



Whispering black holes

The very sub-Eddington regime

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Population of stellar-mass black holes

In the Milky Way

$\Rightarrow$

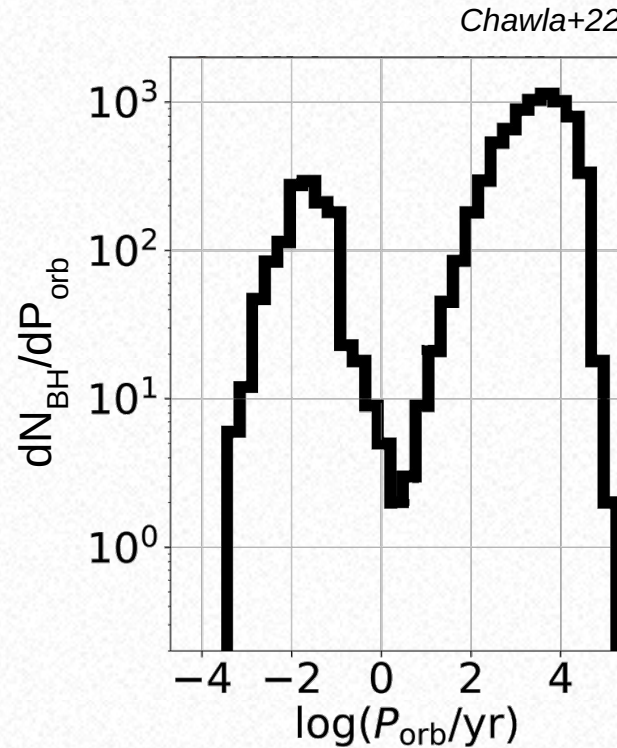
Paired w/ a post-MS star

$\Rightarrow$

Detectable?

