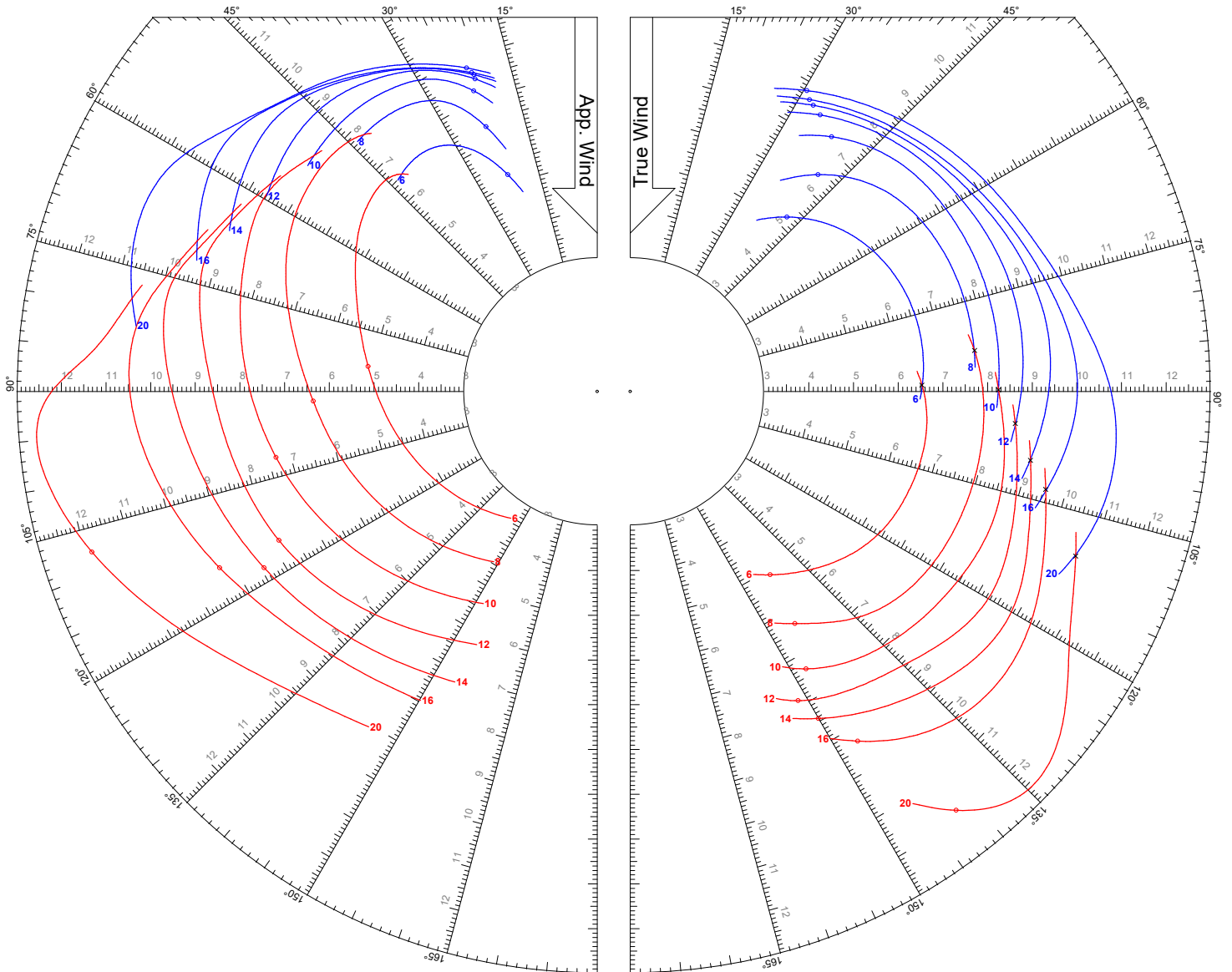




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World Leader in Rating Technology

