Journal of Coastal Research	16	3	950	West Palm Beach, Florida	Summer 2000

REPLY

Reply to: Kerr, A., 2000. Journal of Coastal Research, 16(2), 494–495. Discussion of: Hsu, S.A. and Yan, Z., 1998. A note on the radius of maximum wind for hurricanes. *Journal of Coastal Research*, 14(2), 667–668.

When a tropical storm approaches the U.S. coastline, a reasonable estimate of the radius of maximum wind, R, is a useful parameter for a variety of applications. Values of R found in the open literature vary between 40–50 km. The purpose of this brief Technical Communication was to determine a more specific R with regard to the hurricane classification (i.e., the Saffir/Simpson scale).

To this end, existing data from Simpson and Riehl (1981) was employed. Simple statistics were applied to find the mean and standard deviation of the recorded R value for each hurricane classification. Due to the small sample size, statistics for Classes I and V were not recommended for use. However, mean R values for Classes II, III, and IV were found to be 48 km $\pm$ 3 km, and for the entire data set, 47 km.

Certainly, R varies from storm to storm, and a more accurate estimation for an individual storm can be derived from Hsu et al.'s Eqs. (1) and (2). On the other hand, this paper was designed for operational users, such as those in Emergency Preparedness. Hence, R values were associated with the Saffir/Simpson Scale, since this hurricane intensity classification is well recognized by these specialists as well as the general public. As Kerr states, "The Saffir/Simpson scale was developed to provide agencies a way of gauging anticipated preventative and response measures, as well as degree of structural damage". Our goal was to provide an R estimation based on this intensity classification to aid these personnel with their planning in lack of real time measurements. It is agreed that for other applications, such as hindcasting hurricane-generated wave fields, much more information is needed.

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