

2020

See <https://www.spaceweather.com> <https://www.solarmonitor.org>
<ftp://ftp.swpc.noaa.gov/pub/warehouse/2019/>
ftp://ftp.swpc.noaa.gov/pub/warehouse/2019/2019_plots/xray/

1 Jan

Automated analysis of oscillations in coronal bright points*

B. Ramsey^{1,2}, E. Verwichte² and H. Morgan¹

A&A 679, A10 (2023)

<https://www.aanda.org/articles/aa/pdf/2023/11/aa46757-23.pdf>

1 Jan-2 Feb

Measuring Solar Differential Rotation with an Iterative Phase Correlation Method

Zdeněk Hrazdírka¹, Miloslav Druckmüller¹, and Shadia Habbal²

2021 ApJS 252 6

<https://doi.org/10.3847/1538-4365/abc702>

Jan-Feb 2020

Detection of small magnetic flux ropes from the third and fourth Parker Solar Probe encounters

L.-L. Zhao, G. P. Zank, Q. Hu, D. Telloni, Y. Chen, L. Adhikari,

A&A 2020

<https://arxiv.org/pdf/2010.04664.pdf>

1-3 Jan

Automated analysis of oscillations in coronal bright points

[Brad Ramsey](#), [Erwin Verwichte](#), [Huw Morgan](#)

A&A 2023

<https://arxiv.org/pdf/2309.14863.pdf>

Evolution of interplanetary coronal mass ejection complexity: a numerical study through a swarm of simulated spacecraft

Camilla Scolini, Reka M. Winslow, Noé Lugaz, Stefaan Poedts

ApJ 2021

<https://arxiv.org/pdf/2106.10554.pdf>

4 Jan

A first look at the submillimeter Sun with ALMA

[C. E. Alissandrakis](#), [T. S. Bastian](#), [A. Nindos](#)

A&A 2022

<https://arxiv.org/pdf/2205.01008.pdf>

8 Jan

A first look at the submillimeter Sun with ALMA

[C. E. Alissandrakis](#), [T. S. Bastian](#), [A. Nindos](#)

A&A 2022

<https://arxiv.org/pdf/2205.01008.pdf>

20 Jan

Parker Solar Probe: Four Years of Discoveries at Solar Cycle Minimum

Review

[N. E. Raouafi](#), [L. Matteini](#), [J. Squire](#), [S. T. Badman](#), [M. Velli](#), +++

Space Science Reviews **2023** 157 pages, 65 figures

<https://arxiv.org/pdf/2301.02727.pdf>

23 Jan-8 Feb

Statistical Study of Ejections in Coronal Hole Regions As Possible Sources of Solar Wind Switchbacks and Small-scale Magnetic Flux Ropes

Nengyi [Huang](#)^{1,2}, Sophia D'Anna¹, and Haimin Wang^{1,2}

2023 ApJL 946 L17

<https://iopscience.iop.org/article/10.3847/2041-8213/acc0f1/pdf>

Small-scale magnetic flux ropes and their properties based on in-situ measurements from Parker Solar Probe

Yu [Chen](#), Qiang Hu

ApJ **2021**

<https://arxiv.org/pdf/2111.09261.pdf>

25-27 Jan

Evolution of a Steamer-Blowout CME as Observed by Imagers on Parker Solar Probe and the Solar Terrestrial Relations Observatory

P. C. [Liewer](#), J. Qiu, A. Vourlidas, J. R. Hall, P. Penteado

A&A **2020**

<https://arxiv.org/pdf/2012.05174.pdf>

26-28 Jan

Parker Solar Probe: Four Years of Discoveries at Solar Cycle Minimum

Review

[N. E. Raouafi](#), [L. Matteini](#), [J. Squire](#), [S. T. Badman](#), [M. Velli](#), +++

Space Science Reviews **2023** 157 pages, 65 figures

<https://arxiv.org/pdf/2301.02727.pdf>

Patches of Magnetic Switchbacks and Their Origins

Chen [Shi](#)¹, Olga Panasenco², Marco Velli¹, Anna Tenerani³, Jaye L. Verniero⁴, Nikos Sioulas et al.

2022 ApJ 934 152

<https://iopscience.iop.org/article/10.3847/1538-4357/ac7c11/pdf>

27 Jan

The first light of the Solar Activity MOF Monitor Telescope (SAMM)

Roberto [Speziali](#)^{1*}, Andrea Di Paola¹, Mauro Centrone¹, Maurizio Oliviero², Domenico Bonaccini Calia³, Luciano Dal Sasso⁴, Marco Faccini, Vincenzo Mauriello⁴ and Luciano Terranegra²

J. Space Weather Space Clim. **2021**, 11, 22 <https://doi.org/10.1051/swsc/2020078>

<https://www.swsc-journal.org/articles/swsc/pdf/2021/01/swsc200068.pdf>

28 Jan

Study of solar brightness profiles in the 18-26 GHz frequency range with INAF radio telescopes II. Evidence for coronal emission

[M. Marongiu](#), [A. Pellizzoni](#), [S. Righini](#), [S. Mulas](#), [R. Nesti](#), [A. Burtovoi](#), +++

A&A **2024**

<https://arxiv.org/pdf/2402.07018.pdf>

30 Jan

Macro Magnetic Holes Caused by Ripples in Heliospheric Current Sheet from Coordinated Imaging and Parker Solar Probe Observations

Chong Chen^{1,2}, Ying D. Liu^{1,2}, and Huidong Hu¹

2021 ApJ 921 15

<https://doi.org/10.3847/1538-4357/ac1b2b>

1 Feb

Multifrequency microwave imaging of weak transients from the quiet solar corona

[Surajit Mondal](#), [Bin Chen](#), [Sijie Yu](#)

ApJ 2023

<https://arxiv.org/pdf/2301.07840.pdf>

11 Feb-7 Mar 2020

Probing Upflowing Regions in the Quiet Sun and Coronal Holes

Conrad Schwanitz, Louise Harra, Nour E. Raouafi, Alphonse C. Sterling, Alejandro Moreno Vacas, Jose Carlos del Toro Iniesta, David Orozco Suárez, Hirohisa Hara

Solar Phys. 2021

<https://arxiv.org/pdf/2110.12753.pdf>

23 Feb-24 Mar

Observations of the Quiet Sun During the Deepest Solar Minimum of the Past Century with Chandrayaan-2 XSM -- Sub-A Class Microflares Outside Active Regions

Santosh V. Vadawale, N. P. S. Mithun, Biswajit Mondal, Aveek Sarkar, P. Janardhan, Bhuwan Joshi, Anil Bhardwaj, M. Shanmugam, Arpit R. Patel, Hitesh Kumar L. Adalja, Shiv Kumar Goyal, Tinkal Ladiya, Neeraj Kumar Tiwari, Nishant Singh, Sushil Kumar

ApJL 2021

<https://arxiv.org/pdf/2103.16644.pdf>

6-15 Mar

Spatial and Temporal Distribution of Nanoflare Heating During Active Region Evolution

[Biswajit Mondal](#), [James A Klimchuk](#), [Amy R. Winebarger](#), [P. S. Athiray](#), [Jiayi Liu](#)

ApJ 2024

<https://arxiv.org/pdf/2412.20348>

7 Mar

Inconspicuous Solar Polar Coronal X-ray Jets as the Source of Conspicuous Hinode/EUV Imaging Spectrometer (EIS) Doppler Outflows

[Alphonse C. Sterling](#), [Conrad Schwanitz](#), [Louise K. Harra](#), [Nour E. Raouafi](#), [Navdeep K.](#)

[Panesar](#), [Ronald L. Moore](#)

ApJ 2022

<https://arxiv.org/pdf/2210.09233.pdf>

11 Mar

Evolution of Elemental Abundances During B-Class Solar Flares: Soft X-ray Spectral Measurements with Chandrayaan-2 XSM

Biswajit Mondal, Aveek Sarkar, Santosh V. Vadawale, N. P. S. Mithun, P. Janardhan, Giulio Del Zanna, Helen E. Mason, Urmila Mitra-Kraev, S. Narendranath

ApJ 2021

<https://arxiv.org/pdf/2107.07825.pdf>

29 Mar-12 Apr

Multiwavelength Observations by XSM, Hinode, and SDO of an Active Region. Chemical Abundances and Temperatures

G. **Del Zanna**¹, B. Mondal^{2,3}, Y. K. Rao¹, N. P. S. Mithun², S. V. Vadawale², K. K. Reeves⁴, H. E. Mason¹, A. Sarkar², P. Janardhan², and A. Bhardwaj²

2022 ApJ 934 159

<https://iopscience.iop.org/article/10.3847/1538-4357/ac7a9a/pdf>

3 Apr

Identifying plasma fractionation processes in the chromosphere using IRIS

David M. **Long** , 1, 2 Deborah Baker , 3 Andy S. H. To , 4 Lidia van Driel-Gesztelyi , +++

ApJ 2024

<https://arxiv.org/pdf/2403.06711.pdf>

Understanding the Relationship between Solar Coronal Abundances and F10.7 cm Radio Emission

Andy S. H. **To**¹, Alexander W. James^{1,2}, T. S. Bastian³, Lidia van Driel-Gesztelyi^{1,4,5}, David M.

Long^{1,6}, Deborah Baker¹, David H. Brooks⁷, Samantha Lomuscio³, David Stansby¹, and Gherardo Valori⁸

2023 ApJ 948 121

<https://iopscience.iop.org/article/10.3847/1538-4357/acbc1b/pdf>

<https://arxiv.org/pdf/2304.02552.pdf>

4-9 Apr

Evolution of Elemental Abundances During B-Class Solar Flares: Soft X-ray Spectral Measurements with Chandrayaan-2 XSM

Biswajit **Mondal**, Aveek Sarkar, Santosh V. Vadawale, N. P. S. Mithun, P. Janardhan, Giulio Del Zanna, Helen E. Mason, Urmila Mitra-Kraev, S. Narendranath

ApJ 2021

<https://arxiv.org/pdf/2107.07825.pdf>

7 Apr

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ApJ 2024

<https://arxiv.org/pdf/2403.06711.pdf>

Understanding the Relationship between Solar Coronal Abundances and F10.7 cm Radio Emission

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ApJ 2023

<https://arxiv.org/pdf/2304.02552.pdf>

8 Apr

Genesis and Coronal-jet-generating Eruption of a Solar Minifilament Captured by IRIS Slit-raster Spectra

[Navdeep K. Panesar](#), [Sanjiv K. Tiwari](#), [Ronald L. Moore](#), [Alphonse C. Sterling](#), [Bart De Pontieu](#)

ApJ 2022

<https://arxiv.org/pdf/2209.00059.pdf>

9 Apr

Multiwavelength Observations by XSM, Hinode, and SDO of an Active Region. Chemical Abundances and Temperatures

G. **Del Zanna**¹, B. Mondal^{2,3}, Y. K. Rao¹, N. P. S. Mithun², S. V. Vadawale², K. K. Reeves⁴, H. E. Mason¹, A. Sarkar², P. Janardhan², and A. Bhardwaj²