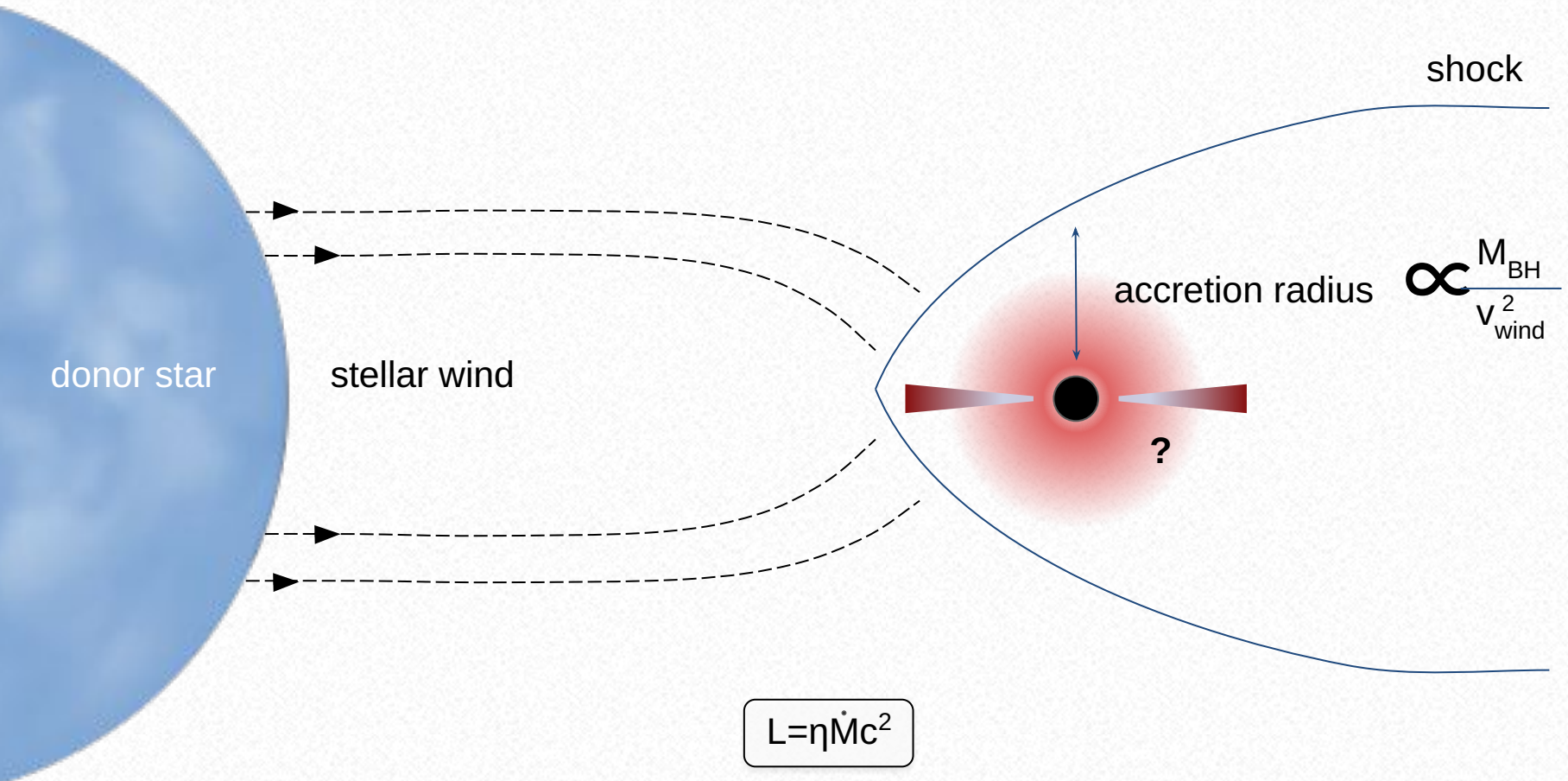
$\exists > 10^6$ stellar-mass BHs

Timmes+96
Brown & Bethe 92

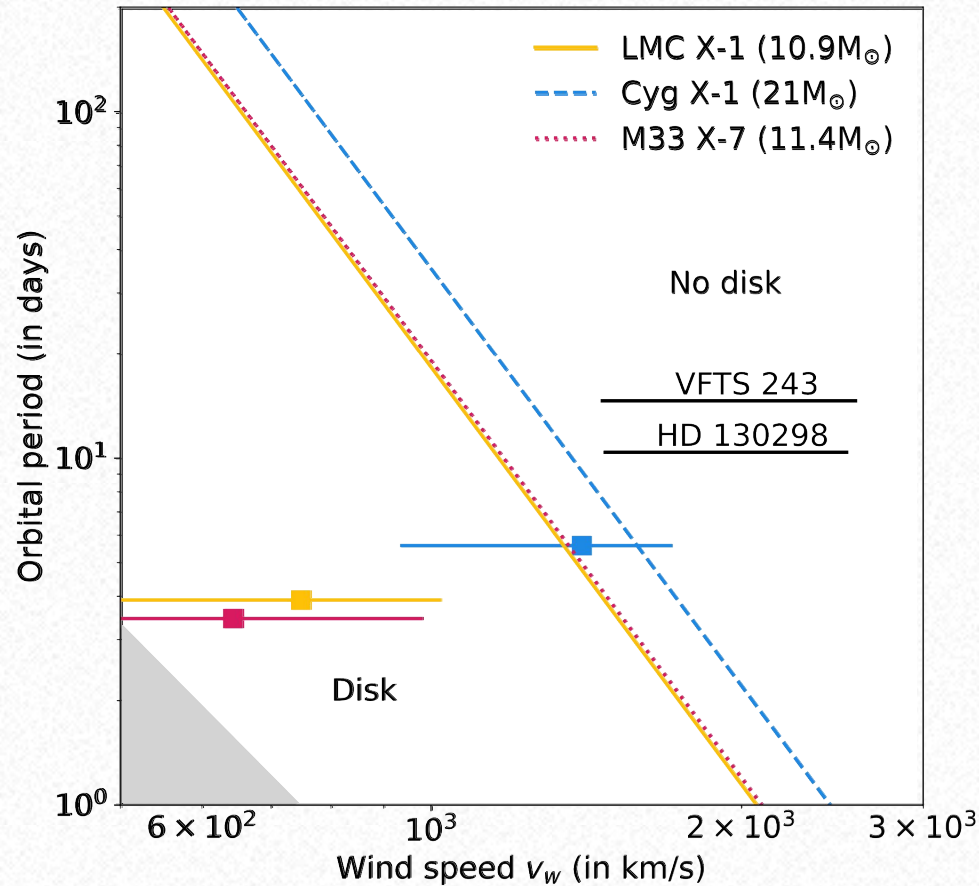


