(CMB) Hu+
current comparison procedure

GRMHD simulation

Input:
- spin
- B field config
- disk tilt*

Output:
- fluid(x,y,z) ρ, u, p, vₓ, Bₓ

GRRT imaging

Input:
- GRMHD electrons
- heating distribution function*
- inclination units
- BH mass
- BH accretion rate

Output:
- image(x,y)

model comparison

Statistics of image ensembles.

Uncertainties:
- plasma physics
e- distribution function
image sample

EHT Paper V
image properties

inclination

+ 1759.3 days

x [μas]

y [μas]

+ 0.0 days

x [μas]
accretion disk anatomy

★ Model parameters:
★ Mass
★ Spin
★ Disk tilt
★ Accretion rate
★ Magnetic flux
★ Inclination
★ Electron thermodynamics
★ Electron distribution function
★ Electron/ion heating

Gammie+ 2003
GRMHD model

model description: MAD, $a=+15/16$ (prograde)
emission source

model description: MAD, $a=15/16$, prograde, “cool disk” model
rotation in the funnel

Log[ rho ] on r = const surface