2022 ApJ 934 159

<https://iopscience.iop.org/article/10.3847/1538-4357/ac7a9a/pdf>

12-15 Apr

Solar origins of a strong stealth CME detected by Solar Orbiter

Jennifer O'Kane, Lucie M. Green, Emma E. Davies, Christian Möstl, Jürgen Hinterreiter, Johan L. Freiherr von Forstner, Andreas J. Weiss, David M. Long, Tanja Amerstorfer

A&A 2021

<https://arxiv.org/pdf/2103.17225.pdf>

15-21 Apr

In-Situ Multi-Spacecraft and Remote Imaging Observations of the First CME Detected by Solar Orbiter and BepiColombo

E. E. Davies (1), C. Möstl (2 and 3), M. J. Owens (4), A. J. Weiss (2 and 3), T. Amerstorfer (2), J. Hinterreiter (2 and 5), M. Bauer (2), R. L. Bailey (6), M. A. Reiss (2 and 3), R. J. Forsyth (1), T. S. Horbury (1), H. O'Brien (1), V. Evans (1), V. Angelini (1), D. Heyner (7), I. Richter (7), H-U. Auster (7), W. Magnes (2), W. Baumjohann (2), D. Fischer (2), D. Barnes (8), J. A. Davies (8), R. A. Harrison (8)

A&A 2020

<https://arxiv.org/pdf/2012.07456.pdf>

19-21 Apr

ICME and Forbush

How Magnetic Reconnection May Affect the Coherence of Interplanetary Coronal Mass Ejections

C. J. Farrugia¹, B. J. Vasquez¹, N. Lugaz¹, N. A. Al-Haddad¹, I. G. Richardson^{2,3} +++

2023 ApJ 953 15

<https://iopscience.iop.org/article/10.3847/1538-4357/acdcf7/pdf>

Multi-spacecraft observations of the structure of the sheath of an interplanetary coronal mass ejection and related energetic ion enhancement

E. K. J. Kilpua, S. W. Good, N. Dresing, R. Vainio, +++

Astronomy & Astrophysics, Solar Orbiter First Results (Cruise Phase) special issue 2021

<https://arxiv.org/pdf/2112.09472.pdf>

Configuration of a Magnetic Cloud from Solar Orbiter and Wind Spacecraft In-situ

Measurements Qiang Hu, Wen He, Lingling Zhao, Edward Lu

Frontiers in Physics 2021

<https://arxiv.org/pdf/2107.01728.pdf>

Solar origins of a strong stealth CME detected by Solar Orbiter

Jennifer O'Kane, Lucie M. Green, Emma E. Davies, Christian Möstl, Jürgen Hinterreiter, Johan L. Freiherr von Forstner, Andreas J. Weiss, David M. Long, Tanja Amerstorfer

A&A 2021

<https://arxiv.org/pdf/2103.17225.pdf>

Multi point analysis of coronal mass ejection flux ropes using combined data from Solar Orbiter, BepiColombo and Wind

A. J. Weiss, C. Moestl, E. E. Davies, T. Amerstorfer, M. Bauer, J. Hinterreiter, M. Reiss, R. L. Bailey, T. S. Horbury, H. O'Brien, V. Evans, V. Angelini, D. Heiner, I. Richter, H-U. Auster, W. Magnes, D. Fischer, W. Baumjohann

A&A 2021

<https://arxiv.org/pdf/2103.16187.pdf>

Radial Evolution of the April 2020 Stealth Coronal Mass Ejection between 0.8 and 1 AU -- A Comparison of Forbush Decreases at Solar Orbiter and Earth

Johan L. Freiherr von Forstner, Mateja Dumbović, Christian Möstl, Jingnan Guo, Athanasios Papaioannou, Anatoly V. Belov, Maria A. Abunina

A&A 2021

<https://arxiv.org/pdf/2102.12185.pdf>

Turbulence/wave transmission at an ICME-driven shock observed by Solar Orbiter and Wind

L. L. Zhao, G. P. Zank, J. S. He, D. Telloni, Q. Hu, G. Li, M. Nakanotani, L. Adhikari, E. K. J. Kilpua, T. S. Horbury, H. O'Brien, V. Evans, V. Angelini

A&A 2021

<https://arxiv.org/pdf/2102.03301.pdf>

20 Apr - SURPRISE GEOMAGNETIC STORM Dst~-63 nT The cause of the storm appears to be a faint slow-moving CME (coronal mass ejection) that left the sun on **April 15th**,

https://www.spaceweather.com/images2020/15apr20/cme_c3_anim_short.gif

Multipoint Observations of the Dynamics at an ICME Sheath–Ejecta Boundary

Matti Ala-Lahti^{1,2}, Tuija I. Pulkkinen¹, Julia Ruohotie², Mojtaba Akhavan-Tafti¹, Simon W. Good², and Emilia K. J. Kilpua²

2023 ApJ 956 131

<https://iopscience.iop.org/article/10.3847/1538-4357/acf99e/pdf>

Compression of Solar Spectroscopic Observations: a Case Study of Mg II k Spectral Line Profiles Observed by NASA's IRIS Satellite

Viacheslav M Sadykov, Irina N Kitiashvili, Alberto Sainz Dalda, Vincent Oria, Alexander G Kosovichev, Egor Illarionov

CBMI 2021

<https://arxiv.org/pdf/2103.07373.pdf>

20-21 Apr

Space Weather Investigation Frontier (SWIFT)

Mojtaba Akhavan-Tafti, Les Johnson, Rohan Sood, +++

Front. Astron. Space Sci. 10: 1185603. 2023

doi: 10.3389/fspas.2023.1185603

<https://www.frontiersin.org/articles/10.3389/fspas.2023.1185603/pdf>

21 Apr

First observations from the SPICE EUV spectrometer on Solar Orbiter

A. Fludra, M. Caldwell, A. Giunta, T. Grundy, S. Guest, S. Leeks, S. Sidher, F. Auchère, M. Carlsson, D. Hassler, H. Peter, R. Aznar Cuadrado, É. Buchlin, S. Caminade, C. DeForest, T. Fredvik, M. Haberreiter, L. Harra, M. Janvier, T. Kucera, D. Müller, S. Parenti, W. Schmutz, U. Schühle, S.K. Solanki, L. Teriaca, W.T. Thompson, S. Tustain, D. Williams, P.R. Young, L.P. Chitta

A&A 2021

<https://arxiv.org/pdf/2110.11252.pdf>

Radio, X-Ray, and Extreme-ultraviolet Observations of Weak Energy Releases in the "Quiet" Sun

R. Ramesh¹, C. Kathiravan¹, N. P. S. Mithun², and S. V. Vadawale²

2021 ApJL 918 L18
<https://arxiv.org/pdf/2109.08455.pdf>
<https://doi.org/10.3847/2041-8213/ac1da3>

25 Apr

Lateral Confinement and the Remarkably Self-similar Nature

Y.-M. Wang¹ and P. Hess¹

2023 ApJ 952 85

<https://iopscience.iop.org/article/10.3847/1538-4357/acd638/pdf>

28-30 Apr

Formation and Immediate Deformation of a Small Filament Through Intermittent Magnetic Interactions

Liang Zhang, Ruisheng Zheng, Changhui Rao, Bing Wang, Huadong Chen, Libo Zhong, Yao Chen
Solar Phys. 2022

<https://arxiv.org/pdf/2202.09633.pdf>

30 Apr

Evolution of Elemental Abundances During B-Class Solar Flares: Soft X-ray Spectral Measurements with Chandrayaan-2 XSM

Biswajit Mondal, Aveek Sarkar, Santosh V. Vadawale, N. P. S. Mithun, P. Janardhan, Giulio Del Zanna, Helen E. Mason, Urmila Mitra-Kraev, S. Narendranath
ApJ 2021

<https://arxiv.org/pdf/2107.07825.pdf>

14 May

First observations from the SPICE EUV spectrometer on Solar Orbiter

A. Fludra, M. Caldwell, A. Giunta, T. Grundy, S. Guest, S. Leeks, S. Sidher, F. Auchère, M. Carlsson, D. Hassler, H. Peter, R. Aznar Cuadrado, É. Buchlin, S. Caminade, C. DeForest, T. Fredvik, M. Haberreiter, L. Harra, M. Janvier, T. Kucera, D. Müller, S. Parenti, W. Schmutz, U. Schühle, S.K. Solanki, L. Teriaca, W.T. Thompson, S. Tustain, D. Williams, P.R. Young, L.P. Chitta
A&A 2021

<https://arxiv.org/pdf/2110.11252.pdf>

15 May

MEASURING THE NASCENT SOLAR WIND OUTFLOW VELOCITIES VIA THE DOPPLER DIMMING TECHNIQUE

Daniele Spadaro¹, Daniele Telloni² and the METIS team

Solar Orbiter nugget #7 2023

<https://www.cosmos.esa.int/web/solar-orbiter/solar-nuggets/measuring-the-solar-wind-via-the-doppler-dimming-technique>

Slow wind belt in the quiet solar corona

E. Antonucci, C. Downs, G. E. Capuano, D. Spadaro, R. Susino, D. Telloni, V. Andretta, V. Da Deppo, Y. De Leo, S. Fineschi, F. Frassetto, F. Landini, G. Naletto, G. Nicolini, M. Pancrazzi, M. Romoli, M. Stangalini, L. Teriaca, M. Uslenghi

2023

<https://arxiv.org/pdf/2302.08385>

First light observations of the solar wind in the outer corona with the Metis coronagraph

M. Romoli (1 and 2), E. Antonucci (3), V. Andretta (3), G.E. Capuano (4 and 5), V. Da Deppo (6)

A&A 2021

<https://arxiv.org/pdf/2106.13344.pdf>

20 May

How Small-scale Jet-like Solar Events from Miniature Flux Rope Eruptions Might Produce the Solar Wind

[Alphonse C. Sterling](#), [Navdeep K. Panesar](#), [Ronald L. Moore](#)

ApJ 2024

<https://arxiv.org/pdf/2401.09560.pdf>

Temperature of Solar Orbiter/EUI quiet Sun small scale brightenings: evidence for a cooler component

[A. Dolliou](#), [S. Parenti](#), [F. Auchère](#), [K. Bocchialini](#), [G. Pelouze](#), [P. Antolin](#), [D. Berghmans](#), [L. Harra](#), [D. M. Long](#), [U. Schühle](#), [E. Kraaikamp](#), [K. Stegen](#), [C. Verbeeck](#), [S. Gissot](#), [R. Aznar Cuadrado](#), [E. Buchlin](#), [M. Mierla](#), [L. Teriaca](#), [A. N. Zhukov](#)

A&A 2023

<https://arxiv.org/pdf/2301.02040.pdf>

Solar Orbiter and SDO Observations, and Bifrost MHD Simulations of Small-scale Coronal Jets

[Navdeep K. Panesar](#), [Viggo H. Hansteen](#), [Sanjiv K. Tiwari](#), [Mark C. M. Cheung](#), [David](#)

[Berghmans](#), [Daniel Müller](#)

ApJ 2022

<https://arxiv.org/pdf/2211.06529.pdf>

Three-dimensional Magnetic and Thermodynamic Structures of Solar Microflares

[Z. F. Li](#), [X. Cheng](#), [F. Chen](#), [J. Chen](#), [M. D. Ding](#)