Cygnus X-1

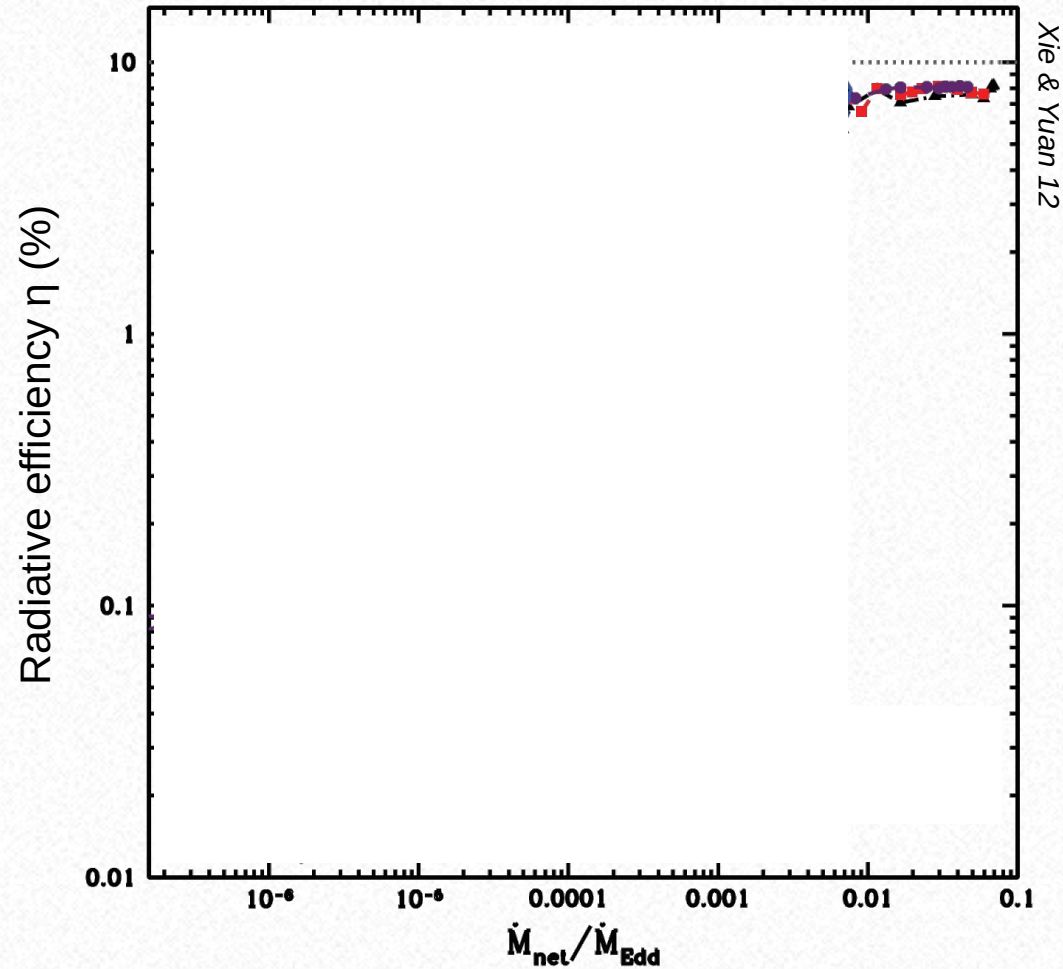
Wind-mediated mass transfer from an evolved star to a black hole



