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A combined crustal depth model for Iran based on the gravity and seismological data

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The inversion of the Bouguer gravity data based on the Parker-Oldenburg method is the well-known method for estimation of the Moho depth model between geoscientist. The advantage of this method is that it gives a continuous surface model in the study area. However, in order to have a precise result in this method, we need to have a well distributed and dense gravity data which does not have large systematic errors. Estimation of the crust depth based on the seismological data is another independent method which is basically point-wised but more precise than the inversion approach. In order to reduce the effect of datum and systematic errors in inversion and taking advantage of the precise seismological model, we developed a combined crustal model for Iran based on the corrective surface idea. The four, five and seven parameters models were used in the least-squares sense to get the best combination. The combined model evaluated based on the independent seismological data. The results indicate clearly very good improvements versus the gravity inversion method.