

Camille Diez



● Presentation

- 3rd year PhD student, working at the Univ of Tübingen under the supervision of Victoria Grinberg
- M2 Astrophysics + master's thesis in Toulouse
- “survival” generation of PhDs who started it during the Covid

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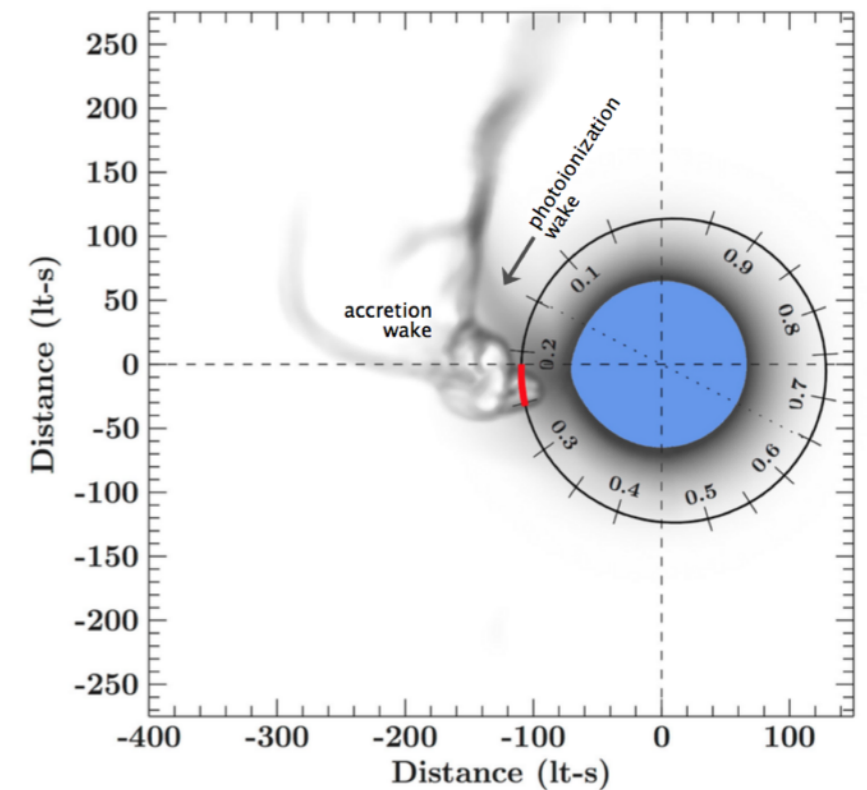


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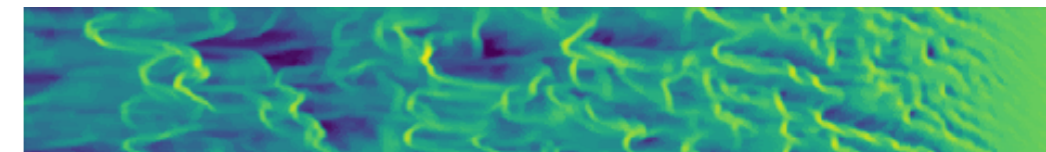
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Current research

- Understanding the accretion structures in neutron stars high-mass X-ray binaries using Vela X-1
 - > Accretion via stellar winds: characterizes the wind, which is clumpy
 - > Long term objective: Understand the end of life of the (high-mass) companion
- Methods: NuStar (3-78keV) and XMM-Newton (0.1-10keV) -> abs at low energy
- + interest in low-mass X-ray binaries to characterize the EoS of neutron stars... but in optical !



Schematic view of the wake behind the NS (Grinberg+17)



