2021 See https://www.spaceweather.com

2 Jan Two dark **filaments** of magnetism erupted in the sun's southern hemisphere and hurled a closely-spaced **pair of CMEs** toward Earth.
See https://www.spaceweather.com for 4 Jan.

3 Jan

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

8 Jan A huge SW **filament** of magnetism launched itself into space at ~03 UT.
Another SW filament eruption (over the central meridian) at ~12 UT.
Two noticeable **CMEs**

12-16 Jan

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

14-17 Jan

Does Turbulence along the Coronal Current Sheet Drive Ion Cyclotron Waves?
Daniele **Telloni**, Gary P. Zank, Laxman Adhikari, Lingling Zhao, et al.
ApJ **2023**
https://arxiv.org/pdf/2302.10545

17 Jan

Linking Small-scale Solar Wind Properties with Large-scale Coronal Source Regions through Joint Parker Solar Probe–Metis/Solar Orbiter Observations
Daniele **Telloni**1, Gary P. Zank2,3, Luca Sorriso-Valvo4,5, Raffaella D'Amicis6, Olga Panasenco7, Roberto Susino1, Roberto Bruno6, Denise Perrone8, Laxman Adhikari2, Haoming Liang2Show full author list
2022 ApJ 935 112
https://iopscience.iop.org/article/10.3847/1538-4357/ac8103/pdf

Suprathermal Ion Energy spectra and Anisotropies near the Heliospheric Current Sheet crossing observed by the Parker Solar Probe during Encounter 7
M. I. **Desai**, D. G. Mitchell, D. J. McComas, J. F. Drake, T. Phan, J. R. Szalay, …
2021
https://arxiv.org/ftp/arxiv/papers/2111/2111.00954.pdf

17-18 Jan

Extracting the Heliographic Coordinates of Coronal Rays using Images from WISPR/Parker Solar Probe
P. C. **Liewer**, J. Qiu, F. Ark, P. Penteado, G. Stenborg, A. Vourlidas, J. R. Hall, P. Riley
Solar Phys. **2022**
https://arxiv.org/pdf/2209.02779.pdf

18 Jan

Exploring the Solar Wind from Its Source on the Corona into the Inner Heliosphere during the First Solar Orbiter–Parker Solar Probe Quadrature
Daniele **Telloni**1, Vincenzo Andretta2, Ester Antonucci1, Alessandro Bemporad1, Giuseppe E. Capuano3,4, Silvano Fineschi1, Silvio Giordano1, Shadia Habbal5, Denise Perrone6, Rui F. Pinto7,8Show full author list
2021 ApJL 920 L14
https://doi.org/10.3847/2041-8213/ac282f

20-22 Jan

A Study on the Nested Rings CME Structure Observed by the WISPR Imager Onboard Parker Solar Probe
Shaheda Begum **Shaik**, Mark G. Linton, Sarah E. Gibson, Phillip Hess, Robin C. Colaninno, Guillermo Stenborg, Carlos R. Braga, Erika Palmerio
ApJ **2024**
https://arxiv.org/pdf/2410.09601

Coronal mass ejection deformation at 0.1 au observed by WISPR
Carlos R. **Braga**, Angelos Vourlidas, Paulett C. Liewer, Phillip Hess, Guillermo Stenborg, Pete Riley
ApJ **2022**
https://arxiv.org/pdf/2209.13057.pdf

22 Jan-18 Feb
Global Effect of New Active Regions on Coronal Holes and Their Wind Streams
Y.-M. **Wang**1, K. J. Knizhnik1, I. Ugarte-Urra1, and M. J. Weberg1
2024 ApJ 972 107
https://iopscience.iop.org/article/10.3847/1538-4357/ad5f87/pdf

10 Feb
Unraveling the untwisting process and upward mass transfer of a twisted prominence driven by vortex motion
X. F. **Zhang**, G. P. Zhou, C. L. Jin, Y. Z. Zhang, G. W. Li, Z. H. Shang, L. P. Li, S. B. Yang, S. H. Yang, J. X. Wang
A&A **2024**
https://arxiv.org/pdf/2408.09732

11 Feb
Lateral Confinement and the Remarkably Self-similar Nature
Y.-M. **Wang**1 and P. Hess1
2023 ApJ 952 85
https://iopscience.iop.org/article/10.3847/1538-4357/acd638/pdf

12 Feb
A Coronal Mass Ejection followed by a prominence eruption and a plasma blob as observed by Solar Orbiter
A. **Bemporad**, V. Andretta, R. Susino, S. Mancuso, D. Spadaro, M. Mierla, D. Berghmans, E. D'Huys, A. N. Zhukov, D.-C. Talpeanu, R. Colaninno, P. Hess, J. Koza, S. Jejcic, P. Heinzel, E. Antonucci, V. Da Deppo, S. Fineschi, F. Frassati, G. Jerse, F. Landini, G. Naletto, G. Nicolini, M. Pancrazzi, M. Romoli, C. Sasso, A. Slemer, M. Stangalini, L. Teriaca
A&A **2022**
https://arxiv.org/pdf/2202.10294.pdf

12-13 Feb

First Determination in the Extended Corona of the 2D Thermal Evolution of a Current Sheet after a Solar Eruption
Alessandro **Bemporad**1,2, Guanglu Shi2,3, Shuting Li2,3, Beili Ying2,3, Li Feng2,3, Jun Lin4, Lucia Abbo1, Vincenzo Andretta5, Aleksandr Burtovoi6, Vania Da Deppo7Show full author list
2024 ApJ 964 92
https://iopscience.iop.org/article/10.3847/1538-4357/ad2516/pdf

16 Feb

Lateral Confinement and the Remarkably Self-similar Nature
Y.-M. **Wang**1 and P. Hess1
2023 ApJ 952 85
https://iopscience.iop.org/article/10.3847/1538-4357/acd638/pdf

18 Feb

The analysis of type II and type III solar radio bursts: GUI for the e-CALLISTO data
Yashan
Hettiarachchi a, Janaka Adassuriya b, Chandana Jayaratne b, Sasani Jayawardhana a, Christian Monstein
New Astronomy Volume 109, July **2024**, 102194
https://doi.org/10.1016/j.newast.2024.102194
CESRA #3809 **2024** https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3809

Identifying the energy release site in a Solar microflare with a jet
Andrea Francesco **Battaglia**, Wen Wang, Jonas Saqri, Tatiana Podladchikova, Astrid M. Veronig, Hannah Collier, Ewan C. M. Dickson, Olena Podladchikova, Christian Monstein, Alexander Warmuth, Frédéric Schuller, Louise Harra, Säm Krucker
A&A **2022**
https://arxiv.org/pdf/2212.11098.pdf

3D reconstruction of a flare related solar coronal jet observed by Solar Orbiter STIX and EUI, STEREO and SDO
W. **Wang**1,2 , A. F. Battaglia2,7 , S. Krucker 2,8 , T. Podladchikova3 , A. M. Veronig4 , A. Warmuth5 , M. Battaglia1 , E. Podladchikova6 , J. Saqri4 , H. Xiao2 , E. Dickson2,4
Presentation at ESP Meeting **2021**
https://indico.ict.inaf.it/event/794/contributions/9517/attachments/4975/10195/Presentation_**ESPM**_WenWang%281%29.pdf

20 Feb **SE filament eruption, CME**
https://www.spaceweather.com/images2021/20feb21/canyonoffire_crop.gif

Solar Filament Eruptions in Hα Doppler Velocity
I. A. **Berezin**1, A. G. Tlatov1, and A. A. Pevtsov2
2023 ApJ 950 100
https://iopscience.iop.org/article/10.3847/1538-4357/acd113/pdf

Ground-based Solar Observations for Space Weather Forecasting
A.G. **Tlatov**, A.A. Pevtsov
2023
https://arxiv.org/ftp/arxiv/papers/2303/2303.01708.pdf

A Coronal Mass Ejection and Magnetic Ejecta Observed In Situ by STEREO-A and Wind at 55∘ Angular Separation
Noé **Lugaz**, Tarik M. Salman, Charles J. Farrugia, Wenyuan Yu, Bin Zhuang, Nada Al-Haddad, Camilla Scolini, Réka M. Winslow, Christian Möstl, Emma E. Davies, Antoinette B. Galvin
ApJ **2022**
https://arxiv.org/pdf/2203.16477

21 Feb

Three Eruptions Observed by Remote Sensing Instruments Onboard Solar Orbiter
Marilena **Mierla**, Hebe Cremades, Vincenzo Andretta, Iulia Chifu, et al.
Solar Physics volume 298, Article number: 42 (**2023**)
https://link.springer.com/article/10.1007/s11207-023-02137-2#Sec1
https://link.springer.com/content/pdf/10.1007/s11207-023-02137-2.pdf

22 Feb

Analysis of solar eruptions deflecting in the low corona: influence of the magnetic environment
A. **Sahade**, A. Vourlidas, C. Mac Cormack
ApJ **2024**
https://arxiv.org/pdf/2411.11599

Recurrent solar density transients in the slow wind observed with the Metis coronagraph⋆
R. **Ventura**1, E. Antonucci2, C. Downs3, P. Romano1, R. Susino2, +++
A&A 675, A170 (**2023**)
https://www.aanda.org/articles/aa/pdf/2023/07/aa46623-23.pdf

23 Feb

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

Coronal voids and their magnetic nature
J. D. **Nölke**1, S. K. Solanki1, J. Hirzberger1, H. Peter1, L. P. Chitta1, F. Kahil1 +++
A&A 678, A196 (**2023**)
https://www.aanda.org/articles/aa/pdf/2023/10/aa46040-23.pdf
https://arxiv.org/pdf/2309.09789.pdf

Imaging and spectroscopic observations of extreme-ultraviolet brightenings using EUI and SPICE on board Solar Orbiter
Ziwen **Huang**, L. Teriaca, R. Aznar Cuadrado, L. P. Chitta, S. Mandal, H. Peter, U. Schühle, S.K. Solanki, F. Auchère, D. Berghmans, É. Buchlin, M. Carlsson, A. Fludra, T. Fredvik, A. Giunta, T. Grundy, D. Hassler, S. Parenti, F. Plaschke
A&A **2023**
https://arxiv.org/pdf/2303.15979.pdf
Solar Orbiter nugget #6 **2023** https://www.cosmos.esa.int/web/solar-orbiter/science-nuggets/euv-brightenings-using-eui-and-spice-on-board-solar-orbiter

High frequency decayless waves with significant energy in Solar Orbiter/EUI observations
Elena **Petrova**, Norbert Magyar, Tom Van Doorsselaere, David Berghmans
ApJ **2022**
https://arxiv.org/pdf/2205.05319.pdf

The magnetic drivers of campfires seen by the Polarimetric and Helioseismic Imager (PHI) on Solar Orbiter
F. **Kahil** (1), J. Hirzberger (1), S.K. Solanki (1 and 10), L. P. Chitta (1), H. Peter (1), F. Auchère (3), +++
A&A **2022**
https://arxiv.org/pdf/2202.13859.pdf

23-25 Feb

Spatial distribution of jets in solar active regions

Jonas **Odermatt**, Krzysztof Barczynski, Louise K. Harra, Conrad Schwanitz, Säm Krucker

A&A **2022**

https://arxiv.org/pdf/2207.09923.pdf

24 Feb

A Coronal Mass Ejection and Magnetic Ejecta Observed In Situ by STEREO-A and Wind at 55∘ Angular Separation

Noé **Lugaz**, Tarik M. Salman, Charles J. Farrugia, Wenyuan Yu, Bin Zhuang, Nada Al-Haddad, Camilla Scolini, Réka M. Winslow, Christian Möstl, Emma E. Davies, Antoinette B. Galvin

ApJ **2022**

https://arxiv.org/pdf/2203.16477

25 Feb

Multi-wavelength observations of a B-class flare using XSM, AIA, and XRT

Yamini K. **Rao**, B. Mondal, Giulio Del Zanna, N. P. S. Mithun, S. V. Vadawale, K. K. Reeves, Helen E. Mason, Anil Bhardwaj

ApJ **2023**

https://arxiv.org/pdf/2308.14912

26 Feb

The Co-alignment of Winged Hα Data Observed by the New Vacuum Solar Telescop

Yun-Fang **Cai**, Xu Yang, Yong-Yuang Xiang, Xiao-Li Yan, Zhen-Yu Jin, Hui Liu, Kai-Fan Ji

Research in Astronomy and Astrophysics **2022**

https://arxiv.org/pdf/2201.11913.pdf

27 Feb departing sunspot AR2804 produced a C2-class flare. Coronal wave.

28 Feb C3.9 flare, CME

1 Mar **Geomagnetic storm, Dst~ -59** A high speed stream associated with CH996

14 Mar–2 Apr

Turbulence dynamics and flow speeds in the inner solar corona: Results from radio-sounding experiments by the Akatsuki spacecraft

Richa N. **Jain**, R. K. Choudhary, Anil Bhardwaj, T. Imamura, Anshuman Sharma, Umang M. Parikh

MNRAS **2023**

https://arxiv.org/pdf/2308.12596.pdf

20 Mar **Storm Dst~ -45**

21 Mar

Analysis of solar eruptions deflecting in the low corona: influence of the magnetic environment

A. **Sahade**, A. Vourlidas, C. Mac Cormack

ApJ **2024**

https://arxiv.org/pdf/2411.11599

Beyond the disk: EUV coronagraphic observations of the Extreme Ultraviolet Imager on board Solar Orbiter

Auchère, F., Berghmans, D., Dumesnil, C., Halain, J.-P., Mercier, R., +++
A&A **2023**
https://arxiv.org/pdf/2305.15308.pdf

Three Eruptions Observed by Remote Sensing Instruments Onboard Solar Orbiter
Marilena **Mierla**, Hebe Cremades, Vincenzo Andretta, Iulia Chifu, et al.
Solar Physics volume 298, Article number: 42 (**2023**)
https://link.springer.com/article/10.1007/s11207-023-02137-2#Sec1
https://link.springer.com/content/pdf/10.1007/s11207-023-02137-2.pdf

23 Mar

CME-related Large Decreases in the Differential Phase Delay of Tianwen-1 DOR Signals
Qingbao **He**1, Zhichao Wang2,3, Qinghui Liu2, Kaijun Liu1, and Li Guo2
2022 ApJL 940 L45
https://iopscience.iop.org/article/10.3847/2041-8213/aca2a8/pdf

