

# MEASURING COSMOLOGICAL PARAMETERS WITH VERY LONG BASELINE INTERFEROMETRY

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Very Long Baseline Interferometry (VLBI) allows us to study a core of AGN with a sub-parsec resolution. We analyze the dependencies “apparent angular size – redshift” and “apparent motion – redshift” which contain an imprint of the source’s properties and cosmology. We present data on the “angular size – redshift” relation obtained with VLBI at 5 GHz on a sample of 300 AGN distributed over the widest available range of redshifts  $0.016 \leq z \leq 4.5$ . The sample exceeds those used in similar studies earlier by Kellermann (1993, 79 sources) and Wilkinson et al. (1997, 160 sources). Unlike extended source, the angular size-redshift for compact radio sources appears consistent with the predictions of standard Friedmann world models with  $q_0 \simeq 0.5$  without taking into account evolutionary effects or selection effects due to a “linear size – luminosity” or “linear size – spectral index” dependences. We discuss different approaches allowing us to disentangle intrinsic evolutionary properties of sources and parameters of the cosmological model. Recent estimates of parameters of the cosmological model are given. We also discuss a perspective of conclusive cosmological tests using the VLBI technique.

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## References

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