# Speed Guide



## Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

TWS: 6, 8, 10, 12, 14, 16, 20 kts

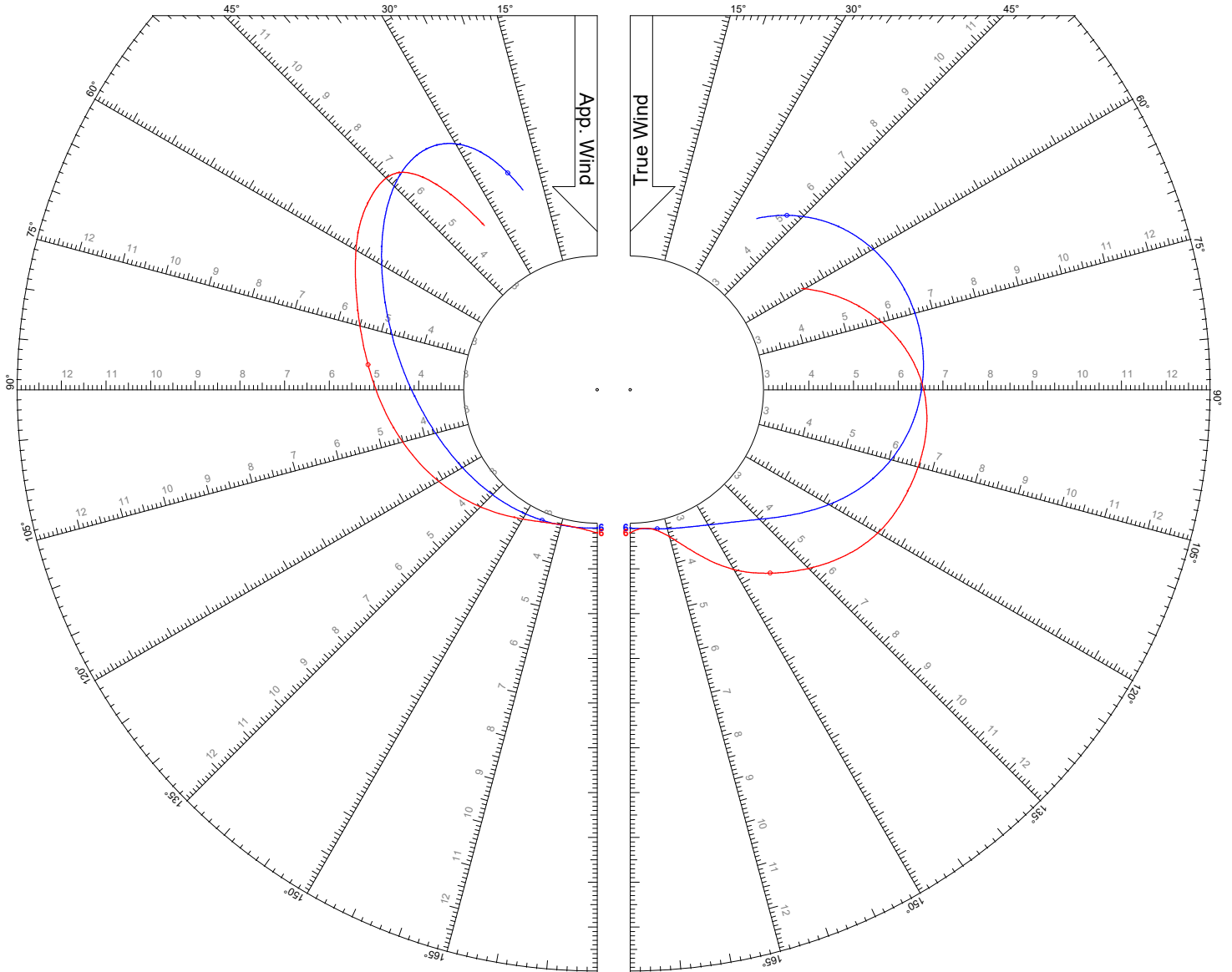
**Jib**

**Asymmetric Spinnaker on Centerline**



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# Speed Guide



## Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

**TWS: 6 kts**

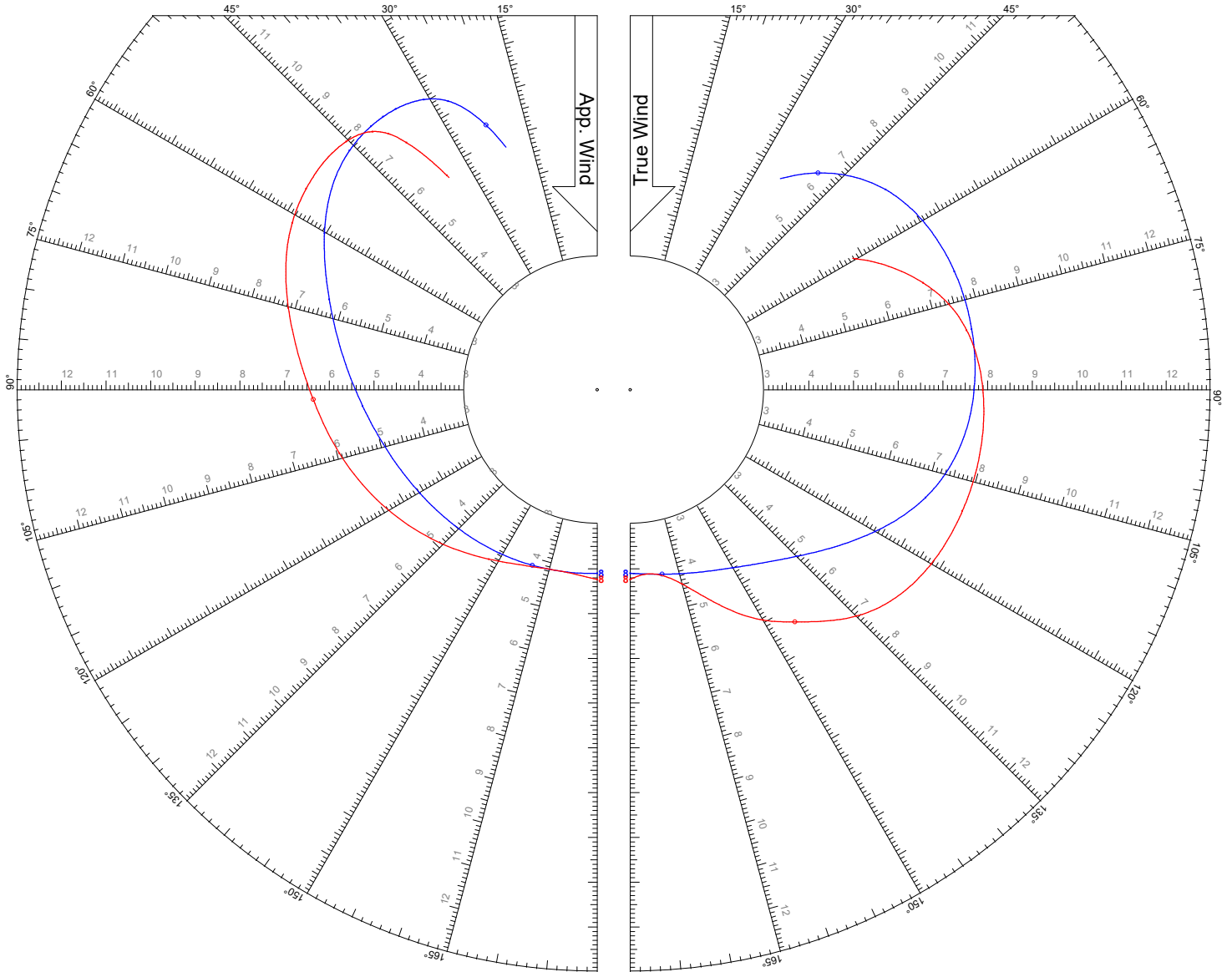
**Jib**

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### Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

**TWS: 8 kts**

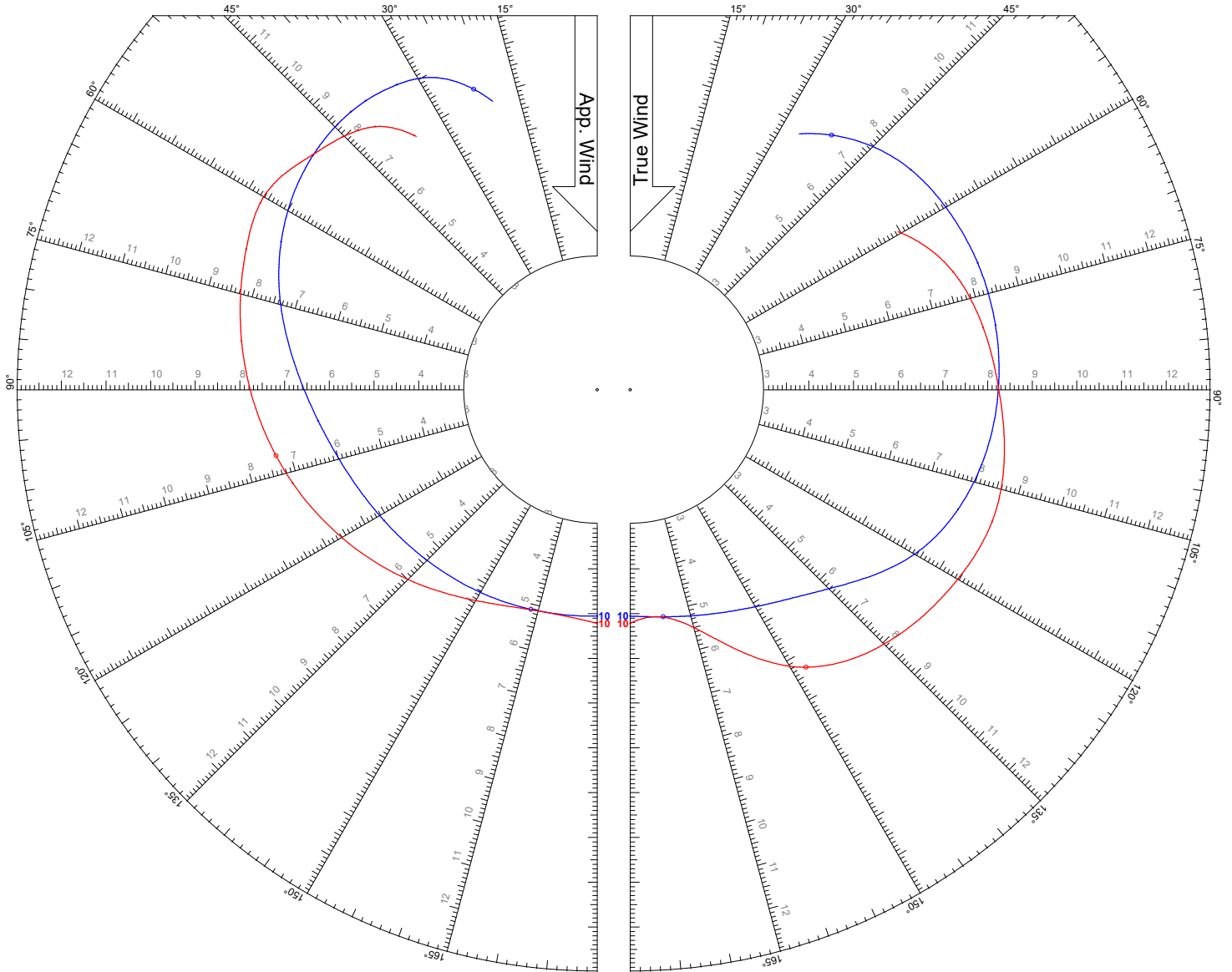
**Jib**

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### Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

**TWS: 10 kts**

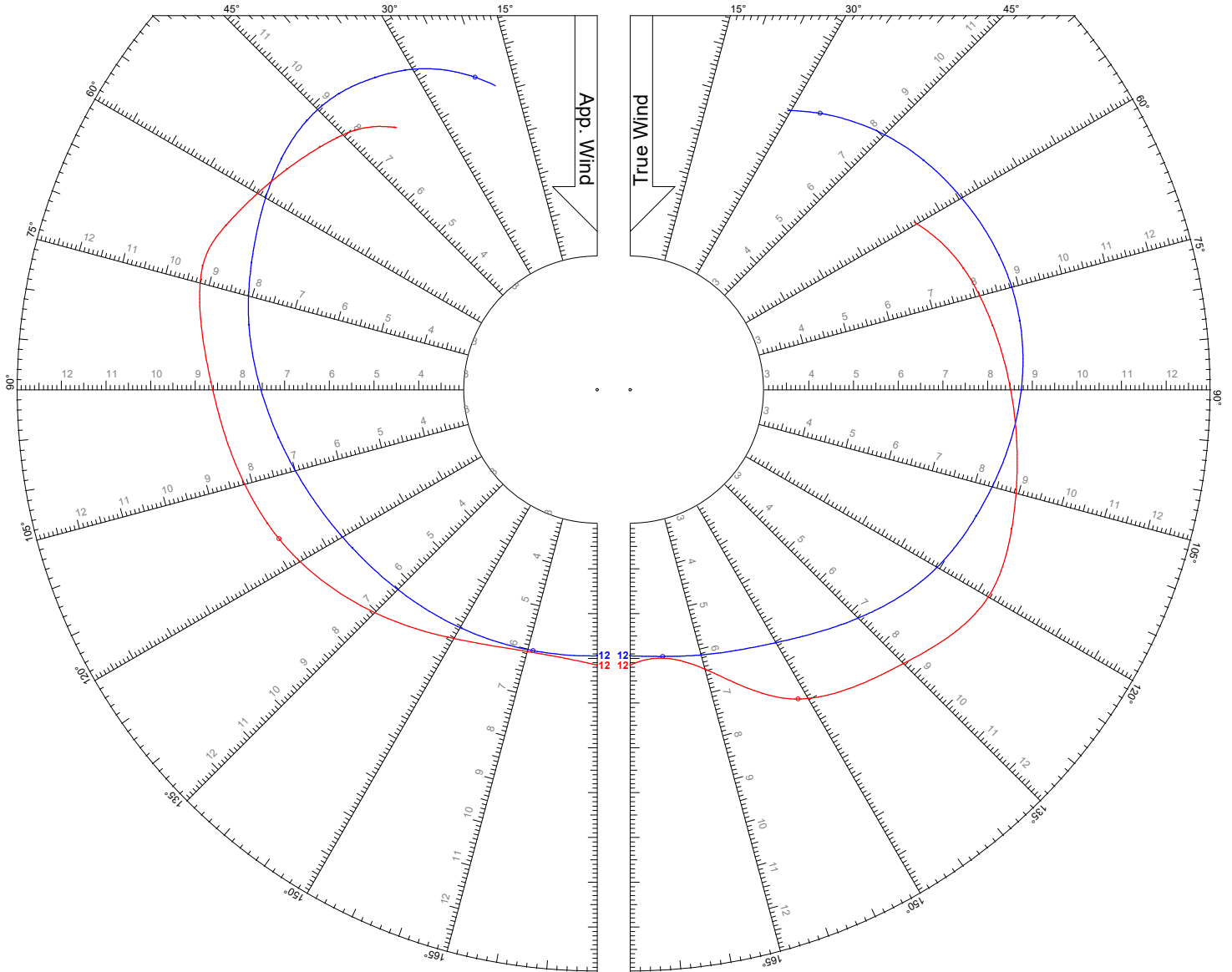
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## Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

