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Rates and populations of dynamically formed binary black holes

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In this contribution I present a fast population synthesis code for binary black holes (BBHs) formation and evolution in globular clusters (GCs) and use it to determine the redshift evolution of the merger rate density and masses of BBHs, with a particular focus on eccentric BBHs. A comparison to the merger rate reported by LIGO-Virgo shows that a scenario in which most of the detected BBH mergers with primary masses > 20Msun are formed in GCs is consistent with current constraints and requires initial GC half-mass densities >10^4 Msun/pc^3. The models can reproduce the masses in the pair-instability gap (> 50 Msun) with hierarchical mergers, if initial BH spins are negligible.

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