CV - Mag. Dr. Christian Möstl

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https://helioforecast.space (ASWO team homepage)
google scholar (publications)
SAO/NASA ADS (publications)
http://orcid.org/0000-0001-6868-4152 (ORCID)
https://figshare.com/authors/_/3695146 (open research data)
https://github.com/cmoestl (open source codes)

https://bsky.app/profile/chrisoutofspace.bsky.social (personal social media)
https://bsky.app/profile/aswogeosphere.bsky.social (ASWO social media)
https://www.geosphere.at/en/topics/disaster-protection/space-weather (Space Weather at GeoSphere)

Personal Information

Mag. Dr. Christian Möstl Nationality: Austrian PhD: 2009, Univ. of Graz, Austria Children: 1

Main areas of research

I am a space scientist based in Graz, Austria and work on basic heliophysics research and applied heliospheric weather forecasting. I am the head of the Austrian Space Weather Office, which is designed to provide a direct feedback loop between basic space weather research (R) and operational (O) products, in an research-to-operations-to-research (R2O2R) cycle.

For current space weather events, we inform the public in Austria and central Europe of their impacts, such as whether northern lights might be observed. At the GeoSphere Austria, the national federal authority on meteorology, geophysics and geology, we take part in the Austrian multi-hazard service (AMAS). Hereby, we warn the public on the combined effects of various natural hazards, including the potential effects of space weather on technological systems.

My research focus is on studying the interplanetary evolution, 3D structure and global shape of solar storms (coronal mass ejections, CMEs) with multi-platform in situ and imaging observations by e.g. SDO, SOHO, STEREO, Wind, Parker Solar Probe, Solar Orbiter and BepiColombo with empirical, analytical and numerical modeling. I am managing the most comprehensive living catalog on CMEs observed in situ at https://helioforecast.space/icmecat. With my team, I work in particular on the modeling and forecasting of CME arrival times and their southward pointing Bz magnetic fields, using data from sub-L1 upstream monitors and hyperfast semi-empirical models. The combination of data from new space missions, such as NASA PUNCH, ESA HENON, Vigil and SHIELD, with physical models and AI-based methods is bound to revolutionize space weather forecasting in the next decade.

I played a large part in developing the new field of interpreting and modeling heliospheric imager observations, provided by STEREO, Solar Orbiter, Parker Solar Probe, NASA PUNCH and the future ESA Vigil missions. I invented a new 3D CME flux rope model (3DCORE). Further, I work on algorithms for the real time prediction of the solar wind, the aurora and geomagnetically induced currents including machine learning, and was involved in studies of space weather on exoplanets.

In 2022, I received an ERC Consolidator Grant and in 2016 the EGU Arne Richter Award.

Leadership

1. PI of **5 completed and 1 ongoing** research projects (3 EU, 3 Austrian Science Fund - FWF).
   ERC Consolidator Grant 2021 (PE9, Universe Sciences, project HELIO4CAST), 2022 - 2027.
   Total PI budget: **3.6 Mio €.** Proposal advisor for 2 successful ERC CoG grants (1 Austria, 1 Finland).
2. Head and founder of the **Austrian Space Weather Office** (2022-), where I lead a team of 9 researchers, see https://helioforecast.space/team. Lead and co-lead since 2020 of the Solar Orbiter science working group „Eruptive Events and Large-Scale Structure“ with 400 participants.

3. Austrian national coordinator for the UNOOSA International Space Weather Initiative.
4. Member of a review panel for the research council of Finland, reviewer for NASA ROSES and NSF Shine (USA), reviewer for the science foundations of Switzerland and Czech Republic
5. Convener and co-convener of **9 sessions at international conferences**, working group leader at 2 international conferences, organizer of 1 workshop in Austria, 8 invited talks.

Experience abroad
Space Science Laboratory, University of California, Berkeley (employed there for 1 year, 2011-2012), University of New Hampshire, (3 visits, 2006-2009, 3 months), NASA Jet Propulsion Laboratory, Pasadena (2 visits, 2012, 2 weeks). Seminars e.g. at ROB Belgium and Imperial College.