**TWS: 12 kts**

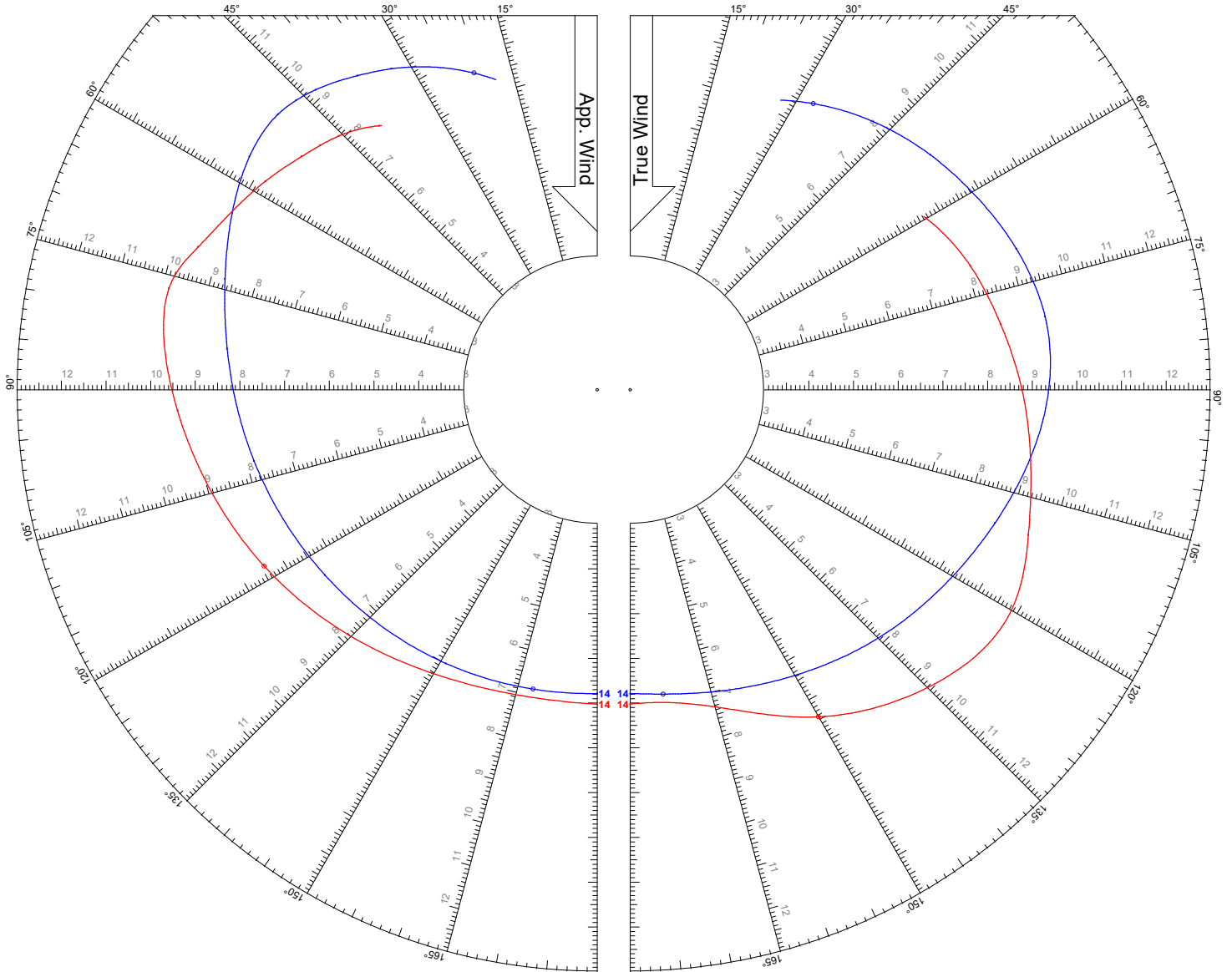
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## Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

**TWS: 14 kts**

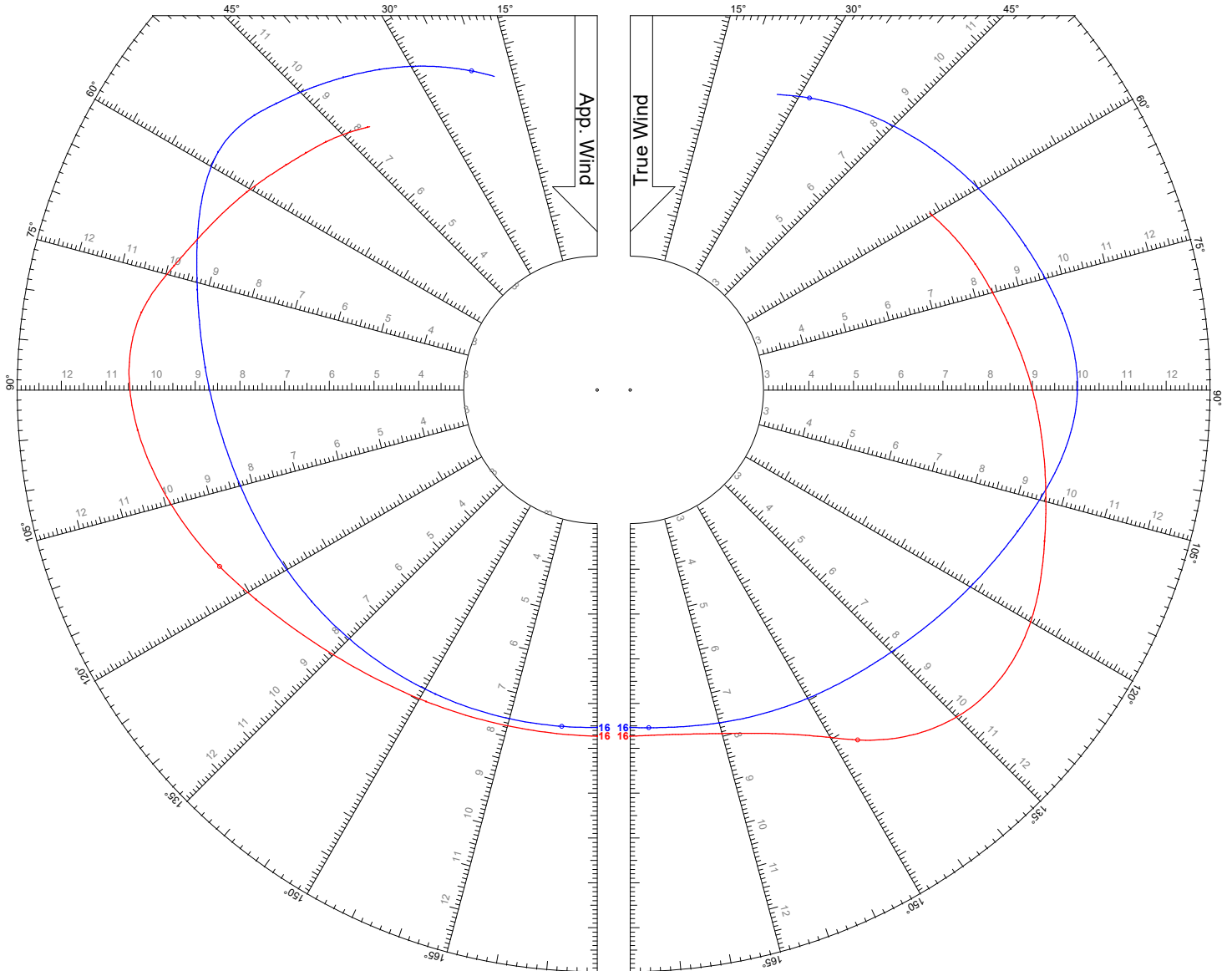
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**Asymmetric Spinnaker on Centerline**



