

DANIEL GALÁN DIÉGUEZ

Curriculum Vitae

PERSONAL INFORMATION

Name: Daniel
Family Name: Galán Diéguez

Birth date: 1998/05/21
Gender: Male

CONTACT INFORMATION

Physical Properties and Evolution of Massive Stars group
Instituto de Astrofísica de Canarias (IAC)
C/ Vía Láctea, E-38205
Tenerife, Spain

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RESEARCH INTERESTS

Massive stars • Binary systems • Low-mass eclipsing binary systems • Multiple massive star systems • Observational support
• Software development for astronomical observations

PROFESSIONAL APPOINTMENTS

Universidad de La Laguna, Spain

4) Assistant professor

Nov 2023 - Current

Instituto de Astrofísica de Canarias, Spain

3) PhD research student

Nov 2023 - Current

2) Observer in the MuSCAT2 research team

Jan 2022 - Dec 2023

Universidad de La Laguna, Spain

1) Data analyst of bright gamma-rays AGNs images

Sep 2021 - Feb 2023

EDUCATION

3) Instituto de Astrofísica de Canarias (IAC), Spain

PhD in Astrophysics

Nov 2023 - Current

- Title: *Life channels and fate of the most massive stars*
- Funded by a “FPI” fellowship from the Agencia Estatal de Investigación, Gobierno de España
- Supervisors: A. Herrero Davó & S. Rodríguez Berlanas

2) Universidad de La Laguna (ULL), Spain

MSc in Astrophysics

Sep 2021 - Jul 2023

- MSc thesis: *Physical parameters of the low-mass eclipsing binary system ASAS J052919-1617.3*
- Supervisors: M.J. Arévalo Morales & R. Iglesias Marzoa
- Obtained the best possible mark for a thesis in Spain

1) Universidade de Santiago de Compostela (USC), Spain

BSc in Physics

Sep 2016 - Jun 2021

- BSc thesis: *Photometric observations of eclipsing binary star systems*
- Supervisors: J.P. Garzón Heydt & R. Iglesias Marzoa
- Obtained the best mark in a physics thesis at Universidade de Santiago de Compostela in 2021

HONORARIA AND PRIZES

5) Formación de Personal Investigador (FPI) fellowship

from the Agencia Estatal de Investigación, Gobierno de España

2023

4) Residente PhD fellowship

from the Instituto de Astrofísica de Canarias, Spain*

2023

3) Special distinction in the MSc thesis

MSc in Astrophysics at Universidad de La Laguna, Spain

2023

2) Special distinction in two MSc subjects

MSc in Astrophysics at Universidad de La Laguna, Spain

2021-2023

1) Best mark in a BSc physics thesis

BSc in Physics at Universidade de Santiago de Compostela, Spain

2021

* PhD fellowship waived in order to accept the FPI fellowship

SKILLS

Programming Skills

Linux shell scripting • Python • PyRAF • HTML • CSS

Massive stars related Programs

PHOEBE • FASTWIND • PypeIt • MGB

Observation related Programs

IRAF • PypeIt

Other Programs

Aladdin • Topcat

CONFERENCES ATTENDED & TALKS

2) XVI Reunión Científica de la SEA

Sociedad Española de Astronomía, Spain

Jul 2024

- Oral presentation: *Lack of fast rotators in Cygnus OB2: a new study from an observational approach*
- Poster contribution: *Unraveling post-binary evolutionary channels in Cygnus OB2 using WEAVE*
- Poster contribution: *A study on spectroscopy and photometry for the AM CVn candidate ASASSN-14mv*

1) COEFIS: Congreso de Estudiantes de Física

Universidad de La Laguna (ULL), Spain

Mar 2022

- Oral presentation: *Eclipsing binary systems: A fancy way to study stars*

SCHOOLS ATTENDED

5) Summer School in statistics for astronomers

Penn State's Center for Astrostatistics. The Pennsylvania State University, USA

2024

4) Stellar spectroscopy workshop

University of Tartu, Estonia

2023

3) Two in a Million - The interplay of binaries and star clusters European Southern Observatory (ESO), Germany	2023
2) ERASMUS+ School on Eclipsing Binaries and Asteroseismology Instituto de Astrofísica de Canarias, Spain	2022
1) Summer course: Visual and photographic astronomy course Universidade de A Coruña, Spain	2018

TELESCOPE TIME

IAC80 Telescope (IAC80)

6) PhD thesis "Life channels and fate of the most massive stars" (PI) • Photometry mode • 6 nights in visitor mode	2024B
5) BSc thesis supervisor "Physical parameters of the low-mass eclipsing binary system CRTSJ041918.8-071807" (PI) • Photometry mode • 6 nights in visitor mode	2024B
4) MSc thesis "Physical parameters of the low-mass eclipsing binary system ASAS J052919-1617.3" (PI) • Photometry mode • 10 nights in visitor mode	2022B
3) BSc thesis supervisor "Determination of the physical parameters of eclipsing binary star systems ASASSN-VJ050229.84-052203.4 and CRTSJ041918.8-071807" • Photometry mode • 9 nights in visitor mode	2022B - 2023A
1) BSc thesis "Photometric observations of eclipsing binary star systems: ASAS J052919-1617.3 & 2MASS J01074282+4845188" (PI) • Photometry mode • 9 nights in visitor mode	2020B - 2021A

