**Samaiyah I. Farid,**

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**Education**

PhD Physics Vanderbilt University 2014-Present

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| M.S. Physics | Alabama A&M University | 2007 |
| B.S. Physics and Mathematics | Alabama A&M University | 2004 |

# Research Experience

# Pre-doctoral Fellow Harvard-Smithsonian Center for Astrophysics, 2017-Present

# Thesis Title: Investigating Acceleration Mechanisms of Coronal Jets Using Solar Dynamics Observatory (SDO), Hinode X-ray Telescope (XRT), and the Interface Region Imaging Spectrograph (IRIS)

Current research expertise in solar coronal heating.

* Develop automatic detection and tracking software to analyze coronal bright points, loops, jets, and coronal holes. Perform data analysis using Interactive Data Language (IDL).
* Develop and run scripts using C, and IDL for data analysis involving Differential Emission Measures, correlation and statistical analysis techniques.
* Report findings at national meetings and/or peer-reviewed journals.

Hinode-XRT Chief Operator

* Develop daily observing schedule and perform data verification as Chief Operator for Hinode/X-ray Telescope (XRT).
* Established and maintained XRT satellite operations site at NASA-MSFC. Duties include data verification software, troubleshooting.

**Research Scientist II,** University of Alabama-Huntsville, 8/2011-9/2017

Coordinator, Heliophysics Summer Research Experience for Undergraduates (REU)

* + Design and Manage REU website, application process and evaluate applicants for admission
  + Organize housing and board arrangements
  + Lead diversity recruitment efforts
  + Report Annual Summary to National funding agency and present summary at national conferences American Geophysical Union Fall Meeting (2012-2014)

Hinode-XRT Chief Operator

* Develop daily observing schedule and perform data verification as Chief Operator for Hinode/X-ray Telescope (XRT).

Solar physics research

* Conduct physics research
* Write and submit proposals to National Funding Agencies

**Support Scientist**, Harvard-Smithsonian Center for Astrophysics, 5/2007-01/2012

* + Perform coronal data analysis using Interactive Data Language (IDL)
  + Assist with calibration, scripting and testing software used for XRT and AIA data analysis XRT and Solar Dynamics Observatory’s Atmospheric Imaging Assembly (AIA) mission support team
  + Provide support for other operators.
  + Create and present educational outreach presentations to local middle schools.

Hinode-XRT Chief Operator

* Develop daily observing schedule and perform data verification as Chief Operator for Hinode/X-ray Telescope (XRT).
* Travel to Japan & China to collaborate with international colleagues and perform CO duties.

**Graduate Research and Teaching Assistant,** Alabama A&M University, 1/2004 – 5/2007

Thesis Title: Observation and Modeling of Polar Plumes Observed during the March 29, 2006 Total Solar Eclipse

Introduction to Physics Teaching Assistant

* Taught introductory laboratory courses for first and second year students.
* Responsible for instruction, grading, and assisting in accompanying courses.

**Undergraduate Research Experiences**

Columbia University/National Science Foundation, Science Ambassador 5/2005-8/2005

Alabama A&M University, 1/2000 - 5/2004

Lawrence Livermore Laboratory, 8/2002-9/2002, 5/2003-8/2003

Lawrence Berkeley Laboratory, 5/2002- 8/2002

Virginia Polytechnic Institute and State University, 5/2001-8/2001

**Leadership Experience**

* National Center for Atmospheric Research Education and Outreach Strategy, Advisory Board Member, 2017- present
* Committee on the Status of Minorities in Astronomy, American Astronomical Society, Graduate Committee, 2018
* Administrator and Coordinator, UAHuntsville-NASA Heliophysics Research Experience in Undergraduate Research Program, 2013 –2016
* National Society of Black Physicists, Secretary, 2016
* Science Ambassador, National Society of Black Physicists, 2006– 2012
* Co-advisor for Undergraduate Summer Research Students 2006, 2013-2016
* 2006 Co-advisor for High School Summer Student whose work resulted in National Prize 2005

**Computer Skills**

* + Proficient in Interactive Data Language (IDL)
  + Proficient in Microsoft Office (Word, Excel, PowerPoint)
  + Proficient in Latex, C++, Unix Environment
  + Some Experience in MATLAB, Python

**Honors and Affiliations**

* + Honored for role in outreach program at High Schools as part of Science Ambassador Team, National Society of Black Physicists, 2008-2010
  + Graduated Cum Laude: 2004
  + Society of Physics Students, AAMU chapter: President 2003, Vice President 2002.
  + Graduate Student Council: Secretary 2006-2007
  + Dean’s List 2003-2004
  + American Astronomical Society: Solar Physics Division, 2005-present
  + American Geophysical Union: 2005-present