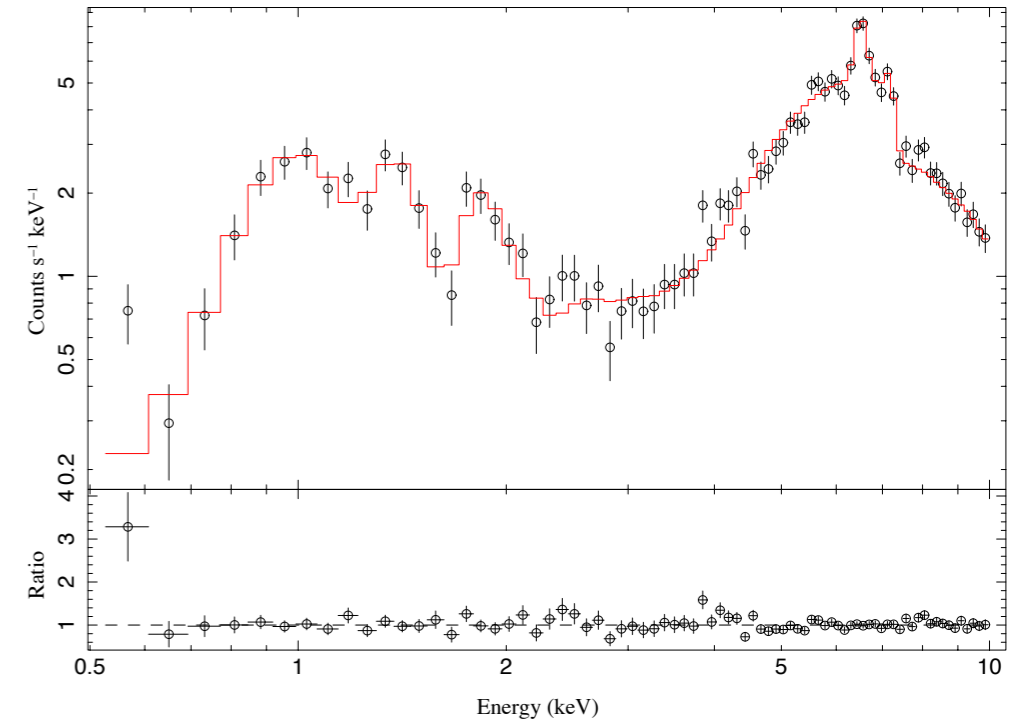
Simulation of the wake (El Mellah+18)

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Perspectives in X-ray astronomy + Athena

- Energetic Universe team
- More spectral resolution (X-IFU) than XMM, ideal for emission lines. Need to describe the composition of the clumpy wind



XMM-Newton EPIC-PN spectrum of Vela X-1 during one pulse at orbital phase 0.5
—> Athena ?

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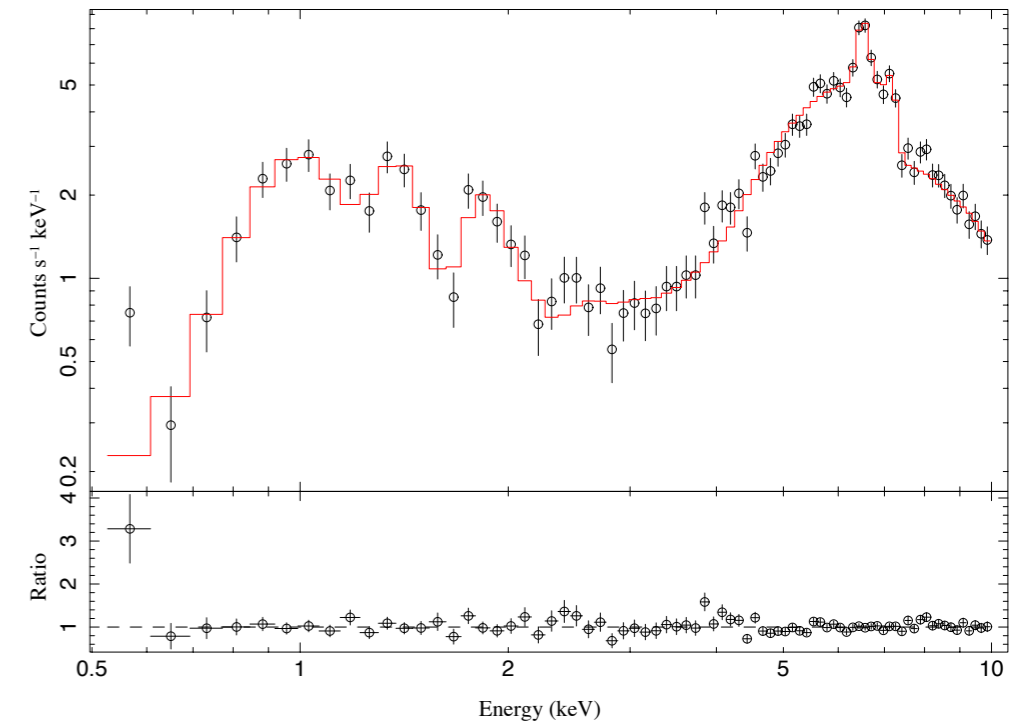


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Personal interests

- Responsibilities/activities
 - > Involved in promoting women in astrophysics (France -> Germany)
- Future
 - > Hoping to remain in the X-IFU team for her future postdoc - you should write it down
- Hobbies
 - > Cannot challenge Didier Barret at wine tasting but has expertise in (german) beers
- Tai Do = martial art



XMM-Newton EPIC-PN spectrum of Vela X-1 during one pulse at orbital phase 0.5
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how to ask ESA to increase the Athena budget