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| Polar Plot for Boat |                          |
|---------------------|--------------------------|
| Name                | J/121                    |
| Sail Number         | USA 1                    |
| Class               | J/121 One Design         |
| Designer            | R. Alan Johnstone        |
| Builder             | J Boats, Inc.            |
| Issued On           | 1/3/2017 - VPP 2016 1.01 |

TWS: 16 kts

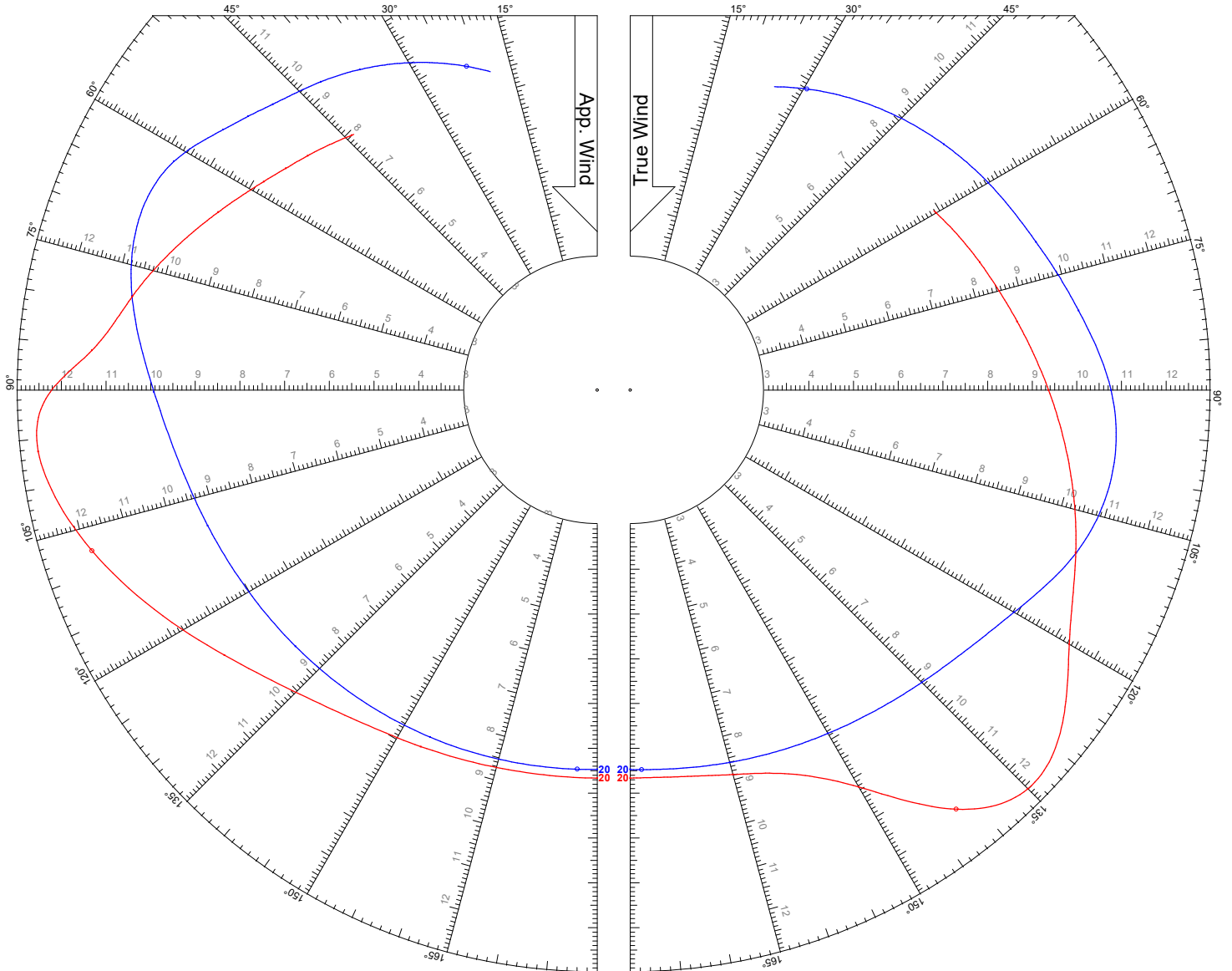
Jib

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## Polar Plot for Boat

Name **J/121**  
Sail Number **USA 1**  
Class **J/121 One Design**  
Designer **R. Alan Johnstone**  
Builder **J Boats, Inc.**  
Issued On **1/3/2017 - VPP 2016 1.01**

**TWS: 20 kts**

**Jib**

**Asymmetric Spinnaker on Centerline**





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**Polar Tables**

Boat Name: **J/121**  
 Sail No: **USA 1**  
 Sail: **Best Performance**  
 Issued On: **1/3/2017 - VPP 2016 1.01**

**TWS = 6 Kts**

| TWA        | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|------|------|-------|--------|-------|------|------|
| 42.0° (b)  | 5.24 | 3.90 | 10.50 | 22.5°  | 4.1°  | 1.00 | 0.97 |
| 52°        | 5.92 | 3.64 | 10.71 | 26.2°  | 4.5°  | 1.00 | 1.00 |
| 60°        | 6.28 | 3.14 | 10.63 | 29.3°  | 4.4°  | 1.00 | 1.00 |
| 70°        | 6.54 | 2.24 | 10.28 | 33.3°  | 4.1°  | 1.00 | 1.00 |
| 75°        | 6.60 | 1.71 | 10.00 | 35.4°  | 3.9°  | 1.00 | 1.00 |
| 80°        | 6.62 | 1.15 | 9.67  | 37.7°  | 3.6°  | 1.00 | 1.00 |
| 90°        | 6.57 | 0.00 | 8.90  | 42.4°  | 15.2° | 1.00 | 0.97 |
| 110°       | 6.61 | 2.26 | 7.25  | 51.0°  | 13.3° | 1.00 | 1.00 |
| 120°       | 6.40 | 3.20 | 6.21  | 56.8°  | 12.5° | 1.00 | 1.00 |
| 135°       | 5.65 | 3.99 | 4.47  | 71.7°  | 11.3° | 1.00 | 1.00 |
| 150°       | 4.64 | 4.02 | 3.05  | 100.5° | 10.1° | 1.00 | 1.00 |
| 165°       | 3.40 | 3.28 | 2.85  | 147.0° | 9.2°  | 1.00 | 1.00 |
| 180°       | 3.20 | 3.20 | 2.80  | 180.0° | 8.8°  | 1.00 | 1.00 |
| 142.6° (r) | 5.16 | 4.10 | 3.67  | 83.8°  | 10.7° | 1.00 | 1.00 |

**TWS = 8 Kts**

| TWA        | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|------|------|-------|--------|-------|------|------|
| 41.0° (b)  | 6.42 | 4.84 | 13.51 | 22.9°  | 10.1° | 1.00 | 0.98 |
| 52°        | 7.26 | 4.47 | 13.72 | 27.4°  | 11.5° | 1.00 | 1.00 |
| 60°        | 7.56 | 3.78 | 13.47 | 30.9°  | 10.5° | 1.00 | 1.00 |
| 70°        | 7.72 | 2.64 | 12.88 | 35.7°  | 8.4°  | 1.00 | 1.00 |
| 75°        | 7.76 | 2.01 | 12.50 | 38.2°  | 7.2°  | 1.00 | 1.00 |
| 80°        | 7.76 | 1.35 | 12.08 | 40.7°  | 5.9°  | 1.00 | 1.00 |
| 90°        | 7.89 | 0.00 | 11.24 | 45.4°  | 20.6° | 1.00 | 0.97 |
| 110°       | 7.91 | 2.71 | 9.13  | 55.4°  | 16.2° | 1.00 | 1.00 |
| 120°       | 7.78 | 3.89 | 7.89  | 61.4°  | 14.9° | 1.00 | 1.00 |
| 135°       | 7.15 | 5.06 | 5.85  | 75.2°  | 12.1° | 1.00 | 1.00 |
| 150°       | 5.94 | 5.15 | 4.12  | 103.8° | 10.6° | 1.00 | 1.00 |
| 165°       | 4.49 | 4.34 | 3.84  | 147.4° | 9.6°  | 1.00 | 1.00 |
| 180°       | 4.24 | 4.24 | 3.76  | 180.0° | 8.9°  | 1.00 | 1.00 |
| 144.6° (r) | 6.36 | 5.19 | 4.64  | 92.0°  | 11.1° | 1.00 | 1.00 |

