

J/133 7.5' Keel 155% Genoa, 182 sq.m. A-Sail VPP Data:

Based on ORC IMS 2006 Velocity Prediction program

Columns are as follows: VTW=Velocity True Wind, BTW=Beta True Wind (angle), VAW=Velocity Apparent Wind, BAW=Beta Apparent Wind (angle), V=Velocity (boatspeed), VMG=Velocity Made Good (directly to windward or leeward as the case may be), PHI = heel angle, REEF - program trying to quantify effect of flattening sails and bending mast, CL = calculated coefficient of lift, iter = # of iterations VPP used to generate best case boatspeed scenario.

For each wind condition grouping there are several rows of data for several sailing angles, three of these rows are for calculated OPTIMUM VMG data (indicated as such on right hand most column). First is Optimum Downwind VMG (OPTDN Asym Spin on CL) with Spinnaker, then Optimum downwind with Jib/Genoa ONLY (Jib OPTDN) and finally, Optimum Upwind (OPTUP).

| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | |
|-----|-------|-------|--------|-------|--------|-----|--------|--------|---------|------|------------------------|
| 6.0 | 180.0 | 2.68 | 180.00 | 3.388 | -3.388 | 0.0 | 1.0000 | 1.0000 | -0.0673 | 5 | Asym Spin tacked on CL |
| 6.0 | 165.0 | 2.68 | 144.13 | 3.687 | -3.561 | 0.2 | 1.0000 | 1.0000 | 0.8476 | 3 | Asym Spin tacked on CL |
| 6.0 | 150.0 | 3.09 | 100.92 | 4.667 | -4.042 | 0.9 | 1.0000 | 1.0000 | 2.2766 | 5 | Asym Spin tacked on CL |
| 6.0 | 135.0 | 4.60 | 68.61 | 5.966 | -4.218 | 2.3 | 1.0000 | 1.0000 | 2.8799 | 6 | Asym Spin tacked on CL |
| 6.0 | 120.0 | 6.48 | 53.99 | 6.837 | -3.419 | 4.1 | 1.0000 | 1.0000 | 2.8802 | 5 | Asym Spin tacked on CL |
| 6.0 | 110.0 | 7.62 | 48.23 | 7.132 | -2.439 | 5.8 | 1.0000 | 1.0000 | 2.7623 | 4 | Asym Spin tacked on CL |
| 6.0 | 90.0 | 9.32 | 40.18 | 7.084 | 0.000 | 8.9 | 1.0000 | 1.0000 | 2.2427 | 3 | Asym Spin tacked on CL |
| 6.0 | 80.0 | 9.76 | 37.48 | 6.668 | 1.158 | 7.1 | 1.0000 | 1.0000 | 1.8647 | 4 | Asym Spin tacked on CL |
| 6.0 | 75.0 | 9.86 | 36.29 | 6.363 | 1.647 | 5.8 | 1.0000 | 1.0000 | 1.6748 | 4 | Asym Spin tacked on CL |
| 6.0 | 70.0 | 9.87 | 35.15 | 5.986 | 2.047 | 4.9 | 1.0000 | 1.0000 | 1.5014 | 3 | Asym Spin tacked on CL |
| 6.0 | 60.0 | 9.61 | 33.05 | 5.019 | 2.510 | 3.8 | 1.0000 | 1.0000 | 1.2225 | 4 | Asym Spin tacked on CL |
| 6.0 | 139.1 | 4.11 | 75.12 | 5.636 | -4.258 | 1.8 | 1.0000 | 1.0000 | 2.8289 | 3 | OPTDN CL Asym |
| 6.0 | 180.0 | 2.86 | 180.00 | 3.047 | -3.047 | 0.1 | 1.0000 | 1.0000 | -0.1154 | 3 | Jib |
| 6.0 | 165.0 | 2.88 | 147.95 | 3.265 | -3.154 | 0.3 | 1.0000 | 1.0000 | 0.2042 | 4 | Jib |
| 6.0 | 150.0 | 3.36 | 118.46 | 3.516 | -3.045 | 0.5 | 1.0000 | 1.0000 | 0.6499 | 3 | Jib |
| 6.0 | 135.0 | 4.18 | 90.09 | 4.172 | -2.950 | 0.8 | 1.0000 | 1.0000 | 1.1266 | 3 | Jib |
| 6.0 | 120.0 | 5.74 | 63.03 | 5.558 | -2.779 | 1.7 | 1.0000 | 1.0000 | 1.6560 | 4 | Jib |
| 6.0 | 110.0 | 7.03 | 52.11 | 6.337 | -2.167 | 2.6 | 1.0000 | 1.0000 | 1.8597 | 3 | Jib |
| 6.0 | 90.0 | 9.13 | 40.22 | 6.964 | 0.000 | 4.4 | 1.0000 | 1.0000 | 1.9547 | 4 | Jib |
| 6.0 | 80.0 | 9.93 | 35.74 | 7.018 | 1.219 | 5.5 | 1.0000 | 1.0000 | 1.9591 | 4 | Jib |
| 6.0 | 75.0 | 10.25 | 33.65 | 6.984 | 1.808 | 6.4 | 1.0000 | 1.0000 | 1.9583 | 4 | Jib |
| 6.0 | 70.0 | 10.51 | 31.66 | 6.905 | 2.362 | 7.3 | 1.0000 | 1.0000 | 1.9568 | 4 | Jib |
| 6.0 | 60.0 | 10.82 | 27.91 | 6.591 | 3.295 | 8.5 | 1.0000 | 1.0000 | 1.9551 | 4 | Jib |
| 6.0 | 52.0 | 10.81 | 25.21 | 6.130 | 3.774 | 8.6 | 1.0000 | 1.0000 | 1.9552 | 4 | Jib |
| 6.0 | 166.4 | 2.86 | 150.96 | 3.246 | -3.155 | 0.3 | 1.0000 | 1.0000 | 0.1653 | 3 | Jib OPTDN |
| 6.0 | 46.8 | 10.62 | 23.69 | 5.667 | 3.880 | 8.0 | 1.0000 | 1.0000 | 1.9501 | 4 | OPTUP |

| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | |
|-----|-------|-------|--------|-------|--------|------|--------|--------|---------|------|------------------------|
| 8.0 | 180.0 | 3.58 | 180.00 | 4.503 | -4.503 | 0.1 | 1.0000 | 1.0000 | -0.0673 | 5 | Asym Spin tacked on CL |
| 8.0 | 165.0 | 3.61 | 144.58 | 4.868 | -4.702 | 0.4 | 1.0000 | 1.0000 | 0.8349 | 4 | Asym Spin tacked on CL |
| 8.0 | 150.0 | 4.16 | 103.69 | 6.018 | -5.211 | 1.3 | 1.0000 | 1.0000 | 2.1806 | 5 | Asym Spin tacked on CL |
| 8.0 | 135.0 | 5.91 | 75.03 | 7.243 | -5.121 | 3.2 | 1.0000 | 1.0000 | 2.8297 | 5 | Asym Spin tacked on CL |
| 8.0 | 120.0 | 7.99 | 60.54 | 7.957 | -3.978 | 7.4 | 1.0000 | 1.0000 | 2.9047 | 5 | Asym Spin tacked on CL |
| 8.0 | 110.0 | 9.23 | 53.60 | 8.182 | -2.798 | 13.4 | 1.0000 | 1.0000 | 2.8795 | 4 | Asym Spin tacked on CL |
| 8.0 | 90.0 | 11.21 | 42.48 | 8.120 | 0.000 | 21.7 | 1.0000 | 1.0000 | 2.5209 | 5 | Asym Spin tacked on CL |
| 8.0 | 80.0 | 12.01 | 38.65 | 7.866 | 1.366 | 20.2 | 1.0000 | 1.0000 | 2.1295 | 3 | Asym Spin tacked on CL |
| 8.0 | 75.0 | 12.32 | 37.21 | 7.643 | 1.978 | 17.8 | 1.0000 | 1.0000 | 1.8986 | 3 | Asym Spin tacked on CL |
| 8.0 | 70.0 | 12.53 | 35.93 | 7.328 | 2.506 | 14.9 | 1.0000 | 1.0000 | 1.6741 | 3 | Asym Spin tacked on CL |
| 8.0 | 60.0 | 12.54 | 33.47 | 6.401 | 3.200 | 9.2 | 1.0000 | 1.0000 | 1.2864 | 5 | Asym Spin tacked on CL |
| 8.0 | 143.9 | 4.76 | 89.36 | 6.588 | -5.325 | 1.9 | 1.0000 | 1.0000 | 2.5994 | 4 | OPTDN CL Asym |
| 8.0 | 180.0 | 3.80 | 180.00 | 4.077 | -4.077 | 0.1 | 1.0000 | 1.0000 | -0.1154 | 3 | Jib |
| 8.0 | 165.0 | 3.85 | 147.98 | 4.350 | -4.202 | 0.5 | 1.0000 | 1.0000 | 0.2039 | 4 | Jib |
| 8.0 | 150.0 | 4.50 | 118.84 | 4.655 | -4.031 | 0.9 | 1.0000 | 1.0000 | 0.6440 | 3 | Jib |
| 8.0 | 135.0 | 5.57 | 91.92 | 5.384 | -3.807 | 1.3 | 1.0000 | 1.0000 | 1.0924 | 3 | Jib |
| 8.0 | 120.0 | 7.36 | 67.86 | 6.712 | -3.356 | 2.4 | 1.0000 | 1.0000 | 1.5596 | 4 | Jib |
| 8.0 | 110.0 | 8.74 | 57.74 | 7.358 | -2.517 | 3.5 | 1.0000 | 1.0000 | 1.7602 | 3 | Jib |
| 8.0 | 90.0 | 11.15 | 44.46 | 7.936 | 0.000 | 8.2 | 1.0000 | 1.0000 | 1.9379 | 5 | Jib |
| 8.0 | 80.0 | 12.07 | 39.02 | 7.975 | 1.385 | 11.9 | 1.0000 | 1.0000 | 1.9565 | 4 | Jib |
| 8.0 | 75.0 | 12.46 | 36.44 | 7.944 | 2.056 | 13.7 | 1.0000 | 1.0000 | 1.9589 | 4 | Jib |
| 8.0 | 70.0 | 12.80 | 33.95 | 7.874 | 2.693 | 15.3 | 1.0000 | 1.0000 | 1.9587 | 4 | Jib |
| 8.0 | 60.0 | 13.26 | 29.32 | 7.579 | 3.789 | 17.7 | 1.0000 | 1.0000 | 1.9554 | 4 | Jib |
| 8.0 | 52.0 | 13.39 | 26.23 | 7.132 | 4.391 | 17.3 | 1.0000 | 0.9650 | 1.8872 | 5 | Jib |
| 8.0 | 167.2 | 3.80 | 152.56 | 4.313 | -4.206 | 0.5 | 1.0000 | 1.0000 | 0.1454 | 3 | Jib OPTDN |
| 8.0 | 43.3 | 13.21 | 23.34 | 6.394 | 4.652 | 14.0 | 1.0000 | 0.8862 | 1.7269 | 5 | OPTUP |

