

Appendix D

Title: The amplification functions using SSRh and CC methods (extra figures)

Mapping site amplification with the dense recording of ambient vibration for the city of Lucerne (Switzerland) – comparison between two approaches

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Appendix D displays additional figures that were not shown in the main manuscript, in particular, a comparison of the different realizations of the amplification functions.

As in Fig. 7. in the main manuscript

Fig. D1. The comparison between SSR, SSRh, and CC methods for sediment sites in the Lucerne area. SSR_{amp} and $SSRh_{amp}$ are interpolated into frequency bins. The base V_{s30} model (i.e. using soil classes) is employed for CC and the weights for SSRh are based on f_0 values.

Fig. D2. The comparison between SSR_{amp} and different realizations of $SSRh_{amp}$ and CC_{amp} for sediment sites in the Lucerne area. SSR_{amp} and $SSRh_{amp}$ are shown here as continuous frequency functions.

Fig. D3. The comparison between SSR_{amp} and different realizations of $SSRh_{amp}$ and CC_{amp} functions for sediment sites in the Lucerne area. SSR_{amp} and $SSRh_{amp}$ are interpolated into bins.

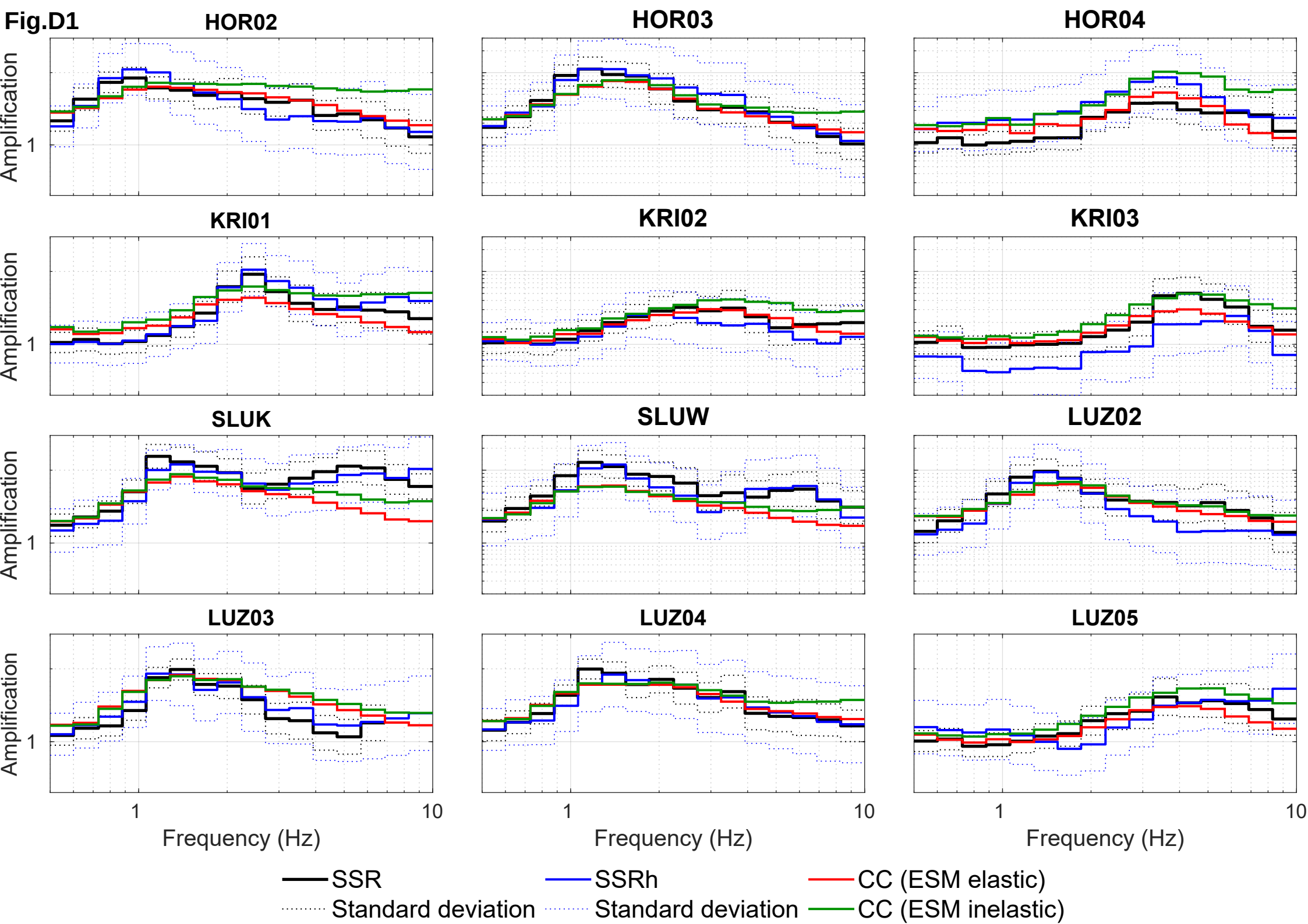
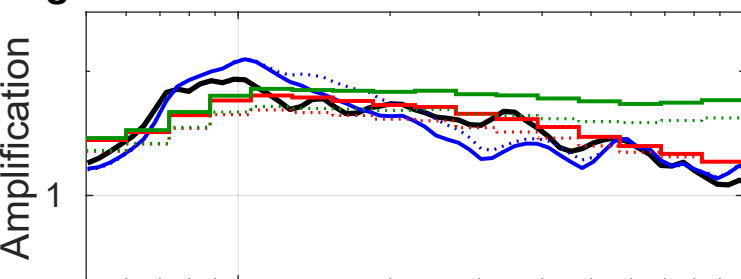
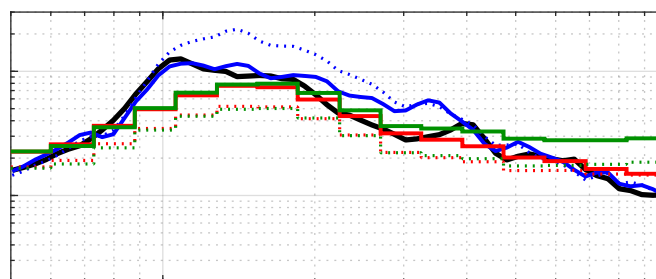
Fig.D1