**TWS = 10 Kts**

| TWA        | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|------|------|-------|--------|-------|------|------|
| 38.4° (b)  | 7.26 | 5.69 | 16.32 | 22.4°  | 20.8° | 1.00 | 0.97 |
| 52°        | 7.98 | 4.91 | 16.18 | 29.1°  | 21.6° | 1.00 | 1.00 |
| 60°        | 8.16 | 4.08 | 15.75 | 33.4°  | 19.1° | 1.00 | 1.00 |
| 70°        | 8.28 | 2.83 | 15.00 | 38.8°  | 15.4° | 1.00 | 1.00 |
| 75°        | 8.30 | 2.15 | 14.56 | 41.6°  | 13.4° | 1.00 | 1.00 |
| 80°        | 8.30 | 1.44 | 14.06 | 44.5°  | 11.3° | 1.00 | 1.00 |
| 90°        | 8.25 | 0.00 | 12.97 | 50.5°  | 22.2° | 0.92 | 0.93 |
| 110°       | 8.62 | 2.95 | 10.74 | 61.0°  | 21.6° | 1.00 | 0.99 |
| 120°       | 8.47 | 4.23 | 9.33  | 68.2°  | 16.3° | 1.00 | 1.00 |
| 135°       | 8.04 | 5.68 | 7.14  | 82.2°  | 12.7° | 1.00 | 1.00 |
| 150°       | 7.13 | 6.18 | 5.23  | 107.0° | 11.0° | 1.00 | 1.00 |
| 165°       | 5.50 | 5.31 | 4.90  | 148.1° | 10.1° | 1.00 | 1.00 |
| 180°       | 5.22 | 5.22 | 4.78  | 180.0° | 9.0°  | 1.00 | 1.00 |
| 147.6° (r) | 7.34 | 6.20 | 5.47  | 101.6° | 11.2° | 1.00 | 1.00 |

**TWS = 12 Kts**

| TWA        | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|------|------|-------|--------|-------|------|------|
| 34.6° (b)  | 7.50 | 6.17 | 18.66 | 21.4°  | 31.2° | 1.00 | 0.93 |
| 52°        | 8.33 | 5.13 | 18.34 | 31.0°  | 30.8° | 1.00 | 0.95 |
| 60°        | 8.57 | 4.28 | 17.89 | 35.5°  | 29.0° | 1.00 | 0.98 |
| 70°        | 8.79 | 3.01 | 17.13 | 41.2°  | 24.9° | 1.00 | 1.00 |
| 75°        | 8.84 | 2.29 | 16.65 | 44.1°  | 21.8° | 1.00 | 1.00 |
| 80°        | 8.86 | 1.54 | 16.10 | 47.2°  | 18.5° | 1.00 | 1.00 |
| 90°        | 8.76 | 0.00 | 14.85 | 53.9°  | 11.9° | 1.00 | 1.00 |
| 110°       | 9.09 | 3.11 | 12.33 | 66.2°  | 22.1° | 0.94 | 0.94 |
| 120°       | 9.26 | 4.63 | 10.89 | 72.6°  | 20.4° | 1.00 | 1.00 |
| 135°       | 8.65 | 6.12 | 8.49  | 88.9°  | 13.6° | 1.00 | 1.00 |
| 150°       | 7.96 | 6.90 | 6.47  | 112.0° | 11.3° | 1.00 | 1.00 |
| 165°       | 6.46 | 6.24 | 6.00  | 148.8° | 10.5° | 1.00 | 1.00 |
| 180°       | 6.15 | 6.15 | 5.85  | 180.0° | 9.1°  | 1.00 | 1.00 |
| 151.5° (r) | 7.87 | 6.91 | 6.33  | 115.0° | 11.2° | 1.00 | 1.00 |

**TWS = 14 Kts**

| TWA        | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|------|------|-------|--------|-------|------|------|
| 32.7° (b)  | 7.59 | 6.39 | 20.80 | 21.3°  | 33.2° | 1.00 | 0.80 |
| 52°        | 8.52 | 5.25 | 20.39 | 32.8°  | 33.7° | 1.00 | 0.83 |
| 60°        | 8.83 | 4.42 | 19.94 | 37.4°  | 33.6° | 1.00 | 0.88 |
| 70°        | 9.20 | 3.15 | 19.20 | 43.2°  | 32.7° | 1.00 | 0.94 |
| 75°        | 9.34 | 2.42 | 18.73 | 46.2°  | 30.7° | 1.00 | 0.97 |
| 80°        | 9.43 | 1.64 | 18.19 | 49.3°  | 28.4° | 1.00 | 1.00 |
| 90°        | 9.37 | 0.00 | 16.85 | 56.2°  | 18.4° | 1.00 | 1.00 |
| 110°       | 9.49 | 3.24 | 13.97 | 70.3°  | 22.1° | 0.87 | 0.94 |
| 120°       | 9.85 | 4.93 | 12.46 | 76.8°  | 22.1° | 0.97 | 0.94 |
| 135°       | 9.41 | 6.65 | 9.91  | 92.8°  | 15.2° | 1.00 | 1.00 |
| 150°       | 8.44 | 7.31 | 7.91  | 117.8° | 11.6° | 1.00 | 1.00 |
| 165°       | 7.33 | 7.08 | 7.17  | 149.7° | 10.8° | 1.00 | 1.00 |
| 180°       | 7.02 | 7.02 | 6.98  | 180.0° | 9.3°  | 1.00 | 1.00 |
| 150.0° (r) | 8.43 | 7.31 | 7.91  | 117.8° | 11.6° | 1.00 | 1.00 |

**TWS = 16 Kts**

| TWA        | BTV   | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|-------|------|-------|--------|-------|------|------|
| 31.7° (b)  | 7.66  | 6.52 | 22.87 | 21.5°  | 34.0° | 1.00 | 0.69 |
| 52°        | 8.66  | 5.33 | 22.39 | 34.3°  | 34.5° | 1.00 | 0.72 |
| 60°        | 9.00  | 4.50 | 21.93 | 39.2°  | 34.6° | 1.00 | 0.76 |
| 70°        | 9.42  | 3.22 | 21.16 | 45.3°  | 34.2° | 1.00 | 0.83 |
| 75°        | 9.62  | 2.49 | 20.69 | 48.3°  | 34.0° | 1.00 | 0.87 |
| 80°        | 9.82  | 1.71 | 20.18 | 51.4°  | 33.7° | 1.00 | 0.93 |
| 90°        | 10.01 | 0.00 | 18.87 | 58.0°  | 27.1° | 1.00 | 1.00 |
| 110°       | 9.87  | 3.38 | 15.67 | 73.7°  | 22.1° | 0.81 | 0.94 |
| 120°       | 10.35 | 5.18 | 14.05 | 80.4°  | 22.1° | 0.91 | 0.94 |
| 135°       | 10.33 | 7.30 | 11.36 | 95.0°  | 16.2° | 1.00 | 1.00 |
| 150°       | 8.96  | 7.76 | 9.38  | 121.5° | 11.9° | 1.00 | 1.00 |
| 165°       | 7.94  | 7.67 | 8.58  | 151.2° | 11.1° | 1.00 | 1.00 |
| 180°       | 7.73  | 7.73 | 8.27  | 180.0° | 9.4°  | 1.00 | 1.00 |
| 146.9° (r) | 9.33  | 7.81 | 9.64  | 115.0° | 12.4° | 1.00 | 1.00 |

**TWS = 20 Kts**

| TWA        | BTV   | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
|------------|-------|------|-------|--------|-------|------|------|
| 30.5° (b)  | 7.80  | 6.72 | 27.01 | 22.1°  | 32.6° | 0.59 | 0.61 |
| 52°        | 8.91  | 5.49 | 26.44 | 36.6°  | 32.3° | 0.69 | 0.61 |
| 60°        | 9.26  | 4.63 | 25.90 | 42.0°  | 32.1° | 0.80 | 0.61 |
| 70°        | 9.67  | 3.31 | 25.01 | 48.7°  | 35.0° | 1.00 | 0.64 |
| 75°        | 9.92  | 2.57 | 24.52 | 52.0°  | 35.3° | 1.00 | 0.68 |
| 80°        | 10.19 | 1.77 | 23.97 | 55.2°  | 35.4° | 1.00 | 0.74 |
| 90°        | 10.76 | 0.00 | 22.71 | 61.7°  | 34.8° | 1.00 | 0.87 |
| 110°       | 10.63 | 3.63 | 19.17 | 78.6°  | 17.2° | 1.00 | 1.00 |
| 120°       | 11.35 | 5.68 | 17.37 | 85.5°  | 22.1° | 0.80 | 0.94 |
| 135°       | 12.59 | 8.90 | 14.23 | 96.3°  | 22.1° | 1.00 | 0.95 |
| 150°       | 10.23 | 8.86 | 12.26 | 125.3° | 12.8° | 1.00 | 1.00 |
| 165°       | 8.89  | 8.58 | 11.65 | 153.6° | 11.7° | 1.00 | 1.00 |
| 180°       | 8.66  | 8.66 | 11.34 | 180.0° | 9.9°  | 1.00 | 1.00 |
| 142.0° (r) | 11.87 | 9.36 | 12.90 | 107.6° | 16.1° | 1.00 | 1.00 |