26 Mar

Beyond small-scale transients: a closer look at the diffuse quiet solar corona
J. **Gorman**, L. P. Chitta, H. Peter, D. Berghmans, F. Auchère, R. Aznar Cuadrado, L. Teriaca, S.K. Solanki, C. Verbeeck, E. Kraaikamp, K. Stegen, S. Gissot
A&A **2023**
https://arxiv.org/pdf/2308.01640.pdf

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

12 Apr ~15 UT: Эрупция SE залимбового волокна(?), CME

14 Apr

A formation mechanism for the large plumes in the prominence
Jincheng **Wang**, Xiaoli Yan, Zhike Xue, Liheng Yang, Qiaoling Li, Hechao Chen, Chun Xia, Zhong Liu
A&A **2022**
https://arxiv.org/pdf/2202.08521.pdf

Solar Prominence Bubble and Plumes Caused By an Eruptive Magnetic Flux Rope
Changxue **Chen**1,2, Yang Su1,2, Jianchao Xue1, Weiqun Gan1, and Yu Huang1
ApJL 923 L10 **2021**
https://iopscience.iop.org/article/10.3847/2041-8213/ac3bd0/pdf
https://doi.org/10.3847/2041-8213/ac3bd0

17 Apr

Kappa-tail technique: Modeling and application to Solar Energetic Particles observed by Parker Solar Probe
G. **Livadiotis**, A.T. Cummings, M.E. Cuesta, R. Bandyopadhyay, H.A. Farooki, L.Y. Khoo, D.J. McComas, J.S. Rankin, T. Sharma, M.M. Shen, C.M.S. Cohen, G.D. Muro, Z. Xu
2024

https://arxiv.org/pdf/2407.04188

Reconnection-generated Plasma Flows in the Quasi-separatrix Layer in Localized Solar Corona
Sripan **Mondal**1, Abhishek K. Srivastava1, Sudheer K. Mishra2, K. Sangal1, Pradeep Kayshap3, Yang Guo4, David I Pontin5, Vadim M. Uritsky6, Leon Ofman6,7, Tongjiang Wang6
2023 ApJ 953 84
https://iopscience.iop.org/article/10.3847/1538-4357/acd2da/pdf
https://arxiv.org/pdf/2305.02277.pdf

The 17 April 2021 widespread solar energetic particle event
N. **Dresing**, L. Rodríguez-García, I. C. Jebaraj, A. Warmuth, S. Wallace, et al.
A&A 674, A105 **2023**
https://arxiv.org/pdf/2303.10969.pdf
https://www.aanda.org/articles/aa/pdf/2023/06/aa45938-23.pdf

Solar-MACH: An open-source tool to analyze solar magnetic connection configurations
Jan **Gieseler**, Nina Dresing, Christian Palmroos, et al.
Front. Astron. Space Sci. 9:1058810. **2023** doi: 10.3389/fspas.2022.1058810
https://www.frontiersin.org/articles/10.3389/fspas.2022.1058810/pdf
https://www.frontiersin.org/articles/10.3389/fspas.2022.1058810/full

Multi-point study of the energy release and impulsive CME dynamics in an eruptive C7 flare
J. **Saqri**, A. M. Veronig, E. C. M. Dickson, T. Podladchikova, A. Warmuth, H. Xiao, D. E. Gary, A. F. Battaglia, S. Krucker
A&A **2023**
https://arxiv.org/pdf/2302.11232.pdf

17-22 Apr

Heliospheric 3-D MHD ENLIL simulations of multi-CME and multi-spacecraft events
Dusan **Odstrcil**
https://www.frontiersin.org/articles/10.3389/fspas.2023.1226992/pdf
Front. Astron. Space Sci. 10: 1226992. **2023**
doi: 10.3389/fspas.2023.1226992
https://www.frontiersin.org/articles/10.3389/fspas.2023.1226992/pdf

21-22 Apr

Reconfiguration and eruption of a solar filament by magnetic reconnection with an emerging magnetic field
Leping **Li**, Hardi Peter, Lakshmi Pradeep Chitta, Hongqiang Song, Zhe Xu, Yongyuan Xiang
ApJ **2022**
https://arxiv.org/pdf/2207.04579.pdf

22 Apr Earth-facing AR2816 exploded this morning, producing a C3.8-class flare
https://www.spaceweather.com/images2021/22apr21/shockwave.gif .
SOLAR TSUNAMI AND CME, A faint but definitely Earth-directed CME:
https://www.spaceweather.com/images2021/22apr21/cm3_c3_anim1.gif

The Eruption of 22 April 2021 as Observed by Solar Orbiter: *Continuous Magnetic Reconnection and Heating After the Impulsive Phase*
L. **Rodriguez**, A. Warmuth, V. Andretta, M. Mierla, A. N. Zhukov, +++
Solar Physics volume 298, Article number: 1 (**2023**)
https://doi.org/10.1007/s11207-022-02090-6

OSPREI: A Coupled Approach to Modeling CME-Driven Space Weather With Automatically Generated, User-Friendly Outputs
C. **Kay**, M. L. Mays,Y. M. Collado-Vega
Space Weather e2021SW002914 **2022**
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2021SW002914
https://arxiv.org/pdf/2109.06960.pdf

The eruption of 22 April 2021 as observed by Solar Orbiter, STEREO and Earth bound instruments
L. **Rodriguez**1 , M. Mierla1,2, D. Berghmans1 , A. Zhukov1,3, et al.
Presentation at ESP Meeting **2021**
https://indico.ict.inaf.it/event/794/contributions/9905/attachments/4883/9992/ESPM-22AprilCME.pdf

24 Apr

Sequential Small Coronal Mass Ejections Observed In~situ and in White-Light Images by Parker Solar Probe
Brian E. **Wood**, Phillip Hess, Yu Chen, Qiang Hu
ApJ **2023**
https://arxiv.org/pdf/2308.01372.pdf

24-27 Apr

On the short term stability and tilting motion of a well-observed low-latitude solar coronal hole
Stephan G. **Heinemann**, Stefan J. Hofmeister, James A. Turtle, Jens Pomoell, Eleanna Asvestari, Alphonse C. Sterling, Andrea Diercke, Cooper Downs
A&A **2023**
https://arxiv.org/pdf/2309.11100.pdf

25 Apr

Eruptive events with exceptionally bright emission in HI Ly-alpha observed by the Metis coronagraph
G. **Russano**, V. Andretta, Y. De Leo, L. Teriaca, M. Uslenghi, S. Giordano, D. Telloni, P. Heinzel,
A&A **2023**
https://arxiv.org/pdf/2312.01899.pdf

Following a prominence eruption from the Sun to Parker Solar Probe with multi-spacecraft observations
Tatiana **Niembro**, Daniel Seaton, Phillip Hess, David Berghmans, +++
Front. Astron. Space Sci. 10 :1191294. **2023**
doi: 10.3389/fspas.2023.1191294
https://www.frontiersin.org/articles/10.3389/fspas.2023.1191294/pdf

OSPREI: A Coupled Approach to Modeling CME-Driven Space Weather with Automatically-Generated, User-Friendly Outputs
C. **Kay**, M. L. May, Y. M. Collado-Vega
Space Weather **2021**
https://arxiv.org/pdf/2109.06960.pdf

25-26 Apr Небольшая Dst~-53 геомагбуря от эрупции 22-ого

26 Apr

Analysis of solar eruptions deflecting in the low corona: influence of the magnetic environment
A. **Sahade**, A. Vourlidas, C. Mac Cormack
ApJ **2024**
https://arxiv.org/pdf/2411.11599

26-27 Apr

Type IV-like Solar Radio Burst Consisting of a Series of Spikes Observed by PSP
Bing **Ma**, Ling Chen, De-Jin Wu, Marc Pulupa, Stuart D. Bale
ApJ **2024**
https://arxiv.org/pdf/2403.07804.pdf

26 Apr-3 May

Variability of the slow solar wind: New insights from modelling and PSP-WISPR observations⋆
Nicolas **Poirier**1,2, Victor Réville3, Alexis P. Rouillard3, Athanasios Kouloumvakos4 and Emeline Valette3
A&A 677, A108 (**2023**)
https://www.aanda.org/articles/aa/pdf/2023/09/aa47146-23.pdf

Structure of the Plasma near the Heliospheric Current Sheet as Seen by WISPR/Parker Solar Probe from inside the Streamer Belt
Paulett C. **Liewer**1, Angelos Vourlidas2, Guillermo Stenborg2, Russell A. Howard2, Jiong Qiu3, Paulo Penteado1, Olga Panasenco4, and Carlos R. Braga5
2023 ApJ 948 24
https://iopscience.iop.org/article/10.3847/1538-4357/acc8c7/pdf

27 Apr

The Structure and Origin of Switchbacks: Parker Solar Probe Observations
Jia **Huang**1, J. C. Kasper2,3, L. A. Fisk3, Davin E. Larson1, Michael D. McManus1 +++
2023 ApJ 952 33
https://iopscience.iop.org/article/10.3847/1538-4357/acd17e/pdf

28 Apr

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. Bale3,4,5,6
2024 ApJL 975 L37
https://iopscience.iop.org/article/10.3847/2041-8213/ad89c2/pdf

Self-Similar Outflows at the Source of the Fast Solar Wind: A Smoking Gun of Multiscale Impulsive Reconnection?
Vadim M. **Uritsky**, Judith T. Karpen, Nour E. Raouafi, Pankaj Kumar, C. Richard DeVore, Craig E. Deforest
ApJ **2023**
https://arxiv.org/pdf/2309.06407.pdf

Magnetic Reconnection as the Driver of the Solar Wind

Nour E. **Raouafi**, G. Stenborg, D. B. Seaton, H. Wang, J. Wang, C. E. DeForest, S. D. Bale, J. F. Drake, V. M. Uritsky, J. T. Karpen, C. R. DeVore, A. C. Sterling, T. S. Horbury, L. K. Harra, S. Bourouaine, J. C. Kasper, P. Kumar, T. D. Phan, M. Velli
2023 ApJ 945 28
https://iopscience.iop.org/article/10.3847/1538-4357/acaf6c/pdf
https://arxiv.org/pdf/2301.00903.pdf

28-29 Apr

On the short term stability and tilting motion of a well-observed low-latitude solar coronal hole

Stephan G. **Heinemann**, Stefan J. Hofmeister, James A. Turtle, Jens Pomoell, Eleanna Asvestari, Alphonse C. Sterling, Andrea Diercke, Cooper Downs
A&A **2023**
https://arxiv.org/pdf/2309.11100.pdf

Structure of the Plasma near the Heliospheric Current Sheet as Seen by WISPR/Parker Solar Probe from inside the Streamer Belt

Paulett C. **Liewer**1, Angelos Vourlidas2, Guillermo Stenborg2, Russell A. Howard2, Jiong Qiu3, Paulo Penteado1, Olga Panasenco4, and Carlos R. Braga5
2023 ApJ 948 24
https://iopscience.iop.org/article/10.3847/1538-4357/acc8c7/pdf

29 Apr

Multi-wavelength observations and modelling of a microflare: constraining non-thermal particle acceleration

Vanessa **Polito** [1,2], Marianne Peterson [3], Lindsay Glesener [3], Paola Testa [4], Sijie Yu [5], Katharine K. Reeves [4], Xudong Sun [6], Jessie Duncan [7]
Front. Astron. Space Sci. 10: 1214901. **2023**
https://www.frontiersin.org/articles/10.3389/fspas.2023.1214901/pdf
https://iris.lmsal.com/nugget

Defining the Middle Corona **Review**

Matthew J. **West**, Daniel B. Seaton, David B. Wexler, John C. Raymond, +++
Solar Physics volume 298, Article number: 78 (**2023**)
https://link.springer.com/content/pdf/10.1007/s11207-023-02170-1.pdf

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 Wang1,2
2023 ApJL 946 L17
https://iopscience.iop.org/article/10.3847/2041-8213/acc0f1/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

2-5 May

On the short term stability and tilting motion of a well-observed low-latitude solar coronal hole

Stephan G. **Heinemann**, Stefan J. Hofmeister, James A. Turtle, Jens Pomoell, Eleanna Asvestari, Alphonse C. Sterling, Andrea Diercke, Cooper Downs
A&A **2023**
https://arxiv.org/pdf/2309.11100.pdf

3 May

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. Bale3,4,5,6
2024 ApJL 975 L37
https://iopscience.iop.org/article/10.3847/2041-8213/ad89c2/pdf

5 May

Sun-as-a-star Analyses of Various Solar Active Events Using Hα Spectral Images Taken by SMART/SDDI
Takato **Otsu**, Ayumi Asai, Kiyoshi Ichimoto, Takako T. Ishii, Kosuke Namekata
ApJ **2022**
https://arxiv.org/pdf/2210.02819.pdf

7 May 2021 ~19:08: M3.9 NE-limb flare, N17E78, CME, coronal wave

Observation of an Extraordinary Type V Solar Radio Burst: Nonlinear Evolution of the Electron Two-Stream Instability.
Benz, A.O., Huber, C.R., Timmel, V. *et al.*
Sol Phys **299**, 146 (**2024**).
https://doi.org/10.1007/s11207-024-02395-8
https://link.springer.com/content/pdf/10.1007/s11207-024-02395-8.pdf

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

A Joint Microwave and Hard X-Ray Study Towards Understanding the Transport of Accelerated Electrons during an Eruptive Solar Flare
Surajit **Mondal**, Andrea F. Battaglia, Bin Chen, Sijie Yu
ApJ **2024**
https://arxiv.org/pdf/2404.14268.pdf

Multi-instrument observations and tracking of a coronal mass ejection front from low to middle corona
Oleg **Stepanyuk*** and Kamen Kozarev
J. Space Weather Space Clim. **2024**, 14, 2
https://www.swsc-journal.org/articles/swsc/pdf/2024/01/swsc230003.pdf

3D evolution of a solar flare thermal X-ray loop-top source⋆
D. F. **Ryan**1, S. Laube1, B. Nicula2, S. Krucker1,3, S. A. Maloney4, A. F. Battaglia1,5, A. Warmuth6, A. Csillaghy1 and D. Müller7
A&A 681, A61 (**2024**)
https://www.aanda.org/articles/aa/pdf/2024/01/aa47212-23.pdf

Investigations of Flaring Plasma Parameters during an M-class Flare Using the Differential Evolution Method and XSM/Chandrayaan-2 Observations
Anna **Kępa**1, Marek Siarkowski1, Arun Kumar Awasthi1, Janusz Sylwester1, and Barbara Sylwester1
2023 ApJL 959 L29
https://iopscience.iop.org/article/10.3847/2041-8213/ad0f23/pdf

