

### 3.2 UNIFYING TROPICAL CYCLONE BEST TRACK DATA

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#### 1. INTRODUCTION

The intent of the International Best Track Archive for Climate Stewardship (IBTrACS) project is to overcome data availability issues and to freely disseminate this global dataset of tropical cyclone data. This goal is being achieved by working directly with all the Regional Specialized Meteorological Centers, other international centers and the research community to create a global best track dataset that aggregates storm information from these multiple centers into one product and archives the data for public use. In combining track and intensity estimates from many sources, this centralized collection of tropical cyclone data provides a more complete global climatology and insight into the data uncertainty – a critical consideration for climate analyses.

A main governing principle of IBTrACS is for the data processing methods to remain open. All data quality revisions and additions are recorded and open for review. Information about the integrity or quality of each storm track is provided back to the center(s) originally providing the storm track data. Also, data provenance is completely recorded so all observations and corrections, either through rigorous quality control or user feedback, may be tracked.

The reasoning behind changes and algorithms that homogenize or adjust the storm information are recorded such that the data can be well understood for years to come. Storm tracks, intensities, and other variables are then provided in various formats given the diversity of the tropical cyclone (TC) data user community.

In addition, the IBTrACS Team at the National Climatic Data Center hosts periodic workshops to gather international experts in global tropical cyclone best track data to discuss a variety of topics that would serve to enhance the existing IBTrACS dataset. Topics of discussion include: the differences in operating procedures at the various RSMC and forecast offices and how changes in processes and capabilities affect best track homogeneity, issues related to various wind speed adjustments and wind-pressure relationships used globally, incorporation of metadata into the best track record, and preparations for a global tropical cyclone reanalysis project.

By fostering ongoing international discussions and providing data in an environment open for review and scrutiny, the IBTrACS Team hopes to meet the needs of forecast offices, researchers, and the public interested in the distribution, frequency and intensity of tropical cyclones.

For more information on the IBTrACS project please visit <http://www.ncdc.noaa.gov/oa/ibtracs>, or write to [IBTrACS.Team@noaa.gov](mailto:IBTrACS.Team@noaa.gov)

#### 2. REFERENCES

Knapp, K. R., M. C. Kruk, D. H. Levinson, H. J. Diamond, and C. J. Neumann, 2010:  
**The International Best Track Archive for Climate Stewardship (IBTrACS): Unifying tropical cyclone best track data.** *Bulletin of the American Meteorological Society*, **91**, 363-376. [doi:10.1175/2009BAMS2755.1](https://doi.org/10.1175/2009BAMS2755.1)

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