Raphaël Mignon-Risse



● Presentation

- **Currently CNES post-doc at Laboratoire AstroParticule et Cosmologie (APC) in Paris with Peggy Varniere**
- ATER (2020-2021) at APC
- PhD in massive star formation (2020) at AIM (CEA-Saclay)

Raphaël Mignon-Risse

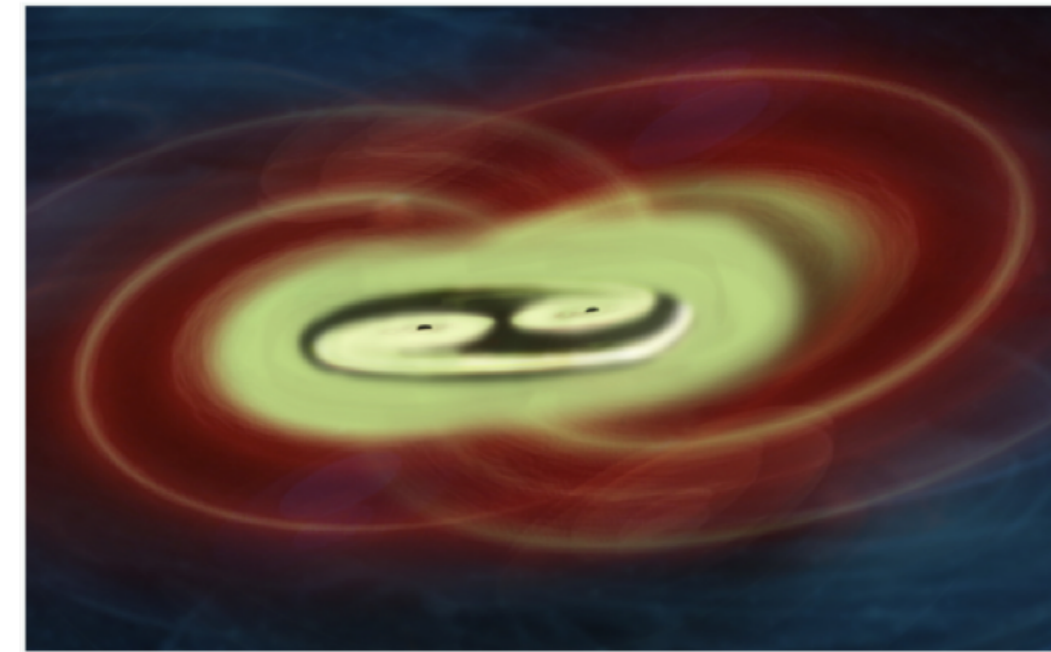


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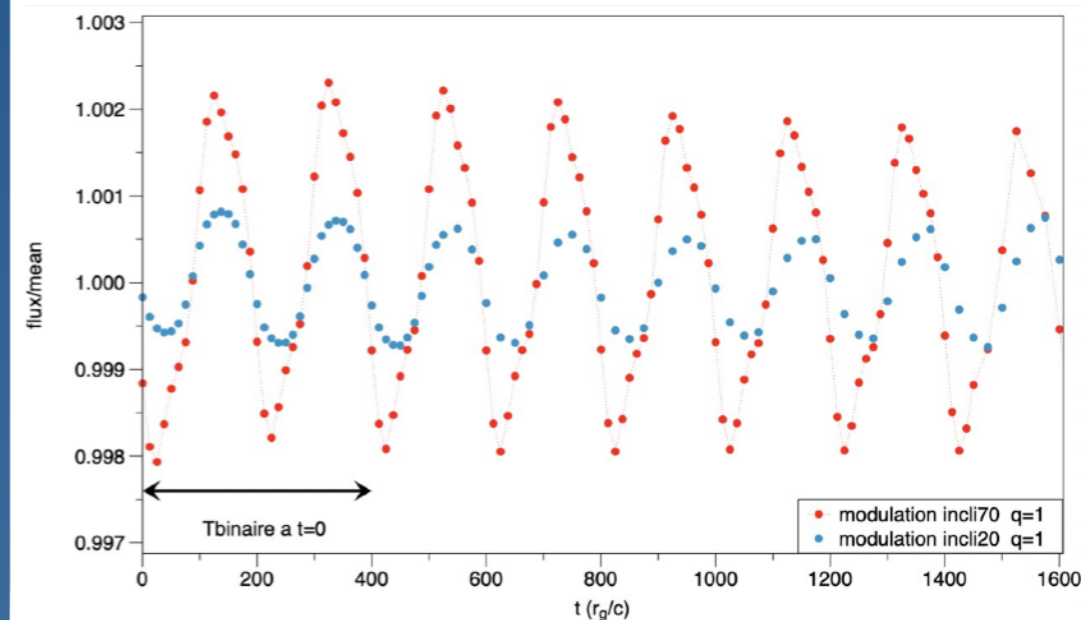
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Current research

