

# Neutron stars, black holes, naked singularities

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Adding to presentations by

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KKKK

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# Comings and goings

2024 PhDs (adieu, bye, bye:-)

- Ruchi Mishra
- Fatemeh Kayanikhoo

Welcome incoming PhD students!

- Tanja Kaister
- Sukalpa Kundu

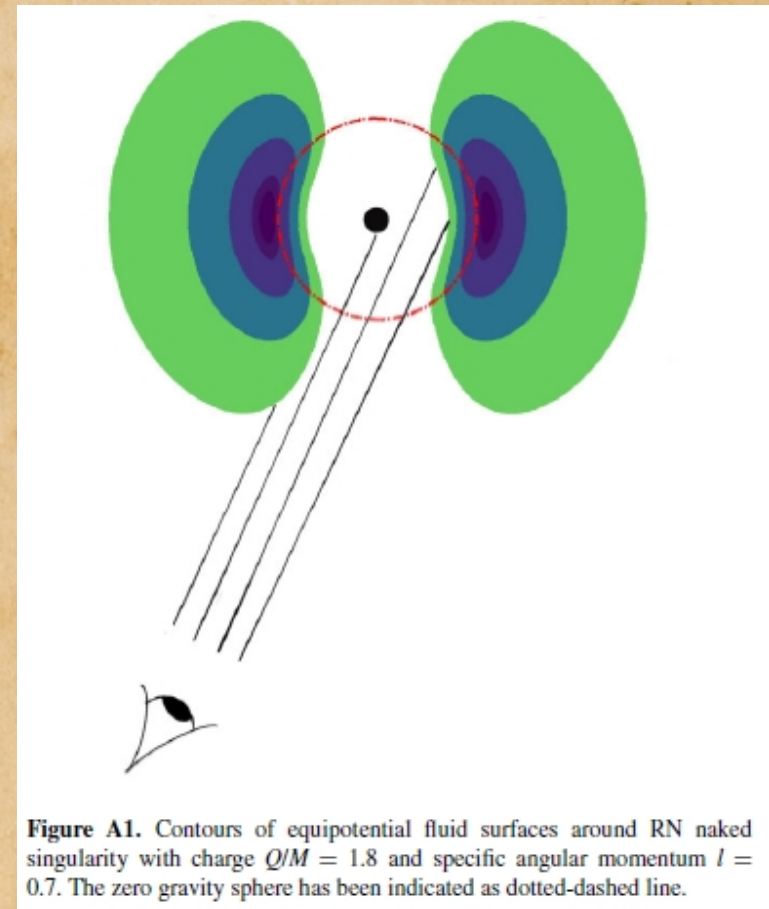
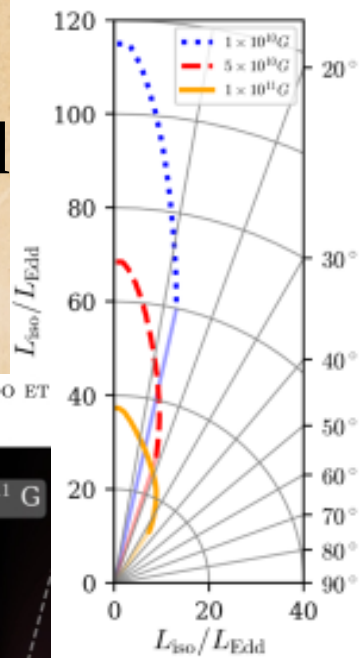
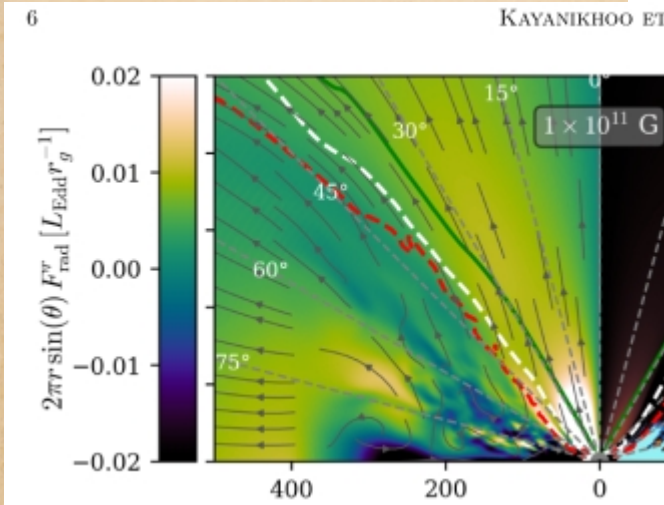
# From PhD dissertations

