

Shear effects in large-sources microlensing

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A very elegant approach to calculate the variations induced by microlensing of large sources was published by Refsdal & Stabell already in 1991. I present an alternative derivation which now allows to take into account external shear. It will be shown that the inclusion of shear changes the behaviour qualitatively. While in the shearless case it is only the number of microlenses in front of the projected source that determine the total magnification, lenses outside of the source area do contribute significantly if shear is present. For negative parity images, the influence of lenses in front of the source does even vanish completely, so that only the outer lenses determine the microlensing signal. This has important implications not only for the expected total variation but also for the autocorrelation function of microlensing light curves.