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Looking for primordial black holes in the spectra of GRBs and FRBs

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The massive compact halo objects (MACHOs) such as primordial black holes or dense mini-halos can gravitational lens the signal of gamma ray bursts (GRB) and fast radio bursts (FRB). I will discuss that most GRB spectra are inappropriate for this kind of lensing searches due to their large sizes. However, FRB lensing, producing a characteristic interference pattern in the frequency spectrum, can probe the MACHOs in the mass range from 10^{-4} to 0.1 solar mass.

Summary

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