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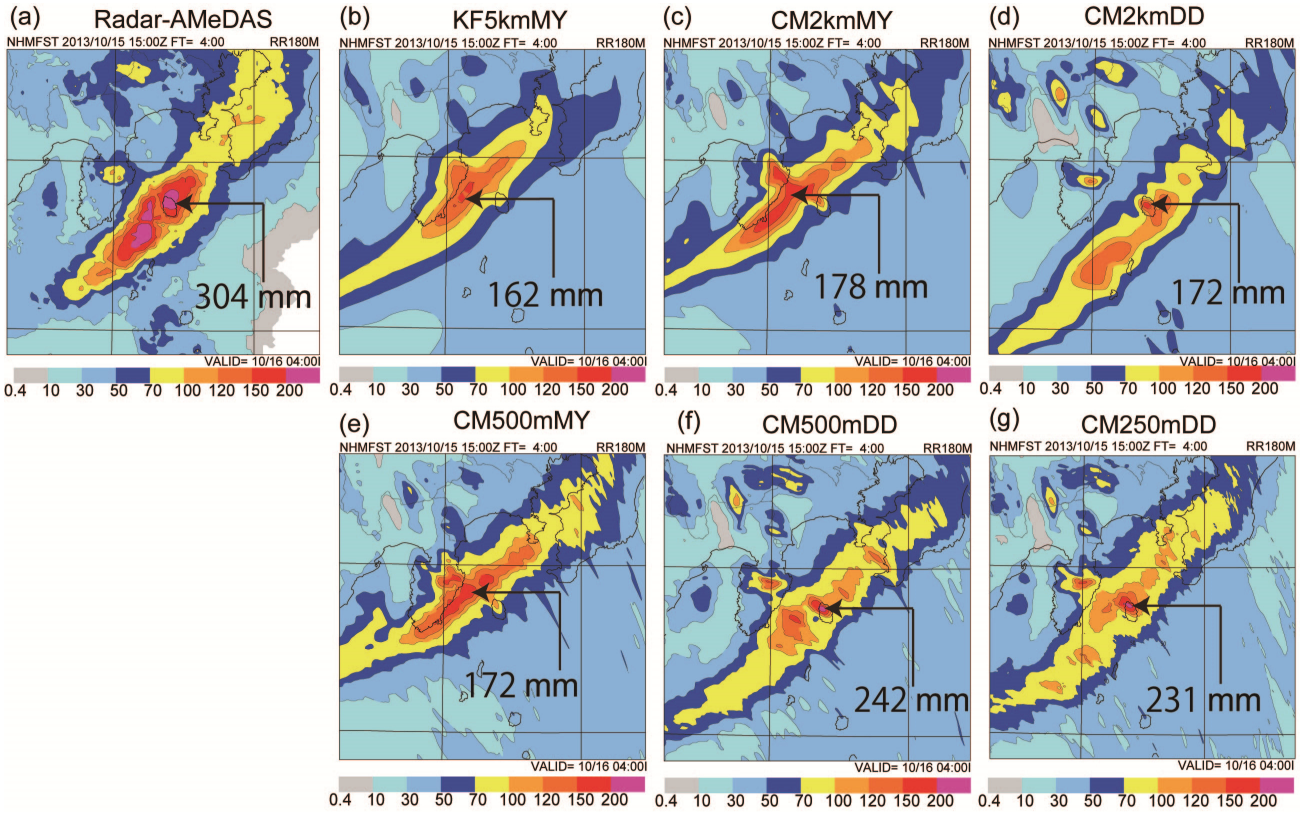

Fig. 1. The three-hour accumulated precipitation and the maximum (arrows) from 0100 JST to 0400 JST on October 16: (a) the Radar/Rain gauge-Analyzed Precipitation, (b) KF5kmMY, (c) CM2kmMY, (d) CM2kmDD, (e) CM500mMY, (f) CM500mDD, and (g) CM250mDD. The unit of the color bar is mm.

- In experiments with a large domain, the experiments with the Deardorff scheme (Exps_DD: grid spacings of 2 km, 500 m, and 250 m) showed better reproducibility of the rainband position than the ones with the Mellor–Yamada–Nakanishi–Niino scheme (Exps_MYNN: grid spacings of 5 km, 2 km, and 500 m).
- Exps_DD simulated distinct convective-scale up/downdraft pairs on the southeast/northwest sides of the front, whereas Exps_MYNN were not clear. Exps_DD yielded stronger cold pools near the surface than did Exps_MYNN. These differences in the boundary layer structures likely had a large impact on the position of the front and the associated rainband.
- An experiment with a small domain exhibited a very different appearance of the rainband to that with the large domain. However, with one-way nesting procedure, the experiment with the small domain could reproduce similar rainfall distribution to those with the large domain.