Table 1: Binary run 143. Red denotes fields that are better in the Ohlmann+16a simulation. Blue denotes fields that are different but not necessarily better in either simulation. Green denotes fields that are better in our simulation. Dashed line separates numerical from physical quantities.

Initialization of Red Giant	Ohlmann+2016a	Chamandy+2018 (Models A/B)
Code	AREPO (moving adaptive mesh)	AstroBEAR (Eulerian AMR)
Hydro BCs	Periodic	Extrapolated
Poisson solver	Tree method	Multipole expansion
Primary core	Point particle, spline	Point particle, spline
Cutoff radius = initial softening length	$2.8\,R_\odot$	$2.4\,R_\odot$
Core profile	Modified Lane-Emden with $n=3$	Modified Lane-Emden with $n=3$
Primary	ZAMS $2\,M_\odot$ → RG (MESA)	ZAMS $2\,M_\odot$ → RG (MESA)
Relaxation $L_{\rm box}$	$192\,R_\odot$	$—/575\,R_\odot$
Damping τ	$9.4\,d$	$—/3.5\,d$
Total relaxation time	$94\,d$	$0/17.4\,d$
Simulation	Ohlmann+2016a	Chamandy+2018 (Models A/B)
Reference frame	Inertial	Inertial
Secondary	Point particle, spline	Point particle, spline
Primary/secondary softening length	$\min(2.8\,R_\odot, \frac{1}{5}\text{separation})$	$2.4\,R_\odot \to 1.2\,R_\odot/2.4\,R_\odot$
$L_{\rm box}$	$4700\,R_\odot$	$1150\,R_\odot/575\,R_\odot$
Run time $t_{\rm f}$	$120\,d$	$40\,d$
Smallest resoln elmt at $t=0$	$0.14\,R_\odot$	$0.14\,R_\odot$
Smallest resoln elmt at $t=t_{\rm f}$	$0.02\,R_\odot$	$0.07\,R_\odot/0.14\,R_\odot$
Resolution near particles	variable	uniform
Cells per softening radius	≥ 10	17
Physical parameters	Ohlmann+2016a	Chamandy+2018 (Models A/B)
Secondary mass	$0.99\,M_\odot$ (half of primary)	$0.978\,M_\odot$ (half of primary)
$\rho_{\rm ambient}$	$10^{-16}\,{\rm g\,cm^{-3}}$	$6.7\times10^{-9}\,{\rm g\,cm^{-3}}$
$P_{\rm ambient}$	Comparable to surface of RG	$10^5\,{\rm dyn\,cm^{-2}}$, comparable to surface of RG
Initial eccentricity	0	0
Initial separation	$49\,R_\odot$	$49\,R_\odot$
Initial rotation of primary	$0.95\,\Omega_{\rm Kepler}$	0
Accretion onto primary	None	None
Accretion onto secondary	None	None/subgrid

Parameter	**Ohlmann+2016a**	**Chamandy+2018 (Models A/B)**
Code	AREPO (moving adaptive mesh)	AstroBEAR (Eulerian AMR)
Hydro BCs	Periodic	Extrapolated
Poisson solver	Tree method	Multipole expansion
Relaxation run $L_{\rm box}$	$192\,R_\odot$	$—/575\,R_\odot$
Damping τ	$9.4\,d$	$—/3.5\,d$
Total relaxation time	$94\,d$	$0/17.4\,d$
Primary/secondary softening length $R_{\rm soft}$	$\min(2.8\,R_\odot, \frac{1}{5}\text{separation})$	$2.4\,R_\odot \to 1.2\,R_\odot/2.4\,R_\odot$
Run time $t_{\rm f}$	$120\,d$	$40\,d$
$L_{\rm box}$	$4700\,R_\odot$	$1150\,R_\odot/575\,R_\odot$
Resolution near particles	Variable	Uniform
Refinement	Cell mass criteria	Max level in region containing particles
Cells per softening radius near particles	≥ 5	17
$\rho_{\rm ambient}$	$10^{-16}\,{\rm g\,cm^{-3}}$	$6.7\times10^{-9}\,{\rm g\,cm^{-3}}$
$P_{\rm ambient}$	$10^{-4}\,{\rm dyn\,cm^{-2}}$	$1.0\times10^{5}\,{\rm dyn\,cm^{-2}}$
Initial rotation of primary	$0.95\,\Omega_{\rm Kepler}$	0
Accretion onto secondary	None	None/subgrid