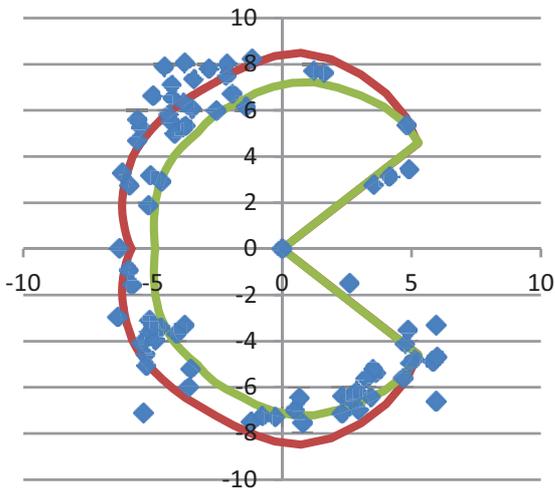
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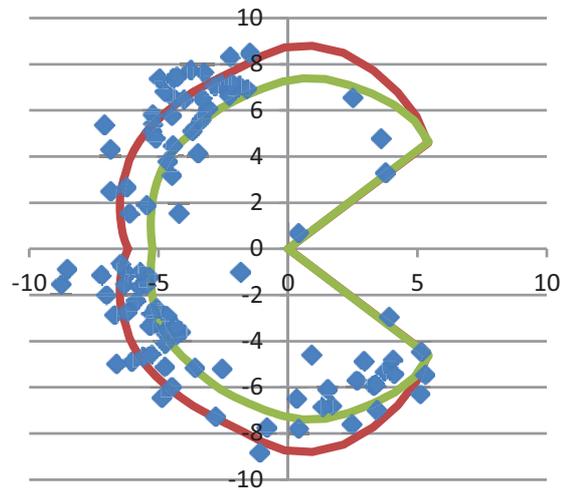
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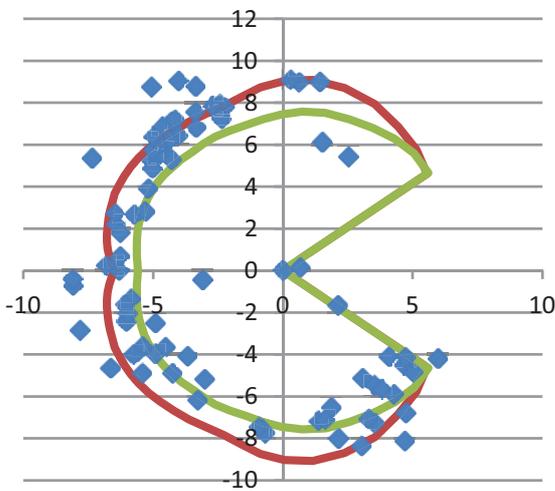
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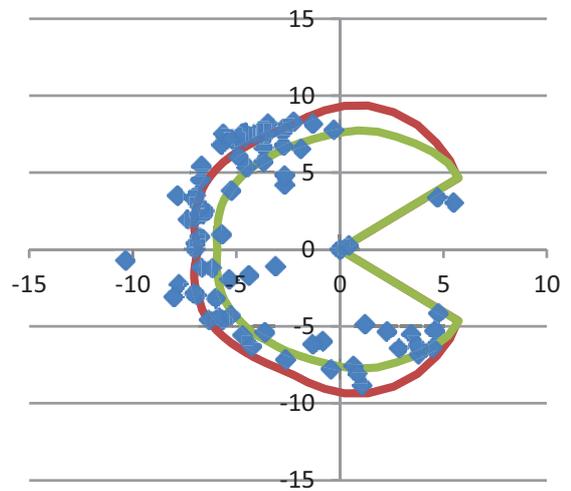
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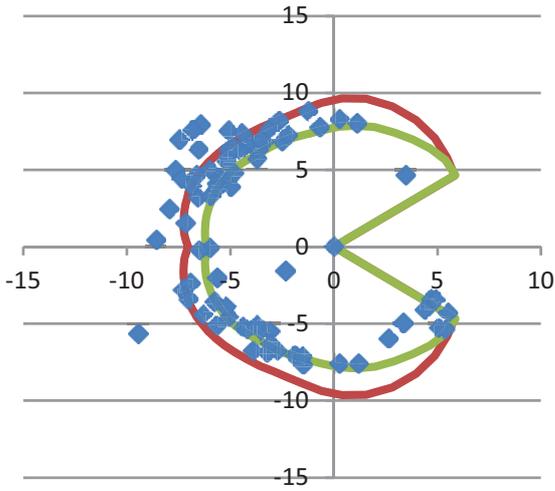
