HIWPP supercell test case on the reduced earth radius

This supercell case is designed to simulate the basic structure of supercell thunderstorms. The configuration basically follows that of Weisman and Klemp (1982) except on the sphere with the reduced earth radius. Following figures show the results from 5 HIWPP models on four horizontal resolutions (.5km, 1km, 2km and 4km).

Figure 1: Time series of the maximum vertical velocity for the supercell test case. Separate lines for each model represent the four different horizontal resolutions run (500-m, 1-km, 2-km and 4-km).

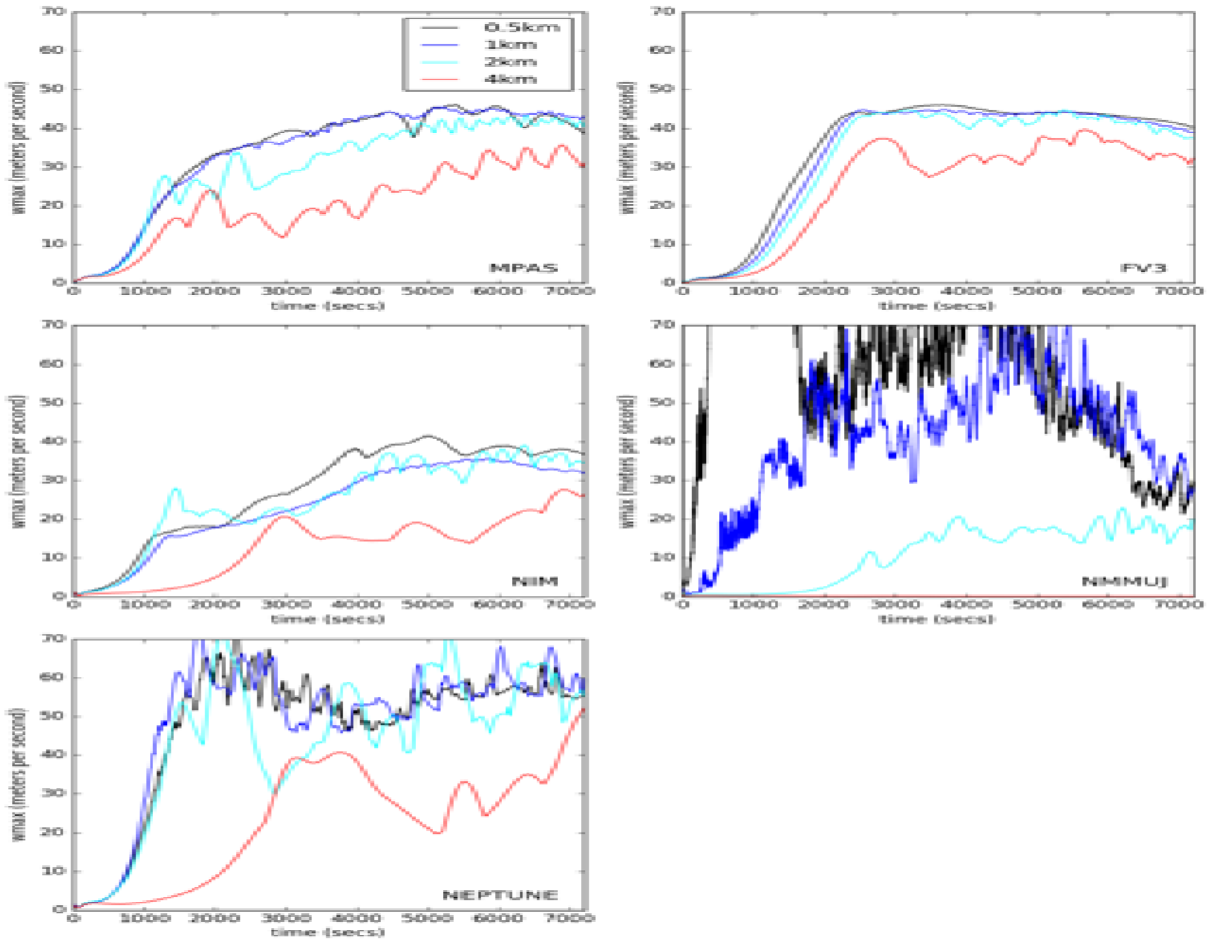

Figure 2: Horizontal maps of vertical velocity (m/s) on the model level nearest 2.5 km for the supercell test case, for the 500-m resolution solution. The y-axis is latitude, and the x-axis is longitude.

