

Warm Coronae in Changing-Look AGNs

Biswaraj Palit¹, 4th year PhD

Supervisor:

Prof. dr hab. Agata Rozanska¹

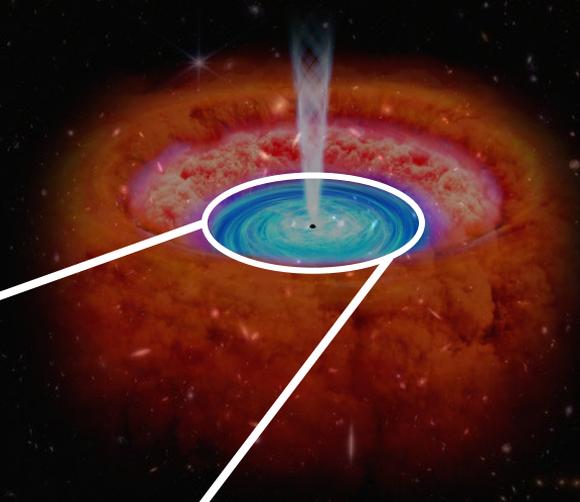
Close collaborators:

*Dr hab. Alex Markowitz¹, Dr. Marzena Śniegowska²,
Dr. Abhijeet Borkar², Prof. Pierre Olivier Petrucci³, Dr.
Santanu Mondal⁴, Prof. M. Vestergaard⁵*

*CAMK PAN¹, ASU CAS², IPA de Grenoble³, IIA⁴,
DARK⁵*

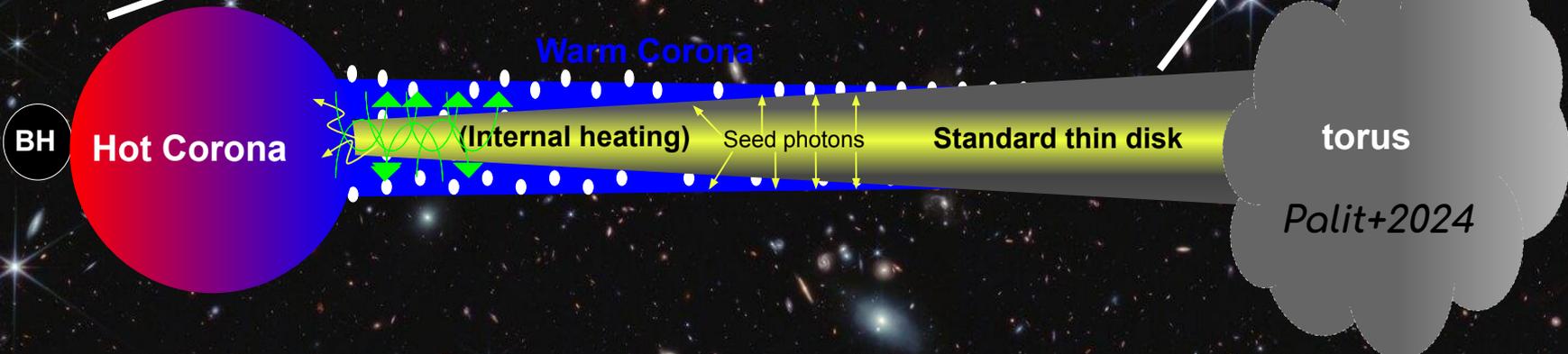
Inner accretion flow: Building blocks

AGNs are the powerhouses of galaxies



Within ~ few 100 gravitational radii

~ 95 % of total AGN emission



Inner accretion flow: Internal heating inside warm corona, a key ingredient to produce soft X-ray

A&A, 690, A308 (2024)

