Electronic supplementary material #1: additional plots

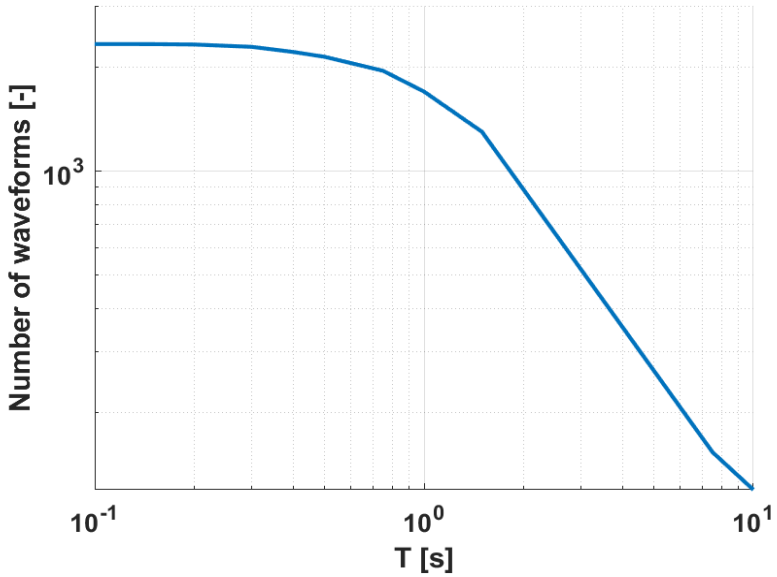


Figure A1. Number of usable records vs. period

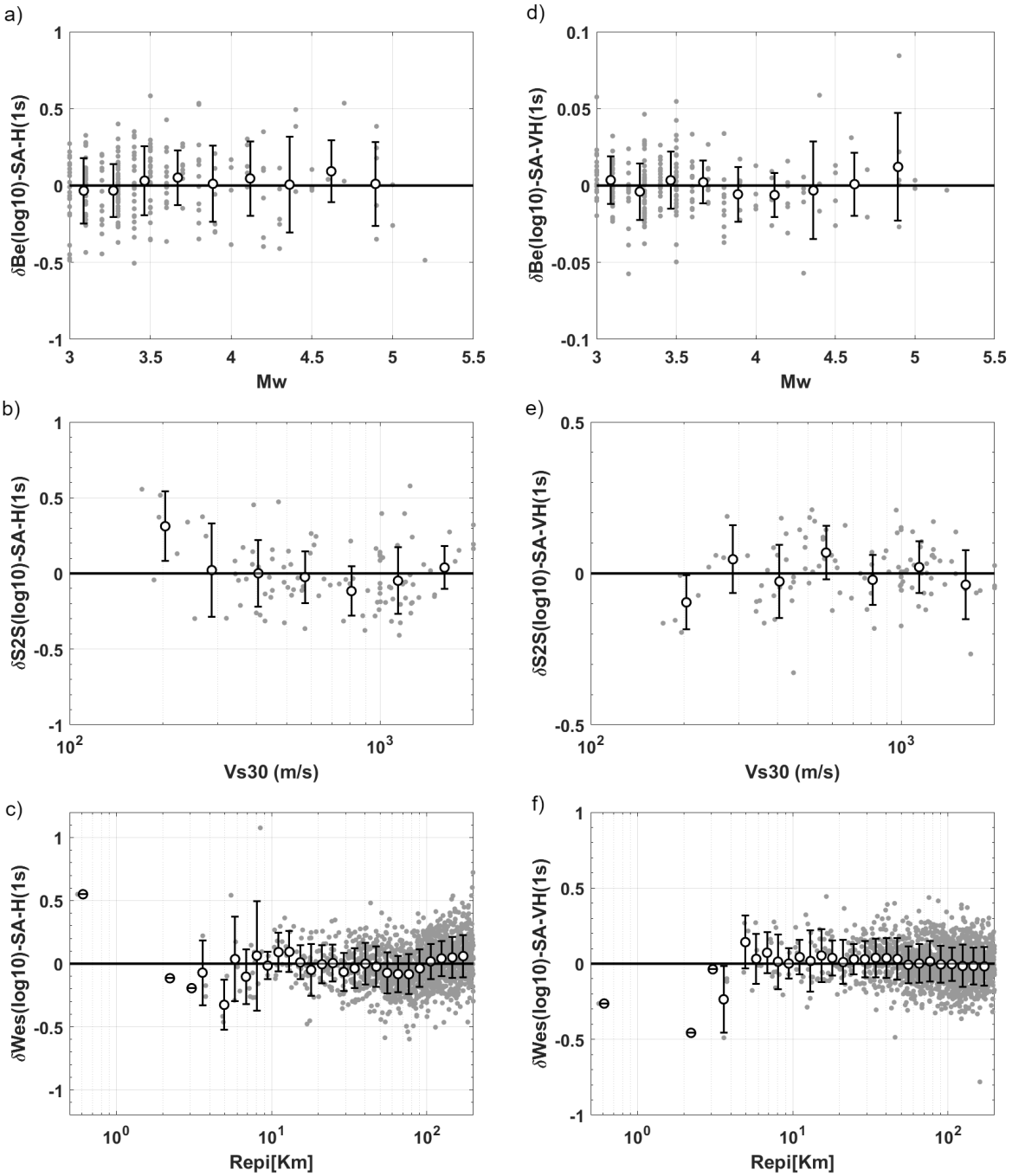


Figure A2. FR20 H (a, b, and c) and VH (d, e, and f) residuals for SA-T=1s vs different explanatory variables: a) and d) δB_e vs. moment