

# Manuel Pichardo Marcano

manuelpm.me  
15 avenue du Colonel Roche  
Logement 1204  
31400 Toulouse, France  
Phone: +33 6 51 93 96 65  
Email: manuelpichardom@gmail.com

## Education

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- *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 (2014 - 2016)
- *Bachelor of Science, Physics*  
Utah State University (2014)

## Research Experience

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- Spring 2016: *Research Project*, Research Institute in Astrophysics and Planetology (IRAP).  
Worked with Dr. Natalie Webb and Dr. Sebastien Guillot in a project studying the compact objects in the globular cliste NGC 6397 with data from the Multi Unit Spectroscopic Explorer (MUSE). <http://manuelmarcano22.github.io/papers/MUSEposter.pdf>
- Summer 2015: *Summer Project*, *Institute for Gravitational Research*, University of Glasgow.  
Worked with Dr. Martin Hendry in a project developing a graphical user interface for gravitational wave data analysis. <https://github.com/manuelmarcano22/aLIGO-wxPython>
- 2013-2014: *Undergraduate Researcher*, *Utah State University*, Astrophysics Group.  
Worked with Dr. Shane Larson and Dr. Jeff Hazboun in a project establishing a limit in the mass of the graviton using Pulsar Timing Arrays. <http://arxiv.org/abs/1311.3153>
- Summer 2013: *Undergraduate Researcher*, *National Center for Atmospheric Research*  
Worked with Dr. Scott McIntosh on project using observations of the Solar Dynamics Observatory (SDO) spacecraft (especially the Helioseismic and Magnetic Imager - SDO/HMI) to study the evolution of the photospheric magnetic field in the build up to the most powerful solar flares and CMEs of the current solar cycle.
- Summer 2012: *Undergraduate Researcher*, *Stanford University*, Geophysics Dep.  
Worked with Dr. Howard Zebker and Dr. Lin Liu on project to try to use the remote sensing technique called InSAR (Interferometric Synthetic Aperture Radar) to study the hydrodynamics of two interconnected lakes in the Dominican Republic.

## Publications & Preprints

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### *Papers*

- *Limiting alternative theories of gravity using gravitational wave observations*  
Jeffrey S. Hazboun, Manuel Pichardo Marcano and Shane L. Larson; preprint [arxiv/1311.3153](http://arxiv.org/abs/1311.3153)

## Talks and Posters

- ▶ *"MUSE integral field unit observations of the compact objects in the globular cluster NGC 6397"*  
Poster. Stellar Remnants at the Junction. Junction, TX. 2016
- ▶ *"Big Flare Hunting"*  
Poster. Summer Program in Solar and Space Physics. Boulder, CO. 2013
- ▶ *"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

## Teaching Experience

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- ▶ *Undergraduate Teaching Fellow*. PHYS 2215: Physics for Scientists and Engineers Lab I - Utah State, Fall 2013.

## Recognitions & Leadership Experiences

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- ▶ 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
- ▶ Vice-President: *Society of Hispanic Professional Engineers*. 2011-2012
- ▶ Outreach Coordinator: *Society of Hispanic Professional Engineers*. 2012-2013
- ▶ Lawrence R. and Abeline Megill Scholarship: *USU Physics Department*

## Technical Skills

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- ▶ *Programming Languages*: Proficient with Python. Good experience with shell (bash), Mathematica, and Matlab scripting
- ▶ *Markup Languages*:  $\text{\LaTeX}$ , Markdown
- ▶ *Operating Systems*: GNU/Linux, OS X, Windows
- ▶ *Software*: Version control (git) and IRAF/PyRAF

## Languages

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- ▶ *Spanish*: Native Language
- ▶ *English*: Fluent
- ▶ *French*: Intermediate knowledge

## Outreach

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- ▶ *Author at Astrobites*: Spanish sister site of Astrobites. Our goal is to present interesting research papers in astronomy in a brief format that is accessible to undergraduate students in the physical science. URL: <http://astrobites.org/>

## References

*Dr. Natalie Webb*

Researcher

Institut de Recherche en Astrophysique et Planétologie

9 Avenue de Colonel Roche

31028 Toulouse Cedex 4, France

PHONE: (+33) 5 61 55 75 70      eMAIL: Natalie.Webb@irap.omp.eu

*Dr. Martin Hendry*

Head of School

Professor of Gravitational Astrophysics and Cosmology

SUPA, School of Physics and Astronomy

University of Glasgow

Glasgow, G12 9RW

PHONE: (+44) 141 330 5685      eMAIL: Martin.Hendry@glasgow.ac.uk

*Dr. Shane Larson*

Research Associate Professor

Center for Interdisciplinary Exploration

and Research in Astrophysics

Northwestern University

Evanston, IL 60208

PHONE: (847) 467 4305      eMAIL: s.larson@northwestern.edu

*Dr. Scott W. McIntosh*

National Center for Atmospheric Research

High Altitude Observatory

3080 Center Green Drive - CG1

Boulder, CO 80301

PHONE: (303) 497 1544      eMAIL: mscott@ucar.edu

*Dr. David Peak*

Professor of Physics

Department of Physics

4415 Old Main Hill

Utah State University

Logan, UT 84322-4415

PHONE: (435) 797-2884      eMAIL: david.peak@usu.edu.