

ORBITS OF BLACK HOLES IN TRIAXIAL POTENTIALS

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EFFECT OF THE STELLAR FRACTION

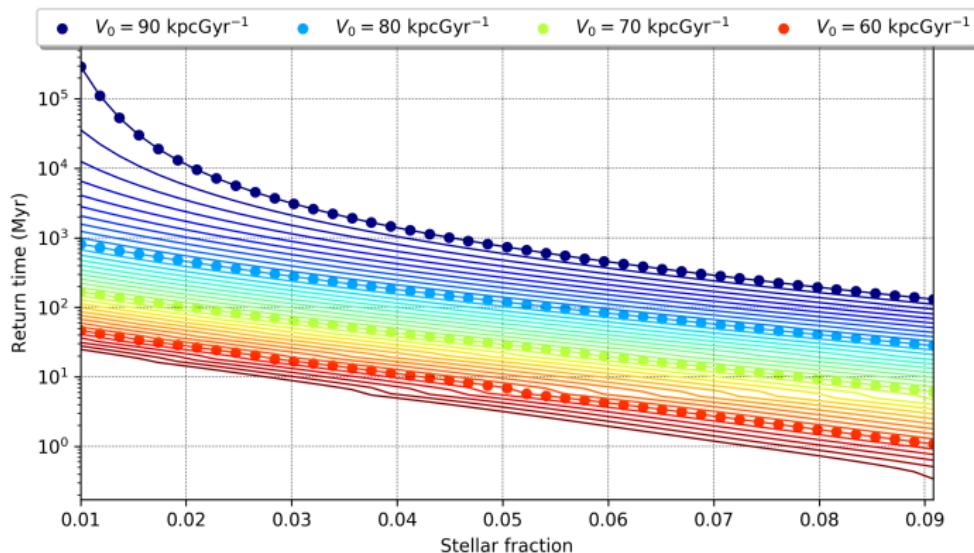


FIGURE: Return time for different stellar densities.

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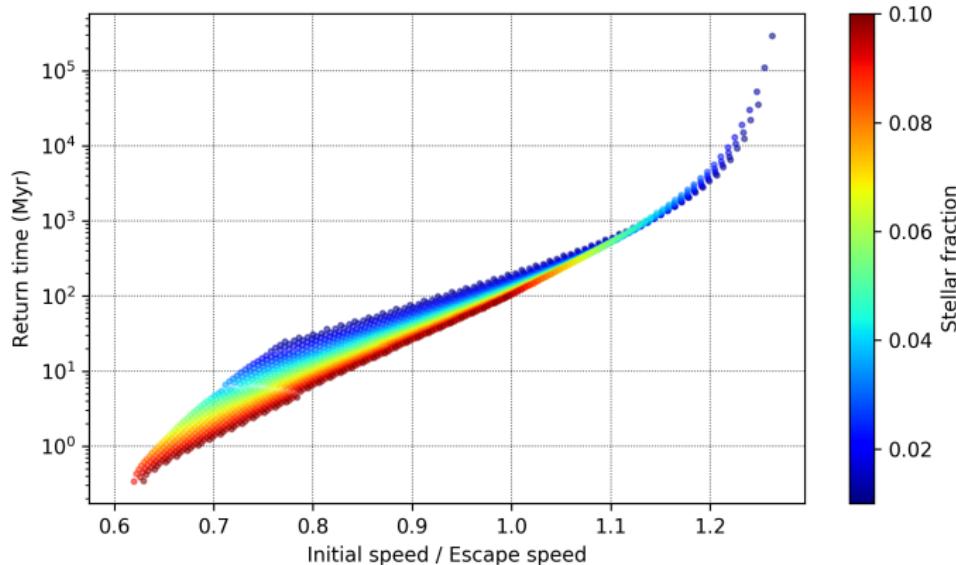
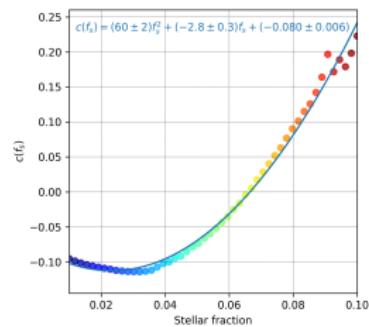
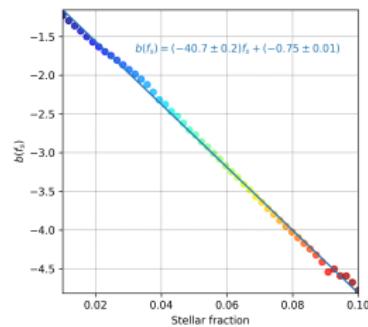
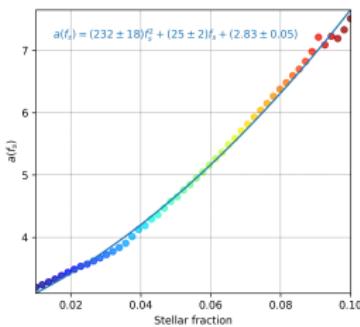


FIGURE: Return time for different initial speeds.

