

## A Consideration of Nowcast with the use of Vertically Integrated Liquid Water Content (VIL)

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An X-band MP radar network is increasing its members in Japan with purpose to determine the mechanism of local severe weather and to develop the algorithm for estimating various rainfall and microphysical parameters from radar measurements. Meanwhile, Tokyo Metropolitan Area, where approximately 30 million people live at, has a high risk of inland flooding because of the large asphalt pavement ratio and the closely spaced concrete buildings it contains, the early warning of local severe storm for managing urban flood risk becomes one of the important roles for the network. Vertically Integrated Liquid water content (VIL) is a convenient parameter that includes vertical information on total water but does not need to consider the microphysical processes of rainfall. In this research, authors derived VIL values from X-band MP radar and compared them to surface rain-gauge observations to evaluate the potential of using VIL as an indicator of local severe storms in forecast or nowcast systems.

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