

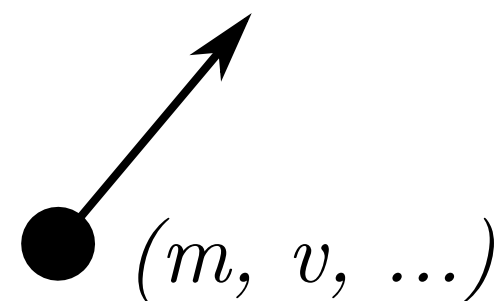
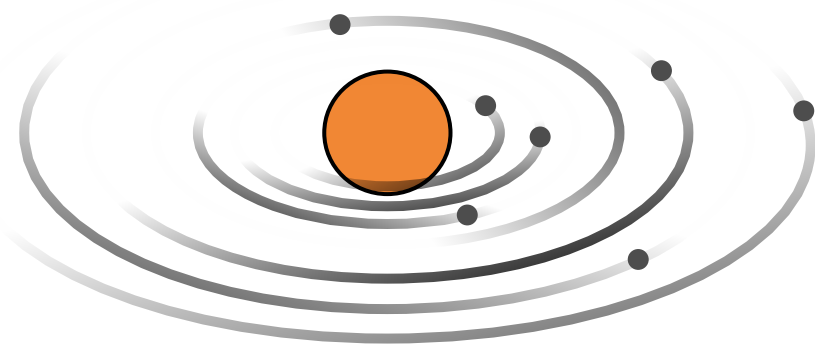
Detailed study of the stability of planetary systems captured by a massive stellar remnant

Matyáš Fuksa, Václav Pavlík, Vladimír Karas, & Steven N. Shore

Initial conditions

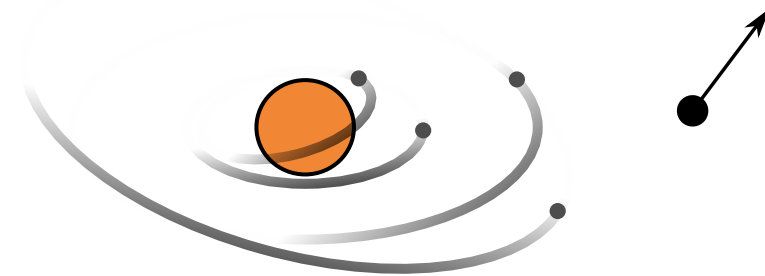
numerical models

planetary system
(Solar System)

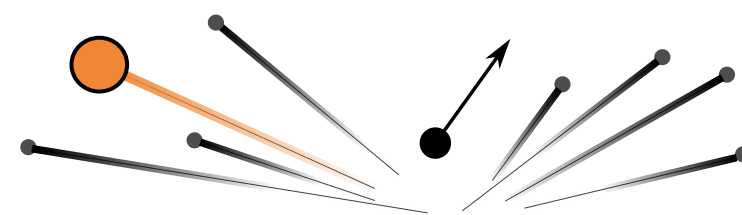


stellar remnant

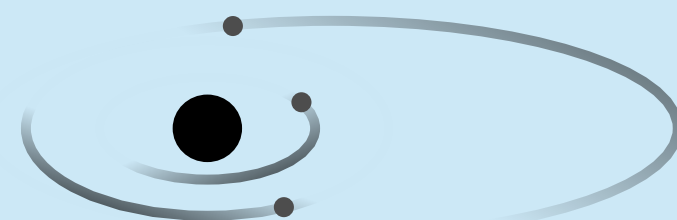
Possible outcomes



partial disruption



destruction



capture

Our results

Pavlík & Shore (2021): first analysis of the initial conditions and outcomes

Fuksa's MSc Thesis (2024): focus on capture scenarios and long-term evolution (Gyrs), discussion about their stability

This poster (#15): planetary system captured by a $10 M_{\odot}$ black hole

Upcoming paper: planetary system captured by a $2 M_{\odot}$ neutron star (formation of planets around pulsars?)