Disk formation condition around a wind-fed BH



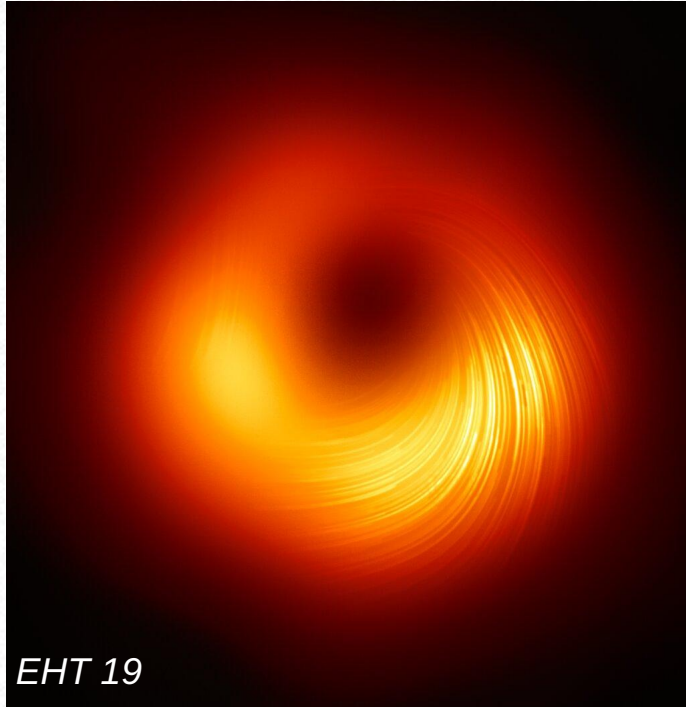
Radiative efficiency



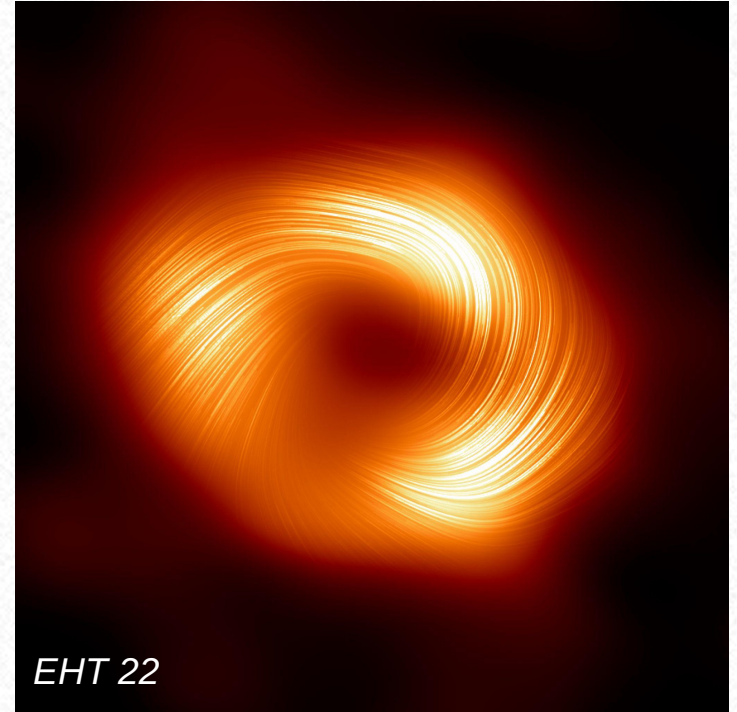
Which fraction δ of the $\dot{M}c^2$ ends up
in the electrons?

