

# Idea on numerical description of cyclone intensity

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In light of the recent discussions on the feasibility of Saffir-Simpson Hurricane Wind Scale, an idea has crossed my mind about a numerical index which could describe the intensity of a cyclone with three components - wind, wind radius and central air pressure. Although the idea was spawned from the discussion re: SSHWS, this metric should not discriminate between tropical and non-tropical areas of low pressure. However, with tropical interests in mind, I have chosen 1 minute average wind speed as the definition for sustained winds. For now I shall refer to this just as a Storm Number.

## The formula

$$SN = \frac{v}{32.7 \text{ ms}^{-1}} + \frac{r}{500 \text{ km}} + \frac{1013 - p}{50 \text{ hPa}}$$

where  $v$  - maximum 1-minute average wind speed in meters per second;

$r$  - maximum radius of 1-minute average wind speed at least  $17.2 \text{ ms}^{-1}$  from the center of circulation;

$p$  - sea-level air pressure in the center of the cyclone.

Divisors 500 kilometers and 50 hectopascals(millibars) are arbitrary constants.

## Additional notes

The Storm Number has no dimension.

This writing has been provided in hope that some in the meteorological community may find it interesting. Scientific merits may not exist.