

Curriculum vitae

of

Maria D Kazachenko
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Date and place of birth: 05 Dec, 1982, Saint-Petersburg, Russia

Education

2000 – 2005 *Saint-Petersburg State University*, Faculty of Mathematics and Mechanics, Department of Astrophysics. Graduated in 2005 with diploma cum laude. MS in Astrophysics (GPA 4.85 out of 5). Diploma's title: *Heating of the solar corona by emerging active regions*.

2005 – 2007 *Montana State University*. MS in Physics.

2007 – 2010 *Montana State University*. *PhD in Physics (GPA 3.78 out of 4)*.

Scientific interests

- Topology of magnetic fields in solar corona.
- Sigmoids as precursors of coronal mass ejections.
- The Sun-Earth Connection: Flares vs. Magnetic clouds

Refereed Publications

1. *Kazachenko, M.*; Canfield, R.; Longcope, D.; Qiu, J.; Predictions of energy and helicity in four major eruptive solar flares, *SolPhys*, 2011, in preparation.
2. Qiu, J.; Liu, W.; Hill, N.; *Kazachenko, M.* Reconnection and Energetics in Two-ribbon Flares: a Revisit of the Bastille-Day Flare, *ApJ*, accepted, 2010.
3. *Kazachenko, M.*; Canfield, R.; Longcope, D.; Qiu, J.; Flare Energetics, and Flux Rope Helicity: Halloween flare on 2003 October 28, *ApJ*, 2010.
4. *Kazachenko, M.*; Canfield, R.; Longcope, D.; Qiu, J.; DesJardins, A.; Nightingale, R.; Sunspot Rotation, Flare Energetics and Flux Rope Helicity: The Eruptive Flare on 2005 May 13, *ApJ*, 2009.
5. Canfield, Richard C.; *Kazachenko, M.*; Acton, Loren W.; Mackay, Duncan. H.; Son, Ji; Freeman, Tanya L.: Yohkoh SXT Full-Resolution Observations of Sigmoids: Structure, Formation, and Eruption, *ApJ*, 2007.
6. Pevtsov Alexei A.; *Kazachenko, M.*: On the Role of the Large-Scale Magnetic Reconnection in the Coronal Heating, Proceedings of the SOHO 15 Workshop, 2004.

Grants and awards

1. SHINE NSF Postdoc grant 2011/2013;
2. SHINE Travel award, 08/2009;
3. SPD Student Poster, Honorable mention 06/2009;
4. NASA EPSCoR travel award, 03/2009;

5. SPD Studentship Award, 2008.
6. Three-year NASA Earth and Space Science Fellowship to study “Creation of Twisted Flux in Solar Eruptions”, 2007.
7. First prize at the scientific conference for young students for the work on “Time series of the musical sounds”, Saint-Petersburg, 2000.

Teaching Experience

1. Supervising an REU-student Kristin Rosenau with Prof. Jiong Qiu during summer school for REU, Montana State University, REU 2009.
2. Supervising two REU-students Nick Hill and Eric Wolf with Prof. Jiong Qiu during summer school for REU, Montana State University, REU 2008. *Project description:*
http://solar.physics.montana.edu/REU/2008/projects/kazachenko_qiu.html
3. Helping Prof. Jiong Qiu in supervising two REU-students Nick Hill and Peter Wyper during summer school for REU, Montana State University, REU 2007.
4. Teaching IDL to REU-students, Montana State University, REU 2007.
5. Guiding observatory tours during the REU program in Sunspot, NM, 2004.

Computer Experience

- Programming languages: IDL, C, Fortran, HTML, TeX/LaTeX, VBA, Matlab
- Operating Systems: Unix, Linux, MS Windows, MS DOS

Languages, hobbies

- Russian (native); conversant in English, Spanish, German.
- Opera singing.

Recommendations

1. My thesis advisor Prof. Richard Canfield (canfield@mithra.physics.montana.edu).
2. My research advisor Prof. Jiong Qiu (qiu@mithra.physics.montana.edu).

Collaborators in last 48 months

1. Richard Canfield
2. Jiong Qiu
3. Dana Longcope
4. Richard Nightingale
5. Angela DesJardins