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| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | |
|------|-------|-------|--------|-------|--------|------|--------|--------|---------|------|------------------------|
| 10.0 | 180.0 | 4.55 | 180.00 | 5.555 | -5.555 | 0.1 | 1.0000 | 1.0000 | -0.0673 | 5 | Asym Spin tacked on CL |
| 10.0 | 165.0 | 4.60 | 145.32 | 5.983 | -5.779 | 0.6 | 1.0000 | 1.0000 | 0.8141 | 4 | Asym Spin tacked on CL |
| 10.0 | 150.0 | 5.33 | 108.55 | 7.058 | -6.112 | 1.7 | 1.0000 | 1.0000 | 2.0017 | 5 | Asym Spin tacked on CL |
| 10.0 | 135.0 | 7.20 | 82.26 | 8.114 | -5.737 | 4.1 | 1.0000 | 1.0000 | 2.7353 | 5 | Asym Spin tacked on CL |
| 10.0 | 120.0 | 9.29 | 67.35 | 8.592 | -4.296 | 12.4 | 1.0000 | 1.0000 | 2.8856 | 5 | Asym Spin tacked on CL |
| 10.0 | 110.0 | 10.44 | 59.14 | 8.704 | -2.977 | 20.2 | 1.0000 | 1.0000 | 2.9048 | 5 | Asym Spin tacked on CL |
| 10.0 | 90.0 | 12.62 | 46.93 | 8.476 | 0.000 | 24.6 | 1.0000 | 0.8043 | 2.2049 | 6 | Asym Spin tacked on CL |
| 10.0 | 80.0 | 13.60 | 41.81 | 8.266 | 1.435 | 24.4 | 1.0000 | 0.7665 | 1.8789 | 3 | Asym Spin tacked on CL |
| 10.0 | 75.0 | 14.03 | 39.47 | 8.119 | 2.101 | 23.9 | 1.0000 | 0.7872 | 1.7433 | 3 | Asym Spin tacked on CL |
| 10.0 | 70.0 | 14.39 | 37.31 | 7.918 | 2.708 | 23.0 | 1.0000 | 0.8486 | 1.6261 | 3 | Asym Spin tacked on CL |
| 10.0 | 60.0 | 14.85 | 33.81 | 7.259 | 3.630 | 18.8 | 1.0000 | 1.0000 | 1.3659 | 5 | Asym Spin tacked on CL |
| 10.0 | 146.5 | 5.68 | 100.67 | 7.372 | -6.145 | 2.1 | 1.0000 | 1.0000 | 2.2852 | 3 | OPTDN CL Asym |
| 10.0 | 180.0 | 4.81 | 180.00 | 5.038 | -5.038 | 0.2 | 1.0000 | 1.0000 | -0.1154 | 3 | Jib |
| 10.0 | 165.0 | 4.87 | 148.46 | 5.361 | -5.178 | 0.8 | 1.0000 | 1.0000 | 0.1975 | 4 | Jib |
| 10.0 | 150.0 | 5.67 | 119.74 | 5.717 | -4.951 | 1.2 | 1.0000 | 1.0000 | 0.6298 | 3 | Jib |
| 10.0 | 135.0 | 6.98 | 94.33 | 6.437 | -4.552 | 1.8 | 1.0000 | 1.0000 | 1.0483 | 3 | Jib |
| 10.0 | 120.0 | 8.90 | 73.11 | 7.510 | -3.755 | 2.9 | 1.0000 | 1.0000 | 1.4555 | 4 | Jib |
| 10.0 | 110.0 | 10.34 | 63.22 | 8.024 | -2.744 | 4.3 | 1.0000 | 1.0000 | 1.6520 | 3 | Jib |
| 10.0 | 90.0 | 12.83 | 48.42 | 8.475 | 0.000 | 13.2 | 1.0000 | 1.0000 | 1.9046 | 5 | Jib |
| 10.0 | 80.0 | 13.77 | 41.91 | 8.471 | 1.471 | 18.5 | 1.0000 | 1.0000 | 1.9485 | 4 | Jib |
| 10.0 | 75.0 | 14.16 | 38.80 | 8.414 | 2.178 | 20.9 | 1.0000 | 1.0000 | 1.9564 | 4 | Jib |
| 10.0 | 70.0 | 14.52 | 36.01 | 8.316 | 2.844 | 22.3 | 1.0000 | 0.9780 | 1.9159 | 5 | Jib |
| 10.0 | 60.0 | 15.20 | 31.35 | 8.026 | 4.013 | 21.4 | 1.0000 | 0.8777 | 1.7175 | 4 | Jib |
| 10.0 | 52.0 | 15.53 | 27.85 | 7.659 | 4.716 | 20.1 | 1.0000 | 0.8119 | 1.5874 | 5 | Jib |
| 10.0 | 167.5 | 4.80 | 153.69 | 5.310 | -5.184 | 0.7 | 1.0000 | 1.0000 | 0.1318 | 3 | Jib OPTDN |
| 10.0 | 41.3 | 15.49 | 23.57 | 6.808 | 5.117 | 16.8 | 1.0000 | 0.7387 | 1.4404 | 6 | OPTUP |

| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | |
|------|-------|-------|--------|-------|--------|------|--------|--------|---------|------|------------------------|
| 12.0 | 180.0 | 5.61 | 180.00 | 6.519 | -6.519 | 0.2 | 1.0000 | 1.0000 | -0.0673 | 5 | Asym Spin tacked on CL |
| 12.0 | 165.0 | 5.73 | 146.76 | 6.926 | -6.690 | 0.8 | 1.0000 | 1.0000 | 0.7736 | 4 | Asym Spin tacked on CL |
| 12.0 | 150.0 | 6.61 | 113.52 | 7.865 | -6.812 | 2.2 | 1.0000 | 1.0000 | 1.8163 | 5 | Asym Spin tacked on CL |
| 12.0 | 135.0 | 8.55 | 89.32 | 8.672 | -6.132 | 5.1 | 1.0000 | 1.0000 | 2.6002 | 5 | Asym Spin tacked on CL |
| 12.0 | 120.0 | 10.52 | 72.82 | 9.088 | -4.544 | 17.9 | 1.0000 | 1.0000 | 2.8486 | 6 | Asym Spin tacked on CL |
| 12.0 | 110.0 | 11.55 | 63.88 | 9.049 | -3.095 | 25.7 | 1.0000 | 0.9631 | 2.7901 | 5 | Asym Spin tacked on CL |
| 12.0 | 90.0 | 14.07 | 50.94 | 8.699 | 0.000 | 26.0 | 0.9904 | 0.6775 | 1.8932 | 6 | Asym Spin tacked on CL |
| 12.0 | 80.0 | 15.16 | 45.05 | 8.482 | 1.473 | 25.8 | 0.9794 | 0.6314 | 1.6110 | 3 | Asym Spin tacked on CL |
| 12.0 | 75.0 | 15.66 | 42.25 | 8.350 | 2.161 | 25.5 | 0.9780 | 0.6283 | 1.4935 | 2 | Asym Spin tacked on CL |
| 12.0 | 70.0 | 16.11 | 39.61 | 8.186 | 2.800 | 25.1 | 0.9852 | 0.6395 | 1.3853 | 3 | Asym Spin tacked on CL |
| 12.0 | 60.0 | 16.78 | 34.97 | 7.651 | 3.826 | 23.1 | 1.0000 | 0.7790 | 1.2116 | 5 | Asym Spin tacked on CL |
| 12.0 | 152.5 | 6.38 | 118.70 | 7.692 | -6.823 | 1.9 | 1.0000 | 1.0000 | 1.6317 | 3 | OPTDN CL Asym |
| 12.0 | 180.0 | 5.85 | 180.00 | 5.966 | -5.966 | 0.2 | 1.0000 | 1.0000 | -0.1154 | 3 | Jib |
| 12.0 | 165.0 | 5.95 | 149.07 | 6.311 | -6.096 | 1.0 | 1.0000 | 1.0000 | 0.1895 | 4 | Jib |
| 12.0 | 150.0 | 6.92 | 121.32 | 6.641 | -5.751 | 1.7 | 1.0000 | 1.0000 | 0.6050 | 3 | Jib |
| 12.0 | 135.0 | 8.43 | 97.62 | 7.239 | -5.119 | 2.3 | 1.0000 | 1.0000 | 0.9892 | 3 | Jib |
| 12.0 | 120.0 | 10.45 | 78.02 | 8.075 | -4.037 | 3.6 | 1.0000 | 1.0000 | 1.3586 | 3 | Jib |
| 12.0 | 110.0 | 11.91 | 68.19 | 8.461 | -2.894 | 5.5 | 1.0000 | 1.0000 | 1.5528 | 4 | Jib |
| 12.0 | 90.0 | 14.35 | 51.55 | 8.839 | 0.000 | 18.3 | 1.0000 | 1.0000 | 1.8624 | 6 | Jib |
| 12.0 | 80.0 | 15.23 | 44.28 | 8.744 | 1.519 | 23.9 | 1.0000 | 0.9691 | 1.8757 | 5 | Jib |
| 12.0 | 75.0 | 15.75 | 41.44 | 8.653 | 2.240 | 23.8 | 1.0000 | 0.9031 | 1.7605 | 4 | Jib |
| 12.0 | 70.0 | 16.23 | 38.68 | 8.550 | 2.924 | 23.7 | 1.0000 | 0.8466 | 1.6563 | 4 | Jib |
| 12.0 | 60.0 | 17.04 | 33.37 | 8.287 | 4.144 | 23.1 | 1.0000 | 0.7545 | 1.4777 | 4 | Jib |
| 12.0 | 52.0 | 17.50 | 29.38 | 7.971 | 4.908 | 22.0 | 1.0000 | 0.6958 | 1.3605 | 4 | Jib |
| 12.0 | 168.7 | 5.83 | 156.70 | 6.233 | -6.113 | 0.9 | 1.0000 | 1.0000 | 0.0969 | 4 | Jib OPTDN |
| 12.0 | 40.1 | 17.63 | 23.97 | 7.102 | 5.431 | 18.9 | 1.0000 | 0.6263 | 1.2225 | 6 | OPTUP |