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| Polar Tables |                          |
|--------------|--------------------------|
| Boat Name:   | J/121                    |
| Sail No:     | USA 1                    |
| Sail:        | Jib                      |
| Issued On:   | 1/3/2017 - VPP 2016 1.01 |

| TWS = 6 Kts |      |      |       |        |      |      |      |
|-------------|------|------|-------|--------|------|------|------|
| TWA         | BTV  | VMG  | AWS   | AWA    | Heel | Reef | Flat |
| 42.0° (b)   | 5.24 | 3.90 | 10.33 | 22.1°  | 4.1° | 1.00 | 0.97 |
| 52°         | 5.92 | 3.64 | 10.55 | 25.7°  | 4.5° | 1.00 | 1.00 |
| 60°         | 6.28 | 3.14 | 10.48 | 28.7°  | 4.4° | 1.00 | 1.00 |
| 70°         | 6.54 | 2.24 | 10.13 | 32.6°  | 4.1° | 1.00 | 1.00 |
| 75°         | 6.60 | 1.71 | 9.87  | 34.7°  | 3.9° | 1.00 | 1.00 |
| 80°         | 6.62 | 1.15 | 9.54  | 36.9°  | 3.6° | 1.00 | 1.00 |
| 90°         | 6.52 | 0.00 | 8.74  | 41.8°  | 3.1° | 1.00 | 1.00 |
| 110°        | 5.79 | 1.98 | 6.66  | 55.3°  | 1.9° | 1.00 | 1.00 |
| 120°        | 5.13 | 2.57 | 5.52  | 66.4°  | 1.3° | 1.00 | 1.00 |
| 135°        | 4.09 | 2.89 | 4.15  | 90.8°  | 0.7° | 1.00 | 1.00 |
| 150°        | 3.49 | 3.02 | 3.34  | 118.5° | 0.4° | 1.00 | 1.00 |
| 165°        | 3.21 | 3.10 | 2.86  | 148.1° | 0.2° | 1.00 | 1.00 |
| 180°        | 3.09 | 3.09 | 2.75  | 180.0° | 0.1° | 1.00 | 1.00 |
| 168.9° (r)  | 3.16 | 3.11 | 2.80  | 156.4° | 0.2° | 1.00 | 1.00 |

| TWS = 8 Kts |      |      |       |        |       |      |      |
|-------------|------|------|-------|--------|-------|------|------|
| TWA         | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 41.0° (b)   | 6.42 | 4.84 | 13.25 | 22.2°  | 10.1° | 1.00 | 0.98 |
| 52°         | 7.26 | 4.47 | 13.44 | 26.5°  | 11.5° | 1.00 | 1.00 |
| 60°         | 7.56 | 3.78 | 13.21 | 30.0°  | 10.5° | 1.00 | 1.00 |
| 70°         | 7.72 | 2.64 | 12.64 | 34.8°  | 8.4°  | 1.00 | 1.00 |
| 75°         | 7.76 | 2.01 | 12.28 | 37.3°  | 7.2°  | 1.00 | 1.00 |
| 80°         | 7.76 | 1.35 | 11.88 | 39.9°  | 5.9°  | 1.00 | 1.00 |
| 90°         | 7.70 | 0.00 | 10.92 | 45.2°  | 4.5°  | 1.00 | 1.00 |
| 110°        | 7.04 | 2.41 | 8.52  | 59.1°  | 2.6°  | 1.00 | 1.00 |
| 120°        | 6.33 | 3.17 | 7.18  | 70.2°  | 1.8°  | 1.00 | 1.00 |
| 135°        | 5.26 | 3.72 | 5.55  | 92.8°  | 1.1°  | 1.00 | 1.00 |
| 150°        | 4.59 | 3.98 | 4.48  | 119.2° | 0.7°  | 1.00 | 1.00 |
| 165°        | 4.26 | 4.11 | 3.84  | 148.3° | 0.4°  | 1.00 | 1.00 |
| 180°        | 4.10 | 4.10 | 3.68  | 180.0° | 0.1°  | 1.00 | 1.00 |
| 170.1° (r)  | 4.18 | 4.12 | 3.73  | 159.0° | 0.3°  | 1.00 | 1.00 |

| TWS = 10 Kts |      |      |       |        |       |      |      |
|--------------|------|------|-------|--------|-------|------|------|
| TWA          | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 38.4° (b)    | 7.26 | 5.69 | 15.83 | 20.7°  | 20.8° | 1.00 | 0.97 |
| 52°          | 7.98 | 4.91 | 15.60 | 26.9°  | 21.6° | 1.00 | 1.00 |
| 60°          | 8.16 | 4.08 | 15.20 | 31.3°  | 19.1° | 1.00 | 1.00 |
| 70°          | 8.28 | 2.83 | 14.53 | 37.1°  | 15.4° | 1.00 | 1.00 |
| 75°          | 8.30 | 2.15 | 14.13 | 40.1°  | 13.4° | 1.00 | 1.00 |
| 80°          | 8.30 | 1.44 | 13.69 | 43.2°  | 11.3° | 1.00 | 1.00 |
| 90°          | 8.24 | 0.00 | 12.68 | 49.5°  | 7.1°  | 1.00 | 1.00 |
| 110°         | 7.81 | 2.67 | 10.18 | 63.9°  | 3.3°  | 1.00 | 1.00 |
| 120°         | 7.35 | 3.67 | 8.80  | 73.7°  | 2.4°  | 1.00 | 1.00 |
| 135°         | 6.29 | 4.45 | 6.95  | 95.3°  | 1.5°  | 1.00 | 1.00 |
| 150°         | 5.60 | 4.85 | 5.67  | 120.4° | 1.0°  | 1.00 | 1.00 |
| 165°         | 5.23 | 5.05 | 4.87  | 148.9° | 0.6°  | 1.00 | 1.00 |
| 180°         | 5.06 | 5.06 | 4.67  | 180.0° | 0.2°  | 1.00 | 1.00 |
| 171.7° (r)   | 5.13 | 5.07 | 4.71  | 162.7° | 0.4°  | 1.00 | 1.00 |

| TWS = 12 Kts |      |      |       |        |       |      |      |
|--------------|------|------|-------|--------|-------|------|------|
| TWA          | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 34.6° (b)    | 7.50 | 6.17 | 17.81 | 18.2°  | 31.2° | 1.00 | 0.93 |
| 52°          | 8.33 | 5.13 | 17.22 | 26.7°  | 30.8° | 1.00 | 0.95 |
| 60°          | 8.57 | 4.28 | 16.74 | 31.3°  | 29.0° | 1.00 | 0.98 |
| 70°          | 8.79 | 3.01 | 16.08 | 37.7°  | 24.9° | 1.00 | 1.00 |
| 75°          | 8.84 | 2.29 | 15.74 | 41.2°  | 21.8° | 1.00 | 1.00 |
| 80°          | 8.86 | 1.54 | 15.34 | 44.9°  | 18.5° | 1.00 | 1.00 |
| 90°          | 8.76 | 0.00 | 14.37 | 52.5°  | 11.9° | 1.00 | 1.00 |
| 110°         | 8.25 | 2.82 | 11.76 | 68.8°  | 3.9°  | 1.00 | 1.00 |
| 120°         | 7.93 | 3.97 | 10.35 | 78.5°  | 2.9°  | 1.00 | 1.00 |
| 135°         | 7.22 | 5.10 | 8.38  | 97.5°  | 1.9°  | 1.00 | 1.00 |
| 150°         | 6.52 | 5.65 | 6.89  | 121.8° | 1.4°  | 1.00 | 1.00 |
| 165°         | 6.13 | 5.92 | 5.97  | 149.6° | 0.8°  | 1.00 | 1.00 |
| 180°         | 5.94 | 5.94 | 5.73  | 180.0° | 0.2°  | 1.00 | 1.00 |
| 173.0° (r)   | 6.00 | 5.96 | 5.76  | 165.8° | 0.5°  | 1.00 | 1.00 |