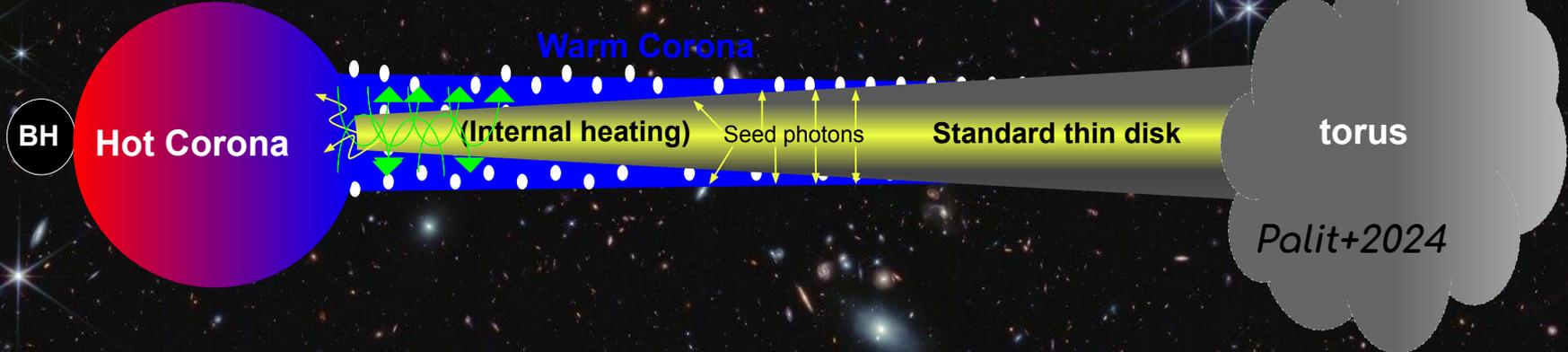
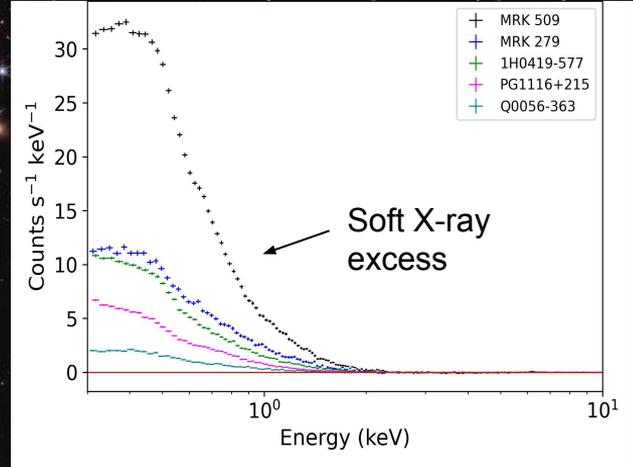
<https://doi.org/10.1051/0004-6361/202450111>

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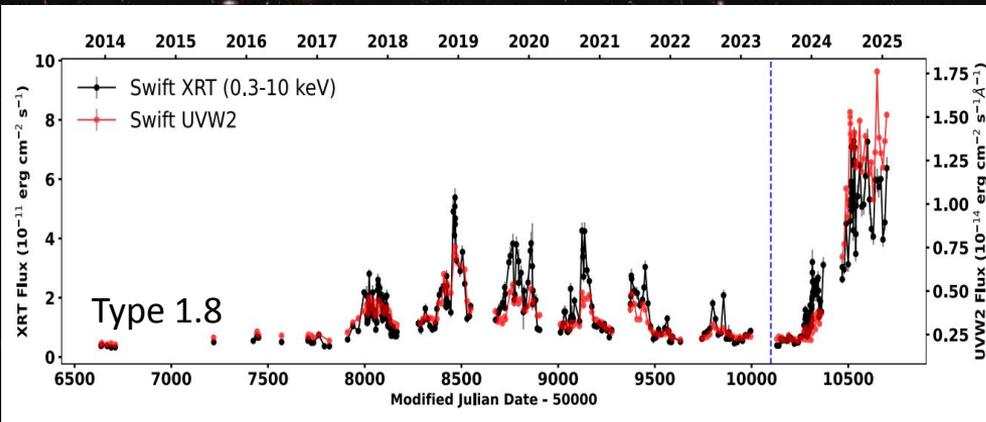
Astronomy
&
Astrophysics

X-ray view of dissipative warm corona in active galactic nuclei

B. Palit^{1,*}, A. Różańska¹, P. O. Petrucci², D. Gronkiewicz¹, S. Barnier⁶, S. Bianchi⁴, D. R. Ballantyne⁵,
V. E. Gianolli^{2,4}, R. Middei^{7,8}, R. Belmont³, and F. Ursini²



Curious case of Markarian 590....



