

JUSTYNA M. SOKÓŁ, Ph.D.

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PHYSICIST

Studying the heliosphere and its interaction with the interstellar medium through development of space instrumentation and data analysis.

PROFESSIONAL EXPERIENCE**Southwest Research Institute, San Antonio, TX**

Sr. Research Scientist (2023 – present), Research Scientist (2021 – 2023)

Princeton University, Princeton, NJ

Visiting Fellow (2019 – 2020)

Space Research Centre Polish Academy of Sciences, Warsaw, Poland

Associate Researcher (2016 - 2019), Research Assistant (2013 - 2016), Specialist in Physics (2012 - 2013), Physicist (2010 - 2011)

SHIELD DRIVE Science Center

Director of Research Thrust 1: *Global Structure of the Heliosphere* (2022 – present)

EDUCATION**Heliophysics Mission Design School, NASA JPL**

(Internship, 2022)

Ph.D., Physical Science, Space Research Centre

Polish Academy of Sciences, Warsaw, Poland, 2016

M.Sc., Physics, Opole University, Poland, 2010

- Individual Member of *International Astronomical Union*
- **89** articles (incl. **14** as first author)
- h-index: **29**, total citations: 2781 (based on ADS)
- **10** scientific projects (incl. **3** as PI)
- First author of **45** talks (incl. **4** invited)
- Host of *Outer Heliosphere and VLISM* online seminars
- Convener or chairman of 11 science sessions (AGU, EGU, AIAC, SHINE)

SCIENCE GROUPS

Interstellar Probe Mission Concept Study (Heliophysics Community Coordinator, Topical Group on Neutrals)

Interstellar Mapping and Acceleration Probe (IMAP; Co-I, IMAP-Lo Conversion Surfaces)

Interstellar Boundary Explorer (IBEX; Supporting Scientist, IBEX-Lo)

MOST SIGNIFICANT ARTICLES

- Sokół et al. 2022, *Interstellar Neutrals, Pickup Ions, and Energetic Neutral Atoms Throughout the Heliosphere: Present Theory And Modeling Overview*, SSR 218:18
- Sokół et al. 2021, *Breathing of the Heliosphere*, ApJ, 922:250 (11pp)
- Sokół et al. 2020, *Sun-Heliosphere Observation-based Ionization Rates Model*, ApJ, 897:179 (21pp)
- Sokół et al. 2019, *Science Opportunities for Observations of the Interstellar Neutral Gas with Adjustable Boresight Direction*, ApJS, 245:28 (22pp)
- Sokół et al. 2019, *Interstellar Neutral Gas Species And Their Pickup Ions Inside The Heliospheric Termination Shock. The Large-scale Structures*, ApJ, 879:24 (20pp)
- Sokół et al. 2016, *Solar Cycle Variation of Interstellar Neutral He, Ne, O Density and Pick-up Ions along the Earth's Orbit*, MNRAS, vol. 458, Issue 4, pp 3691-3704
- Sokół et al. 2015, *The Interstellar Neutral He Haze in the Heliosphere: What Can We Learn?*, ApJS, 220:29 (12pp)
- Sokół et al. 2013, *Heliolatitude And Time Variations of Solar Wind Structure from In-situ Measurements and Interplanetary Scintillation Observations*, Solar Physics Vol 285, pp 167-200