The existence of hot X-ray onsets in solar flares
Andrea Francesco **Battaglia**, Hugh Hudson, Alexander Warmuth, Hannah Collier, Natasha L. S. Jeffrey, Amir Caspi, Ewan C. M. Dickson, Jonas Saqri, Stefan Purkhart, Astrid M. Veronig, Louise Harra, Säm Krucker
A&A **2023**
https://arxiv.org/pdf/2310.04234.pdf

Exploring the Impact of Imaging Cadence on Inferring CME Kinematics
Nitin **Vashishtha**, Satabdwa Majumdar, Ritesh Patel, Vaibhav Pant, Dipankar Banerjee
Frontiers in Astronomy and Space Sciences **2023**
https://arxiv.org/pdf/2308.11944.pdf

The Structure of Coronal Mass Ejections Recorded by the K-Coronagraph at Mauna Loa Solar Observatory
Hongqiang **Song**, Leping Li, Zhenjun Zhou, Lidong Xia, Xin Cheng, Yao Chen
ApJL **2023**
https://arxiv.org/pdf/2307.01398.pdf

Overexpansion-dominated Coronal Mass Ejection Formation and Induced Radio Bursts
B. T. **Wang**, X. Cheng, H. Q. Song, M. D. Ding
A&A **2022**
https://arxiv.org/pdf/2209.06508.pdf

First hard X-ray imaging results by Solar Orbiter STIX
Paolo **Massa**, Andrea F. Battaglia, Anna Volpara, Hannah Collier, Gordon J. Hurford, Matej Kuhar, Emma Perracchione, Sara Garbarino, Anna Maria Massone, Federico Benvenuto, Frederic Schuller, Alexander Warmuth, Ewan C. M. Dickson, Hualin Xiao, Shane A. Maloney, Daniel F. Ryan, Michele Piana, Säm Krucker
A&A **2022**
https://arxiv.org/pdf/2202.09334.pdf

7-8-9 May

First Observation of Chromospheric Waves in a Sunspot by DKIST/ViSP: The Anatomy of an Umbral Flash
Ryan J.**French**, Thomas J. Bogdan, Roberto Casini, Alfred G. de Wijn, Philip G. Judge
ApJL **2023**
https://arxiv.org/pdf/2303.06105.pdf

Grid-based imaging of X-rays and gamma-rays with high angular resolution
Pascal **Saint-Hilaire** ∗ , Albert Y. Shih, Gordon J. Hurford, Brian Dennis
In the 'Handbook of X-ray and Gamma-Ray Astrophysics' **2022**
http://sprg.ssl.berkeley.edu/~shilaire/papers/Grid_imaging_in_X_rays_and_gamma_ray.pdf

The Spectrometer Telescope for Imaging X-rays (STIX) on Solar Orbiter
Laura A. **Hayes**, Sophie Musset, Daniel M üller, S äm Krucker
Book Chapter for Handbook of X-ray and Gamma-ray Astrophysics **2022**
https://arxiv.org/pdf/2207.02079.pdf

8 May

Variation of the electron flux spectrum along a solar flare loop as inferred from STIX hard X-ray observations
Anna **Volpara**, Paolo Massa, Sam Krucker, A Gordon Emslie, Michele Piana, Anna Maria Massone
2023
https://arxiv.org/pdf/2311.07148.pdf

First hard X-ray imaging results by Solar Orbiter STIX
Paolo **Massa**, Andrea F. Battaglia, Anna Volpara, Hannah Collier, Gordon J. Hurford, Matej Kuhar, Emma Perracchione, Sara Garbarino, Anna Maria Massone, Federico Benvenuto, Frederic Schuller, Alexander Warmuth, Ewan C. M. Dickson, Hualin Xiao, Shane A. Maloney, Daniel F. Ryan, Michele Piana, Säm Krucker
A&A **2022**
https://arxiv.org/pdf/2202.09334.pdf

9 May ~10-11 UT: A faint partial halo CME was observed after a filament eruption in the southern hemisphere to the east and north of AR S6846.
https://www.nesdis.noaa.gov/news/time-lapse-of-solar-cycle-25-displays-increasing-activity-the-sun

Development of Torus and Kink Instabilities in Eruptive Prominences
Boris **Filippov**
2024 ApJ 977 259
https://iopscience.iop.org/article/10.3847/1538-4357/ad95fe/pdf

Filament eruption deflection and associated CMEs
K. **Koleva**, R. Chandra, P. Duchlev, P. Devi
Proceedings of IAUS 388 **2024**
https://arxiv.org/pdf/2411.10110

OSPREI: A Coupled Approach to Modeling CME-Driven Space Weather With Automatically Generated, User-Friendly Outputs
C. **Kay**, M. L. Mays,Y. M. Collado-Vega
Space Weather e2021SW002914 **2022**
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2021SW002914
https://arxiv.org/pdf/2109.06960.pdf

First hard X-ray imaging results by Solar Orbiter STIX
Paolo **Massa**, Andrea F. Battaglia, Anna Volpara, Hannah Collier, Gordon J. Hurford, Matej Kuhar, Emma Perracchione, Sara Garbarino, Anna Maria Massone, Federico Benvenuto, Frederic Schuller, Alexander Warmuth, Ewan C. M. Dickson, Hualin Xiao, Shane A. Maloney, Daniel F. Ryan, Michele Piana, Säm Krucker
A&A **2022**
https://arxiv.org/pdf/2202.09334.pdf

10-14 May
Small-Scale Upflows in a Coronal Hole – Tracked from the Photosphere to the Corona.
Schwanitz, C., Harra, L., Barczynski, K. et al.
Sol Phys 298, 129 (**2023**).
https://doi.org/10.1007/s11207-023-02216-4
https://link.springer.com/content/pdf/10.1007/s11207-023-02216-4.pdf

12 May The May 9 CME hit Earth's magnetic field during the early hours of May 12th, sparking the strongest geomagnetic storm of young Solar Cycle 25. **Dst=-61 nT**

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

12-14 May

Spatial distribution of jets in solar active regions
Jonas **Odermatt**, Krzysztof Barczynski, Louise K. Harra, Conrad Schwanitz, Säm Krucker
A&A **2022**
https://arxiv.org/pdf/2207.09923.pdf

May 13: A filament eruption was observed beginning at 15:37 UT just north of AR 12822б a faint CME

14 May

Sustained heating of the chromosphere and transition region over a sunspot light bridge
Rohan E. **Louis**, Shibu K. Mathew, A. Raja Bayanna, Christian Beck, Debi P. Choudhary
ApJ **2023**
https://arxiv.org/pdf/2301.00608.pdf

17-21 May

Small-Scale Upflows in a Coronal Hole – Tracked from the Photosphere to the Corona.
Schwanitz, C., Harra, L., Barczynski, K. et al.
Sol Phys 298, 129 (**2023**).
https://doi.org/10.1007/s11207-023-02216-4
https://link.springer.com/content/pdf/10.1007/s11207-023-02216-4.pdf

21-22 May

The magnetic origin of the mystery of rare Hα Moreton waves
Ze **Zhong**, Yao Chen, Y.W. Ni, P. F. Chen, Ruisheng Zheng, Xiangliang Kong, Chuan Li
ApJ **2024**
https://arxiv.org/pdf/2412.19984

21-24 May Несколько импульсных вспышек C4-M1 с компактными источниками. Корональные волны https://www.spaceweather.com/images2021/23may21/spit_strip.gif
Faint halo CMEs were observed in LASCO imagery following a C1.3 long duration event peaking at 08:44 and an M1.1 flare at 17:11 UT on 22 May.

Solar Activities Associated with 3He-rich Solar Energetic Particle Events Observed by Solar Orbiter
Nariaki **Nitta**, Radoslav Bučík, Radoslav Bučík, Glenn Mason, George Ho, Christina Cohen, Raul Gómez-Herrero, Linghua Wang, and Laura Balmaceda
Front. Astron. Space Sci. 10: 1148467. **2023**
doi: 10.3389/fspas.2023.1148467
https://www.frontiersin.org/articles/10.3389/fspas.2023.1148467/full
https://www.frontiersin.org/articles/10.3389/fspas.2023.1148467/pdf

Interplanetary Ion Flux Dropouts Across Multiple 3He-rich Events
George **Ho**, G Mason, Robert Allen, R Wimmer-Schweingruber, J Rodríguez-Pacheco, and R Gómez-Herrero
Front. Astron. Space Sci. 9:939799. **2022**
doi: 10.3389/fspas.2022.939799
https://www.frontiersin.org/articles/10.3389/fspas.2022.939799/pdf

22 May

Quick Event During the Decay Phase of the Microwave Emission of a Flare on May 22, 2021.
Motyk, I.D., Kashapova, L.K., Setov, A.G. et al.
Geomagn. Aeron. 63, 1062–1071 (**2023**).
https://doi.org/10.1134/S0016793223070174

The Width of Magnetic Ejecta Measured Near 1 au: Lessons from STEREO-A Measurements in 2021--2022
Noé **Lugaz**, Bin Zhuang, Camilla Scolini, Nada Al-Haddad, Charles J. Farrugia, Réka M. Winslow, Florian Regnault, Christian Möstl, Emma E. Davies, Antoinette B. Galvin
ApJ **2023**
https://arxiv.org/pdf/2312.03942.pdf

Solar Active Region Coronal Jets. III. Hidden-Onset Jets
Alphonse C. **Sterling**, Ronald L. Moore, Navdeep K. Panesar
ApJ **2023**
https://arxiv.org/pdf/2310.14109.pdf

Why "solar tsunamis" rarely leave their imprints in the chromosphere
Ruisheng **Zheng**, Yihan Liu, Wenlong Liu, Bing Wang, Zhenyong Hou, Shiwei Feng, Xiangliang Kong, Zhenghua Huang, Hongqiang Song, Hui Tian, Pengfei Chen, Robertus Erdélyi, Yao Chen
ApJ 2023
https://arxiv.org/pdf/2304.14859.pdf

Мотык И.Д., Сетов А.Г., Шамсутдинова Ю.Н., Кашапова Л.К., Куприянова Е.Г., Мышьяков И.И., Жданов Д.А. Быстроживущее событие на фазе спада вспышки 22 мая 2021
Восемнадцатая ежегодная конференция "Физика плазмы в солнечной системе" 6 -10 февраля **2023**. ИКИ РАН

Polarization Observations of a Split-band Type II Radio Burst from the Solar Corona
R. **Ramesh**1 and C. Kathiravan1
2022 ApJ 940 80
https://iopscience.iop.org/article/10.3847/1538-4357/ac9c65/pdf

First hard X-ray imaging results by Solar Orbiter STIX
Paolo **Massa**, Andrea F. Battaglia, Anna Volpara, Hannah Collier, Gordon J. Hurford, Matej Kuhar, Emma Perracchione, Sara Garbarino, Anna Maria Massone, Federico Benvenuto, Frederic Schuller, Alexander Warmuth, Ewan C. M. Dickson, Hualin Xiao, Shane A. Maloney, Daniel F. Ryan, Michele Piana, Säm Krucker
A&A **2022**
https://arxiv.org/pdf/2202.09334.pdf

Kodaikanal Solar Observatory Radio Spectrograph
Indrajit V. **Barve**, C. Kathiravan, G. V. S. Gireesh, M. N. Anand, M. Rajesh, M. Rajalingam, E. Ebenezer Chellasamy & R. Ramesh
Solar Physics volume 296, Article number: 132 (**2021**)
https://link.springer.com/content/pdf/10.1007/s11207-021-01879-1.pdf
https://doi.org/10.1007/s11207-021-01879-1

25 May

The Extreme Stellar-Signals Project III. Combining Solar Data from HARPS, HARPS-N, EXPRES, and NEID
Lily L. **Zhao**, Xavier Dumusque, Eric B. Ford, Joe Llama, Annelies Mortier, +++
ApJ **2023**
https://arxiv.org/pdf/2309.03762.pdf

27 May - during the late hours, the magnetic canopy of sunspot AR2824 became unstable and erupted, there was no significant CME.
A **filament eruption** to the northeast of AR 12824 was recorded as a **C1 long duration event** peaking at 22:07 UT. This event may have triggered the **C7 flare** in AR 12824.

28 May - Ещё одна **значительная эрупция** к NE от AR 12824, **C9.4 LDE вспышка, large CME at STEREO-A**. **Мягкие протоны J10 ~15.**

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

A Living Catalog of Parker Solar Probe IS⊙IS Energetic Particle Enhancements
J. G. **Mitchell**7,1, C. M. S. Cohen2, T. J. Eddy3, C. J. Joyce4, J. S. Rankin3, M. M. Shen3, G. A. de Nolfo1, E. R. Christian1, D. J. McComas3, R. L. McNutt Jr.5 +++
2023 ApJS 264 31
https://iopscience.iop.org/article/10.3847/1538-4365/aca4c8/pdf

3 Jun

Relationship between microwave and metre ranges during an impulsive solar flare
J N **Shamsutdinova**, L K Kashapova, J Zhang, H Reid, D A Zhdanov
MNRAS, Volume 533, Issue 2, September **2024**, Pages 1453–1462,
https://doi.org/10.1093/mnras/stae1899
https://watermark.silverchair.com/stae1899.pdf

Шамсутдинова Ю.Н., Кашапова Л.К., Zhang J., Жданов Д.А., Reid H.A.S., Мышьяков И.И. Слабая солнечная вспышка 3 июня 2021 года в микроволновом и метровом диапазонах **Восемнадцатая** ежегодная конференция "Физика плазмы в солнечной системе" 6 -10 февраля **2023**. ИКИ РАН

8 Jun
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

9 Jun- Departing sunspot AR2831 erupted on June 9 (1159 UT) and hurled a massive plume of plasma into space. CME, **слабенькие протоны**

Modeling CME encounters at Parker Solar Probe with OSPREI: Dependence on photospheric and coronal conditions⋆
Vincent E. **Ledvina**1,⋆⋆, Erika Palmerio1, Christina Kay2,3, 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

10 Jun
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

Exploring the Impact of Imaging Cadence on Inferring CME Kinematics
Nitin **Vashishtha**, Satabdwa Majumdar, Ritesh Patel, Vaibhav Pant, Dipankar Banerjee
Frontiers in Astronomy and Space Sciences **2023**
https://arxiv.org/pdf/2308.11944.pdf

18 Jun
CME-related Large Decreases in the Differential Phase Delay of Tianwen-1 DOR Signals
Qingbao **He**1, Zhichao Wang2,3, Qinghui Liu2, Kaijun Liu1, and Li Guo2
2022 ApJL 940 L45
https://iopscience.iop.org/article/10.3847/2041-8213/aca2a8/pdf