- NS as ULXs (Fatemeh)

GRRMHD

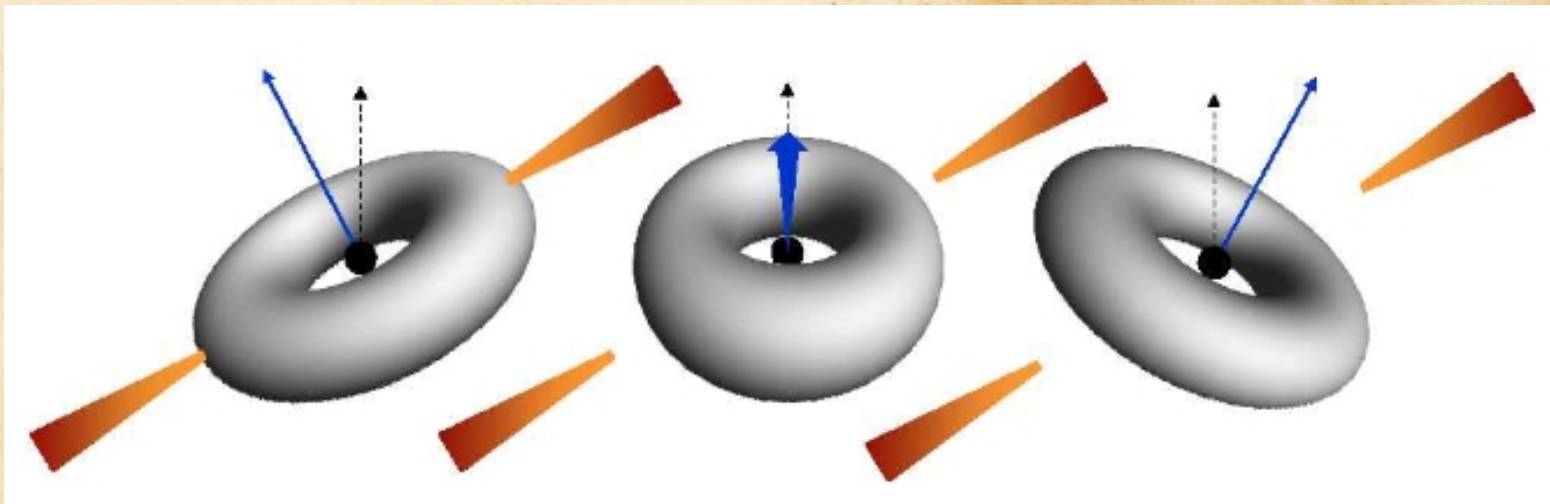
10GG=>120 Edd

- Sgr A\* as NkS (Ruchi)



# Lense-Thirring precession in BHs

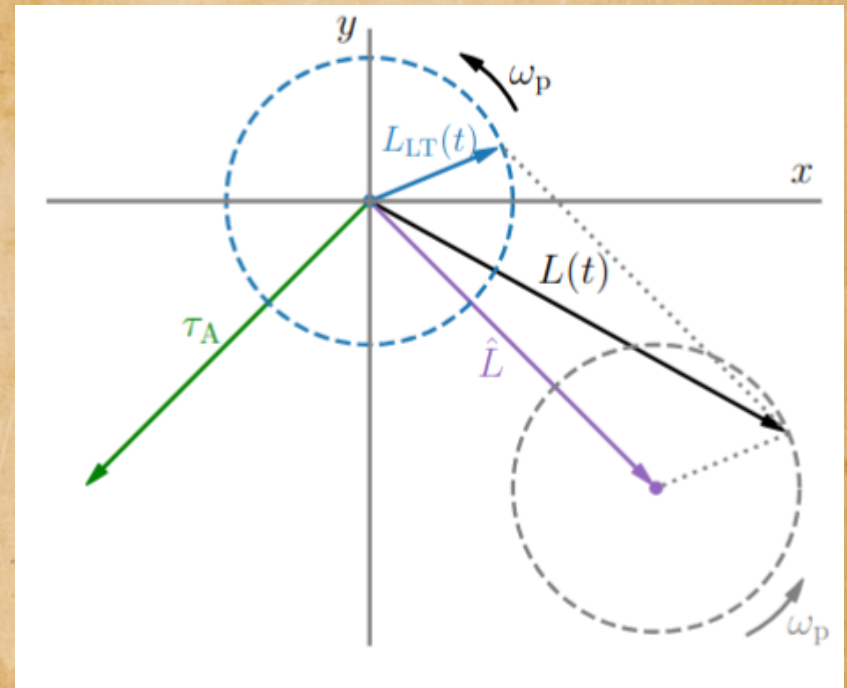
- $\Omega = \omega_{\perp} - \omega$  (Lense-Thirring = epicyclic - orbital)
- Inner accretion torus  
(credit Ingram, Done, Fragile 2009)