ApJ 2022

<https://arxiv.org/pdf/2204.07762.pdf>

Solo/EUI Observations of Ubiquitous Fine-scale Bright Dots in an Emerging Flux Region: Comparison with a Bifrost MHD Simulation

[Sanjiv K. Tiwari](#), [Viggo H. Hansteen](#), [Bart De Pontieu](#), [Navdeep K. Panesar](#), [David Berghmans](#)

ApJ 929 103 2022

<https://arxiv.org/pdf/2203.06161.pdf>

<https://iopscience.iop.org/article/10.3847/1538-4357/ac5d46/pdf>

The Magnetic Origin of Solar Campfires

[Navdeep K. Panesar](#), [Sanjiv K. Tiwari](#), [David Berghmans](#), [Mark C. M. Cheung](#), [Daniel Muller](#), [Frederic Auchere](#), [Andrei Zhukov](#)

ApJL 2021

<https://arxiv.org/pdf/2110.06846.pdf>

20-21 May

Observations of Mini Coronal Dimmings Caused by Small-scale Eruptions in the Quiet Sun

[Rui Wang](#), [Ying D. Liu](#), [Xiaowei Zhao](#), [Huidong Hu](#)

ApJL 2023

<https://arxiv.org/pdf/2307.11406.pdf>

A study of the propagation of magnetoacoustic waves in small-scale magnetic fields using solar photospheric and chromospheric Dopplergrams: HMI/SDO and MAST observations

[Hirdesh Kumar](#), [Brajesh Kumar](#), [S. P. Rajaguru](#), [Shibu K. Mathew](#), [Ankala Raja Bayanna](#)

Journal of Atmospheric and Solar-Terrestrial Physics (Special Issue of STP-15) 2023

<https://arxiv.org/pdf/2304.13492.pdf>

Coronal microjets in quiet-Sun regions observed with the Extreme Ultraviolet Imager onboard Solar Orbiter

Zhenyong **Hou**, Hui Tian, David Berghmans, Hechao Chen, Luca Teriaca, Udo Schuhle, Yuhang Gao, Yajie Chen, Jiansen He, Linghua Wang, Xianyong Bai

ApJ 2021

<https://arxiv.org/pdf/2108.08718.pdf>

21 May-3 Jun

Magnetic Field Line Random Walk and Solar Energetic Particle Path Lengths: Stochastic Theory and PSP/ISoIS Observation

R. **Chhiber**, W. H. Matthaeus, C.M.S. Cohen, D. Ruffolo, W. Sonsrtee, P. Tooprakai, A. Seripienlert, P.Chuychai, A. V. Usmanov, M. L. Goldstein, D. J. McComas, R. A. Leske, E. R. Christian, R. A. Mewaldt, A.W. Labrador, J. R. Szalay, C. J. Joyce, J. Giacalone, N. A. Schwadron, D. G. Mitchell, M. E. Hill, M. E. Wiedenbeck, R. L. McNutt Jr., M. I. Desai

A&A 2020

<https://arxiv.org/pdf/2011.08329.pdf>

24 May-2 Jun

Parker Solar Probe Observations of Helical Structures as Boundaries for Energetic Particles

F. **Pecora**, S. Servidio, A. Greco, W. H. Matthaeus, D. J. McComas, J. Giacalone, C. J. Joyce, T. Getachew, C. M. S. Cohen, R. A. Leske, M. E. Wiedenbeck, R. L. McNutt Jr., M. E. Hill, D. G. Mitchell, E. R. Christian, E. C. Roelof, N. A. Schwadron, S. D. Bale

MNRAS 2021

<https://arxiv.org/pdf/2109.04571.pdf>

27 May

The Spectrometer Telescope for Imaging X-rays (STIX) on Solar Orbiter

[Laura A. Hayes](#), [Sophie Musset](#), [Daniel Müller](#), [Säm Krucker](#)

Book Chapter for Handbook of X-ray and Gamma-ray Astrophysics

2022

<https://arxiv.org/pdf/2207.02079.pdf>

Langmuir-Slow Extraordinary Mode Magnetic Signature Observations with Parker Solar Probe

A. **Larosa**¹, T. Dudok de Wit¹, V. **Krasnoselskikh**^{1,2}, S. D. Bale^{2,3}, O. Agapitov⁺⁺⁺

2022 ApJ 927 95

<https://iopscience.iop.org/article/10.3847/1538-4357/ac4e85/pdf>

27 May-2 Jun

Widespread 1-2 MeV Energetic Particles Associated with Slow and Narrow Coronal Mass Ejections: Parker Solar Probe and STEREO Measurements

Bin **Zhuang**, Noé Lugaz, David Lario

ApJ 2021

28 May

Widespread 1-2 MeV Energetic Particles Associated with Slow and Narrow Coronal Mass Ejections: Parker Solar Probe and STEREO Measurements

Bin **Zhuang**, Noé Lugaz, David Lario

ApJ 2021

First observations from the SPICE EUV spectrometer on Solar Orbiter

A. **Fludra**, M. Caldwell, A. Giunta, T. Grundy, S. Guest, S. Leeks, S. Sidher, F. Auchère, M. Carlsson, D. Hassler, H. Peter, R. Aznar Cuadrado, É. Buchlin, S. Caminade, C. DeForest, T. Fredvik, M. Haberreiter, L. Harra, M. Janvier, T. Kucera, D. Müller, S. Parenti, W. Schmutz, U. Schühle, S.K. Solanki, L. Teriaca, W.T. Thompson, S. Tustain, D. Williams, P.R. Young, L.P. Chitta

A&A 2021

<https://arxiv.org/pdf/2110.11252.pdf>

Multi point analysis of coronal mass ejection flux ropes using combined data from Solar Orbiter, BepiColombo and Wind

A. J. Weiss, C. Moestl, E. E. Davies, T. Amerstorfer, M. Bauer, J. Hinterreiter, M. Reiss, R. L. Bailey, T. S. Horbury, H. O'Brien, V. Evans, V. Angelini, D. Heiner, I. Richter, H-U. Auster, W. Magnes, D. Fischer, W. Baumjohann
A&A 2021

<https://arxiv.org/pdf/2103.16187.pdf>

28-29 May

First Type III Solar Radio Bursts of Solar Cycle 25

Juha Kallunki, Derek McKay & Merja Tornikoski
Solar Physics volume 296, Article number: 57 (2021)
<https://doi.org/10.1007/s11207-021-01790-9>

<https://link.springer.com/content/pdf/10.1007/s11207-021-01790-9.pdf>

29 May

Solar Coronal Density Turbulence and Magnetic Field Strength at the Source Regions of Two Successive Metric Type II Radio Bursts

R. Ramesh¹, C. Kathiravan¹, and Anshu Kumari²
2023 ApJ 943 43

<https://iopscience.iop.org/article/10.3847/1538-4357/acaea5/pdf>

Simulation of the Solar Energetic Particle Event on 2020 May 29 Observed by Parker Solar Probe

Lei Cheng, [Ming Zhang](#), [David Lario](#), [Laura A. Balmaceda](#), [Ryun Young Kwon](#), [Christina Cohen](#)
ApJ 2022

<https://arxiv.org/pdf/2209.02566.pdf>

Widespread 1-2 MeV Energetic Particles Associated with Slow and Narrow Coronal Mass Ejections: Parker Solar Probe and STEREO Measurements

Bin Zhuang, Noé Lugaz, David Lario
ApJ 2021

29 May-7 Jun

Flux ropes and dynamics of the heliospheric current sheet

Study of the Parker Solar Probe and Solar Orbiter conjunction of June 2020

V. Réville, [N. Fargette](#), [A.P. Rouillard](#), [B. Lavraud](#), [M. Velli](#), [A. Strugarek](#), [S. Parenti](#), [A.S. Brun](#), [C. Shi](#), [A. Kouloumvakos](#), [N. Poirier](#), [R.F. Pinto](#), [P. Louarn](#), [A. Fedorov](#), [C.J. Owen](#), [V. Génot](#), [T.S. Horbury](#), [R. Laker](#), [H. O'Brien](#), [V. Angelini](#), [E. Fauchon-Jones](#), [J.C. Kasper](#)

A&A 659, A110 2022

<https://arxiv.org/pdf/2112.07445.pdf>

<https://www.aanda.org/articles/aa/pdf/2022/03/aa42381-21.pdf>

30 May Two M-class **impulsive** flares from NE-limb AR

<https://www.swpc.noaa.gov/news/first-m-class-flare-observed-years>

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Ubiquitous Small-scale EUV Upflow-Like Events above Network Regions Observed by the Solar Orbiter/Extreme Ultraviolet Imager

[Yadan Duan](#), [Hechao Chen](#), [Zhenyong Hou](#), [Zheng Sun](#), [Yuandeng Shen](#)

ApJ 2024

<https://arxiv.org/pdf/2412.13444>

A Statistical Comparison of EUV Brightenings Observed by SO/EUI with Simulated Brightenings in Nonpotential Simulations

Krzysztof **Barczynski**, [Karen A. Meyer](#), [Louise K. Harra](#), [Duncan H. Mackay](#), [Frédéric Auchère](#) & [David Berghmans](#)

[Solar Physics](#) volume 297, Article number: 141 (2022)

<https://link.springer.com/content/pdf/10.1007/s11207-022-02074-6.pdf>

Automatic detection of small-scale EUV brightenings observed by the Solar Orbiter/EUI

[N. Alipour](#), [H. Safari](#), [C. Verbeeck](#), [D. Berghmans](#), [F. Auchère](#), [L. P. Chitta](#), [P. Antolin](#), [K. Barczynski](#), [É. Buchlin](#), [R. Aznar Cuadrado](#), [L. Dolla](#), [M. K. Georgoulis](#), [S. Gissot](#), [L. Harra](#), [A. C. Katsiyannis](#), [D. M. Long](#), [S. Mandal](#), [S. Parenti](#), [O. Podladchikova](#), [E. Petrova](#), [É. Soubrié](#), [U. Schühle](#), [C. Schwanitz](#), [L. Teriaca](#), [M. J. West](#), [A. N. Zhukov](#)

A&A 663, A128 2022

<https://arxiv.org/pdf/2204.04027.pdf>

<https://www.aanda.org/articles/aa/pdf/2022/07/aa43257-22.pdf>

Propagating brightenings in small loop-like structures in the quiet Sun corona: Observations from Solar Orbiter/EUI

Sudip **Mandal**, Hardi Peter, Lakshmi Pradeep Chitta, Sami K. Solanki, Regina Aznar Cuadrado, Luca Teriaca, Udo Schühle, David Berghmans, Frédéric Auchère

A&A Letters 2021

<https://arxiv.org/pdf/2111.08106.pdf>

The Magnetic Origin of Solar Campfires

Navdeep K. **Panesar**, Sanjiv K. Tiwari, David Berghmans, Mark C. M. Cheung, Daniel Muller, Frederic Auchere, Andrei Zhukov

