

MAX PLANCK INSTITUTE
FOR SOLAR SYSTEM RESEARCH



**Max-Planck-Institut
fuer Sonnensystemforschung**

*Max Planck Institute
for Solar System Research*

Referierte Publikationen 2022
Refereed Publications 2022

Refereed Publications 2022

(bold: affiliated to MPS)

Total: 245

- Adair, C. M., Altenmuller, K., Anastassopoulos, V, Cuendis, S. Arguedas, Baier, J., Barth, K., Belov, A., Bozicevic, D., Braeuninger, H., Cantatore, G., Caspers, F., Castel, J. F., Cetin, S. A., Chung, W., Choi, H., Choi, J., Dafni, T., Davenport, M., Dermenev, A., Desch, K., Doebrich, B., Fischer, H., Funk, W., Galan, J., Gardikiotis, A., Gninenko, S., Golm, J., Hasinoff, M. D., Hoffmann, D. H. H., Diez Ibanez, D., Irsatorza, I. G., Jakovcic, K., Kaminski, J., Karuza, M., Krieger, C., Kutlu, C., Lakic, B., Laurent, J. M., Lee, J., Lee, S., Luzon, G., Malbrunot, C., Margalejo, C., Maroudas, M., Miceli, L., Mirallas, H., Obis, L., Ozbey, A., Oezbozduman, K., Pivovarov, M. J., Rosu, M., Ruz, J., Ruiz-Choliz, E., Schmidt, S., Schumann, M., Semertzidis, Y. K., **Solanki, S. K.**, Stewart, L., Tsagris, I, Vafeiadis, T., Vogel, J. K., Vretenar, M., Youn, S., & Zioutas, K. (2022). Search for Dark Matter Axions with CAST-CAPP. *Nature Communications* 13, 6180. doi:[10.1038/s41467-022-33913-6](https://doi.org/10.1038/s41467-022-33913-6).
- Agarwal, S., Bhattacharyya, R., & **Wiegmann, T.** (2022). Effects of Initial Conditions on Magnetic Reconnection in a Solar Transient. *Solar Physics*, 297, 91. doi:[10.1007/s11207-022-02016-2](https://doi.org/10.1007/s11207-022-02016-2).
- Ahlborn, F., **Kupka, F.**, Weiss, A., & Flaskamp, M. (2022). Stellar evolution models with overshooting based on 3-equation non-local theories II. Main-sequence models of A- and B-type stars. *Astronomy and Astrophysics*, 667, A97. doi:[10.1051/0004-6361/202243126](https://doi.org/10.1051/0004-6361/202243126)
- Alipour, N., Safari, H., Verbeeck, C., Berghmans, D., Auchère, F., **Chitta, L. P.**, Antolin, P., Barczynski, K., Buchlin, É., **Aznar Cuadrado, R.**, Dolla, L., Georgoulis, M. K., Gissot, S., Harra, L., Katsiyannis, A. C., Long, D. M., **Mandal, S.**, Parenti, S., Podladchikova, O., Petrova, E., Soubrié, É., **Schühle, U.**, Schwanitz, C., **Teriaca, L.**, West, M. J., & Zhukov, A. N. (2022). Automatic detection of small-scale EUV brightenings observed by the Solar Orbiter/EUI. *Astronomy and Astrophysics*, 663, A128. doi:[10.1051/0004-6361/202243257](https://doi.org/10.1051/0004-6361/202243257).
- Anderson, C. M., Biver, N., Bjoraker, G. L., Cavalié, T., Chin, G., DiSanti, M. A., **Hartogh, P.**, Tielens, A., & Walker, C. K. (2022). Solar System Science with the Orbiting Astronomical Satellite Investigating Stellar Systems (OASIS) Observatory. *Space Science Reviews*, 218, 43. doi:[10.1007/s11214-022-00911-5](https://doi.org/10.1007/s11214-022-00911-5).
- Baker, D., Green, L. M., Brooks, D. H., Démoulin, P., van Driel-Gesztelyi, L., Mihailescu, T., To, A. S. H., Long, D. M., Yardley, S. L., Janvier, M., & **Valori, G.** (2022). Evolution of Plasma Composition in an Eruptive Flux Rope. *The Astrophysical Journal*, 924, 17. doi:[10.3847/1538-4357/ac32d2](https://doi.org/10.3847/1538-4357/ac32d2).
- Ball, W. H., Miglio, A., Chaplin, W. J., Stassun, K. G., García, R., González-Cuesta, L., Mathur, S., Appourchaux, T., Benomar, O., Buzasi, D. L., **Jiang, C.**, Kayhan, C., Örtel, S., Çelik Orhan, Z., Yıldız, M., Ong, J. M. J., & Basu, S. (2022). Solar-like oscillations and ellipsoidal variations in TESS observations of the binary 12 Boötis. *Monthly Notices of the Royal Astronomical Society*, 516, 3709-3714. doi:[10.1093/mnras/stac2212](https://doi.org/10.1093/mnras/stac2212).
- Barosch, J., Nittler, L. R., Wang, J., Alexander, C. M. O., De Gregorio, B. T., Engrand, C., Kebukawa, Y., Nagashima, K., Stroud, R. M., Yabuta, H., Abe, Y., Aléon, J., Amari, S., Amelin, Y., Bajo, K.-i., Bejach, L., Bizzarro, M., Bonal, L., Bouvier, A., Carlson, R. W., Chaussidon, M., Choi, B.-G., Cody, G. D., Dartois, E., Dauphas, N., Davis, A. M., Dazzi, A., Deniset-Besseau, A., Di Rocco, T., Duprat, J., Fujiya, W., Fukai, R., Gautam, I., Haba, M. K., Hashiguchi, M., Hibiya, Y., Hidaka, H., Homma, H., Hoppe, P., Huss, G. R., Ichida, K., Iizuka, T., Ireland, T. R., Ishikawa, A., Ito, M., Itoh, S., Kamide, K., Kawasaki, N., David Kilcoyne, A. L., Kita, N. T., Kitajima, K., **Kleine, T.**, Komatani, S., Komatsu, M., Krot, A. N., Liu, M.-C., Martins, Z., Masuda, Y., Mathurin, J., McKeegan, K. D., Montagnac, G., Morita, M., Mostefaoui, S., Motomura, K., Moynier, F., Nakai, I., Nguyen, A. N., Ohigashi, T., Okumura, T., Onose, M., Pack, A., Park, C., Piani, L., Qin, L., Quirico, E., Remusat, L., Russell, S. S., Sakamoto, N., Sandford, S. A., Schönbächler, M., Shigenaka, M., Suga, H., Tafla, L., Takahashi, Y., Takeichi, Y., Tamenori, Y., Tang, H., Terada, K., Terada, Y., Usui, T., Verdier-Paoletti, M., Wada, S., Wadhwa, M., Wakabayashi, D., Walker, R. J., Yamashita, K., Yamashita, S., Yin, Q.-Z., Yokoyama, T., Yoneda, S., Young, E. D., Yui, H., Zhang, A.-C., Abe,

- M., Miyazaki, A., Nakato, A., Nakazawa, S., Nishimura, M., Okada, T., Saiki, T., Tanaka, S., Terui, F., Tsuda, Y., Watanabe, S.-i., Yada, T., Yogata, K., Yoshikawa, M., Nakamura, T., Naraoka, H., Noguchi, T., Okazaki, R., Sakamoto, K., Tachibana, S., & Yurimoto, H. (2022). Presolar Stardust in Asteroid Ryugu. *The Astrophysical Journal*, 935, L3. doi:[10.3847/2041-8213/ac83bd](https://doi.org/10.3847/2041-8213/ac83bd).
- Baumgartner, C., Birch, A. C., Schunker, H., Cameron, R. H., & Gizon, L.** (2022). Impact of spatially correlated fluctuations in sunspots on metrics related to magnetic twist. *Astronomy and Astrophysics*, 664, A183. doi:[10.1051/0004-6361/202243357](https://doi.org/10.1051/0004-6361/202243357).
- Beck, P. G., Mathur, S., Hambleton, K., García, R. A., Steinwender, L., Eisner, N. L., do Nascimento, J.-D., **Gaulme, P.**, & Mathis, S. (2022). 99 oscillating red-giant stars in binary systems with NASA TESS and NASA Kepler identified from the SB9-Catalogue. *Astronomy and Astrophysics*, 667, A31. doi:[10.1051/0004-6361/202143005](https://doi.org/10.1051/0004-6361/202143005).
- Bekki, Y., Cameron, R. H., & Gizon, L.** (2022). Theory of solar oscillations in the inertial frequency range: Amplitudes of equatorial modes from a nonlinear rotating convection simulation. *Astronomy and Astrophysics*, 666, A135. doi:[10.1051/0004-6361/202244150](https://doi.org/10.1051/0004-6361/202244150).
- Bekki, Y., Cameron, R. H., & Gizon, L.** (2022). Theory of solar oscillations in the inertial frequency range: Linear modes of the convection zone. *Astronomy and Astrophysics*, 662, A16. doi:[10.1051/0004-6361/202243164](https://doi.org/10.1051/0004-6361/202243164).
- Bemporad, A., Andretta, V., Susino, R., Mancuso, S., Spadaro, D., Mierla, M., Berghmans, D., D'Huys, E., Zhukov, A. N., Talpeanu, D.-C., Colaninno, R., Hess, P., Koza, J., Jejič, S., Heinzel, P., Antonucci, E., Da Deppo, V., Fineschi, S., Frassati, F., Jerse, G., Landini, F., Naletto, G., Nicolini, G., Pancrazzi, M., Romoli, M., Sasso, C., Slemmer, A., Stangalini, M., & **Teriaca, L.** (2022). Coronal mass ejection followed by a prominence eruption and a plasma blob as observed by Solar Orbiter. *Astronomy and Astrophysics*, 665, A7. doi:[10.1051/0004-6361/202243162](https://doi.org/10.1051/0004-6361/202243162).
- Benzi, R., Nelson, D., Shankar, S., Toschi, F., & **Zhu, X.** (2022). Spatial population genetics with fluid flow. *Reports on Progress in Physics*, 85, 9. doi:[10.1088/1361-6633/ac8231](https://doi.org/10.1088/1361-6633/ac8231).
- Bergner, J. B., Shirley, Y. L., Jørgensen, J. K., McGuire, B., Aalto, S., Anderson, C. M., Chin, G., Gerin, M., **Hartogh, P.**, Kim, D., Leisawitz, D., Najita, J., Schwarz, K. R., Tielens, A. G. G. M., Walker, C. K., Wilner, D. J., & Wollack, E. J. (2022). Astrochemistry with the Orbiting Astronomical Satellite for Investigating Stellar Systems (OASIS). *Frontiers in Astronomy and Space Sciences*, 8, 246. doi:[10.3389/fspas.2021.793922](https://doi.org/10.3389/fspas.2021.793922).
- Bernardoni, E., Horányi, M., Doner, A., Piquette, M., Szalay, J. R., Poppe, A. R., James, D., Hunziker, S., Sterken, V., **Strub, P.**, Olkin, C., Singer, K. N., Spencer, J., Stern, A., & Weaver, H. (2022). Student Dust Counter Status Report: The First 50 au. *The Planetary Science Journal*, 3, 69. doi:[10.3847/PSJ/ac5ab7](https://doi.org/10.3847/PSJ/ac5ab7).
- Bhatia, T. S., Cameron, R. H., Solanki, S. K., Peter, H., Przybylski, D., Witzke, V., & Shapiro, A.** (2022). Small-scale dynamo in cool stars. I. Changes in stratification and near-surface convection for main-sequence spectral types. *Astronomy and Astrophysics*, 663, A166. doi:[10.1051/0004-6361/202243607](https://doi.org/10.1051/0004-6361/202243607).
- Biondo, R., Bemporad, A., Pagano, P., Telloni, D., Reale, F., Romoli, M., Andretta, V., Antonucci, E., Da Deppo, V., **De Leo, Y.**, Fineschi, S., Heinzel, P., Moses, D., Naletto, G., Nicolini, G., Spadaro, D., Stangalini, M., **Teriaca, L.**, Landini, F., Sasso, C., Susino, R., Jerse, G., Uslenghi, M., & Pancrazzi, M. (2022). Connecting Solar Orbiter remote-sensing observations and Parker Solar Probe in situ measurements with a numerical MHD reconstruction of the Parker spiral. *Astronomy and Astrophysics*, 668, A144. doi:[10.1051/0004-6361/202244535](https://doi.org/10.1051/0004-6361/202244535).
- Biswas, A., Karak, B. B., & **Cameron, R.** (2022). Toroidal Flux Loss due to Flux Emergence Explains why Solar Cycles Rise Differently but Decay in a Similar Way. *Physical Review Letters*, 129, 241102. doi:[10.1103/PhysRevLett.129.241102](https://doi.org/10.1103/PhysRevLett.129.241102).

- Blocker, A., Kronberg, E. A., Grigorenko, E. E., Clark, G., Kozak, L., Vogt, M. F., & **Roussos, E.** (2022). Plasroids in the Jovian Magnetotail: Statistical Survey of Ion Acceleration Using Juno Observations. *Journal of Geophysical Research-Space Physics*, 127, 8. doi:[10.1029/2022JA030460](https://doi.org/10.1029/2022JA030460).
- Bockelée-Morvan, D., Biver, N., Schambeau, C. A., Crovisier, J., Opitom, C., de Val Borro, M., Lellouch, E., **Hartogh, P.**, Vandenbussche, B., Jehin, E., Kidger, M., Küppers, M., Lis, D. C., Moreno, R., Szutowicz, S., & Zakharov, V. (2022). Water, hydrogen cyanide, carbon monoxide, and dust production from distant comet 29P/Schwassmann-Wachmann 1. *Astronomy and Astrophysics*, 664, A95. doi:[10.1051/0004-6361/202243241](https://doi.org/10.1051/0004-6361/202243241).
- Bonsor, A., Lichtenberg, B., **Drzowska, J.**, & Buchan, A. M. (2022). Rapid formation of exoplanetesimals revealed by white dwarfs. *Nature Astronomy*, 7, 39–48. doi:[10.1038/s41550-022-01815-8](https://doi.org/10.1038/s41550-022-01815-8).
- Boro Saikia, S., Lüftinger, T., Folsom, C. P., Antonova, A., Alecian, E., Donati, J.-F., Guedel, M., Hall, J. C., **Jeffers, S. V.**, Kochukhov, O., Marsden, S. C., Metodieva, Y. T., Mittag, M., Morin, J., Perdelwitz, V., Petit, P., Schmid, M., & Vidotto, A. A. (2022). Time evolution of magnetic activity cycles in young suns: The curious case of κ Ceti. *Astronomy and Astrophysics*, 658, A16. doi:[10.1051/0004-6361/202141525](https://doi.org/10.1051/0004-6361/202141525).
- Borre, C. C., Borsen-Koch, V. A., Helmi, A., Koppelman, H. H., Nielsen, M. B., Rorsted, J. L., Stello, D., Stokholm, A., Winther, M. L., Davies, G. R., Hon, M., Kruijssen, J. M. D., Laporte, C. F. P., Reyes, C., & **Yu, J.** (2022). Age determination of galaxy merger remnant stars using asteroseismology. *Monthly Notices of the Royal Astronomical Society*, 514, 2. doi:[10.1093/mnras/stac1498](https://doi.org/10.1093/mnras/stac1498).
- Braun, D. C., **Birch, A. C.**, & Fan, Y. (2022). Erratum: "Probing the Solar Meridional Circulation Using Fourier Legendre Decomposition" (2021, ApJ, 911, 54). *The Astrophysical Journal*, 924, 140. doi:[10.3847/1538-4357/ac4582](https://doi.org/10.3847/1538-4357/ac4582).
- Breu, C., Peter, H., Cameron, R., Solanki, S. K., Przybylski, D., Rempel, M., & Chitta, L. P.** (2022). A solar coronal loop in a box: Energy generation and heating. *Astronomy and Astrophysics*, 658, A45. doi:[10.1051/0004-6361/202141451](https://doi.org/10.1051/0004-6361/202141451).
- Brooks, D. H., Janvier, M., Baker, D., Warren, H. P., Auchère, F., Carlsson, M., Fludra, A., Hassler, D., **Peter, H.**, Müller, D., Williams, D., **Aznar Cuadrado, R.**, Barczynski, K., Buchlin, E., Caldwell, M., Fredvik, T., Giunta, A., Grundy, T., Guest, S., Haberreiter, M., Harra, L., Leeks, S., Parenti, S., Pelouze, G., Plowman, J., Schmutz, W., **Schühle, U.**, Sidher, S., **Teriaca, L.**, Thompson, W. T., & Young, P. R. (2022). Plasma Composition Measurements in an Active Region from Solar Orbiter/SPICE and Hinode/EIS. *The Astrophysical Journal*, 940, 66. doi:[10.3847/1538-4357/ac9b0b](https://doi.org/10.3847/1538-4357/ac9b0b).
- Brown, E. L., **Jeffers, S. V.**, Marsden, S. C., Morin, J., Boro Saikia, S., Petit, P., Jardine, M. M., See, V., Vidotto, A. A., Mengel, M. W., & Dahlkemper, M. N. (2022). Linking chromospheric activity and magnetic field properties for late-type dwarf stars. *Monthly Notices of the Royal Astronomical Society*, 514, 4300–4319. doi:[10.1093/mnras/stac1291](https://doi.org/10.1093/mnras/stac1291).
- Brown, Z. L., **Medvedev, A. S.**, Starichenko, E. D., Koskinen, T. T., & Müller-Wodarg, I. C. F. (2022). Evidence for Gravity Waves in the Thermosphere of Saturn and Implications for Global Circulation. *Geophysical Research Letters*, 49, e97219. doi:[10.1029/2021GL097219](https://doi.org/10.1029/2021GL097219).
- Budde, G., Archer, G. J., Tissot, F. L. H., Tappe, S., & **Kleine, T.** (2022). Origin of the analytical W-183 effect and its implications for tungsten isotope analyses. *Journal of Analytical Atomic Spectrometry*, 37, 2005–2021. doi:[10.1039/D2JA00102K](https://doi.org/10.1039/D2JA00102K).
- Buettner, A., Ernst, M., Hunnekuhl, M., Kalms, R., Willemsen, L.-E., **Heise, J.**, & **Ulrich, J.** (2022). Space-qualified, compact and lightweight pulsed DPSS UV laser for the MOMA instrument of the ExoMars mission. *CEAS Space Journal*, 15, 283–317. doi: [10.1007/s12567-022-00448-x](https://doi.org/10.1007/s12567-022-00448-x).
- Burtovoi, A., Naletto, G., Dolei, S., Spadaro, D., Romoli, M., Landini, F., & **De Leo, Y.** (2022). Measuring the F-corona intensity through time correlation of total and polarized visible light images. *Astronomy and Astrophysics*, 659, A50. doi:[10.1051/0004-6361/202141414](https://doi.org/10.1051/0004-6361/202141414).