- Electromagnetic counterpart to binary black hole coalescence
 - > uses general relativistic MHD simulations of accretion structures around binary black holes
 - > what is the characteristic EM signature of a BH-BH merger?
 - > second last living soul on Earth interested in QPOs



Artist view of a binary black hole



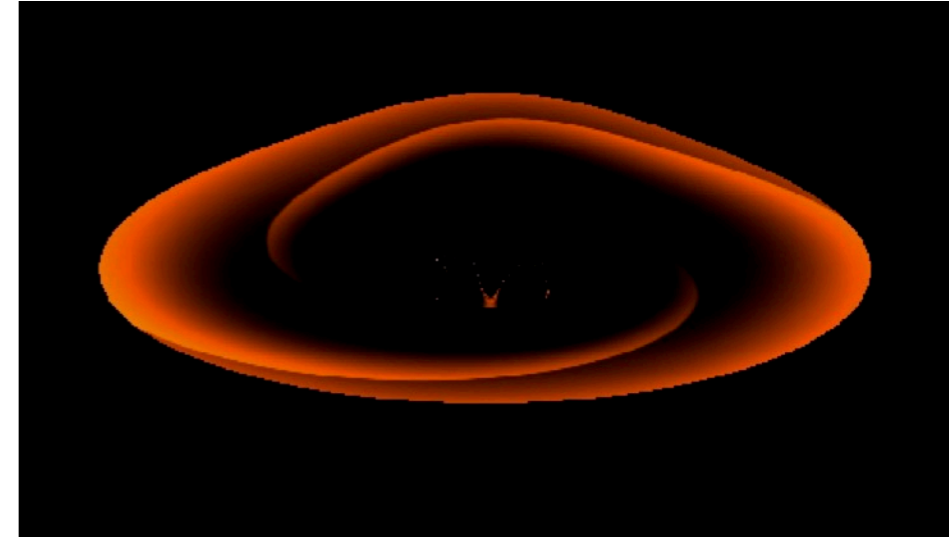
Modulation of a lightcurve (MR+, in prep)

Raphaël Mignon-Risse



● Perspectives in X-ray astronomy + Athena

- Give to the Athena community the X-ray signal to look for in the sky after a LISA (or LIGO/VIRGO) gravitational wave detection
 - > compare arrival times and put constraints on the speed of the GW
 - > witness the (re-)birth of an AGN



Synthetic observation of a binary black hole
(MR et al, in prep.)

Raphaël Mignon-Risse

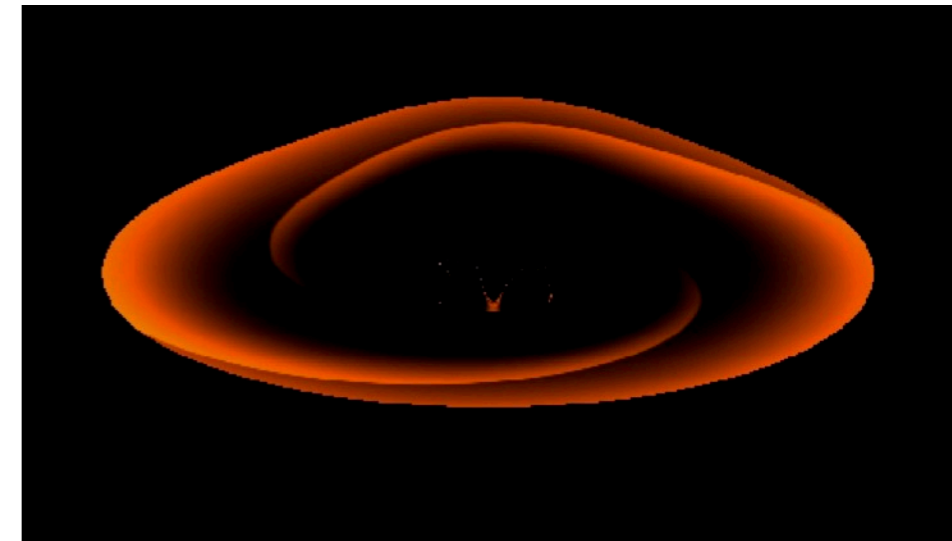


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Personal interests

- Organises online seminars about accretion/ejection mechanisms
- Only astrophysicist interested in soccer (is he?)
- Engaged in reducing his carbon foot print: e.g. always travels to conferences by trains
- Definitely can't compete with Didier's expertise on wines



Synthetic observation of a binary black hole (MR et al, in prep.)