Fig.D2

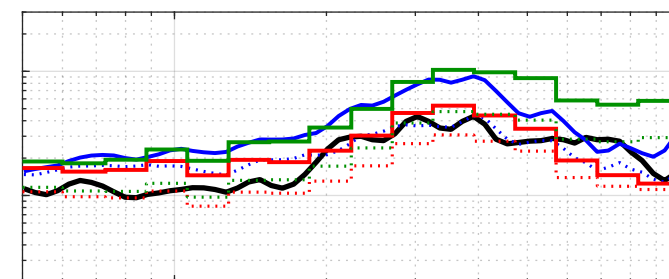
HOR02



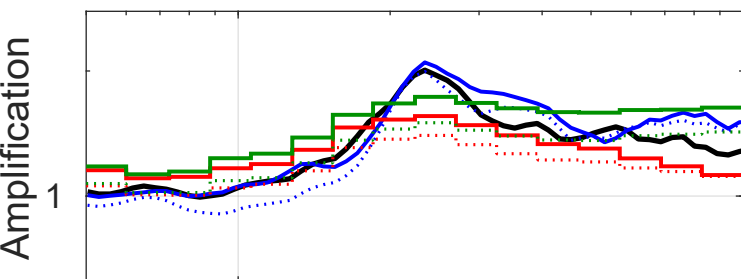
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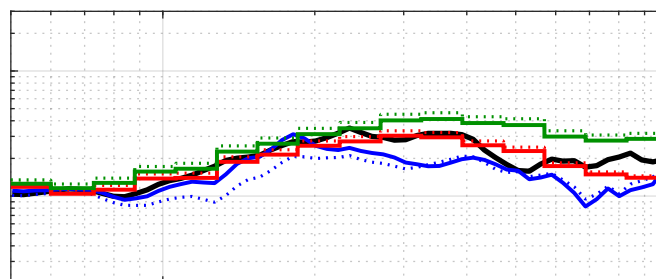
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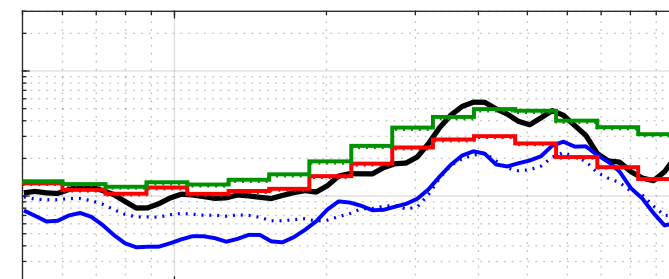
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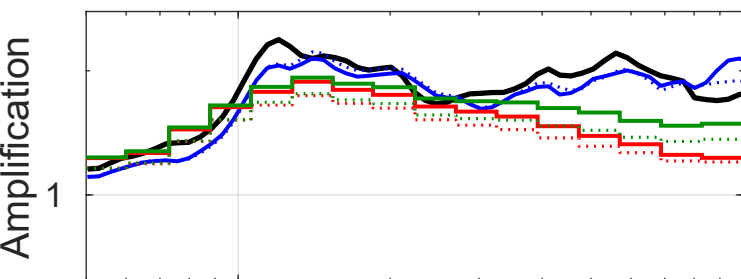
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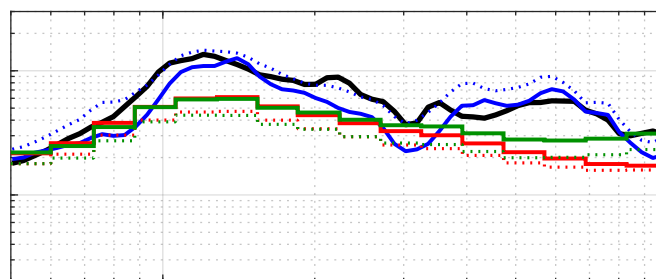
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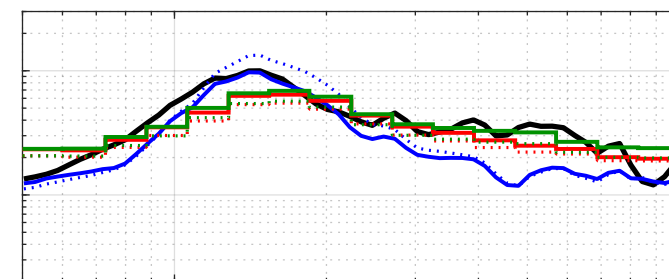
SLUK



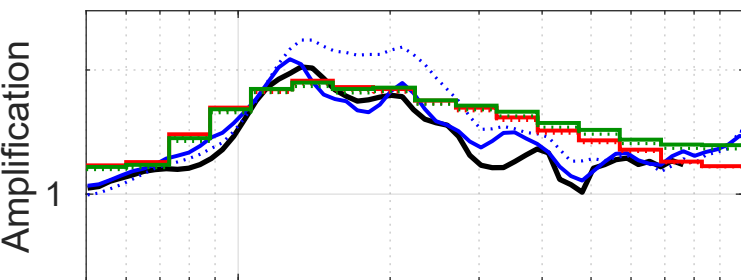
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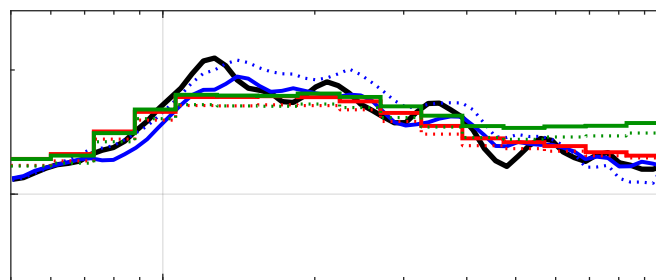
LUZ02



