

Evolution of massive binary systems

Jelena Petrovic ¹

¹*Astronomical Observatory, Volgina 7, Belgrade, Serbia*

E-mail: jpetrovic@aob.rs

Some of the most exciting cosmic phenomena are thought to occur in massive binary systems. For example, gamma-ray bursts are associated with collapsars evolved from Wolf-Rayet stars that lost their hydrogen shell due to the mass transfer in massive binaries. Also, sources of gravitational waves recently observed by the LIGO-Virgo telescopes are binary systems containing compact objects, relics of massive stars - black holes and neutron stars. Evolutionary calculations of massive close binaries were performed by various authors, but many aspects are not yet fully understood. Rotation, magnetic fields, stellar wind mass loss, accretion efficiency during the mass transfer, as well as angular momentum accretion are some of the most important parameters that can influence the final outcome of the binary system evolution.

References

Petrovic, J. et al.: 2004, *A&A*, **435**, 247

Petrovic, J. et al: 2005, *A&A*, **435**, 1013

Kruckow, M. U. Et al: 2018, *MNRAS*, **481**, 1908