ApJL 2021

<https://arxiv.org/pdf/2110.06846.pdf>

Stereoscopy of extreme UV quiet Sun brightenings observed by Solar Orbiter/EUI

A. N. **Zhukov**, M. Mierla, F. Auchère, S. Gissot, L. Rodriguez, E. Soubrié, W. T. Thompson, B. Inhester, B. Nicula, P. Antolin, S. Parenti, É. Buchlin, K. Barczynski, C. Verbeeck, E. Kraaikamp, P. J. Smith, K. Stegen, L. Dolla, L. Harra, D. M. Long, U. Schühle, O. Podladchikova, R. Aznar Cuadrado, L. Teriaca, M. Haberreiter, A. C. Katsiyannis, P. Rochus, J.-P. Halain, L. Jacques, D. Berghmans

A&A 2021

<https://arxiv.org/pdf/2109.02169.pdf>

Coronal microjets in quiet-Sun regions observed with the Extreme Ultraviolet Imager onboard Solar Orbiter

Zhenyong **Hou**, Hui Tian, David Berghmans, Hechao Chen, Luca Teriaca, Udo Schühle, Yuhang Gao, Yajie Chen, Jiansen He, Linghua Wang, Xianyong Bai

ApJ 2021

<https://arxiv.org/pdf/2108.08718.pdf>

Extreme UV quiet Sun brightenings observed by Solar Orbiter/EUI

D. **Berghmans**, F. Auchere, D. M. Long, E. Soubrie, M. Mierla A.N. Zhukov, U. Schuhle, P. Antolin, L. Harra S. Parenti, O. Podladchikova, R. Aznar Cuadrado, E. Buchlin, L. Dolla, C. Verbeeck, S. Gissot, L. Teriaca, M. Haberreiter, A.C. Katsiyannis, L. Rodriguez, E. Kraaikamp, P.J. Smith, K. Stegen, P. Rochus, J. P. Halain, L. Jacques, W.T. Thompson, B. Inhester

A&A 2021

<https://arxiv.org/pdf/2104.03382.pdf>

June

Flux ropes and dynamics of the heliospheric current sheet

[V. Réville](#), [N. Fargette](#), [A.P. Rouillard](#), [B. Lavraud](#), [M. Velli](#), [A. Strugarek](#), [S. Parenti](#), [A.S. Brun](#), [C. Shi](#), [A. Kouloumvakos](#), [N. Poirier](#), [R.F. Pinto](#), [P. Louarn](#), [A. Fedorov](#), [C.J. Owen](#), [V. Génot](#), [T.S. Horbury](#), [R. Laker](#), [H. O'Brien](#), [V. Angelini](#), [E. Fauchon-Jones](#), [J.C. Kasper](#)
A&A 2021
<https://arxiv.org/pdf/2112.07445.pdf>

1 Jun

Widespread 1-2 MeV Energetic Particles Associated with Slow and Narrow Coronal Mass Ejections: Parker Solar Probe and STEREO Measurements

Bin Zhuang, Noé Lugaz, David Lario
ApJ 2021

5 June

Imaging a large coronal loop using type U solar radio burst interferometry

[Jinge Zhang](#), [Hamish A.S. Reid](#), [Eoin Carley](#), [Laurent Lamy](#), [Pietro Zucca](#), [Peijin Zhang](#), [Baptiste Ceconi](#)
ApJ 2024
<https://arxiv.org/pdf/2402.04822.pdf>

Source positions of an interplanetary type III radio burst and anisotropic radio-wave scattering

[Xingyao Chen](#), [Eduard P. Kontar](#), [Nicolina Chrysaphi](#), [Peijin Zhang](#), [Vratislav Krupar](#), [Sophie Musset](#), [Milan Maksimovic](#), [Natasha L. S. Jeffrey](#), [Francesco Azzollini](#), [Antonio Vecchio](#)
A&A 2023
<https://arxiv.org/pdf/2306.09160.pdf>

Parker Solar Probe detects solar radio bursts related with a behind-the-limb active region

Aleksander A. Stanislavsky, Igor N. Bubnov, Artem A. Koval, Serge N. Yerin
A&A 2021
<https://arxiv.org/pdf/2110.08644.pdf>

First Type III Solar Radio Bursts of Solar Cycle 25

Juha Kallunki, Derek McKay & Merja Tornikoski
Solar Physics volume 296, Article number: 57 (2021)
<https://doi.org/10.1007/s11207-021-01790-9>
<https://link.springer.com/content/pdf/10.1007/s11207-021-01790-9.pdf>

The first detection of the solar U+III association with an antenna prototype for the future lunar observatory

Lev Stanislavsky, Igor Bubnov, Oleksandr Konovalenko, Petro Tokarsky, Serhiy Yerin
Research in Astronomy and Astrophysics 2021
<https://arxiv.org/pdf/2102.02533.pdf>

5-8 June

Formation of an Intermediate Filament Driven by Small-scale Magnetic Reconnection

Xia Sun^{1,2}, Xiaoli Yan^{2,3}, Hongfei Liang¹, Zhike Xue^{2,3}, Jincheng Wang^{2,3}, Liheng Yang^{2,3}, Zhe Xu^{2,3}, Liping Yang², Yang Peng², Qiaoling Li^{2,4} Show full author list
2023 ApJ 944 161
<https://iopscience.iop.org/article/10.3847/1538-4357/acaa3e/pdf>

6 Jun

Multi-instrument STIX microflare study

J. Saqri, A.M. Veronig, A. Warmuth, E.C.M. Dickson, A.F. Battaglia, T. Podladchikova, H. Xiao, M. Battaglia, G.J. Hurford, S. Krucker
A&A 2022

<https://arxiv.org/pdf/2201.00712.pdf>

6-7 Jun

First joint X-ray solar microflare observations with NuSTAR and Solar Orbiter/STIX
[Natália Bajnoková](#), [Iain G. Hannah](#), [Kristopher Cooper](#), [Säm Krucker](#), [Brian W. Grefenstette](#), [David M. Smith](#), [Natasha L. S. Jeffrey](#), [Jessie Duncan](#)

MNRAS 2024

<https://arxiv.org/pdf/2409.04722>

7 Jun

A Data-constrained Scheme for the Reconstruction of Solar Wind Parameters in the Inner Heliosphere

Man [Zhang](#)^{3,1}, [Xueshang Feng](#)^{3,1,2}, [Liping Yang](#)¹, and [Xiaoqing Liu](#)¹

2023 ApJS 264 36

<https://iopscience.iop.org/article/10.3847/1538-4365/acaddc/pdf>

Solar Chromospheric Network as a Source for Solar Wind Switchbacks

[Jeongwoo Lee](#)^{1,2,3}, [Vasyl Yurchyshyn](#)^{1,2,3}, [Haimin Wang](#)^{1,2,3}, [Xu Yang](#)^{1,2,3}, [Wenda Cao](#)^{1,2,3}, and [Juan Carlos Martínez Oliveros](#)⁴

2022 ApJL 935 L27

<https://iopscience.iop.org/article/10.3847/2041-8213/ac86bf/pdf>

Multi-instrument STIX microflare study

[J. Saqri](#), [A.M. Veronig](#), [A. Warmuth](#), [E.C.M. Dickson](#), [A.F. Battaglia](#), [T. Podladchikova](#), [H. Xiao](#), [M. Battaglia](#), [G.J. Hurford](#), [S. Krucker](#)

A&A 2022

<https://arxiv.org/pdf/2201.00712.pdf>

STIX X-ray microflare observations during the Solar Orbiter commissioning phase

[Andrea Francesco Battaglia](#), [Jonas Saqri](#), [Paolo Massa](#), [Emma Perracchione](#), [Ewan C. M. Dickson](#), [Hualin Xiao](#), [Astrid M. Veronig](#), [Alexander Warmuth](#),

A&A 2021

<https://arxiv.org/pdf/2106.10058.pdf>

9 June A dark magnetic filament bisecting sunspot AR2765 erupted on June 9th at 1800 UT.

Ground Based Support of the Space Mission Parker Performed with Ukrainian Low Frequency Radio Telescopes

[Vladimir Dorovskyy](#), [Valentin Melnik](#), [Anatolii Brazhenko](#)

Radio Physics and Radio Astronomy. Vol. 28, No. 2, 2023

<https://arxiv.org/ftp/arxiv/papers/2307/2307.03016.pdf>

9-10 Jun

Statistical Study of Ejections in Coronal Hole Regions As Possible Sources of Solar Wind Switchbacks and Small-scale Magnetic Flux Ropes

[Nengyi Huang](#)^{1,2}, [Sophia D'Anna](#)¹, and [Haimin Wang](#)^{1,2}

2023 ApJL 946 L17

<https://iopscience.iop.org/article/10.3847/2041-8213/acc0f1/pdf>

13 Jun

STIX X-ray microflare observations during the Solar Orbiter commissioning phase

[Andrea Francesco Battaglia](#), [Jonas Saqri](#), [Paolo Massa](#), [Emma Perracchione](#), [Ewan C. M. Dickson](#), [Hualin Xiao](#), [Astrid M. Veronig](#), [Alexander Warmuth](#),

A&A 2021

<https://arxiv.org/pdf/2106.10058.pdf>

17 Jun

First observations from the SPICE EUV spectrometer on Solar Orbiter

A. **Fludra**, M. Caldwell, A. Giunta, T. Grundy, S. Guest, S. Leeks, S. Sidher, F. Auchère, M. Carlsson, D. Hassler, H. Peter, R. Aznar Cuadrado, É. Buchlin, S. Caminade, C. DeForest, T. Fredvik, M. Haberreiter, L. Harra, M. Janvier, T. Kucera, D. Müller, S. Parenti, W. Schmutz, U. Schühle, S.K. Solanki, L. Teriaca, W.T. Thompson, S. Tustain, D. Williams, P.R. Young, L.P. Chitta
A&A **2021**

<https://arxiv.org/pdf/2110.11252.pdf>

18 Jun

³He-rich solar energetic particle events observed on the first perihelion pass of Solar Orbiter

G. M. **Mason**¹, G. C. Ho¹, R. C. Allen¹, J. Rodríguez-Pacheco², et al.
A&A 656, L1 (2021)

<https://www.aanda.org/articles/aa/pdf/2021/12/aa39752-20.pdf>

<https://doi.org/10.1051/0004-6361/202039752>

19-24 June Solar Orbiter's first perihelion at 0.5 AU

Signatures of coronal hole substructure in the solar wind: combined Solar Orbiter remote sensing and in situ measurements

T. S. **Horbury**, R. Laker, L. Rodriguez, K. Steinvall, M. Maksimovic, S. Livi, D. Berghmans, F. Auchere, A. N. Zhukov, Yu. V. Khotyaintsev, L. Woodham, L. Matteini, J. Stawarz, T. Woolley, S. D. Bale, A. Rouillard, H. O'Brien, V. Evans, V. Angelini, C. Owen, S. K. Solanki, B. Nicula, D. Muller, I. Zouganelis
A&A **2021**

<https://arxiv.org/pdf/2104.14960.pdf>

20 Jun

An Unsupervised Machine Learning-based Algorithm for Detecting Weak Impulsive Narrowband Quiet Sun Emissions and Characterizing Their Morphology

