

# *Curriculum Vita* **Sebastian Cole**

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Location: Phoenix, AZ

Email: sebastian.m.cole@gmail.com

Phone: (602) 318-2603

## **Education**

- Arizona State University Bachelor of Science Physics: Graduated *cum laude* Spring 2015
- Arizona State University Physics Graduate Program: Graduated August 2021  
Dissertation: *Partial Wave Analysis of Meson Resonances That Decay  $K^*\bar{K}$  Using Data from the GlueX Experiment*

## **Research**

- Biophysics ASU: Daniel Martin (Ph.D.) Individual Instruction Summer/Fall 2012  
– CLAS Funded Research Summer 2014
- Arizona State University's Meson Physics Group: May 2015 - August 2021
- Jefferson Lab's GlueX collaboration: May 2015 - Present  
– Research Assistant: August 2017 - August 2021

## **Grants and Awards**

- Bold Leader Award: Awarded to top Cadet of Company at LTC July 12, 2010
- Wally Stoezl Scholarship: Awarded April 30, 2014
- CLAS Funding: Awarded May, 2014
- Wally Stoezl Scholarship: Awarded April 18, 2017
- CLAS Student Leader: Awarded November 2, 2018
- CLAS Student Leader: Awarded November 20, 2020
- CISA Outstanding Graduate Student: Awarded December 2, 2020

## **Professional Development**

- Army ROTC: Fall 2009 - Fall 2010
- Leadership Training Course (LTC): Summer 2010
- Matlab: 12 years

- Unix shell (Bash): 11 years
- C++: 10 years
- Python: 9.5 years
- GlueX software: 5.5 years
- CERN's ROOT: 5.5 years
- Research at Jefferson Lab with GlueX collaboration Newport News, VA: Fall 2017 - Fall 2018

### **Teaching experience**

- ASU Physics 132 Lab: Fall 2011 (two sections)
- ASU Physical Science 110 Lab: Fall 2011
- ASU Physical Science 110 Lab: Spring 2012
- ASU Physics 111 Recitation: Spring 2012
- ASU Physics 241 Recitation: Spring 2012
- ASU Physics 121 Recitation: Summer 2012
- ASU Physics 113 Lab: Summer 2012
- ASU Physics 150: Fall 2013
- ASU Physics 122 Lab: Spring 2013
- ASU Physics 131 Recitation: Spring 2013
- ASU Physics 132 Lab: Spring 2013
- ASU Physics 121 Recitation: Fall 2013 (three sections)
- ASU Physics 131 Recitation: Fall 2013
- ASU Physics 113 Lab: Spring 2014 (three sections)
- ASU Physics 121 Recitation: Summer 2014
- ASU Physics 112 Recitation: Summer 2014
- ASU Physics 121 Recitation: Fall 2014 (two sections)
- ASU Physics 131 Recitation: Fall 2014 (three sections)
- ASU Physics 121 Recitation: Spring 2015 (five sections)
- ASU Physics 121 Recitation: Fall 2015 (five sections)
- ASU Physics 121 Recitation: Spring 2016 (three sections)

- ASU Physics 112 Recitation: Fall 2016 (two sections)
- ASU Physics 121 Recitation: Fall 2016 (two sections)
- ASU Physics 121 Recitation: Spring 2017 (four sections)
- ASU Physics 121 Recitation: Summer 2017
- ASU Physics 132 Lab: Summer 2017
- ASU Physics 310: Fall 2018 (in class section)
- ASU Physics 311: Fall 2018 (hybrid section)
- ASU Physics 311: Spring 2019 (in class and hybrid sections)
- ASU Physics 113 Lab: Summer 2019 (online)
- ASU Physics 150: Fall 2019
- ASU Physics 121: Fall 2020

## Presentations

1. **“Analysis of  $K^*K$  states photoproduced from the proton”**  
American Physics Society Division of Nuclear Physics conference: October 16, 2019
2. **“ $K^{*\pm}(892)K^\mp$  in GlueX”** CISA poster session: December 12, 2020
3. **“Evaluation of Machine Learning Methods on Simulated Track to Improve  $K\pi$  identification in GlueX”** CISA poster session: May, 2020

## Publications

1. **“First measurement of near-threshold  $J/\psi$  exclusive photoproduction off the proton”**, A. Ali *et al.* (The GlueX Collaboration), Phys. Rev. Lett. **123**, 072001 (2019)
2. **“Beam Asymmetry  $\Sigma$  for the Photoproduction of  $\eta$  and  $\eta'$  Mesons at  $E_\gamma = 8.8$  GeV”**, S. Adhikari *et al.* (The GlueX Collaboration), Phys. Rev. C **100**, 052201(R) (2019)
3. **“Measurement of beam asymmetry for  $\pi^-\Delta^{++}$  photoproduction on the proton at  $E_\gamma = 8.5$  GeV”**, S. Adhikari, *et al.* (The GlueX Collaboration), Submitted to Phys. Rev. C (2020)
4. **“Measurement of the Beam Asymmetry in  $\gamma p \rightarrow K^+\Sigma^0$  at  $E_\gamma = 8.5$  GeV”**, S. Adhikari, *et al.* (The GlueX Collaboration), Phys. Rev. C **101**, 065206 (2020)
5. **“The GlueX Beamline and Detector”**, S. Adhikari *et al.* (The GlueX Collaboration), Nucl. Instrum. & Meth. A **987**, 164807 (2021)