Olivier Hervet

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https://www.olivierhervet.com/

Expertise:

- High energy astrophysics
- Multi-Wavelength modeling, interpretation, and phenomenology of jetted active galactic nuclei
- Data analysis of very-high-energy gamma rays, high-energy gamma rays, X-rays, and optical telescopes
- Simulations of Cherenkov telescopes performances
- Teaching of observational astronomy and scientific computing for undergrads

Career and Education

2021 – now	**Assistant Project Scientist** at the Santa Cruz Institute for Particle Physics (SCIPP) at University of California at Santa Cruz (UCSC), Santa Cruz (USA, CA)
2016 – 2021	**Postdoctoral Scholar** at the Santa Cruz Institute for Particle Physics (SCIPP) at University of California at Santa Cruz (UCSC), Santa Cruz (USA, CA)
2015 – 2016	**Research and teaching assistant**, Paris Observatory (France)
2015	**Ph.D.: "Active galactic nuclei in extreme gamma-rays: radio-gamma connections for the study of intermediate blazars"** LUTH, Paris Observatory (France), *very honorable mention*
2012	**M.Sc.** "Cosmos, Fields and Particles", Montpellier 2 University (France)
2010	**B.Sc.** "Physics and Applications", Orléans University (France)

Languages

Spoken:	**English**	**Fluent**
	German	Basic knowledge
	French	Native language

Programming: Bash, Python, C++, Root

Membership to Collaborations & Organizations

2019 – now	European Astronomical Society (EAS)
2019 – now	French Society of Astronomy & Astrophysics (SF2A)
2016 – now	VERITAS Collaboration
2012 – now	CTAO Consortium
2012 – 2018	H.E.S.S. Collaboration

Management & Responsibilities

Current

2024 – now	Co-chair of the VERITAS Time Allocation Committee
2021 – now	Member of the VERITAS Paper Publication Committee
2017 – now	Coordinator of simulations of US telescopes 'SCTs' for the commissioning of CTA
2016 – now	Paper referee for ApJ, internal referee for VERITAS and CTA

Past

2023	Panelist for the NASA *IXPE* Cycle 1 general observer program
2021 – 2023	Co-organizer of the weekly SCIPP seminars (UCSC)
2021 – 2022	Member of the VERITAS Time Allocation Committee
2018 – 2022	Co-chair of the VERITAS blazar group
2020	Panelist for the NASA *NuSTAR* Cycle 6 general observer program
2018	Panelist for the NASA *Swift* Cycle 15 guest investigator program
2014 – 2015	Organizer of the monthly LUTH Ph.D. meetings
2013 – 2014	Co-organizer of the weekly LUTH seminars (Paris Observatory)

Teaching & Supervising Experience

Current	Supervisor of one graduate student, and co-supervisor of two graduate students
2023-2024	**Lecturer of "Astrophysics Advanced Laboratory" (PHYS 135)**, UCSC undergrads, 2 quarters
2023	**Lecturer of "Introduction to Scientific Computing" (ASTR 119)**, UCSC undergrads, 1 quarter
2022-2023	**Lecturer of "Advanced Astronomy Laboratory" (ASTR 136)**, UCSC undergrads, 2 quarters
2015-2024	Supervisor of 12 high school students, 5 undergraduates, and co-supervisor of 4 graduates
2019,2024	Invited to teach at the Astroparticle Physics Summer School at Columbia, NY
2015–2016	**Research and teaching assistant** at the Paris Observatory (equivalent 96 h practical work)
2013–2015	**Graduate teaching assistant** at the Paris Observatory (equivalent 128 h practical work)

Astrophysical observations

2020 – now	5 nights of observations with the **Keck** (USA, Hawaii)
2016 – now	Multiple observational shifts with the **VERITAS array at F. L. Whipple Observatory** (USA, AZ), current total of 13 weeks on site
	∼Bi-monthly observing nights with the Shane telescope at **Lick Observatory** (USA, CA)
2015	Month of observation with the **H.E.S.S. array** (Namibia)
2012-2015	Regular observing nights with amateur and professional telescope for teaching at the **Paris Observatory** (France)
2011 , 2014	Observing nights as student and teacher at the **Haute-Provence Observatory** France)

Scientific proposals and grants

Contributed in the writing of three NSF grants (Particle Astrophysics program in the Physics Division) since 2017, **with a total of 1.94 M$ awarded.**
17 observation proposals accepted as principal investigator (PI), more than 50 submitted as PI or co-I. **Total of 231k$ awarded as scientific PI.** The considered instruments are H.E.S.S., VERITAS, *Fermi*-LAT, *Swift*, NuSTAR, XMM-Newton, Nicer, Lick-Shane, Keck, Effelsberg, VLBA, and the GMVA.

Selection of 5 successful proposals as PI with granted observations and funding:

- **NuSTAR GO Cycle 8**, 2022, *Defining the Spectral Transition Between Synchrotron and Inverse-Compton in Northern TeV Intermediate Blazars*, **260ks, $20,000**
- **Swift GI Cycle 17**, 2021, *Daily Monitoring of Mrk 421 for an Unprecedented Multi-Wavelength Variability Study*, **147ks, $44,000**
- **Fermi GI Cycle 13**, 2020, *Building the first Map and Anisotropy Spectrum of the EBL from Extragalactic Gamma-Ray Sources*, **$72,000**
- **NRAO 2020 (VLBA)**, *Probing Ultra-Fast Jet Motion After a Major X-Ray Flare in the BL Lac Mrk 421*, **60h**
- **Fermi GI Cycle 12**, 2019, *Probing the Location of the Gamma-Ray Emission Zones in the BL Lac Mrk 421: A Scenario of Recollimation Shocks*, **$57,000 + 16h with the VLBA**

Publication metrics and selection of 5 papers (chronological order)

- Total publication/refereed: 172/113, h-index: 36 (based on the ADS database: Link)
- Main author or major contributions (not including proceedings): **13**
- Conferences, colloquia and seminars (not including CTA, VERITAS, and HESS meetings): Invited: **13**, Contributor: **21**

1. **O. Hervet**, C. A. Johnson, and A. Youngquist. Bjet_mcmc: A new tool to automatically fit the broad-band spectral energy distributions of blazars. *ApJ*, 962(2):140, feb 2024. https://dx.doi.org/10.3847/1538-4357/ad09c0

2. **O. Hervet**, D. A. Williams, A. D. Falcone, and A. Kaur. Probing an X-Ray Flare Pattern in Mrk 421 Induced by Multiple Stationary Shocks: A Solution to the Bulk Lorentz Factor Crisis. *ApJ*, 877(1):26, May 2019. https://ui.adsabs.harvard.edu/abs/2019ApJ...877...26H

3. **O. Hervet**, Z. Meliani, A. Zech, C. Boisson, V. Cayatte, C. Sauty, and H. Sol. Shocks in relativistic transverse stratified jets. A new paradigm for radio-loud AGN. *A&A*, 606:A103, October 2017. http://adsabs.harvard.edu/abs/2017A%26A...606A.103H

4. **O. Hervet**, C. Boisson, and H. Sol. An innovative blazar classification based on radio jet kinematics. *A&A*, 592:A22, July 2016. http://adsabs.harvard.edu/abs/2016A%26A...592A..22H

5. **O. Hervet**, C. Boisson, and H. Sol. Linking radio and gamma-ray emission in Ap Librae. *A&A*, 578:A69, June 2015. http://adsabs.harvard.edu/abs/2015A%26A...578A..69H