- Cairós, L. M., González-Pérez, J. N., Weilbacher, P. M., & **Manso Sainz, R.** (2022). Warm ionized gas in the blue compact galaxy Haro 14 viewed by MUSE. The diverse ionization mechanisms acting in low-mass starbursts. *Astronomy and Astrophysics*, 664, A144. doi:[10.1051/0004-6361/202243028](https://doi.org/10.1051/0004-6361/202243028).
- Castillo-Rogez, J., Neveu, M., Vinogradoff, V., Miller, K. E., Sori, M. M., Tosi, F., Schmidt, B., Scully, J. E. C., Melwani Daswani, M., Hughson, K., McSween, H., De Sanctis, C., Quick, L., Ermakov, A., Thangjam, G., Otto, K., Krohn, K., Schenk, P., **Nathues, A.**, & Raymond, C. (2022). Science Drivers for the Future Exploration of Ceres: From Solar System Evolution to Ocean World Science. *The Planetary Science Journal*, 3, 64. doi:[10.3847/PSJ/ac502b](https://doi.org/10.3847/PSJ/ac502b).
- Ceylan, S., Clinton, J. F., Giardini, D., Stähler, S. C., Horleston, A., Kawamura, T., Böse, M., Charalambous, C., Dahmen, N. L., van Driel, M., Durán, C., Euchner, F., Khan, A., Kim, D., Plasman, M., **Scholz, J.-R.**, Zenhäusern, G., Beucler, E., Garcia, R. F., Kedar, S., Knapmeyer, M., Lognonné, P., Panning, M. P., Perrin, C., Pike, W. T., Stott, A. E., & Banerdt, W. B. (2022). The marsquake catalogue from InSight, sols 0-1011. *Physics of the Earth and Planetary Interiors*, 333, 106943. doi:[10.1016/j.pepi.2022.106943](https://doi.org/10.1016/j.pepi.2022.106943).
- Chaturvedi, P., Bluhm, P., Nagel, E., Hatzes, A. P., Morello, G., Brady, M., Korth, J., Molaverdikhani, K., Kossakowski, D., Caballero, J. A., Guenther, E. W., Pallé, E., Espinoza, N., Seifahrt, A., Lodieu, N., Cifuentes, C., Furlan, E., Amado, P. J., Barclay, T., Bean, J., Béjar, V. J. S., Bergond, G., Boyle, A. W., Ciardi, D., Collins, K. A., Collins, K. I., Esparza-Borges, E., Fukui, A., Gnilka, C. L., Goeke, R., Guerra, P., Henning, T., Herrero, E., Howell, S. B., **Jeffers, S. V.**, Jenkins, J. M., Jensen, E. L. N., Kasper, D., Kodama, T., Latham, D. W., López-González, M. J., Luque, R., Montes, D., Morales, J. C., Mori, M., Murgas, F., Narita, N., Nowak, G., Parviainen, H., Passegger, V. M., Quirrenbach, A., Reffert, S., Reiners, A., Ribas, I., Ricker, G. R., Rodriguez, E., Rodríguez-López, C., Schlecker, M., Schwarz, R. P., Schweitzer, A., Seager, S., Stefánsson, G., Stockdale, C., Tal-Or, L., Twicken, J. D., Vanaverbeke, S., Wang, G., Watanabe, D., Winn, J. N., & Zechmeister, M. (2022). TOI-1468: A system of two transiting planets, a super-Earth and a mini-Neptune, on opposite sides of the radius valley. *Astronomy and Astrophysics*, 666, A155. doi:[10.1051/0004-6361/202244056](https://doi.org/10.1051/0004-6361/202244056).
- Chatzistergos, T., Krivova, N.**, & Ermolli, I. (2022). Full-disc Ca II K observations-A window to past solar magnetism. *Frontiers in Astronomy and Space Sciences*, 9, 1038949. doi:[10.3389/fspas.2022.1038949](https://doi.org/10.3389/fspas.2022.1038949)
- Chatzistergos, T.** (2022). Is there a link between the length of the solar cycle and Earth's temperature? *Rendiconti Lincei. Scienze Fisiche e Naturali*, 34, 11-21. doi:[10.1007/s12210-022-01127-z](https://doi.org/10.1007/s12210-022-01127-z).
- Chatzistergos, T.**, Ermolli, I., **Krivova, N. A.**, Barata, T., Carvalho, S., & Malherbe, J.-M. (2022). Scrutinising the relationship between plage areas and sunspot areas and numbers. *Astronomy and Astrophysics*, 667, A167. doi:[10.1051/0004-6361/202244913](https://doi.org/10.1051/0004-6361/202244913).
- Chen, H., Tian, H., Li, L., **Peter, H., Chitta, L. P.**, & Hou, Z. (2022). Coronal condensation as the source of transition-region supersonic downflows above a sunspot. *Astronomy and Astrophysics*, 659, A107. doi:[10.1051/0004-6361/202142093](https://doi.org/10.1051/0004-6361/202142093).
- Chen, Y., Peter, H., Przybylski, D.**, Tian, H., & Zhang, J. (2022). Doppler shifts of spectral lines formed in the solar transition region and corona. *Astronomy and Astrophysics*, 661, A94. doi:[10.1051/0004-6361/202243111](https://doi.org/10.1051/0004-6361/202243111).
- Chen, X., Ge, Z., Chen, Y., Bi, S., **Yu, J.**, Yang, W., Ferguson, J. W., Wu, Y., Li, Y. (2022). Ages of Main-sequence Turnoff Stars from the GALAH Survey. *The Astrophysical Journal*, 929, 124. doi:[10.3847/1538-4357/ac55a1](https://doi.org/10.3847/1538-4357/ac55a1).
- Chifu, I., Inhester, B.**, & **Wiegelmann, T.** (2022). Coronal magnetic field evolution over cycle 24. *Astronomy and Astrophysics*, 659, A174. doi:[10.1051/0004-6361/202038001](https://doi.org/10.1051/0004-6361/202038001).
- Chitta, L. P., Peter, H.**, Parenti, S., Berghmans, D., Auchère, F., **Solanki, S. K., Aznar Cuadrado, R., Schühle, U., Teriaca, L., Mandal, S.**, Barczynski, K., Buchlin, É., Harra, L., Kraaikamp, E., Long, D. M., Rodriguez, L., Schwanitz, C., Smith, P. J., Verbeeck, C., Zhukov, A. N., Liu, W., & Cheung, M. C. M. (2022). Solar coronal heating from small-scale magnetic braids. *Astronomy and Astrophysics*, 667, A166. doi:[10.1051/0004-6361/202244170](https://doi.org/10.1051/0004-6361/202244170).

- Chitta, L. P.**, Seaton, D. B., Downs, C., DeForest, C. E., & Higginson, A. K. (2022). Direct observations of a complex coronal web driving highly structured slow solar wind. *Nature Astronomy*, 7, 133–141. doi:[10.1038/s41550-022-01834-5](https://doi.org/10.1038/s41550-022-01834-5).
- Curdt, W., Wilhelm, K., Schühle, U.**, Vial, J.-C., Lemaire, P., & Bocchialini, K. (2022). Updates to the SUMER Spectral Atlas. *Solar Physics*, 297, 145. doi:[10.1007/s11207-022-02078-2](https://doi.org/10.1007/s11207-022-02078-2).
- da Silva Santos, J. M., Danilovic, S., Leenaarts, J., de la Cruz Rodríguez, J., **Zhu, X.**, White, S. M., Vissers, G. J. M., & Rempel, M. (2022). Heating of the solar chromosphere through current dissipation. *Astronomy and Astrophysics*, 661, A59. doi:[10.1051/0004-6361/202243191](https://doi.org/10.1051/0004-6361/202243191).
- Das, R., Ghosh, A., & **Karak, B. B.** (2022). Is the hemispheric asymmetry of sunspot cycle caused by an irregular process with long-term memory? *Monthly Notices of the Royal Astronomical Society*, 511, 472–479. doi:[10.1093/mnras/stac035](https://doi.org/10.1093/mnras/stac035).
- Davidsson, B. J. R., Schloerb, F. P., Fornasier, S., Oklay, N., Gutiérrez, P. J., Buratti, B. J., Chmielewski, A. B., Gulkis, S., Hofstadter, M. D., Keller, H. U., **Sierks, H., Güttler, C.**, Küppers, M., Rickman, H., Choukroun, M., Lee, S., Lellouch, E., Lethuillier, A., Da Deppo, V., Groussin, O., Kührt, E., Thomas, N., Tubiana, C., El-Maarry, M. R., La Forgia, F., Mottola, S., & Pajola, M. (2022). CO₂-driven surface changes in the Hapi region on Comet 67P/Churyumov-Gerasimenko. *Monthly Notices of the Royal Astronomical Society*, 516, 6009-6040. doi:[10.1093/mnras/stac2560](https://doi.org/10.1093/mnras/stac2560).
- Deheuvels, S., Ballot, J., **Gehan, C.**, & Mosser, B. (2022). Seismic signature of electron degeneracy in the core of red giants: Hints for mass transfer between close red-giant companions. *Astronomy and Astrophysics*, 659, A106. doi:[10.1051/0004-6361/202142094](https://doi.org/10.1051/0004-6361/202142094).
- DiBraccio, G. A., Romanelli, N., Bowers, C. F., Gruesbeck, J. R., Halekas, J. S., Ruhunusiri, S., Weber, T., Espley, J. R., Xu, S., Luhmann, J. G., Harada, Y., **Dubin, E.**, Poh, G. K., Brain, D. A., & Curry, S. M. (2022). A Statistical Investigation of Factors Influencing the Magnetotail Twist at Mars. *Geophysical Research Letters*, 49, e98007. doi:[10.1029/2022GL098007](https://doi.org/10.1029/2022GL098007).
- Dialynas, K., Krimigis, S. M., Decker, R.B., Hill, M; Mitchell, D. G., Hsieh, K. C., **Hilchenbach, M.**, Czechowski, A. (2022). The Structure of the Global Heliosphere as Seen by In-Situ Ions from the Voyagers and Remotely Sensed ENAs from Cassini. *Space Science Review*, 218, 21. doi:[10.1007/s11214-022-00889-0](https://doi.org/10.1007/s11214-022-00889-0).
- Dietrich, W.**, Kumar, S., Poser, A. J., French, M., Nettelmann, N., Redmer, R., & **Wicht, J.** (2022). Magnetic induction processes in hot Jupiters, application to KELT-9b. *Monthly Notices of the Royal Astronomical Society*, 517, 3113-3125. doi:[10.1093/mnras/stac2849](https://doi.org/10.1093/mnras/stac2849).
- Dikpati, M., Gilman, P. A., Guerrero, G. A., Kosovichev, A. G., McIntosh, S. W., Sreenivasan, K. R., **Warnecke, J.**, & Zaqarashvili, T. V. (2022). Simulating Solar Near-surface Rossby Waves by Inverse Cascade from Supergranule Energy. *The Astrophysical Journal*, 931, 117. doi:[10.3847/1538-4357/ac674b](https://doi.org/10.3847/1538-4357/ac674b).
- Dreau, G., Lebreton, Y., Mosser, B., Bossini, D., **Yu, J.** (2022). Characterising the AGB bump and its potential to constrain mixing processes in stellar interiors. *Astronomy and Astrophysics*, 668, A115. doi:[10.1051/0004-6361/202243732](https://doi.org/10.1051/0004-6361/202243732).
- Erdélyi, R., Damé, L., Fludra, A., Mathioudakis, M., Amari, T., Belucz, B., Berrilli, F., Bogachev, S., Bolsée, D., Bothmer, V., Brun, S., Dewitte, S., de Wit, T. D., Faurobert, M., **Gizon, L.**, Gyenge, N., Korsós, M. B., Labrosse, N., Matthews, S., Meftah, M., Morgan, H., Pallé, P., Rochus, P., Rozanov, E., Schmieder, B., Tsinganos, K., Verwichte, E., Zharkov, S., Zuccarello, F., & Wimmer-Schweingruber, R. (2022). HiRISE - High-Resolution Imaging and Spectroscopy Explorer - Ultrahigh resolution, interferometric and external occulting coronagraphic science. *Experimental Astronomy*, 54, 227–256. doi:[10.1007/s10686-022-09831-2](https://doi.org/10.1007/s10686-022-09831-2).

- Ermolli, I., Giorgi, F., & **Chatzistergos, T.** (2022). Rome Precision Solar Photometric Telescope: precision solar full-disk photometry during solar cycles 23-25. *Frontiers in Astronomy and Space Sciences*, 9. doi:[10.3389/fspas.2022.1042740](https://doi.org/10.3389/fspas.2022.1042740).
- Espinoza, N., Pallé, E., Kemmer, J., Luque, R., Caballero, J. A., Cifuentes, C., Herrero, E., Sánchez Béjar, V. J., Stock, S., Molaverdikhani, K., Morello, G., Kossakowski, D., Schlecker, M., Amado, P. J., Bluhm, P., Cortés-Contreras, M., Henning, T., Kreidberg, L., Kürster, M., Lafarga, M., Lodieu, N., Morales, J. C., Oshagh, M., Passegger, V. M., Pavlov, A., Quirrenbach, A., Reffert, S., Reiners, A., Ribas, I., Rodríguez, E., López, C. R., Schweitzer, A., Trifonov, T., Chaturvedi, P., Dreizler, S., **Jeffers, S. V.**, Kaminski, A., López-González, M. J., Lillo-Box, J., Montes, D., Nowak, G., Pedraz, S., Vanaverbeke, S., Zapatero Osorio, M. R., Zechmeister, M., Collins, K. A., Girardin, E., Guerra, P., Naves, R., Crossfield, I. J. M., Matthews, E. C., Howell, S. B., Ciardi, D. R., Gonzales, E., Matson, R. A., Beichman, C. A., Schlieder, J. E., Barclay, T., Vezie, M., Villaseñor, J. N., Daylan, T., Mireies, I., Dragomir, D., Twicken, J. D., Jenkins, J., Winn, J. N., Latham, D., Ricker, G., & Seager, S. (2022). A Transiting, Temperate Mini-Neptune Orbiting the M Dwarf TOI-1759 Unveiled by TESS. *The Astronomical Journal*, 163, 133. doi:[10.3847/1538-3881/ac4af0](https://doi.org/10.3847/1538-3881/ac4af0).
- Fan, K., Yan, L., Wei, Y., Zhang, A., Kong, L., **Fraenz, M.**, He, F., Chai, L., Yuan, C., Wang, Y., Zhong, J., Rong, Z., Yao, Z., Pan, Y., Cui, J., He, J., Li, W., Tang, B., & Wang, C. (2022). The solar wind plasma upstream of Mars observed by Tianwen-1: Comparison with Mars Express and MAVEN. *Science China Earth Sciences*, 65, 759-768. doi:[10.1007/s11430-021-9917-0](https://doi.org/10.1007/s11430-021-9917-0).
- Folsom, C. P., Ignace, R., Erba, C., Casini, R., del Pino Alemán, T., Gayley, K., Hobbs, K., **Manso Sainz, R.**, Neiner, C., Petit, V., Shultz, M. E., & Wade, G. A. (2022). Ultraviolet spectropolarimetry: investigating stellar magnetic field diagnostics. *Astrophysics and Space Science*, 367, 125. doi:[10.1007/s10509-022-04140-8](https://doi.org/10.1007/s10509-022-04140-8).
- Fournier, D., Gizon, L., & Hyst, L.** (2022). Viscous inertial modes on a differentially rotating sphere: Comparison with solar observations. *Astronomy and Astrophysics*, 664, A6. doi:[10.1051/0004-6361/202243473](https://doi.org/10.1051/0004-6361/202243473).
- Franco, A. M. S., Echer, E., Bolzan, M. J. A., & **Fraenz, M.** (2022). Study of Mars Magnetosheath Fluctuations using the Kurtosis Technique: Mars Express Observations. *Earth and Planetary Physics*, 6, 28. doi:[10.26464/epp2022006](https://doi.org/10.26464/epp2022006).
- Franco, A. M. S., Echer, E., **Fraenz, M.**, & Bolzan, M. (2022). ULF Waves Propagating Through the Martian Magnetosheath into the Ionosphere: A Statistical Study Using Mars Express Observations. *Brazilian Journal of Physics*, 53, 14. doi:[10.1007/s13538-022-01213-5](https://doi.org/10.1007/s13538-022-01213-5).
- Fuhrmeister, B., Czesla, S., Nagel, E., Reiners, A., Schmitt, J. H. M. M., Jeffers, S. V., Caballero, J. A., Shulyak, D., **Johnson, E. N.**, Zechmeister, M., Montes, D., López-Gallifa, Á., Ribas, I., Quirrenbach, A., Amado, P. J., Galadí-Enríquez, D., Hatzes, A. P., Kürster, M., Danielski, C., Béjar, V. J. S., Kaminski, A., Morales, J. C., & Zapatero Osorio, M. R. (2022). The CARMENES search for exoplanets around M dwarfs. Diagnostic capabilities of strong K I lines for photosphere and chromosphere. *Astronomy and Astrophysics*, 657, A125. doi:[10.1051/0004-6361/202141733](https://doi.org/10.1051/0004-6361/202141733).
- Galli, A., Vorbürger, A., Carberry Mogan, S. R., **Roussos, E.**, Stenberg Wieser, G., Wurz, P., Föhn, M., **Krupp, N., Franz, M.**, Barabash, S., Futaana, Y., Brandt, P. C., Kollmann, P., Haggerty, D. K., Jones, G. H., Johnson, R. E., Tucker, O. J., Simon, S., Tippens, T., & Liuzzo, L. (2022). Callisto's Atmosphere and Its Space Environment: Prospects for the Particle Environment Package on Board JUICE. *Earth and Space Science*, 9, e2021EA002172. doi:[10.1029/2021EA002172](https://doi.org/10.1029/2021EA002172).
- Gasda, P. J., Comellas, J., Essunfeld, A., Das, D., Bryk, A. B., Dehouck, E., Schwenzer, S. P., Crossey, L., Herkenhoff, K., Johnson, J. R., Newsom, H., Lanza, N. L., Rapin, W., **Goetz, W.**, Meslin, P.-Y., Bridges, J. C., Anderson, R., David, G., Turner, S. M. R., Thorpe, M. T., Kah, L., Frydenvang, J., Kronyak, R., Caravaca, G., Ollila, A., Le Mouélic, S., Nellessen, M., Hoffman, M., Fey, D., Cousin, A., Wiens, R. C., Clegg, S. M., Maurice, S., Gasnault, O., Delapp, D., & Reyes-Newell, A. (2022). Overview of the Morphology

