



Seasonal gravity variations at the station Pecný

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Repeated gravity measurements with the absolute gravimeter FG5 No. 215 have been used for detection of seasonal and secular gravity variations at the station Pecný. Since 2001 the repeated measurements have been regularly performed at approximately four-week intervals. The results of gravity measurements are within the range of $10 \mu\text{Gal}$ with strong annual progress, where the maximum gravity value appears at the beginning of March. To explain seasonal variation of gravity, the seasonal atmospheric effects and hydrological effects (global and local) have been computed. The reliable elimination of local hydrological effects was accomplished with the help of soil moisture measurements in different depths outside the observatory. After applying corresponding corrections the dispersion of the reduced gravity series decreased by about 50%.