Current position

2022 - : Head and founder of the **Austrian Space Weather Office** at the **GeoSphere Austria**, PI of **ERC Consolidator Grant** HELIO4CAST, in Graz, Austria.

Former positions

2020 - 2022: Research Associate & project PI, Space Research Institute (IWF), Austrian Academy of Sciences, **leading 2 Austrian Science Fund (FWF) projects**: *Modeling the magnetic cores of solar storms and* P31521-N27, *Enhanced lead time for geomagnetic storms,* P31659-N27.

2020: Research Associate & project PI, Technical University of Graz, Institute for Geodesy, leading 2 FWF projects: *Modeling the magnetic cores of solar storms*, P31521-N27, *Enhanced lead time for geomagnetic storms,* P31659-N27.

2014 - 2020: Research Associate & project PI, Space Research Institute (IWF), project: *The evolution of solar storms in the inner heliosphere,* Austrian Science Fund, P26174-N27.

2014 - 2017: Working package leader & local PI, Institute of Physics, University of Graz (UNI Graz), Austria. *HELCATS - Heliospheric Cataloguing Analysis and Techniques Service,* EU-FP7-SPACE.

2013 - 2014: Post-Doc, Institute of Physics, UNI Graz, Austria. *COMESEP - Coronal mass ejections and solar energetic particles,* EU FP7 - SPACE, PI: N. Crosby.

2012 - 2013: Marie Curie Fellow (Post-Doc), Institute of Physics, UNI Graz, Austria. *WILISCME: The relationship between white-light and in situ observations of coronal mass ejections,* Marie-Curie international outgoing fellowship (return phase), EU FP7 - PEOPLE, PI: C. Möstl

2011 - 2012: Marie Curie Fellow (Post-Doc), **Space Science Laboratory, University of California, Berkeley, USA,** *WILISCME,* Marie-Curie international outgoing fellowship, EU FP7 - PEOPLE, PI: C. Möstl, supervisor: J. G. Luhmann.

2011: Post-Doc, Institute of Physics, UNI Graz, Austria, project: *COMESEP - Coronal mass ejections and solar energetic particles,* EU FP7 - SPACE, PI: N. Crosby.

2010 - 2011: Post-Doc, IWF, Graz, Austria, *Magnetic clouds and their solar sources,* Austrian Science Fund, PI: H. Biernat. **2008 - 2009:** Doctoral Researcher, IWF, Graz, Austria, *Magnetic clouds and their solar sources,* Austrian Science Fund, PI: H. Biernat. **2007 - 2008:** Doctoral Researcher, IWF, Graz, Austria, *Multi-spacecraft studies of magnetic clouds*, funded by University of Graz, PI: C. Möstl.

Supervised young researchers (and their current position): Martin A. Reiss (NASA CCMC, permanent), Tanja Amerstorfer (research project PI, GeoSphere Austria, permanent), Rachel L. Bailey (Conrad Observatory, GeoSphere Austria, permanent), Andreas J. Weiss (PostDoc, NASA Goddard), Ute V. Amerstorfer (PostDoc, GeoSphere), Emma E. Davies (PostDoc, GeoSphere), Hannah T. Rüdisser (PhD student, GeoSphere), Maike Bauer (PhD student, Geosphere), Eva Weiler (PhD student, GeoSphere), Mateja Dumbovic (research project PI, Univ. of Zagreb), Manuel Kubicka (TU Graz), Julia Donnerer, Peter Boakes, Olli Törmanen, Dominik Utz (all industry).

Academic education: **2006-2009:** PhD Study in natural sciences (physics, with distinction) at the UNI Graz, Thesis: *Modeling of magnetic clouds using multi-spacecraft observations*, supervisors: Helfried Biernat, Charles J. Farrugia (University of New Hampshire, USA). **1999-2005**: Study of physics at the

UNI Graz, with distinction, master thesis about solar magnetic field observations with the Swedish Solar Telescope on La Palma, supervisor: Arnold Hanslmeier.

