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# The hunt for stellar-mass DM clumps: applying the statistical machine learning techniques to strong microlensing events

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Strong gravitational microlensing (GM) events give us a possibility to determine some characteristics of both microlens and microlensed source. As the role of microlens can be played by a DM clump, GM can give us an important clue to understand the nature of dark matter on comparably small spatial/mass scales. In the same time, fitting the lightcurves of microlensed sources is quite time-consuming process, especially taking into account nonzero lens size. Here we test the possibility to apply the statistical machine learning techniques to distinguish high-amplification microlensing events (HAME) caused by continuously distributed DM clump from star- or black hole- induced microlensing (i.e. microlens is considered as a point-like mass). On this stage we use the set of simulated HAE amplification curves of sources microlensed by point masses and clumps of DM with various density profiles.

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