Carlos Sánchez Telescope (TCS)

1) Research project <i>MuSCAT2 Project: validation of exoplanets</i> • Photometry mode • 40 nights in remote mode	2022A - 2023B
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Nordic Optical Telescope (NOT)

2) IACOB project: <i>A new era in the study of Galactic massive OB stars</i> • Spectroscopy mode • 1 night in visitor mode	2022B
1) MSc thesis "Physical parameters of the low-mass eclipsing binary system ASAS J052919-1617.3" (PI) • Spectroscopy mode • 8 nights in service mode	2022B

Isaac Newton Telescope (INT)

2) Phd thesis "*Life channels and fate of the most massive stars*" (PI) 2023B -2024A

- Spectroscopy mode
- 5 nights in service mode

1) MSc thesis "*Physical parameters of the low-mass eclipsing binary system ASAS J052919-1617.3*" (PI) 2022B

- Spectroscopy mode
- 3 nights in service mode

Mercator Telescope (MT)

1) IACOB project: *A new era in the study of Galactic massive OB stars* 2022B

- Spectroscopy mode
- 1 night in visitor mode

TEACHING

Universidad de La Laguna, Spain

- Courses that I did not coordinate:

Course	Year	ECTS credits	Lecture hours	ECTS credits awarded for teaching	Level
Basic observational techniques	2023-2024	6	30 out of 30	0	Master

SUPERVISION

Universidad de La Laguna, Spain

Bachelor thesis:

- "*Physical parameters of the low-mass eclipsing binary system CRTSJ041918.8-071807*" 2025
 - Author: Elena Ruiz Laguna
 - Supervisors: M.J. Arévalo Morales & D. Galán Diéguez
- "*Determination of the physical parameters of eclipsing binary star systems ASASSN-VJ050229.84-052203.4 and CRTSJ041918.8-071807*" 2023
 - Author: Gareb Enoc Fernández Rodríguez
 - Supervisors: M.J. Arévalo Morales & E. Pallé Bago & D. Galán Diéguez

COAUTHOR PUBLICATIONS

- [1] H. Kang et al. "Simultaneous multicolour transit photometry of hot Jupiters HAT-P-19b, HAT-P-51b, HAT-P-55b, and HAT-P-65b". In: *MNRAS* 528.2 (Feb. 2024), pp. 1930–1944. doi: [10.1093/mnras/stae072](https://doi.org/10.1093/mnras/stae072). arXiv: [2401.03715](https://arxiv.org/abs/2401.03715) [astro-ph.EP].
- [2] Masayuki Kuzuhara et al. "Gliese 12 b: A Temperate Earth-sized Planet at 12 pc Ideal for Atmospheric Transmission Spectroscopy". In: *The Astrophysical Journal Letters* 967.2 (May 2024), p. L21. doi: [10.3847/2041-8213/ad3642](https://doi.org/10.3847/2041-8213/ad3642). URL: <https://dx.doi.org/10.3847/2041-8213/ad3642>.
- [3] G. Morello et al. "TOI-1442 b and TOI-2445 b: Two potentially rocky ultra-short period planets around M dwarfs". In: *A&A* 673, A32 (May 2023), A32. doi: [10.1051/0004-6361/202243592](https://doi.org/10.1051/0004-6361/202243592). arXiv: [2201.13274](https://arxiv.org/abs/2201.13274) [astro-ph.EP].

- [4] C. M. Raiteri et al. “The optical behaviour of BL Lacertae at its maximum brightness levels: a blend of geometry and energetics”. In: MNRAS 522.1 (June 2023), pp. 102–116. doi: [10.1093/mnras/stad942](https://doi.org/10.1093/mnras/stad942). arXiv: [2302.10555](https://arxiv.org/abs/2302.10555) [[astro-ph.HE](#)].
- [5] E. Esparza-Borges et al. “A hot sub-Neptune in the desert and a temperate super-Earth around faint M dwarfs. Color validation of TOI-4479b and TOI-2081b”. In: A&A 666, A10 (Oct. 2022), A10. doi: [10.1051/0004-6361/202243731](https://doi.org/10.1051/0004-6361/202243731). arXiv: [2206.10643](https://arxiv.org/abs/2206.10643) [[astro-ph.EP](#)].
- [6] F. Murgas et al. “HD 20329b: An ultra-short-period planet around a solar-type star found by TESS”. In: A&A 668, A158 (Dec. 2022), A158. doi: [10.1051/0004-6361/202244459](https://doi.org/10.1051/0004-6361/202244459). arXiv: [2211.02547](https://arxiv.org/abs/2211.02547) [[astro-ph.EP](#)].

LANGUAGES

- **Mother tongues:** Spanish and Galician.
- **Fluent:** English.

MISCELLANEOUS

- Full clean driving license.