

# Central Episodes

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Case (a)

Parameters  $N = 40,000$ ;  $N_b = 2000$ ;  $N_{bh} = 30$

Final masses 26, 28, 15; T + S at  $t = 500$  Myr

Sling-shot  $V_{esc} = 59, 10 \text{ km/s}$ ;  $E_b/E > 2$

Case (b)

Parameters  $N = 60,000$ ;  $N_b = 3000$ ;  $N_{bh} = 37$

Stage  $inc = 109^\circ$ ;  $a = 3 \times 10^{-5}$ ;  $e = 0.9998$

Evolution IPN = 1, 2, 3;  $e \Rightarrow 0.99992$ ;  $\Delta t/T_K = 200$

Coalescence  $\Delta E_{rad} = -3 \times 10^{-4}$ ,  $\Delta E_{err} = -6 \times 10^{-7}$

Criteria IPN = 3;  $e > 0.99999$ ;  $T_{coal} < 0.1$ ;  $N_p = 0$

Conclusions Mass segregation & Kozai cycles