

METEOROLOGY

Hurricane Season Follows Two Years Without Storm

Three Major Storms Within Week Bring Destruction From Texas Across United States into Canada

THE HURRICANE season got off to a violent start this year with three major storms within a week, two in the Gulf of Mexico and one in the Atlantic. For several days two storms were raging simultaneously.

The season was late in starting—it usually begins in mid-August and lasts until mid-October—but it made up for its tardiness with extra fury. It also marked the end of an unusually quiet period. There has been no hurricane of major importance for the past two years, the Weather Bureau informed Science Service.

The Atlantic storm ran a curious course. It was first reported Sept. 18 about a hundred miles off the east coast of Florida. It was then moving almost due east, which it continued to do for two days, going 600 miles out to sea. There it stopped, drifted about for a day and a half, then looped back and headed straight for Cape Hatteras. This looked bad and aroused fears that Washington might get a whiff of the storm. But the old storm—five days old by then—changed its mind again, swung off to the north and east, passed 250 miles southeast of Nantucket and sailed again out to sea, this time for good.

No serious damage was done by this storm. Only some high tides were produced along the Atlantic coast.

Quite different is the story of the second Gulf storm. At first it seemed the more orderly although the more violent of the two storms. First reported Sept. 20 about 150 miles west of Cuba, it moved steadily northwest for three days toward the coast of Texas just north of the Mexican border. Consequently it was expected to strike at or near this point. Instead, it veered to the north and northeast, struck the coast about 75 miles west of Galveston and passed directly over Houston, Texas' largest city, 55 miles inland. Coming unexpectedly, people were not adequately prepared for it, much damage was done and several lives were lost.

Extremely high tides occurred, due to the fact that the waters heaped up by

the previous hurricane had not yet fully subsided. These tides, rolling up the estuaries of the Texas rivers, flooded much of the coastal country.

After passing Houston, the storm continued its northeasterly course with accelerated speed, passing entirely across the United States in 24 hours and crossing Lake Huron into Canada.

Another storm of hurricane force began raging in the Caribbean between Haiti and the South American coast, heading toward Nicaragua on September 26.

Science News Letter, October 4, 1941

PHYSICS

From Electron to Universe By New Multiplication Table

A NEW picture of the Universe from the smallest things to the greatest is given by a sort of multiplication table suggested by M. Davidson in the *Journal of the British Astronomical Association*. Taking his cue from Sir Arthur Eddington's famous lines in his book "The Expanding Universe,"

"A hundred thousand million stars make one Galaxy;

A hundred thousand million Galaxies make one Universe"

Dr. Davidson proposed a series of things each of which multiplied by 100,000 would give the size of the next in the series.

Beginning with the electron, as the smallest thing known in the Universe, the multiplication table of the Universe would run like this:

A hundred thousand electrons side by side stretch the width of an atom.

A hundred thousand atoms side by side stretch the width of a white blood corpuscle.

A hundred thousand white blood corpuscles side by side reach a length of 13 feet.

A hundred thousand times 13 feet is the radius of the minor planet Vesta.

A hundred thousand times the radius of Vesta will reach from the center of

the sun to one-third of the distance to Mercury—the planet nearest the sun.

A hundred thousand times this distance is one-tenth of a light year or the distance that light, traveling 186,000 miles per second, would reach in the tenth part of a year.

A hundred thousand times a tenth of a light year is of course 10,000 light years, one time supposed to be about the size of our own Galaxy or Milky Way system, but now believed to be more than ten times as large.

A hundred thousand times 10,000 light years is a billion light years, a distance that would stretch across the whole Universe now visible to astronomers.

Here ends the table of M. Davidson, but not the Universe. With each increase in the size of telescopes, with each increase in the sensitiveness of photographic plates, the visible Universe is extended. And the number of stars coming in with each increase indicate that the end is still far away. Every theoretical model of the Universe, beginning with Einstein's, has made the radius of the Universe thousands of times greater than that of the part now visible.

Science News Letter, October 4, 1941

Radioactive phosphorus produced in the atom-smashing cyclotron at the University of California has been shipped to Peru for medical use.

Possible for next spring—straw hats made from woven plastic.

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