Figure S1: Bias of FAS of the (a) east-west, (b) north-south and (c) vertical component, calculated from 3D simulations in CVM-S with V_S tapering depths of 350 m and 1000 m along with attenuation models $Q_S = 0.05V_S$, $Q_S = 0.1V_S$, and $Q_S = 0.15V_S$. A positive (negative) value means overprediction (underprediction). The left (right) columns show type A (B) sites. The solid line is the median of FAS, where the narrow band is the 95% confidence interval of the median, and the dashed lines depict the standard deviation centered at the median.
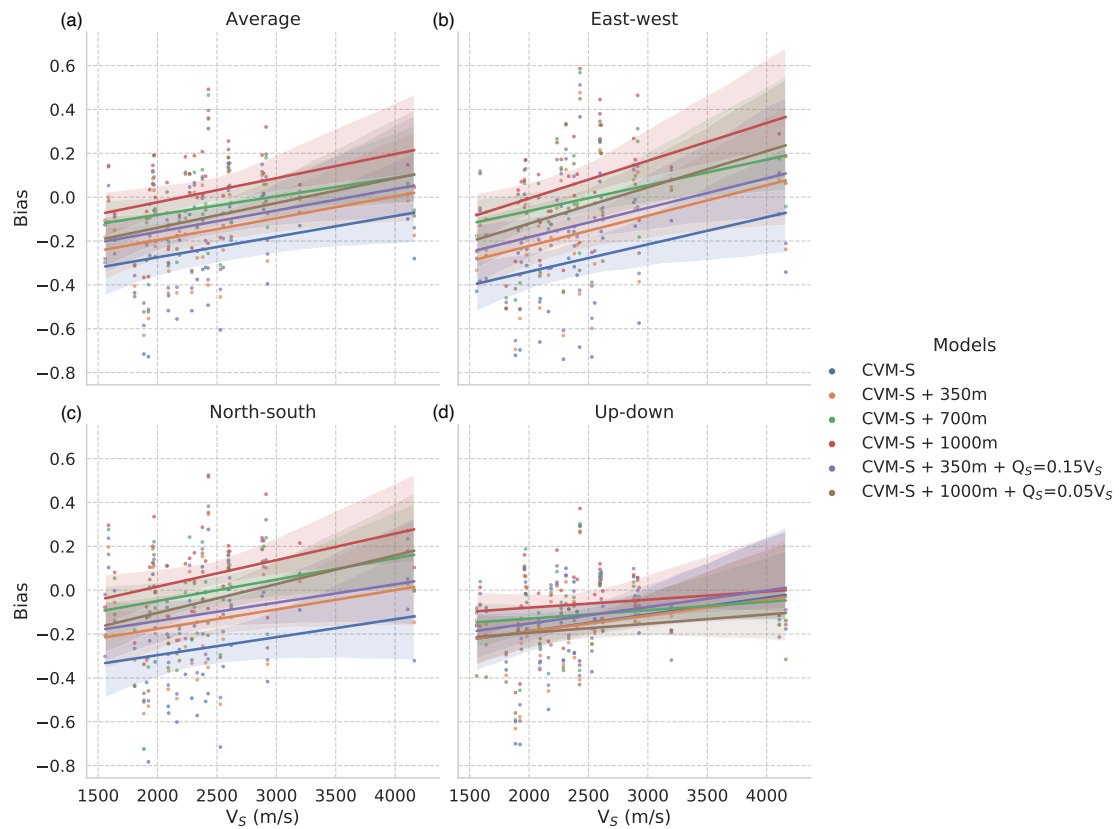
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Figure S2: Averaged FAS bias for frequencies between 0.15-1 Hz at poorly constrained sites plotted as a function of site surface V_S for (a) three-component average, (b) east-west, (c) north-south and (d) vertical components. The shades represent 95% confidence intervals estimated using bootstrap.