Inspiring precedents

M87*

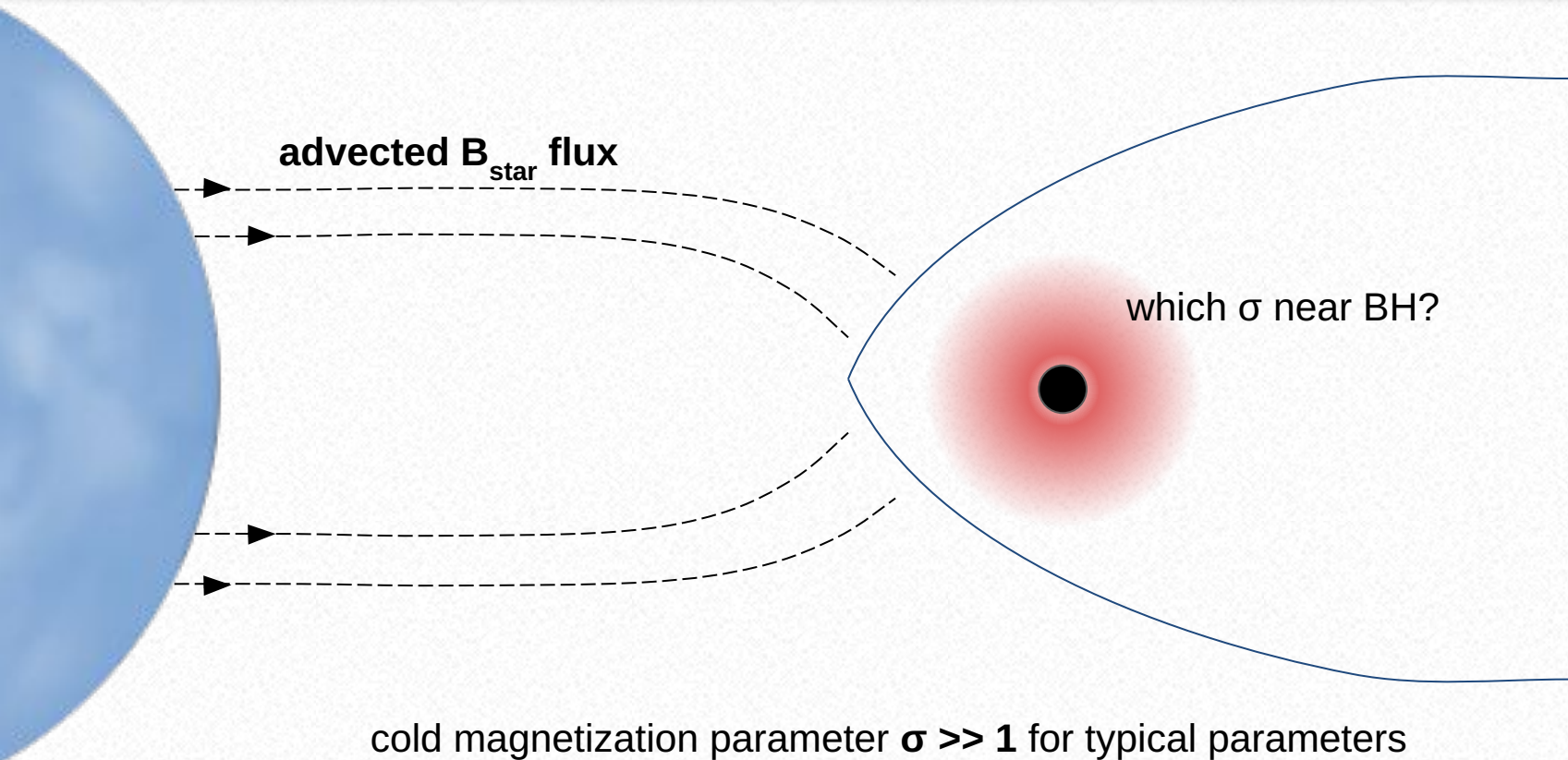


Sagittarius A*



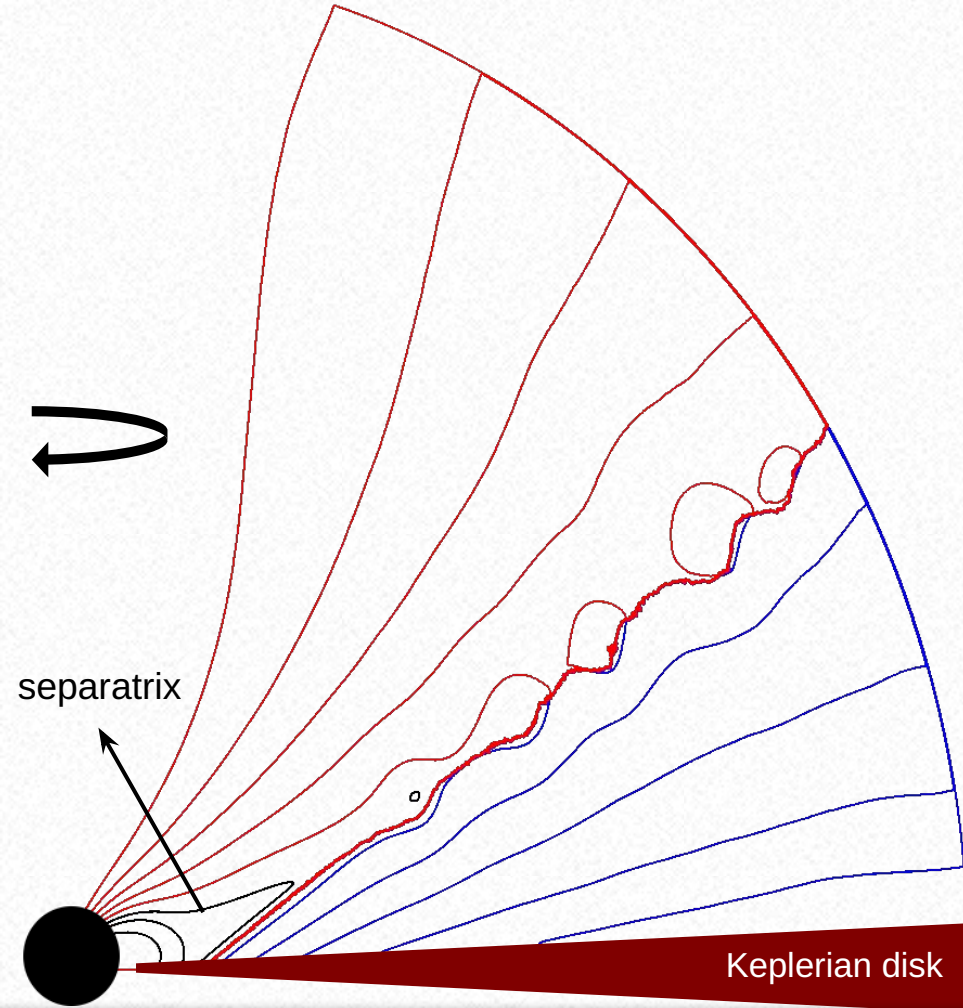
Low $\dot{M}/\dot{M}_{\text{Edd}}$ and yet, **bright**

