

# Analysis of Seasonal and Interannual Variations in the Positions of Permanent GPS Tracking Stations

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## ABSTRACT

Time series of daily station solutions of eight permanent GPS tracking stations located in the Pacific region are adopted to analyze the frequency features in the data. The GPS tracking stations are part of the IGS network and the daily solutions carried out by the JPL are used. The study shows that there are seasonal and interannual signals in all the three coordinate components beside the general linear trends of movement of the stations. The seasonal signals show some quasi-periodic oscillations and the strongest oscillations appear in the height component. The seasonal oscillations in the height component amount to about 3-6 mm. The strongest interannual signals also appear in the height component that are up to about 12 mm.

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