- └ STUDIES
 - └ SYMMETRICAL

EFFECT OF THE STELLAR FRACTION

$$\log_{10}(T_{\text{return}}) = [a(f_s)v + b(f_s)] + \frac{c(f_s)}{v - 1.3} \quad (1)$$



$$a(f_s) = 232f_s^2 + 25f_s + 2.83 \quad (2)$$

$$b(f_s) = -40.7f_s - 0.75 \quad (3)$$

$$c(f_s) = 60f_s^2 - 2.8f_s - 0.080 \quad (4)$$

EFFECT OF THE STELLAR FRACTION

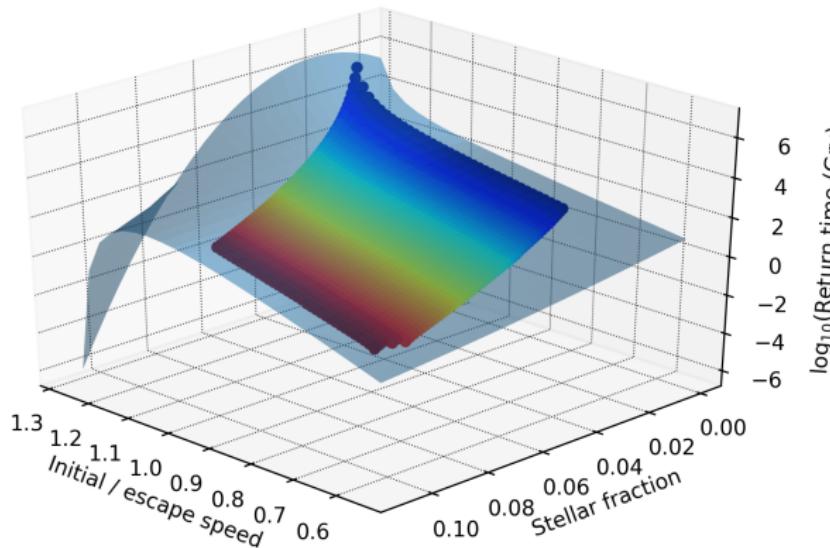
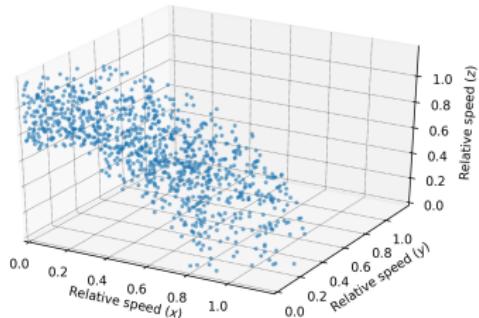
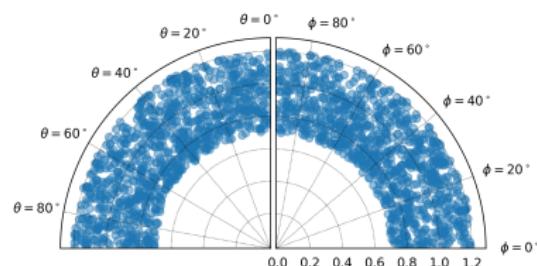


FIGURE: Return time for different stellar densities and speeds.

INITIAL CONDITIONS



(A) Cartesian



(B) Polar

FIGURE: Distributions of initial speeds for the triaxial lunches. θ describes the polar angle and ϕ the azimuth.

INITIAL CONDITIONS

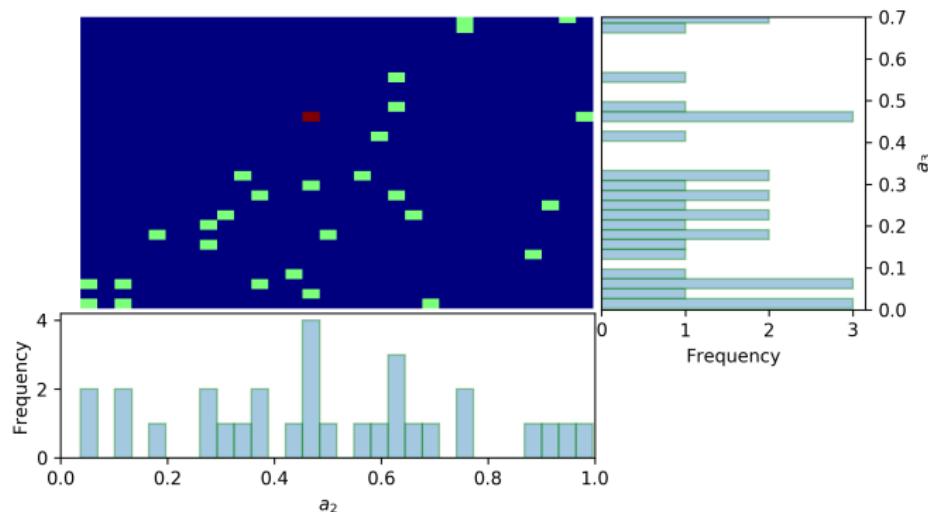


FIGURE: Distribution of the 30 pair of values for the y and z semiaxis.