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| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | | | | |
|------|-------|-------|--------|-------|--------|------|--------|--------|---------|------|-------|-------|--------|-------|
| 14.0 | 180.0 | 6.81 | 180.00 | 7.338 | -7.338 | 0.2 | 1.0000 | 1.0000 | -0.0673 | 5 | Asym | Spin | tacked | on CL |
| 14.0 | 165.0 | 6.99 | 148.39 | 7.717 | -7.454 | 1.1 | 1.0000 | 1.0000 | 0.7281 | 4 | Asym | Spin | tacked | on CL |
| 14.0 | 150.0 | 8.03 | 118.39 | 8.433 | -7.303 | 2.6 | 1.0000 | 1.0000 | 1.6427 | 4 | Asym | Spin | tacked | on CL |
| 14.0 | 135.0 | 9.96 | 94.68 | 9.182 | -6.493 | 7.7 | 1.0000 | 1.0000 | 2.4674 | 6 | Asym | Spin | tacked | on CL |
| 14.0 | 120.0 | 11.65 | 77.06 | 9.534 | -4.767 | 23.7 | 1.0000 | 1.0000 | 2.8039 | 6 | Asym | Spin | tacked | on CL |
| 14.0 | 110.0 | 12.86 | 68.54 | 9.315 | -3.186 | 26.5 | 0.9577 | 0.9194 | 2.4260 | 7 | Asym | Spin | tacked | on CL |
| 14.0 | 90.0 | 15.52 | 54.30 | 8.871 | 0.000 | 26.1 | 0.9006 | 0.7164 | 1.6789 | 5 | Asym | Spin | tacked | on CL |
| 14.0 | 80.0 | 16.70 | 47.85 | 8.633 | 1.499 | 25.8 | 0.8931 | 0.6467 | 1.4304 | 4 | Asym | Spin | tacked | on CL |
| 14.0 | 75.0 | 17.24 | 44.77 | 8.501 | 2.200 | 25.7 | 0.8934 | 0.6285 | 1.3268 | 3 | Asym | Spin | tacked | on CL |
| 14.0 | 70.0 | 17.74 | 41.81 | 8.347 | 2.855 | 25.4 | 0.8963 | 0.6268 | 1.2331 | 3 | Asym | Spin | tacked | on CL |
| 14.0 | 60.0 | 18.57 | 36.49 | 7.872 | 3.936 | 24.1 | 0.9316 | 0.6851 | 1.0647 | 5 | Asym | Spin | tacked | on CL |
| 14.0 | 162.0 | 7.11 | 142.18 | 7.842 | -7.460 | 1.3 | 1.0000 | 1.0000 | 0.9034 | 3 | OPTDN | CL | Asym | |
| 14.0 | 180.0 | 7.02 | 180.00 | 6.767 | -6.767 | 0.3 | 1.0000 | 1.0000 | -0.1154 | 4 | Jib | | | |
| 14.0 | 165.0 | 7.16 | 150.12 | 7.108 | -6.866 | 1.3 | 1.0000 | 1.0000 | 0.1759 | 4 | Jib | | | |
| 14.0 | 150.0 | 8.25 | 123.32 | 7.411 | -6.418 | 2.1 | 1.0000 | 1.0000 | 0.5736 | 3 | Jib | | | |
| 14.0 | 135.0 | 9.92 | 100.86 | 7.880 | -5.572 | 2.9 | 1.0000 | 1.0000 | 0.9328 | 3 | Jib | | | |
| 14.0 | 120.0 | 12.02 | 82.41 | 8.478 | -4.239 | 4.4 | 1.0000 | 1.0000 | 1.2730 | 4 | Jib | | | |
| 14.0 | 110.0 | 13.48 | 72.25 | 8.808 | -3.012 | 8.2 | 1.0000 | 1.0000 | 1.4718 | 4 | Jib | | | |
| 14.0 | 90.0 | 15.70 | 53.77 | 9.125 | 0.000 | 23.8 | 1.0000 | 1.0000 | 1.8218 | 6 | Jib | | | |
| 14.0 | 80.0 | 16.83 | 47.08 | 8.931 | 1.551 | 24.9 | 1.0000 | 0.8544 | 1.6341 | 4 | Jib | | | |
| 14.0 | 75.0 | 17.39 | 43.99 | 8.823 | 2.284 | 24.9 | 1.0000 | 0.7914 | 1.5328 | 4 | Jib | | | |
| 14.0 | 70.0 | 17.91 | 40.97 | 8.710 | 2.979 | 24.8 | 1.0000 | 0.7386 | 1.4409 | 4 | Jib | | | |
| 14.0 | 60.0 | 18.82 | 35.16 | 8.450 | 4.225 | 24.2 | 1.0000 | 0.6546 | 1.2823 | 4 | Jib | | | |
| 14.0 | 52.0 | 19.38 | 30.76 | 8.160 | 5.024 | 23.4 | 1.0000 | 0.6019 | 1.1775 | 4 | Jib | | | |
| 14.0 | 169.8 | 7.00 | 159.64 | 7.008 | -6.898 | 1.0 | 1.0000 | 1.0000 | 0.0648 | 4 | Jib | OPTDN | | |
| 14.0 | 39.3 | 19.67 | 24.39 | 7.285 | 5.641 | 20.5 | 1.0000 | 0.5361 | 1.0474 | 6 | OPTUP | | | |

| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | | | | |
|------|-------|-------|--------|-------|--------|------|--------|--------|---------|------|-------|-------|--------|-------|
| 16.0 | 180.0 | 8.16 | 180.00 | 8.009 | -8.009 | 0.3 | 1.0000 | 1.0000 | -0.0673 | 5 | Asym | Spin | tacked | on CL |
| 16.0 | 165.0 | 8.42 | 150.21 | 8.311 | -8.028 | 1.3 | 1.0000 | 1.0000 | 0.6782 | 3 | Asym | Spin | tacked | on CL |
| 16.0 | 150.0 | 9.56 | 122.36 | 8.887 | -7.696 | 3.1 | 1.0000 | 1.0000 | 1.5090 | 4 | Asym | Spin | tacked | on CL |
| 16.0 | 135.0 | 11.38 | 98.56 | 9.719 | -6.872 | 11.1 | 1.0000 | 1.0000 | 2.3546 | 6 | Asym | Spin | tacked | on CL |
| 16.0 | 120.0 | 12.79 | 81.02 | 9.863 | -4.931 | 27.0 | 0.9765 | 1.0000 | 2.6226 | 8 | Asym | Spin | tacked | on CL |
| 16.0 | 110.0 | 14.21 | 72.27 | 9.556 | -3.268 | 26.6 | 0.8755 | 0.9802 | 2.1422 | 3 | Asym | Spin | tacked | on CL |
| 16.0 | 90.0 | 16.99 | 57.11 | 9.022 | 0.000 | 26.2 | 0.8271 | 0.7523 | 1.4937 | 5 | Asym | Spin | tacked | on CL |
| 16.0 | 80.0 | 18.23 | 50.24 | 8.754 | 1.520 | 25.9 | 0.8219 | 0.6664 | 1.2765 | 4 | Asym | Spin | tacked | on CL |
| 16.0 | 75.0 | 18.81 | 46.94 | 8.614 | 2.230 | 25.8 | 0.8238 | 0.6367 | 1.1846 | 3 | Asym | Spin | tacked | on CL |
| 16.0 | 70.0 | 19.35 | 43.74 | 8.460 | 2.894 | 25.6 | 0.8273 | 0.6227 | 1.1025 | 3 | Asym | Spin | tacked | on CL |
| 16.0 | 60.0 | 20.28 | 37.89 | 8.020 | 4.010 | 24.4 | 0.8536 | 0.6540 | 0.9536 | 4 | Asym | Spin | tacked | on CL |
| 16.0 | 170.3 | 8.24 | 160.69 | 8.164 | -8.048 | 0.9 | 1.0000 | 1.0000 | 0.4004 | 3 | OPTDN | CL | Asym | |
| 16.0 | 180.0 | 8.30 | 180.00 | 7.463 | -7.463 | 0.5 | 1.0000 | 1.0000 | -0.1154 | 4 | Jib | | | |
| 16.0 | 165.0 | 8.48 | 151.27 | 7.784 | -7.518 | 1.7 | 1.0000 | 1.0000 | 0.1614 | 4 | Jib | | | |
| 16.0 | 150.0 | 9.67 | 125.53 | 8.026 | -6.951 | 2.7 | 1.0000 | 1.0000 | 0.5389 | 4 | Jib | | | |
| 16.0 | 135.0 | 11.47 | 104.08 | 8.352 | -5.906 | 3.6 | 1.0000 | 1.0000 | 0.8789 | 3 | Jib | | | |
| 16.0 | 120.0 | 13.62 | 86.02 | 8.817 | -4.409 | 5.8 | 1.0000 | 1.0000 | 1.2035 | 4 | Jib | | | |
| 16.0 | 110.0 | 15.03 | 75.32 | 9.163 | -3.134 | 11.6 | 1.0000 | 1.0000 | 1.4103 | 4 | Jib | | | |
| 16.0 | 90.0 | 17.16 | 56.35 | 9.313 | 0.000 | 25.7 | 1.0000 | 0.9231 | 1.6362 | 6 | Jib | | | |
| 16.0 | 80.0 | 18.43 | 49.46 | 9.078 | 1.576 | 25.7 | 1.0000 | 0.7588 | 1.4306 | 5 | Jib | | | |
| 16.0 | 75.0 | 19.02 | 46.16 | 8.952 | 2.317 | 25.7 | 1.0000 | 0.6986 | 1.3416 | 4 | Jib | | | |
| 16.0 | 70.0 | 19.58 | 42.94 | 8.824 | 3.018 | 25.6 | 1.0000 | 0.6491 | 1.2608 | 4 | Jib | | | |
| 16.0 | 60.0 | 20.57 | 36.73 | 8.552 | 4.276 | 25.1 | 1.0000 | 0.5721 | 1.1206 | 4 | Jib | | | |
| 16.0 | 52.0 | 21.21 | 32.01 | 8.275 | 5.094 | 24.4 | 1.0000 | 0.5248 | 1.0272 | 4 | Jib | | | |
| 16.0 | 171.1 | 8.27 | 162.87 | 7.667 | -7.575 | 1.2 | 1.0000 | 1.0000 | 0.0315 | 4 | Jib | OPTDN | | |
| 16.0 | 38.7 | 21.64 | 24.87 | 7.401 | 5.774 | 21.6 | 1.0000 | 0.4638 | 0.9068 | 6 | OPTUP | | | |

