Tyler Cohen

PO Box 3072
Socorro, NM 87801
(914) 299-8953
tyler.cohen@student.nmt.edu

EDUCATION	***Master of Science***, Physics	Expected May 2019
	Ph.D, Astrophysics	Expected May 2023
	New Mexico Inst. of Mining and Technology, Socorro, NM	
	Bachelor of Science, Physics & Astronomy	
	Stony Brook University, Stony Brook, NY	Received May 2016

RESEARCH INTERESTS

Main Field: Observational Astrophysics
Specific Interests: Pulsar-timing, Gravitational Waves, Cosmology, Fast Radio Transients, Gamma-Ray Bursts, Inter-Stellar Medium

EXPERIENCE

Physics Research Assistant, New Mexico Inst. of Mining and Technology
Advisor: Paul Demorest   Aug. 2018 - Present

- Population synthesis and maximum-likelihood analysis of millisecond-period pulsar populations
- Analysis of high-time resolution pulse arrival time data

Tour Guide, National Radio Astronomy Observatory, Socorro, NM
Supervisors: Judy Stanley, Jessica Harris   Jan. 2018 - Present

- Conducting guided tours of up to 90 visitors at the Very Large Array
- Organized and coordinated Very Large Array Open House for 800 visitors
- Assisting in creating, organizing and conducting astronomy/science outreach programs for visitors to the Very Large Array

Physics Teaching Assistant, New Mexico Inst. of Mining and Technology
Supervisor: Carlos Lopez-Carrillo   Aug. 2017 - May 2017

- Working problem sets with 25-student sections for General Physics I and II.
- Instructor of 16-student sections for General Physics Laboratory II

Dunlap Inst. Instrumentation Summer School, University of Toronto
Program Director: Bryan Gaensler   July 23-28, 2017

- Attended lectures and hands-on laboratory activities in development of optics, spectrographs and detectors for astronomy

Research Intern, Gemini North Observatory   Oct. 2016 - Feb. 2017
Advisors: Inger Jørgensen and Kristin Chiboucas

- Data reduction and statistical analysis of HST photometric data in Python and IRAF to determine properties of galaxy cluster

Undergraduate Research Assistant, Stony Brook University   2014 - 2016
Advisor: Frederick Walter

- Applied methods of statistical regression analysis in IDL to model highly-sampled photometry curves
- Presented results at undergraduate research symposium

REU Research Assistant, Arecibo Observatory   Summer 2015
Advisors: Chris Salter and Tapasi Ghosh

- Wrote data-processing pipeline in IDL to probe over 1800 hours of observations in the form of 4D data structures for astronomical signals
- Tested/debugged pipeline in FORTRAN to distinguish astronomical signals from interference via fast Fourier transform and statistical analysis
- Presented results at 227th AAS meeting (poster) and department colloqium

COMPUTER SKILLS

Languages: Python, R, IRAF, IDL, FORTRAN, C++, LaTeX
Software: Gnuplot, SAOImage DS9
Operating Systems: Linux, Apple OS X, Microsoft Windows

ABSTRACTS

2. *A Search for Fast Radio Bursts in GALFACTS data.* T. Cohen, T. Ghosh, C.J. Salter. BAAS, 241.23, 2015

1. *Predicting the Performance of Future Pulsar Timing Arrays.* T. Cohen, P. Demorest, K. Stovall. BAAS, ???, 2019

INVITED TALKS

An Analysis of the Millisecond Pulsar Population. NANOGrav Science Meeting, Green Bank Observatory, Green Bank, WV. October 17, 2018.

Predicting the Performance of Future Pulsar Timing Arrays. NRAO Summer Student Colloquium, National Radio Astronomy Observatory, Socorro, NM. August 8, 2018.

Predicting the Performance of Future Pulsar Timing Arrays. Physics Colloquium, New Mexico Inst. of Mining and Technology, December 7, 2017.

A search for Fast Radio Bursts in GALFACTS data. Astronomy and Astrophysics Seminar, Stony Brook University, October 7, 2015.

Searching for Fast Radio Bursts in GALFACTS data. REU Colloquium, National Astronomy and Ionosphere Center, Arecibo, Puerto Rico, August 7, 2015.

LEADERSHIP —&— AFFILIATIONS

President, Stony Brook University Astronomy Club   Fall 2015 - Spring 2016

- Organized outreach events for greater Long Island community
- Advised underclassmen on undergraduate and post-graduate career
- Operated and maintained Stony Brook University's observatory including telescopes, CDDs, and spectrographs
- Taught basic telescope operation, maintenance and photometry

Vice President, Stony Brook University Astronomy Club   Fall 2014 - Spring 2015
Secretary, Stony Brook University Astronomy Club   Fall 2013 - Spring 2014

	American Astronomical Society Junior Member	November 2015 - Present
	Westchester Amateur Astronomers	2009 - 2017
COMMUNITY SERVICE	Midnight Run	2008-2016
	Feeding and clothing the homeless of New York City	
	Global Family Philanthropy	2010-2014
	Fund-raised for impoverished Haitian orphans	
AWARDS & RECOGNITION	Thomas Jefferson Award for scientific outreach	Spring 2016
	Stony Brook Presidential Scholarship	2012 - 2016
	Dean's List	Fall 2012, 2013, 2014