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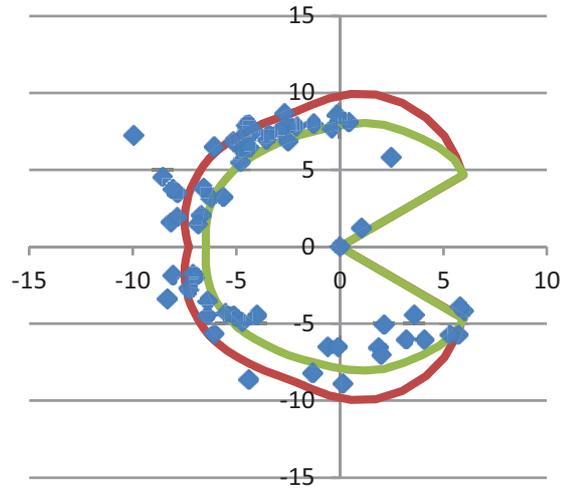
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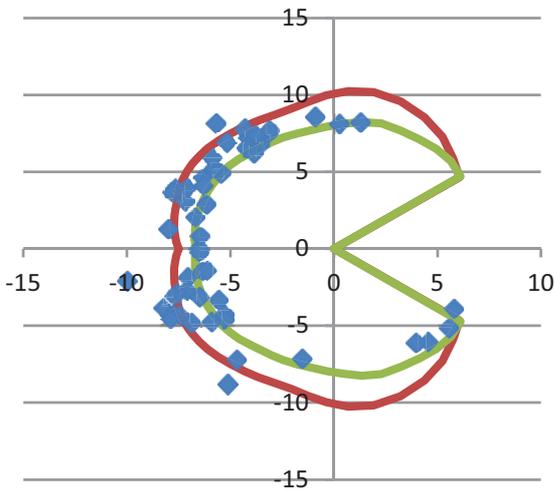
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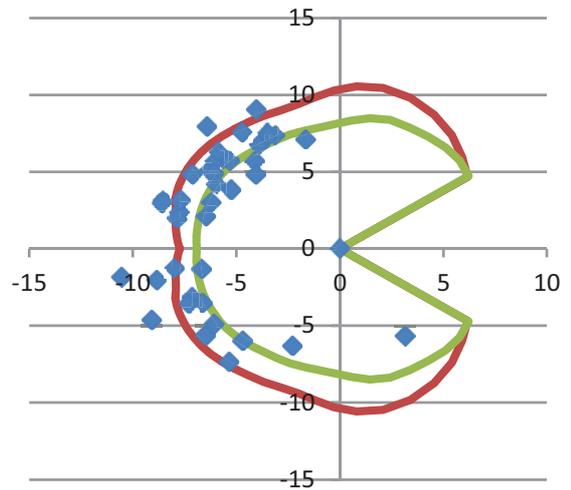
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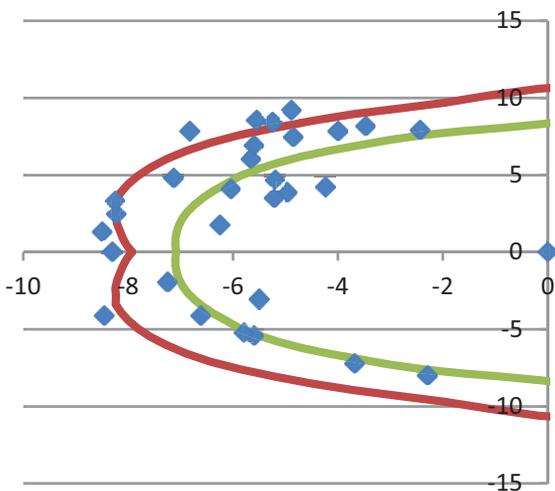