**Selected Refereed Journal Publications and Conference Presentations**

*A Novel Approach to Investigating Acceleration Mechanism in Solar Coronal Jets*, **S.Farid**, K.Reeves, A. Savcheva, N.Soto, American Astronomical Society, Oral Presentation, 01/2019

*Magnetic Reconnection Null Points as the Origin of Semirelativistic Electron Beams in a Solar Jet*, Chen, Bin,Yu, Sijie, Battaglia, Marina, **Farid, S.**, Savcheva, Antonia, Reeves, Katharine K.,Krucker, Säm; Bastian, T. S., Guo, Fan, Tassev, Svetlin, Astrophysical Journal, 10/2018

*Evidence of Chromopsheric Evaporation as An Accelerator of Coronal Jets*, **Farid, S.**, Reeves, Kathy,Savcheva, Antonia, Soto, Natalia, Poster Presentation, HINODE-12 Science Meeting, 09/2018

*Evidence of Chromospheric Evaporation in Coronal Jets?,* **Farid,S.**, Reeves, Kathy,Savcheva, Antonia, Soto, Natalia, Poster Presentation, SHINE Meeting, 06/2018

*Coronal Jet Plasma Properties and Acceleration Mechanisms*, **Farid,Samaiyah**, Reeves, Kathy,Savcheva, Antonia, Soto, Natalia, Oral Presentation, SPD , 08/2017

*Analysis of Active Region Loop Cooling Times-Revisited****,* S.Farid,** A.Winebarger, K.Stassun, Solar Heliospheric and INterplanetary Environment(SHINE) Annual Meeting, 7/2016.

*Exploration and Parameter Study of Active Region Luminosity*, Lenon, A.; **Farid, S.;** Winebarger, A. R.; Falconer, D. A., Poster presentation, AGU 2015

*UAHuntsville-NASA MSFC Heliophysics REU: A Model for Recruiting Targeted Groups* **Farid, S**.; Heerikhuisen, J.; Winebarger, A. R. Oral Presentation, American Geophysical Union, December 2014

*Statistical Properties of Jets in the SDO Era*: **Farid, S**., Savcheva,A. Poster Presented American Astronomical Society, AAS Meeting #224, #323.37 June 2014

*University of Alabama in Huntsville and NASA MSFC Heliophysics NSF REU Site: Year One Strategy and Results* **Farid, S**.,Heerikesen, J. Winebarger,A. Poster Presentation American Geophysical Union, December 2012

*Inter-calibration Of EIS, Xrt And Aia Using Active Region And Bright Point Data* Mulu, Fana; Winebarger, A.; Cirtain, J.; **Farid, S**., Poster Presented American Geophysical Union, December 2012

*Computer Vision for SDO: First Results from the SDO Feature Finding Algorithms* Attrill, A.R Davey, **S.Farid**, P.C Grigis, J.Kasper, K.Korreck, S.H.Saar, Y.Su, A.Savcheva, P.Testa, M.Wills-Davey, P.N.Bernasconi, M.K.Georgoulis, V.A.Delouille, J.F.Hochedez, J.W.Cirtian, C.E.DeForest, R.A.Angry, I.De Moortel,T.Wiegelmann, Solar Physics, Volume 275, Issue 1-2, pp. 79-113 ,01/2012

*Examining the Effect of Local Magnetic Field on Coronal Bright Point Heating and Evolution*, **Farid, S**.; Saar, S.; Govindan, R.; Deluca, E.,ASP Conference Series, Vol. 415, 2009, p.15 12/2009

*Thermal And Statistical Properties of X-ray Bright Points*, Saar, S.; **Farid, S**.; Deluca, E.,AIP Conference Proceedings, Vol. 1094, pp. 756-759 3/2009.

*Observation and Modeling of Polar Plumes Observed during the March 29, 2006 Total Solar Eclipse*, **Farid, S. I**.; Oluseyi, H. M.; Sterling, S.; Tan, A.; Williamson, J. L.; Winebarger, A. R. 2007 AIP Conference Proceedings, Vol. 991,03/2008

*Differential Emission Measure of Xray Bright Points Observed Using Hinode’s Xray Telescope (XRT***) S.Farid**,S.Saar.E.Deluca,L.Golub,S.Saar,M.Weber Presented: American Geophysical Union. December 2007

*Characterization and deployment of large-format fully depleted back-illuminated*

*p-channel CCDs for precision astronomy*, Sensors, Systems, and Next-Generation Satellites VIII. Oluseyi,H, **Farid.S** Proceedings of the SPIE, Vol. 5570, pp. 515-524. 11/2004