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Mass spectrum of primordial black holes

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The chirp mass spectrum, revealed by LIGO, demonstrates impressive agreement with the prediction that the black holes forming the original binaries have log-normal mass spectrum. The central mass of the log-normal spectrum nicely fits the theoretically favored value around 10 solar masses.

On the other hand, the assumption of astrophysical origin of the primary black holes forming binaries quite poorly describes the data for several traditional models of their formation.

With the found values of the spectrum parameters (almost) all black holes in the universe in all mass ranges can be primordial. This conjecture allows to resolve a big lot of cosmological and astrophysical conundra.

Author: DOLGOV, Alexander (NSU)

Presenter: DOLGOV, Alexander (NSU)

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