Monthly Notices
of the
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Structural changes in accretion flow ?
Warm corona component appears
above $\geq 0.02 L_{Edd}$

Accretion rate
increased by
20%
In ~ 300 days

Markarian 590: the AGN awakens

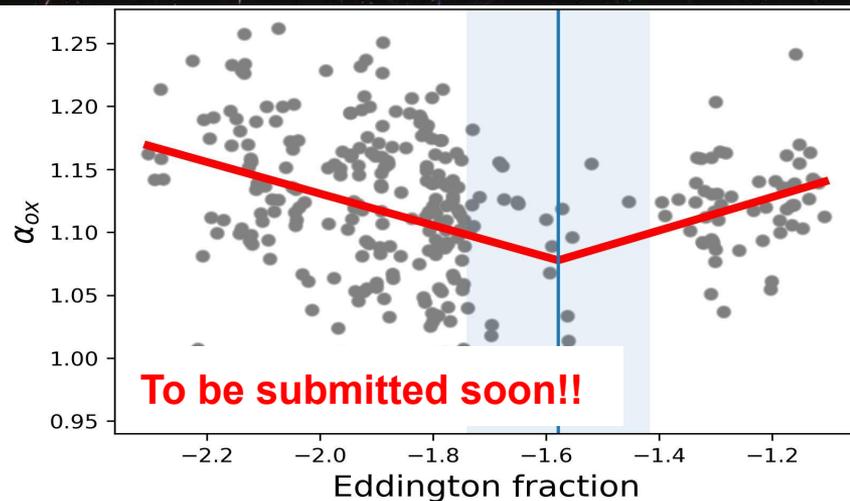
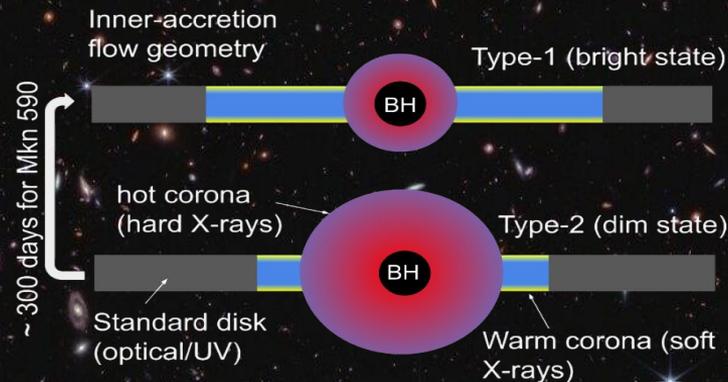
Biswaraj Palit^{1, *}, Marzena Śniegowska,² Alex Markowitz^{3, 1}, Agata Różańska,¹ Joseph Farah^{3, 4} and D. Andrew Howell^{3, 4}

PROCEEDING

Optical and cm follow-ups of the Changing-Look event in Mkn 590

Biswaraj Palit^{*1} | Abhijeet Borkar² | Agata Różańska¹ | Alex Markowitz¹ | Marzena Śniegowska² | Swayamtrupta Panda^{3, 4} | David Homan⁵ | Krystian Ikiewicz¹

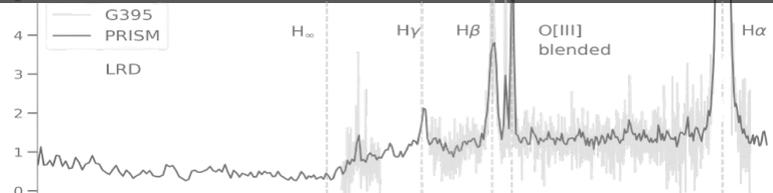
X-ray binary accretion states in CL AGNs ????



Mission: Little Red Dots

PI: Anna de Graaff

JWST Workshop, Torun, PL



Compact, unusually bright, dust-covered galaxies at redshift ~ 8

Galaxies without a central black hole?

(supermassive star cluster???)

How did massive black holes grow so fast? (persistent super-Eddington accretion???)

Or just say:
"Slow-Spinning Dark Matter Halos"
and move on...

