

The deflection of light induced by the Sun gravity field and measured with geodetic VLBI

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The Sun's gravitational field deflects positions of close objects in accordance with the formulae of general relativity. The optical astrometry used to test the prediction only with the stars close to the Sun and only during total Solar eclipses. The geodetic VLBI technique is capable to measure the deflection of the light from distant radio sources anytime and around the whole sky. We show that the effect of light deflection is equivalent to the gravitational delay calculated for reduction of VLBI data. All reference radio sources display an annual circular motion with the magnitude proportional to their ecliptic latitude. In particular, the radio sources near the ecliptic pole draw an annual circle with magnitude of 4 mas. This effect could be easily measured with the current precision of the geodetic VLBI data.

The full presentation is available from the author on request