

Manuel Pichardo Marcano

manuelpm.me

Texas Tech University

Department of Physics and Astronomy

Lubbock, TX 79409

Email: manuel.pichardo-marcano@ttu.edu

Pronouns: he/him/his

Education

- ▶ *PhD., Physics*
Texas Tech University, 2018-Present
- ▶ *Master of Science in Physics*
Texas Tech University, 2016-2018
- ▶ *Joint European Master Degree in Space Science & Technology*
Project topic: MUSE observations of the compact objects NGC 6397
M.S., Space and Science Technology, Luleå tekniska universitet (2014 - 2016)
M.S., Astrophysics, Université Paul Sabatier Toulouse III, Mention Assez Bien (2014 - 2016)
- ▶ *Bachelor of Science, Physics*
Utah State University, Cum Laude (2014)

Research Experience

- ▶ Spring 2016: *Research Project*, Research Institute in Astrophysics and Planetology (IRAP).
MUSE observations of the compact objects NGC 6397. <https://github.com/manuelmarcano22/MasterThesis>
- ▶ Summer 2015: *Summer Project*, Institute for Gravitational Research, University of Glasgow.
<https://github.com/manuelmarcano22/aLIGO-wxPython>
- ▶ 2013-2014: *Undergraduate Researcher*, Utah State University, Astrophysics Group.
<http://arxiv.org/abs/1311.3153>
- ▶ Summer 2013: *Undergraduate Researcher*, National Center for Atmospheric Research
<http://manuelpm.me/papers/posterhao.pdf>
- ▶ Summer 2012: *Undergraduate Researcher*, Stanford University, Geophysics Dep.
<http://manuelpm.me/papers/posterinsar.pdf>

Publications & Preprints

Papers

- ▶ S.W. McIntosh, W.J. Cramer, **M. Pichardo Marcano**, R.J. Leamon. *The detection of Rossby-like waves on the Sun*. Nature Astron. 1, 0086 (2017). doi:10.1038/s41550-017-0086
- ▶ *Limiting alternative theories of gravity using gravitational wave observations*
Jeffrey S. Hazboun, **Manuel Pichardo Marcano** and Shane L. Larson; preprint <http://arxiv.org/abs/1311.3153>

Talks and Posters

- ▶ *"Compact Binaries in the globular cluster NGC 6397"*
Talk. Texas APS Section. Lubbock, TX. 2019
- ▶ *"MUSE integral field unit observations of the compact objects in the globular cluster NGC 6397"*
Poster. Stellar Remnants at the Junction. Junction, TX. 2016
- ▶ *"Measuring Water Level Fluctuations of Two Connected Wetlands in the Dominican Republic Using InSAR"*
Poster. SHPE National Conference. Dallas, TX. 2012
- ▶ *"Measuring Water Level Fluctuations of Two Connected Wetlands in the Dominican Republic Using InSAR"* Talk. USU Physics Department Colloquium. 2012

Observing Time Awarded

- ▶ Multi Unit Spectroscopic Explorer (MUSE): *The Hydrogen Alpha Disk Emission from the Compact Binaries of the Globular Cluster NGC 6397* (Co-Investigator 1.5 h)

Teaching Experience

- ▶ Graduate Part-Time Instructor PHYS 1403/1404: Algebra-based, Inquiry-based, Laboratory-based Introductory Physics Curriculum. TTU, 2017-Present.
- ▶ Teaching Assistant PHYS 1401/2401: Principles of Physics I/II. Lead the laboratories and discussions for the calculus based introductory physics. TTU, 2016-2017.
- ▶ Undergraduate Teaching Fellow PHYS 2215: Physics for Scientists and Engineers Lab I - Utah State, Fall 2013.

Recognitions & Leadership Experiences

- ▶ Erasmus Mundus Scholarship: 2-year scholarship awarded by the European Commission
- ▶ Presidential Scholarship: Full 4-year scholarship awarded by the Dominican Government
- ▶ Member: *Sigma Pi Sigma*, The Physics Honor Society
- ▶ Lawrence R. and Abeline Megill Scholarship: *USU Physics Department*

Technical Skills

- | | |
|---|--|
| ▶ <i>Programming Languages</i> : Proficient in Python (Jupyter/iPython notebooks) and shell scripting (bash). | ▶ <i>Software</i> : IRAF/PyRAF, SAOImageDS9/JS9 |
| ▶ <i>Markup Languages</i> : \LaTeX , Markdown | ▶ <i>Version Control Systems</i> : Git |
| ▶ <i>Operating Systems</i> : GNU/Linux, OS X, Windows | ▶ <i>Virtualization and Cloud Services</i> : Docker (learning) |

Languages

- | | |
|------------------------------------|--|
| ▶ <i>Spanish</i> : Native Language | ▶ <i>French</i> : Intermediate knowledge |
| ▶ <i>English</i> : Fluent | |

Public Outreach

- ▶ *Past Author at Astrobitos*: URL: <https://astrobitos.org/author/manuelmarcano22/>
- ▶ *"A tour of the Milky Way/Un Tour por la Vía Lactea"*
Bilingual talk for Astronight event at TTU, Lubbock, TX. 2019
- ▶ *"Dimensionality Reduction applied to Large Spectroscopic Surveys"*
Emmy Noether High School Mathematics Day, Lubbock, TX. 2018
- ▶ *"Galactic Bulge Survey: Fuentes de Rayos X del Bulbo Galáctico"*
Santo Domingo, Dominican Republic. 2018
- ▶ *"Estudio de la población de objetos compactos en el cúmulo globular NGC 6397 con la unidad de campo integral MUSE"*
Santo Domingo, Dominican Republic. 2016