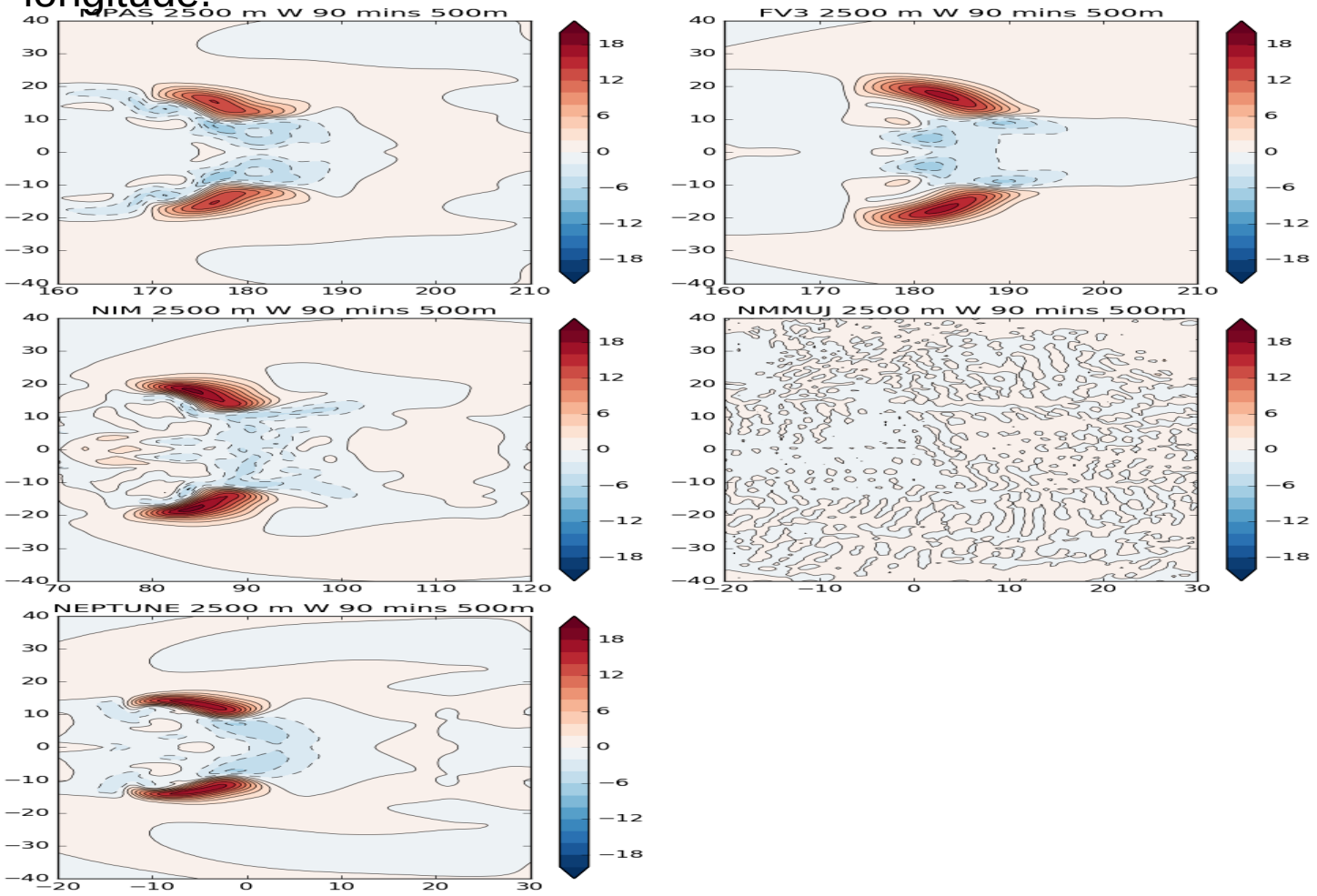

Figure 3: As in Figure 2, for the 1-km resolution runs.

