Arthur S. Magalhães

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Personal Information

- Nationality: Brazilian
- Position: M.Sc. Student at Universidade de São Paulo

Education

M.Sc. **Universidade de São Paulo**, Astronomy — Mar. 2024 – Currently
- GPA: 4.0/4.0
- Thesis (in progress): *Characterization of the young stellar clusters Collinder 205 and Ruprecht 79*

B.Sc **Universidade de São Paulo**, Physics — Apr. 2021 – Dec. 2023
- GPA: 8.1/ 10.0
- Undergraduate Research: *Near-Infrared study of regions associated with young star clusters*

B.Sc **Universidade Federal de Minas Gerais**, Physics — Feb. 2019 – Feb. 2021 (transferred)
- Undergraduate Research: *Astrophysical parameters and evolution of star clusters*

International Experience

Exchange Semester

Uppsala University, Sweden — Jan. 2025 - Jun. 2025

- Theses: Testing webSME for abundance determination; Probing NGC 6397 for Atomic Diffusion using webSME (published on DiVA portal)
- Courses: *Nuclear Astrophysics; Astrophysical Tests of Physical Theories* (Passed with distinction)

Scholarships

CAPES — 2024-Ongoing
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior
Master of Sciences Scholarship

Erasmus+ KA107 — 2025-2025
International Credit Mobility Program
Full-time exchange studies

CNPq — 2022-2023
Conselho Nacional de Desenvolvimento Científico e Tecnológico
Undergraduate Research Scholarship

CNPq — 2020-2021
Conselho Nacional de Desenvolvimento Científico e Tecnológico
Undergraduate Research Scholarship

Publications

Conference Proceedings

Characterization of the young stellar cluster Collinder 205 with Spartan/SOAR 2025
A.S. Magalhães, J. Gregorio-Hetem
Boletim da Sociedade Astronômica Brasileira

Near-infrared study of regions associated with young star clusters 2024
A.S. Magalhães, J. Gregorio-Hetem
Boletim da Sociedade Astronômica Brasileira

Professional & Observing Activities

IAG - USP, *33°International Symposium on Scientific and Technological Initiation at USP* 2025
Poster evaluator

IAG - USP, *32°International Symposium on Scientific and Technological Initiation at USP* 2024
Poster evaluator

Observatório Pico dos Dias (OPD), *Multiple Observing runs* 2019-2024
1.6 m Perkin-Elmer Telescope and 0.6 m Boller & Chivens Telescope (photometry and polarimetry).

Participation in Events

Presenter

Talks

X IAG Science Day 2025
São Paulo - Brazil
Using webSME to study atomic diffusion in the globular cluster NGC6397

IX IAG Science Day 2024
São Paulo - Brazil
Characterization of the young stellar cluster Collinder 205 with Spartan/SOAR

VIII IAG Science Day 2023
São Paulo - Brazil
Astrophysical Parameters Determination for Young Star Clusters

Posters

11th meeting of the BRICS Astronomy Working Group 2025
São José dos Campos - Brazil
Probing atomic diffusion in the globular cluster NGC6397 using VLT/FLAMES-UVES data

XIX IAG/USP Advanced School on Astrophysics 2025
Bertioga - Brazil
Testing webSME for abundance determination & probing atomic diffusion in NGC 6397.

XLVII Annual Meeting of the Brazilian Astronomical Society 2024
Águas de Lindóia - Brazil
Characterization of the young stellar cluster Collinder 205 with Spartan/SOAR

31°International Symposium on Scientific and Technological Initiation at USP 2023
São Paulo - Brazil
Near-infrared study of regions associated with young star clusters

XLVI Annual Meeting of the Brazilian Astronomical Society 2023
Rio de Janeiro - Brazil
Near-infrared study of regions associated with young star clusters

XXIX Undergraduate Research Week at UFMG 2020
Belo Horizonte - Brazil
Study of the interstellar cloud TGUH1821 while searching for open clusters

Teaching Assistant

Instituto de Astronomia, Geofísica e Ciências Atmosféricas da USP 2024
AGA0414 - Methods in Observational Astrophysics I First Semester

Technologies

- **Programming Languages:** Python, R
- **Astronomical Data:** *Gaia*-DR3, AllWISE/NEOWISE, 2MASS
- **Tools:** Linux, LaTeX, git, webSME, Topcat, Aladin, DS9, StarFinder, `IRAF`

Outreach

Astronomia ao meio-dia
Outreach seminars (organizer)

Independent YouTube Content Creator
Science communication

Astrobites
Guest post

Astropontos
Regular author (The PT-BR equivalent of Astrobites)

Other Information

- **Time Proposals:**
  - SOAR Telescope (SAM - Adaptive Optics Module) — Co-author on a time proposal to observe two star clusters and four star-forming regions. (*Accepted*)
  - SOAR Telescope (Goodman - Multi Object Spectroscopy) — Co-author on a time proposal to obtain optical spectra of variable sources in the Collinder 205 open cluster and the CMa star-forming region. (*Accepted*)
  - T-80 South Telescope (S-PLUS filters) — Co-author on a time proposal for variability analysis of four star-forming regions. (*Accepted*)
  - OPD 1.6 m Perkin-Elmer Telescope (Coudé spectrograph) — Co-author on a time proposal to obtain optical spectra of variable sources in the Collinder 205 open cluster and other star-forming regions. (*Accepted*)
- **Languages:** Portuguese (Native), English (Proficient), Spanish (Basic), German (Basic)