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Exploring the interactions of M dwarf winds and cosmic rays

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Publications

Amanda L. Mesquita, Donna Rodgers-Lee, Aline A. Vidotto, & Robert D. Kavanagh. *The strong suppression of Galactic cosmic rays reaching AU Mic b, c and Prox Cen b*

2022, MNRAS, 515, 1218–1227

Amanda L. Mesquita, Donna Rodgers-Lee, Aline A. Vidotto, Dimitra Atri, & Brian E. Wood. *Galactic cosmic ray propagation through M dwarf planetary systems.*

2022, MNRAS, 509, 2091–2101

Donna Rodgers-Lee, Aline A. Vidotto, & **Amanda L. Mesquita**. *Charting nearby stellar systems: the intensity of Galactic cosmic rays for a sample of solar-type stars.*

2021, MNRAS, 508, 4696–4704

Amanda L. Mesquita, Donna Rodgers-Lee, & Aline A. Vidotto. *The Earth-like Galactic cosmic ray intensity in the habitable zone of the M dwarf GJ 436.*

2021, MNRAS, 505, 1817–1826

Amanda L. Mesquita, & Aline A. Vidotto. *Global trends in winds of M dwarf stars.*

2020, MNRAS, 494, 1297–1307

PUBLICATIONS

Curriculum Vitae

I was born in Lavras, Minas Gerais, Brazil, on June 10, 1992. However, I grew and lived the majority of my life in a small countryside village called Ijaci, situated ~ 12 km away from Lavras.

As far as I remember, I liked maths and science. For this reason, I decided to study physics as my undergrad. My BSc was done mainly at *Universidade Federal de Lavras* with one year at *Universidad de Valladolid* as part of the government project “science without borders”. My BSc’s final year project was associated with the study of specific heat of crystalline solids supervised by Prof. Antônio Silva.

By the end of my BSc, I decided to start a Master’s. I receive a scholarship from *Instituto Nacional de Pesquisas Spaciais* for a two-year MCs program in space geophysics. This was when I had more contact with astrophysics and started to appreciate the subject more. During my MCs, I worked with solar coronal mass ejections observed by the LASCO instrument under the supervision of Prof. Alisson Dal Lago. My research focused on the prediction of coronal mass ejection’s arrival at Earth using an algorithm to track and calculate the kinematic properties of these ejections.

I had a good experience during my MCs and decided to do a PhD. Initially, I started a PhD at *Instituto Nacional de Pesquisas Spaciais* for almost a year to extend my Master’s project. I was then offered a scholarship to do a PhD abroad at Trinity College Dublin and decided it would be better for my career. During three of the four-year PhD program, my PhD was at Trinity College. However, for my last year, with my research group, I relocated to Leiden. Under the supervisor Dr. Aline Vidotto and Dr. Donna Rodgers-Lee, I worked with numerical simulations of stellar winds and cosmic rays. I focused on M dwarfs and the effects of Galactic cosmic rays within their environment.

CURRICULUM VITAE

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I would like to thank my supervisors, Donna and Aline, for their support and guidance during my academic life and everyone in our group, all the PhDs and postdocs.

To everyone in our office in Dublin, thanks for making my days a lot easier, for helping me improve my English (even when it was difficult to understand the Irish accent), and for the many board games we played together. Thanks to Marina and Thais for helping me during difficult moments in my life and also for giving me great input.

As an international student, I feel obliged to thank everyone in Dublin and in Leiden that helped me with visas, houses, and many other trivial things associated with moving to another country.

A special thanks to my partner, who have always supported me during difficult times in my academic life, and also for staying many nights awake while I was writing my thesis.