

## Corrigendum

STEPHANIE N. STEVENSON AND KRISTEN L. CORBOSIERO

*University at Albany, State University of New York, Albany, New York*

SERGIO F. ABARCA

*Environmental Modeling Center, I. M. Systems Group, and NOAA/NWS/NCEP, College Park, Maryland*

(Manuscript received 22 July 2016, in final form 26 September 2016)

---

An error was discovered in the direction of the deep-layer vertical wind shear vector obtained from the Statistical Hurricane Intensity Prediction Scheme (SHIPS) database in [Stevenson et al. \(2016\)](#). In the original submission, postprocessed files were used for 2005–13, and real-time text files were used for 2014 because the postprocessed files were not available for 2014 prior to submission. The authors were unaware of the differences in shear direction between the two datasets: the postprocessed files use the shear heading (i.e., the direction the shear is going *toward*), while the real-time text files use the direction the shear is *coming from* (M. DeMaria 2016, personal communication). Thus, the shear directions used for tropical cyclones (TCs) in 2014 were off by 180°. This impacted 359 (18%) individual time periods (ITPs) in the eastern North Pacific and 143 (6%) ITPs in the North Atlantic. [Figures 8, 10, and 11](#) have changed as a result of this error.

While small changes are evident in icosagon magnitudes in [Fig. 8](#), the interpretation of the figure remains the same. Lightning peaks downshear left in the inner core and downshear right in the outer rainbands, with the relationship becoming stronger as the shear magnitude increases.

Slight changes are also evident in the histogram of the angle between the shear and motion vectors shown in [Fig. 10](#). The general patterns discussed between the eastern North Pacific and the North Atlantic remain the same despite these changes.

The largest differences occur in [Fig. 11](#). [Stevenson et al. \(2016\)](#) discussed the peak of lightning occurring downmotion rather than downshear for eastern North Pacific cases where the motion and shear vectors opposed one another (i.e., are approximately 180° apart). This signal becomes less evident with the corrected shear directions for 2014. The overall maximum shifted toward the expected downshear-left position in the inner core and downshear-right position in the outer rainbands. However, there is still an indication that motion plays a larger role in the eastern North Pacific than it does in the North Atlantic in this opposite shear and motion scenario, particularly for fast-moving TCs (not shown). This difference between the basins remains a topic for future research.

### REFERENCE

- Stevenson, S. N., K. L. Corbosiero, and S. F. Abarca, 2016: Lightning in eastern North Pacific tropical cyclones: A comparison to the North Atlantic. *Mon. Wea. Rev.*, **144**, 225–239, doi:[10.1175/MWR-D-15-0276.1](#).

---

*Corresponding author address:* Stephanie N. Stevenson, Department of Atmospheric and Environmental Sciences, University at Albany, State University of New York, 1400 Washington Ave., Albany, NY 12222.  
E-mail: [sstevenson@albany.edu](mailto:sstevenson@albany.edu)

