

# Arturo O. Martinez

ASTRONOMER

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## Education

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### Graduate Research Assistant

GEORGIA STATE UNIVERSITY

- Aiming for PhD in Astronomy to be awarded in 2021 (expected).

Atlanta, GA, USA

Fall 2016 – Present

### M.S. – Physics (with concentration in Astronomy)

GEORGIA STATE UNIVERSITY

Atlanta, GA, USA

Fall 2016 – Spring 2018

### Graduate Student

SAN DIEGO STATE UNIVERSITY

San Diego, CA, USA

Fall 2015 – Summer 2016

### B.S. – Astronomy (with Math Minor)

SAN DIEGO STATE UNIVERSITY

San Diego, CA, USA

Fall 2011 – Spring 2015

## Research Interests

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My current research interests lies in stellar astronomy in topics such as stellar evolution, calculating stellar parameters, and image reconstruction through optical interferometry. My current work involves studying the origin of rapid rotators and finding the precise ages of stars. Other current research interests include image restoration and combining astronomy with modern technology (using virtual reality).

## Research Experience

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### Graduate Research Assistant (Advisor: Prof. Fabien Baron)

DEPARTMENT OF PHYSICS AND ASTRONOMY, GEORGIA STATE UNIVERSITY

- My research with Prof. Baron consists of studying rapid rotators. I will be using the Center for High Angular Resolution Astronomy (CHARA) Array to do image reconstruction on these rapid rotators to study their origins, show any detection (or lack thereof) of sunspots, and compare observational data with theoretical codes.

Atlanta, GA, USA

October 2016 – Present

### Researcher (Advisor: Prof. Eric Sandquist)

DEPARTMENT OF ASTRONOMY, SAN DIEGO STATE UNIVERSITY

- My research with Prof. Sandquist involved eclipsing binary stars in order to derive a precise age in the star cluster M 37. I specifically looked at two eclipsing binaries in order to constrain their periods by producing light curves.

San Diego, CA, USA

January 2014 – August 2016

### Visiting Researcher (Advisor: Prof. Ian Crossfield)

STEWART OBSERVATORY, UNIVERSITY OF ARIZONA

- As part of the California-Arizona Minority Partnership for Astronomy Research and Education (CAMPARE), I worked under the guidance of Prof. Crossfield to find stellar and planetary parameters for various *K2* objects of interest. Although the CAMPARE program only lasted 10 weeks (from June 2015 - August 2015), I continued working with Prof. Crossfield and published a paper in *ApJ*.

Tucson, AZ, USA

June 2015 – August 2015

## Honors & Awards

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**Second Century Initiative University Doctoral Fellow**, August 2016 – Present

**Cal-Bridge Scholar**, October 2014 – July 2016

**Gordon and Doris Cox Scholarship**, May 2011

**California Scholarship Federation Member**, May 2011

Atlanta, GA, USA

San Diego, CA, USA

## Technical and Personal Skills

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**Programming** Fortran 90, Python, L<sup>A</sup>T<sub>E</sub>X, Julia

**Web** HTML, CSS

**Linguistics** English (native), Spanish (conversant)

**Observing** Photometry (with SDSU's 1-m telescope at Mount Laguna Observatory), Spectroscopy (using SOFI and EFOSC2 on the New Technology Telescope), Interferometry (using MIRC-X and CLIMB at the CHARA Array)

## Accepted Observing Proposals

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2018B	<b>CHARA Array</b> , Imaging Rapid Rotators with CHARA/MIRC-X	5 Nights
2018A	<b>CHARA Array</b> , Monitoring Spotty Stars with MIRCx	7 Nights
2018A	<b>CHARA Array</b> , Imaging Rapid Rotators with CHARA/MIRCx	7 Nights
2017B	<b>CHARA Array</b> , Imaging Rapid Rotators with CHARA/MIRC	4 Nights

## Presentations

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### American Astronomical Society Meeting

*Kissimmee, FL, USA*

POSTER PRESENTATION

*January 2016*

- Presented CAMPARE summer research: "Stellar and Planetary Parameters for K2's Late-type Dwarf Systems from C1 to C5"

### K2SciCon Meeting

*Santa Barbara, CA, USA*

POSTER PRESENTATION

*November 2015*

- Presented CAMPARE summer research: "Stellar and Planetary Parameters for K2's Late-type Dwarf Systems from C1 to C5"

### CAMPARE Symposium

*Pomona, CA, USA*

RESEARCH TALK

*September 12, 2015*

### Lunar and Planetary Laboratory Conference

*Tucson, AZ, USA*

RESEARCH TALK

*August 20, 2015*

- Presented CAMPARE summer research: "Stellar and Planetary Parameters for K2's Late-type Dwarf Systems from C1 to C5"

### Steward Observatory CAMPARE Presentations

*Tucson, AZ, USA*

RESEARCH TALK

*August 19, 2015*

## Teaching Experience

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### Georgia State University

*Atlanta, GA, USA*

TEACHING ASSISTANT - LAB INSTRUCTOR

*August 2016 - April 2018*

- As a TA at GSU, I have taught several labs. Topics for these labs include, but are not limited to the following: Phases of the Moon, Stellar Classification, and Galaxy Classification.

