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A proposal for detection of the crustal movements by numerical filters. case study: Kenai peninsular

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Nowadays, there are many ways for detection of the crustal movements using the geodetic observations. On the other hand, the crustal movements are the most systematic errors in the time series geodetic observations which are gathered by the permanent GPS stations. As we know, some numerical filters such as Wiener deconvolution filter and Kalman filter can refine data which are contaminated with systematic and stochastically errors. This paper then devoted to the numerical filters and their applications on the detection of crustal movements. The results show that these filters are suitable tools for the analysis of crustal movements, Of course, there are limits in them for example, in the Wiener deconvolution filter; we are not able to distinguish the values of crustal movements as well as the detection of them. The details are presented in this paper.