## The 8th Conference of the Polish Society on Relativity



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## Optical distance measures in general relativity

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I will discuss the relation between the angular diameter distance and parallax distance in general relativity. This relation involves the curvature tensor along the line of sight and the difference between distance measures can be used to measure the matter content along the line of sight. Moreover, it is also possible to prove that the parallax distance must be not smaller than the angular diameter distance if the null energy condition holds. I will discuss possible astrophysical and cosmological application of these results.

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