Shabbir **Bawaji**^{6,1}, Ujjaini Alam¹, Surajit Mondal², Divya Oberoi³, and Ayan Biswas^{3,4,5}
2023 ApJ 954 39

<https://iopscience.iop.org/article/10.3847/1538-4357/ace042/pdf>

Characterizing the Spectral Structure of Weak Impulsive Narrowband Quiet Sun Emissions

[Surajit Mondal](#), [Divya Oberoi](#), [Ayan Biswas](#), [Devojyoti Kansabanik](#)

ApJ **2023**

<https://arxiv.org/pdf/2306.16390.pdf>

Study of radio transients from the quiet Sun during an extremely quiet time

[Surajit Mondal](#), [Divya Oberoi](#), [Ayan Biswas](#)

ApJ **2022**

<https://arxiv.org/pdf/2212.00503.pdf>

21 June Затмение

Modeling CME encounters at Parker Solar Probe with OSPREI: Dependence on photospheric and coronal conditions*

Vincent E. **Ledvina**^{1,*,**}, Erika Palmerio¹, Christina Kay^{2,3}, Nada Al-Haddad⁴ and Pete Riley¹
A&A 673, A96 (2023)

<https://doi.org/10.1051/0004-6361/202245445>

<https://www.aanda.org/articles/aa/pdf/2023/05/aa45445-22.pdf>

Modeling CME encounters at Parker Solar Probe with OSPREI: Dependence on photospheric and coronal conditions

[Vincent E. Ledvina](#), [Erika Palmerio](#), [Christina Kay](#), [Nada Al-Haddad](#), [Pete Riley](#)

A&A 2023

Radio Interferometric Observations of the Sun Using Commercial Dish TV Antennas

G. V. S. Gireesh, C. Kathiravan, Indrajit V. Barve & R. Ramesh

Solar Physics volume 296, Article number: 121 (2021)

<https://link.springer.com/content/pdf/10.1007/s11207-021-01871-9.pdf>

<https://doi.org/10.1007/s11207-021-01871-9>

21-26 June

Predicting the Magnetic Fields of a Stealth CME Detected by Parker Solar Probe at 0.5 AU

Erika Palmerio, Christina Kay, Nada Al-Haddad, Benjamin J. Lynch, Wenyuan Yu, Michael L. Stevens, Sanchita Pal, Christina O. LeeApJ 2021

<https://arxiv.org/pdf/2109.04933.pdf>

22 Jun

Eruption and Interplanetary Evolution of a Stealthy Streamer-Blowout CME Observed by PSP at ~0.5~AU

[Sanchita Pal](#), [Benjamin J. Lynch](#), [Simon W. Good](#), [Erika Palmerio](#), [Eleanna Asvestari](#), [Jens Pomoell](#), [Michael L. Stevens](#), [Emilia K. J. Kilpua](#)

Frontiers 2022

<https://arxiv.org/pdf/2205.07713.pdf>

23 June

Multipoint ICME events during the first year of combined Solar Orbiter, BepiColombo, Parker Solar Probe, Wind and STEREO-A observations

C. Möstl, A. J. Weiss, M. A. Reiss, T. Amerstorfer, R. L. Bailey, J. Hinterreiter, M. Bauer, D. Barnes, J. A. Davies, R. A. Harrison, J. L. Freiherr von Forstner, E. E. Davies, D. Heyner, T. Horbury, S. D. BaleApJL 2021

<https://arxiv.org/pdf/2109.07200.pdf>

25 Jun

Parker Solar Probe: Four Years of Discoveries at Solar Cycle Minimum

Review

[N. E. Raouafi](#), [L. Matteini](#), [J. Squire](#), [S. T. Badman](#), [M. Velli](#), +++

Space Science Reviews 2023 157 pages, 65 figures

<https://arxiv.org/pdf/2301.02727.pdf>

30 Jun

LANGMUIR WAVES ASSOCIATED WITH MAGNETIC HOLES IN THE SOLAR WIND

J.J. Boldú^{1,2}, D. B. Graham¹, M. Morooka¹, M. André¹ Yu. V. Khotyaintsev¹, T. Karlsson³, J. Souček⁴, D. Piša⁴, and M. Maksimovic⁵

Solar Orbiter nugget #3 2023

<https://www.cosmos.esa.int/web/solar-orbiter/science-nuggets/langmuir-waves-associated-with-magnetic-holes-in-the-solar-wind>

9-14 July Небольшой CME – источник бури 14-ого Dst~-65 nT

Predicting CMEs using ELEvoHI with STEREO-HI beacon data

Maïke Bauer, Tanja Amerstorfer, Jürgen Hinterreiter, Andreas J. Weiss, Jackie A. Davies, Christian Möstl, Ute V. Amerstorfer, Martin A. Reiss, Richard A. Harrison

Space Weather 2021

<https://arxiv.org/pdf/2108.08072.pdf>

11 Jul

CESRA #3215 2022 <https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3215>

3He-rich solar energetic particle events observed on the first perihelion pass of Solar Orbiter

G. M. **Mason**¹, G. C. Ho¹, R. C. Allen¹, J. Rodríguez-Pacheco², et al.
A&A 656, L1 (2021)

<https://www.aanda.org/articles/aa/pdf/2021/12/aa39752-20.pdf>

<https://doi.org/10.1051/0004-6361/202039752>

Simulations of radio-wave anisotropic scattering to interpret type III radio bursts measurements by Solar Orbiter, Parker Solar Probe, STEREO and Wind

S. **Musset**, M. Maksimovic, E. Kontar, V. Krupar, N. Chrisaphi, X. Bonnin, A. Vecchio, B. Cecconi, A. Zaslavsky, K. Issautier, S. D. Bale, M. Pulupa

A&A 2021

<https://arxiv.org/pdf/2109.13713.pdf>

15 Jul-15 Oct

Evolution of coronal hole solar wind in the inner heliosphere: Combined observations by Solar Orbiter and Parker Solar Probe

D. **Perrone**¹, S. Perri², R. Bruno³, D. Stansby⁴, R. D'Amicis³, +++

A&A 668, A189 (2022)

<https://doi.org/10.1051/0004-6361/202243989>

<https://www.aanda.org/articles/aa/pdf/2022/12/aa43989-22.pdf>

16 Jul

The scintillating tail of comet C/2020 F3 (Neowise)[★]

R. A. **Fallows**^{1,3}, B. Forte², M. Mevius¹, M. A. Brentjens¹, C. G. Bassa¹, M. M. Bisi³, A. Offringa¹, G. Shaifullah^{4,5,6}, C. Tiburzi⁶, H. Vedantham¹ and P. Zucca¹

A&A 667, A57 (2022)

<https://www.aanda.org/articles/aa/pdf/2022/11/aa44377-22.pdf>

Magnetic reconnection as a mechanism to produce multiple proton populations and beams locally in the solar wind

B. **Lavraud**, R. Kieokaew, N. Fargette, et al.

A&A 2021

<https://arxiv.org/pdf/2109.11232.pdf>

20 Jul

3He-rich solar energetic particle events observed on the first perihelion pass of Solar Orbiter

G. M. **Mason**¹, G. C. Ho¹, R. C. Allen¹, J. Rodríguez-Pacheco², et al.

A&A 656, L1 (2021)

<https://www.aanda.org/articles/aa/pdf/2021/12/aa39752-20.pdf>

<https://doi.org/10.1051/0004-6361/202039752>

21 Jul

Discrepancy between the Low-frequency Cutoffs of Type III Radio Bursts Based on Simultaneous Observations by WIND and PSP

Bing **Ma** (马兵)^{1,2}, Ling Chen (陈玲)^{1,3}, Dejin Wu (吴德金)^{1,3}, Marc Pulupa⁴, and Stuart D. Bale⁴

2022 ApJL 932 L26

<https://iopscience.iop.org/article/10.3847/2041-8213/ac7525/pdf>

First year of energetic particle measurements in the inner heliosphere with Solar Orbiter's Energetic Particle Detector

R. F. Wimmer-Schweingruber, N. Janitzek, D. Pacheco, I. Cernuda,

A&A 2021

<https://arxiv.org/pdf/2108.02020.pdf>

30-31 Jul

Statistical Properties of Magnetic Bright Points at Different Latitudes and Longitudes of the Sun.

Zhao, L., Yang, P., Bai, H. et al.

Sol Phys 299, 1 (2024).

<https://doi.org/10.1007/s11207-023-02242-2>

Spectroscopic Detection of Alfvénic Waves in the Chromospheric Fibrils of a Solar-quiet Region

Hannah Kwak¹, Jongchul Chae², Eun-Kyung Lim¹, Kyoung-Sun Lee², Donguk Song^{1,3}, and Heesu Yang¹

2023 ApJ 958 131

<https://iopscience.iop.org/article/10.3847/1538-4357/ad06b5/pdf>

Research on the quantity and brightness evolution characteristics of Photospheric Bright Points groups

HaiCheng Bai

A&A 2022

<https://arxiv.org/pdf/2210.02635.pdf>

3 Aug

Efficient Electron Acceleration Driven by Flux Rope Evolution during Turbulent Reconnection

Z. Wang^{1,2}, A. Vaivads², H. S. Fu^{1,3}, J. B. Cao^{1,3}, and Y. Y. Liu^{1,3}

2023 ApJ 946 39

<https://iopscience.iop.org/article/10.3847/1538-4357/acbd3e/pdf>

5 Aug

³He-rich solar energetic particle events observed on the first perihelion pass of Solar Orbiter

G. M. Mason¹, G. C. Ho¹, R. C. Allen¹, J. Rodríguez-Pacheco², et al.

A&A 656, L1 (2021)

<https://www.aanda.org/articles/aa/pdf/2021/12/aa39752-20.pdf>

<https://doi.org/10.1051/0004-6361/202039752>

7-16 Aug

Observations of magnetic reconnection in the deep solar atmosphere in the H ϵ line \star

Luc H. M. Rouppe van der Voort^{1,2}, Jayant Joshi³ and Kilian Krikova^{1,2}

A&A, 683, A190 (2024)

<https://www.aanda.org/articles/aa/pdf/2024/03/aa48976-23.pdf>

11 Aug

Ultra-high-resolution observations of plasmoid-mediated magnetic reconnection in the deep solar atmosphere \star

Luc H. M. Rouppe van der Voort^{1,2}, Michiel van Noort³ and Jaime de la Cruz Rodríguez⁴

A&A 673, A11 (2023)

<https://www.aanda.org/articles/aa/pdf/2023/05/aa45933-23.pdf>

28 Aug-28 Sep

Evolution of coronal hole solar wind in the inner heliosphere: Combined observations by Solar Orbiter and Parker Solar Probe

D. Perrone¹, S. Perri², R. Bruno³, D. Stansby⁴, R. D'Amicis³, +

A&A 668, A189 (2022)

<https://doi.org/10.1051/0004-6361/202243989>

<https://www.aanda.org/articles/aa/pdf/2022/12/aa43989-22.pdf>

31 Aug

Planar Magnetic Structures Downstream of Coronal Mass Ejection-driven Shocks in the Inner Heliosphere