19 Jun
Microwave response to sunspot oscillations
Robert **Sych**, Alexander Altyntsev
MNRAS **2022**
https://arxiv.org/pdf/2210.02044.pdf

22 Jun
Magnetic Topology of quiet-Sun Ellerman bombs and associated Ultraviolet brightenings
Aditi **Bhatnagar**, Avijeet Prasad, Luc Rouppe van der Voort, Daniel Nóbrega-Siverio, Jayant Joshi
A&A **2024**
https://arxiv.org/pdf/2412.03211

23 Jun
The Extreme Stellar-Signals Project III. Combining Solar Data from HARPS, HARPS-N, EXPRES, and NEID
Lily L. **Zhao**, Xavier Dumusque, Eric B. Ford, Joe Llama, Annelies Mortier, +++
ApJ **2023**
https://arxiv.org/pdf/2309.03762.pdf

24 Jun
Do Periods of Decayless Kink Oscillations of Solar Coronal Loops Depend on Noise?
Valery M. **Nakariakov**, Dmitrii Y. Kolotkov, Sihui Zhong
MNRAS **2022**
https://arxiv.org/pdf/2209.06343.pdf

30 Jun
The observational evidence that all microflares that accelerate electrons to high-energies are rooted in sunspots
Andrea Francesco **Battaglia**, Säm Krucker, Astrid M. Veronig, Muriel Zoë Stiefel, Alexandar Warmuth, Arnold O. Benz, Daniel F. Ryan, Hannah Collier, Louise Harra
A&A **2024**
https://arxiv.org/pdf/2409.14466

3-4 Jul – Серия импульсных вспышек C-X-класса из прилимбовой NW области AR 2838 (N24W88), включая X1.5 вспышку 3d, 14:29 UT, узкий CME, практически без SEPs
https://www.nesdis.noaa.gov/news/time-lapse-of-solar-cycle-25-displays-increasing-activity-the-sun

5-6 Jul
https://nesdis-prod.s3.amazonaws.com/2023-05/July_5_6_2021_solar_array.gif

7 Jul - Decaying sunspot AR2837 (N17W36) erupted, hurling a CMEe: movie.

9 Jul – Серия из 3-ёх **импульсных** вспышек балла

13 Jul – ~20 UT: farside halo CME
https://www.spaceweather.com/images2021/13jul21/halocme_opt.gif
See **STEREO** https://stereo-ssc.nascom.nasa.gov/browse/2021/

14 Jul – ~22 UT: one more farside halo CME

15 Jul - ~20 UT: A magnificent halo CME billowed away from the farside of the sun. This is the 3rd such explosion in the last three days:

16 Jul - ~00 UT: Не только гало, но и красивый выброс ES протуберанца
https://www.spaceweather.com/images2021/16jul21/halo_no3_opt.gif

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

17 Jul **Сильно залимбовая** S20E140 **гамма-вспышка, Fermi-LAT, STEREO-A and SolO, корональная волна**

Exploring the Dynamics of CME-Driven Shocks by Comparing Numerical Modeling and Observations
Meng **Jin**, Gang Li, Nariaki Nitta, Wei Liu, Vahe Petrosian, Ward Manchester, Christina Cohen, Frederic Effenberger, Zheyi Ding, Melissa Pesce-Rollins, Nicola Omodei, Nat Gopalswamy
Proceedings of IAU Symposium No. 388 - Solar and Stellar Coronal Mass Ejections **2024**
https://arxiv.org/pdf/2409.18020

Evidence for flare-accelerated particles in large scale loops in the behind-the-limb gamma-ray solar flare of September 29, 2022
Melissa **Pesce-Rollins**, Karl-Ludwig Klein, Säm Krucker, Alexander Warmuth, M. Astrid Veronig, Nicola Omodei, Christian Monstein
A&A **2024**
https://arxiv.org/pdf/2402.08380.pdf **File**

The Coupling of an EUV Coronal Wave and Ion Acceleration in a Fermi-LAT Behind-the-Limb Solar Flare
Melissa **Pesce-Rollins**1, Nicola Omodei2, Säm Krucker3, Niccolò Di Lalla4, Wen Wang5,6, Andrea F. Battaglia5, Alexander Warmuth7, Astrid M. Veronig8, and Luca Baldini9
2022 ApJ 929 172
https://arxiv.org/pdf/2205.04760.pdf
https://iopscience.iop.org/article/10.3847/1538-4357/ac5f0c/pdf

19 Jul
An Overview of Solar Orbiter Observations of Interplanetary Shocks in Solar Cycle 25

Review
D. **Trotta**, A. Dimmock, H. Hietala, X. Blanco-Cano, T. S. Horbury, +++
ApJ **2024**
https://arxiv.org/pdf/2410.24007

20 Jul 16 UT**:** A filament near AR2846 erupted, sparking a B-class flare, CME
https://www.spaceweather.com/images2021/20jul21/sideways_strip_anim.gif

23 Jul
Extended 3He-rich Time Periods Observed by Solar Orbiter: Magnetic Connectivity and Sources
A. **Kouloumvakos**1, G. M. Mason1, G. C. Ho1, R. C. Allen1,
2023 ApJ 956 123
https://iopscience.iop.org/article/10.3847/1538-4357/acf44e/pdf

28 Jul ~07 UT: a magnetic filament in the sun's northern hemisphere erupted.
Серьёзная эрупция волокна и ещё очаги
CME: http://spaceweather.gmu.edu/seeds/dailymkmovie.php?cme=20210728&r

30 Jul

Determining the nanoflare heating frequency of an X-ray Bright Point observed by MaGIXS
Biswajit **Mondal**, P. S. Athiray, Amy R. Winebarger, Sabrina L. Savage, +++
ApJ **2024**
https://arxiv.org/pdf/2402.05036.pdf

Can Emission Measure Distributions Derived from Extreme-ultraviolet Images Accurately Constrain High-temperature Plasma?
P. S. **Athiray**1,2 and Amy R. Winebarger2
2024 ApJ 961 181
https://iopscience.iop.org/article/10.3847/1538-4357/ad1837/pdf

The First Flight of the Marshall Grazing Incidence X-ray Spectrometer (MaGIXS)
Sabrina L. **Savage**, Amy R. Winebarger, Ken Kobayashi, +++
ApJ **2022**
https://arxiv.org/pdf/2212.00665.pdf

31 Jul - during the late hours: SW filament eruption near AR2849, B2.4 LDE flare, CME

1 Aug
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. Bale3,4,5,6
2024 ApJL 975 L37
https://iopscience.iop.org/article/10.3847/2041-8213/ad89c2/pdf

4 Aug

The Chromosphere Underneath a Coronal Bright Point
Souvik **Bose**1,2,3,4, Daniel Nóbrega-Siverio3,4,5,6, Bart De Pontieu1,3,4, and Luc Rouppe van der Voort3,4
2023 ApJ 944 171
https://iopscience.iop.org/article/10.3847/1538-4357/acb544/pdf

https://arxiv.org/pdf/2301.08596

7 Aug

High Resolution Imaging Spectroscopy of a Tiny Sigmoidal Mini-filament Eruption
Jiasheng **Wang**, Jeongwoo Lee, Jongchul Chae, Yan Xu, Wenda Cao, Haimin Wang
ApJ **2024**
https://arxiv.org/pdf/2402.08483.pdf

Imaging of the Quiet Sun in the Frequency Range of 20-80 MHz
PeiJin **Zhang**, Pietro Zucca, Kamen Kozarev, Eoin Carley, ChuanBing Wang, Thomas Franzen, Bartosz Dabrowski, Andrzej Krankowski, Jasmina Magdalenic, Christian Vocks
ApJ **2022**
https://arxiv.org/pdf/2205.00065.pdf

8-10 Aug
Variability of the slow solar wind: New insights from modelling and PSP-WISPR observations⋆
Nicolas **Poirier**1,2, Victor Réville3, Alexis P. Rouillard3, Athanasios Kouloumvakos4 and Emeline Valette3
A&A 677, A108 (**2023**)
https://www.aanda.org/articles/aa/pdf/2023/09/aa47146-23.pdf

10 Aug
Magnetic reconnection as an erosion mechanism for magnetic switchbacks
G.H.H. **Suen**, C.J. Owen, D. Verscharen, T.S. Horbury, P. Louarn, R. De Marco
A&A **2023**
https://arxiv.org/pdf/2305.06035.pdf

11-12 Aug
Switchback Patches Evolve into Microstreams via Magnetic Relaxation
Shirsh Lata **Soni**, Mojtaba Akhavan-Tafti, Gabriel Ho Hin Suen, Justin Kasper, Marco Velli, Rossana De Marco, Christopher Owen
2024
https://arxiv.org/pdf/2402.13964.pdf

14 Aug
Imaging of the Quiet Sun in the Frequency Range of 20-80 MHz
PeiJin **Zhang**, Pietro Zucca, Kamen Kozarev, Eoin Carley, ChuanBing Wang, Thomas Franzen, Bartosz Dabrowski, Andrzej Krankowski, Jasmina Magdalenic, Christian Vocks
ApJ **2022**
https://arxiv.org/pdf/2205.00065.pdf

15 Aug 05-06 UT: a gigantic filament of magnetism erupted from the farside of the sun: movie. CME https://twitter.com/halocme/status/1426980798146699268

20 Aug
The Lyman-α Emission in a C1.4 Solar Flare Observed by the Extreme Ultraviolet Imager aboard Solar Orbiter
Ying **Li**, Qiao Li, De-Chao Song, Andrea Francesco Battaglia, Hualin Xiao, Säm Krucker, Udo Schühle, Hui Li, Weiqun Gan, M. D. Ding
ApJ **2022**
https://arxiv.org/pdf/2208.06182.pdf

22 Aug

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

23 Aug ~06 UT: N filament eruption, halo CME

24 Aug 12 UT: **dark** plasma billowed from AR2859 after B9-class flare.

Non-thermal electrons in an eruptive solar event: Magnetic structure, confinement, and escape into the heliosphere
Karl-Ludwig **Klein**1,2,⋆, Carolina Salas Matamoros3,⋆, Abdallah Hamini1,2 and Alexander Kollhoff4,⋆
A&A, 690, A382 (**2024**)
https://doi.org/10.1051/0004-6361/202450456
https://www.aanda.org/articles/aa/pdf/2024/10/aa50456-24.pdf
https://hal.science/hal-04667689v1/document

26 Aug 1818 UT **C3 Flare with Associated with** erupting filament, partial halo **CME** movie, massive "tsunami."

The Width of Magnetic Ejecta Measured Near 1 au: Lessons from STEREO-A Measurements in 2021--2022
Noé **Lugaz**, Bin Zhuang, Camilla Scolini, Nada Al-Haddad, Charles J. Farrugia, Réka M. Winslow, Florian Regnault, Christian Möstl, Emma E. Davies, Antoinette B. Galvin
ApJ **2023**
https://arxiv.org/pdf/2312.03942.pdf

27 Aug
Solar radio bursts observations by Egypt- Alexandria CALLISTO spectrometer: First results
F. N. **Minta**, S. Nozawa, K. Kozarev, A. Elsaid, A. Mahrous
Adv Sp Res **2023**
https://arxiv.org/ftp/arxiv/papers/2302/2302.00289.pdf

28 Aug **GeoMag storm**: 01 UT, -74 nT
06:11-AR 12860 produced an **M4.7 flare**. **Корональная волна. CME**
16 UT: N filament eruption, **304 A**, CME

A Modelling Investigation for Solar Flare X-ray Stereoscopy with Solar Orbiter/STIX and Earth Orbiting Missions
Natasha L. S. **Jeffrey**, Säm Krucker, Morgan Stores, Eduard P. Kontar, Pascal Saint-Hilaire, Andrea F. Battaglia, +++
ApJ **2024**
https://arxiv.org/pdf/2401.16032.pdf

Solar Filament Eruptions in Hα Doppler Velocity
I. A. **Berezin**1, A. G. Tlatov1, and A. A. Pevtsov2
2023 ApJ 950 100
https://iopscience.iop.org/article/10.3847/1538-4357/acd113/pdf

29 Aug
The deformation of an erupting magnetic flux rope in a confined solar flare

Ruisheng **Zheng**, Yihan Liu, Liang Zhang, Yang Liu, Changhui Rao, Qing Lin, Zhimao Du, Libo Zhong, Huadong Chen, Yao Chen
2023
https://arxiv.org/pdf/2212.14498.pdf

30 Aug

Magnetic reconnection as an erosion mechanism for magnetic switchbacks
G.H.H. **Suen**, C.J. Owen, D. Verscharen, T.S. Horbury, P. Louarn, R. De Marco
A&A **2023**
https://arxiv.org/pdf/2305.06035.pdf

1 Sep-20 Oct

Спокойная корона Солнца: ежедневные изображения на длинах волн 8.8–10.7 см
Алтынцев А.Т., Глоба М.В., Мешалкина Н.С.
СОЛНЕЧНО-ЗЕМНАЯ ФИЗИКА Том 9 № 2 , **2023** С. 71–77.
https://naukaru.ru/ru/storage/viewWindow/123106

8 Sep 00:36 – **C2.3 LDE**? Flare, N23W35, **Корональная волна. CME**
https://twitter.com/halocme/status/1435450783705698313

Beyond the disk: EUV coronagraphic observations of the Extreme Ultraviolet Imager on board Solar Orbiter
Auchère, F., Berghmans, D., Dumesnil, C., Halain, J.-P., Mercier, R., +++
A&A **2023**
https://arxiv.org/pdf/2305.15308.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

9 Sep

Sympathetic Partial Filament Eruptions Caused by the Interaction between Two Nearby Filaments
Liping **Yang**1,2, Xiaoli Yan1,3, Zhike Xue1,3, Jincheng Wang1,3, Liheng Yang1,3, Qiaoling Li4,5, Zhe Xu1,3, Yang Peng1,2, Xia Sun6, and Xinsheng Zhang1,2
2023 ApJ 943 62
https://iopscience.iop.org/article/10.3847/1538-4357/aca9d2/pdf

11 Sep

Eruptive events with exceptionally bright emission in HI Ly-alpha observed by the Metis coronagraph
G. **Russano**, V. Andretta, Y. De Leo, L. Teriaca, M. Uslenghi, S. Giordano, D. Telloni, P. Heinzel,
A&A **2023**
https://arxiv.org/pdf/2312.01899.pdf

12-13 Sep

Imaging and spectroscopic observations of extreme-ultraviolet brightenings using EUI and SPICE on board Solar Orbiter
Ziwen **Huang**, L. Teriaca, R. Aznar Cuadrado, L. P. Chitta, S. Mandal, H. Peter, U. Schühle, S.K. Solanki, F. Auchère, D. Berghmans, É. Buchlin, M. Carlsson, A. Fludra, T. Fredvik, A. Giunta, T. Grundy, D. Hassler, S. Parenti, F. Plaschke