and Chemistry of Diagenetic Features in the Clay-Rich Glen Torridon Unit of Gale Crater, Mars. *Journal of Geophysical Research (Planets)*, 127, e2021JE007097. doi:[10.1029/2021JE007097](https://doi.org/10.1029/2021JE007097).

Gaulme, P., Borkovits, T., Appourchaux, T., Pavlovski, K., **Spada, F., Gehan, C.,** Ong, J., Miglio, A., Tkachenko, A., Mosser, B., Vvard, M., Benbakoura, M., Drew Chojnowski, S., Perkins, J., Hedlund, A., & Jackiewicz, J. (2022). KIC 7955301: A hierarchical triple system with eclipse timing variations and an oscillating red giant. *Astronomy and Astrophysics*, 668, A173. doi:[10.1051/0004-6361/202244373](https://doi.org/10.1051/0004-6361/202244373).

Gehan, C., Gaulme, P., & Yu, J. (2022). Surface magnetism of rapidly rotating red giants: Single versus close binary stars. *Astronomy and Astrophysics*, 668, A116. doi:[10.1051/0004-6361/202245083](https://doi.org/10.1051/0004-6361/202245083).

Gkioulidou, M., Opher, M., Kornbleuth, M., Dialynas, K., Giacalone, J., Richardson, J. D., Zank, G. P., Fuselier, S. A., Mitchell, D. G., Krimigis, S. M., **Roussos, E.,** Baliukin, I. (2022). On the Energization of Pickup Ions Downstream of the Heliospheric Termination Shock by Comparing 0.52-55 keV Observed Energetic Neutral Atom Spectra to Ones Inferred from Proton Hybrid Simulations. *The Astrophysical Journal Letters*, 931, L21. doi:[10.3847/2041-8213/ac6beb](https://doi.org/10.3847/2041-8213/ac6beb).

González-Álvarez, E., Zapatero Osorio, M. R., Sanz-Forcada, J., Caballero, J. A., Reffert, S., Béjar, V. J. S., Hatzes, A. P., Herrero, E., **Jeffers, S. V.,** Kemmer, J., López-González, M. J., Luque, R., Molaverdikhani, K., Morello, G., Nagel, E., Quirrenbach, A., Rodríguez, E., Rodríguez-López, C., Schlecker, M., Schweitzer, A., Stock, S., Passegger, V. M., Trifonov, T., Amado, P. J., Baker, D., Boyd, P. T., Cadieux, C., Charbonneau, D., Collins, K. A., Doyon, R., Dreizler, S., Espinoza, N., Fűrész, G., Furlan, E., Hesse, K., Howell, S. B., Jenkins, J. M., Kidwell, R. C., Latham, D. W., McLeod, K. K., Montes, D., Morales, J. C., O'Dwyer, T., Pallé, E., Pedraz, S., Reiners, A., Ribas, I., Quinn, S. N., Schnaible, C., Seager, S., Skinner, B., Smith, J. C., Schwarz, R. P., Shporer, A., Vanderspek, R., & Winn, J. N. (2022). A multi-planetary system orbiting the early-M dwarf TOI-1238. *Astronomy and Astrophysics*, 658: A138. doi:[10.1051/0004-6361/202142128](https://doi.org/10.1051/0004-6361/202142128).

Gorman, J., Chitta, L. P., & Peter, H. (2022). Spectroscopic observation of a transition region network jet. *Astronomy and Astrophysics*, 660, A116. doi:[10.1051/0004-6361/202142995](https://doi.org/10.1051/0004-6361/202142995).

Gorrini, P., Astudillo-Defru, N., Dreizler, S., Damasso, M., Díaz, R. F., Bonfils, X., **Jeffers, S. V.,** Barnes, J. R., Del Sordo, F., Almenara, J.-M., Artigau, E., Bouchy, F., Charbonneau, D., Delfosse, X., Doyon, R., Figueira, P., Forveille, T., Haswell, C. A., López-González, M. J., Melo, C., Mennickent, R. E., Gaisné, G., Morales Morales, N., Murgas, F., Pepe, F., Rodríguez, E., Santos, N. C., Tal-Or, L., Tsapras, Y., & Udry, S. (2022). Detailed stellar activity analysis and modelling of GJ 832. Reassessment of the putative habitable zone planet GJ 832c. *Astronomy and Astrophysics*, 664, A64. doi:[10.1051/0004-6361/202243063](https://doi.org/10.1051/0004-6361/202243063).

Gottschling, N., Schunker, H., **Birch, A. C., Cameron, R., & Gizon, L.** (2022). Testing solar surface flux transport models in the first days after active region emergence. *Astronomy and Astrophysics*, 660, A6. doi:[10.1051/0004-6361/202142071](https://doi.org/10.1051/0004-6361/202142071).

Green, L. M., Thalmann, J. K., **Valori, G.,** Pariat, E., Linan, L., & Moraitis, K. (2022). Magnetic Helicity Evolution and Eruptive Activity in NOAA Active Region 11158. *The Astrophysical Journal*, 937, 59. doi:[10.3847/1538-4357/ac88cb](https://doi.org/10.3847/1538-4357/ac88cb).

Grigorenko, E. E., Zelenyi, L. M., Shuvalov, S. D., Malova, H. V., & **Dubin, E.** (2022). Electron-scale Current Layers in the Martian Magnetotail: Spatial Scaling and Properties of Embedding. *The Astrophysical Journal*, 926, 160. doi:[10.3847/1538-4357/ac4bd8](https://doi.org/10.3847/1538-4357/ac4bd8).

Grygalashvily, M., Shaposhnikov, D. S., **Medvedev, A. S., Sonnemann, G. R., & Hartogh, P.** (2022). Simplified Relations for the Martian Night-Time OH* Suitable for the Interpretation of Observations. *Remote Sensing*, 14, 3866. doi:[10.3390/rs14163866](https://doi.org/10.3390/rs14163866).

Guevara Gómez, J. C., **Jafarzadeh, S.,** Wedemeyer, S., & Szydlarski, M. (2022). Propagation of transverse waves in the solar chromosphere probed at different heights with ALMA sub-bands. *Astronomy and Astrophysics*, 665, L2. doi:[10.1051/0004-6361/202244387](https://doi.org/10.1051/0004-6361/202244387).

- Gurgenashvili, E., Zaqarashvili, T., Kukhianidze, V., Reiners, A., **Reinhold, T.**, & Lanza, A. (2022). Rieger-type cycles on the solar-like star KIC 2852336. *Astronomy and Astrophysics*, 660, A33. doi:[10.1051/0004-6361/202142696](https://doi.org/10.1051/0004-6361/202142696).
- Gutiérrez, Ó., Prieto, M., Sanchez-Reyes, A., Perales-Eceiza, Á., **Ravanbakhsh, A.**, Guzmán, D., Gomez, A., & Pennestri, G. (in press). Electronic components TID radiation qualification for space applications using LINACs. Comparative analysis with 60 Co standard procedure. *Advances in Space Research*, 69, 4376-4390. doi:[10.1016/j.asr.2022.03.034](https://doi.org/10.1016/j.asr.2022.03.034).
- Harada, Y., Aizawa, S., Saito, Y., André, N., Persson, M., Delcourt, D., Hadid, L. Z., **Fraenz, M.**, Yokota, S., Fedorov, A., Miyake, W., Penou, E., Barthe, A., Sauvaud, J.-A., Katra, B., Matsuda, S., & Murakami, G. (2022). BepiColombo Mio Observations of Low-Energy Ions During the First Mercury Flyby: Initial Results. *Geophysical Research Letters*, 49, e00279. doi:[10.1029/2022GL100279](https://doi.org/10.1029/2022GL100279).
- Haslebacher, N., Gerig, S.-B., Thomas, N., Marschall, R., Zakharov, V., & **Tubiana, C.** (2022). A numerical model of dust particle impacts during a cometary encounter with application to ESA's Comet Interceptor mission. *Acta Astronautica*, 195, 243-250. doi:[10.1016/j.actaastro.2022.02.023](https://doi.org/10.1016/j.actaastro.2022.02.023).
- Heller, R.**, Harre, J.-V., & Samadi, R. (2022). Transit least-squares survey. IV. Earth-like transiting planets expected from the PLATO mission. *Astronomy and Astrophysics*, 665, A11. doi:[10.1051/0004-6361/202141640](https://doi.org/10.1051/0004-6361/202141640).
- Heller, R.**, & Hippke, M. (2022). Signal preservation of exomoon transits during light curve folding. *Astronomy and Astrophysics*, 657, A119. doi:[10.1051/0004-6361/202142403](https://doi.org/10.1051/0004-6361/202142403).
- Hernandez, J. A.**, **Nathues, A.**, Hiesinger, H., **Goetz, W.**, **Hoffmann, M.**, Schmedemann, N., Thangjam, G., **Mengel, K.**, & **Sarkar, R.** (2022). Geology and colour of Kupalo crater on Ceres. *Planetary and Space Science*, 220, 105538. doi:[10.1016/j.pss.2022.105538](https://doi.org/10.1016/j.pss.2022.105538).
- Hippke, M., & **Heller, R.** (2022). Pandora: A fast open-source exomoon transit detection algorithm. *Astronomy and Astrophysics*, 662, A37. doi:[10.1051/0004-6361/202243129](https://doi.org/10.1051/0004-6361/202243129).
- Hofmeister, S. J., Asvestari, E., Guo, J., Heidrich-Meisner, V., **Heinemann, S. G.**, Magdalenic, J., Poedts, S., Samara, E., Temmer, M., Vennerstrom, S., Veronig, A., Vršnak, B., & Wimmer-Schweingruber, R. (2022). How the area of solar coronal holes affects the properties of high-speed solar wind streams near Earth: An analytical model. *Astronomy and Astrophysics*, 659, A190. doi:[10.1051/0004-6361/202141919](https://doi.org/10.1051/0004-6361/202141919).
- Hon, M., **Kuszlewicz, J. S.**, Huber, D., Stello, D., & Reyes, C. (2022). HD-TESS: An Asteroseismic Catalog of Bright Red Giants within TESS Continuous Viewing Zones. *The Astronomical Journal*, 164, 135. doi:[10.3847/1538-3881/ac8931](https://doi.org/10.3847/1538-3881/ac8931).
- Hopp, T., Dauphas, N., Abe, Y., Aleon, J., Alexander, C. M. O., Amari, S., Amelin, Y., Bajo, K., Bizzarro, M., Bouvier, A., Carlson, R. W., Chaussidon, M., Choi, B. G., Davis, A. M., Di Rocco, T., Fujiya, W., Fukai, R., Gautam, I., Haba, M. K., Hibiya, Y., Hidaka, H., Homma, H., Hoppe, P., Huss, G. R., Ichida, K., Iizuka, T., Ireland, T. R., Ishikawa, A., Ito, M., Itoh, S., Kawasaki, N., Kita, N. T., Kitajima, K., **Kleine, T.**, Komatani, S., Krot, A. N., Liu, M. C., Masuda, Y., McKeegan, K. D., Morita, M., Motomura, K., Moynier, F., Nakai, I., Nagashima, K., Nesvornyy, D., Nguyen, A., Nittler, L., Onose, M., Pack, A., Park, C., Piani, L., Qin, L. P., Russell, S. S., Sakamoto, N., Schonbachler, M., Tafla, L., Tang, H. L., Terada, K., Terada, Y., Usui, T., Wada, S., Wadhwa, M., Walker, R. J., Yamashita, K., Yin, Q. Z., Yokoyama, T., Yoneda, S., Young, E. D., Yui, H., Zhang, A. C., Nakamura, T., Naraoka, H., Noguchi, T., Okazaki, R., Sakamoto, K., Yabuta, H., Abe, M., Miyazaki, A., Nakato, A., Nishimura, M., Okada, T., Yada, T., Yogata, K., Nakazawa, S., Saiki, T., Tanaka, S., Terui, F., Tsuda, Y., Watanabe, S., Yoshikawa, M., Tachibana, S., Yurimoto, H. (2022). Ryugu's nucleosynthetic heritage from the outskirts of the Solar System. *Science Advances*, 8, eadd8141. doi:[10.1126/sciadv.add8141](https://doi.org/10.1126/sciadv.add8141).
- Howell, S. B., Izmodenov, V., Kopeikin, S. M., Marziani, P., Puzzarini, C., **Rengel, M.**, McIntosh, S. W., Fraix-Burnet, D., & Kanik, I. (2022). Editorial: Frontiers in astronomy and space sciences: Rising stars. *Frontiers in Astronomy and Space Sciences*, 9, 991696. doi:[10.3389/fspas.2022.991696](https://doi.org/10.3389/fspas.2022.991696).