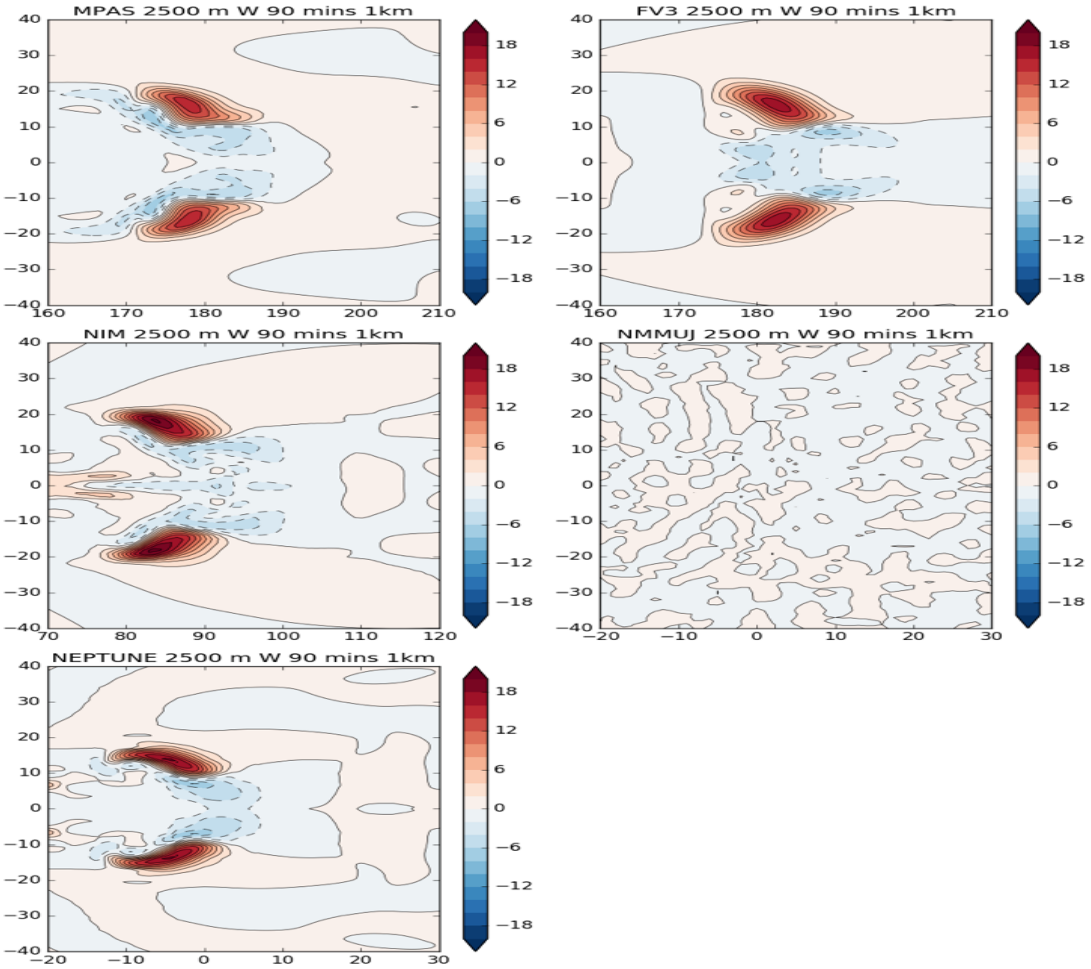

Figure 4: As in Figure 2, for the 2-km resolution runs.

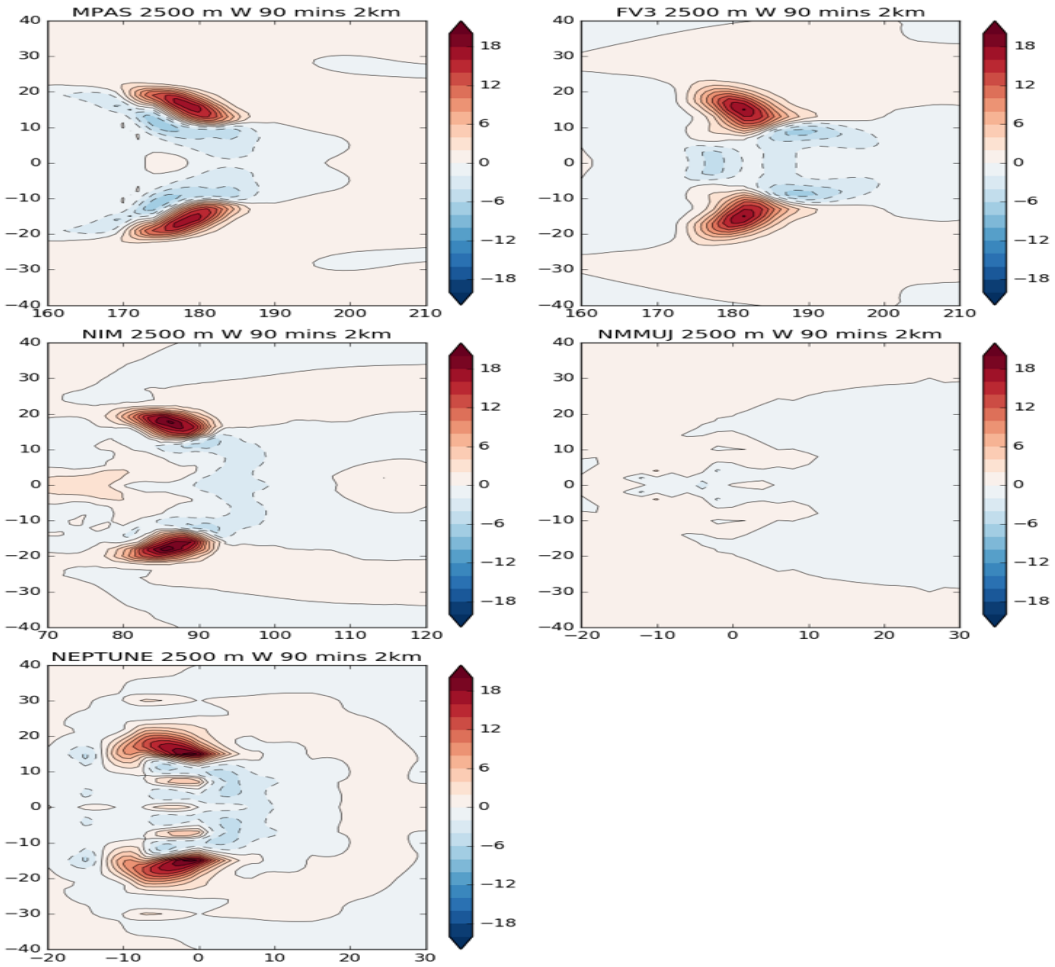

Figure 5: As in Figure 2, for the 4-km resolution runs.