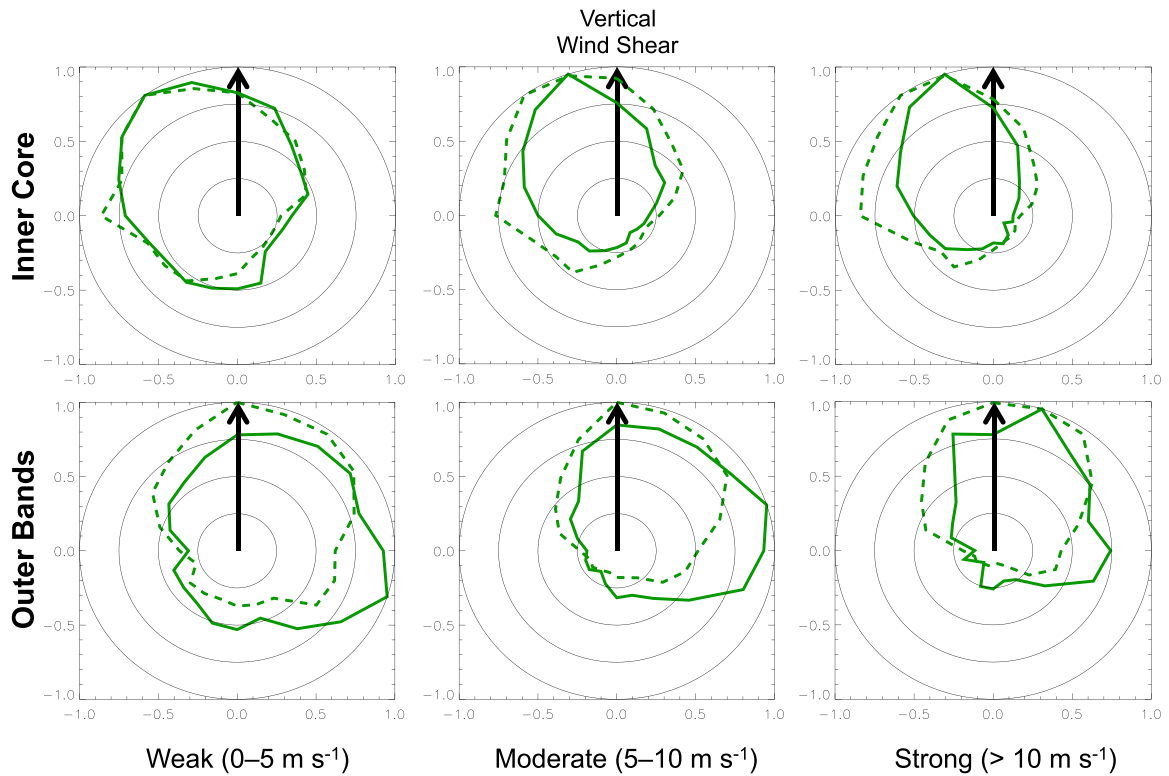


FIG. 8. Icosagons indicating the most common locations of lightning flashes in the (top) inner core and (bottom) outer rainbands with respect to the shear vector (black arrow) for eastern North Pacific (solid) and North Atlantic (dashed) TCs. The icosagons are displayed for various shear values: (left) weak ( $0\text{--}5\text{ m s}^{-1}$ ), (middle) moderate ( $5\text{--}10\text{ m s}^{-1}$ ), and (right) strong ( $>10\text{ m s}^{-1}$ ).

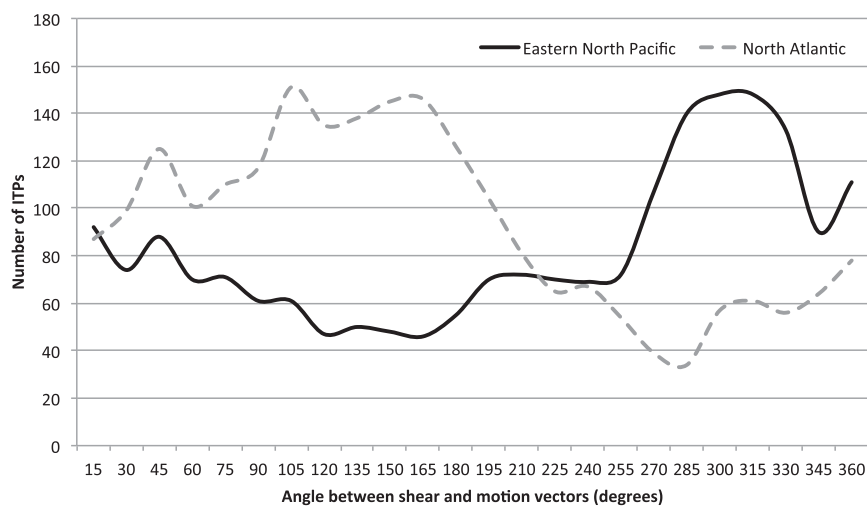


FIG. 10. Histogram of the number of 6-hourly individual time periods (ITPs) corresponding to various angles between the shear and motion vectors for eastern North Pacific (solid black) and North Atlantic (dashed gray) TCs. The angle is measured counterclockwise from the shear vector to the motion vector.

