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REANALYSIS OF THE 1955-1964 ATLANTIC HURRICANE SEASONS

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The Hurricane Database, known as HURDAT, is the main historical archive of all tropical storms, subtropical storms, and hurricanes in the North Atlantic Basin, which includes the Caribbean Sea and Gulf of Mexico, from 1851 to the present. HURDAT is maintained and updated annually by the National Hurricane Center at Miami, Florida. Today, HURDAT

previously unrecognized tropical cyclones have been discovered, analyzed, and recommended to the HURDAT Best Track Change Committee for inclusion into HURDAT. Changes to the number of tropical storms, hurricanes, major hurricanes, accumulated cyclone energy, and U.S. landfalling hurricanes are recommended for most of the years. A brief overview

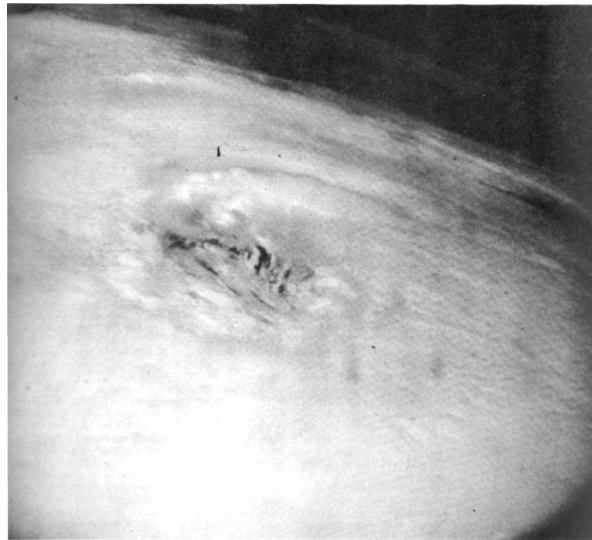


Fig. 1. Satellite picture of Hurricane Debbie taken by the Mercury Spacecraft on September 13th, 1961 at 1416 UTC.

is widely used by research scientists, operational hurricane forecasters, insurance companies, emergency managers and others. Thus, its accuracy is essential, but previous work has shown that a reanalysis of HURDAT is necessary because it contains both random errors and systematic biases. The Atlantic Hurricane Reanalysis Project is an ongoing effort to correct the errors in HURDAT and to provide as accurate of a database as is possible with utilization of all available data. The work reported on here covers hurricane seasons from the mid-1950s to the early 1960s, during the early years of aircraft reconnaissance, but before routine satellite imagery became available. The track and intensity of each existing tropical cyclone has been reassessed, and

of the reanalysis methodology will be provided and the preliminary results of the reanalysis of the 1955-1964 hurricane seasons accomplished thus far will be shown. Some of the most interesting results thus far include decreasing the landfall intensity of Hurricane Audrey, 1957 from 125 kt originally in HURDAT to 105 kt, increasing the landfall intensity of Hurricane Gracie, 1959 from 105 kt originally in HURDAT to 115 kt and adding 12 new tropical storms.

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