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## Wolf-Rayet –compact object binaries: the road to merging binary compact objects

The properties of binaries hosting a Wolf-Rayet star and a compact object (black hole or neutron star) suggest that such systems could be the progenitors of binary compact objects merging via gravitational wave emission. With the population-synthesis code SEVN, we quantified the impact of different assumptions on metallicity, common envelope efficiency, core-collapse supernova and natal kick models on the evolution of a binary population representative of the one observed in the Milky Way. Within the considered parameter space, we found that more than 99\% of merging binary compact objects had a progenitor in the Wolf-Rayet - compact object configuration. Some of them exhibit properties similar to Cyg X-3, the only Wolf-Rayet – compact object candidate in the Milky Way. Future observations of Wolf-Rayet – compact object systems could be the “Rosetta stone” to calibrate models for the formation of binary compact objects.

### Contribution

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