Magnetization in the corona of a whispering BH



Particle acceleration via B reconnection possible in
the corona of X-ray quiescent stellar-mass black holes

Magnetic reconnection in BH corona

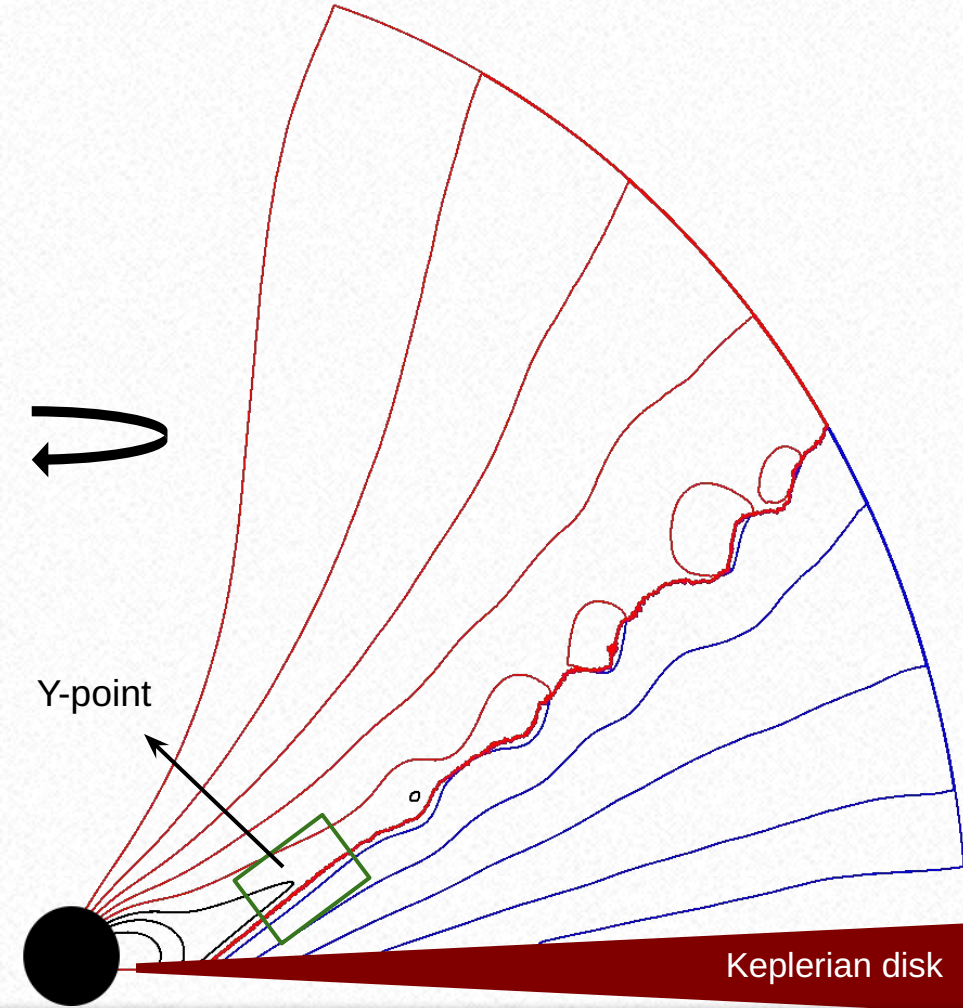


Open field lines anchored in BH => BZ jet

