Climatologies of Precipitation Bands over the USA and UK

Robert Houze’s research in the 70s and 80s led to a classification of precipitation bands in midlatitude cyclones that we still use today.

We define a band as a precipitation feature from radar mosaics with:
- a contiguous 20 dBZ (0 mm/h UK) area ≥ 500 km² (100 km² UK),
- a major axis ≥ 100 km, and
- a ratio of major axis length to minor axis length ≥ 3:1.

Thank you, Bob, for your inspiration, leadership, teaching, mentorship, and friendship.


Fairman et al., 2017: Climatology of size, shape and intensity of precipitation features over the United Kingdom and Republic of Ireland. J. Hydrometeor., in review.

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SUMMARY
- UK bands tend to form over the coastal regions and mountains.
- US bands form inland over flatter terrain (e.g., Ohio Valley).
- US and UK bands favored daytime in spring and autumn.
- UK has more hours per year of bands due to our different definitions.