J/133 7.5' Keel 155% Genoa, 182 sq.m. A-Sail VPP Data:
 Based on ORC IMS 2006 Velocity Prediction program

| VTW | BTW | VAW | BAW | V | VMG | PHI | REEF | FLAT | CL | iter | |
|------|-------|-------|--------|--------|--------|------|--------|--------|---------|------|------------------------|
| 20.0 | 180.0 | 11.28 | 180.00 | 8.938 | -8.938 | 0.6 | 1.0000 | 1.0000 | -0.0673 | 4 | Asym Spin tacked on CL |
| 20.0 | 165.0 | 11.55 | 153.09 | 9.221 | -8.907 | 2.0 | 1.0000 | 1.0000 | 0.5999 | 4 | Asym Spin tacked on CL |
| 20.0 | 150.0 | 12.64 | 127.10 | 9.880 | -8.557 | 4.5 | 1.0000 | 1.0000 | 1.3566 | 5 | Asym Spin tacked on CL |
| 20.0 | 135.0 | 13.97 | 103.64 | 10.929 | -7.728 | 19.4 | 1.0000 | 1.0000 | 2.1901 | 7 | Asym Spin tacked on CL |
| 20.0 | 120.0 | 15.56 | 87.34 | 10.473 | -5.236 | 27.5 | 0.8780 | 1.0000 | 2.0356 | 8 | Asym Spin tacked on CL |
| 20.0 | 110.0 | 17.04 | 78.09 | 10.003 | -3.421 | 27.0 | 0.7755 | 1.0000 | 1.6779 | 4 | Asym Spin tacked on CL |
| 20.0 | 90.0 | 19.96 | 61.57 | 9.275 | 0.000 | 26.4 | 0.7127 | 0.8115 | 1.1964 | 5 | Asym Spin tacked on CL |
| 20.0 | 80.0 | 21.32 | 54.05 | 8.939 | 1.552 | 26.2 | 0.7118 | 0.7038 | 1.0298 | 4 | Asym Spin tacked on CL |
| 20.0 | 75.0 | 21.95 | 50.44 | 8.774 | 2.271 | 26.0 | 0.7148 | 0.6607 | 0.9585 | 3 | Asym Spin tacked on CL |
| 20.0 | 70.0 | 22.55 | 46.92 | 8.604 | 2.943 | 25.8 | 0.7204 | 0.6283 | 0.8936 | 3 | Asym Spin tacked on CL |
| 20.0 | 60.0 | 23.60 | 40.29 | 8.180 | 4.090 | 25.0 | 0.7382 | 0.6202 | 0.7790 | 4 | Asym Spin tacked on CL |
| 20.0 | 174.0 | 11.30 | 169.31 | 9.005 | -8.957 | 1.1 | 1.0000 | 1.0000 | 0.1852 | 3 | OPTDN CL Asym |
| 20.0 | 180.0 | 11.23 | 180.00 | 8.465 | -8.465 | 0.8 | 1.0000 | 1.0000 | -0.1154 | 5 | Jib |
| 20.0 | 165.0 | 11.51 | 153.73 | 8.704 | -8.408 | 2.5 | 1.0000 | 1.0000 | 0.1313 | 4 | Jib |
| 20.0 | 150.0 | 12.79 | 129.79 | 8.872 | -7.684 | 4.1 | 1.0000 | 1.0000 | 0.4721 | 4 | Jib |
| 20.0 | 135.0 | 14.66 | 109.18 | 9.106 | -6.439 | 6.7 | 1.0000 | 1.0000 | 0.7963 | 4 | Jib |
| 20.0 | 120.0 | 16.70 | 90.95 | 9.537 | -4.769 | 12.6 | 1.0000 | 1.0000 | 1.1106 | 4 | Jib |
| 20.0 | 110.0 | 17.87 | 79.65 | 9.839 | -3.365 | 19.5 | 1.0000 | 1.0000 | 1.3236 | 4 | Jib |
| 20.0 | 90.0 | 20.18 | 60.91 | 9.569 | 0.000 | 26.8 | 0.9605 | 0.8267 | 1.2836 | 6 | Jib |
| 20.0 | 80.0 | 21.53 | 53.29 | 9.278 | 1.611 | 26.5 | 0.9253 | 0.7258 | 1.1354 | 4 | Jib |
| 20.0 | 75.0 | 22.16 | 49.67 | 9.123 | 2.361 | 26.3 | 0.9141 | 0.6805 | 1.0703 | 4 | Jib |
| 20.0 | 70.0 | 22.76 | 46.15 | 8.967 | 3.067 | 26.1 | 0.9086 | 0.6370 | 1.0099 | 4 | Jib |
| 20.0 | 60.0 | 23.88 | 39.34 | 8.656 | 4.328 | 25.8 | 0.9157 | 0.5485 | 0.8992 | 5 | Jib |
| 20.0 | 52.0 | 24.66 | 34.14 | 8.373 | 5.155 | 25.3 | 0.9401 | 0.4723 | 0.8177 | 5 | Jib |
| 20.0 | 173.7 | 11.21 | 168.85 | 8.576 | -8.524 | 1.5 | 1.0000 | 1.0000 | -0.0249 | 3 | Jib OPTDN |
| 20.0 | 38.4 | 25.43 | 26.03 | 7.504 | 5.878 | 23.3 | 1.0000 | 0.3581 | 0.7003 | 7 | OPTUP |

J133.DAT J133USSA.OFF Cert#: Yacht: J133 Standard
 Class: Designer: RODNEY JOHNSTONE

Netherlands Triple-number scoring TMF ratings

| COURSE | LOW | MED | HIGH |
|--------|-------|-------|-------|
| WW/LW | 0.832 | 1.093 | 1.263 |
| CR | 1.097 | 1.374 | 1.534 |
| CR-2 | 1.068 | 1.338 | 1.493 |

Ratings Before Wind Averaging and NOT multiplied by Dynamic Allowance.

