

Own achievements

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In this study case, I tried to generate a crustal velocity structure map of the Eastern part of Bangladesh. It was to recognize the depth of the layers, some faults, and possibly the subduction zone between the India-Burmese plate. To do this, I first used a CSH script proportionated by my supervisor Anna Foster to prepare the seismic data and then continued working with MAT-noise code using MATLAB. Furthermore, I reviewed all the MATLAB codes to make changes according to the seismic data I would use to obtain my results. It means I had to change some variables, values, and lines according to my interests. However, the preprocess allowed me to generate good images-results to identify in what range period I have to apply my study. It was in the range of 2-10 s, according to the power spectral density I got from the cross-correlation of the different stations. After different tests I did, I set the codes to obtain the best possible results with our data. Additionally, because not the cross-correlation functions showed a huge signal-to-noise ratio, I had to decide to apply large values of errors to generate acceptable phase velocity maps at different periods to interpret them and recognize the possible faults located in the study zone.