Publications

126 articles (16 as first author) in **internationally peer-reviewed scientific journals**, such as *Nature Communications, Astrophysical Journal Letters*, *Geophysical Research Letters, Space Weather* etc. **h-index: 44, total refereed citations: 5726,** source: SAO/NASA ADS, September 2025.

Conferences

> 200 posters and talks (author and co-author) at AGU, EGU, COSPAR, ESWW, IUGG, SIP, ICS9, SOHO, and STEREO meetings.

Seminar talks at Lockheed Martin Solar and Astrophysics Laboratory, CA, USA; NASA Caltech Jet Propulsion Laboratory, CA, USA; Imperial College, UK; NY University, Abu Dhabi (online).

Convener and Co-Convener of 9 sessions at international conferences (3 AGU, 3 EGU, 1 SHINE, ISEST workshop, 7th SIP workshop). Organizer of a CME workshop in Austria (2011). Member of the SOC at 2024 COSPAR session "Off-the-Sun-Earth-Line (OSEL) missions".

Invited talks (9 in total)

1. *Lectures from multipoint observations of ICMEs*, at The Sun 360, Kiel, Germany, 2011.
2. *Connecting directions, speeds and arrival times of 22 CMEs from the Sun to 1 AU,* at the European Geosciences Union (EGU) General Assembly, Vienna, 2014.
3. *Combining Heliospheric Imaging and in situ observations to constrain CME evolution,* 7th Solar Image Processing workshop, La Roche-en-Ardenne, Belgium, 2014.
4. *A new view of solar coronal mass ejections with the Heliophysics System Observatory*, EGU Vienna, 2016.
5. *Predicting CME arrivals and their planetary impacts: a review of methods and results*, ESPM-15 Budapest, 2017.
6. *The heliosphere in 3D from multi-spacecraft observations*, IAUS 372, (virtual), 2022.
7. *On the current understanding of large-scale flux ropes within solar coronal mass ejections*, EGU, Vienna, 2024.
8. *Current and future challenges in space weather forecasting*, 8th Parker Solar Probe scholars meeting (virtual), 2024.
9. *R2O2R at the Austrian Space Weather Office and the case for sub-L1 monitors*, UK Space Weather & Space Environment Meeting III, September 2025, Sheffield, United Kingdom.

Most important academic awards

1. **Arne Richter Award for Outstanding Young Scientists of the European Geosciences Union**. Open world-wide, 4 recipients each year in the geo-, space and solar system sciences. (2016)

2. **Josef - Krainer Award** for young researchers (federal state of Styria, Austria, 2011).

3. Award of the governor of Styria for young researchers (UNI Graz, 2008).

4. Young Scientist Outstanding Poster Presentation Award (European Geophysical Union, 2008).

Further recognitions: PRO SCIENTIA scholarship for interdisciplinary communication (Austria, 2008, 2009), Alumni of the month at the University of Graz (2016).

Most important peer review activities

1. Panel member for the Research Council of Finland, Reviewer for NASA ROSES (2x), NSF SHINE (USA). Czech Science Foundation, Swiss National Science Foundation, AXA research fund.

2. Reviewer for the international journals: *Nature*, *The Astrophysical Journal, The Astrophysical Journal Letters, AGU Space Weather, Journal of Geophysical Research, Geophysical Research Letters, Solar Physics, Annales Geophysicae, Journal of Space Weather and Space Climate, JASTP, Physics of Plasmas.*

3. Pre-Examiner of the PhD thesis of Alexey Isavnin, University of Helsinki, Finland (2014).

4. Student judge at AGU and EGU meetings.

Most important memberships in academic organizations

1. Member (2012-2014) of the Scientific Organizing Committee of the Varsiti/ISEST program.

2. Austrian coordinator for the United Nations Office for Outer Space Affairs (UNOOSA) International Space Weather Initiative (ISWI) (2024-) https://www.unoosa.org/oosa/sk/ourwork/psa/bssi/iswi.html

All research projects

Total research budget as PI: 3.6 Mio. €
1. *HELIO4CAST - Solving the Bz problem in heliospheric weather forecasting,* ERC Consolidator Grant 2021, duration: 2022-2027, budget: 2 Mio. €. EU CORDIS project page

