


Biographical Sketch

HERMES - Heliospheric Magnetic Energy: Storage and Conversion

	Olga Panasenco <i>Project Manager and Co-I</i>
	Advanced Heliophysics Inc.

Education

- Ph.D., Physics and Chemistry of Plasma, Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow Russia, 1999
- M.Sc., Physics, Physics Department, Lomonosov Moscow State University, Moscow Russia, 1993

Professional Employment

- 2007 – present, Senior Research Scientist, Advanced Heliophysics
- 2002 – 2006, Research Scientist, Space Physics Lab, Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow Russia
- 1999 – 2002, Postdoctoral position, Space Physics Lab, Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow Russia

Recent Experience

2013 – present, President and CEO at Advanced Heliophysics Inc.

2018 – 2019, Co-I – NSF, Solar Filaments and deflection of CMEs

2014 – 2017, PI – NASA, Solar Wind from Pseudostreamers

2013 – 2014, Co-I, CalTech JPL subcontract, Solar Wind Acceleration

2012 – 2015, Co-I – NASA, Sympathetic Eruptions and Pseudostreamers

2019 – Reader, Huntington Research Library, San Marino, CA

Research Interests

Solar and Heliospheric Physics, Space Weather:

- Observations of the Sun and the Solar Corona through direct ground-base telescopic observation;
- Space telescope remote sensing observations;
- Data analysis of in-situ plasma measurements;
- Modeling and observations of magnetic structures in the solar corona;
- Modeling the structure and acceleration of the solar wind;
- Energetic particle events from the Sun and their origin;
- Coronal holes and active region evolution;
- Formation and evolution of solar filaments and prominences;
- Formation, eruption and propagation of solar Coronal Mass Ejections (CMEs), Space Weather predictions.

Already established collaborations between DRIVE team members

- a. PI Marco Velli (UCLA) -> solar corona and origins of the solar wind; solar filament/prominence formations and eruptions = 2009 + 10 years of collaboration -> multiple papers
- b. Co-I Viacheslav Titov (PSI) -> Coronal Mass Ejections = 2011 + 6 years of collaboration -> 3 papers

Synergistic activity relevant to DRIVE

- a. Editor of AGU monograph "Close Encounters with the Sun" (in prep.)
- b. 2015- 2019: 5 consecutive years Convener of the AGU Session "Fundamental Physics of the Solar Corona and Inner Heliosphere"
- c. Conference organizations: PROM meetings 2007-2011, First Solar Probe Plus meeting in Pasadena 2014, First joint Solar Probe Plus-Solar Orbiter conference 2015, Artimino, Florence, Italy
- d. President and CEO, Board Member of Advanced Heliophysics Inc.
- e. A member of the International ISSI Team (2017) "Solving the prominence paradox" (PI Nicolas Labrosse)
- f. PROBA-2/SWAP Guest Investigator at the Royal Observatory of Belgium (2016) ("Pseudostreamers and their Immediate Environment: Observations and Modeling").
- g. Co-I of a Category II proposal to NASA Heliophysics Explorer, SAFARI, Solar Activity Far Side Investigation.
- h. 2009 – Present – Regular reviewer for NASA and for a range of scientific manuscripts including Solar Physics, JGR, APJ, and APJL.

Selected Publications:

- Panasenco, O., Velli, M., and Panasenco, A., "Large-scale Magnetic Funnel in the Solar Corona" *ApJ*, **873**, 25 (2019)
- Wang, Y.-M., and Panasenco, O., "Observations of Solar Wind from Earth-directed Coronal Pseudostreamers", *ApJ*, **872**, 139 (2019)
- Titov, V.S., Mikic, Z., Török, T., Linker, J.A., and Panasenco, O. "2010 August 1–2 Sympathetic Eruptions. II. Magnetic Topology of the MHD Background Field", *ApJ*, **845**, 141 (2017)
- Liewer, P., Panasenco, O., Vourlidas, A., and R. Colaninno, "Observations and Analysis of the Non-Radial Propagation of Coronal Mass Ejections Near the Sun", *Solar Phys.* **290**, 3343 (2015)
- Panasenco, O., Martin, S., Velli, M., and A. Vourlidas, "Origins of Rolling, Twisting and Non-Radial Propagation of Eruptive Solar Events", *Solar Phys.* **287**, 391 (2014)
- Panasenco, O., Martin, S., and M. Velli, "Apparent Solar Tornado – Like Prominences", *Solar Phys.* **289**, 603 (2014)
- Sheeley, N.R., Jr., Martin, S.F., Panasenco, O., Warren, H.P., "Using Coronal Cells to Infer the Magnetic Field Structure and Chirality of Filament Channels", *Astrophys. J.* **772**, 88
- Titov, V.S., Mikic, Z., Török, T., Linker, J.A., and Panasenco, O., "2010 August 1-2 Sympathetic Eruptions. I. Magnetic Topology of the Source-surface Background Field", *ApJ*, **759**, 70 (2012)
- Török, T., Panasenco, O., Titov, V. S., Mikić, Z., Reeves, K. K., Velli, M.; Linker, J. A., De Toma, G., "A Model for Magnetically Coupled Sympathetic Eruptions", *ApJ Lett.*, **739**, 2, L63 (2011)