Mengsi Ruan^{1,2}, Pingbing Zuo^{1,2}, Xueshang Feng^{1,2}, Qi Xu^{1,2}, Zilu Zhou³, Jiayun Wei^{1,2}, Chaowei Jiang^{1,2}, Yi Wang^{1,2}, Xiaojun Xu³, and Zhenning Shen³

2023 ApJ 951 47

<https://iopscience.iop.org/article/10.3847/1538-4357/acd245/pdf>

6 Sep

Study of solar brightness profiles in the 18-26 GHz frequency range with INAF radio telescopes II. Evidence for coronal emission

M. Marongiu, A. Pellizzoni, S. Righini, S. Mulas, R. Nesti, A. Burtovoi, +

A&A 2024

<https://arxiv.org/pdf/2402.07018.pdf>

13 Sep

Spectral Characteristics of Fundamental-Harmonic Pairs of Interplanetary Type III Radio Bursts Observed by PSP

Ling Chen (陈玲)^{1,2}, Bing Ma (马兵)¹, Dejin Wu (吴德金)^{1,2}, Zongjun Ning (宁宗军)¹, Xiaowei Zhou (周晓伟)¹, and Stuart D. Bale^{3,4,5,6}

2024 ApJL 975 L37

<https://iopscience.iop.org/article/10.3847/2041-8213/ad89c2/pdf>

17 Sep

Solar observations with single-dish INAF radio telescopes: continuum imaging in the 18-26 GHz range

A. Pellizzoni, S. Righini, M. N. Iacolina, M. Marongiu, et al.

Solar Phys. 2022

<https://arxiv.org/pdf/2205.00197.pdf>

³He-rich solar energetic particle events observed on the first perihelion pass of Solar Orbiter

G. M. Mason¹, G. C. Ho¹, R. C. Allen¹, J. Rodríguez-Pacheco², et al.

A&A 656, L1 (2021)

<https://www.aanda.org/articles/aa/pdf/2021/12/aa39752-20.pdf>

<https://doi.org/10.1051/0004-6361/202039752>

22 Sep

Propagating Oscillations in the Lower Atmosphere under Coronal Holes

Andrei Chelpanov, Nikolai Kobanov, Maksim Chelpanov, Aleksandr Kiselev

ApJ 2021

<https://arxiv.org/pdf/2110.12672.pdf>

24-30 Sep

First Image of the Sun with MeerKAT Solar Observations: Opening a New Frontier in Solar Physics

[Devojyoti Kansabanik](#), [Surajit Mondal](#), [Divya Oberoi](#), [James O. Chibueze](#), [N. E. Engelbrecht](#), [R. D. Strauss](#), [Eduard P. Kontar](#), [Gert J. J. Botha](#), [Ruhann Steyn](#)

ApJ 2023

<https://arxiv.org/pdf/2307.01895.pdf>

25 Sep-2 Oct

Tracking of magnetic helicity evolution in the inner heliosphere

A radial alignment study

T. [Alberti](#)¹, Y. Narita², L. Z. Hadid³, D. Heyner⁴, A. Milillo¹, C. Plainaki⁵, H.-U. Auster⁴ and I. Richter⁴

A&A 664, L8 (2022)

<https://www.aanda.org/articles/aa/pdf/2022/08/aa44314-22.pdf>

Patches of Magnetic Switchbacks and Their Origins

Chen [Shi](#)¹, Olga Panasenco², Marco Velli¹, Anna Tenerani³, Jaye L. Verniero⁴, Nikos Sioulas et al.

2022 ApJ 934 152

<https://iopscience.iop.org/article/10.3847/1538-4357/ac7c11/pdf>

Oscillation Dynamics in Short-Lived Facula Regions during Their Lifetime

[Andrei Chelpanov](#), [Nikolai Kobanov](#)

ApJ 2022

<https://arxiv.org/pdf/2202.07239.pdf>

26-27 Sep

Spectroscopic Imaging of the Sun with MeerKAT: Opening a New Frontier in Solar Physics

Devojyoti [Kansabanik](#)¹, Surajit Mondal², Divya Oberoi¹, James O. Chibueze^{3,4,5}, N. E. Engelbrecht⁴, R. D. Strauss⁴, E. P. Kontar⁶, G. J. J. Botha⁷, P. J. Steyn⁴, and Amoré E. Nel⁸

2024 ApJ 961 96

<https://iopscience.iop.org/article/10.3847/1538-4357/ad0b7f/pdf>

27 Sep

A solar source of Alfvénic magnetic field switchbacks: $\{em\ in\ situ\}$ remnants of magnetic funnels on supergranulation scales

S. D. [Bale](#), T. S. Horbury, M. Velli, M. I. Desai, J. S. Halekas, M. D. McManus, O. Panasenco, S. T. Badman, T. A. Bowen, B. D. G. Chandran, J. F. Drake, J. C. Kasper, R. Laker, A. Mallet, L. Matteini, T. D. Phan, N. E. Raouafi, J. Squire, L. D. Woodham, T. Wooley

ApJ 2021

<https://arxiv.org/pdf/2109.01069.pdf>

28 Sep

Magnetic fields beneath active region coronal loops

[Philip Judge](#), [Lucia Kleint](#), [Christoph Kuckein](#)

ApJ 2024

<https://arxiv.org/pdf/2405.05391>

29-30 Sep

PSP/IS☉IS Observation of a Solar Energetic Particle Event Associated With a Streamer Blowout Coronal Mass Ejection During Encounter 6

T. [Getachew](#), [D. J. McComas](#), [C. J. Joyce](#), [E. Palmerio](#), [E. R. Christian](#), + + +

ApJ 2021

<https://arxiv.org/pdf/2112.04671.pdf>

16 Oct

The role of the chromospheric magnetic canopy in the formation of a sunspot penumbra

[P. Lindner](#), [C. Kuckein](#), [S.J. González Manrique](#), [N. Bello González](#), [L. Kleint](#), [T. Berkefeld](#)

A&A 2023

<https://arxiv.org/pdf/2303.07112.pdf>

Soft X-ray Spectral Diagnostics of Multi-thermal Plasma in Solar Flares with Chandrayaan-2 XSM

[N. P. S. Mithun](#), [Santosh V. Vadawale](#), [Giulio Del Zanna](#), [Yamini K. Rao](#), [Bhuwan Joshi](#), [Aveek](#)

[Sarkar](#), [Biswajit Mondal](#), [P. Janardhan](#), [Anil Bhardwaj](#), [Helen E. Mason](#)

ApJ 2022

<https://arxiv.org/pdf/2210.03364.pdf>

19 Oct

Coronal microjets in quiet-Sun regions observed with the Extreme Ultraviolet Imager onboard Solar Orbiter

Zhenyong **Hou**, Hui Tian, David Berghmans, Hechao Chen, Luca Teriaca, Udo Schuhle, Yuhang Gao, Yajie Chen, Jiansen He, Linghua Wang, Xianyong Bai

ApJ 2021

<https://arxiv.org/pdf/2108.08718.pdf>

21-31 Oct

Oscillation Dynamics in Short-Lived Facula Regions during Their Lifetime

[Andrei Chelpanov](#), [Nikolai Kobanov](#)

ApJ 2022

<https://arxiv.org/pdf/2202.07239.pdf>

22 Oct

Coronal microjets in quiet-Sun regions observed with the Extreme Ultraviolet Imager onboard Solar Orbiter

Zhenyong **Hou**, Hui Tian, David Berghmans, Hechao Chen, Luca Teriaca, Udo Schuhle, Yuhang Gao, Yajie Chen, Jiansen He, Linghua Wang, Xianyong Bai

ApJ 2021

<https://arxiv.org/pdf/2108.08718.pdf>

23 Oct 15-18 UT, эрупция NE волокна, CME

23-24 Oct Буря -42 нТл associated with CH976

26 Oct ~22 UT- эрупция N/центрального волокна; A partial halo CME was associated with a filament eruption in AR S6588 starting at 20:38 UT

Formation of solar quiescent coronal loops through magnetic reconnection in an emerging active region

Zhenyong **Hou**, Hui Tian, Hechao Chen, Xiaoshuai Zhu, Zhenghua Huang, Xianyong Bai, Jiansen He, Yongliang Song, Lidong Xia

ApJ 2021

<https://arxiv.org/pdf/2105.03199.pdf>

30 Oct

Lateral Confinement and the Remarkably Self-similar Nature

Y.-M. Wang¹ and P. Hess¹

2023 ApJ 952 85

<https://iopscience.iop.org/article/10.3847/1538-4357/acd638/pdf>

10 Nov

Transient dark ribbons at the outer boundaries of sunspot superpenumbrae in the chromosphere

Chengzhi **Xu**, Jun Zhang and Tao Ding

A&A 678, A36 (2023)

<https://www.aanda.org/articles/aa/pdf/2023/10/aa46735-23.pdf>

Plasma composition measurements in an active region from Solar Orbiter/SPICE and Hinode/EIS

David H. **Brooks**, [Miho Janvier](#), [Deborah Baker](#)+++

ApJ 2022

<https://arxiv.org/pdf/2210.08899>

11Nov

Macrosicules and Their Connection to Magnetic Reconnection in the Lower Atmosphere

[Yadan Duan](#), [Yuandeng Shen](#), [Hechao Chen](#), [Zehao Tang](#), [Chenrui Zhou](#), [Xinping Zhou](#), [Song Tan](#)

ApJL 2022

<https://arxiv.org/pdf/2212.03425.pdf>

13-27 Nov

What is Exceptional about Solar Activity in the Early Phase of Cycle 25?

Kiran **Jain**¹, Charles Lindsey², and Sushanta C. Tripathy¹

2021 Res. Notes AAS 5 253

<https://iopscience.iop.org/article/10.3847/2515-5172/ac3429>

<https://doi.org/10.3847/2515-5172/ac3429>

17 Nov

Plasma composition measurements in an active region from Solar Orbiter/SPICE and Hinode/EIS

David H. **Brooks**, [Miho Janvier](#), [Deborah Baker](#)+++

ApJ 2022

<https://arxiv.org/pdf/2210.08899>

17-23 Nov

The first gradual solar energetic particle event with enhanced 3He abundance on Solar Orbiter

R. **Bučík**, [G. M. Mason](#), [R. Gómez-Herrero](#), [V. Krupar](#), +++

A&A 669, A13 (2023)

<https://arxiv.org/pdf/2210.16403.pdf>

<https://www.aanda.org/articles/aa/pdf/2023/01/aa45037-22.pdf>

The long period of 3He-rich solar energetic particles measured by Solar Orbiter 2020 November 17–23

R. **Bučík**¹, [G. M. Mason](#)², [R. Gómez-Herrero](#)³, [D. Lario](#)⁴, [L. Balmaceda](#)^{4, 5}, [N. V. Nitta](#)⁶, et al.