2. *Enhanced lead time for geomagnetic storms*, Austrian Science Fund - stand alone project, duration: 2019-2023, budget: 376k €. FWF project page

3. *Modeling the magnetic cores of solar storms*, Austrian Science Fund - stand alone project, duration: 2019-2022, budget: 353k €. FWF project page

4. *The evolution of solar storms in the inner heliosphere,* Austrian Science Fund - stand alone project, duration: 2014-2019, budget: 447k €. FWF project page

5. *HELCATS – Heliospheric Cataloguing, Analysis and Techniques,* EU FP7 - SPACE, 2014-2017, local PI with budget of 270k € (full budget: 2.5 Mio €, PI R. Harrison). https://www.helcats-fp7.eu
6. *WILISCME - The relationship between white-light and in situ observations of coronal mass ejections* Marie-Curie fellowship, European Union FP7-PEOPLE IOF, 2011-2013, 146k €.

Key international collaboration partners in the last 5 years

J. A. Davies, D. Barnes, R. A. Harrison, Methods for predicting CMEs with Heliospheric Imagers, STEREO data analysis, RAL Space, UK; T. Horbury, J. P. Eastwood: Solar Orbiter and Vigil magnetometer, Imperial College, UK; D. Heyner, BepiColombo magnetometer, TU Braunschweig, Germany; C. J. Farrugia, N. Lugaz, Interplanetary small satellites, CME modeling, University of New Hampshire, USA. E. Palmerio, P. Riley, magnetic structure of ICMEs, Predictive Science, San Diego, USA. C. Kay, catalogs if interplanetary coronal mass ejections, JHU/APL, USA.

From 2024-2026 I take part in an ISSI team about "What must we learn to make accurate space-weather predictions?" (2024-2026, PIs: A. Samsonov, U. Amerstorfer)

Public outreach

Interviews and articles in the Austrian national television, press and radio (e.g. ORF Zeit im Bild, Die Presse, Kurier, Krone, derStandard, orf.at, Kleine Zeitung, Terra Mater, Ö1, Ö3, Antenne, derPragmaticus, futurezone), and international press (e.g. in Germany "Die Zeit", Australian "Cosmos" magazine, USA: space.com, Popular Science, AGU Eos, The Washington Post).

Animations produced by my team are featured in this TED talk on solar storm chasing (1.3 Mio views, from 2017). I was an expert adviser for the Austrian mint for a coin about extraterrestrial life (which won a an award as best bi-metallic coin in 2023), and was a young science ambassador in Austria (2020-2022), visiting schools to spark the interest in science for children. I am a strong advocate of open science and diversity in science teams. I am active on BlueSky as @chrisoutofspace, and on https://bsky.app/profile/aswogeosphere.bsky.social (> 1100 followers) our team publishes real-time predictions of the solar wind, solar storms and the aurora for people from all over the world. On official federal @geosphere_at accounts (instagram, facebook) we are informing the Austrian (and german speaking European) public on live space weather, aurora events and the science of heliophysics.

Examples of recent press coverage

Grazer entwickelten KI für Sonnenstürme (Austrian TV ORF2, August 2025)

NASA Missions Help Explain, Predict Severity of Solar Storms (NASA science story, June 2025)

Auch 2025 gute Chancen auf Polarlichter in Österreich (APA science, January 2025).

Bedrohen Sonnenstürme unsere Zivilisation? derStandard Podcast "Rätsel der Wissenschaft" (2025)

Missed seeing the northern lights near you? The biggest storm may be yet to come.
(The Washington Post, August 2024).

Seit über 20 Jahren gab es nicht mehr so viele Sonnenflecken (derStandard, August 2024).

Wie nah brachten uns die Sonnenstürme an einen Blackout? (derStandard, May 2024).

Einmal Welt retten, bitte (der Pragmaticus Magazine, March 2024).

Sturmwarnung aus dem Weltall (Spirit of Styria Magazine, August 2023).

Starker Sonnensturm sorgte für Polarlichter auch über Österreich (derStandard, April 2023).

Stärkster geomagnetischer Sturm seit Jahren sorgte für beeindruckende Nordlichter (derStandard, März 2023).

