

Curriculum Vitae of Damien Bégué

Relativistic Astrophysics



Contact:

Damien Bégué
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References:

Prof. Pe'er A.
Prof. Ryde F.
Dr. Vereshchagin G.

Programming:

C/C++
GPU computing (CUDA)
Maple/Matlab
Latex, OpenOffice

Tutored student:

2017: Filip Samuelsson,
Master project.

Languages:

English: reading-good
writing-good
speaking-good
French: native tong
Italian: notions

Miscellaneous:

Hobbies: reading
cinema
I play the violin
Sports: footing
trekking

Current position: Mai 2017-present: Post-doctoral position with Prof. J. Greiner at the Max Planck Institute for extraterrestrial Physics (MPE), Garching, Germany

Previous position: 2015-Mai 2017: Post-doctoral position with Prof. Felix Ryde at the Royal Institute of Technology (KTH), Stockholm, Sweden

Education:

2011-2014: Erasmus Mundus PhD at the University of Roma la Sapienza (Italy): "The photospheric emission of gamma-ray-bursts". Advisors: Vereshchagin G. and Ruffini R.

2010-2011: Master degree in modelling and numerical simulation dedicated to physical problems at the university of Grenoble (France).

2008-2010: Master degree in astrophysics and low density medium at the university of Grenoble (France).

Awards:

- [1] Erasmus Mundus scholarship for the Ph.D.
- [2] 2016- Grant from Olle Engkvist foundation 600k SEK (~69k US)
- [3] 2016- Travel grant 20k SEK (~2k US)

Selected Publications:

- [1] Bégué, Pe'er and Lyubarsky, Radiative striped wind model for gamma-ray bursts, accepted by MNRAS.
- [2] Bégué and Burgess, The Anatomy of a Long Gamma-Ray Burst: A Simple Classification Scheme for the Emission Mechanism(s)., 2015, ApJ 820, 68.
- [3] Bégué and Pe'er, Poynting flux dominated jets challenged by their photospheric emission, 2015, ApJ 802, 134B.
- [4] Bégué, Siutsou and Vereshchagin, Monte Carlo Simulations of the Photospheric Emission in Gamma-Ray Bursts, 2013, ApJ, 767, 139.

Scientific interests:

Astrophysics: gamma-ray-bursts and physics of relativistic outflows: transparency and photospheric emission; thermalisation processes; magnetic reconnection, neutrinos production and transport.

Numerics: Monte-Carlo simulation of photons transport; solvers for relativistic hydrodynamics (Eulerian and SPH); solvers for homogeneous Boltzmann equation with photons and electron-positron pairs.

Teaching:

2016, teaching at KTH:

Undergraduate course SH2402: Astrophysics (Role: Assistant)

2010-2011:

Physical sciences in 3 classes at the high-school of Voiron (France).