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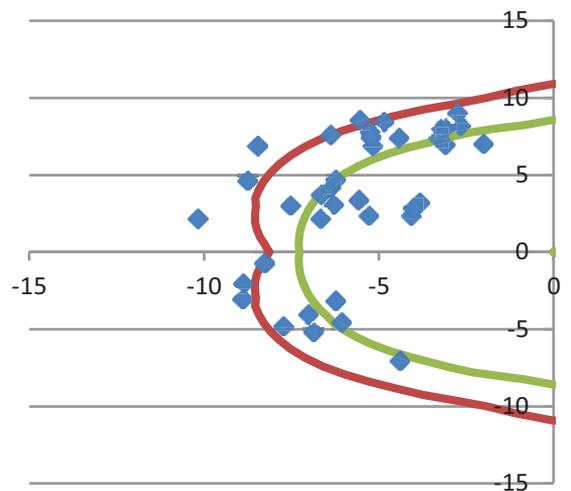
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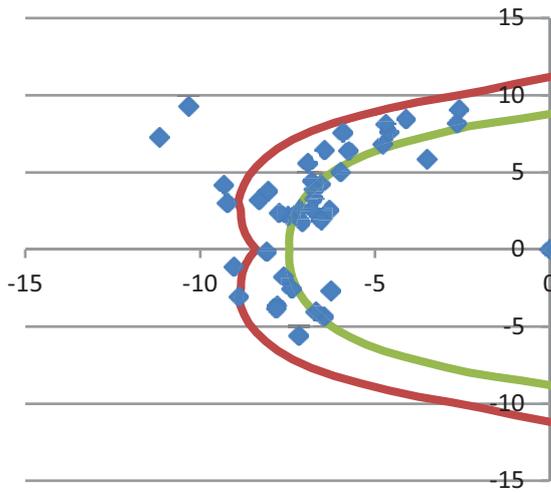
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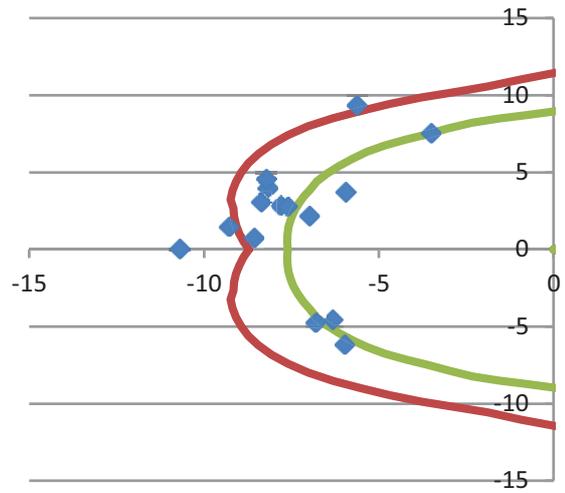
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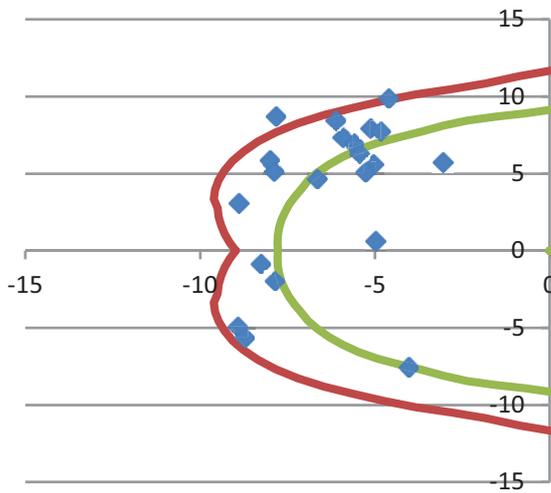
