

Camila Franco

PHD CANDIDATE · ASTRONOMY

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Education

Observatório Nacional

PHD ASTRONOMY

- Advisor: Dr. Armando Bernui

Rio de Janeiro, RJ, Brazil

08/2023 - present

Observatório Nacional

MS ASTRONOMY

- *Analysis of the Statistical Isotropy in the Distribution of Structures in the Local Universe*
- Advisor: Dr. Armando Bernui
- Co-advisor: Dr. Felipe Avila

Rio de Janeiro, RJ, Brazil

08/2021 - 08/2023

Instituto Federal de Educação, Ciência e Tecnologia Fluminense

PHYSICS

- *Introduction to the Casimir effect: origin, quantum vacuum and applications*
- Advisor: Dr. Alexandre Peixoto

Cabo Frio, RJ, Brazil

02/2017 - 08/2021

Publications

PUBLISHED

- C. Franco**, J. Oliveira, M. Lopes, F. Avila, A. Bernui. 2025. *Measuring the matter fluctuations in the Local Universe with the ALFALFA catalog*. Monthly Notices of the Royal Astronomical Society, 537, 2
- M. Lopes, A. Bernui, W. S. Hipólito-Ricaldi, **C. Franco**, F. Avila. 2024. *Dipolar fluence distribution of statistically isotropic FERMI gamma-ray bursts*. Astronomy & Astrophysics, 694, A77
- M. Lopes, A. Bernui, **C. Franco**, A. Bernui. 2024. *Bulk Flow Motion Detection in the Local Universe with Pantheon+ Type Ia Supernovae*. The Astrophysical Journal, 967, 47
- C. Franco**, F. Avila, A. Bernui. 2024. *Probing cosmic isotropy in the Local Universe*. Monthly Notices of the Royal Astronomical Society, 527, 3

SUBMITTED

- C. Franco**, F. Avila, A. Bernui. *Probing large-scale structures with the 2-point function and the power spectrum: insights into cosmic clustering evolution*
- U. Ribeiro, F. Avila, C. R. Bom, **C. Franco**, A. Cortesi, C. Mendes de Oliveira, A. Kanaan, T. Ribeiro, W. Schoenell, E. Telles, A. Bernui. *A cosmology weakly dependent measurement of 2D Baryon Acoustic Oscillations scale from the Southern Photometric Local Universe Survey*
- F. OLiveira, F. Avila, **C. Franco**, A. Bernui. *Is $\omega_0\omega_a$ CDM a good model for the clumpy Universe?*
- F. Avila, F. OLiveira, **C. Franco**, M. Lopes, R. Holanda, R. C. Nunes, A. Bernui. *Probing the Cosmic Distance Duality Relation via Non-Parametric Reconstruction for High Redshifts*

IN PREP

- C. Franco**, F. Avila, A. Bernui. *The homogeneity scale in the Local Universe: model-independent measurement from S-PLUS iDR5 blue galaxies*

Presentations

* *presenting author*

- C. Franco***, F. Avila, A. Bernui. Talk, 2024. *Investigating the Angular Scale of Homogeneity in the Local Universe Using S-PLUS*. 19th S-PLUS Collaboration Meeting, Rio de Janeiro, RJ, Brazil
- C. Franco***, F. Avila, A. Bernui. Talk, 2023. *Isotropy in the Local Universe and the Local Cosmic Void*. III Encontro de Primavera da Sociedade Brasileira de Física, Talk, Niterói, RJ, Brazil
- C. Franco***, F. Avila, A. Bernui. Poster, 2023. *Isotropy in the Local Universe and the Local Cosmic Void*. Giambiagi Winter School on Cosmology (ICTP), Buenos Aires, Argentina
- C. Franco***, F. Avila, A. Bernui. Talk, 2023. *O Mistério do Local Cosmic Void*. Astrocientistas II: Encontro Brasileiro de Meninas e Mulheres da Astrofísica, Gravitação e Cosmologia, Brazil

Supervision Experience

08/2023 - **Eduardo Rubim**, *Análise de aglomeração de estruturas no Universo Local usando a função de correlação de dois pontos (FC2P)*, BS Physics, Universidade do Estado do Rio de Janeiro

Rio de Janeiro, RJ, Brazil