Interactive comment on “Site effect classification based on microtremor data analysis using concentration–area fractal model” by A. Adib et al.

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Dear Sir, Based on the reviewer comment, We add descriptions about multifractal natures of my parameters in the area. Fig. 7 is edited and power-law relationships with R2 are added to the log-log plots for showing of multifractal nature of the data.

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According to the C-A log-log plots, four populations were distinguished for frequency and five populations for amplification and $K_g$. Five populations for frequency and five populations for amplification and $K_g$ reveal multifractal nature for the parameters in the Meybod city, as depicted in Fig. 7. There are multifractal nature for frequency, amplification and $K_g$ based on more than two straight segments. The straight segments fitted lines were derived based on least-square regression (Agterberg et al., 1996; Spallone et al., 2010). All R-squared values are higher than 0.9 and most of them have R$^2$ higher than 0.95 which show a proper correlation (Fig. 7). The power-law relationships between the geophysical parameters and their occupied areas were indicated in the Fig. 7. According to the Eq. 2, there is different values for $\alpha$ which is exponent equal to fractal dimensions, as depicted in Fig. 7. The variation of fractal dimensions reveals a multifractal nature for frequency, amplification and $K_g$ in the area. The data distribution based on C-A model has been shown in Fig. 7. The sites with high intensity values of frequency are situated in the central parts of the area and the sites with high intensive amplification and $K_g$ are located in the northern and eastern parts of the Meybod city.