- Hu, H., Liu, Y. D., **Chitta, L. P., Peter, H.,** & Ding, M. (2022). Spectroscopic and Imaging Observations of Spatially Extended Magnetic Reconnection in the Splitting of a Solar Filament Structure. *The Astrophysical Journal*, 940, L12. doi:[10.3847/2041-8213/ac9dfd](https://doi.org/10.3847/2041-8213/ac9dfd).
- Huang, Q., Schmerr, N. C., King, S. D., Kim, D., Rivoldini, A., Plesa, A.-C., Samuel, H., Maguire, R. R., Karakostas, F., Lekić, V., Charalambous, C., Collinet, M., Myhill, R., Antonangeli, D., Drilleau, M., Bystricky, M., Bollinger, C., Michaut, C., Gudkova, T., Irving, J. C. E., Horleston, A., Fernando, B., Leng, K., Nissen-Meyer, T., Bejina, F., Bozdağ, E., Beghein, C., Waszek, L., Siersch, N. C., **Scholz, J.-R.,** Davis, P. M., Lognonné, P., Pinot, B., Widmer-Schnidrig, R., Panning, M. P., Smrekar, S. E., Spohn, T., Pike, W. T., Giardini, D., & Banerdt, W. B. (2022). Seismic detection of a deep mantle discontinuity within Mars by InSight. *Proceedings of the National Academy of Science*, 119, e2204474119. doi:[10.1073/pnas.2204474119](https://doi.org/10.1073/pnas.2204474119).
- Huber, D., White, T. R., Metcalfe, T. S., Chontos, A., Fausnaugh, M. M., Ho, C. S. K., Eyles, V. V., Ball, W. H., Basu, S., Bedding, T. R., Benomar, O., Bossini, D., Breton, S., Buzasi, D. L., Campante, T. L., Chaplin, W. J., Christensen-Dalsgaard, J., Cunha, M. S., Deal, M., García, R. A., Garcia Muñoz, A., **Gehan, C.,** González-Cuesta, L., **Jiang, C.,** Kayhan, C., Kjeldsen, H., Lundkvist, M. S., Mathis, S., Mathur, S., Monteiro, M. J. P. F. G., Nsamba, B., Ong, J. M. J., Pakštienė, E., Serenelli, A. M., Aguirre, V. S., Stassun, K. G., Stello, D., Stilling, S. N., Winther, M. L., Wu, T., Barclay, T., Daylan, T., Günther, M. N., Hermes, J. J., Jenkins, J. M., Latham, D. W., Levine, A. M., Ricker, G. R., Seager, S., Shporer, A., Twicken, J. D., Vanderspek, R. K., & Winn, J. N. (2022). A 20 Second Cadence View of Solar-type Stars and Their Planets with TESS: Asteroseismology of Solar Analogs and a Recharacterization of π Men c. *The Astrophysical Journal*, 163(2): 79. doi:[10.3847/1538-3881/ac3000](https://doi.org/10.3847/1538-3881/ac3000).
- Hunt, G., Provan, G., Bradley, T., Cowley, S., Dougherty, M., & **Roussos, E.** (2022). The Response of Saturn's Dawn Field-Aligned Currents to Magnetospheric and Ring Current Conditions During Cassini's Proximal Orbits: Evidence for a Region 2 Response at Saturn. *Journal of Geophysical Research-Space Physics*, 127, e2021JA029852. doi:[10.1029/2021JA029852](https://doi.org/10.1029/2021JA029852).
- Inceoglu, F., Shprits, Y. Y., **Heinemann, S. G.,** & Bianco, S. (2022). Identification of Coronal Holes on AIA/SDO Images Using Unsupervised Machine Learning. *The Astrophysical Journal*, 930, 118. doi:[10.3847/1538-4357/ac5f43](https://doi.org/10.3847/1538-4357/ac5f43).
- Ishikawa, R. T., Nakata, M., Katsukawa, Y., Masada, Y., & **Riethmüller, T. L.** (2022). Multi-scale deep learning for estimating horizontal velocity fields on the solar surface. *Astronomy and Astrophysics*, 658, A142. doi:[10.1051/0004-6361/202141743](https://doi.org/10.1051/0004-6361/202141743).
- Jain, N., **Muñoz, P. A.,** Farzalipour Tabriz, M., Ramp, M., & **Büchner, J.** (2022). Importance of accurate consideration of the electron inertia in hybrid-kinetic simulations of collisionless plasma turbulence: The 2D limit. *Physics of Plasmas*, 29, 053902. doi:[10.1063/5.0087103](https://doi.org/10.1063/5.0087103).
- Jeffers, S. V.,** Barnes, J. R., Schöfer, P., Quirrenbach, A., Zechmeister, M., Amado, P. J., Caballero, J. A., Fernández, M., Rodríguez, E., Ribas, I., Reinert, A., Cardona Guillén, C., Cifuentes, C., Czesla, S., Hatzes, A. P., Kürster, M., Montes, D., Morales, J. C., Pedraz, S., & Sadeg, S. (2022). The CARMENES search for exoplanets around M dwarfs. Benchmarking the impact of activity in high-precision radial velocity measurements. *Astronomy and Astrophysics*, 663, A27. doi:[10.1051/0004-6361/202141880](https://doi.org/10.1051/0004-6361/202141880).
- Jeffers, S. V., Cameron, R. H.,** Marsden, S. C., Boro Saikia, S., Folsom, C. P., Jardine, M. M., Morin, J., Petit, P., See, V., Vidotto, A. A., Wolter, U., & Mittag, M. (2022). The crucial role of surface magnetic fields for stellar dynamos: ϵ Eridani, 61 Cygni A, and the Sun. *Astronomy and Astrophysics*, 661, A152. doi:[10.1051/0004-6361/202142202](https://doi.org/10.1051/0004-6361/202142202).
- Jha, B. K., Hegde, M., Priyadarshi, A., **Mandal, S.,** Ravindra, B., & Banerjee, D. (2022). Extending the sunspot area series from Kodaikanal Solar Observatory. *Frontiers in Astronomy and Space Sciences*, 9, 1019751. doi:[10.3389/fspas.2022.1019751](https://doi.org/10.3389/fspas.2022.1019751).

- Jiang, C.**, Cunha, M., Christensen-Dalsgaard, J., Zhang, Q. S., & **Gizon, L.** (2022). Evolution of dipolar mixed-mode coupling factor in red giant stars: impact of buoyancy spike. *Monthly Notices of the Royal Astronomical Society*, 515, 3853–3866. doi:[10.1093/mnras/stac2065](https://doi.org/10.1093/mnras/stac2065).
- Jiang, C.**, (2022). Contributions of structural variations to the asymptotic mixed-mode coupling Factor in red giant stars. *Astronomische Nachrichten*, 343, e20220051. doi:[10.1002/asna.20220051](https://doi.org/10.1002/asna.20220051).
- Käpylä, M. J.**, Rheinhardt, M., & Brandenburg, A. (2022). Compressible Test-field Method and Its Application to Shear Dynamos. *The Astrophysical Journal*, 932, 8. doi:[10.3847/1538-4357/ac5b78](https://doi.org/10.3847/1538-4357/ac5b78).
- Kahil, F., Hirzberger, J., Solanki, S. K., Chitta, L. P., Peter, H., Auchère, F., Sinjan, J., Orozco Suárez, D., Albert, K., Albelo Jorge, N., Appourchaux, T., Alvarez-Herrero, A., Blanco Rodríguez, J., Gandorfer, A., Germerott, D., Guerrero, L., Gutiérrez Márquez, P., Kolleck, M., del Toro Iniesta, J. C., Volkmer, R., Woch, J., Fiethe, B., Gómez Cama, J. M., Pérez-Grande, I., Sanchis Kilders, E., Balaguer Jiménez, M., Bellot Rubio, L. R., Calchetti, D., Carmona, M., Deutsch, W., Fernández-Rico, G., Fernández-Medina, A., García Parejo, P., Gasent-Blesa, J. L., Gizon, L., Grauf, B., Heerlein, K., Lagg, A., Lange, T., López Jiménez, A., Maue, T., Meller, R., Michalik, H., Moreno Vacas, A., Müller, R., Nakai, E., Schmidt, W., Schou, J., Schühle, U., Staub, J., Strecker, H., Torralbo, I., Valori, G., Aznar Cuadrado, R., Teriaca, L., Berghmans, D., Verbeeck, C., Kraaikamp, E., & Gissot, S.** (2022). The magnetic drivers of campfires seen by the Polarimetric and Helioseismic Imager (PHI) on Solar Orbiter. *Astronomy and Astrophysics*, 660, A143. doi:[10.1051/0004-6361/202142873](https://doi.org/10.1051/0004-6361/202142873).
- Kaplan-Lipkin, A., Macintosh, B., Madurowicz, A., **Sowmya, K., Shapiro, A., Krivova, N., & Solanki, S. K.** (2022). Multiwavelength Mitigation of Stellar Activity in Astrometric Planet Detection. *The Astronomical Journal*, 163, 205. doi:[10.3847/1538-3881/ac56e0](https://doi.org/10.3847/1538-3881/ac56e0).
- Karjalainen, M., Karjalainen, R., Hatzes, A. P., Lehmann, H., Kervella, P., **Hekker, S.**, Van Winckel, H., Überlauer, J., Vítková, M., Skarka, M., Kabáth, P., Prins, S., Tkachenko, A., Cochran, W. D., & Jorissen, A. (2022). Companions to Kepler giant stars: A long-period eccentric sub-stellar companion to KIC 3526061 and a stellar companion to HD 187878. *Astronomy and Astrophysics*, 668, A26. doi:[10.1051/0004-6361/202244501](https://doi.org/10.1051/0004-6361/202244501).
- Kawabata, Y., Katsukawa, Y., Kubo, M., Anan, T., Ichimoto, K., Shinoda, K., Tsuzuki, T., Uruguchi, F., Nagata, S., Oba, T., Exposito, D. H., Gomez, A. S., Suarez, D. O., Jimenz, M. B., Martinez, E. B., Fernandez, J. M. M., Mantas, A. M., Iniesta, J. C. D., **Gandorfer, A., Feller, A.** (2022). Polarimetric calibration of a spectropolarimeter instrument with high precision: Sunrise chromospheric infrared spectropolarimeter (SCIP) for the sunrise iii balloon telescope. *Applied Optics* 61, 9716–9736. doi:[10.1364/AO.472516](https://doi.org/10.1364/AO.472516).
- Kawasaki, N., Nagashima, K., Sakamoto, N., Matsumoto, T., Bajo, K. I., Wada, S., Igami, Y., Miyake, A., Noguchi, T., Yamamoto, D., Russell, S. S., Abe, Y., Aleon, J., Alexander, C. M. O., Amari, S., Amelin, Y., Bizzarro, M., Bouvier, A., Carlson, R. W., Chaussidon, M., Choi, B. G., Dauphas, N., Davis, A. M., Di Rocco, T., Fujiya, W., Fukai, R., Gautam, I., Haba, M. K., Hibiya, Y., Hidaka, H., Homma, H., Hoppe, P., Huss, G. R., Ichida, K., Iizuka, T., Ireland, T. R., Ishikawa, A., Ito, M., Itoh, S., Kita, N. T., Kitajima, K., **Kleine, T.**, Komatani, S., Krot, A. N., Liu, M. C., Masuda, Y., McKeegan, K. D., Morita, M., Motomura, K., Moynier, F., Nakai, I., Nguyen, A., Nittler, L., Onose, M., Pack, A., Park, C., Piani, L., Qin, L. P., Schonbachler, M., Tafla, L., Tang, H. L., Terada, K., Terada, Y., Usui, T., Wadhwa, M., Walker, R. J., Yamashita, K., Yin, Q. Z., Yokoyama, T., Yoneda, S., Young, E. D., Yui, H., Zhang, A. C., Nakamura, T., Naraoka, H., Okazaki, R., Sakamoto, K., Yabuta, H., Abe, M., Miyazaki, A., Nakato, A., Nishimura, M., Okada, T., Yada, T., Yogata, K., Nakazawa, S., Saiki, T., Tanaka, S., Terui, F., Tsuda, Y., Watanabe, S. I., Yoshikawa, M., Tachibana, S., Yurimoto, H. (2022). Oxygen isotopes of anhydrous primary minerals show kinship between asteroid Ryugu and comet 81P/Wild2. *Science Advances* 8, eade2067. doi:[10.1126/sciadv.ade2067](https://doi.org/10.1126/sciadv.ade2067).
- Kemmer, J., Dreizler, S., Kossakowski, D., Stock, S., Quirrenbach, A., Caballero, J. A., Amado, P. J., Collins, K. A., Espinoza, N., Herrero, E., Jenkins, J. M., Latham, D. W., Lillo-Box, J., Narita, N., Pallé, E., Reiners, A., Ribas, I., Ricker, G., Rodríguez, E., Seager, S., Vanderspek, R., Wells, R., Winn, J., Aceituno, F. J., Béjar, V. J. S., Barclay, T., Bluhm, P., Chaturvedi, P., Cifuentes, C., Collins, K. I., Cortés-Contreras, M.,

- Demory, B.-O., Fausnaugh, M. M., Fukui, A., Gómez Maqueo Chew, Y., Galadí-Enríquez, D., Gan, T., Gillon, M., Golovin, A., Hatzes, A. P., Henning, T., Huang, C., **Jeffers, S. V.**, Kaminski, A., Kunitomo, M., Kürster, M., López-González, M. J., Lafarga, M., Luque, R., McCormac, J., Molaverdikhani, K., Montes, D., Morales, J. C., Passegger, V. M., Reffert, S., Sabin, L., Schöfer, P., Schanche, N., Schlecker, M., Schroffenegger, U., Schwarz, R. P., Schweitzer, A., Sota, A., Tenenbaum, P., Trifonov, T., Vanaverbeke, S., & Zechmeister, M. (2022). Discovery and mass measurement of the hot, transiting, Earth-sized planet, GJ 3929 b. *Astronomy and Astrophysics*, 659, A17. doi:[10.1051/0004-6361/202142653](https://doi.org/10.1051/0004-6361/202142653).
- Khabarova, O., **Büchner, J.**, Jain, N., Sagitov, T., Malova, H., Kislov, R. (2022). Electron-to-ion Bulk Speed Ratio as a Parameter Reflecting the Occurrence of Strong Electron-dominated Current Sheets in the Solar Wind. *The Astrophysical Journal*, 933, 97. doi:[10.3847/1538-4357/ac71ab](https://doi.org/10.3847/1538-4357/ac71ab).
- Kim, D., Banerdt, W. B., Ceylan, S., Giardini, D., Lekic, V., Lognonne, P., Beghein, C., Beucler, E., Carrasco, S., Charalambous, C., Clinton, J., Drilleau, M., Duran, C., Golombek, M., **Joshi, R.**, Khan, A., Knapmeyer-Endrun, B., Li, J., Maguire, R., Pike, W. T., Samuel, H., Schimmel, M., Schmerr, N. C., Stahler, S. C., Stutzmann, E., Wiczorek, M., Xu, Z., Batov, A., Bozdog, E., Dahmen, N., Davis, P., Gudkova, T., Horleston, A., Huang, Q., Kawamura, T., King, S. D., McLennan, S. M., Nimmo, F., Plasman, M., Plesa, A. C., Stepanova, I. E., Weidner, E., Zenhäusern, G., Daubar, I. J., Fernando, B., Garcia, R. F., Posiolova, L. V., Panning, M. P. (2022). Surface waves and crustal structure on Mars. *Science*, 378, 417-421. doi:[10.1126/science.abq7157](https://doi.org/10.1126/science.abq7157).
- Kim, Y., **Agarwal, J.**, Jewitt, D., Mutchler, M., Larson, S., Weaver, H., & Mommert, M. (2022). Sublimation origin of active asteroid P/2018 P3. *Astronomy and Astrophysics*, 666, A163. doi:[10.1051/0004-6361/202244356](https://doi.org/10.1051/0004-6361/202244356).
- Kimura, H., Markkanen, J., Kolokolova, L., **Hilchenbach, M.**, Wada, K., Kanada, Y., & Matsui, T. (2022). Do twin spectral peaks of olivine particles in the thermal infrared diagnose their sizes and porosities? *Icarus*, 380, 114964. doi:[10.1016/j.icarus.2022.114964](https://doi.org/10.1016/j.icarus.2022.114964).
- Koldobskiy, S. A., Kähkönen, R., **Hofer, B.**, **Krivova, N. A.**, Kovaltsov, G. A., & Usoskin, I. G. (2022). Time Lag Between Cosmic-Ray and Solar Variability: Sunspot Numbers and Open Solar Magnetic Flux. *Solar Physics*, 297: 38. doi:[10.1007/s11207-022-01970-1](https://doi.org/10.1007/s11207-022-01970-1).
- Kollatschny, W., Ochmann, M. W., Kaspi, S., Schumacher, C., Behar, E., Chelouche, D., Horne, K., **Müller, B.**, Rafter, S. E., Chini, R., Haas, M., & Probst, M. A. (2022). The Great Slump: Mrk 926 reveals discrete and varying Balmer line satellite components during a drastic phase of decline. *Astronomy and Astrophysics*, 657, A122. doi:[10.1051/0004-6361/202142007](https://doi.org/10.1051/0004-6361/202142007).
- Kollmann, P., **Roussos, E.**, Clark, G., Cooper, J. F., Sturmer, S. J., Kotova, A., Regoli, L., Shprits, Y. Y., Aseev, N., & **Krupp, N.** (2022). Spectra of Saturn's proton belts revealed. *Icarus*, 376, 114795. doi:[10.1016/j.icarus.2021.114795](https://doi.org/10.1016/j.icarus.2021.114795).
- Korpi-Lagg, M. J., **Korpi-Lagg, A.**, Olsper, N., & Truong, H.-L. (2022). Solar-cycle variation of quiet-Sun magnetism and surface gravity oscillation mode. *Astronomy and Astrophysics*, 665, A141. doi:[10.1051/0004-6361/202243979](https://doi.org/10.1051/0004-6361/202243979).
- Kossakowski, D., Kürster, M., Henning, T., Trifonov, T., Caballero, J. A., Lafarga, M., Bauer, F. F., Stock, S., Kemmer, J., **Jeffers, S. V.**, Amado, P. J., Pérez-Torres, M., Béjar, V. J. S., Cortés-Contreras, M., Ribas, I., Reiners, A., Quirrenbach, A., Aceituno, J., Baroch, D., Cifuentes, C., Dreizler, S., Hatzes, A., Kaminski, A., Montes, D., Morales, J. C., Pavlov, A., Pena, L., Perdelwitz, V., Reffert, S., Revilla, D., Lopez, C. R., Rosich, A., Sadegi, S., Sanz-Forcada, J., Schöfer, P., Schweitzer, A., & Zechmeister, M. (2022). The CARMENES search for exoplanets around M dwarfs. Stable radial-velocity variations at the rotation period of AD Leonis: A test case study of current limitations to treating stellar activity. *Astronomy and Astrophysics*, 666, A143. doi:[10.1051/0004-6361/202243773](https://doi.org/10.1051/0004-6361/202243773).
- Kostogryz, N. M.**, **Witzke, V.**, **Shapiro, A. I.**, **Solanki, S. K.**, Moxed, P. F. L., Kurucz, R. L., & **Gizon, L.** (2022). Stellar limb darkening. A new MPS-ATLAS library for Kepler, TESS, CHEOPS, and PLATO passbands. *Astronomy and Astrophysics*, 666, A60. doi:[10.1051/0004-6361/202243722](https://doi.org/10.1051/0004-6361/202243722).