RESULTS

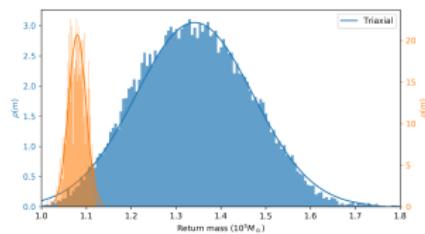


FIGURE: Mass distributions of the returned black hole, for the 30 triaxial lunches (blue) and for an spherical galaxy.

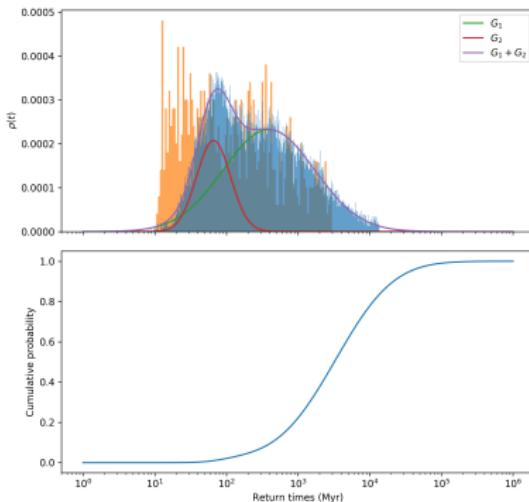


FIGURE: Return time distributions, for the 30 triaxial lunches (blue) and for an spherical galaxy. Below, the cumulative probability of the purple curve.

RESULTS

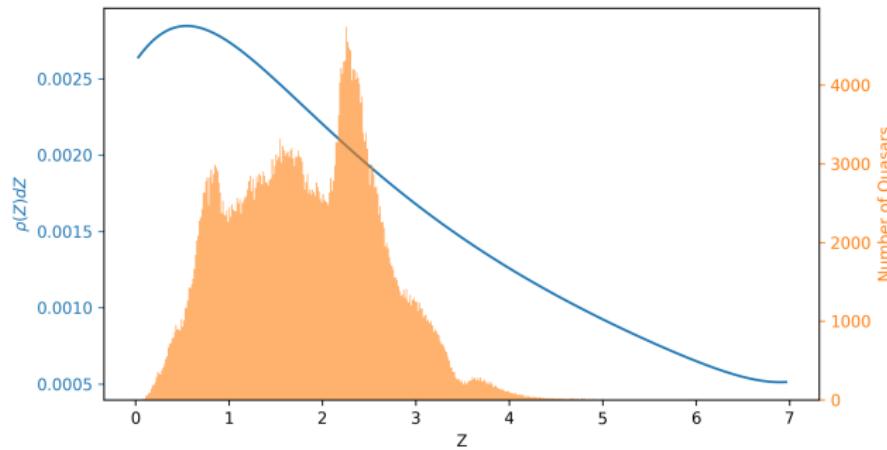


FIGURE: Comparison of the predicted distribution of quasars and the observational data.

