

## Michael S. Freed

Email: [micfreed@gmail.com](mailto:micfreed@gmail.com)

Website: <http://solar.physics.montana.edu/mfreed/>

### Education:

August 2012 – Present

-A Ph.D. Candidate in Physics at *Montana State University*

August 2009-May 2012

-Attended *Montana State University* and earned a Masters of Physics degree

August 2004 – May 2009

-Attended *Northern Arizona University* and earned a BS in Physics & Astronomy with a minor in Mathematics

May 1997 - December 2003

-Attended *Thomas Nelson Community College* and earned an Associates degree in Mechanical Technology

January 1997 - May 2002

- Graduated with honors at *Northrop Grumman Apprentice School*

-Finished extensive classes in Marine Design, which included Strength of Materials, Naval Architect, Statics, DC/AC, Electrical Motors, Electronics, and Digital theory.

### Work Experience:

January 2014 – Present

-Hinode (X-ray Telescope) XRT Chief Observer and conducting research under a NASA Living With a Star grant

June 2013 – December 2013

-Conducted solar research under a Montana State Grant Consortium (MSGC) fellowship

May 2013 – June 2013

-Lectured for PHSX 205 *College Physics I*

August 2008-May 2013

-Taught introductory Physics and Astronomy labs, Co-taught PHSX 201 *Physics by Inquiry*

May 2012 – May 2013

-Managed NASA sponsored Space Public Outreach Team (SPOT)

June 2012 – August 2012

-Lectured for PHSX 207 *College Physics II*

January 2007 – May 2008

-Supplemental Instructor for first and second semester calculus-based Physics at NAU

June 2007 - August 2007

-Researcher, National Radio Astronomy Observatory, National Science Foundation REU program

August 2005 - December 2006

-On-line, in-hall and by appointment tutor for NAU North Learning Assistance Center

May 2006 - August 2006

-Researcher, Baylor University, National Science Foundation REU program

January 2005 - January 2006

-Served with AmeriCorps; Tutored GED material for NACA (Native American Community Action) Adult Education

January 1997 - July 2004

- Electrical/Marine Design apprentice at Northrop Grumman Newport News
- (August 1999 - July 2004) Marine Designer with design experience on Auto-Cad and Cadam
- (December 1997 till August 1999) Welding Technician on various welding equipment including Carbon-Arcs, MIG, TIG, and flux core machines.
- (January 1997 - November 1997) Welder with experience on MIG, stick welding, flux core, TIG and Pulse Arc

#### **Awards:**

- Raytheon Scholarship in 2006
- Montana Space Grant Consortium (MSGC) fellowship in 2013

#### **Publications:**

- Michael Freed, Dana Longcope, and David McKenzie, "Three-Year Global Survey of Coronal Null Points from Potential-Field-Source-Surface (PFSS) Modeling and Solar Dynamics Observatory (SDO) Observations", 2014, *Solar Physics*, (Accepted Oct. 16, 2014)
- Lorin S. Matthews, Ryan Hayes, Michael Freed, and Truell W. Hyde, "Formation of Cosmic Dust Bunnies", 2007, *IEEE Transactions on Plasma Science*, 35, 260.

#### **Oral Presentations:**

- McKenzie, D. and Freed, M. "Spectral Analysis of Velocities in Quiescent Prominences Observations with Hinode", 2015, Abstract in *Triennial Earth-Sun Summit Meeting*
- Freed, M., and McKenzie, D. "Characterizing Turbulent Flow in Quiescent Prominences", 2014, Abstract in *American Geophysics Union Fall Meeting*
- Freed, M., Verbiscer, A., Sicardy, B., French, R.G., and Hock, R. "Near-infrared Observations of Saturn's Satellites at True Opposition", 2007, Abstract in *American Physical Society Four Corners*.

#### **Poster Presentations:**

- Freed, M., and McKenzie, D. "Characterizing Turbulent Flow in Quiescent Prominences", 2014, Abstract in *LWS Science Meeting* proceedings
- Freed, M., Longcope, D., and McKenzie, D. "Findings from a Three Year Survey of Coronal Null Points", 2014, Abstract in the 224<sup>th</sup> meeting of *AAS* proceedings
- Freed, M., McKenzie, D., and Longcope, D. "Survey of Coronal Null Points with SDO/AIA & WSO", 2013, Abstract in the 44<sup>th</sup> meeting of *AAS-Solar Physics Division* proceedings
- Freed, M., Lowder, S., and McKenzie, D. "Success of Solar Dynamics Observatory (SDO) Education & Public Outreach (E/PO) in Montana", 2013, Abstract in *LWS/SDO-7 Science Workshop* proceedings
- Freed, M., Verbiscer, A., Sicardy, B., French, R.G., and Hock, R. "Near-infrared Observations of Saturn's Satellites at True Opposition", 2007, Abstract in *Bulletin of the American Astronomical Society*, 39, 493.