No. 402

Aug. 25

A Science Service Feature

? WHY THE WEATHER ?

By Dr. Charles F. Brooks
of Clark University.

WHERE WILL A HURRICANE STRIKE?

When a hurricane enters the Gulf of Mexico, the gulf coast cities become apprehensive, for it is difficult to tell just where the storm is going to hit the shore. Naturally, ships leave the hurricane strictly alone, as far as possible, and there is no one to send in a report of just what it is doing.

The forecaster on shore, however, can obtain some idea of its probable course not only from the wind direction and the forerunning cirrus clouds when the storm is near at hand, but also from the storm waves and storm tides which reach the shore long before the storm.

The largest and longest waves are produced in the rear right quadrant of the cyclone, for here the rotary wind motion is reinforced by the general forward motion of the storm, and the wind is not only the strongest, but persists the longest in the same direction. Long waves will move forward with a velocity only slightly less than that of the wind producing them. As hurricane winds commonly reach a velocity of 60 miles an hour, while the storm center itself travels only 12 to 15 miles an hour, it is not surprising that high waves reach the coast and the water begins to rise while the storm is still 300 to 500 miles off shore. Mr. I. M. Cline, district forecaster at New Orleans, has shown that these waves, originating mainly on the right side of the cyclone, cause a rise in the water in front of and on the right of the path over which the cyclone is advancing. In a rough way, then, it may be said that when the water begins to rise between Galveston and New Orleans the storm center is likely to reach shore near Galveston, or farther east if the recurve begins in the Gulf.

(Tomorrow: Damp Cellars)

Science Service,
B and 21st Sts.,
Washington, D.C.