RESULTS

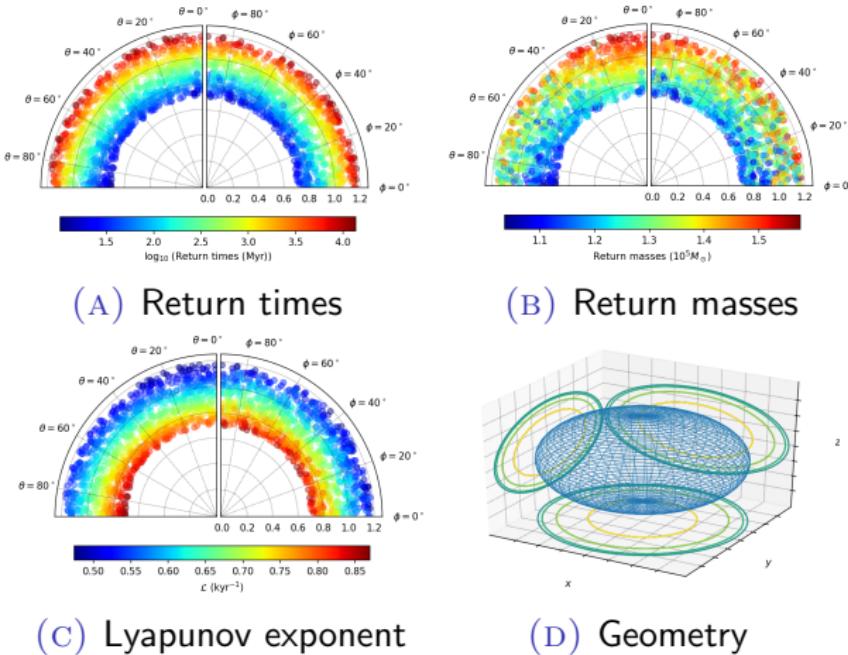
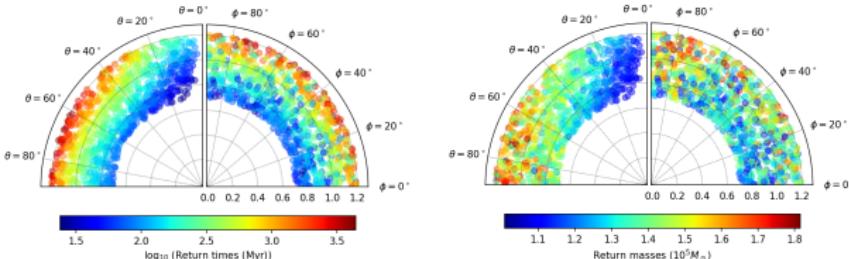
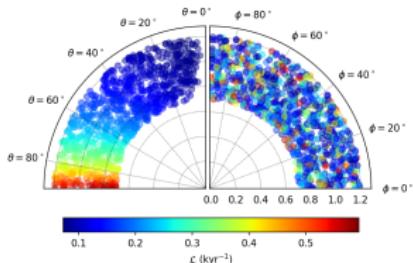


FIGURE: Distribution of the different properties for the galaxy with $a_1 = 1$, $a_2 = 9.6 \times 10^{-1}$, $a_3 = 7.0 \times 10^{-1}$.

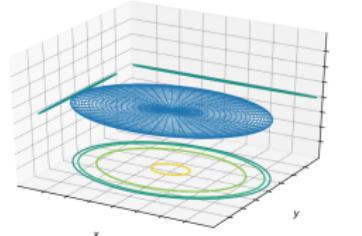
RESULTS



(A) Return times



(c) Lyapunov exponent



(D) Geometry

FIGURE: Distribution of the different properties for the galaxy with $a_1 = 1$, $a_2 = 6.9 \times 10^{-1}$, $a_3 = 1.2 \times 10^{-2}$.

RESULTS

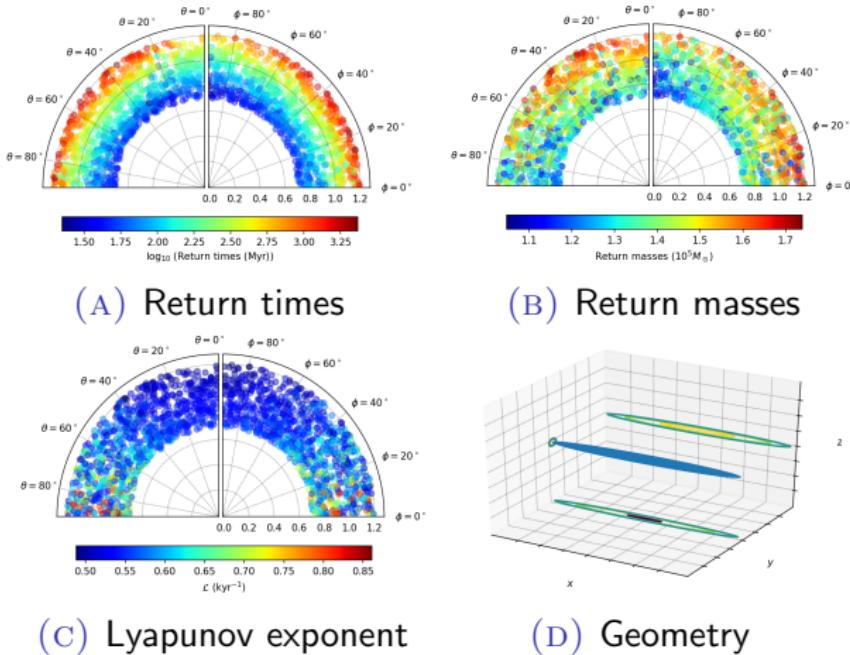


FIGURE: Distribution of the different properties for the galaxy with $a_1 = 1$, $a_2 = 6.6 \times 10^{-2}$, $a_3 = 6.1 \times 10^{-2}$.