A&A **2023**
https://arxiv.org/pdf/2303.15979.pdf
Solar Orbiter nugget #6 **2023** https://www.cosmos.esa.int/web/solar-orbiter/science-nuggets/euv-brightenings-using-eui-and-spice-on-board-solar-orbiter

13 Sep ~02:00 - a **dark filament** of magnetism on the sun exploded. **304 A**.
The blast hurled a CME

14 Sep

A Statistical Investigation of Decayless Oscillations in Small-scale Coronal Loops Observed by Solar Orbiter/EUI
Arpit Kumar **Shrivastav**, Vaibhav Pant, David Berghmans, Andrei N. Zhukov, Tom Van Doorsselaere, Elena Petrova, Dipankar Banerjee, Daye Lim, Cis Verbeeck
A&A **2023**
https://arxiv.org/pdf/2304.13554.pdf

Multi-stage reconnection powering a solar coronal jet
David M. **Long**, Lakshmi Pradeep Chitta, Deborah Baker, Iain G. Hannah, Nawin Ngampoopun, David Berghmans, Andrei N. Zhukov, Luca Teriaca
ApJ **2023**
https://arxiv.org/pdf/2301.02034.pdf

A highly dynamic small-scale jet in a polar coronal hole
Sudip **Mandal**, Lakshmi Pradeep Chitta, Hardi Peter, Sami K. Solanki, Regina Aznar Cuadrado, Luca Teriaca, Udo Schühle, David Berghmans, Frèdèric Auchère
A&A **2022**
https://arxiv.org/pdf/2206.02236.pdf

17 Sep **Behind-the-limb gamma-ray flare**

Evidence for flare-accelerated particles in large scale loops in the behind-the-limb gamma-ray solar flare of September 29, 2022
Melissa **Pesce-Rollins**, Karl-Ludwig Klein, Säm Krucker, Alexander Warmuth, M. Astrid Veronig, Nicola Omodei, Christian Monstein
A&A **2024**
https://arxiv.org/pdf/2402.08380.pdf **File**

The coupling of an EUV coronal wave and ion acceleration in a Fermi-LAT behind-the-limb solar flare
Melissa **Pesce-Rollins**, Nicola Omodei, Sam Krucker, Niccol`o Di Lalla, Wen Wang, Andrea F. Battaglia, Alexander Warmuth, Astrid M. Veronig, Luca Baldini
ApJ 929 172 **2022**
https://arxiv.org/pdf/2205.04760.pdf
https://iopscience.iop.org/article/10.3847/1538-4357/ac5f0c/pdf

20-25 Sep
Relative yield of thermal and nonthermal emission during weak flares observed by STIX during September 20-25, 2021
Arun Kumar **Awasthi** (1), Tomasz Mrozek (1), Sylwester Kołomański (2), Michalina Litwicka (3,1), Marek Stęślicki (1), Karol Kułaga (2)
ApJ **2024**
https://arxiv.org/pdf/2402.01936.pdf

21 Sep

A coronal mass ejection encountered by four spacecraft within 1 au from the Sun: ensemble modelling of propagation and magnetic structure
Erika **Palmerio**, Christina Kay, Nada Al-Haddad, Benjamin J Lynch, Domenico Trotta, Wenyuan Yu, Vincent E Ledvina, Beatriz Sánchez-Cano, Pete Riley, Daniel Heyner ++
MNRAS Volume 536, Issue 1, January **2025**, Pages 203–222,
https://doi.org/10.1093/mnras/stae2606
https://watermark.silverchair.com/stae2606.pdf
23 Sep Две короткие **М-класс вспышки**, CME, type II,IV bursts

A coronal mass ejection encountered by four spacecraft within 1 au from the Sun: Ensemble modelling of propagation and magnetic structure
Erika **Palmerio**, Christina Kay, Nada Al-Haddad, Benjamin J. Lynch, Domenico Trotta, Wenyuan Yu, Vincent E. Ledvina, Beatriz Sánchez-Cano, Pete Riley, Daniel Heyner, Daniel Schmid, David Fischer, Ingo Richter, Hans-Ulrich Auster
MNRAS **2024**
https://arxiv.org/pdf/2411.12706

The existence of hot X-ray onsets in solar flares
Andrea Francesco **Battaglia**, Hugh Hudson, Alexander Warmuth, Hannah Collier, Natasha L. S. Jeffrey, Amir Caspi, Ewan C. M. Dickson, Jonas Saqri, Stefan Purkhart, Astrid M. Veronig, Louise Harra, Säm Krucker
A&A **2023**
https://arxiv.org/pdf/2310.04234.pdf

Solar flare hard X-rays from the anchor points of an eruptive filament
Muriel Zoë **Stiefel**1, Andrea Francesco Battaglia1,2, Krzysztof Barczynski1,3, Hannah Collier1,2, Anna Volpara4, Paolo Massa5, Conrad Schwanitz1,3, Sofia Tynelius1, Louise Harra3,1 and Säm Krucker2,6
A&A 670, A89 (**2023**)
ww.aanda.org/articles/aa/pdf/2023/02/aa45044-22.pdf
https://arxiv.org/pdf/2212.11327.pd

Characterising fast-time variations in the hard X-ray time profiles of solar flares using Solar Orbiter's STIX
Hannah **Collier**, Laura A. Hayes, Andrea F. Battaglia, Louise K. Harra, Säm Krucker
A&A **2023**
https://arxiv.org/pdf/2301.08040.pdf

24 Sep
Spicules in IRIS Mg II Observations: Automated Identification
Vicki L. **Herde**, Phillip C. Chamberlin, Don Schmit, Souvik Bose, Adrian Daw, Ryan O. Milligan, Vanessa Polito
AAS Journal **2022**
https://arxiv.org/pdf/2212.04990.pdf

24-26 Sep
Lateral Confinement and the Remarkably Self-similar Nature
Y.-M. **Wang**1 and P. Hess1
2023 ApJ 952 85
https://iopscience.iop.org/article/10.3847/1538-4357/acd638/pdf

25 Sep
Lateral Confinement and the Remarkably Self-similar Nature
Y.-M. **Wang**1 and P. Hess1
2023 ApJ 952 85
https://iopscience.iop.org/article/10.3847/1538-4357/acd638/pdf

26-28 Sep

Lateral Confinement and the Remarkably Self-similar Nature

Y.-M. **Wang**1 and P. Hess1

2023 ApJ 952 85

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

27 Sep

Repeated Type III Burst Groups Associated with a B-Class Flare and a Narrow-Width CME

Silja **Pohjolainen**, Derek McKay, Nasrin Talebpour Sheshvan, Christian Monstein

Solar Phys. **2023**

http://sp.dy.fi/type3-27sep-final.pdf

28 Sep Decaying sunspot AR2871 erupted at 0634 UT producing a slow C2-class solar flare; a shadowy shock wave billowing away from the blast site; a partial-halo CME

Study of Plasma Heating Processes in a Coronal Mass Ejection–driven Shock Sheath Region Observed with the Metis Coronagraph

Federica **Frassati**1, Alessandro Bemporad1, Salvatore Mancuso1, Silvio Giordano1, Vincenzo Andretta2, Aleksandr Burtovoi3,4, Vania Da Deppo5, Silvano Fineschi1, Catia Grimani6, Salvo Guglielmino7Show full author list

2024 ApJ 964 15

https://iopscience.iop.org/article/10.3847/1538-4357/ad26fb/pdf

Acceleration and Release of Solar Energetic Particles Associated with a Coronal Shock on 2021 September 28 Observed by Four Spacecraft

Bin **Zhuang**, Noé Lugaz, David Lario, Ryun-Young Kwon, Nicolina Chrysaphi, Jonathan Niehof, Tingyu Gou, Lulu Zhao

ApJ **2024**

https://arxiv.org/pdf/2401.10388.pdf

Solar Energetic Particles: Spatial Extent and Implications of the H and He Abundances

Review

Donald V. **Reames**

Space Sci. Rev **2022**

https://arxiv.org/ftp/arxiv/papers/2205/2205.06883.pdf

2 Oct

Eruptive events with exceptionally bright emission in HI Ly-alpha observed by the Metis coronagraph

G. **Russano**, V. Andretta, Y. De Leo, L. Teriaca, M. Uslenghi, S. Giordano, D. Telloni, P. Heinzel,

A&A **2023**

https://arxiv.org/pdf/2312.01899.pdf

4 Oct

The observational evidence that all microflares that accelerate electrons to high-energies are rooted in sunspots

Andrea Francesco **Battaglia**, Säm Krucker, Astrid M. Veronig, Muriel Zoë Stiefel, Alexandar Warmuth, Arnold O. Benz, Daniel F. Ryan, Hannah Collier, Louise Harra

A&A **2024**

https://arxiv.org/pdf/2409.14466

7 Oct

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

7-10 Oct
Subsurface Flows Associated with Formation and Flaring Activity of Solar Active Regions
Alexander G. **Kosovichev**, Viacheslav M. Sadykov
Proc. IAU Symp. 365, **2024**
https://arxiv.org/pdf/2401.17598.pdf

8 Oct

Mapping the Longitudinal Magnetic Field in the Atmosphere of an Active Region Plage from the Inversion of the Near-ultraviolet CLASP2.1 Spectropolarimetric Data
Hao **Li**1,2, Tanausú del Pino Alemán1,2, Javier Trujillo Bueno1,2,3, Ryohko Ishikawa4 +++
2024 ApJ 974 154
https://iopscience.iop.org/article/10.3847/1538-4357/ad6dfb/pdf

How Hot Can Small Solar Flares Get?
Louise **Harra**, Andrea F. Battaglia, Krzysztof Barczynski, Hannah Collier, Säm Krucker, Katharine K. Reeves & George Doschek
Solar Physics volume 298, Article number: 13 (**2023**)
https://link.springer.com/content/pdf/10.1007/s11207-022-02106-1.pdf

8-9 Oct
The observational evidence that all microflares that accelerate electrons to high-energies are rooted in sunspots
Andrea Francesco **Battaglia**, Säm Krucker, Astrid M. Veronig, Muriel Zoë Stiefel, Alexandar Warmuth, Arnold O. Benz, Daniel F. Ryan, Hannah Collier, Louise Harra
A&A **2024**
https://arxiv.org/pdf/2409.14466

9 Oct AR2882 erupted at 06:40, producing a M2-class flare and an Earth-directed halo CME. Слабенькие (J10~1.2) продолжительные (3 дня) протоны. Корональная волна, II/IV bursts https://www.spaceweather.com/images2021/09oct21/m1p6_anim.gif
The October 9 CME was observed reaching DSCOVR at 01:47 UT on October 12.

Кузнецов Plasma-2022 СРГ

Multi-spacecraft observations of the decay phase of solar energetic particle events
R. A. **Hyndman**, S. Dalla, T. Laitinen, A. Hutchinson, C. M. S. Cohen, R. F. Wimmer-Schweingruber
A&A **2024**
https://arxiv.org/pdf/2411.07903

Improved modelling of SEP event onset within the WSA-Enlil-SEPMOD framework
Erika **Palmerio**, Janet G. Luhmann, M. Leila Mays, Ronald M. Caplan, +++
Journal of Space Weather and Space Climat **2024**
https://arxiv.org/pdf/2401.05309.pdf

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. **Lorfing**, Hamish A. S. Reid, Raul Gomez-Herrero, Milan Maksimovic, Georgios Nicolaou, Christopher J. Owen, Javier Rodriguez-Pacheco, Daniel F. Ryan, Domenico Trotta, Daniel Verscharen
ApJ **2023**
https://arxiv.org/pdf/2311.14444.pdf

The existence of hot X-ray onsets in solar flares
Andrea Francesco **Battaglia**, Hugh Hudson, Alexander Warmuth, Hannah Collier, Natasha L. S. Jeffrey, Amir Caspi, Ewan C. M. Dickson, Jonas Saqri, Stefan Purkhart, Astrid M. Veronig, Louise Harra, Säm Krucker
A&A **2023**
https://arxiv.org/pdf/2310.04234.pdf

Multiple injections of energetic electrons associated with the flare/CME event on 9 October 2021
Immanuel Christopher **Jebaraj**, Athanasios Koulooumvakos, Nina Dresing, Alexander Warmuth, Nicolas Wijsen, Christian Palmroos, Jan Gieseler, Rami Vainio, Vratislav Krupar, Jasmina Magdalenic, Thomas Wiegelmann, Frederic Schuller, Andrea Battaglia, Annamaria Fedeli
A&A 675, A27 **2023** **File**
https://arxiv.org/pdf/2301.03650.pdf
https://www.aanda.org/articles/aa/pdf/2023/07/aa45716-22.pdf

The effect of the ambient solar wind medium on a CME-driven shock and the associated gradual solar energetic particle event
Nicolas **Wijsen**, David Lario, Beatriz Sánchez-Cano, Immanuel C. Jebaraj, Nina Dresing, Ian G. Richardson, Angels Aran, Athanasios Kouloumvakos, Zheyi Ding, Antonio Niemela, Erika Palmerio, Fernando Carcaboso, Rami Vainio, Alexandr Afanasiev, Marco Pinto, Daniel Pacheco, Stefaan Poedts, Daniel Heyner
ApJ **2023**
https://arxiv.org/pdf/2305.09525.pdf

HOT X-RAY ONSET OBSERVATIONS IN SOLAR FLARES WITH SOLAR ORBITER/STIX
Andrea Francesco **Battaglia**1,2, Hugh Hudson3,4, Säm Krucker1,4, Hannah Collier1,2, and the Solar Orbiter/STIX team
Solar Orbiter nugget #5 **2023** https://www.cosmos.esa.int/web/solar-orbiter/science-nuggets/hot-x-ray-onset-observations-in-solar-flares-with-solar-orbiter-stix

Solar-MACH: An open-source tool to analyze solar magnetic connection configurations
Jan **Gieseler**, Nina Dresing, Christian Palmroos, et al.
Front. Astron. Space Sci. 9:1058810. **2023** doi: 10.3389/fspas.2022.1058810
https://www.frontiersin.org/articles/10.3389/fspas.2022.1058810/pdf
https://www.frontiersin.org/articles/10.3389/fspas.2022.1058810/full

Solar radio bursts observations by Egypt- Alexandria CALLISTO spectrometer: First results
F. N. **Minta**, S. Nozawa, K. Kozarev, A. Elsaid, A. Mahrous
Adv Sp Res **2023**
https://arxiv.org/ftp/arxiv/papers/2302/2302.00289.pdf

