



**Figure S2:** Checkerboard resolution tests for the Rayleigh wave data at 10 s. (a), (b) and (c) are the synthetic models with 3° x 3°, 2° x 2° and 1° x 1° checkerboard cells respectively. Recovered resultant structures are (d), (e) and (f) 3° x 3°, 2° x 2° and 1° x 1° checkerboard cells respectively.