



A TROPICAL CYCLONE DATA TAPE FOR THE NORTH ATLANTIC BASIN,
1886-1983: CONTENTS, LIMITATIONS, AND USES

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UNITED STATES
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William E. Evans
Under Secretary and Administrator

National Weather Service
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DEFINITIONS

Cyclone: An atmospheric closed-circulation rotating counterclockwise in the Northern Hemisphere.

Extratropical Stage: In tropical meteorology this refers to the transformation of a tropical cyclone from a warm core to a cold core system. This process usually occurs poleward from the belt of tropical easterlies.

GMT: Greenwich Mean Time. Also referred to as "Z" time or Zulu time. Mean solar time of the meridian at Greenwich, England, used as the basis for standard time throughout most of the world.

Hurricane: A warm-core tropical cyclone in which the maximum sustained surface wind (1-min mean) is ≥ 64 kt.

Knot: The unit of speed in the nautical system; 1 n.mi. h^{-1} . It is equal to 1.1508 mi h^{-1} or 0.5144 m s^{-1} .

Millibar: A pressure unit of 1000 dyn cm^{-2} , convenient for reporting atmospheric pressures.

Subtropical Cyclones: Nonfrontal, low pressure systems that comprise initially baroclinic circulations developing over subtropical waters. There are two types: (1) A cold low with circulation extending to the surface layer and maximum sustained winds generally occurring at a radius of about 100 mi or more from the pressure center. These cyclones sometimes undergo a metamorphosis and become tropical storms or hurricanes. (2) A mesoscale cyclone originating in or near a frontolyzing zone of horizontal wind shear, with radius of maximum sustained winds generally less than 30 mi. The entire circulation sometimes encompasses an area initially no more than 100 mi in diameter. These marine cyclones may change in structure from cold to warm core. While generally short-lived, they may ultimately evolve into major hurricanes or into extra-tropical cyclones.

Subtropical cyclones are classed according to intensity as follows:

- Subtropical Depression: A subtropical cyclone in which the maximum sustained surface wind (1-min mean) is ≤ 33 kt.
- Subtropical Storm: A subtropical cyclone in which the maximum sustained surface wind (1-min mean) is ≥ 34 kt.

Tropical Cyclone: A nonfrontal low pressure system of synoptic scale developing over tropical or subtropical waters and having definite organized circulation.

Tropical Depression: A tropical cyclone in which the maximum sustained surface wind (1-min mean) is ≤ 33 kt.

Tropical Storm: A warm-core tropical cyclone in which the maximum sustained surface wind (1-min mean) ranges from 34 to 63 kt.