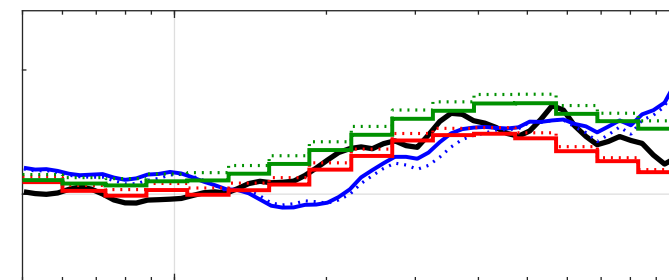
LUZ03



LUZ04



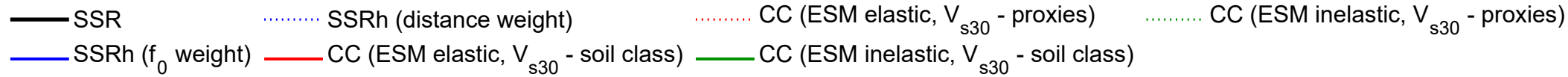
LUZ05



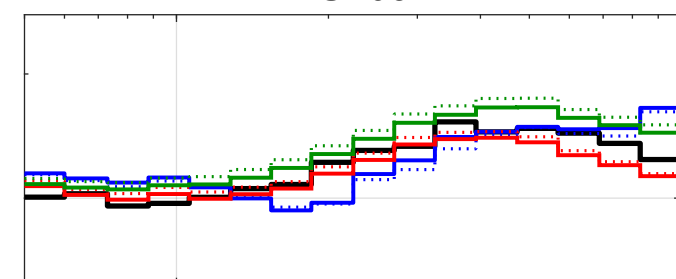
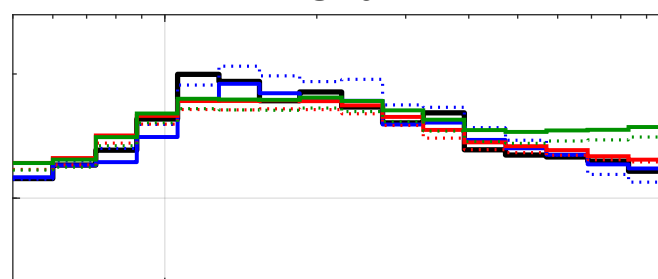
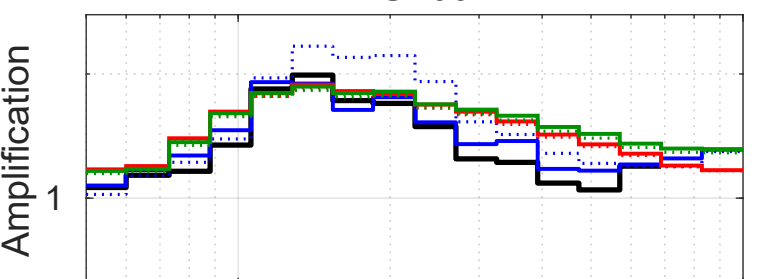
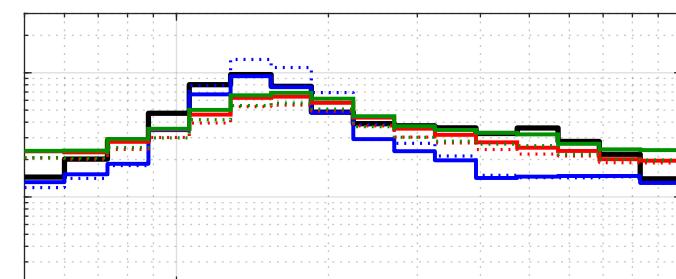
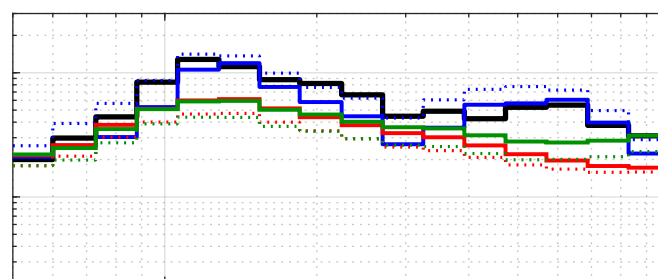
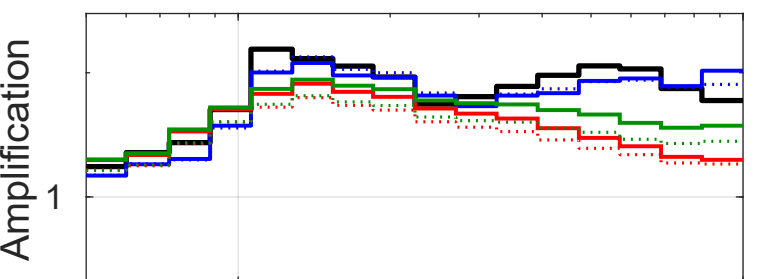
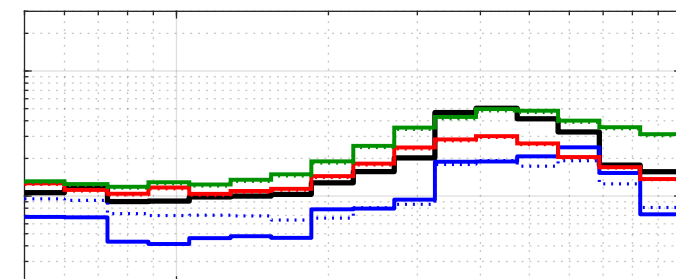
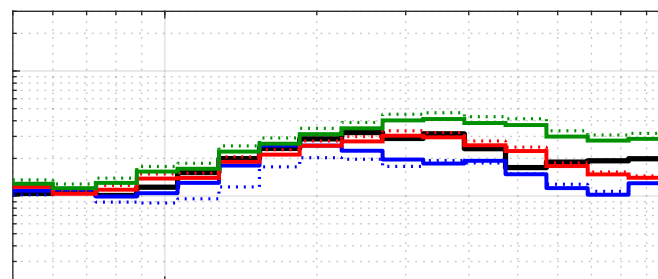
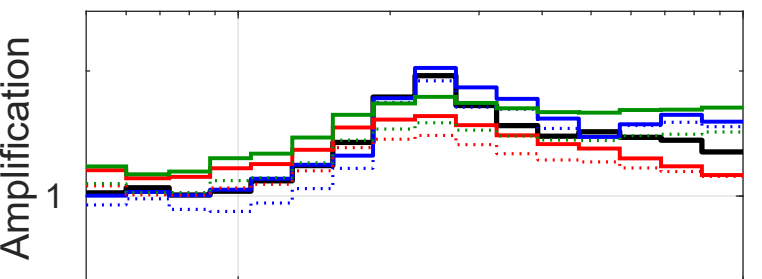
