

Columns in catalogues SE, SC, LE, LC, LEm, SEM:

1. realization ID
2. source ID
3. source redshift
4. M_1 (restframe) in solar masses
5. mass ratio q
6. ecliptic longitude, ϕ_S (random in the interval $[0, 2\pi]$)
7. ecliptic latitude, θ_S (in the interval $[-\pi/2, \pi/2]$, sampled with probability $\cos(\theta_S + \pi/2)$)
8. azimuthal direction of the binary orbital angular momentum L in ecliptic frame (solar system barycentric), ϕ_L (random in the interval $[0, 2\pi]$)
9. polar direction of the binary orbital angular momentum L in ecliptic frame (solar system barycentric), θ_L (in the interval $[0, \pi]$, sampled with probability $\cos\theta_L$)
10. initial phase, ϕ_0 (random in the interval $[0, 2\pi]$)
11. coalescence time t_c in seconds (random in the interval $[0, 3\text{yr}]$)
12. magnitude of spin 1
13. magnitude of spin 2
14. polar direction of spin 1, θ_{a1} (in the interval $[0, \pi]$, sampled with probability $\cos\theta_{a1}$ for chaotic models; = 0 for coherent models)
15. polar direction of spin 2, θ_{a2} (in the interval $[0, \pi]$, sampled with probability $\cos\theta_{a2}$ for chaotic models (SC,LC); = 0 for coherent models (SE,LE))
16. azimuthal direction of of spin 1, ϕ_{a1} (random in the interval $[0, 2\pi]$ for chaotic models (SC,LC); = 0 for coherent models (SE,LE))
17. azimuthal direction of of spin 2, ϕ_{a2} (random in the interval $[0, 2\pi]$ for chaotic models (SC,LC); = 0 for coherent models (SE,LE))
18. azimuthal direction of the binary pericenter, γ (random in the interval $[0, 2\pi]$)
19. residual eccentricity at an observed gravitational wave frequency of 10^{-4} Hz.
Where the gravitational wave frequency is intended to be the frequency of the second harmonic (i.e. twice the orbital redshifted frequency)
20. Luminosity distance (in Mpc)
21. Chirp mass (intrinsic)
22. Eta : symmetric mass ratio
23. polar direction of spin 1 in ecliptic frame (solar system barycentric)
24. polar direction of spin 2 in ecliptic frame (solar system barycentric), θ_{a2} (in the interval $[0, \pi]$, sampled with probability $\cos\theta_{a2}$ for chaotic models (SC,LC); = 0 for coherent models (SE,LE))
25. azimuthal direction of of spin 1 in ecliptic frame (solar system barycentric), ϕ_{a1} (random in the interval $[0, 2\pi]$ for chaotic models (SC,LC); = 0 for coherent models (SE,LE))
26. azimuthal direction of of spin 2 in ecliptic frame (solar system barycentric), ϕ_{a2} (random in the interval $[0, 2\pi]$ for chaotic models (SC,LC); = 0 for coherent models (SE,LE))

Columns in catalogues HOR:

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8. azimuthal direction of the binary orbital angular momentum L in ecliptic frame (solar system barycentric), ϕ_L (random in the interval $[0, 2\pi]$)
9. polar direction of the binary orbital angular momentum L in ecliptic frame (solar system barycentric), θ_L (in the interval $[0, \pi]$, sampled with probability $\cos\theta_L$)
10. initial phase, ϕ_0 (random in the interval $[0, 2\pi]$)
11. coalescence time t_c in seconds (random in the interval $[0, 3\text{yr}]$)
12. Luminosity distance (in Mpc)
13. Chirp mass (intrinsic)
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