

DANGEROUS SEMICIRCLE

Hurricanes act much the same as high latitude depressions when it comes to force of their winds, and the dangerous and navigable semicircles.

There are two reasons for this. First, on the dangerous side of the storm, to escape from the track of the storm and the dangerous center you must beat or power into the winds and seas. On the navigable side, the wind is at your back as you are running away from the storm center.

Then there are the winds. What you feel on the boat is a function of the wind that is circulating around the storm center and the increase or decrease due to the direction in which the storm is traveling.

On the dangerous side of the storm the winds are circulating at angles that are complemented, and reinforced by the speed of travel. On the navigable side of the storm, the speed of travel is opposite the circulating wind direction and so reduces the wind you feel.

In the Northern Hemisphere, if you face the storm center and the storm is coming right at you, the dangerous quadrant is to your left and the navigable quadrant is to your right. In the Southern Hemisphere, the dangerous quadrant is to your right when you face the storm, and the navigable quadrant is to your left.

Before we get carried away with terms like dangerous quadrant and navigable quadrant, keep in mind that these are relative terms. What is dangerous or navigable is very much a function of the storm structure and distribution of winds around its center. It is also a function of the seaworthiness of vessel and crew.

It is far better to take avoiding action early enough in the encounter so that the storm passes harmlessly far enough away so as to make this discussion academic.

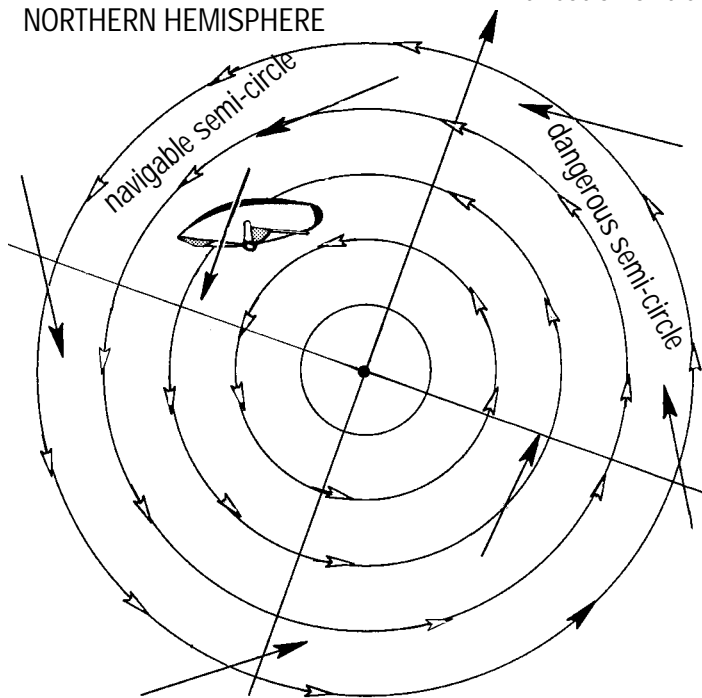
Finding the navigable quadrant of a hurricane—face the storm center:

- ❑ In the Northern Hemisphere the navigable quadrant is to your right.
- ❑ In the Southern hemisphere the navigable quadrant is on your left.

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TROPICAL CYCLONES

NORTHERN HEMISPHERE

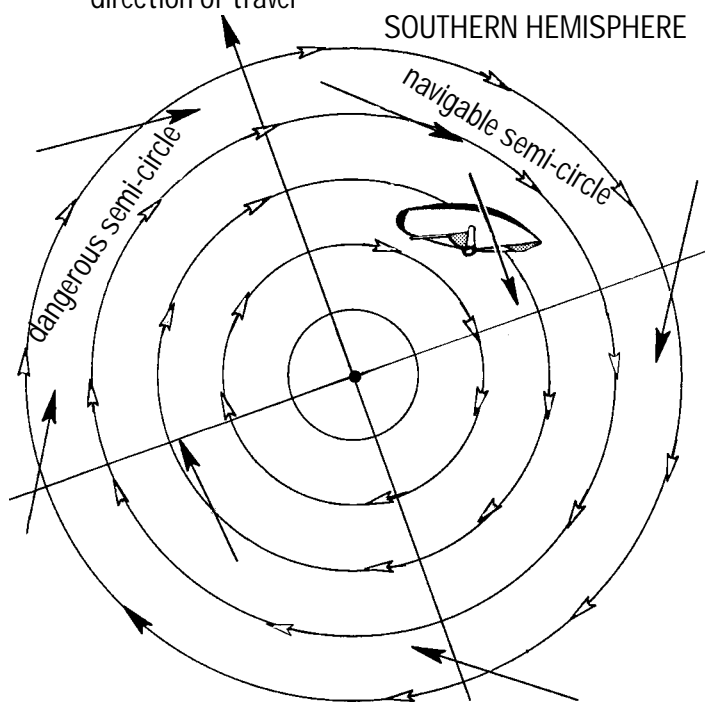


In the Northern Hemisphere, hurricanes rotate counterclockwise around their centers. Looking at this top view of the storm, you can see that on the right-hand side of the storm, the wind is blowing in the same direction as the storm is traveling. When you feel this wind pressure on a boat you have the total of the circulation winds about the center plus the direction of travel speed.

If the wind were circulating at 100 knots, and the storm moving at 15 knots, you would feel 115 knots of wind force. On the left side you subtract motion speed from wind speed, so in this example you would feel 85 knots.

direction of travel

SOUTHERN HEMISPHERE



In the Southern Hemisphere, winds circulate clockwise around the low center (bottom drawing). In this case, the dangerous side is to the left when looking at the storm from the top. Here you add the speed of travel to the circulating wind speed on the left side and deduct it on the right-hand side.