- Kou, Y. K., **Cheng, X.**, Wang, Y. L., Yu, S. J., Chen, B., Kontar, E. P., Ding, M. D. (2022). Microwave imaging of quasi-periodic pulsations at flare current sheet. *Nature Communications*, 13, 7680. doi:[10.1038/s41467-022-35377-0](https://doi.org/10.1038/s41467-022-35377-0).
- Kozak, L. V., Petrenko, B. A., Grigorenko, E. E., & **Kronberg, E. A.** (2022). Comparison of Ground-Based and Satellite Geomagnetic Pulsations during Substorms. *Kinematics and Physics of Celestial Bodies*, 38, 1-10. doi:[10.3103/S0884591322010044](https://doi.org/10.3103/S0884591322010044).
- Kruijjer, T. S., Burkhardt, C., Borg, L. E., **Kleine, T.** (2022). Tungsten and molybdenum isotopic evidence for an impact origin of pallasites. *Earth and Planetary Science Letters*, 584, 117440. doi:[10.1016/j.epsl.2022.117440](https://doi.org/10.1016/j.epsl.2022.117440).
- Kupka, F.**, Ahlborn, F., & Weiss, A. (2022). Stellar evolution models with overshooting based on 3-equation non-local theories I. Physical basis and the computation of the dissipation rate. *Astronomy and Astrophysics*, 667, A96. doi:[10.1051/0004-6361/202243125](https://doi.org/10.1051/0004-6361/202243125).
- Kwon, Y. G., Bagnulo, S., **Markkanen, J.**, **Agarwal, J.**, Kolokolova, L., Levasseur-Regourd, A.-C., Snodgrass, C., & Tozzi, G. P. (2022). VLT spectropolarimetry of comet 67P: dust environment around the end of its intense southern summer. *Astronomy and Astrophysics*, 657, A40. doi:[10.1051/0004-6361/202141865](https://doi.org/10.1051/0004-6361/202141865).
- Kwon, Y. G., Hasegawa, S., Fornasier, S., Ishiguro, M., & **Agarwal, J.** (2022). Probing the surface environment of large T-type asteroids. *Astronomy and Astrophysics*, 666, A173. doi:[10.1051/0004-6361/202243816](https://doi.org/10.1051/0004-6361/202243816).
- Kwon, Y. G., Masiero, J. R., & **Markkanen, J.** (2022). Examining the dust of the tailless Oort-cloud comet C/2020 T2. *Astronomy and Astrophysics*, 668, A97. doi:[10.1051/0004-6361/202244853](https://doi.org/10.1051/0004-6361/202244853).
- Lau, T. C. H., **Drazkowska, J.**, Stammler, S. M., Birnstiel, T., & Dullemond, C. P. (2022). Rapid formation of massive planetary cores in a pressure bump. *Astronomy and Astrophysics*, 668, A170. doi:[10.1051/0004-6361/202244864](https://doi.org/10.1051/0004-6361/202244864).
- Ledvina, V. E., Kazachenko, M. D., Criscuoli, S., Tilipman, D., Ermolli, I., Falco, M., Guglielmino, S., **Jafarzadeh, S.**, Rouppe van der Voort, L., & Zuccarello, F. (2022). Quantifying Properties of Photospheric Magnetic Cancellations in the Quiet Sun Internetwork. *The Astrophysical Journal*, 934, 38. doi:[10.3847/1538-4357/ac7785](https://doi.org/10.3847/1538-4357/ac7785).
- Lehtinen, J. J., **Käpylä, M. J.**, Hackman, T., Kochukhov, O., Willamo, T., Marsden, S., **Jeffers, S. V.**, Henry, G., & Jetsu, L. (2022). Topological changes in the magnetic field of LQ Hya during an activity minimum. *Astronomy and Astrophysics*, 660: A141. doi:[10.1051/0004-6361/201936780](https://doi.org/10.1051/0004-6361/201936780).
- Lejosne, S., Allison, H. J., Blum, L. W., Drozdov, A. Y., Hartinger, M. D., Hudson, M. K., Jaynes, A. N., Ozeke, L., **Roussos, E.**, & Zhao, H. (2022). Differentiating Between the Leading Processes for Electron Radiation Belt Acceleration. *Frontiers in Astronomy and Space Sciences*, 9:896245. doi:[10.3389/fspas.2022.896245](https://doi.org/10.3389/fspas.2022.896245).
- Lekshmi, B.**, Jain, K., Komm, R., & Nandy, D. (2022). Sub-surface plasma flows and the flare productivity of solar active regions. *Frontiers in Astronomy and Space Sciences*, 9:1020748. doi:[10.3389/fspas.2022.1020748](https://doi.org/10.3389/fspas.2022.1020748).
- Leseigneur, G., Bredehöft, J. H., Gautier, T., Giri, C., **Krüger, H.**, MacDermott, A. J., Meierhenrich, U. J., Muñoz Caro, G. M., Raulin, F., Steele, A., Steininger, H., Szopa, C., Thiemann, W., Ulamec, S., & **Goesmann, F.** (2022). ESA's Cometary Mission Rosetta—Re-Characterization of the COSAC Mass Spectrometry Results. *Angewandte Chemie International Edition*, 61, e202201925. doi:[10.1002/anie.202201925](https://doi.org/10.1002/anie.202201925).
- Leseigneur, G., Bredehöft, J. H., Gautier, T., Giri, C., **Krüger, H.**, MacDermott, A. J., Meierhenrich, U. J., Muñoz Caro, G. M., Raulin, F., Steele, A., Szopa, C., Thiemann, W., Ulamec, S., & **Goesmann, F.** (2022). COSAC's Only Gas Chromatogram Taken on Comet 67P/Churyumov-Gerasimenko. *ChemPlusChem*, 87, e202200116. doi: [10.1002/cplu.202200116](https://doi.org/10.1002/cplu.202200116).

- Lethuillier, A., Feller, C., Kaufmann, E., Becerra, P., Hänni, N., Diethelm, R., Kreuzig, C., Gundlach, B., Blum, J., Pommerol, A., Kargl, G., Laddha, S., Denisova, K., Kührt, E., Capelo, H. L., Haack, D., Zhang, X., Knollenberg, J., Molinski, N. S., Gilke, T., **Sierks, H.**, Tiefenbacher, P., **Güttler, C.**, Otto, K. A., Bischoff, D., Schweighart, M., Hagermann, A., & Jäggi, N. (2022). Cometary dust analogues for physics experiments. *Monthly Notices of the Royal Astronomical Society*, 515, 3420-3438. doi:[10.1093/mnras/stac1734](https://doi.org/10.1093/mnras/stac1734).
- Li, H. T., **Cheng, X.**, Guo, J. H., Yan, X. L., Wang, L. F., Zhong, Z., Li, C., Ding, M. D. (2022). Growth of a filament channel by intermittent small-scale magnetic reconnection. *Astronomy and Astrophysics*, 663, A127. doi: [10.1051/0004-6361/202243115](https://doi.org/10.1051/0004-6361/202243115).
- Li, L., **Peter, H.**, **Chitta, L. P.**, Song, H., Xu, Z., & Xiang, Y. (2022). Reconfiguration and Eruption of a Solar Filament by Magnetic Reconnection with an Emerging Magnetic Field. *The Astrophysical Journal*, 935, 85. doi:[10.3847/1538-4357/ac7ffa](https://doi.org/10.3847/1538-4357/ac7ffa).
- Li, L., Song, H., **Peter, H.**, & **Chitta, L. P.** (2022). Failed Solar Eruption of a Multithermal Flux Rope. *The Astrophysical Journal*, 941, L1. doi:[10.3847/2041-8213/aca47b](https://doi.org/10.3847/2041-8213/aca47b).
- Li, Y., Li, Q., Song, D.-C., Battaglia, A. F., Xiao, H., Krucker, S., **Schühle, U.**, Li, H., Gan, W., & Ding, M. D. (2022). The Ly α Emission in a C1.4 Solar Flare Observed by the Extreme Ultraviolet Imager aboard Solar Orbiter. *The Astrophysical Journal*, 936, 142. doi:[10.3847/1538-4357/ac897c](https://doi.org/10.3847/1538-4357/ac897c).
- Li, Z. F., **Cheng, X.**, Chen, F., Chen, J., Ding, M. D. (2022). Three-dimensional Magnetic and Thermodynamic Structures of Solar Microflares. *The Astrophysical Journal*, 930, L7. doi:[10.3847/2041-8213/ac67aa](https://doi.org/10.3847/2041-8213/ac67aa).
- Lin, F., **Song, J.**, Zhao, Z., Liu, N., Lu, X.-Y., Khomami, B. (2022). A novel transition route to elastically dominated turbulence in viscoelastic Taylor–Couette flow. *Journal of Non-Newtonian Fluid Mechanics*, 312, 104968. doi:[10.1016/j.jnnfm.2022.104968](https://doi.org/10.1016/j.jnnfm.2022.104968).
- Longobardo, A., Mannel, T., Kim, M., Fulle, M., Rotundi, A., Della Corte, V., Rinaldi, G., Lasue, J., **Merouane, S.**, Cottin, H., Ciarniello, M., Dirri, F., & Palomba, E. (2022). Combining Rosetta's GIADA and MIDAS data: morphological versus dynamical properties of dust at 67P/Churyumov-Gerasimenko. *Monthly Notices of the Royal Astronomical Society*, 516, 5611-5617. doi:[10.1093/mnras/stac2544](https://doi.org/10.1093/mnras/stac2544).
- Loukitcheva, M.**, Reardon, K. P. (2022). First looks at solar active regions with ALMA. *Frontiers in Astronomy and Space Sciences*, 9, 1025368. doi:[10.3389/fspas.2022.1025368](https://doi.org/10.3389/fspas.2022.1025368).
- Luque, R., Fulton, B. J., Kunitomo, M., Amado, P. J., Gorrini, P., Dreizler, S., Hellier, C., Henry, G. W., Molaverdikhani, K., Morello, G., Peña-Moñino, L., Pérez-Torres, M., Pozuelos, F. J., Shan, Y., Anglada-Escudé, G., Béjar, V. J. S., Bergond, G., Boyle, A. W., Caballero, J. A., Charbonneau, D., Ciardi, D. R., Dufoer, S., Espinoza, N., Everett, M., Fischer, D., Hatzes, A. P., Henning, T., Hesse, K., Howard, A. W., Howell, S. B., Isaacson, H., **Jeffers, S. V.**, Jenkins, J. M., Kane, S. R., Kemmer, J., Khalafinejad, S., Kidwell, R. C., Kossakowski, D., Latham, D. W., Lillo-Box, J., Lissauer, J. J., Montes, D., Orell-Miquel, J., Pallé, E., Pollacco, D., Quirrenbach, A., Reffert, S., Reiners, A., Ribas, I., Ricker, G. R., Rogers, L. A., Sanz-Forcada, J., Schlecker, M., Schweitzer, A., Seager, S., Shporer, A., Stassun, K. G., Stock, S., Tal-Or, L., Ting, E. B., Trifonov, T., Vanaverbeke, S., Vanderspek, R., Villaseñor, J., Winn, J. N., Winters, J. G., & Zapatero Osorio, M. R. (2022). The HD 260655 system: Two rocky worlds transiting a bright M dwarf at 10 pc. *Astronomy and Astrophysics*, 664, A199. doi:[10.1051/0004-6361/202243834](https://doi.org/10.1051/0004-6361/202243834).
- Madelaire, M., Laundal, K. M., Reistad, J. P., Hatch, S. M., Ohma, A., **Haaland, S.** (2022). Geomagnetic Response to Rapid Increases in Solar Wind Dynamic Pressure: Event Detection and Large Scale Response. *Frontiers in Astronomy and Space Sciences*, 9, 904620. doi:[10.3389/fspas.2022.904620](https://doi.org/10.3389/fspas.2022.904620).
- Madjarska, M. S.**, Mackay, D. H., Galsgaard, K., **Wiegmann, T.**, & Xie, H. (2022). Eruptions from coronal bright points: A spectroscopic view by IRIS of a mini-filament eruption, QSL reconnection, and reconnection-driven outflows. *Astronomy and Astrophysics*, 660, A45. doi:[10.1051/0004-6361/202142439](https://doi.org/10.1051/0004-6361/202142439).

- Maggiolo, R., **Maes, L.**, Cessateur, G., Darrouzet, F., De Keyser, J., Gunell, H. (2022). The Earth's Magnetic Field Enhances Solar Energy Deposition in the Upper Atmosphere. *Journal of Geophysical Research: Space Physics*, 127, e2022JA030899. doi:[10.1029/2022JA030899](https://doi.org/10.1029/2022JA030899).
- Mandal, S., Chitta, L. P., Antolin, P., Peter, H., Solanki, S. K., Auchère, F., Berghmans, D., Zhukov, A. N., Teriaca, L., Aznar Cuadrado, R., Schühle, U., Parenti, S., Buchlin, É., Harra, L., Verbeeck, C., Kraaikamp, E., Long, D. M., Rodriguez, L., Pelouze, G., Schwanitz, C., Barczynski, K., & Smith, P. J.** (2022). What drives decayless kink oscillations in active-region coronal loops on the Sun? *Astronomy and Astrophysics*, 666, L2. doi:[10.1051/0004-6361/202244403](https://doi.org/10.1051/0004-6361/202244403).
- Mandal, S., Chitta, P., Peter, H., Solanki, S. K., Aznar Cuadrado, R., Teriaca, L., Schühle, U., Berghmans, D., & Auchère, F.** (2022). A highly dynamic small-scale jet in a polar coronal hole. *Astronomy and Astrophysics*, 664, A28. doi:[10.1051/0004-6361/202243765](https://doi.org/10.1051/0004-6361/202243765).
- Mierla, M., **Inhester, B.**, Zhukov, A. N., Shestov, S. V., Bemporad, A., Lamy, P., & Koutchmy, S. (2022). Polarimetric Studies of a Fast Coronal Mass Ejection. *Solar Physics*, 297, 78. doi:[10.1007/s11207-022-02018-0](https://doi.org/10.1007/s11207-022-02018-0).
- Mitra, P. K., Joshi, B., Veronig, A. M., & **Wiegmann, T.** (2022). Multiwavelength Signatures of Episodic Nullpoint Reconnection in a Quadrupolar Magnetic Configuration and the Cause of Failed Flux Rope Eruption. *The Astrophysical Journal*, 926, 143. doi:[10.3847/1538-4357/ac4756](https://doi.org/10.3847/1538-4357/ac4756).
- Morbidelli, A., Baillié, K., Batygin, K., Charnoz, S., Guillot, T., Rubie, D. C., & **Kleine, T.** (2022). Contemporary formation of early Solar System planetesimals at two distinct radial locations. *Nature Astronomy*, 6, 72-79. doi:[10.1038/s41550-021-01517-7](https://doi.org/10.1038/s41550-021-01517-7).
- Mou, C., Peter, H., Xia, L., & Huang, Z.** (2022). Anisotropic nonthermal motions in the transition region of solar active regions. *Astronomy and Astrophysics*, 660, A3. doi:[10.1051/0004-6361/202142285](https://doi.org/10.1051/0004-6361/202142285).
- Mousis, O., Bouquet, A., Langevin, Y., Andre, N., Boithias, H., Durry, G., Faye, F., **Hartogh, P.**, Helbert, J., Iess, L., Kempf, S., Masters, A., Postberg, F., Renard, J.B., Vernazza, P., Vorburger, A., Wurz, P., Atkinson, D. H., Barabash, S., Berthomier, M., Brucato, J., Cable, M., Carter, J., Cazaux, S., Coustenis, A., Danger, G., Dehant, V., Fornaro, T., Garnier, P., Gautier, T., Groussin, O., Hadid, L. Z., Ize, J. C., Kolmasova, I., Lebreton, J. P., Le Maistre, S., Lellouch, E., Lunine, J. I., Mandt, K. E., Martins, Z., Mimoun, D., Nenon, Q., Caro, G. M. M., Rannou, P., Rauer, H., Schmitt-Kopplin, P., Schneeberger, A., Simons, M., Stephan, K., Van Hoolst, T., Vaverka, J., Wieser, M., Worner, L. (2022). Moonraker: Enceladus Multiple Flyby Mission. *The Planetary Science Journal*, 3, 268. doi:[10.3847/PSJ/ac9c03](https://doi.org/10.3847/PSJ/ac9c03).
- Moyano, F. D., Eggenberger, P., Meynet, G., **Gehan, C.**, Mosser, B., Buldgen, G., & Salmon, S. J. A. J. (2022). Asteroseismology of evolved stars to constrain the internal transport of angular momentum. V. Efficiency of the transport on the red giant branch and in the red clump. *Astronomy and Astrophysics*, 663, A180. doi:[10.1051/0004-6361/202243389](https://doi.org/10.1051/0004-6361/202243389).
- Moynier, F., Dai, W., Yokoyama, T., Hu, Y., Paquet, M., Abe, Y., Aléon, J., Alexander, C. M. O., Amari, S., Amelin, Y., Bajo, K.-I., Bizzarro, M., Bouvier, A., Carlson, R. W., Chaussidon, M., Choi, B.-G., Dauphas, N., Davis, A. M., Di Rocco, T., Fujiya, W., Fukai, R., Gautam, I., Haba, M. K., Hibiya, Y., Hidaka, H., Homma, H., Hoppe, P., Huss, G. R., Ichida, K., Iizuka, T., Ireland, T. R., Ishikawa, A., Ito, M., Itoh, S., Kawasaki, N., Kita, N. T., Kitajima, K., **Kleine, T.**, Komatani, S., Krot, A. N., Liu, M.-C., Masuda, Y., McKeegan, K. D., Morita, M., Motomura, K., Nakai, I., Nagashima, K., Nesvorný, D., Nguyen, A., Nittler, L., Onose, M., Pack, A., Park, C., Piani, L., Qin, L., Russell, S. S., Sakamoto, N., Schönbachler, M., Tafla, L., Tang, H., Terada, K., Terada, Y., Usui, T., Wada, S., Wadhwa, M., Walker, R. J., Yamashita, K., Yin, Q.-Z., Yoneda, S., Young, E. D., Yui, H., Zhang, A.-C., Nakamura, T., Naraoka, H., Noguchi, T., Okazaki, R., Sakamoto, K., Yabuta, H., Abe, M., Miyazaki, A., Nakato, A., Nishimura, M., Okada, T., Yada, T., Yogata, K., Nakazawa, S., Saiki, T., Tanaka, S., Terui, F., Tsuda, Y., Watanabe, S.-I., Yoshikawa, M., Tachibana, S., & Yurimoto, H. (2022). The Solar System calcium isotopic composition inferred from Ryugu samples. *Geochemical Perspectives Letters*, 24, 1-6. doi:[10.7185/geochemlet.2238](https://doi.org/10.7185/geochemlet.2238).