magnitude; b) and e) $\delta S2S_s$ vs $V_{S,30}$; c) and f) δW_{es} vs R_{epi}.

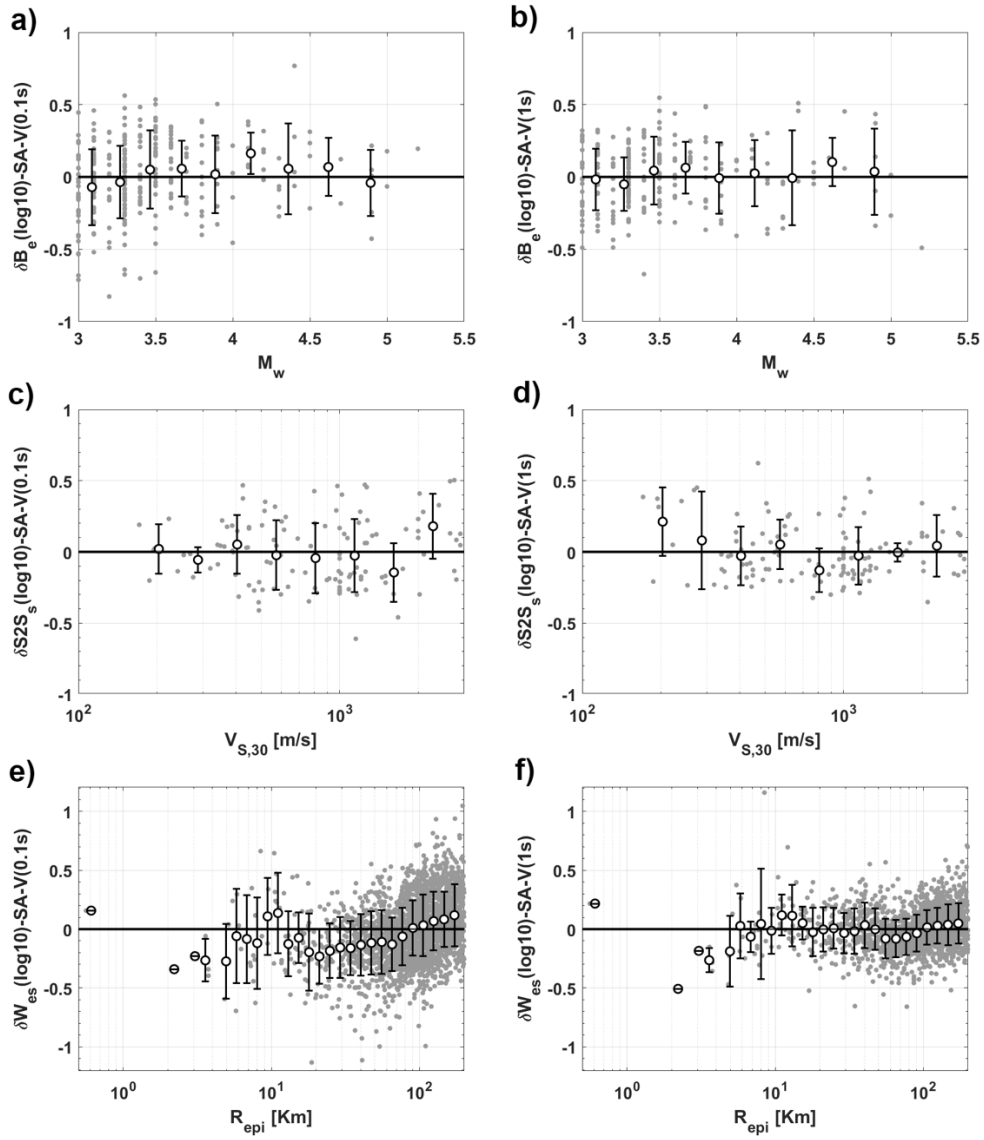


Figure A3. FR20 V residuals for SA-T=0.1s and T=1s vs different explanatory variables: a) and b) δB_e vs. moment magnitude; c) and d) $\delta S2S_s$ vs $V_{S,30}$; e) and f) δW_{es} vs R_{epi}.

