

Reading SeBa output : SeBa.data

For every binary SeBa produces several lines of output data. Every line represents a moment in the evolution of the binary when something interesting happened, for example one of the star transitions from the main-sequence to the hertzsprung gap, or mass transfer starts or stops. The meaning of the columns is defined below. The first column represents a unique identifier for each binary.

columns (starting at column 1):

column 1 binary identity number
column 2 binary type
column 3 mass transfer type
column 4 time
column 5 separation in Solar radii
column 6 eccentricity
column 8 & 14 star type
column 9 & 15 stellar mass in Solar mass
column 10 & 16 stellar radius in Solar radii
column 12 & 18 core mass in Solar mass

options for binary type

2 detached
3 semi detached + stable mass transfer
4 contact
5 CE (γ)
6 double_spiral_in
7 merged
8 disrupted
9 CE (α)

options for mass transfer type

1 on nuclear time scale
2 on angular momentum loss timescale (either gravitational waves & magnetic braking)
3 on thermal time scale
4 CE due to dynamics
5 CE due to Darwin Riemann instability

options for stellar type

1 planet
2 brown dwarf
3 main sequence
5 hertzsprung gap
6 sub_giant
7 core helium burning star
8 agb
10 helium star
11 helium giant
12 carbon-oxygen white dwarf
13 helium white dwarf

14 oxygen-neon white dwarf
18 neutron star
19 black hole
20 disintegrated