- Narita, Y., **Glassmeier, K.-H.**, & Motschmann, U. (2022). The Wave Telescope Technique. *Journal of Geophysical Research-Space Physics*, 127, e2021JA030165. doi:[10.1029/2021JA030165](https://doi.org/10.1029/2021JA030165).
- Nascimbeni, V., Piotto, G., Börner, A., Montalto, M., Marrese, P. M., Cabrera, J., Marinoni, S., Aerts, C., Altavilla, G., Benatti, S., Claudi, R., Deleuil, M., Desidera, S., Fabrizio, M., **Gizon, L.**, Goupil, M. J., Granata, V., Heras, A. M., Magrin, D., Malavolta, L., Mas-Hesse, J. M., Ortolani, S., Pagano, I., Pollacco, D., Prisinzano, L., Ragazzoni, R., Ramsay, G., Rauer, H., & Udry, S. (2022). The PLATO field selection process. I. Identification and content of the long-pointing fields. *Astronomy and Astrophysics*, 658, A31. doi:[10.1051/0004-6361/202142256](https://doi.org/10.1051/0004-6361/202142256).
- Nathues, A.**, **Hoffmann, M.**, Schmedemann, N., **Sarkar, R.**, Thangjam, G., **Mengel, K.**, **Hernandez, J.**, Hiesinger, H., & Pasckert, J. H. (2022). Brine residues and organics in the Urvara basin on Ceres. *Nature Communications*, 13, 927. doi:[10.1038/s41467-022-28570-8](https://doi.org/10.1038/s41467-022-28570-8).
- Nèmec, N.-E.**, **Shapiro, A. I.**, Işık, E., **Sowmya, K.**, **Solanki, S. K.**, **Krivova, N. A.**, **Cameron, R. H.**, & **Gizon, L.** (2022). Faculae Cancel out on the Surfaces of Active Suns. *The Astrophysical Journal*, 934, L23. doi:[10.3847/2041-8213/ac8155](https://doi.org/10.3847/2041-8213/ac8155).
- Nèmec, N.-E.**, **Shapiro, A. I.**, Işık, E., **Sowmya, K.**, **Solanki, S. K.**, **Krivova, N. A.**, **Cameron, R. H.**, & **Gizon, L.** (2022). Erratum: "Faculae Cancel out on the Surfaces of Active Suns" (2022, ApJL, 934, L23). *The Astrophysical Journal*, 936, L17. doi:[10.3847/2041-8213/ac8b70](https://doi.org/10.3847/2041-8213/ac8b70).
- Nigro, G.** (2022). An Argument in Favor of Magnetic Polarity Reversals Due to Heat Flux Variations in Fully Convective Stars and Planets. *The Astrophysical Journal*, 938, 22. doi:[10.3847/1538-4357/ac8d57](https://doi.org/10.3847/1538-4357/ac8d57).
- Nindos, A., Patsourakos, S., **Jafarzadeh, S.**, & Shimojo, M. (2022). The dynamic chromosphere at millimeter wavelengths. *Frontiers in Astronomy and Space Sciences*, 9, 981205. doi:[10.3389/fspas.2022.981205](https://doi.org/10.3389/fspas.2022.981205).
- Nørnberg, P., Finster, K., Thøgersen, J., Golbek, T. W., Weidner, T., Hassenkam, T., **Goetz, W.**, Oehlke, M., & Knak Jensen, S. J. (2022). Methane as a reddish coating agent. *Icarus*, 382, 115023. doi:[10.1016/j.icarus.2022.115023](https://doi.org/10.1016/j.icarus.2022.115023).
- Ó Fionnagáin, D., Kavanagh, R. D., Vidotto, A. A., **Jeffers, S. V.**, Petit, P., Marsden, S., Morin, J., & Golden, A. (2022). Coronal Mass Ejections and Type II Radio Emission Variability during a Magnetic Cycle on the Solar-type Star ϵ Eridani. *The Astrophysical Journal*, 924, 115. doi:[10.3847/1538-4357/ac35de](https://doi.org/10.3847/1538-4357/ac35de).
- Oba, T., Shimizu, T., Katsukawa, Y., Kubo, M., Kawabata, Y., Hara, H., Uruguchi, F., Tsuzuki, T., Tamura, T., Shinoda, K., Kodeki, K., Fukushima, K., Morales Fernández, J. M., Sánchez Gómez, A., Balaguer Jimenez, M., Hernández Expósito, D., & **Gandorfer, A.** (2022). Development of Fast and Precise Scan Mirror Mechanism for an Airborne Solar Telescope. *Solar Physics*, 297, 114. doi:[10.1007/s11207-022-02044-y](https://doi.org/10.1007/s11207-022-02044-y).
- Ondratschek, P. A.**, Röpke, F. K., Schneider, F. R. N., Fendt, C., Sand, C., Ohlmann, S. T., Pakmor, R., & Springel, V. (2022). Bipolar planetary nebulae from common-envelope evolution of binary stars. *Astronomy and Astrophysics*, 660, L8. doi:[10.1051/0004-6361/202142478](https://doi.org/10.1051/0004-6361/202142478).
- Orsini, S., Milillo, A., Lichtenegger, H., Varsani, A., Barabash, S., Livi, S., De Angelis, E., Alberti, T., Laky, G., Nilsson, H., Phillips, M., Aronica, A., Kallio, E., Wurz, P., Olivieri, A., Plainaki, C., Slavin, J. A., Dandouras, I., Raines, J. M., Benkhoff, J., Zender, J., Berthelier, J.-J., Dosa, M., Ho, G. C., Killen, R. M., McKenna-Lawlor, S., Torkar, K., Vaisberg, O., Allegrini, F., Daglis, I. A., Dong, C., Escoubet, C. P., Fatemi, S., **Fraenz, M.**, Ivanovski, S., **Krupp, N.**, Lammer, H., Leblanc, F., Mangano, V., Mura, A., Rispoli, R., Sarantos, M., Smith, H. T., Wieser, M., Camozzi, F., Di Lellis, A. M., Fremuth, G., Giner, F., Gurnee, R., Hayes, J., Jeszenszky, H., Trantham, B., Balaz, J., Baumjohann, W., Cantatore, M., Delcourt, D., Delva, M., Desai, M., **Fischer, H.**, Galli, A., Grande, M., Holmström, M., Horvath, I., Hsieh, K. C., Jarvinen, R., Johnson, R. E., Kazakov, A., Kecskemety, K., **Krüger, H.**, Kürbisch, C., Leblanc, F., Leichtfried, M., Mangraviti, E., Massetti, S., Moissenko, D., Moroni, M., Noschese, R., Nuccilli, F., Paschalidis, N., Ryno, J., Seki, K., Shestakov, A., Shuvalov, S., Sordini, R., Stenbeck, F., Svensson, J.,

- Szalai, S., Szego, K., Toublanc, D., Vertolli, N., Wallner, R., & Vorburger, A. (2022). Inner southern magnetosphere observation of Mercury via SERENA ion sensors in BepiColombo mission. *Nature Communications*, 13, 7390. doi:[10.1038/s41467-022-34988-x](https://doi.org/10.1038/s41467-022-34988-x).
- Pakhotin, I., Burchill, J., **Förster, M.**, & Lomidze, L. (2022). The swarm Langmuir probe ion drift, density and effective mass (SLIDEM) product. *Earth, Planets and Space*, 74, 109. doi:[10.1186/s40623-022-01668-5](https://doi.org/10.1186/s40623-022-01668-5).
- Paquet, M., Moynier, F., Yokoyama, T., Dai, W., Hu, Y., Abe, Y., Aléon, J., O'D. Alexander, C. M., Amari, S., Amelin, Y., Bajo, K.-i., Bizzarro, M., Bouvier, A., Carlson, R. W., Chaussidon, M., Choi, B.-G., Dauphas, N., Davis, A. M., Di Rocco, T., Fujiya, W., Fukai, R., Gautam, I., Haba, M. K., Hibiya, Y., Hidaka, H., Homma, H., Hoppe, P., Huss, G. R., Ichida, K., Iizuka, T., Ireland, T. R., Ishikawa, A., Ito, M., Itoh, S., Kawasaki, N., Kita, N. T., Kitajima, K., **Kleine, T.**, Komatani, S., Krot, A. N., Liu, M.-C., Masuda, Y., McKeegan, K. D., Morita, M., Motomura, K., Nakai, I., Nagashima, K., Nesvorný, D., Nguyen, A. N., Nittler, L., Onose, M., Pack, A., Park, C., Piani, L., Qin, L., Russell, S. S., Sakamoto, N., Schönbächler, M., Tafla, L., Tang, H., Terada, K., Terada, Y., Usui, T., Wada, S., Wadhwa, M., Walker, R. J., Yamashita, K., Yin, Q.-Z., Yoneda, S., Young, E. D., Yui, H., Zhang, A.-C., Nakamura, T., Naraoka, H., Noguchi, T., Okazaki, R., Sakamoto, K., Yabuta, H., Abe, M., Miyazaki, A., Nakato, A., Nishimura, M., Okada, T., Yada, T., Yogata, K., Nakazawa, S., Saiki, T., Tanaka, S., Terui, F., Tsuda, Y., Watanabe, S.-i., Yoshikawa, M., Tachibana, S., & Yurimoto, H. (2022). Contribution of Ryugu-like material to Earth's volatile inventory by Cu and Zn isotopic analysis. *Nature Astronomy*, 7, 182–189. doi:[10.1038/s41550-022-01846-1](https://doi.org/10.1038/s41550-022-01846-1).
- Paranicas, C., **Roussos, E.**, Dialynas, K., Kollmann, P., **Krupp, N.**, Hedman, M., Allen, R. C., & Hospodarsky, G. (2022). The Electric Field outward of Saturn's Main Rings. *The Astrophysical Journal*, 934, 11. doi:[10.3847/1538-4357/ac745e](https://doi.org/10.3847/1538-4357/ac745e).
- Pasckert, J. H., Schmedemann, N., **Nathues, A.**, Hiesinger, H., van der Bogert, C. H. (2022). The young resurfacing events at Ceres' Occator crater: Seismic shaking or deposition of cryovolcanic material? *Icarus*, 389, 115259. doi:[10.1016/j.icarus.2022.115259](https://doi.org/10.1016/j.icarus.2022.115259).
- Pearson, C., Leavitt, S., Kromer, B., **Solanki, S.**, & Usoskin, I. (2022). DENDROCHRONOLOGY AND RADIO-CARBON DATING. *Radiocarbon*, 64, 569-588. doi:[10.1017/RDC.2021.97](https://doi.org/10.1017/RDC.2021.97).
- Pekkilä, J., Väisälä, M. S., **Käpylä, M. J.**, Rheinhardt, M., & Lappiae, O. (2022). Scalable communication for high-order stencil computations using CUDA-aware MPI. *Parallel Computing*, 111: 102904. doi:[10.1016/j.parco.2022.102904](https://doi.org/10.1016/j.parco.2022.102904).
- Persson, M., Aizawa, S., André, N., Barabash, S., Saito, Y., Harada, Y., Heyner, D., Orsini, S., Fedorov, A., Mazelle, C., Futaana, Y., Hadid, L. Z., Volwerk, M., Collinson, G., Sanchez-Cano, B., Barthe, A., Penou, E., Yokota, S., Génot, V., Sauvaud, J. A., Delcourt, D., **Fraenz, M.**, Modolo, R., Milillo, A., Auster, H.-U., Richter, I., Mieth, J. Z. D., Louarn, P., Owen, C. J., Horbury, T. S., Asamura, K., Matsuda, S., Nilsson, H., Wieser, M., Alberti, T., Varsani, A., Mangano, V., Mura, A., Lichtenegger, H., Laky, G., Jeszenszky, H., Masunaga, K., Signoles, C., Rojo, M., & Murakami, G. (2022). BepiColombo mission confirms stagnation region of Venus and reveals its large extent. *Nature Communications*, 13, 7743. doi:[10.1038/s41467-022-35061-3](https://doi.org/10.1038/s41467-022-35061-3).
- Peter, H; Chitta, LP;** Chen, F; Pontin, DI; Winebarger, AR; Golub, L; Savage, SL; Rachmeler, LA; Kobayashi, K; Brooks, DH; Cirtain, JW; De Pontieu, B; McKenzie, DE; Morton, RJ; Testa, P; Tiwari, SK; Walsh, RW; Warren, HP. (2022). Parallel Plasma Loops and the Energization of the Solar Corona. *The Astrophysical Journal*, 933, 153. doi:[10.3847/1538-4357/ac7219](https://doi.org/10.3847/1538-4357/ac7219).
- Pfeifer, M., Agarwal, J., & Schröter, M.** (2022). On the trail of a comet's tail: A particle tracking algorithm for comet 67P/Churyumov-Gerasimenko. *Astronomy and Astrophysics*, 659, A171. doi:[10.1051/0004-6361/202141953](https://doi.org/10.1051/0004-6361/202141953).
- Philidet, J., Belkacem, K., & Goupil, M.** (2022). Coupling between turbulence and solar-like oscillations: A combined Lagrangian PDF/SPH approach I. The stochastic wave equation. *Astronomy and Astrophysics*, 656, A95. doi:[10.1051/0004-6361/202141483](https://doi.org/10.1051/0004-6361/202141483)

Plainaki, C., Massetti, S., Jia, X., Mura, A., **Roussos, E.**, Milillo, A., & Grassi, D. (2022). The Jovian Energetic Ion Environment of Ganymede: Planetary Space Weather Considerations in View of the JUICE Mission. *The Astrophysical Journal*, 940, 186. doi:[10.3847/1538-4357/ac9c54](https://doi.org/10.3847/1538-4357/ac9c54).

Poulier, P.-L., Liang, Z.-C., Fournier, D., & Gizon, L. (2022). Contribution of flows around active regions to the north-south helioseismic travel-time measurements. *Astronomy and Astrophysics*, 664, A189. doi:[10.1051/0004-6361/202243476](https://doi.org/10.1051/0004-6361/202243476).

Przybylski, D., Cameron, R., Solanki, S. K., Rempel, M., Leenaarts, J., Anusha, L. S., Witzke, V., & Shapiro, A. I. (2022). Chromospheric extension of the MURaM code. *Astronomy and Astrophysics*, 664, A91. doi:[10.1051/0004-6361/202141230](https://doi.org/10.1051/0004-6361/202141230).