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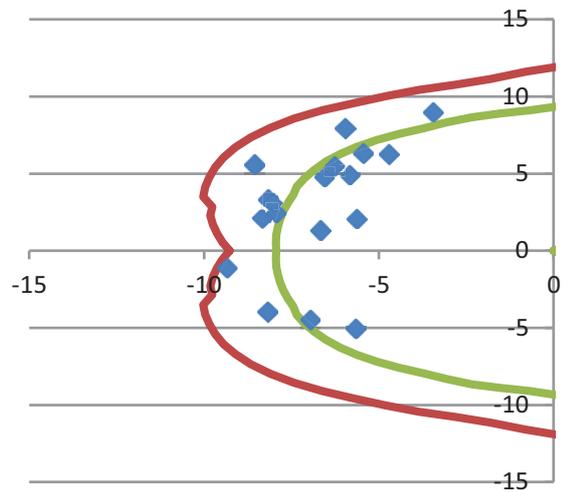
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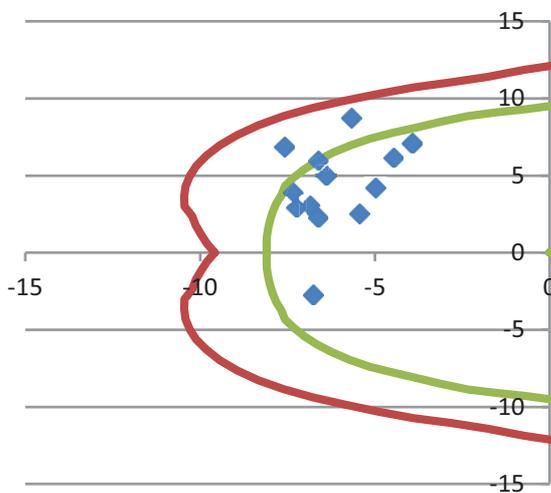
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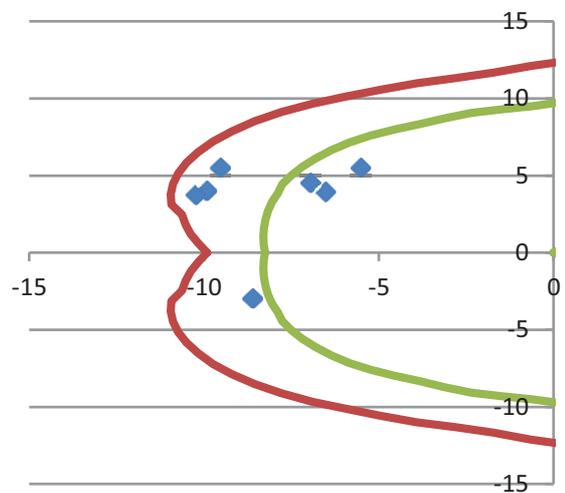
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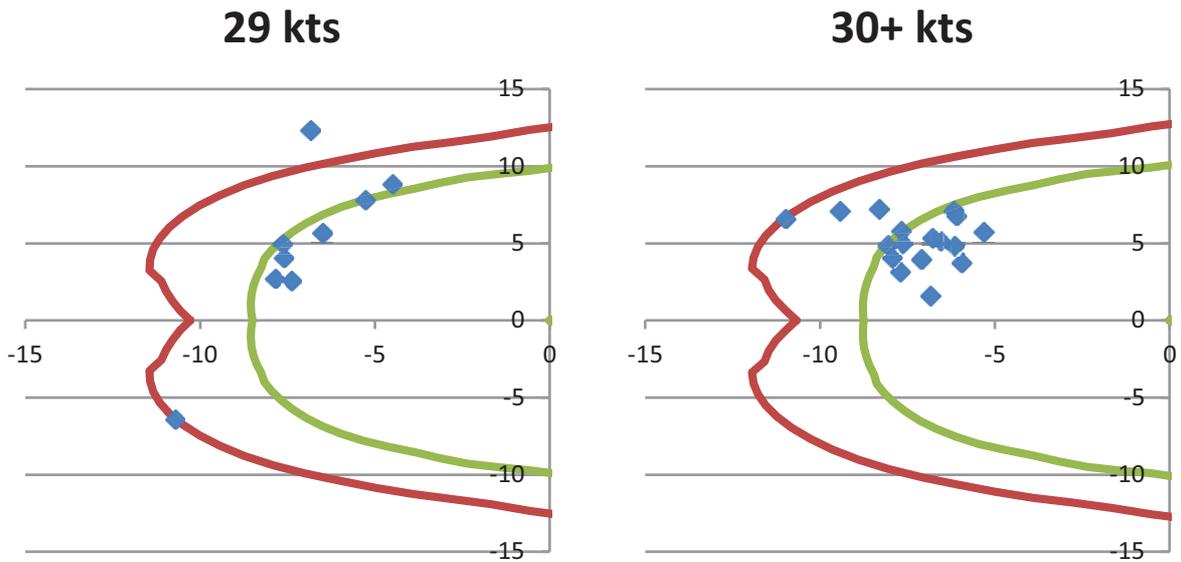


