Moroda, Y., K. Tsuboki, S. Satoh, K. Nakagawa, T. Ushio, and S. Shimizu, 2021: Structure and evolution of precipitation cores in an isolated convective storm observed by phased array weather radar. *J. Meteor. Soc. Japan*, **99**, 765 – 784.
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Plain Language Summary: An isolated convective storm was observed by two phased array weather radars (PAWRs) that can perform one volume scan in just 30 seconds. The storm caused localized heavy rainfall on 7 August 2015 in the Kinki District, western Japan. We described the evolution of the storm in terms of precipitation cores and updraft cores that were clearly defined using threshold values of radar reflectivity and vertical velocity. We found that the isolated storm exhibited structures of multi-precipitation cores and multi-updraft cores.

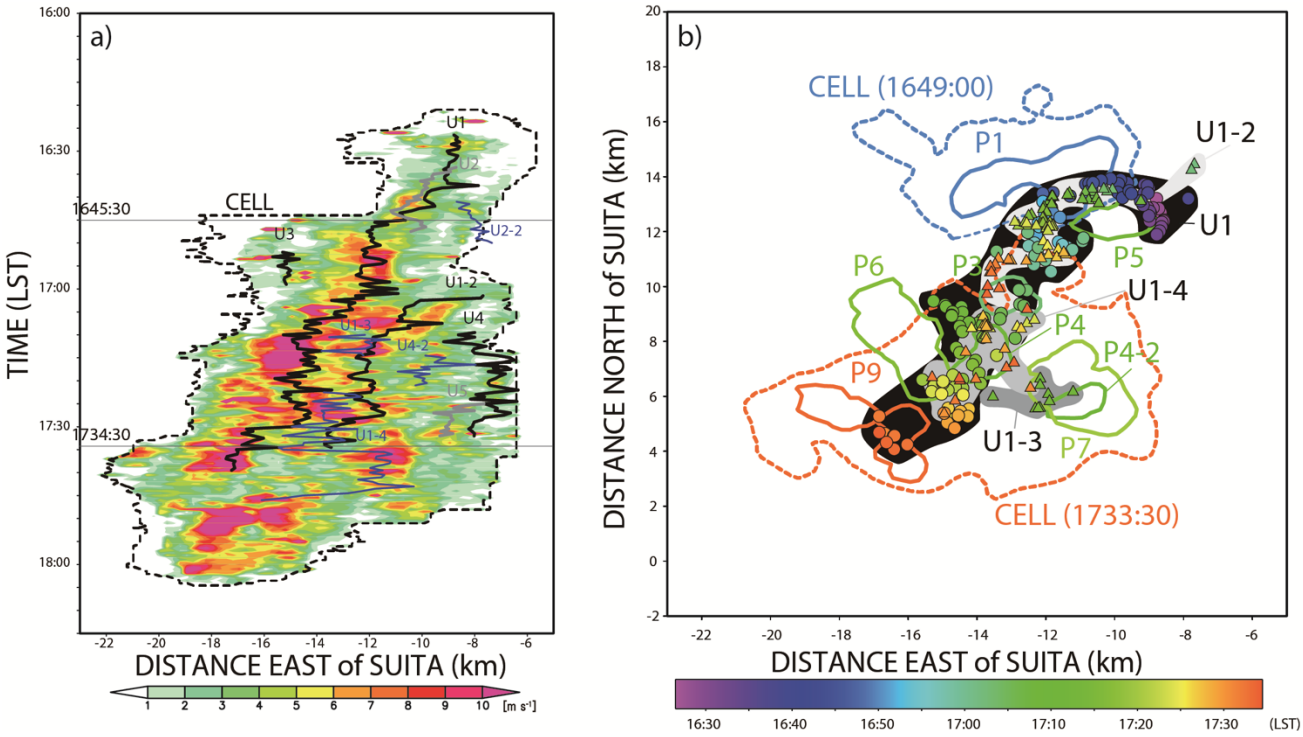

Figure 1. (a) Time–distance cross-section of the maximum updraft at 2 km above sea level (ASL) within the north–south range of the cell. The black, gray, and blue lines indicate the center of the identified updraft cores. The dashed line indicates the easternmost and westernmost edges of the cell. (b) Location of the precipitation core (bold lines) and cell (dashed lines) at 6 km ASL, and the centers of the updraft cores (circles and triangles) at 2 km ASL. The black and gray areas represent regions where the center of each updraft core passed through.

- The observations of two PAWRs enable us to perform dual-Doppler analysis every 30 seconds.
- The storm had nine precipitation cores and five updraft cores. All the precipitation cores were observed along the trajectory of a major updraft core and its branches.
- The evolutions of the precipitation cores and updraft cores were different, although they influenced each other.