Quintero Noda, C., Schlichenmaier, R., Bellot Rubio, L. R., Löfdahl, M. G., Khomenko, E., Jurčák, J., Leenaarts, J., Kuckein, C., González Manrique, S. J., Gunár, S., Nelson, C. J., de la Cruz Rodríguez, J., Tziotziou, K., Tsiropoula, G., Aulanier, G., Aboudarham, J., Allegrì, D., Alsina Ballester, E., Amans, J. P., Asensio Ramos, A., Bailén, F. J., Balaguer, M., Baldini, V., Balthasar, H., Barata, T., Barczynski, K., Barreto Cabrera, M., Baur, A., Béchet, C., Beck, C., Belío-Asín, M., Bello-González, N., Belluzzi, L., Bentley, R. D., Berdyugina, S. V., Berghmans, D., Berlicki, A., Berrilli, F., Berkefeld, T., Bettonvil, F., Bianda, M., Bienes Pérez, J., Bonaque-González, S., Brajša, R., Bommier, V., Bourdin, P.-A., Burgos Martín, J., **Calchetti, D.**, Calcines, A., Calvo Tovar, J., Campbell, R. J., Carballo-Martín, Y., Carbone, V., Carlin, E. S., Carlsson, M., Castro López, J., Cavaller, L., Cavallini, F., Cauzzi, G., Cecconi, M., Chulani, H. M., Ciraami, R., Consolini, G., Coretti, I., Cosentino, R., Cózar-Castellano, J., Dalmasse, K., Danilovic, S., De Juan Ovelar, M., Del Moro, D., del Pino Alemán, T., del Toro Iniesta, J. C., Denker, C., Dhara, S. K., Di Marcantonio, P., Díaz Baso, C. J., Diercke, A., Dineva, E., Díaz-García, J. J., **Doerr, H.-P.**, Doyle, G., Erdelyi, R., Ermolli, I., Escobar Rodríguez, A., Esteban Pozuelo, S., Faurobert, M., Felipe, T., **Feller, A.**, Feijoo Amoedo, N., Femenía Castellá, B., Fernandes, J., Ferro Rodríguez, I., Figueroa, I., Fletcher, L., Franco Ordovas, A., Gafeira, R., Gardenghi, R., Gelly, B., Giorgi, F., Gisler, D., Giovannelli, L., González, F., González, J. B., González-Cava, J. M., González García, M., Gömöry, P., Gracia, F., **Grauf, B.**, Greco, V., Grivel, C., Guerreiro, N., Guglielmino, S. L., Hammerschlag, R., Hanslmeier, A., Hansteen, V., Heinzel, P., Hernández-Delgado, A., Hernández Suárez, E., Hidalgo, S. L., Hill, F., **Hizberger, J.**, Hofmeister, S., Jägers, A., Janett, G., Jarolim, R., Jess, D., Jiménez Mejías, D., Jolissaint, L., Kamlah, R., Kapitán, J., Kašparová, J., Keller, C. U., Kentischer, T., Kiselman, D., Kleint, L., Klvana, M., Kontogiannis, I., Krishnappa, N., Kučera, A., Labrosse, N., **Lagg, A.**, Landi Degl'Innocenti, E., Langlois, M., Lafon, M., Laforgue, D., Le Men, C., Lepori, B., Lepreti, F., Lindberg, B., Lilje, P. B., López Ariste, A., López Fernández, V. A., López Jiménez, A. C., López López, R., **Manso Sainz, R.**, Marassi, A., Marco de la Rosa, J., Marino, J., Marrero, J., Martín, A., Martín Gálvez, A., Martín Hernando, Y., Masciadri, E., Martínez González, M., Matta-Gómez, A., Mato, A., Mathioudakis, M., Matthews, S., Mein, P., Merlos García, F., Moity, J., Montilla, I., Molinaro, M., Molodij, G., Montoya, L. M., Munari, M., Murabito, M., Núñez Cagigal, M., Oliviero, M., Orozco Suárez, D., Ortiz, A., Padilla-Hernández, C., Paéz Mañá, E., Paletou, F., Pancorbo, J., Pastor Cañedo, A., Pastor Yabar, A., Peat, A. W., Pedichini, F., Peixinho, N., Peñate, J., Pérez de Taoro, A., Peter, H., Petrovay, K., Piazzesi, R., Pietropaolo, E., Pleier, O., Poedts, S., Pötzi, W., Podladchikova, T., Prieto, G., Quintero Nehr Korn, J., Ramelli, R., Ramos Sapena, Y., Rasilla, J. L., Reardon, K., Rebolo, R., Regalado Olivares, S., Reyes García-Talavera, M., **Riethmüller, T. L.**, Rimmele, T., Rodríguez Delgado, H., Rodríguez González, N., Rodríguez-Losada, J. A., Rodríguez Ramos, L. F., Romano, P., Roth, M., Rouppe van der Voort, L., Rudawy, P., Ruiz de Galarreta, C., Rybák, J., Salvade, A., Sánchez-Capuchino, J., Sánchez Rodríguez, M. L., Sangiorgi, M., Sayède, F., Scharmer, G., Scheffelen, T., Schmidt, W., Schmieder, B., Scirè, C., Scuderi, S., Siegel, B., Sigwarth, M., Simões, P. J. A., Snik, F., Slieden, G., Sobotka, M., Socas-Navarro, H., Sola La Serna, P., **Solanki, S. K.**, Soler Trujillo, M., Soltau, D., Sordini, A., Sosa Méndez, A., Stangalini, M., Steiner, O., Stenflo, J. O., Štěpán, J., Strassmeier, K. G., Sudar, D., Suematsu, Y., Sütterlin, P., Tallon, M., Temmer, M., Tenegi, F., Triteschler, A., Trujillo Bueno, J., Turchi, A., Utz, D., van Harten, G., **van Noort, M.**, van Werkhoven, T., Vansintjan, R., Vaz Cedillo, J. J., Vega Reyes, N., Verma, M., Veronig, A. M., Viavattene, G., Vitas, N., Vögler, A., von der Lühe, O.,

- Volkmer, R., Waldmann, T. A., Walton, D., Wisniewska, A., Zeman, J., Zeuner, F., Zhang, L. Q., Zucarello, F., & Collados, M. (2022). The European Solar Telescope. *Astronomy and Astrophysics*, 666, A21. doi:[10.1051/0004-6361/202243867](https://doi.org/10.1051/0004-6361/202243867).
- Reiners, A., Shulyak, D., Käpylä, P. J., Ribas, I., Nagel, E., Zechmeister, M., Caballero, J. A., Shan, Y., Fuhrmeister, B., Quirrenbach, A., Amado, P. J., Montes, D., **Jeffers, S. V.**, Azzaro, M., Béjar, V. J. S., Chaturvedi, P., Henning, T., Kürster, M., & Pallé, E. (2022). Magnetism, rotation, and nonthermal emission in cool stars. Average magnetic field measurements in 292 M dwarfs. *Astronomy and Astrophysics*, 662, A41. doi:[10.1051/0004-6361/202243251](https://doi.org/10.1051/0004-6361/202243251).
- Reinhold, T., Shapiro, A. I., Solanki, S. K.**, & Basri, G. (2022). Measuring Periods in Aperiodic Light Curves—Applying the GPS Method to Infer the Rotation Periods of Solar-like Stars. *The Astrophysical Journal*, 938, L1. doi:[10.3847/2041-8213/ac937a](https://doi.org/10.3847/2041-8213/ac937a).
- Render, J., Brennecke, G. A., Burkhardt, C., **Kleine, T.** (2022). Solar System evolution and terrestrial planet accretion determined by Zr isotopic signatures of meteorites. *Earth and Planetary Science Letters*, 595, 117748. doi:[10.1016/j.epsl.2022.117748](https://doi.org/10.1016/j.epsl.2022.117748).
- Rengel, M., Shulyak, D., Hartogh, P.**, Sagawa, H., Moreno, R., & **Jarchow, C.** (2022). Ground-based HCN submillimetre measurements in Titan's atmosphere: an intercomparison with Herschel observations. *Astronomy and Astrophysics*, 658, A88. doi:[10.1051/0004-6361/202141422](https://doi.org/10.1051/0004-6361/202141422).
- Renggli, C. J., Hellmann, J. L., **Burkhardt, C.**, Klemme, S., Berndt, J., Pangritz, P., & **Kleine, T.** (2022). Tellurium isotope fractionation during evaporation from silicate melts. *Geochimica et Cosmochimica Acta*, 339, 35-45. doi:[10.1016/j.gca.2022.10.032](https://doi.org/10.1016/j.gca.2022.10.032).
- Reshetnik, V., **Skorov, Y.**, Bentley, M., **Rezac, L., Hartogh, P.**, & Blum, J. (2022). Transport Characteristics of a Hierarchical Near-Surface Layer of the Nucleus of Comet 67P/Churyumov-Gerasimenko. *Solar System Research*, 56, 100-121. doi:[10.1134/S0038094622020071](https://doi.org/10.1134/S0038094622020071).
- Rietveld, M., & **Stubbe, P.** (2022). History of the Tromsø ionosphere heating facility. *History of Geo- and Space Sciences*, 13(1), 71-82. doi:[10.5194/hgss-13-71-2022](https://doi.org/10.5194/hgss-13-71-2022).
- Roeten, K. J., Bougher, S. W., Yiğit, E., **Medvedev, A. S.**, Benna, M., & Elrod, M. K. (2022). Impacts of Gravity Waves in the Martian Thermosphere: The Mars Global Ionosphere-Thermosphere Model Coupled with a Whole Atmosphere Gravity Wave Scheme. *Journal of Geophysical Research (Planets)*, 127, e2022JE007477. doi:[10.1029/2022JE007477](https://doi.org/10.1029/2022JE007477).
- Roussos, E.**, Cohen, C., Kollmann, P., Pinto, M., **Krupp, N.**, Gonçalves, P., & Dialynas, K. (2022). A source of very energetic oxygen located in Jupiter's inner radiation belts. *Science Advances*, 8: eabm4234. doi:[10.1126/sciadv.abm4234](https://doi.org/10.1126/sciadv.abm4234).
- Samadi-Ghadim, A.**, Lampens, P., & **Gizon, L.** (2022). KIC 6951642: A confirmed Kepler γ Doradus - δ Scuti star with intermediate to fast rotation in a possible single-lined binary system. *Astronomy and Astrophysics*, 667, A60. doi:[10.1051/0004-6361/202243507](https://doi.org/10.1051/0004-6361/202243507).
- Samara, E., Magdalenić, J., Rodriguez, L., **Heinemann, S. G.**, Georgoulis, M. K., Hofmeister, S. J., & Poedts, S. (2022). Influence of coronal hole morphology on the solar wind speed at Earth. *Astronomy and Astrophysics*, 662, A68. doi:[10.1051/0004-6361/202142793](https://doi.org/10.1051/0004-6361/202142793).
- Sauer, K., **Dubin, E.** (2020). Multi-Ion Oscillitons—Origin of Coherent Magnetospheric EMIC Waves. *Journal of Geophysical Research: Space Physics*, 127, e2022JA030925. doi:[10.1029/2022JA030925](https://doi.org/10.1029/2022JA030925).
- Scherer, K., Dialynas, K., Fichtner, H., Galli, A., & **Roussos, E.** (2022). The properties of 0.11 keV-344 MeV ion spectra in the inner heliosheath using regularized κ -distributions. *Astronomy and Astrophysics*, 664, A132. doi:[10.1051/0004-6361/202243449](https://doi.org/10.1051/0004-6361/202243449).
- Schöfer, P., **Jeffers, S. V.**, Reiners, A., Zechmeister, M., Fuhrmeister, B., Lafarga, M., Ribas, I., Quirrenbach, A., Amado, P. J., Caballero, J. A., Anglada-Escudé, G., Bauer, F. F., Béjar, V. J. S., Cortés-Contreras, M., Alonso, E. D., Dreizler, S., Guenther, E. W., Herbort, O., Johnson, E. N., Kaminski, A., Kürster,

- M., Montes, D., Morales, J. C., Pedraz, S., & Tal-Or, L. (2022). The CARMENES search for exoplanets around M dwarfs. Rotational variation in activity indicators of Ross 318, YZ CMi, TYC 3529-1437-1, and EV Lac. *Astronomy and Astrophysics*, 663, A68. doi:[10.1051/0004-6361/201936102](https://doi.org/10.1051/0004-6361/201936102).
- Schou, J.** (2022). Using birefringent elements and imaging Michelsons for the calibration of high-precision planet-finding spectrographs. *Astronomy and Astrophysics*, 662, A119. doi:[10.1051/0004-6361/202141657](https://doi.org/10.1051/0004-6361/202141657).
- Shaheen, F., Scariah, N. V., Lala, M. G. N., Krishna, A. P., Jeganathan, C., & **Hoekzema, N. M.** (2022). Shadow method retrievals of the atmospheric optical depth above Gale crater on Mars using HRSC images. *Icarus*, 388, 115229. doi:[10.1016/j.icarus.2022.115229](https://doi.org/10.1016/j.icarus.2022.115229).
- Shaposhnikov, D. S., **Medvedev, A. S.**, & Rodin, A. V. (2022). Simulation of Water Vapor Photodissociation during Dust Storm Season on Mars. *Solar System Research*, 56, 23-31. doi:[10.1134/S0038094622010051](https://doi.org/10.1134/S0038094622010051).
- Shaposhnikov, D. S., **Grigalashvili, M.**, **Medvedev, A.**, **Zonnemann, G. R.**, & **Hartogh, P.** (2022). Analytical Approximations of the Characteristics of Nighttime Hydroxyl on Mars and Intra-Annual Variations. *Solar System Research*, 57, 1-13. doi:[10.1134/S0038094623010057](https://doi.org/10.1134/S0038094623010057).
- Shaposhnikov, D. S., **Medvedev, A. S.**, Rodin, A. V., Yiğit, E., & **Hartogh, P.** (2022). Martian Dust Storms and Gravity Waves: Disentangling Water Transport to the Upper Atmosphere. *Journal of Geophysical Research (Planets)*, 127, e07102. doi:[10.1029/2021JE007102](https://doi.org/10.1029/2021JE007102).
- Shi, Z. D., **Munoz, P. A.**, **Buchner, J.**, Liu, S. M. (2022). Proton and Helium Heating by Cascading Turbulence in a Low-beta Plasma. *The Astrophysical Journal*, 941, 39. doi:[10.3847/1538-4357/ac9fd7](https://doi.org/10.3847/1538-4357/ac9fd7).
- Silva, S. S. A., Murabito, M., **Jafarzadeh, S.**, Stangalini, M., Verth, G., Ballai, I., & Fedun, V. (2022). The Importance of Horizontal Poynting Flux in the Solar Photosphere. *The Astrophysical Journal*, 927, 146. doi:[10.3847/1538-4357/ac4601](https://doi.org/10.3847/1538-4357/ac4601).
- Sinha, S., Gupta, O., Singh, V., **Lekshmi, B.**, Nandy, D., Mitra, D., Chatterjee, S., Bhattacharya, S., Chatterjee, S., Srivastava, N., Brandenburg, A., & Pal, S. (2022). A Comparative Analysis of Machine-learning Models for Solar Flare Forecasting: Identifying High-performing Active Region Flare Indicators. *The Astrophysical Journal*, 935, 45. doi:[10.3847/1538-4357/ac7955](https://doi.org/10.3847/1538-4357/ac7955).
- Skorov, Y.**, Reshetnyk, V., Bentley, M. S., **Rezac, L.**, **Hartogh, P.**, & Blum, J. (2022). The effect of hierarchical structure of the surface dust layer on the modelling of comet gas production. *Monthly Notices of the Royal Astronomical Society*, 510, 5520-5534. doi:[10.1093/mnras/stab3760](https://doi.org/10.1093/mnras/stab3760).
- Snellman, J. E., Barrio, R. A., Kaski, K. K., **Käpylä, M. J.** (2022). Modelling the interplay between epidemics and regional socio-economics. *Physica A: Statistical Mechanics and its Applications*, 604, 127696. doi:[10.1016/j.physa.2022.127696](https://doi.org/10.1016/j.physa.2022.127696).
- Song, J.**, Liu, N., Lu, X.-Y., & Khomami, B. (2022). Direct numerical simulation of elastic turbulence in the Taylor–Couette flow: transition pathway and mechanistic insight. *Journal of Fluid Mechanics*, 949, A49. doi:[10.1017/jfm.2022.801](https://doi.org/10.1017/jfm.2022.801).
- Sowmya, K.**, **Lagg, A.**, **Solanki, S. K.**, & **Castellanos Durán, J. S.** (2022). Magnetized supersonic downflows in the chromosphere. A statistical study using the He I 10 830 Å lines. *Astronomy and Astrophysics*, 661, A122. doi:[10.1051/0004-6361/202142850](https://doi.org/10.1051/0004-6361/202142850).
- Sowmya, K.**, **Némec, N.-E.**, **Shapiro, A. I.**, Işık, E., **Krivova, N. A.**, & **Solanki, S. K.** (2022). Predictions of Astrometric Jitter for Sun-like Stars. III. Fast Rotators. *The Astrophysical Journal*, 934, 146. doi:[10.3847/1538-4357/ac79b3](https://doi.org/10.3847/1538-4357/ac79b3).
- Spanier, F., **Schreiner, C.**, Schlickeiser, R. (2022). Determining Pitch-Angle Diffusion Coefficients for Electrons in Whistler Turbulence. *Physics*, 4, 80-103. doi:[10.3390/physics4010008](https://doi.org/10.3390/physics4010008).
- Stangalini, M., Verth, G., Fedun, V., Aldhafeeri, A. A., Jess, D. B., **Jafarzadeh, S.**, Keys, P. H., Fleck, B., Teradas, J., Murabito, M., Ermolli, I., Soler, R., Giorgi, F., & MacBride, C. D. (2022). Large scale coherent

magnetohydrodynamic oscillations in a sunspot. *Nature Communications*, 13, 479. doi:[10.1038/s41467-022-28136-8](https://doi.org/10.1038/s41467-022-28136-8).