# Include disk accretion torque

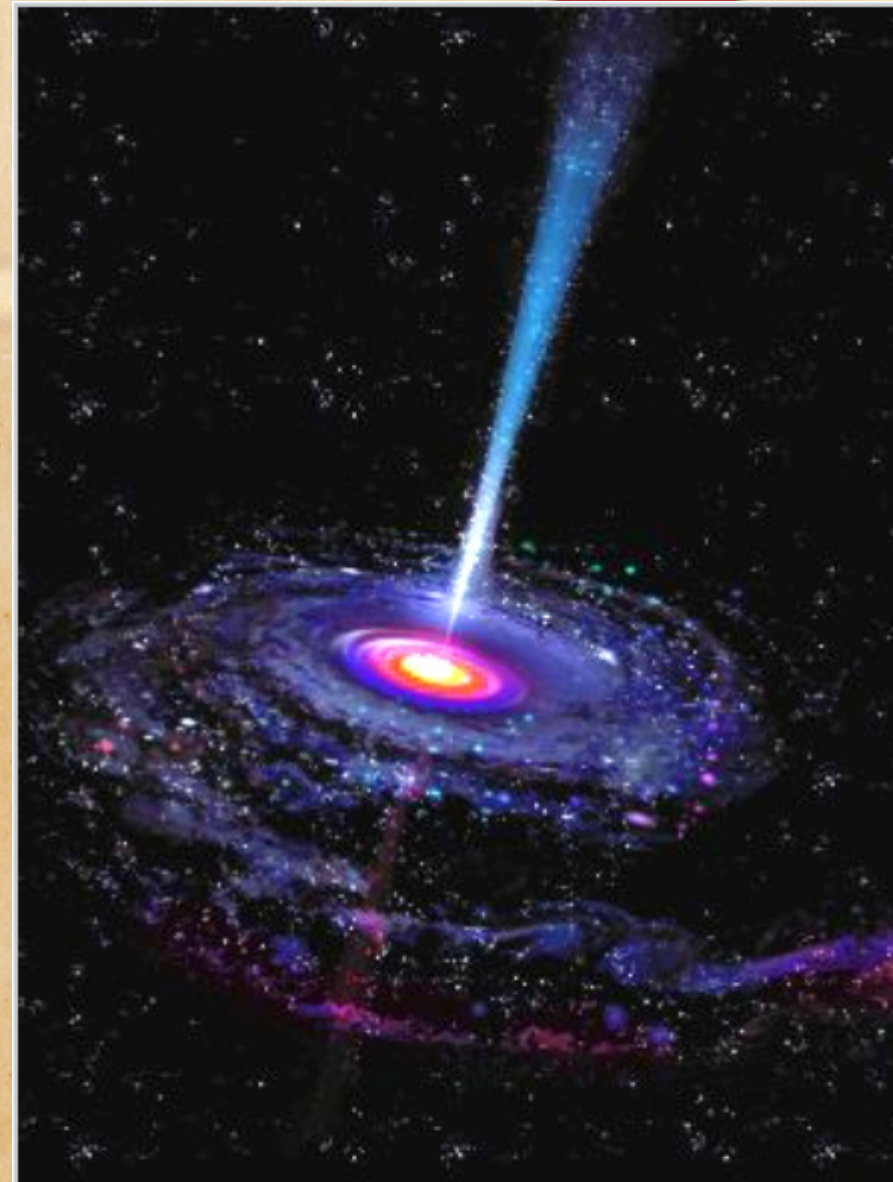
- Precession frequency unchanged, Lense-Thirring
- Axis of precession will be misaligned with BH axis
- projection onto equatorial plane:


- Credit: Bollimpalli,  
Horak, Kluźniak,  
Fragile 2025



# Takehome

- L'effet LT devrait être significatif, malgré tout...
- The jet may not be aligned with the BH axis!



Vue d'artiste d'un trou noir en rotation, autour duquel l'effet Lense-Thirring devrait être significatif. 



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