Grazer Station für das Weltraumwetter (ORF, November 2022).

11 Discoveries Awaiting Us at Solar Max (AGU Eos, August 2022)

ESA Tracking Space Weather (ESA online, May 2022)

All Publications – Christian Möstl

126 articles (16 as first author) published in internationally peer reviewed journals.

Total refereed citations: 5726, h-index 44 (source: SAO/NASA ADS, September 2025).

ORCID: 0000-0001-6868-4152 google scholar (h-index 46, 6566 citations)

(a) peer-reviewed

submitted / in revision / revised:

131. Rüdisser, H. T., G. Nguyen, J. LeLouëdec, E.E. Davies, **C. Möstl**, ARCANE - Early Detection of Interplanetary Coronal Mass Ejections, *Space Weather*, revised, 2025. https://arxiv.org/abs/2505.09365

130. Davies, E.E., E. Weiler, **C. Möstl**, T. S. Horbury, H. O'Brien, J. Morris, and A. Crabtree, Real-time prediction of geomagnetic storms using Solar Orbiter as a far upstream solar wind monitor, *Space Weather*, submitted, 2025. https://arxiv.org/abs/2508.13892

129. Zhao, X., C. Shi, X. Feng, X. Liu, Y. Zhou, N. Xiang, L. Deng, **C. Möstl**, Mathematical expressions of the Drag-Based Models for predicting the arrival time of coronal mass ejection and their development and evolutionary processes, *Frontiers*, submitted, 2025.

128. Scherf, M., S. Krauss, G. Tsurikov, A. Strasser, V. Shematovich, D. Bisikalo, H. Lammer, M. Güdel, **C. Möstl**, Impact of electron precipitation on thermospheric NO production, Earth's upper atmosphere structure and satellite drag, *Annales Geophysicae*, submitted, 2025.

127. Zahraoui, E.-M.*, H. T. Rüdisser*, G. M. Shaifullah*, C. Tiburzi* (* equal contribution), J.-M. Grießmeier, **C. Möstl**, U. V. Amerstorfer, M. Dumbovic, P. Zucca, J. P. W. Verbiest, A. J. Weiss, B. Cecconi, B. Ciardi, C. Vocks, G. Theureau, I. P. Kravtsov, J. Girard, L. Bondonneau, O. Ulyanov, O. Konovalenko, P. Tokarsky, R.-J. Dettmar, S. Corbel, V. Zakharenko, Probing the magnetic field of a coronal mass ejection with PSR J1022+1001, in preparation, 2025.

published / in press:

126. Ruohotie, J., S. Good, **C. Möstl**, Emilia Kilpua, Intermittency in Interplanetary Coronal Mass Ejections Observed by Parker Solar Probe and Solar Orbiter, *The Astrophysical Journal Letters*, 986, L27, 2025. https://iopscience.iop.org/article/10.3847/2041-8213/ade0b0

125. Capello, G. M., M. Temmer, E. Weiler, A. Liberatore, **C. Möstl**, T. Amerstorfer, CORHI-X: a Python tool to investigate heliospheric events through multiple observation angles and heliocentric distances, *Frontiers in Astronomy and Space Sciences, section Stellar and Solar Physics*, 12:1571024., 2025. https://doi.org/10.3389/fspas.2025.1571024

124. Weiler, E., **C. Möstl,** E. E. Davies, A. Veronig, U. V. Amerstorfer, T. Amerstorfer, J. Le Louëdec, M. Bauer, N. Lugaz, V. Haberle, H. T. Rüdisser, S. Majumdar, M. A. Reiss, First observations of a geomagnetic superstorm with a sub-L1 monitor, *Space Weather,* 23, 3, e2024SW004260, 2025. https://arxiv.org/abs/2411.12490 https://doi.org/10.1029/2024SW004260

123. Lugaz, N., N. Al-Haddad, B. Zhuang, **C. Möstl**, E. E. Davies, C. J. Farrugia, S. Banu, E. Weiler, A. B. Galvin, The Need for a Sub-L1 Space Weather Research, Mission Before Operational Sub-L1 Monitors: Current Knowledge Gaps on Coronal Mass Ejections, *Space Weather*, 23, 2, 2025. https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2024SW004189