27 kts



28 kts





The polar plots show the computer log data collected by Jeanneau 35 on Dinah's transatlantic crossing. The Red line corresponds to sailing with spinnaker, whereas the Green line is without a spinnaker

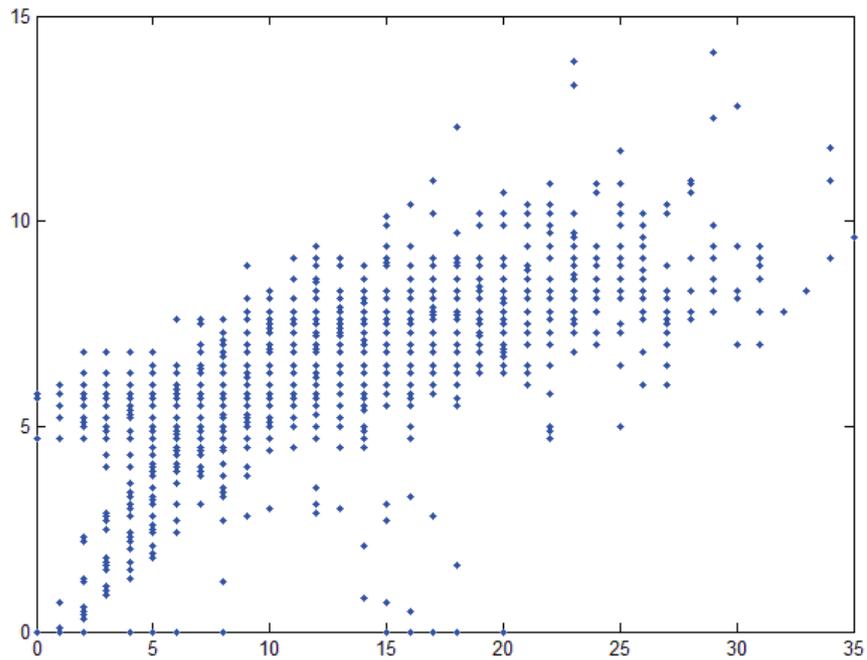


Figure 5 – Dinah. Wind Speed against yacht Speed Graph

Results of Real life Data and MATLAB VPP

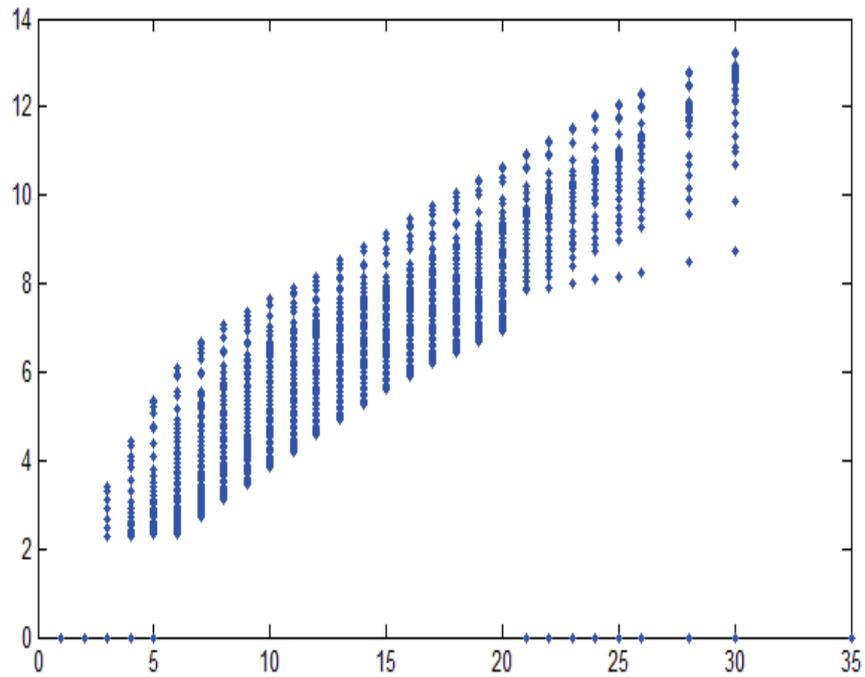


Figure 6 – MATLAB VPP, Wind Speed against yacht Speed Graph

Figure 5 and 6 displays the same information but in a more summarised form. Where the x axis is wind speed and the y axis is yacht speed. Figure 5 takes the data from Dinah whereas figure 6 is from the MATLAB VPP code.

Figure 7 to Figure 24 show the same information as Figure 5 and Figure 6. But highlighting the data points at different apparent wind directions. There is also the comparison of using or not using the spinnaker.