Astronomy & Astrophysics, Lett. 2021

<https://www.aanda.org/articles/aa/pdf/forth/aa41009-21.pdf>

<https://arxiv.org/pdf/2109.05570.pdf>

18 Nov

First determination of the angular dependence of rise and decay times of solar radio bursts using multi-spacecraft observations

[Nicolina Chrysaphi](#), [Milan Maksimovic](#), [Eduard P. Kontar](#), [Antonio Vecchio](#), [Xingyao Chen](#), [Aikaterini Pesini](#)

A&A 2024

<https://arxiv.org/pdf/2404.01497.pdf>

In-flight radiometric calibration of the Metis Visible Light channel using stars and comparison with STEREO-A/COR2 data

Y. De Leo^{1,2}, A. Burtovoi³, L. Teriaca¹, M. Romoli^{3,4}, + + +

A&A 676, A45 (2023)

<https://www.aanda.org/articles/aa/pdf/2023/08/aa45979-23.pdf>

Imaging from STIX visibility amplitudes

Paolo Massa, Emma Perracchione, Sara Garbarino, Andrea F Battaglia, Federico Benvenuto, Michele Piana, Gordon Hurford, Sam Krucker

A&A Volume 656, id.A25 2021

<https://arxiv.org/pdf/2108.04901.pdf>

<https://www.aanda.org/articles/aa/pdf/2021/12/aa40946-21.pdf>

19 Nov

Parker Solar Probe: Four Years of Discoveries at Solar Cycle Minimum

Review

N. E. Raouafi, L. Matteini, J. Squire, S. T. Badman, M. Velli, + + +

Space Science Reviews 2023 157 pages, 65 figures

<https://arxiv.org/pdf/2301.02727.pdf>

Moving structures in ultraviolet bright points: observations from Solar Orbiter/EUI

Dong Li

A&A 2022

<https://arxiv.org/pdf/2204.02047>

Coronal microjets in quiet-Sun regions observed with the Extreme Ultraviolet Imager onboard Solar Orbiter

Zhenyong Hou, Hui Tian, David Berghmans, Hechao Chen, Luca Teriaca, Udo Schuhle, Yuhang Gao, Yajie Chen, Jiansen He, Linghua Wang, Xianyong Bai

ApJ 2021

<https://arxiv.org/pdf/2108.08718.pdf>

23 Nov

Solar observations with single-dish INAF radio telescopes: continuum imaging in the 18-26 GHz range

A. Pellizzoni, S. Righini, M. N. Iacolina, M. Marongiu, et al.

Solar Phys. 2022

<https://arxiv.org/pdf/2205.00197.pdf>

24 Nov >12-13 UT – a halo CME from a backside eruption

http://spaceweather.gmu.edu/seeds/dailymkmovie_ql.php?cme=20201124

Solar Electron Beam—Langmuir Wave Interactions and How They Modify Solar Electron Beam Spectra: Solar Orbiter Observations of a Match Made in the Heliosphere

Camille Y. Lorfing¹, Hamish A. S. Reid¹, Raúl Gómez-Herrero², Milan Maksimovic³, Georgios Nicolaou¹, Christopher J. Owen¹, Javier Rodriguez-Pacheco², Daniel F. Ryan⁴, Domenico Trotta⁵, and Daniel Verscharen¹

2023 ApJ 959 128

<https://iopscience.iop.org/article/10.3847/1538-4357/ad0be3/pdf>

<https://arxiv.org/pdf/2311.14444.pdf>

The first gradual solar energetic particle event with enhanced ³He abundance on Solar Orbiter

R. Bučik, G. M. Mason, R. Gómez-Herrero, V. Krupar, + + +

A&A 669, A13 (2023)

<https://arxiv.org/pdf/2210.16403.pdf>

<https://www.aanda.org/articles/aa/pdf/2023/01/aa45037-22.pdf>

Direct First PSP Observation of the Interaction of Two Successive Interplanetary Coronal Mass Ejections in November 2020

Teresa **Nieves-Chinchilla**, [Nathalia Alzate](#), [Hebe Cremades](#), [Laura Rodriguez-Garcia](#), et al.

ApJ 2022

<https://arxiv.org/pdf/2201.11212.pdf>

26 Nov

Probing Velocity Dispersion inside CMEs in Inner Corona: New Insights on CME Initiation

[Satabdwa Majumdar](#), [Elke D' Huys](#), [Marilena Mierla](#), [Nitin Vashishtha](#), [Dana-Camelia Talpeanu](#), [Dipankar Banerjee](#), [Martin A. Reiss](#)

ApJL 2024

<https://arxiv.org/pdf/2407.02244>

Direct First Parker Solar Probe Observation of the Interaction of Two Successive Interplanetary Coronal Mass Ejections in 2020 November

Teresa **Nieves-Chinchilla**¹, Nathalia Alzate^{1,2}, Hebe Cremades³, Laura Rodríguez-García⁴, Luiz F. G. Dos Santos⁵, Ayris Narock^{1,2}, Hong Xie^{1,6}, Adam Szabo¹, Erika Palmerio^{7,8}, Vratislav Krupar^{1,9}Show full author list

2022 ApJ 930 88

<https://iopscience.iop.org/article/10.3847/1538-4357/ac590b/pdf>

<https://arxiv.org/pdf/2201.11212.pdf>

29 Nov 13:11 M4.4 behind the ES-limb LDE, a significant wide CME, type II, затем слабые протоны J10~6

https://www.spaceweather.com/images2020/29nov20/m4flare_teal_anim.gif

https://www.spaceweather.com/images2020/29nov20/cme_c3_1024.jpg

This could be the same region that produced a back-sided full halo CME a few days ago (on 24 Nov).

<https://www.nesdis.noaa.gov/news/time-lapse-of-solar-cycle-25-displays-increasing-activity-the-sun>

Energetic Particles from Quasi-Separatrix Layers and Current Sheets at the Sun

Nathan A. **Schwadron**, [Ronald M. Caplan](#), [Jon A. Linker](#), [Erika Palmerio](#), [Matthew A. Young](#)

ApJ 2024

<https://arxiv.org/pdf/2410.07420>

Limb Observations of Global Solar Coronal EUV Wavefronts: the Inclination, Kinematics, Coupling with the Expanding CMEs, and Connection with the CME-driven Shocks

Huidong **Hu** (1), [Bei Zhu](#) (2), [Ying D. Liu](#) (1), [Chong Chen](#) (3), [Rui Wang](#) (1), [Xiaowei Zhao](#) (4)

ApJ 2024

<https://arxiv.org/pdf/2409.15017>

Correlation of Coronal Mass Ejection Shock Temperature with Solar Energetic Particle Intensity

Manuel Enrique **Cuesta**, [D. J. McComas](#), [L. Y. Khoo](#), [R. Bandyopadhyay](#), [T. Sharma](#), +++

ApJ 2024

<https://arxiv.org/pdf/2402.00210.pdf>

Parker Solar Probe: Four Years of Discoveries at Solar Cycle Minimum

Review

[N. E. Raouafi](#), [L. Matteini](#), [J. Squire](#), [S. T. Badman](#), [M. Velli](#), +++
Space Science Reviews 2023 157 pages, 65 figures
<https://arxiv.org/pdf/2301.02727.pdf>

Modelling the 2020 November 29 solar energetic particle event using the EUHFORIA and the iPATH model

Zheyi [Ding](#), [Nicolas Wijsen](#), [Gang Li](#), [Stefaan Poedts](#)

A&A 668, A71 2022

<https://arxiv.org/pdf/2210.16967.pdf>

<https://doi.org/10.1051/0004-6361/202244732>

<https://www.aanda.org/articles/aa/pdf/2022/12/aa44732-22.pdf>

Seismic Monitoring of the Sun's Far Hemisphere: A Crucial Component in Future Space Weather Forecasting (A White Paper Submitted to the Decadal Survey for Solar and Space Physics (Heliophysics) -- SSPH 2024-2033) Review

[Kiran Jain](#), [C. Lindsey](#), [E. Adamson](#), [C. N. Arge](#), [T. E. Berger](#), [D. C. Braun](#), [R. Chen](#), [Y. M. Collado-Vega](#), [M. Dikpati](#), [T. Felipe](#), [C. J. Henney](#), [J. T. Hoeksema](#), [R. W. Komm](#), [K. D. Leka](#), [A. R. Marble](#), [V. Martinez Pillet](#), [M. Miesch](#), [L. J. Nickisch](#), [A. A. Pevtsov](#), [V. J. Pizzo](#), [W. K. Tobiska](#), [S. C. Tripathy](#), [J. Zhao](#)

A White Paper Submitted to Decadal Survey for Solar and Space Physics (Heliophysics) – SSPH 2024-2033 2022

<https://arxiv.org/ftp/arxiv/papers/2210/2210.01291.pdf>

Multispacecraft Remote Sensing and In Situ Observations of the 2020 November 29 Coronal Mass Ejection and Associated Shock: From Solar Source to Heliospheric Impacts

[Chong Chen](#), [Ying D. Liu](#), [Bei Zhu](#)

ApJ 2022

<https://arxiv.org/pdf/2207.07534.pdf>

First report of a solar energetic particle event observed by China's Tianwen-1 mission in transit to Mars

Shuai [Fu](#), [Zheyi Ding](#), [Yongjie Zhang](#), [Xiaoping Zhang](#), [Cunhui Li](#), [Gang Li](#), [Shuwen Tang](#), [Haiyan Zhang](#), [Yi Xu](#), [Yuming Wang](#), [Jingnan Guo](#), [Lingling Zhao](#), [Yi Wang](#), [Xiangyu Hu](#), [Pengwei Luo](#), [Zhiyu Sun](#), [Yuhong Yu](#), [Lianghai Xie](#)

ApJL 2022

<https://arxiv.org/pdf/2207.06740.pdf>

The first widespread solar energetic particle event of solar cycle 25 on 2020 November 29 Shock wave properties and the wide distribution of solar energetic particles*

A. [Kouloumvakos](#)¹, R. Y. [Kwon](#)^{2,3}, L. [Rodríguez-García](#)⁴, D. [Lario](#)⁵, N. [Dresing](#)⁶, E. K. J. [Kilpua](#)⁷, R. [Vainio](#)⁶, T. [Török](#)⁸, I. [Plotnikov](#)¹, A. P. [Rouillard](#)¹, C. [Downs](#)⁸, J. A. [Linker](#)⁸, O. E. [Malandraki](#)⁹, R. F. [Pinto](#)^{1,10}, P. [Riley](#)⁸ and R. C. [Allen](#)¹¹

A&A 660, A84 (2022)

<https://doi.org/10.1051/0004-6361/202142515>

<https://www.aanda.org/articles/aa/pdf/2022/04/aa42515-21.pdf>

CMEs and SEPs During November-December 2020: A Challenge for Real-Time Space Weather Forecasting

Erika [Palmerio](#), [Christina O. Lee](#), [M. Leila Mays](#), [Janet G. Luhmann](#), [David Lario](#), [Beatriz Sánchez-Cano](#), [Ian G. Richardson](#), [Rami Vainio](#), [Michael L. Stevens](#), [Christina M. S. Cohen](#), [Konrad Steinvall](#), [Christian Möstl](#), [Andreas J. Weiss](#), [Teresa Nieves-Chinchilla](#), [Yan Li](#), [Davin E. Larson](#), [Daniel Heyner](#), [Stuart D. Bale](#), [Antoinette B. Galvin](#), [Mats Holmström](#), [Yuri V. Khotyaintsev](#), [Milan Maksimovic](#), [Igor G. Mitrofanov](#)