Open field lines anchored in disk => BP wind

Disk-BH coupling field lines

Magnetic reconnection in BH corona

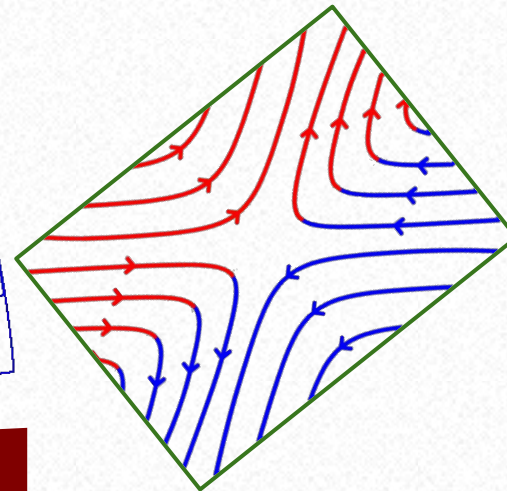


Open field lines anchored in BH => BZ jet

Open field lines anchored in disk => BP wind

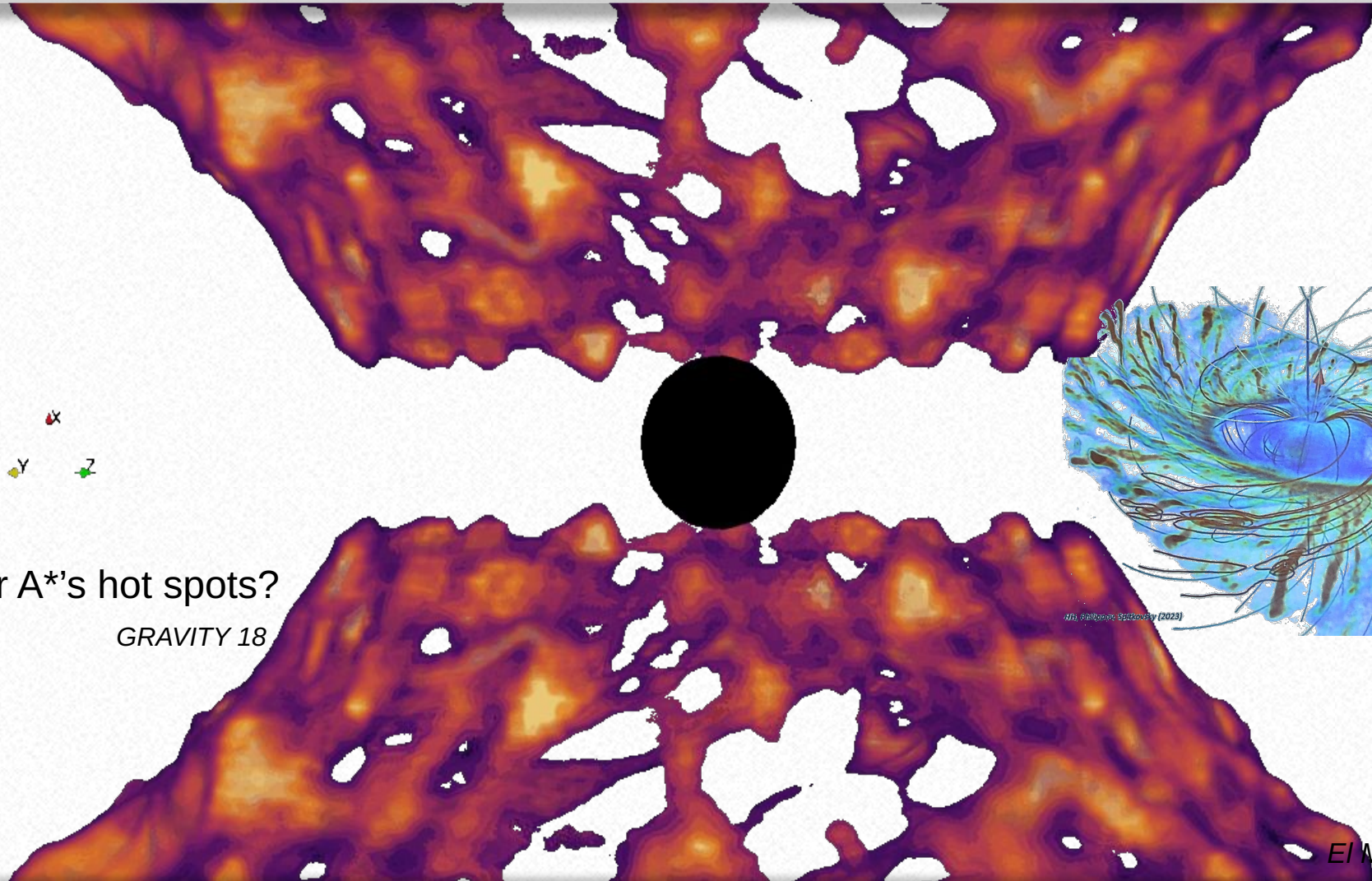
Disk-BH coupling field lines