| TWS = 14 Kts |      |      |       |        |       |      |      |
|--------------|------|------|-------|--------|-------|------|------|
| TWA          | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 32.7° (b)    | 7.59 | 6.39 | 19.70 | 17.7°  | 33.2° | 1.00 | 0.80 |
| 52°          | 8.52 | 5.25 | 18.83 | 27.5°  | 33.7° | 1.00 | 0.83 |
| 60°          | 8.83 | 4.42 | 18.21 | 31.8°  | 33.6° | 1.00 | 0.88 |
| 70°          | 9.20 | 3.15 | 17.33 | 37.5°  | 32.7° | 1.00 | 0.94 |
| 75°          | 9.34 | 2.42 | 16.94 | 40.9°  | 30.7° | 1.00 | 0.97 |
| 80°          | 9.43 | 1.64 | 16.53 | 44.6°  | 28.4° | 1.00 | 1.00 |
| 90°          | 9.37 | 0.00 | 15.90 | 53.9°  | 18.4° | 1.00 | 1.00 |
| 110°         | 8.69 | 2.97 | 13.40 | 72.5°  | 4.9°  | 1.00 | 1.00 |
| 120°         | 8.34 | 4.17 | 11.92 | 82.8°  | 3.5°  | 1.00 | 1.00 |
| 135°         | 7.85 | 5.55 | 9.86  | 100.8° | 2.4°  | 1.00 | 1.00 |
| 150°         | 7.37 | 6.38 | 8.17  | 123.2° | 1.7°  | 1.00 | 1.00 |
| 165°         | 6.99 | 6.75 | 7.11  | 150.3° | 1.1°  | 1.00 | 1.00 |
| 180°         | 6.79 | 6.79 | 6.84  | 180.0° | 0.3°  | 1.00 | 1.00 |
| 173.8° (r)   | 6.84 | 6.80 | 6.86  | 167.6° | 0.6°  | 1.00 | 1.00 |

| TWS = 16 Kts |       |      |       |        |       |      |      |
|--------------|-------|------|-------|--------|-------|------|------|
| TWA          | BTV   | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 31.7° (b)    | 7.66  | 6.52 | 21.55 | 17.8°  | 34.0° | 1.00 | 0.69 |
| 52°          | 8.66  | 5.33 | 20.47 | 28.6°  | 34.5° | 1.00 | 0.72 |
| 60°          | 9.00  | 4.50 | 19.77 | 33.1°  | 34.6° | 1.00 | 0.76 |
| 70°          | 9.42  | 3.22 | 18.76 | 38.9°  | 34.2° | 1.00 | 0.83 |
| 75°          | 9.62  | 2.49 | 18.21 | 41.9°  | 34.0° | 1.00 | 0.87 |
| 80°          | 9.82  | 1.71 | 17.62 | 45.0°  | 33.7° | 1.00 | 0.93 |
| 90°          | 10.01 | 0.00 | 16.95 | 53.8°  | 27.1° | 1.00 | 1.00 |
| 110°         | 9.23  | 3.16 | 15.05 | 75.0°  | 7.5°  | 1.00 | 1.00 |
| 120°         | 8.79  | 4.40 | 13.55 | 85.9°  | 4.3°  | 1.00 | 1.00 |
| 135°         | 8.27  | 5.85 | 11.42 | 104.2° | 2.9°  | 1.00 | 1.00 |
| 150°         | 7.95  | 6.88 | 9.60  | 125.6° | 2.1°  | 1.00 | 1.00 |
| 165°         | 7.69  | 7.43 | 8.38  | 151.3° | 1.3°  | 1.00 | 1.00 |
| 180°         | 7.53  | 7.53 | 8.04  | 180.0° | 0.4°  | 1.00 | 1.00 |
| 176.8° (r)   | 7.55  | 7.54 | 8.04  | 173.8° | 0.6°  | 1.00 | 1.00 |

| TWS = 20 Kts |       |      |       |        |       |      |      |
|--------------|-------|------|-------|--------|-------|------|------|
| TWA          | BTV   | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 30.5° (b)    | 7.80  | 6.72 | 25.15 | 18.5°  | 32.6° | 0.59 | 0.61 |
| 52°          | 8.91  | 5.49 | 23.93 | 31.4°  | 32.3° | 0.69 | 0.61 |
| 60°          | 9.26  | 4.63 | 23.19 | 36.5°  | 32.1° | 0.80 | 0.61 |
| 70°          | 9.67  | 3.31 | 21.67 | 42.0°  | 35.0° | 1.00 | 0.64 |
| 75°          | 9.92  | 2.57 | 20.98 | 45.1°  | 35.3° | 1.00 | 0.68 |
| 80°          | 10.19 | 1.77 | 20.29 | 48.4°  | 35.4° | 1.00 | 0.74 |
| 90°          | 10.76 | 0.00 | 18.94 | 55.4°  | 34.8° | 1.00 | 0.87 |
| 110°         | 10.63 | 3.63 | 17.90 | 77.2°  | 17.2° | 1.00 | 1.00 |
| 120°         | 9.92  | 4.96 | 16.73 | 89.5°  | 8.8°  | 1.00 | 1.00 |
| 135°         | 9.23  | 6.53 | 14.55 | 108.5° | 4.4°  | 1.00 | 1.00 |
| 150°         | 8.85  | 7.67 | 12.64 | 129.6° | 3.1°  | 1.00 | 1.00 |
| 165°         | 8.61  | 8.31 | 11.37 | 153.7° | 2.0°  | 1.00 | 1.00 |
| 180°         | 8.47  | 8.47 | 10.99 | 180.0° | 0.7°  | 1.00 | 1.00 |
| 178.3° (r)   | 8.48  | 8.47 | 10.99 | 176.9° | 0.9°  | 1.00 | 1.00 |



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| Polar Tables                               |  |  |  |  |  |  |  |
|--------------------------------------------|--|--|--|--|--|--|--|
| Boat Name: <b>J/121</b>                    |  |  |  |  |  |  |  |
| Sail No: <b>USA 1</b>                      |  |  |  |  |  |  |  |
| Sail: <b>Asymmetric Spinnaker on CL</b>    |  |  |  |  |  |  |  |
| Issued On: <b>1/3/2017 - VPP 2016 1.01</b> |  |  |  |  |  |  |  |

| TWS = 6 Kts |      |      |      |        |       |      |      |
|-------------|------|------|------|--------|-------|------|------|
| TWA         | BTV  | VMG  | AWS  | AWA    | Heel  | Reef | Flat |
| 60°         | 4.51 | 2.25 | 9.04 | 34.0°  | 12.8° | 1.00 | 0.97 |
| 70°         | 5.45 | 1.86 | 9.27 | 36.0°  | 13.8° | 1.00 | 0.97 |
| 75°         | 5.83 | 1.51 | 9.25 | 37.1°  | 14.6° | 1.00 | 0.97 |
| 80°         | 6.14 | 1.07 | 9.16 | 38.4°  | 15.0° | 1.00 | 0.97 |
| 90°         | 6.57 | 0.00 | 8.75 | 41.3°  | 15.2° | 1.00 | 0.97 |
| 110°        | 6.61 | 2.26 | 7.13 | 50.2°  | 13.3° | 1.00 | 1.00 |
| 120°        | 6.40 | 3.20 | 6.11 | 56.1°  | 12.5° | 1.00 | 1.00 |
| 135°        | 5.65 | 3.99 | 4.41 | 71.8°  | 11.3° | 1.00 | 1.00 |
| 150°        | 4.64 | 4.02 | 3.02 | 101.1° | 10.1° | 1.00 | 1.00 |
| 165°        | 3.40 | 3.28 | 2.83 | 147.3° | 9.2°  | 1.00 | 1.00 |
| 180°        | 3.20 | 3.20 | 2.77 | 180.0° | 8.8°  | 1.00 | 1.00 |
| 142.6° (r)  | 5.16 | 4.10 | 3.62 | 84.2°  | 10.7° | 1.00 | 1.00 |

| TWS = 8 Kts |      |      |       |        |       |      |      |
|-------------|------|------|-------|--------|-------|------|------|
| TWA         | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 60°         | 5.85 | 2.93 | 11.86 | 34.0°  | 15.9° | 1.00 | 0.97 |
| 70°         | 6.98 | 2.39 | 12.05 | 36.4°  | 17.3° | 1.00 | 0.97 |
| 75°         | 7.39 | 1.91 | 11.91 | 37.6°  | 19.0° | 1.00 | 0.97 |
| 80°         | 7.65 | 1.33 | 11.62 | 39.0°  | 20.9° | 1.00 | 0.96 |
| 90°         | 7.89 | 0.00 | 10.85 | 43.3°  | 20.6° | 1.00 | 0.97 |
| 110°        | 7.91 | 2.71 | 8.87  | 54.2°  | 16.2° | 1.00 | 1.00 |
| 120°        | 7.78 | 3.89 | 7.68  | 60.5°  | 14.9° | 1.00 | 1.00 |
| 135°        | 7.15 | 5.06 | 5.73  | 74.9°  | 12.1° | 1.00 | 1.00 |
| 150°        | 5.94 | 5.15 | 4.08  | 104.4° | 10.6° | 1.00 | 1.00 |
| 165°        | 4.49 | 4.34 | 3.81  | 147.7° | 9.6°  | 1.00 | 1.00 |
| 180°        | 4.24 | 4.24 | 3.72  | 180.0° | 8.9°  | 1.00 | 1.00 |
| 144.6° (r)  | 6.36 | 5.19 | 4.58  | 92.4°  | 11.1° | 1.00 | 1.00 |