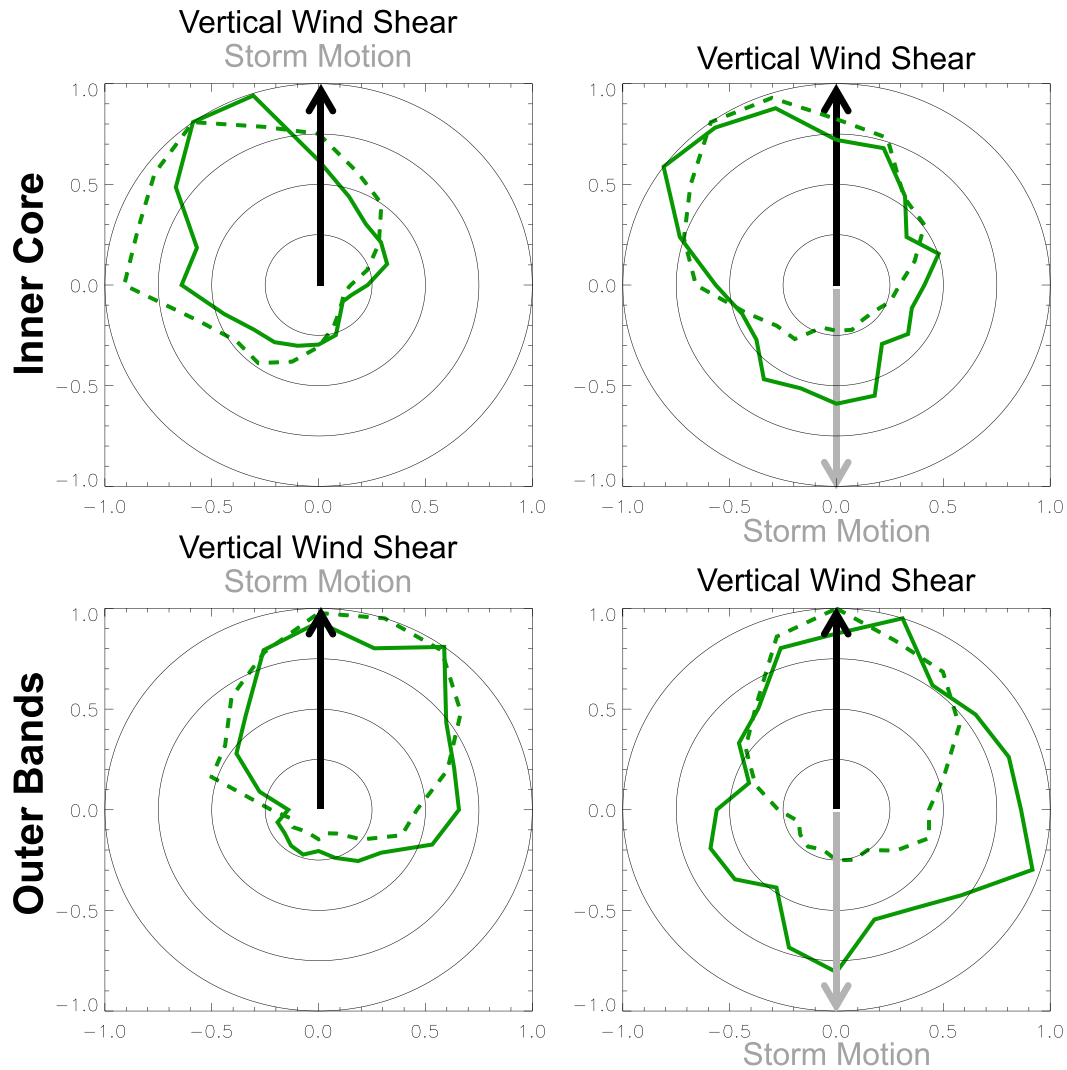


FIG. 11. Icosagons indicating the most common locations of lightning flashes in the (top) inner core and (bottom) outer rainbands with respect to the shear (black arrow) and motion (gray arrow) vector for the eastern North Pacific (solid) and North Atlantic (dashed). (left) ITPs where the shear and motion vector are aligned ( $>37.5^\circ$  and  $<22.5^\circ$ ), and (right) ITPs where the shear and motion vector are opposed ( $157.5^\circ$ – $202.5^\circ$ ). All motion speeds and shear magnitudes are included.