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## Mobile GNSS reflectometry measurements

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A major benefit of ground-based GNSS reflectometry (GNSS-R) over e.g. traditional tide gauge installations is the lower cost and basically maintenance-free operations. Still, a geodetic GNSS antenna is not exactly free of charge, so using cheaper equipment can make the technology available to even more people. With the ever increasing computing power and functionality in mobile phones and tablet computers, some new models are capable of recording raw GNSS data in e.g. RINEX-files. Therefore, they can act as a complete GNSS-R system, with both antenna, receiver, and processing done on a single unit. We make a proof of concept by using GNSS data received with a tablet computer to calculate sea level heights using spectral Lomb-Scargle retrievals. The latter strategy is used for their low computational cost and simplicity. In comparing the resulting sea level retrievals to a traditional tide gauge and a geodetic quality GNSS-R installation, we show that the two GNSS-R installations perform on similar levels of precision. At the same time, the recorded GNSS data can also be used to derive the position of the tablet computer. Thus, mobile devices can be used as a cheap, and mobile, GNSS-R installation with possible applications in both oceanography and agriculture.