| TWS = 10 Kts |      |      |       |        |       |      |      |
|--------------|------|------|-------|--------|-------|------|------|
| TWA          | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 60°          | 7.00 | 3.50 | 14.33 | 33.5°  | 22.9° | 1.00 | 0.93 |
| 70°          | 7.70 | 2.63 | 13.97 | 37.6°  | 22.6° | 0.92 | 0.93 |
| 75°          | 7.88 | 2.04 | 13.62 | 40.1°  | 22.4° | 0.90 | 0.92 |
| 80°          | 8.02 | 1.39 | 13.22 | 42.6°  | 22.3° | 0.89 | 0.93 |
| 90°          | 8.25 | 0.00 | 12.30 | 47.9°  | 22.2° | 0.92 | 0.93 |
| 110°         | 8.62 | 2.95 | 10.13 | 59.0°  | 21.6° | 1.00 | 0.99 |
| 120°         | 8.47 | 4.23 | 8.99  | 67.2°  | 16.3° | 1.00 | 1.00 |
| 135°         | 8.04 | 5.68 | 6.96  | 81.9°  | 12.7° | 1.00 | 1.00 |
| 150°         | 7.13 | 6.18 | 5.16  | 107.5° | 11.0° | 1.00 | 1.00 |
| 165°         | 5.50 | 5.31 | 4.85  | 148.4° | 10.1° | 1.00 | 1.00 |
| 180°         | 5.22 | 5.22 | 4.73  | 180.0° | 9.0°  | 1.00 | 1.00 |
| 147.6° (r)   | 7.34 | 6.20 | 5.38  | 102.0° | 11.2° | 1.00 | 1.00 |

| TWS = 12 Kts |      |      |       |        |       |      |      |
|--------------|------|------|-------|--------|-------|------|------|
| TWA          | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 60°          | 7.41 | 3.71 | 16.24 | 35.2°  | 22.8° | 0.87 | 0.93 |
| 70°          | 7.94 | 2.72 | 15.65 | 40.4°  | 22.3° | 0.81 | 0.93 |
| 75°          | 8.10 | 2.10 | 15.24 | 43.1°  | 22.4° | 0.80 | 0.92 |
| 80°          | 8.24 | 1.43 | 14.79 | 46.0°  | 22.3° | 0.81 | 0.93 |
| 90°          | 8.52 | 0.00 | 13.79 | 51.9°  | 22.2° | 0.84 | 0.93 |
| 110°         | 9.09 | 3.11 | 11.49 | 64.0°  | 22.1° | 0.94 | 0.94 |
| 120°         | 9.26 | 4.63 | 10.23 | 71.3°  | 20.4° | 1.00 | 1.00 |
| 135°         | 8.65 | 6.12 | 8.23  | 88.7°  | 13.6° | 1.00 | 1.00 |
| 150°         | 7.96 | 6.90 | 6.34  | 112.2° | 11.3° | 1.00 | 1.00 |
| 165°         | 6.46 | 6.24 | 5.89  | 149.0° | 10.5° | 1.00 | 1.00 |
| 180°         | 6.15 | 6.15 | 5.76  | 180.0° | 9.1°  | 1.00 | 1.00 |
| 151.5° (r)   | 7.87 | 6.91 | 6.20  | 115.2° | 11.2° | 1.00 | 1.00 |

| TWS = 14 Kts |      |      |       |        |       |      |      |
|--------------|------|------|-------|--------|-------|------|------|
| TWA          | BTV  | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 60°          | 7.65 | 3.83 | 18.02 | 36.9°  | 22.7° | 0.77 | 0.93 |
| 70°          | 8.10 | 2.77 | 17.29 | 42.7°  | 22.4° | 0.73 | 0.92 |
| 75°          | 8.26 | 2.14 | 16.84 | 45.7°  | 22.3° | 0.74 | 0.93 |
| 80°          | 8.42 | 1.46 | 16.36 | 48.8°  | 22.2° | 0.74 | 0.93 |
| 90°          | 8.77 | 0.00 | 15.31 | 55.1°  | 22.2° | 0.77 | 0.93 |
| 110°         | 9.49 | 3.24 | 12.88 | 68.2°  | 22.1° | 0.87 | 0.94 |
| 120°         | 9.85 | 4.93 | 11.51 | 75.3°  | 22.1° | 0.97 | 0.94 |
| 135°         | 9.41 | 6.65 | 9.53  | 92.7°  | 15.2° | 1.00 | 1.00 |
| 150°         | 8.44 | 7.31 | 7.74  | 118.1° | 11.6° | 1.00 | 1.00 |
| 165°         | 7.33 | 7.08 | 7.05  | 149.9° | 10.8° | 1.00 | 1.00 |
| 180°         | 7.02 | 7.02 | 6.86  | 180.0° | 9.3°  | 1.00 | 1.00 |
| 150.0° (r)   | 8.43 | 7.31 | 7.74  | 118.1° | 11.6° | 1.00 | 1.00 |

| TWS = 16 Kts |       |      |       |        |       |      |      |
|--------------|-------|------|-------|--------|-------|------|------|
| TWA          | BTV   | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 60°          | 7.80  | 3.90 | 19.72 | 38.4°  | 22.7° | 0.70 | 0.93 |
| 70°          | 8.22  | 2.81 | 18.91 | 44.7°  | 22.4° | 0.68 | 0.93 |
| 75°          | 8.40  | 2.17 | 18.44 | 47.9°  | 22.3° | 0.68 | 0.93 |
| 80°          | 8.59  | 1.49 | 17.94 | 51.2°  | 22.2° | 0.69 | 0.93 |
| 90°          | 9.01  | 0.00 | 16.85 | 57.7°  | 22.2° | 0.71 | 0.93 |
| 110°         | 9.87  | 3.38 | 14.31 | 71.5°  | 22.1° | 0.81 | 0.94 |
| 120°         | 10.35 | 5.18 | 12.88 | 78.9°  | 22.1° | 0.91 | 0.94 |
| 135°         | 10.33 | 7.30 | 10.86 | 95.0°  | 16.2° | 1.00 | 1.00 |
| 150°         | 8.96  | 7.76 | 9.17  | 121.8° | 11.9° | 1.00 | 1.00 |
| 165°         | 7.94  | 7.67 | 8.43  | 151.4° | 11.1° | 1.00 | 1.00 |
| 180°         | 7.73  | 7.73 | 8.14  | 180.0° | 9.4°  | 1.00 | 1.00 |
| 146.9° (r)   | 9.33  | 7.81 | 9.41  | 115.3° | 12.4° | 1.00 | 1.00 |

| TWS = 20 Kts |       |      |       |        |       |      |      |
|--------------|-------|------|-------|--------|-------|------|------|
| TWA          | BTV   | VMG  | AWS   | AWA    | Heel  | Reef | Flat |
| 60°          | 7.91  | 3.95 | 23.05 | 40.9°  | 23.4° | 0.65 | 0.76 |
| 70°          | 8.33  | 2.85 | 22.18 | 48.0°  | 22.8° | 0.65 | 0.73 |
| 75°          | 8.55  | 2.21 | 21.67 | 51.5°  | 22.7° | 0.65 | 0.74 |
| 80°          | 8.80  | 1.53 | 21.13 | 55.0°  | 22.6° | 0.65 | 0.76 |
| 90°          | 9.37  | 0.00 | 19.95 | 62.0°  | 22.3° | 0.65 | 0.84 |
| 110°         | 10.62 | 3.63 | 17.23 | 76.5°  | 22.1° | 0.72 | 0.94 |
| 120°         | 11.35 | 5.68 | 15.68 | 84.0°  | 22.1° | 0.80 | 0.94 |
| 135°         | 12.59 | 8.90 | 13.08 | 96.3°  | 22.1° | 1.00 | 0.95 |
| 150°         | 10.23 | 8.86 | 11.96 | 125.8° | 12.8° | 1.00 | 1.00 |
| 165°         | 8.89  | 8.58 | 11.45 | 153.9° | 11.7° | 1.00 | 1.00 |
| 180°         | 8.66  | 8.66 | 11.16 | 180.0° | 9.9°  | 1.00 | 1.00 |
| 142.0° (r)   | 11.87 | 9.36 | 12.37 | 108.0° | 16.1° | 1.00 | 1.00 |