



Perspectives for a relativistic height reference

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We give an update on research on the determination of the gravitational frequency redshift by way of remote frequency comparisons carried out in the Hannover Collaborative Research Center geo-Q. We discuss the progress and current limitations of optical clocks and long-distance frequency transfer through optical fiber as performed, e.g. in the link between PTB (Braunschweig) and SYRTE (Paris). We discuss the expectations about the precision (stability) and accuracy of the determination of the gravitational redshift, and the resulting boundary conditions for applications in geodesy, in particular for height systems and height reference.