122. Weiss, A. J., T. Nieves-Chinchilla, **C. Möstl**, Distorted Magnetic Flux Ropes within Interplanetary Coronal Mass Ejections, *ApJ*, 975 169, 2024. https://arxiv.org/abs/2406.13022 https://iopscience.iop.org/article/10.3847/1538-4357/ad7940

121. Lugaz, N., C. O. Lee, N. Al-Haddad, R. J. Lillis, L. K. Jian, D. W. Curtis, A. B. Galvin, P. L. Whittlesey, A. Rahmati, E. Zesta, M. Moldwin, E. J. Summerlin, D. E. Larson, S. Courtade, R. French,

R. Hunter, F. Covitti, D. Cosgrove, J. D. Prall, R. C. Allen, B. Zhuang, R. M. Winslow, C. Scolini, B. J. Lynch, R. Filwett, E. Palmerio, C. J. Farrugia, C. W. Smith, **C. Möstl**, E. Weiler, M. Janvier, F. Regnault, R. Livi and T. Nieves-Chinchilla, The Need for Near-Earth Multi-Spacecraft Heliospheric Measurements and an Explorer Mission to Investigate Interplanetary Structures and Transients in the Near-Earth Heliosphere, *Space Science Reviews*, 220, 73, 2024.
https://link.springer.com/article/10.1007/s11214-024-01108-8

120. Davies, E. E., H. T. Rüdisser, U. V. Amerstorfer, **C. Möstl**, M. Bauer, E. Weiler, T. Amerstorfer, S. Majumdar, P. Hess, A. J. Weiss, M. A. Reiss, L. M. Green, D. M. Long, T. Nieves-Chinchilla, D. Trotta, T. S. Horbury, H. O'Brien, E. Fauchon-Jones, J. Morris, C. J. Owen, S. D. Bale, and J. C. Kasper, Flux rope modeling of the 2022 Sep 5 CME observed by Parker Solar Probe and Solar Orbiter from 0.07 to 0.69 au, *ApJ*, 973, 51, 2024. https://iopscience.iop.org/article/10.3847/1538-4357/ad64cb
https://arxiv.org/abs/2405.10810

119. Rüdisser, H. T., A. J. Weiss, J. LeLouëdec, U.V. Amerstorfer, **C. Möstl**, E. E. Davies, H. Lammer, Understanding the effects of spacecraft trajectories through solar coronal mass ejection flux ropes using 3DCOREweb, *ApJ*, 973, 150, 2024. https://iopscience.iop.org/article/10.3847/1538-4357/ad660a
https://arxiv.org/abs/2405.03271

118. Liberatore, A., C. R. Braga, M. Temmer, G. M. Cappello, D. Telloni, P. C. Liewer , A. Vourlidas, M. Velli, D. Heyner, H.-U. Auster, I. Richter, D. Schmid, D. Fischer, **C. Möstl**, Multi-Spacecraft Analysis of a Distorted CME Seen During a Solar Orbiter-STEREO Quadrature, *ApJ*, 970, 81, 2024.
https://iopscience.iop.org/article/10.3847/1538-4357/ad5003

117. Eastwood, J. P., P. Brown, W. Magnes, C. M. Carr, M. Agu, R. Baughen, G. Berghofer, J. Hodgkins, I. Jernej, **C. Möstl**, T. Oddy, A. Strickland, A. Vitkova, Definition and design of the Vigil magnetometer for operational space weather services from the Sun-Earth L5 point, *Space Weather*, 22, e2024SW003867, 2024. https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2024SW003867

116. Laker, R., T. S. Horbury, H. O'Brien, E. J. Fauchon-Jones, V. Angelini, N. Fargette, T. Amerstorfer, M. Bauer, **C. Möstl**, E. E. Davies, J. A. Davies, R. A. Harrison, D. Barnes, M. Dumbovic, Using Solar Orbiter as an upstream solar wind monitor for real time space weather predictions, *Space Weather*, 22, 2, e2023SW003628, 2024.
https://arxiv.org/abs/2307.01083 https://doi.org/10.1029/2023SW003628