JWST Deep field

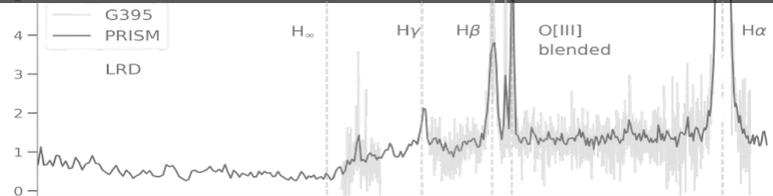


RUBIES

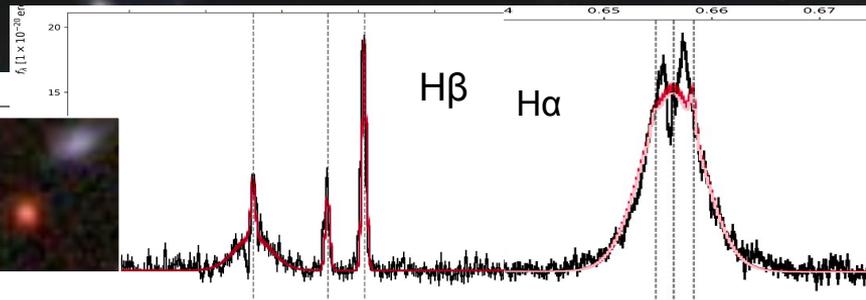
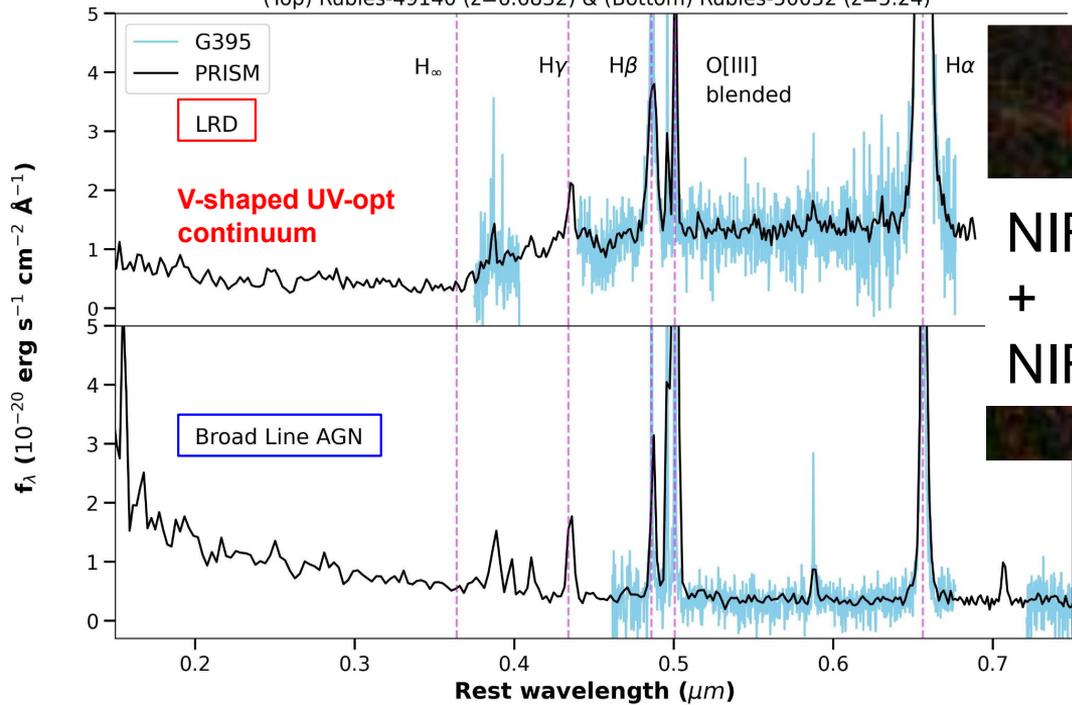
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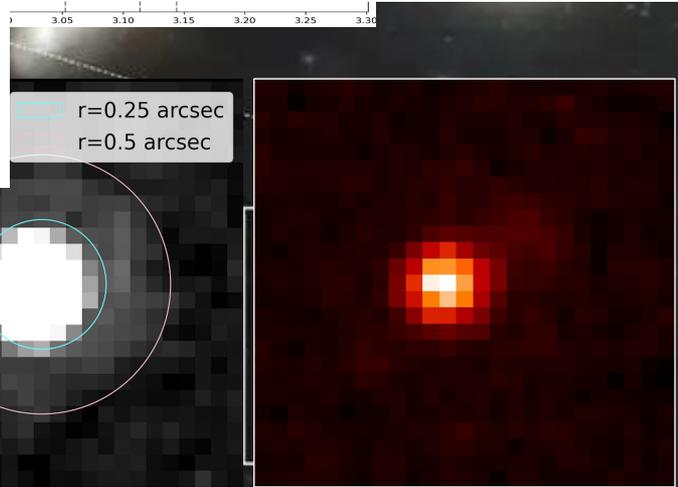
JWST Workshop, Torun, PL



(Top) Rubies-49140 ($z=6.6832$) & (Bottom) Rubies-50052 ($z=5.24$)



NIRCam
+
NIRSpec



200 days of
summer....



Warsaw, PL
(PTA Meeting)



Gerlosberg, AT
(Brainstorming the IXPE proposal)

Vasto, ITA
(Nothing beats a
conference in the
Mediterranean)



Madrid, ESP
(ESAC)



Torun, PL
(Team: Little Red Dots)