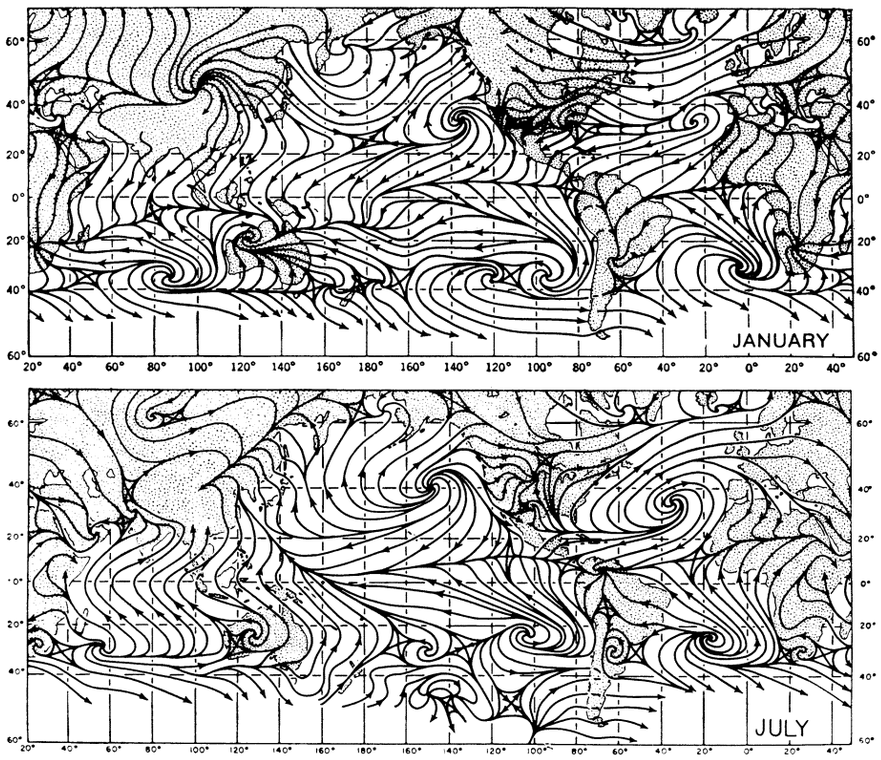

Winds of the Northern and Southern Hemispheres meet near the equator.

Nature Note

Intertropical Convergence Zone

The Intertropical Convergence Zone is a cumbersome name for a fascinating zone of winds that blow near the equator and may be responsible for the generation of giant hurricanes.

This is an undulating zone where the prevailing winds of the Northern Hemisphere meet and converge with those of the Southern Hemisphere. It flows near, but not at, the equator through the great oceans of the world, usually in a westerly direction. It does not move in a set path throughout the year, but tends to follow the sun. In summer, when the sun is north of the equator, the zone can be found at its northernmost location of about 12 degrees north latitude. In winter it tends to move south, usually within one to three degrees south of the equator—in all tropical oceans except the Atlantic.

The width and strength of this zone of converging winds also vary. Sometimes it is 50 to 100 miles wide, and at other times it is so weak and narrow it is hard to locate.

This zone, nicknamed ITC by meteorologists, is also called the equatorial front, although it is not a true weather front because temperatures of the converging air masses are quite similar. The region also has been erroneously called the doldrums, the region of equatorial calms where the heated surface air rises almost straight up toward the sky, creating an area with little or no horizontal motion of winds. The ITC zone moves in and through this doldrum area on separate paths.

Scientists are pinpointing this warm windy zone as a breeding ground of young hurricanes, an area where the colliding winds and spin of the rotating earth help spawn small tropical storms that can generate into towering destructive hurricanes.

When the intertropical convergence zone is located relatively close to the equator—a few degrees to the north or to the south—only small whirlwinds form along its course. But when it migrates farther into the Northern or the Southern Hemispheres, the influence of the rotating earth becomes large enough to give a spin to the converging wind currents and thus helps generate and foster the giant hurricanes.