Yacht Dimensions

Table 1 contains the data obtained from the specifications. * where no value is found, it is estimated by taking a scale from a diagram.

Data	Denah
LOA (m)	10.59
LWL (m)	9.05
Bmax (m)	3.41
Cb	0.43
My (tonnes)	3.5
FA (m)	1.19
P (m)*	13.17
E (m)*	5.30
I (m)*	12.00
BAD (m)*	1.00
maxCk/LWL*	0.1053
minCK/LWL*	0.0702
Lk/LWL*	0.16667
maxCr/LWL*	0.07
minCr/LWL*	0.0614
Lr/LWL*	0.158

Table 1

Data	Denah
Tc (m)	0.334
Cp	0.56
Cm	0.77
Cw	0.72
LCB (m)	-2.9
Dc (m3)	3.5
Mk (tonnes)	0.833
mc(tonnes)	2.75
GM (m)	2.27
J (m)	3.29
LPG (m)	4.81
BADY (m)	0
SL (m)	14.0
EHM (m)	15.4
EMDC (m)	0.16
PY (m)	0
EY (m)	0
YSD (m)	0
YSF (m)	0
YSMG (m)	0
crew	5
Bodywt (kg)	80
Pw (kg/m3)	1025
pair(kg/m3)	1.1
V (kg/ms)	1.00E-06

Table 2