Characterising fast-time variations in the hard X-ray time profiles of solar flares using Solar Orbiter's STIX
Hannah **Collier**, Laura A. Hayes, Andrea F. Battaglia, Louise K. Harra, Säm Krucker
A&A **2023**
https://arxiv.org/pdf/2301.08040.pdf

Global Morphology Distortion of the 2021 October 9 Coronal Mass Ejection from an Ellipsoid to a Concave Shape
Liping **Yang**1, Chuanpeng Hou2, Xueshang Feng1,3, Jiansen He2, Ming Xiong1,4, Man Zhang1, Yufen Zhou1, Fang Shen1,4, Xinhua Zhao1, Huichao Li3,1Show full author list
2023 ApJ 942 65
https://iopscience.iop.org/article/10.3847/1538-4357/aca52d/pdf

Multiple injections of energetic electrons associated with the flare/CME event on 9 October 2021
Immanuel Christopher **Jebaraj**, Athanasios Kouloumvakos, Nina Dresing, Alexander Warmuth, Nicolas Wijsen, Christian Palmroos, Jan Gieseler, Rami Vainio, Vratislav Krupar, Jasmina Magdalenic, Thomas Wiegelmann, Frederic Schuller, Andrea Battaglia, Annamaria Fedeli
A&A **2023**
https://arxiv.org/pdf/2301.03650.pdf File

Solar Energetic Particle Time Series Analysis with Python
Christian **Palmroos**, Jan Gieseler, Nina Dresing, Diana E. Morosan, Eleanna Asvestari, Aleksi Yli-Laurila, Daniel J. Price, Saku Valkila, Rami Vainio
2022
https://arxiv.org/pdf/2210.10432.pdf

Detecting the oscillation and propagation of the nascent dynamic solar wind structure at 2.6 solar radii using VLBI radio telescopes
Maoli **Ma**, Guifre Molera Calves, Giuseppe Cimo, Ming Xiong, +++
ApJ **2022**
https://arxiv.org/pdf/2210.10324.pdf

Solar-MACH: An open-source tool to analyze solar magnetic connection configurations
Jan **Gieseler**, Nina Dresing, Christian Palmroos, Johan L. Freiherr von Forstner, Daniel J. Price, Rami Vainio, Athanasios Kouloumvakos, Laura Rodríguez-García, Domenico Trotta, Vincent Génot, Arnaud Masson, Markus Roth, Astrid Veronig
2022
https://arxiv.org/pdf/2210.00819.pdf

Influence of Large-scale Interplanetary Structures on the Propagation of Solar Energetic Particles: The Multispacecraft Event on 2021 October 9
D. **Lario**1, N. Wijsen2, R. Y. Kwon3, B. Sánchez-Cano4, I. G. Richardson1,5, D. Pacheco6, E. Palmerio7, M. L. Stevens8, A. Szabo1, D. Heyner9Show full author list
2022 ApJ 934 55
https://iopscience.iop.org/article/10.3847/1538-4357/ac6efd/pdf

Circular Polarization Observations of Type II Solar Radio Bursts and the Coronal Magnetic Field
R. **Ramesh**1, C. Kathiravan1, and E. Ebenezer Chellasamy2
2022 ApJ 932 48
https://iopscience.iop.org/article/10.3847/1538-4357/ac6f05/pdf

10 Oct

Subsurface Flows Associated with Formation and Flaring Activity of Solar Active Regions
Alexander G. **Kosovichev**, Viacheslav M. Sadykov
Proc. IAU Symp. 365, **2024**
https://arxiv.org/pdf/2401.17598.pdf

Exploring the Impact of Imaging Cadence on Inferring CME Kinematics
Nitin **Vashishtha**, Satabdwa Majumdar, Ritesh Patel, Vaibhav Pant, Dipankar Banerjee

Frontiers in Astronomy and Space Sciences **2023**
https://arxiv.org/pdf/2308.11944.pdf

The Structure of Coronal Mass Ejections Recorded by the K-Coronagraph at Mauna Loa Solar Observatory
Hongqiang **Song**, Leping Li, Zhenjun Zhou, Lidong Xia, Xin Cheng, Yao Chen
ApJL **2023**
https://arxiv.org/pdf/2307.01398.pdf

11 Oct

Efficiency of solar microflares in accelerating electrons when rooted in a sunspot⋆
Jonas **Saqri**1, Astrid M. Veronig1,2, Andrea Francesco Battaglia3,4, Ewan C. M. Dickson1, Dale E. Gary5 and Säm Krucker3,6
A&A 683, A41 (**2024**)
https://arxiv.org/pdf/2312.06856.pdf
https://www.aanda.org/articles/aa/pdf/2024/03/aa48295-23.pdf
https://doi.org/10.1051/0004-6361/202348295

12 Oct G1-2 storm; Kp~6, **Dst~53**
A magnetic **filament** connected to sunspot AR2882 erupted on Oct. 12th (~0200 UT).

20 Oct
Improved AI-generated Solar Farside Magnetograms by STEREO and SDO Data Sets and Their Release
Hyun-Jin **Jeong**1, Yong-Jae Moon1,2, Eunsu Park3, Harim Lee2, and Ji-Hye Baek3,4
2022 ApJS 262 50
https://iopscience.iop.org/article/10.3847/1538-4365/ac8d66/pdf

25 Oct
Eruptive events with exceptionally bright emission in HI Ly-alpha observed by the Metis coronagraph
G. **Russano**, V. Andretta, Y. De Leo, L. Teriaca, M. Uslenghi, S. Giordano, D. Telloni, P. Heinzel,
A&A **2023**
https://arxiv.org/pdf/2312.01899.pdf

28 Oct **15:35: X1.0 flare near AR12887 , very fast and large EIT wave, fast halo CME, очень длительные протоны SEP (J10~20) with very hard spectrum, GLE73; type II/IV bursts, microwaves?** https://www.spaceweather.com/images2021/28oct21/tsunami_gold.gif
https://www.spaceweather.com/images2021/28oct21/cme_c3.gif
https://www.nesdis.noaa.gov/news/time-lapse-of-solar-cycle-25-displays-increasing-activity-the-sun

Multi-spacecraft observations of the decay phase of solar energetic particle events
R. A. **Hyndman**, S. Dalla, T. Laitinen, A. Hutchinson, C. M. S. Cohen, R. F. Wimmer-Schweingruber
A&A **2024**
https://arxiv.org/pdf/2411.07903

An explanation for the slow-rise phase of solar eruptions
Yaoyu **Xing**, Aiying Duan, Chaowei Jiang
MNRAS, Volume 534, Issue 1, October **2024**, Pages 107–116,
https://doi.org/10.1093/mnras/stae2088
https://watermark.silverchair.com/stae2088.pdf

ИСТОЧНИКИ СОЛНЕЧНЫХ ПРОТОНОВ В СОБЫТИЯХ 24-25 ФЕВРАЛЯ И 16-17

ИЮЛЯ 2023 ГОДА

СТРУМИНСКИЙ А.Б.[1], **САДОВСКИЙ А.М.**[1], **ГРИГОРЬЕВА И.Ю.**[2]
КОСМИЧЕСКИЕ ИССЛЕДОВАНИЯ Том: 62Номер: 2 Год: 2024 Страницы: 188-200

Exploring the Dynamics of CME-Driven Shocks by Comparing Numerical Modeling and Observations
Meng **Jin**, Gang Li, Nariaki Nitta, Wei Liu, Vahe Petrosian, Ward Manchester, Christina Cohen, Frederic Effenberger, Zheyi Ding, Melissa Pesce-Rollins, Nicola Omodei, Nat Gopalswamy
Proceedings of IAU Symposium No. 388 - Solar and Stellar Coronal Mass Ejections **2024**
https://arxiv.org/pdf/2409.18020

Very High Energy Solar Energetic Particle Events and Ground Level Enhancement Events: Forecasting and Alerts **Review**
N. **Crosby**, H. Mavromichalaki, O. Malandraki, M. Gerontidou, M. Karavolos, D. Lingri, P. Makrantoni, M. Papailiou, P. Paschalis, A. Tezari
Space Weather Volume22, Issue9 e2023SW003839 **2024**
https://doi.org/10.1029/2023SW003839
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2023SW003839

Recent advances in solar data-driven MHD simulations of the formation and evolution of CME flux ropes **Review**
Brigitte **Schmieder**, Jinhan Guo, Stefaan Poedts
Reviews of Modern Plasma Physics **2024**
https://arxiv.org/pdf/2408.06595

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

Low-frequency solar radio type II bursts and their association with space weather events during the ascending phase of solar cycle 25
Theogene **Ndacyayisenga**, Jean Uwamahoro, Jean Claude Uwamahoro, Daniel Izuikedinachi Okoh, Kantepalli Sasikumar Raja, Akeem Babatunde Rabiu, Christian Kwisanga, and Christian Monstein.
Ann. Geophys., 42, 313–329, **2024**
https://doi.org/10.5194/angeo-42-313-2024
https://angeo.copernicus.org/articles/42/313/2024/angeo-42-313-2024.pdf

The multi-spacecraft high-energy solar particle event of 28 October 2021
A. **Kouloumvakos**, A. Papaioannou, C. O. G. Waterfall, S. Dalla, R. Vainio, G. M. Mason, B. Heber, P. Kühl, R. C. Allen, C.M.S. Cohen, G. Ho, A. Anastasiadis, A. P. Rouillard, J. Rodríguez-Pacheco, J. Guo, X. Li, M. Hörlöck, R. F. Wimmer-Schweingruber
A&A **2024**
https://arxiv.org/pdf/2401.05991.pdf

The Width of Magnetic Ejecta Measured Near 1 au: Lessons from STEREO-A Measurements in 2021--2022
Noé **Lugaz**, Bin Zhuang, Camilla Scolini, Nada Al-Haddad, Charles J. Farrugia, Réka M. Winslow, Florian Regnault, Christian Möstl, Emma E. Davies, Antoinette B. Galvin
ApJ **2023**
https://arxiv.org/pdf/2312.03942.pdf

Eruptive events with exceptionally bright emission in HI Ly-alpha observed by the Metis coronagraph
G. **Russano**, V. Andretta, Y. De Leo, L. Teriaca, M. Uslenghi, S. Giordano, D. Telloni, P. Heinzel,

A&A **2023**
https://arxiv.org/pdf/2312.01899.pdf

Observational Characteristics of solar EUV waves **Review**
Ramesh **Chandra**, Pooja Devi, P. F. Chen, Brigitte Schmieder, Reetika Joshi, Bhuwan Joshi, Arun Kumar Awasthi
3rd BINA workshop proceeding **2023**
https://arxiv.org/pdf/2310.12844.pdf

Dynamics of Threads Wrapping a Filament's Leg Prior to the Eruption on 2021 October 28
Yue **Fang**1, Jun Zhang1, Yi Bi2, and Zhiping Song1
2023 ApJ 955 87
https://iopscience.iop.org/article/10.3847/1538-4357/acf19e/pdf

The triggering process of an X-class solar flare on a small quadrupolar active region
Qiao **Song**, Jing-Song Wang, Xiaoxin Zhang, Hechao Chen, Shuhong Yang, Zhenyong Hou, Yijun Hou, Qian Ye, Peng Zhang, Xiuqing Hu, Jinping Dun, Weiguo Zong, Xianyong Bai, Bo Chen, Lingping He, Kefei Song
ApJ **2023**
https://arxiv.org/pdf/2309.09414.pdf

On the three-dimensional relation between the coronal dimming, erupting filament and CME. Case study of the 28 October 2021 X1.0 event
Galina **Chikunova**, Tatiana Podladchikova, Karin Dissauer, Astrid M. Veronig, Mateja Dumbović, Manuela Temmer, Ewan C.M. Dickson
A&A **2023**
https://arxiv.org/pdf/2308.09815.pdf

A MEGA-BUBBLE IN THE SUN'S ATMOSPHERE:
https://www.spaceweather.com/images2023/11jun23/bubble.gif
See https://www.spaceweather.com June 12, **2023**

Solar Energetic Particle Events Detected in the Housekeeping Data of the European Space Agency's Spacecraft Flotilla in the Solar System
Beatriz **Sánchez-Cano**, Olivier Witasse, Elise W. Knutsen, Dikshita Meggi, +++
Space Weather Volume21, Issue8 August **2023** e2023SW003540
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2023SW003540

Full velocities and propagation directions of coronal mass ejections inferred from simultaneous full-disk imaging and Sun-as-a-star spectroscopic observations
Hong-peng **Lu**, Hui Tian, He-chao Chen, Yu Xu, Zhen-yong Hou, Xian-yong Bai, Guang-yu Tan, Zi-hao Yang, Jie Ren
ApJ **2023**
https://arxiv.org/pdf/2305.08765.pdf

Why "solar tsunamis" rarely leave their imprints in the chromosphere
Ruisheng **Zheng**, Yihan Liu, Wenlong Liu, Bing Wang, Zhenyong Hou, Shiwei Feng, Xiangliang Kong, Zhenghua Huang, Hongqiang Song, Hui Tian, Pengfei Chen, Robertus Erdélyi, Yao Chen
ApJ **2023**
https://arxiv.org/pdf/2304.14859.pdf

The Initiation Mechanism of the First On-disk X-Class Flare of Solar Cycle 25
Aiying **Duan**, Chaowei Jiang, ZhenJun Zhou, Xueshang Feng
A&A **2023**
https://arxiv.org/pdf/2304.13241.pdf

Thermodynamic and Magnetic Topology Evolution of the X1.0 Flare on 2021 October 28 Simulated by a Data-driven Radiative Magnetohydrodynamic Model
Jin-han **Guo**, Yi-wei Ni, Ze Zhong, Yang Guo, Chun Xia, Hai-tang Li, Stefaan Poedts, Brigitte Schmieder, Peng-fei Chen
Astrophysical Journal Supplement **2023**
https://arxiv.org/pdf/2303.13980.pdf

Image Super-resolution Methods for FY-3E X-EUVI 195 Å Solar Images
Qinglin **Yang**1,2, Zhou Chen2,3,4, Rongxin Tang2,3, Xiaohua Deng2,3, and Jinsong Wang4
2023 ApJS 265 36
https://iopscience.iop.org/article/10.3847/1538-4365/acb3b9/pdf

Solar-MACH: An open-source tool to analyze solar magnetic connection configurations
Jan **Gieseler**, Nina Dresing, Christian Palmroos, et al.
Front. Astron. Space Sci. 9:1058810. **2023** doi: 10.3389/fspas.2022.1058810
https://www.frontiersin.org/articles/10.3389/fspas.2022.1058810/pdf
https://www.frontiersin.org/articles/10.3389/fspas.2022.1058810/full