- Stejko, A. M., Kosovichev, A. G., Featherstone, N. A., Guerrero, G., Hindman, B. W., Matilsky, L. I., & **Warnecke, J.** (2022). Constraining Global Solar Models through Helioseismic Analysis. *The Astrophysical Journal*, 934, 161. doi:[10.3847/1538-4357/ac7a44](https://doi.org/10.3847/1538-4357/ac7a44).
- Steller, T., Burkhardt, C., Yang, C., **Kleine, T.** (2022). Nucleosynthetic zinc isotope anomalies reveal a dual origin of terrestrial volatiles. *Icarus*, 386, 115171. doi:[10.1016/j.icarus.2022.115171](https://doi.org/10.1016/j.icarus.2022.115171).
- Sun, Y. X., Hao, Y.X., **Roussos, E.**, Zong, Q. G., Liu, Y., Zhou, X. Z., Yue, C., **Krupp, N.** (2022). Zebra Stripe Patterns in Energetic Ion Spectra at Saturn. *Geophysical Research Letters*, 49, e2021GL097691. doi:[10.1029/2021GL097691](https://doi.org/10.1029/2021GL097691).
- Tayar, J., Moyano, F. D., Soares-Furtado, M., Escorza, A., Joyce, M., Martell, S. L., García, R. A., Breton, S. N., Mathis, S., Mathur, S., Delsanti, V., Kiefer, S., Reffert, S., Bowman, D. M., Van Reeth, T., Shetye, S., **Gehan, C.**, & Grunblatt, S. K. (2022). Spinning up the Surface: Evidence for Planetary Engulfment or Unexpected Angular Momentum Transport? *The Astrophysical Journal*, 940, 23. doi:[10.3847/1538-4357/ac9312](https://doi.org/10.3847/1538-4357/ac9312).
- Telloni, D., Zank, G. P., Sorriso-Valvo, L., D'Amicis, R., Panasenco, O., Susino, R., Bruno, R., Perrone, D., Adhikari, L., Liang, H., Nakanotani, M., Zhao, L., Hadid, L. Z., Sánchez-Cano, B., Verscharen, D., Velli, M., Grimani, C., Marino, R., Carbone, F., Mancuso, S., Biondo, R., Pagano, P., Reale, F., Bale, S. D., Kasper, J. C., Case, A. W., de Wit, T. D., Goetz, K., Harvey, P. R., Korreck, K. E., Larson, D., Livi, R., MacDowall, R. J., Malaspina, D. M., Pulupa, M., Stevens, M. L., Whittlesey, P., Romoli, M., Andretta, V., Deppo, V. D., Fineschi, S., Heinzl, P., Moses, J. D., Naletto, G., Nicolini, G., Spadaro, D., Stangalini, M., **Teriaca, L.**, Capobianco, G., Capuano, G. E., Casini, C., Casti, M., Chioetto, P., Corso, A. J., **De Leo, Y.**, Fabi, M., Frassati, F., Frassetto, F., Giordano, S., Guglielmino, S. L., Jerse, G., Landini, F., Liberatore, A., Magli, E., Massone, G., Messerotti, M., Pancrazzi, M., Pelizzo, M. G., Romano, P., Sasso, C., **Schühle, U.**, Slemmer, A., Straus, T., Uslenghi, M., Volpicelli, C. A., Zangrilli, L., Zuppella, P., Abbo, L., Auchère, F., **Aznar Cuadrado, R.**, Berlicki, A., Ciaravella, A., Lamy, P., Lanzafame, A., Malvezzi, M., Nicolosi, P., Nisticò, G., **Peter, H.**, **Solanki, S. K.**, Strachan, L., Tsinganos, K., Ventura, R., Vial, J.-C., **Woch, J.**, & Zimbardo, G. (2022). Linking Small-scale Solar Wind Properties with Large-scale Coronal Source Regions through Joint Parker Solar Probe-Metis/Solar Orbiter Observations. *The Astrophysical Journal*, 935, 112. doi:[10.3847/1538-4357/ac8103](https://doi.org/10.3847/1538-4357/ac8103).
- Telloni, D., Zank, G. P., Stangalini, M., Downs, C., Liang, H., Nakanotani, M., Andretta, V., Antonucci, E., Sorriso-Valvo, L., Adhikari, L., Zhao, L., Marino, R., Susino, R., Grimani, C., Fabi, M., D'Amicis, R., Perrone, D., Bruno, R., Carbone, F., Mancuso, S., Romoli, M., Deppo, V. D., Fineschi, S., Heinzl, P., Moses, J. D., Naletto, G., Nicolini, G., Spadaro, D., **Teriaca, L.**, Frassati, F., Jerse, G., Landini, F., Pancrazzi, M., Russano, G., Sasso, C., Biondo, R., Burtovoi, A., Capuano, G. E., Casini, C., Casti, M., Chioetto, P., **De Leo, Y.**, Giarrusso, M., Liberatore, A., Berghmans, D., Auchère, F., **Aznar Cuadrado, R.**, **Chitta, L. P.**, Harra, L., Kraaikamp, E., Long, D. M., **Mandal, S.**, Parenti, S., Pelouze, G., **Peter, H.**, Rodriguez, L., **Schühle, U.**, Schwanitz, C., Smith, P. J., Verbeeck, C., & Zhukov, A. N. (2022). Observation of a Magnetic Switchback in the Solar Corona. *The Astrophysical Journal*, 936, L25. doi:[10.3847/2041-8213/ac8104](https://doi.org/10.3847/2041-8213/ac8104).
- Toepfer, S., Oertel, I., Schiron, V., Narita, Y., **Glassmeier, K.-H.**, Heyner, D., Kolhey, P., & Motschmann, U. (2022). Reconstruction of Mercury's internal magnetic field beyond the octupole. *Annales Geophysicae*, 40, 91-105. doi:[10.5194/angeo-40-91-2022](https://doi.org/10.5194/angeo-40-91-2022).
- Usoskin, I. G., **Solanki, S. K.**, **Krivova, N.**, **Hofer, B.**, Kovaltsov, G. A., Wacker, L., Brehm, N., & Kromer, B. (2022). Solar cyclic activity over the last millennium reconstructed from annual 14C data (Corrigendum). *Astronomy and Astrophysics*, 664, C3. doi:[10.1051/0004-6361/202140711e](https://doi.org/10.1051/0004-6361/202140711e).

- Valori, G., Löschl, P.,** Stansby, D., Pariat, E., **Hirzberger, J.,** & Chen, F. (2022). Disambiguation of Vector Magnetograms by Stereoscopic Observations from the Solar Orbiter (SO)/Polarimetric and Helioseismic Imager (PHI) and the Solar Dynamic Observatory (SDO)/Helioseismic and Magnetic Imager (HMI). *Solar Physics*, 297, 12. doi:[10.1007/s11207-021-01942-x](https://doi.org/10.1007/s11207-021-01942-x).
- van Noort, M., Bischoff, J., Kramer, A., Solanki, S. K.,** & Kiselman, D. (2022). A prototype of a micro-lensed hyperspectral imager for solar observations. *Astronomy and Astrophysics*, 668, A149. doi:[10.1051/0004-6361/202243464](https://doi.org/10.1051/0004-6361/202243464).
- van Noort, M., & Chanumolu, A.** (2022). Characterization of the Microlensed Hyperspectral Imager prototype. *Astronomy and Astrophysics*, 668, A150. doi:[10.1051/0004-6361/202243465](https://doi.org/10.1051/0004-6361/202243465).
- van Noort, M., & Doerr, H.-P.** (2022). Data reduction and restoration of spectropolarimetric microlensed hyperspectral imager data. *Astronomy and Astrophysics*, 668, A151. doi:[10.1051/0004-6361/202243466](https://doi.org/10.1051/0004-6361/202243466).
- Vasilyev, V., Reinhold, T., Shapiro, A., Krivova, N.,** Usokin, I., Montet, B., **Solanki, S., & Gizon, L.** (2022). Superflares on solar-like stars. A new method for identifying the true flare sources in photometric surveys. *Astronomy and Astrophysics*, 668, A167. doi:[10.1051/0004-6361/202244422](https://doi.org/10.1051/0004-6361/202244422).
- Vasyliūnas, V. M.** (2022). How energy is conserved in Newtonian gravity. *American Journal of Physics*, 90, 416-424. doi:[10.1119/10.0009889](https://doi.org/10.1119/10.0009889).
- Vines, J. I., Jenkins, J. S., Berdiñas, Z., Soto, M. G., Díaz, M. R., Alves, D. R., Tuomi, M., Wittenmyer, R. A., de Leon, J. P., Peña, P., Lissauer, J. J., Ballard, S., Bedding, T., Bowler, B. P., Horner, J., Jones, H. R. A., Kane, S. R., Kielkopf, J., Plavchan, P., Shporer, A., Tinney, C. G., Zhang, H., Wright, D. J., Addison, B., Mengel, M. W., Okumura, J., & **Samadi-Ghadim, A.** (2022). A dense mini-Neptune orbiting the bright young star HD 18599. *Monthly Notices of the Royal Astronomical Society*, 518, 2627-2639. doi:[10.1093/mnras/stac2845](https://doi.org/10.1093/mnras/stac2845).
- Vissers, G. J. M., Danilovic, S., **Zhu, X.,** Leenaarts, J., Díaz Baso, C. J., da Silva Santos, J. M., de la Cruz Rodríguez, J., & **Wiegelmann, T.** (2022). Active region chromospheric magnetic fields. Observational inference versus magnetohydrostatic modelling. *Astronomy and Astrophysics*, 662, A88. doi:[10.1051/0004-6361/202142087](https://doi.org/10.1051/0004-6361/202142087).
- Vukadinović, D.,** Milić, I., & Atanacković, O. (2022). Investigating magnetic field inference from the spectral region around the Mg I b2 line using the weak-field approximation. *Astronomy and Astrophysics*, 664, A182. doi:[10.1051/0004-6361/202142015](https://doi.org/10.1051/0004-6361/202142015).
- Wagner, A., Asvestari, E., Temmer, M., **Heinemann, S. G.,** & Pomoell, J. (2022). Validation scheme for solar coronal models: Constraints from multi-perspective observations in EUV and white light. *Astronomy and Astrophysics*, 657, A117. doi:[10.1051/0004-6361/202141552](https://doi.org/10.1051/0004-6361/202141552).
- Wang, D., Jiang, H., Liu, S., **Zhu, X.,** & Sun, C. (2022). Effects of radius ratio on annular centrifugal Rayleigh-Bénard convection. *Journal of Fluid Mechanics*, 930: A19. doi:[10.1017/jfm.2021.889](https://doi.org/10.1017/jfm.2021.889).
- Wang, Y., **Cheng, X.,** Ren, Z., & Ding, M. (2022). Current-sheet Oscillations Caused by the Kelvin-Helmholtz Instability at the Loop Top of Solar Flares. *Astrophysical Journal Letters*, 931, L32. doi:[10.3847/2041-8213/ac715a](https://doi.org/10.3847/2041-8213/ac715a).
- Wang, Y., Guo, J., Li, G., **Roussos, E.,** & Zhao, J. (2022). Variation in Cosmic-Ray Intensity Lags Sunspot Number: Implications of Late Opening of Solar Magnetic Field. *The Astrophysical Journal*, 928, 157. doi:[10.3847/1538-4357/ac5896](https://doi.org/10.3847/1538-4357/ac5896).
- Wieczorek, M. A., Broquet, A., McLennan, S. M., Rivoldini, A., Golombek, M., Antonangeli, D., Beghein, C., Giardini, D., Gudkova, T., Gyalay, S., Johnson, C. L., **Joshi, R.,** Kim, D., King, S. D., Knapmeyer-Endrun, B., Lognonné, P., Michaut, C., Mittelholz, A., Nimmo, F., Ojha, L., Panning, M. P., Plesa, A.-C., Siegler, M. A., Smrekar, S. E., Spohn, T., & Banerdt, W. B. (2022). InSight Constraints on the Global Character of the Martian Crust. *Journal of Geophysical Research: Planets*, 127, e2022JE007298. doi:[10.1029/2022JE007298](https://doi.org/10.1029/2022JE007298).

- Willamo, T., Lehtinen, J. J., Hackman, T., **Käpylä, M. J.**, Kochukhov, O., **Jeffers, S. V.**, Korhonen, H., & Marsden, S. C. (2022). Zeeman-Doppler imaging of five young solar-type stars. *Astronomy and Astrophysics*, 659, A71. doi:[10.1051/0004-6361/202141649](https://doi.org/10.1051/0004-6361/202141649).
- Witzke, V.**, **Shapiro, A. I.**, **Kostogryz, N. M.**, **Cameron, R.**, Rackham, B. V., Seager, S., **Solanki, S. K.**, & Unruh, Y. C. (2022). Can 1D Radiative-equilibrium Models of Faculae Be Used for Calculating Contamination of Transmission Spectra? *The Astrophysical Journal*, 941, L35. doi:[10.3847/2041-8213/aca671](https://doi.org/10.3847/2041-8213/aca671).
- Woollands, R., Rossi, F., Stegun Vaquero, T., Sanchez Net, M., Bae, S. S., **Bickel, V.**, & Vander Hook, J. (2022). Maximizing Dust Devil Follow-Up Observations on Mars Using Cubesats and On-Board Scheduling. *Journal of the Astronautical Sciences*, 69, 918-940. doi:[10.1007/s40295-022-00317-z](https://doi.org/10.1007/s40295-022-00317-z).
- Wulff, P. N.**, **Dietrich, W.**, **Christensen, U. R.**, & **Wicht, J.** (2022). Zonal winds in the gas planets driven by convection above a stably stratified layer. *Monthly Notices of the Royal Astronomical Society*, 517, 5584-5593. doi:[10.1093/mnras/stac3045](https://doi.org/10.1093/mnras/stac3045).
- Yalcin, R. A., Lee, T. M., Kashanchi, G. N., **Markkanen, J.**, Martinez, R., Tolbert, S. H., & Pilon, L. (2022). *ACS Photonics*, 9, 3318–3332. doi:[10.1021/acsphotonics.2c00664](https://doi.org/10.1021/acsphotonics.2c00664).
- Yamada, T., Baron, P., Neary, L., Nishibori, T., **Larsson, R.**, Kuroda, T., Daerden, F., & Kasai, Y. (2022). Observation Capability of a Ground-Based Terahertz Radiometer for Vertical Profiles of Oxygen and Water Abundances in Martian Atmosphere. *IEEE Transactions on Geoscience and Remote Sensing*, 60, 3152271. doi:[10.1109/TGRS.2022.3152271](https://doi.org/10.1109/TGRS.2022.3152271).
- Yao, X.**, **Muñoz, P. A.**, & **Büchner, J.** (2022). Non-thermal electron velocity distribution functions due to 3D kinetic magnetic reconnection for solar coronal plasma conditions. *Physics of Plasmas*, 29, 022104. doi:[10.1063/5.0061151](https://doi.org/10.1063/5.0061151).
- Yao, X.**, **Muñoz, P. A.**, & **Büchner, J.** Benacek, J., Liu, S., & **Zhou, X.** (2022). Wave Emission of Nonthermal Electron Beams Generated by Magnetic Reconnection. *The Astrophysical Journal*, 933, 219. doi:[10.3847/1538-4357/ac7141](https://doi.org/10.3847/1538-4357/ac7141).
- Yi, S., Choe, G. S., Cho, K. S., **Solanki, S. K.**, & **Büchner, J.** (2022). Reconstruction of Coronal Magnetic Fields Using a Poloidal–Toroidal Representation. *The Astrophysical Journal*, 937, 11. doi:[10.3847/1538-4357/ac8b0e](https://doi.org/10.3847/1538-4357/ac8b0e).
- Yiğit, E., Dhadly, M., **Medvedev, A. S.**, Harding, B. J., Englert, C. R., Wu, Q., & Immel, T. J. (2022). Characterization of the Thermospheric Mean Winds and Circulation During Solstice Using ICON/MIGHTI Observations. *Journal of Geophysical Research (Space Physics)*, 127, e2022JA030851. doi:[10.1029/2022JA030851](https://doi.org/10.1029/2022JA030851).
- Yiğit, E., Lühr, H., **Medvedev, A. S.**, Ward, W., Elias, A. G., Chau, J. L., Miyoshi, Y., Jain, S., & Liu, L. (2022). Editorial: Coupling Processes in Terrestrial and Planetary Atmospheres. *Frontiers in Astronomy and Space Sciences*, 9, 857766. doi:[10.3389/fspas.2022.857766](https://doi.org/10.3389/fspas.2022.857766).
- Ying, B., Feng, L., **Inhester, B.**, Mierla, M., Gan, W., Lu, L., & Li, S. (2022). Three-dimensional analyses of an aspherical coronal mass ejection and its driven shock. *Astronomy and Astrophysics*, 660, A23. doi:[10.1051/0004-6361/202142797](https://doi.org/10.1051/0004-6361/202142797).
- Zhu, X., & **Wiegmann, T.** (2022). Toward a fast and consistent approach to modeling solar magnetic fields in multiple layers. *Astronomy and Astrophysics*, 658, A37. doi:[10.1051/0004-6361/202141505](https://doi.org/10.1051/0004-6361/202141505).
- Zhu, X., Neukrich, T., & **Wiegmann, T.** (2022). Magnetohydrostatic modeling of the solar atmosphere. *Science in China E: Technological Sciences*, 65, 1710-1726. doi:[10.1007/s11431-022-2047-8](https://doi.org/10.1007/s11431-022-2047-8).