### San Diego Learning Center

*Chula Vista, CA, USA*

EDUCATOR

*October 2013 - March 2015*

- At the SDLC, my main job was to help students, anywhere from first grade to college freshman in Algebra 1, Geometry, Trigonometry, Calculus, Astronomy, and Physics.

## Mentoring

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### Cal-Bridge Mentor

AS GRADUATE MENTOR

*Since January 2018*

- Mentor current Cal-Bridge Scholars to assist them with the undergraduate to graduate school transitions.

## Outreach

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### Volunteer Activities for Total Solar Eclipse

RABUN GAP NACOOCHEE SCHOOL

- Assisted Rabun Gap County with total solar eclipse (e.g., maintaining telescope).

*Rabun Gap, GA, USA*

*August 21, 2017*

### Georgia Buddhist Summer Camp

HARD LABOR CREEK OBSERVATORY

- Gave a talk to the Georgia Buddhist Summer Camp group, which included many newcomers to astronomy (half of which were children). Also showed guests the observatory, telescopes, and celestial objects.

*Rutledge, GA, USA*

*June 9, 2017*

### Open House

HARD LABOR CREEK OBSERVATORY

- Gave a public showing of different telescopes and celestial objects through the telescopes on June 3rd, 2017.

*Rutledge, GA, USA*

*Summer 2017*

### Tutoring

CHULA VISTA HIGH SCHOOL

- Peer-tutoring in subjects ranging Algebra up to Calculus.

*Chula Vista, CA, USA*

*Fall 2010 – Spring 2011*

## Publications

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### First Author

#### [Stellar and Planetary Parameters for K2s Late-type Dwarf Systems from C1 to C5](#)

**Martinez, A. O.**, Crossfield, I. J. M., Schlieder, J. E., Dressing, C. D., Obermeier, C., Livingston, J., Ciceri, S., Peacock, S., Beichman, C. A., Lépine, S., Aller, K. M., Chance, Q. A., Petigura, E. A., Howard, A. W., Werner, M. W.,

*ApJ*, 837 p. 72, Mar. 2017.

### Contributing Author

#### [197 Candidates and 104 Validated Planets in K2s First Five Fields](#)

Crossfield, I. J. M., Ciardi, D. R., Petigura, E. A., Sinukoff, E., Schlieder, J. E., Howard, A. W., Beichman, C. A., Isaacson, H., Dressing, C. D., Christiansen, J. L., Fulton, B. J., Lépine, S., Weiss, L., Hirsch, L., Livingston, J., Baranec, C., Law, N. M., Riddle, R., Ziegler, C., Howell, S. B., Horch, E., Everett, M., Teske, J., **Martinez, A. O.**, Obermeier, C., Benneke, B., Scott, N., Deacon, N., Aller, K. M., Hansen, B. M. S., Mancini, L., Ciceri, S., Brahm, R., Jordán, A., Knutson, H. A., Henning, T., Bonafede, M., Liu, M. C., Crepp, J. R., Lothringer, J., Hinz, P., Bailey, V., Skemer, A., Defrere, D.,

*ApJS*, 226 p. 7, Sept. 2016.

#### [Kepler Eclipsing Binary Stars. VII. The Catalog of Eclipsing Binaries Found in the Entire Kepler Data Set](#)

Kirk, B., Conroy, K., Prša, A., Abdul-Masih, M., Kochoska, A., Matijević, G., Hambleton, K., Barclay, T., Bloemen, S., Boyajian, T., Doyle, L. R., Fulton, B. J., Hoekstra, A. J., Jek, K., Kane, S. R., Kostov, V., Latham, D., Mazeh, T., Orosz, J. A., Pepper, J., Quarles, B., Ragozzine, D., Shporer, A., Southworth, J., Stassun, K., Thompson, S. E., Welsh, W. F., Agol, E., Derekas, A., Devor, J., Fischer, D., Green, G., Gropp, J., Jacobs, T., Johnston, C., LaCourse, D. M., Saetre, K., Schwengeler, H., Toczyski, J., Werner, G., Garrett, M., Gore, J., **Martinez, A. O.**, Spitzer, I., Stevick, J., Thomadis, P. C., Vrijmoet, E. H., Yenawine, M., Batalha, N., Borucki, W.,

*AJ*, 151 p. 68, Mar. 2016.