First ground-level enhancement of solar cycle 25 as seen by the High-Energy Particle Detector (HEPD-01) on board the CSES-01 satellite
Matteo **Martucci**, Monica Laurenza, Simone Benella, Francesco Berrilli, +++++
Space Weather e2022SW003191 **Volume21, Issue1** **2023** **File**
https://doi.org/10.1029/2022SW003191
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2022SW003191

Implications of High-density, High-temperature Ridges Observed in Some Two-ribbon Flares
Dana **Longcope**1 and Jiong Qiu1
2022 ApJ 941 160 **File**
https://iopscience.iop.org/article/10.3847/1538-4357/aca29a/pdf

A Study of the Possible Mechanism of the Ground Level Enhancement on 28 October 2021
YunFeng **Zhang**, Kazi A. Firoz, WeiQun Gan, YouPing Li & HuanYu Jia
Solar Physics volume 297, Article number: 155 (**2022**)
https://doi.org/10.1007/s11207-022-02087-1

Extreme-Ultraviolet Wave and Accompanying Loop Oscillations
Pooja **Devi**, Ramesh Chandra, Arun Kumar Awasthi, Brigitte Schmieder, Reetika Joshi
Solar Phys. **297**, Article number: 153 **2022**
https://arxiv.org/pdf/2211.07438.pdf
https://doi.org/10.1007/s11207-022-02082-6

A Data-constrained Magnetohydrodynamic Simulation of the X1.0 Solar Flare of 2021 October 28
Daiki **Yamasaki**, Satoshi Inoue, Yumi Bamba, Jeongwoo Lee, Haimin Wang
ApJ **2022**
https://arxiv.org/pdf/2210.14563 **File**

Solar Energetic Particle Time Series Analysis with Python
Christian **Palmroos**, Jan Gieseler, Nina Dresing, Diana E. Morosan, Eleanna Asvestari, Aleksi Yli-Laurila, Daniel J. Price, Saku Valkila, Rami Vainio
2022
https://arxiv.org/pdf/2210.10432.pdf

On some features of the solar proton event on 2021 October 28 – GLE73
I.M. **Chertok**

MNRAS Volume 517, Issue 2, Pages 2709–2713, **2022**
https://arxiv.org/ftp/arxiv/papers/2210/2210.04238.pdf

Solar-MACH: An open-source tool to analyze solar magnetic connection configurations
Jan **Gieseler**, Nina Dresing, Christian Palmroos, Johan L. Freiherr von Forstner, Daniel J. Price, Rami Vainio, Athanasios Kouloumvakos, Laura Rodríguez-García, Domenico Trotta, Vincent Génot, Arnaud Masson, Markus Roth, Astrid Veronig
2022
https://arxiv.org/pdf/2210.00819.pdf

Ionospheric response to the M- and X-class solar flares of 28 October 2021 over the African sector
John Bosco **Habarulema**, Mpho Tshisaphungo, Zama Thobeka Katamzi-Joseph, Tshimangadzo Merline Matamba, Rendani Nndanganeni
Space Weather e2022SW003104 **2022**
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2022SW003104

A New Model for Nowcasting the Aviation Radiation Environment With Comparisons to In Situ Measurements During GLEs
A. D. P. **Hands**, F. Lei,C. S. Davis,B. J. Clewer,C. S. Dyer,K. A. Ryden
Space Weather Volume20, Issue8 e2022SW003155 **2022**
https://doi.org/10.1029/2022SW003155
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2022SW003155 **File**

The relativistic solar particle event on 28 October 2021: Evidence of particle acceleration within and escape from the solar corona⋆
Karl-Ludwig **Klein**1,2, Sophie Musset1,3, Nicole Vilmer1,2, Carine Briand1,2, Säm Krucker4,5, Andrea Francesco Battaglia4,6, Nina Dresing7, Christian Palmroos7 and Dale E. Gary8
A&A 663, A173 (**2022**)
https://www.aanda.org/articles/aa/pdf/2022/07/aa43903-22.pdf **File**
Download Video: Formats: mp4 (2.1 MB) | webm (134.3 KB) | ogg (5.0 MB) | Original mp4 (2.1 MB)

High-Resolution Spectral and Anisotropy Characteristics of Solar Protons During the GLE №73 on 28 October 2021 Derived with Neutron-Monitor Data Analysis
Alexander L. **Mishev**, Leon G. Kocharov, Sergey A. Koldobskiy, Nicholas Larsen, Esa Riihonen, Rami Vainio & Ilya G. Usoskin
Solar Physics volume 297, Article number: 88 (**2022**) **File**
https://link.springer.com/content/pdf/10.1007/s11207-022-02026-0.pdf
https://doi.org/10.1007/s11207-022-02026-0

The Spectrometer Telescope for Imaging X-rays (STIX) on Solar Orbiter
Laura A. **Hayes**, Sophie Musset, Daniel M üller, S äm Krucker
Book Chapter for Handbook of X-ray and Gamma-ray Astrophysics **2022**
https://arxiv.org/pdf/2207.02079.pdf

Major X-class solar flare from earth-facing active region AR 12887 on October 28, 2021 and first cosmic ray GLE 73 in solar cycle 25.
Velinov, P.I.Y.:
2022, C. R. Acad. Bulgare Sci. 75(2), 248. **File**
http://www.proceedings.bas.bg/index.php/cr/article/download/29/29/39

Sun-as-a-star spectroscopic observations of the line-of-sight velocity of a solar eruption on October 28, 2021
Yu **Xu**, Hui Tian, Zhenyong Hou, Zihao Yang, Yuhang Gao, Xianyong Bai
ApJ Volume 931, Issue 2, id.76, **2022** **File**
https://arxiv.org/pdf/2204.11722.pdf

https://iopscience.iop.org/article/10.3847/1538-4357/ac69d5/pdf
RHESSI Science Nuggets №430 May **2022** https://sprg.ssl.berkeley.edu/~tohban/wiki/index.php/Sun-as-a-star_spectroscopic_observations_of_the_line-of-sight_velocity_of_a_solar_eruption_on_October_28,_2021

Solar Energetic Particles Produced during Two Fast Coronal Mass Ejections
Xiaolei **Li**1, Yuming Wang1,2,3, Jingnan Guo1,2, and Shaoyu Lyu1
2022 ApJL 928 L6
https://iopscience.iop.org/article/10.3847/2041-8213/ac5b72/pdf **File**

Three-dimensional Propagation of the Global EUV Wave associated with a solar eruption on 2021 October 28
Zhenyong **Hou**, Hui Tian, Jing-Song Wang, Xiaoxin Zhang, Qiao Song, Ruisheng Zheng, Hechao Chen, Bo Chen, Xianyong Bai, Yajie Chen, Lingping He, Kefei Song, Peng Zhang, Xiuqing Hu, Jinping Dun, Weiguo Zong, Yongliang Song, Yu Xu, Guangyu Tan
ApJ **928** 98 **2022** **File**
https://arxiv.org/pdf/2202.13051.pdf
https://iopscience.iop.org/article/10.3847/1538-4357/ac590d/pdf

The First Ground Level Enhancement of Solar Cycle 25 on 28 October 2021
A. **Papaioannou**, A. Kouloumvakos, A. Mishev, R. Vainio, I. Usoskin, K. Herbst, A. P. Rouillard, A. Anastasiadis, J. Gieseler, R. Wimmer-Schweingruber, P. Kühl
A&A Let 660, L5 **2022**
https://arxiv.org/pdf/2202.07927.pdf
www.aanda.org/articles/aa/pdf/2022/04/aa42855-21.pdf **File**
https://doi.org/10.1051/0004-6361/202142855
Movie 1 associated with Fig. 2 (SDO_AIA_20211028_Extended_full) (Access here)
Movie 2 associated with Fig. B.1 (AIA_and_ConnectFLs_v2) (Access here)

A demonstration of STIX hard X-ray imaging spectroscopy capabilities for an X-class flare (SOL2021-10-28)
Andrea **BATTAGLIA**, Hannah COLLIER, and Säm KRUCKER
RHESSI Science Nuggets #426 **2022**
https://sprg.ssl.berkeley.edu/~tohban/wiki/index.php/A_demonstration_of_STIX_hard_X-ray_imaging_spectroscopy_capabilities_for_an_X-class_flare_(SOL2021-10-28)

30 Oct
Backstreaming ions at a high Mach number interplanetary shock Solar Orbiter measurements during the nominal mission phase
A. P. **Dimmock**1, M. Gedalin2, A. Lalti1,3, D. Trotta4, Yu. V. Khotyaintsev1, D. B. Graham1, A. Johlander5,1, R. Vainio6, X. Blanco-Cano7, P. Kajdič7, C. J. Owen8 and R. F. Wimmer-Schweingruber9
A&A 679, A106 (**2023**)
https://www.aanda.org/articles/aa/pdf/2023/11/aa47006-23.pdf

31 Oct Слабая буря от CME 28-ого: Kp=5, Dst~24 nT, Bz>0

31 Oct- 6 Nov
MULTI-SCALE STRUCTURE AND COMPOSITION OF ICME PROMINENCE MATERIAL FROM THE SOLAR WIND ANALYSER SUITE
Ryan M. **Dewey**1, Susan T. Lepri1, Stefano Livi1,2, Christopher J. Owen3, Philippe Louarn4, Raffaella D'Amicis5, and the Solar Orbiter/SWA team
Solar Orbiter nugget #4 **2023** https://www.cosmos.esa.int/web/solar-orbiter/science-nuggets/multi-scale-structure-and-composition-of-icme-prominence-material-from-the-solar-wind-analyser-suite
31 Oct-6 Nov 2021

1 Nov SW AR2887 erupted again at 01:45, producing an M1 flare and a coronal wave that rippled across half the solar disk: movie. Type II burst

~ 15 UT - Эрупция центрального волокна
21:33 –C4 flare, partial halo CME, there are still flares

A Modelling Investigation for Solar Flare X-ray Stereoscopy with Solar Orbiter/STIX and Earth Orbiting Missions
Natasha L. S. **Jeffrey**, Säm Krucker, Morgan Stores, Eduard P. Kontar, Pascal Saint-Hilaire, Andrea F. Battaglia, +++
ApJ **2024**
https://arxiv.org/pdf/2401.16032.pdf

Beyond the disk: EUV coronagraphic observations of the Extreme Ultraviolet Imager on board Solar Orbiter
Auchère, F., Berghmans, D., Dumesnil, C., Halain, J.-P., Mercier, R., +++
A&A **2023**
https://arxiv.org/pdf/2305.15308.pdf

1-2 Nov
CMEs evolve in the interplanetary medium to double their predicted geo-effectiveness
Shirsh Lata **Soni**1,2, Anwesha Maharana3, Antonio Guerrero4, Wageesh Mishra5, Stefaan Poedts3,6, Smitha Thampi2 and Mojtaba Akhavan-Tafti1
A&A, 686, A23 (**2024**)
https://doi.org/10.1051/0004-6361/202347552
https://www.aanda.org/articles/aa/pdf/2024/06/aa47552-23.pdf

2 Nov **03 UT: Central N AR2891, M1.7 LDE flare, coronal wave, eruption, PE arcade, fast full halo CME**
A CANNIBAL CME https://spaceweatherarchive.com/2021/11/04/a-cannibal-cme/

The Width of Magnetic Ejecta Measured Near 1 au: Lessons from STEREO-A Measurements in 2021--2022
Noé **Lugaz**, Bin Zhuang, Camilla Scolini, Nada Al-Haddad, Charles J. Farrugia, Réka M. Winslow, Florian Regnault, Christian Möstl, Emma E. Davies, Antoinette B. Galvin
ApJ **2023**
https://arxiv.org/pdf/2312.03942.pdf

Application of the Tianwen-1 DOR Signals Observed by Very Long Baseline Interferometry Radio Telescopes in the Study of Solar Wind Plasma and a Coronal Mass Ejection
Zhichao **Wang**1,2, Maoli Ma1, Qinghui Liu1, Qingbao He3, Xin Zheng1, Lijia Liu4, and Guifré Molera Calvés5
2023 ApJS 269 57
https://iopscience.iop.org/article/10.3847/1538-4365/ad077f/pdf

Why "solar tsunamis" rarely leave their imprints in the chromosphere
Ruisheng **Zheng**, Yihan Liu, Wenlong Liu, Bing Wang, Zhenyong Hou, Shiwei Feng, Xiangliang Kong, Zhenghua Huang, Hongqiang Song, Hui Tian, Pengfei Chen, Robertus Erdélyi, Yao Chen
ApJ **2023**
https://arxiv.org/pdf/2304.14859.pdf

Cross-loop propagation of a quasi-periodic extreme-ultraviolet wave train triggered by successive stretching of magnetic field structures during a solar eruption
Zheng **Sun**, Hui Tian, P. F. Chen, Shuo Yao, Zhenyong Hou, Hechao Chen, Linjie Chen
ApJ **2022**
https://arxiv.org/pdf/2210.06769.pdf

3 Nov В конце дня SSC and **Energetic Storm Particles (ESPs)** J10~15

An Overview of Solar Orbiter Observations of Interplanetary Shocks in Solar Cycle 25 Review
D. **Trotta**, A. Dimmock, H. Hietala, X. Blanco-Cano, T. S. Horbury, +++
ApJ **2024**
https://arxiv.org/pdf/2410.24007

The Energetic Storm Particle events of 3 November 2021
Federica **Chiappetta**, Monica Laurenza, Fabio Lepreti, Fabio Lepreti, Simone Benella, Simone Benella, Giuseppe Consolini, and Maria Marcucci
Front. Astron. Space Sci. 10: 1209479 **2023**
https://www.frontiersin.org/articles/10.3389/fspas.2023.1209479/pdf

Multi-spacecraft observations of shocklets at an interplanetary shock
D **Trotta**, H Hietala, T Horbury, N Dresing, R Vainio, L Wilson, III, I Plotnikov, E Kilpua
MNRAS, Volume 520, Issue 1, March **2023**, Pages 437–445,
https://doi.org/10.1093/mnras/stad104
https://watermark.silverchair.com/stad104.pdf
Solar Orbiter nugget #10 **2023**
https://www.cosmos.esa.int/web/solar-orbiter/solar-nuggets/an-interesting-interplanetary-shock

Beyond the disk: EUV coronagraphic observations of the Extreme Ultraviolet Imager on board Solar Orbiter
Auchère, F., Berghmans, D., Dumesnil, C., Halain, J.-P., Mercier, R., +++
A&A **2023**
https://arxiv.org/pdf/2305.15308.pdf