Current sheet from Y-point



Mehlhoff+25
advected loops
=> striped BZ jet

Reconnecting jet sheath



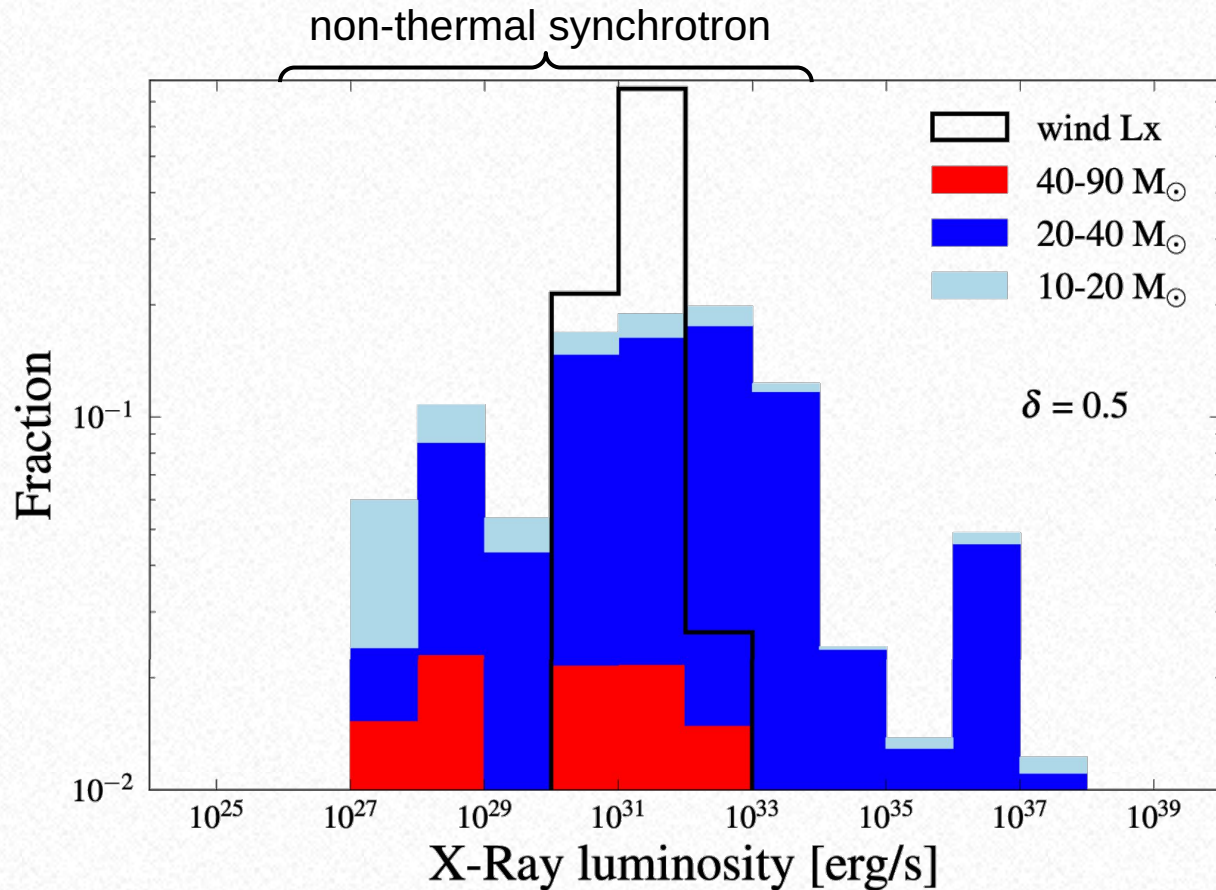
Sgr A*'s hot spots?

GRAVITY 18

El Mellah+23

Detectability

Massive binary population synthesis + radiative efficiency η computation



Sen, El Mellah + 24