| VTW | WW/LW | OLYMPIC | CR | LR | OCEAN | CC CR | CC LR |
|------|-------|---------|-------|-------|-------|-------|-------|
| 6.0 | 889.5 | 831.0 | 667.7 | 636.2 | 791.6 | 764.1 | 707.6 |
| 8.0 | 727.3 | 686.1 | 558.8 | 537.9 | 631.8 | 621.8 | 590.4 |
| 10.0 | 646.8 | 616.3 | 508.5 | 493.1 | 544.6 | 548.9 | 530.1 |
| 12.0 | 597.2 | 575.4 | 478.2 | 465.3 | 490.5 | 505.3 | 492.7 |
| 14.0 | 562.4 | 547.4 | 457.3 | 445.3 | 452.8 | 477.6 | 467.3 |
| 16.0 | 537.3 | 526.9 | 442.5 | 430.5 | 426.1 | 458.9 | 449.3 |
| 20.0 | 509.1 | 501.7 | 422.5 | 408.1 | 387.3 | 436.9 | 426.1 |

Wind Averaged Ratings multiplied by Dynamic allowance.

| VTW | WW/LW | OLYMPIC | CR | LR | OCEAN | CC CR | CC LR |
|------|-------|---------|-------|-------|-------|-------|-------|
| 6.0 | 911.1 | 852.2 | 743.9 | 713.2 | 846.5 | 832.3 | 782.9 |
| 8.0 | 743.5 | 701.7 | 606.3 | 584.1 | 668.1 | 666.8 | 634.7 |
| 10.0 | 657.7 | 627.0 | 533.8 | 516.5 | 567.5 | 576.7 | 554.8 |
| 12.0 | 606.0 | 583.9 | 492.0 | 477.4 | 504.8 | 523.2 | 507.3 |
| 14.0 | 570.4 | 555.0 | 465.9 | 452.5 | 462.5 | 489.5 | 477.0 |
| 16.0 | 544.9 | 534.1 | 448.2 | 434.9 | 432.0 | 467.1 | 456.1 |
| 20.0 | 516.3 | 508.4 | 424.6 | 409.8 | 389.2 | 439.7 | 428.5 |

General purpose rating (W/ DA): 549.2 Time on time multiplier (W/ DA): 1.0931

Ocean course performance line scoring time factor (W/ DA): 0.889
 Ocean course performance line scoring distance factor (W/ DA): 84.2

J/133 7.5' Keel 155% Genoa, 182 sq.m. A-Sail VPP Data:
 Based on ORC IMS 2006 Velocity Prediction program

----- 2006 TIME ALLOWANCES IN SEC/MI BY TRUE WIND VELOCITY & ANGLE -----
 ----- NOT Wind Averaged. These have been multiplied by Dynamic Allowance -----

| Wind Velocity: | 6kt | 8kt | 10kt | 12kt | 14kt | 16kt | 20kt |
|----------------|--------|--------|--------|--------|--------|--------|--------|
| BEAT ANGLES: | 46.8ø | 43.3ø | 41.3ø | 40.1ø | 39.3ø | 38.7ø | 38.4ø |
| BEAT VMG: | 936.3 | 780.9 | 710.0 | 668.8 | 644.1 | 629.1 | 618.1 |
| 52ø: | 591.8 | 508.3 | 473.2 | 454.7 | 444.1 | 437.9 | 432.7 |
| R 60ø: | 549.3 | 477.6 | 450.9 | 436.6 | 428.2 | 423.1 | 418.0 |
| E 75ø: | 517.1 | 454.5 | 429.1 | 417.3 | 409.2 | 403.3 | 395.8 |
| A 90ø: | 509.8 | 444.7 | 426.0 | 408.5 | 395.7 | 387.7 | 377.3 |
| C 110ø: | 506.3 | 441.3 | 414.9 | 399.0 | 387.7 | 377.9 | 361.0 |
| H 120ø: | 528.1 | 453.9 | 420.3 | 397.3 | 378.8 | 366.1 | 344.8 |
| 135ø: | 605.3 | 498.6 | 445.1 | 416.4 | 393.3 | 371.5 | 330.4 |
| 150ø: | 734.5 | 587.3 | 509.0 | 459.1 | 428.2 | 406.3 | 365.5 |
| RUN VMG: | 848.1 | 678.1 | 587.7 | 529.3 | 484.1 | 448.7 | 403.2 |
| GYBE ANGLES: | 139.1ø | 143.9ø | 146.5ø | 152.5ø | 162.0ø | 170.3ø | 174.0ø |

NOTE: To convert any time allowance above to speed in knots: Kt = 3600/TA

----- 2006 WIND-AVERAGED TIME ALLOWANCES FOR SELECTED COURSES -----
 ----- Already multiplied by Dynamic Allowance -----

| | | | | | | | |
|---------------|-------|-------|-------|-------|-------|-------|-------|
| Wnd/Lwd VMG | 911.1 | 743.5 | 657.7 | 606.0 | 570.4 | 544.9 | 516.3 |
| Olympic 6-leg | 852.2 | 701.7 | 627.0 | 583.9 | 555.0 | 534.1 | 508.4 |
| Circular Rndm | 743.9 | 606.3 | 533.8 | 492.0 | 465.9 | 448.2 | 424.6 |
| Non-Spinnaker | 832.3 | 666.8 | 576.7 | 523.2 | 489.5 | 467.1 | 439.7 |
| Ocean for PCS | 846.5 | 668.1 | 567.5 | 504.8 | 462.5 | 432.0 | 389.2 |