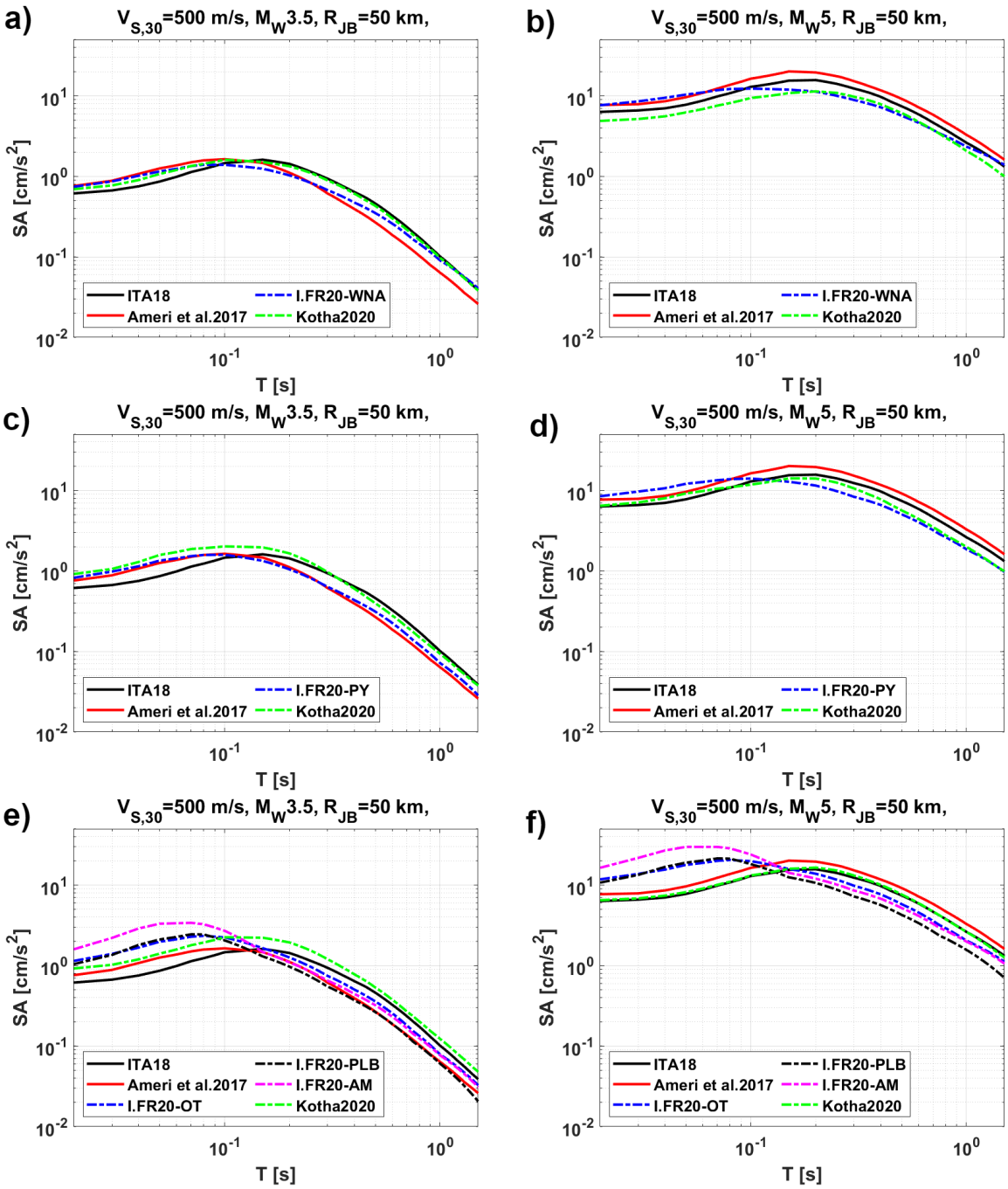
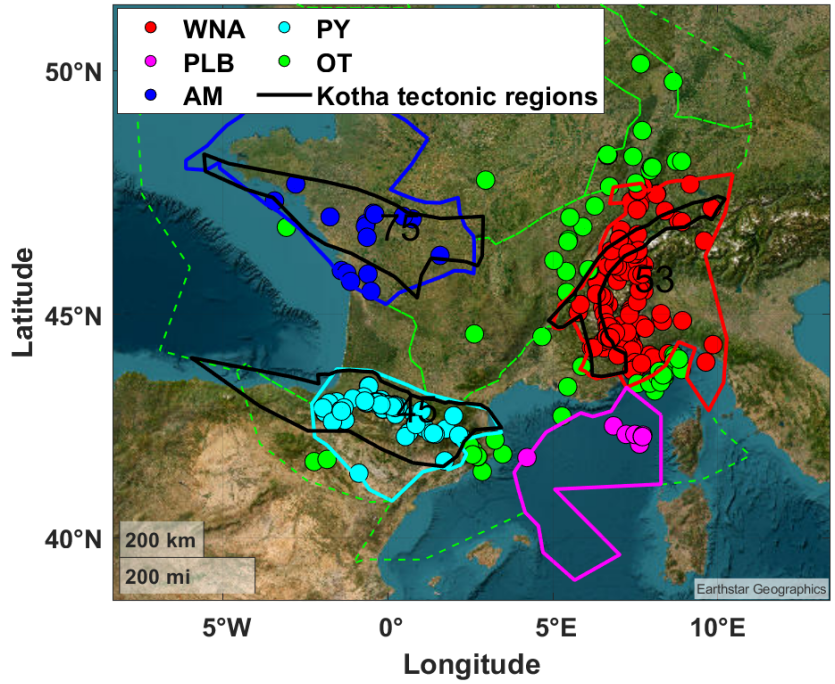
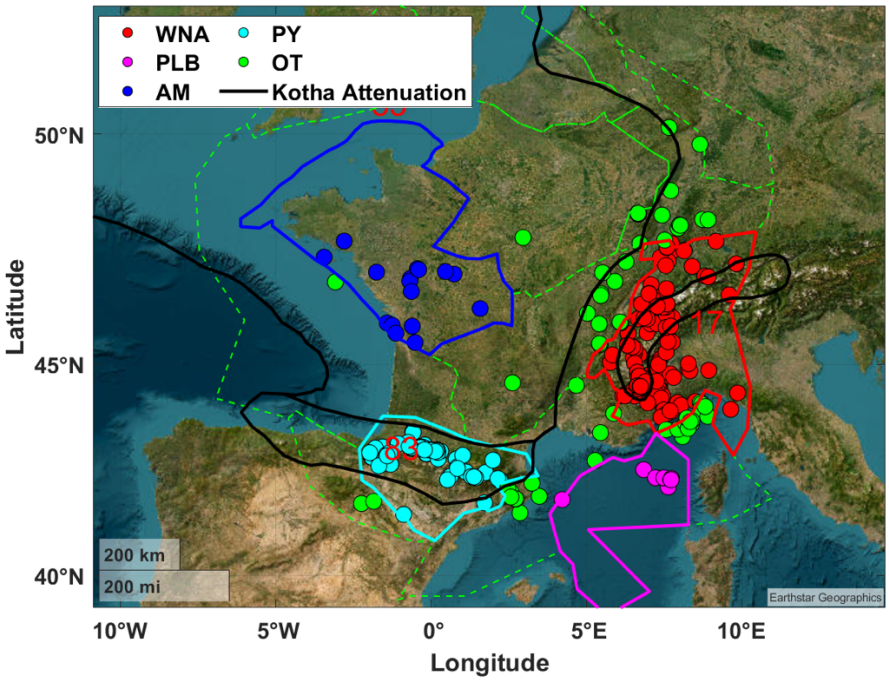


Figure A4. Horizontal acceleration response spectra predicted by I.FR20, ITA18, Ameri et al. (2017) and Kotha et al. (2020) GMMs for two scenarios with M_w 3.5 (a, c and e) and M_w 5.0 (b, d and f), R_{JB}=50km and $V_{S,30}$=500 m/s. Top panel (a and b): GMMs predictions for WNA; middle panel (c and d): GMMs predictions for PY; bottom panel: GMMs predictions for the other zones (OT, AM and PLB).



(a)



(b)

Figure A5. Source (a) and attenuation (b) zones used for GMMs comparison between I.FR20 and the model by Kotha et al. (2020) in Figure 12 of the manuscript.