Non-intrinsic Variability and Chromaticity of Lensed Radio Sources

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Lensed flat-spectrum radio sources are assumed not to be affected by microlensing, scintillation and/or differential scattering at a significant or systematic level. This assumption, however, largely dependents on the unknown power-spectrum of the surface brightness distribution of the radio source, the total microlensing-induced magnification pattern and the scattering-measure distribution of the ionized medium in the lens. I will discuss some of these issues, put them in a general framework and show how they might affect different analyses of lensed radio systems. I illustrate these effects through several observed lens systems.