

Interactive comment on “Sensing earth and environment dynamics by telecommunication fiber-optic sensors: An urban experiment in Pennsylvania USA” by Tieyuan Zhu et al.

Tieyuan Zhu et al.

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Dear Gilda,

Thank you for careful checking. Please find the point-to-point response to all your comments below:

1) In Figure 3 the fk plot is illustrated. Please check the label over the x-axis. The plot seems symmetric, as it has been shown for negative and positive frequencies.

Reply: you're right. This fk plot was incorrectly shown here and reversed x and y axis. We have updated figure 3 in the revised manuscript (see attached figure 3 as well).

2) Always in Fig. 3, the strain is ± 50 microstrain, while particle velocity, derived for fk scaling, is ± 100 micro_m/s. This means that the average apparent velocity is 2 m/s. This outcome is not convincing. Please, check the results of the fk transform.

Reply: This unit 'microstrain' is a typo. The unit for strain (2nd figure in Fig 3) is nanostrain.

3) It is surprising to see a large strain variation of the order of microstrain for a tele-seism. Estimates of dynamic strains at regional and teleseismic distances are available in literature. Please, refer to Agnew and Wyatt (2014). I suggest you to check carefully your conversion factor or the scale unit.

Reply: The strain of this teleseismic is nanostrain from DAS.

Minor points: 1) Fig. 4 correct the label in the y-axis from "partical" in "particle"

Reply: This typo in the label of Fig. 4 has been corrected in the revised manuscript.

2) It would be helpful to have the colorbar scale in all the figures

Reply: The colorbar has been added for all the figures.

Thank you, Tiejuan Zhu

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2020-103>, 2020.

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Discussion paper



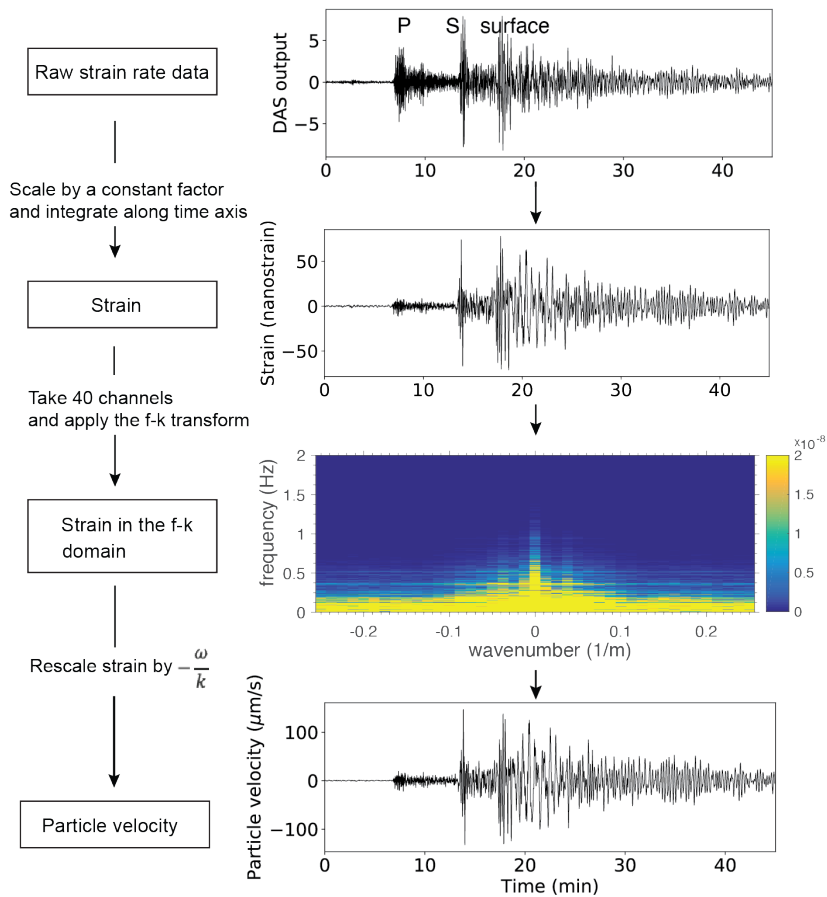


Fig. 1. figure 3