3-5 Nov

Discrepancies in the Properties of a Coronal Mass Ejection on Scales of 0.03~au as Revealed by Simultaneous Measurements at Solar Orbiter and Wind: The 2021 November 3--5 Event
F. **Regnault**, N. Al-Haddad, N. Lugaz, C. J. Farrugia, W. Yu, B. Zhuang, E. E. Davies
ApJ **2023**
https://arxiv.org/pdf/2311.14046.pdf

Large amplitude bidirectional anisotropy of cosmic-ray intensity observed with world-wide networks of ground-based neutron monitors and muon detectors in November, 2021
K. **Munakata**, M. Kozai, C. Kato, Y. Hayashi, R. Kataoka, +++
ApJ **2022**
https://arxiv.org/pdf/2209.05743.pdf

4 Nov **G3 Geomagnetic storm Kp=7, 14 UT - Dst~-107 nT due to the 2 Nov eruption; Strong Forbush ~11%**
https://www.nesdis.noaa.gov/news/time-lapse-of-solar-cycle-25-displays-increasing-activity-the-sun

Beyond the disk: EUV coronagraphic observations of the Extreme Ultraviolet Imager on board Solar Orbiter
Auchère, F., Berghmans, D., Dumesnil, C., Halain, J.-P., Mercier, R., +++
A&A **2023**
https://arxiv.org/pdf/2305.15308.pdf

A New Model for Nowcasting the Aviation Radiation Environment With Comparisons to In Situ Measurements During GLEs
A. D. P. **Hands**, F. Lei,C. S. Davis,B. J. Clewer,C. S. Dyer,K. A. Ryden
Space Weather Volume20, Issue8 e2022SW003155 **2022**
https://doi.org/10.1029/2022SW003155
https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2022SW003155

5-6 Nov

First Detection of Kink Oscillations with Solar Orbiter
Sihui **ZHONG** et al.
RHESSI Science Nuggets №436 **2022**
https://sprg.ssl.berkeley.edu/~tohban/wiki/index.php/First_Detection_of_Kink_Oscillations_with_Solar_Orbiter

Two-Spacecraft Detection of Short-period Decayless Kink Oscillations of Solar Coronal Loops
Sihui **Zhong**, Valery M. Nakariakov, Dmitrii Y. Kolotkov, Cis Verbeeck, David Berghmans
MNRAS **2022**
https://arxiv.org/pdf/2209.01917.pdf

6 Nov
Solar Filament Eruptions in Hα Doppler Velocity
I. A. **Berezin**1, A. G. Tlatov1, and A. A. Pevtsov2
2023 ApJ 950 100
https://iopscience.iop.org/article/10.3847/1538-4357/acd113/pdf

7 Nov

Detecting non-thermal emission in a solar microflare using nested sampling
Kristopher **Cooper**, Iain G. Hannah, Lindsay Glesener, Brian W. Grefenstette
MNRAS **2024**
https://arxiv.org/pdf/2402.05426.pdf

Modeling CME encounters at Parker Solar Probe with OSPREI: Dependence on photospheric and coronal conditions⋆
Vincent E. **Ledvina**1,⋆⋆, Erika Palmerio1, Christina Kay2,3, 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

9 Nov 17:01 – NW limb **M2 LDE** the flare , a bright CME , small low energy SEP J10~3

14 Nov
Investigating Coronal Holes and CMEs as Sources of Brightness Depletion Detected in PSP/WISPR Images
Guillermo **Stenborg**1, Evangelos Paouris1,2, Russell A. Howard1, Angelos Vourlidas1, and Phillip Hess3
2023 ApJ 949 61
https://iopscience.iop.org/article/10.3847/1538-4357/acd2cf/pdf

16-26 Nov

Prediction and Verification of Parker Solar Probe Solar Wind Sources at 13.3 R⊙

Samuel T. **Badman**, Pete Riley, Shaela I. Jones, Tae K. Kim, Robert C. Allen, C. Nick Arge, Stuart D. Bale, Carl J. Henney, Justin C. Kasper, Parisa Mostafavi, Nikolai V. Pogorelov, Nour E. Raouafi, Michael L. Stevens, J. L. Verniero
JGR Space Physics **2023**/1/31
https://arxiv.org/pdf/2303.04852.pdf

Overview of the remote sensing observations from PSP solar encounter 10 with perihelion at 13.3 Rsun
Russell A. **Howard**, Guillermo Stenborg, Angelos Vourlidas, Brendan M. Gallagher, Mark G. Linton, Phillip Hess, Nathan B. Rich, Paulett C. Liewer
ApJ **2022**
https://arxiv.org/pdf/2207.12175.pdf

18-19 Nov

Investigating Coronal Holes and CMEs as Sources of Brightness Depletion Detected in PSP/WISPR Images
Guillermo **Stenborg**1, Evangelos Paouris1,2, Russell A. Howard1, Angelos Vourlidas1, and Phillip Hess3
2023 ApJ 949 61
https://iopscience.iop.org/article/10.3847/1538-4357/acd2cf/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

19 Nov
Overview of the remote sensing observations from PSP solar encounter 10 with perihelion at 13.3 Rsun
Russell A. **Howard**, Guillermo Stenborg, Angelos Vourlidas, Brendan M. Gallagher, Mark G. Linton, Phillip Hess, Nathan B. Rich, Paulett C. Liewer
ApJ **2022**
https://arxiv.org/pdf/2207.12175.pdf

19-21 Nov
New Evidence on the Origin of Solar Wind Microstreams/Switchbacks
Pankaj **Kumar**, Judith T. Karpen, Vadim M. Uritsky, Craig E. Deforest, Nour E. Raouafi, C. Richard DeVore, Spiro K. Antiochos
ApJL **2023**
https://arxiv.org/pdf/2305.06914.pdf

20-22 Nov

Investigating Coronal Holes and CMEs as Sources of Brightness Depletion Detected in PSP/WISPR Images
Guillermo **Stenborg**1, Evangelos Paouris1,2, Russell A. Howard1, Angelos Vourlidas1, and Phillip Hess3
2023 ApJ 949 61
https://iopscience.iop.org/article/10.3847/1538-4357/acd2cf/pdf

Parker Solar Probe Encounters the Leg of a Coronal Mass Ejection at 14 Solar Radii
D. J. **McComas**1, T. Sharma1, E. R. Christian2, C. M. S. Cohen3, M. I. Desai4,5, M. E. Hill6, L. Y. Khoo1, W. H. Matthaeus7, D. G. Mitchell6, F. Pecora7Show full author list
2023 ApJ 943 71
https://iopscience.iop.org/article/10.3847/1538-4357/acab5e/pdf

Interchange reconnection within coronal holes powers the fast solar wind
S. D. **Bale**, J. F. Drake, M. D. McManus, M. I. Desai, S. T. Badman, D. E. Larson, M. Swisdak, N. E. Raouafi, T. Phan, M. Velli, D. J. McComas, C. M. S. Cohen, D. Mitchell, O. Panasenco, J. C. Kasper
2022
https://arxiv.org/ftp/arxiv/papers/2208/2208.07932.pdf

Overview of the remote sensing observations from PSP solar encounter 10 with perihelion at 13.3 Rsun
Russell A. **Howard**, Guillermo Stenborg, Angelos Vourlidas, Brendan M. Gallagher, Mark G. Linton, Phillip Hess, Nathan B. Rich, Paulett C. Liewer
ApJ **2022**
https://arxiv.org/pdf/2207.12175.pdf

21-22 Nov a confined C4.5 flare, a flare-less filament eruption and a double-peak M-class flare

Fundamental-harmonic pairs of interplanetary type III radio bursts
Immanuel Christopher **Jebaraj**, Vladimir Krasnoselskikh, Marc Pulupa, Jasmina Magdalenic, Stuart Bale
ApJL **2023**
https://arxiv.org/pdf/2309.05763.pdf

Tracking magnetic flux and helicity from Sun to Earth -- Multi-spacecraft analysis of a magnetic cloud and its solar source
J. K. **Thalmann**, M. Dumbovic, K. Dissauer, T. Podladchikova, G. Chikunova, M. Temmer, E. Dickson, A. M. Veronig
A&A **2022**
https://arxiv.org/pdf/2210.02228.pdf

22 Nov
The Effect of the Parametric Decay Instability on the Morphology of Coronal Type III Radio Bursts
Chaitanya Prasad **Sishtla**, Immanuel Christopher Jebaraj, Jens Pomoell, Norbert Magyar, Marc Pulupa, Emilia Kilpua, Stuart D. Bale
ApJL **2023**
https://arxiv.org/pdf/2312.10398.pdf

22-23 Nov
Overview of the remote sensing observations from PSP solar encounter 10 with perihelion at 13.3 Rsun
Russell A. **Howard**, Guillermo Stenborg, Angelos Vourlidas, Brendan M. Gallagher, Mark G. Linton, Phillip Hess, Nathan B. Rich, Paulett C. Liewer
ApJ **2022**
https://arxiv.org/pdf/2207.12175.pdf

24 Nov ~13 UT– **southern filament eruption**,
partial halo CME http://spaceweather.gmu.edu/seeds/dailymkmovie.php?cme=20211124&r
http://spaceweather.gmu.edu/seeds/dailymkmovie.php?cme=20211124&cor2=a
The CME left the sun following a filament eruption

24-26 Nov
Overview of the remote sensing observations from PSP solar encounter 10 with perihelion at 13.3 Rsun
Russell A. **Howard**, Guillermo Stenborg, Angelos Vourlidas, Brendan M. Gallagher, Mark G. Linton, Phillip Hess, Nathan B. Rich, Paulett C. Liewer
ApJ **2022**

https://arxiv.org/pdf/2207.12175.pdf

27 Nov

Energetic particle contamination in STIX during Solar Orbiter's passage through Earth's radiation belts and an interplanetary shock

Hannah **Collier**, Olivier Limousin, Hualin Xiao, Arnaud Claret, Frederic Schuller, Nina Dresing, Saku Valkila, Francisco Espinosa Lara, Annamaria Fedeli, Simon Foucambert, Säm Krucker

IEEE TRANSACTIONS ON NUCLEAR SCIENCE **2024**

https://arxiv.org/pdf/2402.03816.pdf

29 Nov ~08 UT - again **large southern filament eruption** movie ;
CME http://spaceweather.gmu.edu/seeds/dailymkmovie.php?cme=20211129&r

30 Nov-1 Dec CIR hit Earth's magnetic field, sparking a G1-class geostorm, **Dst~-56 nT**
effects from CH1044

4 Dec

Interplanetary Rotation of 2021 December 4 CME

Mengxuan **Ma**, Liping Yang, Fang Shen, Chenglong Shen, Yutian Chi, Yuming Wang, Yufen Zhou, Man Zhang, Daniel Heyner, Uli Auster, Ingo Richter, Beatriz Sanchez-Cano

ApJ **2024**

https://arxiv.org/pdf/2410.20803

4-8 Dec

The Dynamic Evolution of Multipoint Interplanetary Coronal Mass Ejections Observed with BepiColombo, Tianwen-1, and MAVEN

Yutian **Chi**1, Chenglong Shen2,3, Junyan Liu4, Zhihui Zhong4, Mathew Owens5, Christopher Scott5, Luke Barnard5, Bingkun Yu1, Daniel Heyner6, Hans-Ulrich Auster6

2023 ApJL 951 L14

https://iopscience.iop.org/article/10.3847/2041-8213/acd7e7/pdf

5 Dec SW farside activity **Серьёзная эрупция большого центрального южного swirling волокна в 11:30 и ещё в ~23 UT.**

20 Dec **Комплекс ARs на юге в центре**
03:20 - южно-центральная эрупция, C4.4 вспышка, корональная волна
11:36 – M1.8 вспышка, S22W05, корон. волна, type II, большой, но слабый CME
https://www.spaceweather.com/images2021/20dec21/cme_c3_anim.gif
http://spaceweather.gmu.edu/seeds/dailymkmovie.php?cme=20211220&r

23 Dec

Lateral Confinement and the Remarkably Self-similar Nature

Y.-M. **Wang**1 and P. Hess1

2023 ApJ 952 85

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

24 Dec

Imaging and spectroscopic observations of a confined solar filament eruption with two-stage evolution

Zhe **Xu**, Xiaoli Yan, Liheng Yang, Zhike Xue, Jincheng Wang, Yian Zhou

MNRAS **2024**

https://arxiv.org/pdf/2403.12639.pdf

24-25 Dec

Analysis of the first coronagraphic multi-band observations of a sungrazing comet
A. **Bemporad**1, S. Pennella2, K. Battams3, S. Giordano1, B. Gray4, M. M. Knight, +++
A&A 680, A90 (**2023**)
https://www.aanda.org/articles/aa/pdf/2023/12/aa46881-23.pdf

26 Dec
Analysis of solar eruptions deflecting in the low corona: influence of the magnetic environment
A. **Sahade**, A. Vourlidas, C. Mac Cormack
ApJ **2024**
https://arxiv.org/pdf/2411.11599

28 Dec A pair of M1-class solar flares yesterday did *not* hurl CMEs toward Earth. *The impulsive flares were too shortlived to lift significant clouds of plasma out of the sun's atmosphere.*

28-31 Dec
The Dynamic Evolution of Multipoint Interplanetary Coronal Mass Ejections Observed with BepiColombo, Tianwen-1, and MAVEN
Yutian **Chi**1, Chenglong Shen2,3, Junyan Liu4, Zhihui Zhong4, Mathew Owens5, Christopher Scott5, Luke Barnard5, Bingkun Yu1, Daniel Heyner6, Hans-Ulrich Auster6
2023 ApJL 951 L14
https://iopscience.iop.org/article/10.3847/2041-8213/acd7e7/pdf

31 Dec two explosions occured 700,000 km apart: M1 flare with filament eruption in NW AR2918 and enormous prominence/CME from the SW hemisphere

Analysis of solar eruptions deflecting in the low corona: influence of the magnetic environment
A. **Sahade**, A. Vourlidas, C. Mac Cormack
ApJ **2024**
https://arxiv.org/pdf/2411.11599

3He and Fe Spectral Properties in 3He-rich Solar Energetic Particle Events
G. M. **Mason**1, A. Kouloumvakos1, G. C. Ho2, R. C. Allen2, R. Gómez-Herrero3, R. F. Wimmer-Schweingruber4, and J. Rodríguez-Pacheco3
2024 ApJ 974 54
https://iopscience.iop.org/article/10.3847/1538-4357/ad6ddc/pdf