

Alessandro Bemporad
PUBLICATIONS
(April 2019)

During his career he published a total of 58 referee papers, 25 conference proceedings, 26 technical papers, 12 technical reports, and 11 outreach papers listed below.

• **REFEREED PUBLICATIONS (H index = 19 – Google Scholar)**

1. “3D reconstruction of CME-driven shock–streamer interaction from radio observations: a different take on the diagnostics of coronal magnetic fields”, Mancuso S., Frassati F., Barghini D., **Bemporad A.**, A&A, (in press), 2019
2. “Comprehensive Analysis of the Formation of a Shock Wave Associated with a Coronal Mass Ejection”, Frassati F., Susino R., Mancuso S., **Bemporad A.**, ApJ, 871, Issue 2, 2019
3. “Measuring the electron temperatures of coronal mass ejections with future space-based multi-channel coronagraphs: a numerical test”, **Bemporad A.**, Pagano P., Giordano S., A&A, 619, id.A25, 2018
4. “Evolution of the Solar Wind Speed with Heliocentric Distance and Solar Cycle. Surprises from Ulysses and Unexpectedness from Observations of the Solar Corona”, Khabarova O. V., Obridko V. N., Kislov R. A., Malova H. V., **Bemporad A.**, Zelenyi L. M., Kuznetsov V. D., Kharshiladze A. F., Plasma Physics Reports, Volume 44, Issue 9, 2018
5. “Hot prominence detected in the core of a coronal mass ejection. III. Plasma filling factor from UVCS Lyman- α and Lyman- β observations”, Susino R., **Bemporad A.**, Jejčić S., Heinzel P., A&A, 617, id.A21, 2018
6. “Mapping the solar wind HI outflow velocity in the inner heliosphere by coronagraphic ultraviolet and visible-light observations”, Dolei S., Susino R., Sasso C., Bemporad A., and 17 coauthors, A&A, 612, id.A84, 2018
7. “Visibility of Prominences Using the He I D₃ Line Filter on the PROBA-3/ASPIICS Coronagraph”, Jejčić S., Heinzel P., Labrosse N., Zhukov A. N., **Bemporad A.**, Fineschi S., Gunár S., Sol. Phys., Volume 293, Issue 2, article id. 33, 2018
8. “Comprehensive Analysis of the Geoeffective Solar Event of 21 June 2015: Effects on the Magnetosphere, Plasmasphere, and Ionosphere Systems”, Piersanti M., Alberti T., **Bemporad A.**, et al., Sol. Phys., 292, 169, 2017
9. “Hot prominence detected in the core of a coronal mass ejection. II. Analysis of the C III line detected by SOHO/UVCS”, Jejčić S., Susino R., Heinzel P., Dzifčáková, E., **Bemporad A.**, Anzer, U., ApJ, 607, 80, 2017
10. “Constraining the pass-band of future space-based coronagraphs for observations of solar eruptions in the FeXIV 530.3 nm “green line””, **Bemporad A.**, Pagano P., Giordano S., Fineschi S., Exp. Astron., 44, 83, 2017
11. “Study of the early phase of a Coronal Mass Ejection driven shock in EUV images”, Frassati F., Susino R., Mancuso S., **Bemporad A.**, Astroph. & Sp. Sci., 362, 194, 2017
12. “Exploring the Inner Acceleration Region of Solar Wind: A Study Based on Coronagraphic UV and Visible Light Data”, **Bemporad A.**, ApJ, 846, 86, 2017
13. “Determination of Coronal Mass Ejection Physical Parameters from a Combination of Polarized Visible Light and UV Ly α Observations”, Susino R., & **Bemporad A.**, ApJ, 830 (2), 58, 2016
14. “Measuring coronal magnetic fields with remote sensing observations of shock waves”, **Bemporad A.**, Susino R., Frassati F., Fineschi S., Frontiers in Astronomy and Space Sciences, Vol- 3, id.17, 2016
15. “Hot prominence detected in the core of a coronal mass ejection: Analysis of SOHO/UVCS L α and SOHO/LASCO visible-light observations”, Heinzel P., Susino R., Jejčić S., **Bemporad A.**, Anzer U., A&A, 589, id.A128, 2016
16. “Study of sungrazing comets with space-based coronagraphs: New possibilities offered by METIS on board Solar Orbiter”, **Bemporad A.**, et al., Adv. Sp. Res., 56 (10), 2288, 2015
17. “Physical Conditions of Coronal Plasma at the Transit of a Shock Driven by a Coronal Mass Ejection”, Susino R., **Bemporad A.**, Mancuso S., ApJ, 812, 119, 2015
18. “Future capabilities of CME polarimetric 3D reconstructions with the METIS instrument: A numerical test”, Pagano P., **Bemporad A.**, Mackay D. H., A&A, 582, A72, 2015