Space Weather **2022**
<https://arxiv.org/pdf/2203.16433.pdf>

The GOES-R Solar UltraViolet Imager

[Jonathan M. Darnel](#), [Daniel B. Seaton](#), [Christian Bethge](#), [Laurel Rachmeler](#), [Alison Jarvis](#), [Steven M. Hill](#), [Courtney L. Peck](#), [J. Marcus Hughes](#), [Jason Shapiro](#) ... [See all authors](#)

Space Weather **2022**
<https://doi.org/10.1029/2022SW003044>
<https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2022SW003044>

The first widespread solar energetic particle event observed by Solar Orbiter on 2020 November 29

A. [Kollhoff](#)¹, A. [Kouloumvakos](#)², D. [Lario](#)³, N. [Dresing](#)⁴, R. [Gómez-Herrero](#)⁵, L. [Rodríguez-García](#)⁵, O. E. [Malandraki](#)⁶, I. G. [Richardson](#)^{3,7}, A. [Posner](#)⁸, K.-L. [Klein](#)⁹, et al. +++
A&A 656, A20 (2021)

<https://doi.org/10.1051/0004-6361/202140937>
<https://www.aanda.org/articles/aa/pdf/2021/12/aa40937-21.pdf>

Energetic Electron Observations by Parker Solar Probe/IS \odot IS during the First Widespread SEP Event of Solar Cycle 25 on 2020 November 29

J. G. [Mitchell](#)^{1,2}, G. A. De [Nolfo](#)², M. E. [Hill](#)³, E. R. [Christian](#)², I. G. [Richardson](#)^{2,4}, D. J. [McComas](#)⁵, R. L. [McNutt Jr.](#)³, D. G. [Mitchell](#)³, N. A. [Schwadron](#)⁶, S. D. [Bale](#)^{7,8,9,10}, J. [Giacalone](#)¹¹, C. J. [Joyce](#)⁵, J. T. [Niehof](#)⁶, and J. R. [Szalay](#)⁵

2021 ApJ 919 119
<https://iopscience.iop.org/article/10.3847/1538-4357/ac110e/pdf>
<https://doi.org/10.3847/1538-4357/ac110e>

Multipoint ICME events during the first year of combined Solar Orbiter, BepiColombo, Parker Solar Probe, Wind and STEREO-A observations

C. [Möstl](#), A. J. [Weiss](#), M. A. [Reiss](#), T. [Amerstorfer](#), R. L. [Bailey](#), J. [Hinterreiter](#), M. [Bauer](#), D. [Barnes](#), J. [A. Davies](#), R. A. [Harrison](#), J. L. [Freiherr von Forstner](#), E. E. [Davies](#), D. [Heyner](#), T. [Horbury](#), S. D. [Bale](#)
ApJL **2021**

<https://arxiv.org/pdf/2109.07200.pdf>

Improving the Medium-Term Forecasting of Space Weather: A Big Picture Review from a Solar Observer's Perspective Review

[Angelos Vourlidas](#)
Front. Astron. Space Sci., 12 May **2021** |
<https://doi.org/10.3389/fspas.2021.651527>
<https://www.frontiersin.org/articles/10.3389/fspas.2021.651527/full>

From formation to disruption: observing multi-phase evolution of a solar flare current sheet

L. P. [Chitta](#), E. R. [Priest](#), X. [Cheng](#)
ApJ **2021**
<https://arxiv.org/pdf/2103.02352.pdf>

29 Nov-2 Dec

Direct First Parker Solar Probe Observation of the Interaction of Two Successive Interplanetary Coronal Mass Ejections in 2020 November

Teresa [Nieves-Chinchilla](#)¹, Nathalia [Alzate](#)^{1,2}, Hebe [Cremades](#)³, Laura [Rodríguez-García](#)⁴, Luiz F. G. [Dos Santos](#)⁵, Ayris [Narock](#)^{1,2}, Hong [Xie](#)^{1,6}, Adam [Szabo](#)¹, Erika [Palmerio](#)^{7,8}, Vratislav [Krupar](#)^{1,9}Show full author list

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<https://arxiv.org/pdf/2201.11212.pdf>

Comparative Analysis of the 2020 November 29 Solar Energetic Particle Event Observed by Parker Solar Probe

D. Lario¹, I. G. Richardson^{1,2}, E. Palmerio^{3,4}, N. Lugaz⁵, S. D. Bale^{3,6,7,8}, M. L. Stevens⁹, C. M. S. Cohen¹⁰, J. Giacalone¹¹, D. G. Mitchell¹², A. Szabo¹Show full author list

2021 ApJ 920 123

<https://doi.org/10.3847/1538-4357/ac157f>

29 Nov- 7 Dec

CMEs and SEPs During November-December 2020: A Challenge for Real-Time Space Weather Forecasting

Erika Palmerio, [Christina O. Lee](#), [M. Leila Mays](#), [Janet G. Luhmann](#), [David Lario](#), [Beatriz Sánchez-Cano](#), [Ian G. Richardson](#), [Rami Vainio](#), [Michael L. Stevens](#), [Christina M. S. Cohen](#), [Konrad Steinvall](#), [Christian Möstl](#), [Andreas J. Weiss](#), [Teresa Nieves-Chinchilla](#), [Yan Li](#), [Davin E. Larson](#), [Daniel Heyner](#), [Stuart D. Bale](#), [Antoinette B. Galvin](#), [Mats Holmström](#), [Yuri V. Khotyaintsev](#), [Milan Maksimovic](#), [Igor G. Mitrofanov](#)

Space Weather 2022

<https://arxiv.org/pdf/2203.16433.pdf>

30 Nov

Energetic Particles Associated with a Coronal Mass Ejection Shock Interacting with a Convected Magnetic Structure

J. Giacalone¹, D. Burgess², S. D. Bale^{2,3,4,5}, M. I. Desai⁶, J. G. Mitchell^{7,8}, D. Lario⁸, C. H. K. Chen², E. R. Christian⁸, G. A. de Nolfo⁸, M. E. Hill⁹Show full author list

2021 ApJ 921 102

<https://doi.org/10.3847/1538-4357/ac1ce1>

7 Dec 16:32: AR2790 unleashed a C7-class solar flare and hurled a CME asymmetric full halo CME toward Earth. The CME reached Earth after 02 UT on December 10.

See <https://www.spaceweather.com>

Modelling non-radially propagating coronal mass ejections and forecasting the time of their arrival at Earth

[Angelos Valentino](#), [Jasmina Magdalenic](#)

A&A 2024

<https://arxiv.org/pdf/2407.17295>

Time-of-Arrival of Coronal Mass Ejections: A Two-Phase Kinematics Approach Based on Heliospheric Imaging Observations

Paouris Evangelos, [Vourlidas Angelos](#)

Space Weather e2022SW003070 2022

<https://doi.org/10.1029/2022SW003070>

<https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2022SW003070>

CMEs and SEPs During November-December 2020: A Challenge for Real-Time Space Weather Forecasting

Erika Palmerio, [Christina O. Lee](#), [M. Leila Mays](#), [Janet G. Luhmann](#), [David Lario](#), [Beatriz Sánchez-Cano](#), [Ian G. Richardson](#), [Rami Vainio](#), [Michael L. Stevens](#), [Christina M. S. Cohen](#), [Konrad Steinvall](#), [Christian Möstl](#), [Andreas J. Weiss](#), [Teresa Nieves-Chinchilla](#), [Yan Li](#), [Davin E. Larson](#), [Daniel Heyner](#), [Stuart D. Bale](#), [Antoinette B. Galvin](#), [Mats Holmström](#), [Yuri V. Khotyaintsev](#), [Milan Maksimovic](#), [Igor G. Mitrofanov](#)

Space Weather 2022

<https://arxiv.org/pdf/2203.16433.pdf>

On the evolution of a sub-C class flare: a showcase for the capabilities of the revamped Catania Solar Telescope

Paolo **Romano**, Salvo L. Guglielmino, Pierfrancesco Costa, Mariachiara Falco, Salvatore Buttaccio, Alessandro Costa, Eugenio Martinetti, Giovanni Occhipinti, Daniele Spadaro, Rita Ventura, Giuseppe E. Capuano, Francesca Zuccarello

Solar Phys. **2021**

<https://arxiv.org/pdf/2111.08972.pdf>

7-8 Dec

Grow-up of a Filament Channel by Intermittent Small-scale Magnetic Reconnection

H. T. Li, [X. Cheng](#), [J. H. Guo](#), [X. L. Yan](#), [L. F. Wang](#), [Z. Zhong](#), [C. Li](#), [M. D. Ding](#)

A&A **2022**

<https://arxiv.org/pdf/2203.09110.pdf>

10-11 Dec

First year of energetic particle measurements in the inner heliosphere with Solar Orbiter's Energetic Particle Detector

R. F. **Wimmer-Schweingruber**, N. Janitzek, D. Pacheco, I. Cernuda,

A&A **2021**

<https://arxiv.org/pdf/2108.02020.pdf>

14 Dec - total solar eclipse that will be visible from Chile, Argentina and other parts of the southern hemisphere.

Derived Electron Densities from Linear Polarization Observations of the Visible-Light Corona During the 14 December 2020 Total Solar Eclipse

Liam **Edwards**¹ · Kaine A. Bunting¹ · Brad Ramsey¹ · Matthew Gunn¹ · Tomos Fearn² · Thomas Knight¹ · Gabriel Domingo Muro^{1,3} · Huw Morgan¹

Solar Physics (2023) 298:140

<https://doi.org/10.1007/s11207-023-02231-5>

<https://link.springer.com/content/pdf/10.1007/s11207-023-02231-5.pdf>

The Double-Bubble CME of the 2020 December 14 Total Solar Eclipse

Benjamin **Boe**, Bryan Yamashiro, Miloslav Druckmuller, Shadia Habbal

ApJL **2021**

<https://arxiv.org/pdf/2106.04027.pdf>

Serendipitous observation of a coronal mass ejection during the total solar eclipse of 14 December 2020

Guillermo **Abramson**

2021

<https://arxiv.org/pdf/2106.00784.pdf>

Cosmic Meteorology

Mike **Lockwood**, Mat Owens

Astronomy and Geophysics **2021**

<https://arxiv.org/ftp/arxiv/papers/2105/2105.12559.pdf>

27 Dec

Three-Minute Oscillations in Sunspot's Penumbrae and Superpenumbrae. Alfvénic or Sound?

[Andrei Chelpanov](#), [Nikolai Kobanov](#)

2024

<https://arxiv.org/pdf/2409.15701>

30 Dec

Observation of solar radio burst events from Mars orbit with the Shallow Radar instrument

[Christopher Gerekos](#), [Gregor Steinbrügge](#), [Immanuel Jebaraj](#), [Andreas Casillas](#), [Elena Donini](#), [Beatriz Sánchez-Cano](#), [Mark Lester](#), [Jasmina Magdaleníć](#), [Sean Peters](#), [Andrew Romero-Wolf](#), [Donald Blankenship](#)

A&A 683, A56 (2024)

<https://arxiv.org/pdf/2307.01747.pdf>

<https://www.aanda.org/articles/aa/pdf/2024/03/aa47900-23.pdf>