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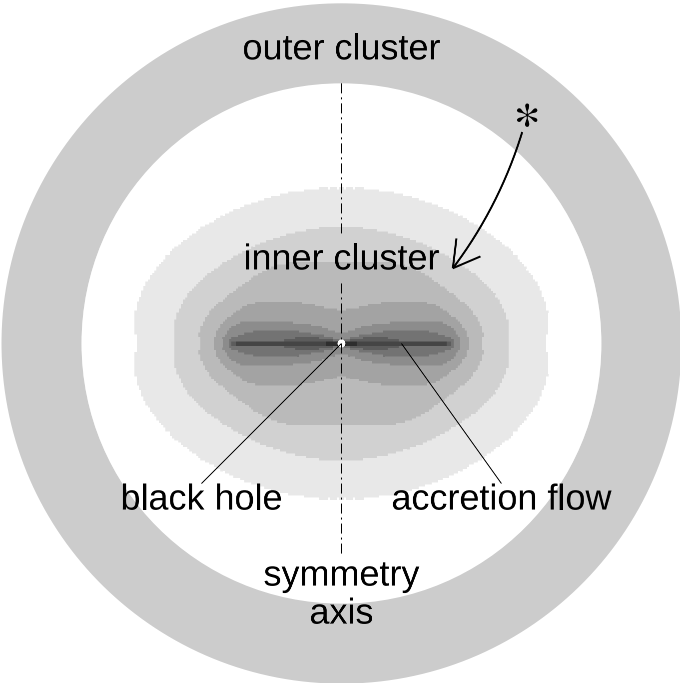

- Black hole:
  $M_{BH} \approx 10^6 - 10^9 M_\odot$
- Accretion flow:
  $\Sigma_\mathrm{d} \propto r^\mathrm{s}$
  $R_\mathrm{d} \approx 10^4 R_\mathrm{g} \approx 0.1 M_8\,\mathrm{pc}$
- Outer cluster:

$$\begin{aligned} n(r) &= n_0 (r/r_\mathrm{h})^{-7/8} \\ r_\mathrm{h} &= GM_{BH}/\sigma^2 \\ &\approx 10 M_8^{1/2}\,\mathrm{pc} \\ \sigma &\approx 200 M_8^{1/4}\,\mathrm{km/s} \\ n_0 &\approx 10^6 - 10^8\,\mathrm{pc}^{-3} \end{aligned}$$

Dissipative drag of accretion disc on individual orbits $\longrightarrow$

- distortion of the stellar cluster
- flow of stars towards the centre at a rate:

$$\frac{\dot{M}}{M_\odot} \approx 1.7\times 10^{-2} M_8^{5/4}\, n_6^2 \left(\frac{M_*}{M_\odot}\right)^2 \frac{R_\mathrm{d}}{10^4 R_\mathrm{g}}\ \mathrm{yr}^{-1}$$

Gravity of the disc may cause large jumps of orbital elements even if it is only a weak perturbation to the central field