



New Master Thesis Topic



GNSS satellites are used to determine the position on earth. To get a high precision, the transmission time of the signal from the GNSS satellite to the receiver needs to be known with high accuracy. Beside technical and electronic reasons for a delay in the transmission time, the atmosphere plays a prominent role for the variability of the delay of the transmission time. While the transmission time through the dry and clear atmosphere can be easily determined, the variability of the transmission time due to clouds, aerosols and water vapor in the atmosphere is very high and difficult to assess.

In this thesis the Eikonal equations will be used to assess the effect of aerosols, clouds and inhomogenous water vapor distribution on the delay time of the signal.

This work contributes to the research unit ClockMetrology which aims at the synchronization of atomic clocks with GNSS satellites.

Topic for students of

- M.Sc. Environmental Physics
- M.Sc. Space Sciences and Technologies

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