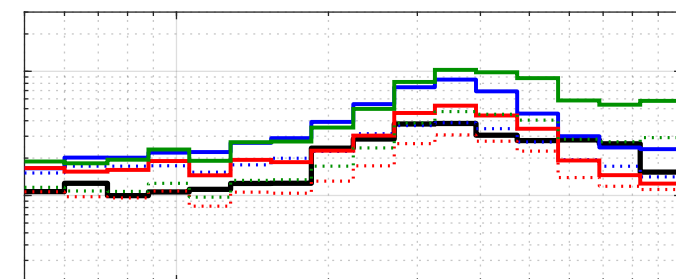
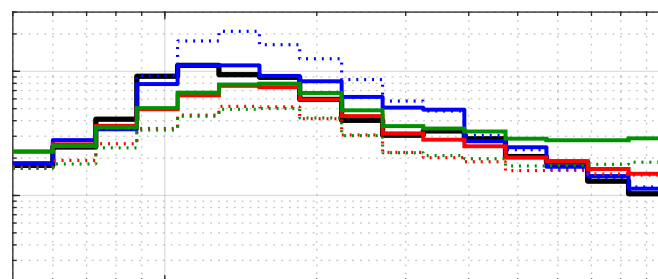
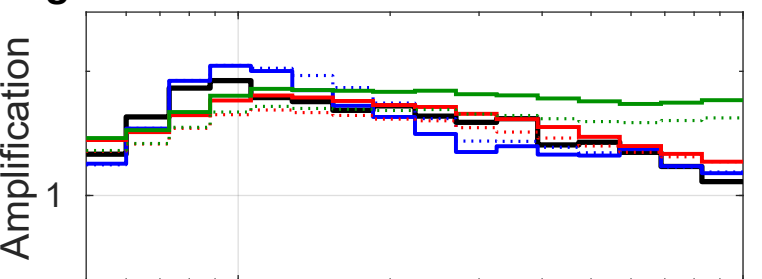
Frequency (Hz)

Frequency (Hz)

Frequency (Hz)



Amplification



Frequency (Hz)

Frequency (Hz)

Frequency (Hz)

— SSR SSRh (distance weight) CC (ESM elastic, V_{s30} - proxies) CC (ESM inelastic, V_{s30} - proxies)
 — SSRh (f_0 weight) — CC (ESM elastic, V_{s30} - soil class) — CC (ESM inelastic, V_{s30} - soil class)