

Khaled Al Moulla

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Education

- 2020 – 2024 **PhD in Astrophysics**, University of Geneva, Switzerland
Thesis: Solar-Type Activity in Optical and Near-Infrared Radial Velocities
Supervisor: Prof. Xavier Dumusque
- 2018 – 2020 **MSc in Physics: Astronomy**, Uppsala University, Sweden
Thesis: Advanced Characterization of Exoplanet Host Stars
Supervisor: Prof. Nikolai Piskunov
- 2015 – 2018 **BSc in Physics: Astronomy**, Uppsala University, Sweden
Thesis: Turbulence at MHD and Sub-Ion Scales in the Magnetosheath of Saturn
Supervisor: Dr. Lina Hadid

Instrumentation

Consortia

- Since 2023 **Keck Planet Finder (KPF)**, Member of Science Team
- Since 2023 **Near-InfraRed Planet Searcher (NIRPS)**, Member of Science Team

Proposals

- 2022 **ESO P111 Proposal 111.252R**, Co-I, Telescope: VLT, Time: 33.3 h

Observations

- 2021 – 2022 **Swiss Euler 1.2m Telescope**, 42 nights

Teaching

Courses

- 2023 – 2024 **Astrophysics and Data Science**, Teaching Assistant
University of Geneva, Master's Level Course

Students

- 2023 – 2024 **Romain Eltschinger**, Co-Supervisor of Master's Thesis Project
Thesis: Synthetic Periodograms for the Bern Planetary Population Model
- 2023 **Fabrice Reymond**, Supervisor of Bachelor's Advanced Course Project
Project: Studying Solar Activity to Enhance Radial Velocity Exoplanet Detection

Service

- 2023 **JUnior Researchers' Assembly (JURA) IV**, Member of SOC/LOC
Participants: 47, Budget: CHF 32,000 \approx USD 35,000
- Since 2022 **DEI Group, Geneva Observatory**, Member of Committee

Scholarships

- 2020 **F. O. Törnlund Foundation**, SEK 26,000 \approx USD 3,000
2018 – 2019 **A. & A. Löfberg Foundation**, SEK 100,000 \approx USD 11,000

Presentations

- Talks 5 conferences, 3 science meetings, 1 invited seminar, 5 campus seminars.
Posters 2 conferences, 2 science meetings.

Conferences

- 2023 **EPRV 5**, Hilton Beachfront Resort, Santa Barbara, US
Formation Temperature-Dependent Stellar Activity RVs Across Spectral Types
Sun-as-a-Star Workshop, Flatiron Institute, New York City, US
Which Spectral Segments are Optimal for Radial Velocity Extraction?
PoET Workshop, CAUP, Porto, PT
Understanding the Physics of Stellar Activity at the Spectral Level
2022 **JURA III**, Hotel Meielisalp, Leissigen, CH
Stellar Activity Indicators with Solar Observations
GPRV Workshop, All Souls College, Oxford, UK
Radial Velocity Dependence on Line Formation Temperature

Science Meetings

- 2023 **NIRPS Science Team Meeting**, University of Montreal, Montreal, CA
HELIOS-NIRPS Initial Results
2022 **EPRV RCN Meeting**, Online
Stellar Signal Components seen in HARPS and HARPS-N Solar RVs
NCCR PlanetS Domain 2 Meeting, Online
Radial Velocity Dependence on Line Formation Temperature

Invited Seminars

- 2023 **Astrophysics Group**, Weizmann Institute of Science, Rehovot, IL
Introducing ARVE: Analyzing Radial Velocity Elements

Publications

A complete list is available on my [ADS Public Library](#).

First Author

- 2023 Al Moulla, K., Dumusque, X., & Cretignier, M. 2023, submitted to A&A
Stellar activity correlation with line formation temperature
Al Moulla, K., Dumusque, X., Figueira, P., et al. 2023, A&A, 669, A39
Stellar signal components seen in HARPS and HARPS-N solar radial velocities
2022 Al Moulla, K., Dumusque, X., Cretignier, M., et al. 2022, A&A, 664, A34
Dependence of stellar activity signal on line formation temperature

Coauthor

- 2023 Zhao, L. L., Dumusque, X., Ford, E. B., et al. 2023, AJ, 166, 173
Combining Solar Data from HARPS, HARPS-N, EXPRES, and NEID