115. Reiss, M. A., K. Muglach, E. Mason, E. E. Davies, S. Chakraborty, V. Delouille, C. Downs,T. G. Garton, J. A. Grajeda, A. Hamada, S. G. Heinemann, S. Hofmeister, E. Illarionov, R. Jarolim, L. Krista, C. Lowder, E. Verwichte, C. N. Arge, L. E. Boucheron, C. Foullon, M. S. Kirk, A. Kosovichev, A. Leisner, **C. Möstl**, J. Turtle, A. Veronig, A Community Dataset for Comparing Automated Coronal Hole Detection Schemes, ApJS, 271, 6, 2024.

https://arxiv.org/abs/2312.03942

114. Lugaz, N., B. Zhuang, C. Scolini, N. Al-Haddad, C. J. Farrugia, R. M. Winslow, F. Regnault, **C. Möstl**, E. E. Davies, and A. B. Galvin, The Width of Magnetic Ejecta Measured Near 1 au: Lessons from STEREO-A Measurements in 2021–2022, ApJ, 962, 2, 93, 2024.
https://iopscience.iop.org/article/10.3847/1538-4357/ad17b9 https://arxiv.org/abs/2312.03942

113. Davies, E. E., C. Scolini, R. M. Winslow, A. P. Jordan, **C. Möstl**, The effect of magnetic reconnection on ICME-related GCR modulation, ApJ, 959, 133, 2023.

https://iopscience.iop.org/article/10.3847/1538-4357/ad046a

https://arxiv.org/abs/2310.11310

112. Good, S.W., O. K. Rantala, A.-S. M. Jylha, C. H. K. Chen, **C.Möstl** and E. K. J. Kilpua, Turbulence Properties of Interplanetary Coronal Mass Ejections in the Inner Heliosphere: Dependence on Proton beta and Flux Rope Structure, ApJL, 956, L30, 2023.

https://arxiv.org/abs/2307.09800

111. Pal, S., L. Balmaceda, A. J. Weiss, T. Nieves-Chinchilla, F. Carcaboso, E. K. J. Kilpua, and **C. Möstl**, Global insight into a complex structured heliosphere based on the local multi-point analysis,

Frontiers in Astronomy and Space Sciences (Space Physics), 10, fspas.2023.1195805, 2023. https://www.frontiersin.org/articles/10.3389/fspas.2023.1195805/full

110. Harrison, R. A., J. A. Davies, D. Barnes, **C. Möstl,** et al., A comparison between coronagraph and heliospheric imager observations at L1 and off the Sun-Earth line for Earth-directed CMEs: An analysis of anomalous observations, *Space Weather*, 21, 4, e2022SW003358, 2023. https://doi.org/10.1029/2022SW003358 https://arxiv.org/abs/2304.05264

109. Riley, P., M.A. Reiss, **C. Möstl**, Which Upstream Explanatory Variables Matter Most in Predicting Bz within Coronal Mass Ejections, *Space Weather*, 21, 4, e2022SW003327, 2023. https://doi.org/10.1029/2022SW003327 https://arxiv.org/abs/2303.17682

108. Mierla, M., H. Cremades, V. Andretta, I. Chifu, A. N. Zhukov, R. Susino, F. Auchere, A. Vourlidas, D.-C. Talpeanu, L. Rodriguez, J. Janssens, B. Nicula, R. A. Cuadrado, D. Berghmans, A. Bemporad, E. D'Huys, L. Dolla, S. Gissot, G. Jerse, E. Kraaikamp, D. M. Long, B. Mampaey, **C. Möstl**, P. Pagano, S. Parenti, M. J. West, O. Podladchikova, M. Romoli, C. Sasso, K. Stegen, L. Teriaca, W. Thompson, C. Verbeeck, E. Davies, Three eruptions observed by remote sensing instruments onboard Solar Orbiter, *Solar Physics*, 298, 42, 2023.
https://link.springer.com/article/10.1007/s11207-023-02137-2

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