19. “Plasma Physical Parameters along CME-driven Shocks. II. Observation-Simulation Comparison”, Bacchini F., Susino R., **Bemporad A.**, Lapenta, G., ApJ, 809, 58, 2015
20. “Physical properties of solar polar jets. A statistical study with Hinode XRT data”, Parashiv A.R., **Bemporad A.**, Sterling, A.C., A&A, 579, A96, 2015
21. “Uncertainties in polarimetric 3D reconstructions of coronal mass ejections”, **Bemporad A.** & Pagano P., A&A, 576, A93, 2015
22. “Three-dimensional Stereoscopic Analysis of a Coronal Mass Ejection and Comparison with UV Spectroscopic Data”, Susino R., **Bemporad A.**, Dolei S., ApJ, 790, 25, 2014
23. “Plasma Physical Parameters along Coronal-mass-ejection-driven Shocks. I. Ultraviolet and White-light Observations”, **Bemporad, A.**; Susino, R.; Lapenta, G., ApJ, 784, 102, 2014
24. “Measurements with STEREO/COR1 data of drag forces acting on small-scale blobs falling in the intermediate corona”, Dolei S., **Bemporad A.**, Spadaro D., A&A, 562, 74, 2014
25. “Characteristics of polar coronal hole jets”, Chandrashekhara K., **Bemporad A.**, Banerjee D., Gupta G. R., Teriaca L., A&A, 561, id.A104, 2014
26. “Plasma Heating in a Post Eruption Current Sheet: A Case Study Based on Ultraviolet, Soft, and Hard X-Ray Data”, Susino R., **Bemporad A.**, & Krucker S., ApJ, 777 (2), article id. 93, 2013
27. “Study of a Coronal Mass Ejection with SOHO/UVCS and STEREO data”, Susino R., **Bemporad A.**, Dolei S., Vourlidas A., Adv. Space Res., 52 (5), 957, 2013
28. “Super- and sub-critical regions in shocks driven by radio-loud and radio-quiet CMEs”, **Bemporad A.** & Mancuso S., Journ. of Adv. Res., 4 (3), 287, 2013
29. “SWIFF: Space Weather Integrated Forecasting Framework”, Lapenta G., Pierrard V., Keppens R., Markidis S., Poedts S., Šebek O., Trávníček P.M., Henri P., Califano F., Pegoraro F., Faganello M., Olshevsky V., Restante A., Nordlund A., Frederiksen J.T., Mackay D.H., Parnell C.E., **Bemporad A.**, Susino R. and Borremans K., Journal of Space Weather and Space Climate, 3, id.A05, 2013
30. “Study of Multiple Coronal Mass Ejections at Solar Minimum Conditions”, **Bemporad A.**, Zuccarello F.P., Jacobs C., Mierla M., Poedts S., Sol. Phys., 281, 223, 2012.
31. “Spectroscopic Signature of Alfvén Waves Damping in a Polar Coronal Hole up to 0.4 Solar Radii”, **Bemporad A.** & Abbo L., ApJ, 751, 110, 2012.
32. “Solar magnetism eXplorer (SolmeX). Exploring the magnetic field in the upper atmosphere of our closest star”, Hardi P., Abbo L., Andretta V., Auchère F., **Bemporad A.**, and 34 coauthors, Experimental Astronomy, 33, 271, 2012.
33. “The Role of Streamers in the Deflection of Coronal Mass Ejections: Comparison between STEREO Three-dimensional Reconstructions and Numerical Simulations”, Zuccarello F. P., **Bemporad A.**, Jacobs C., Mierla M., Poedts S., Zuccarello, F., ApJ, 744, 66, 2012.
34. “Identification of Super- and Subcritical Regions in Shocks Driven by Coronal Mass Ejections”, **Bemporad A.** & Mancuso S., ApJ, 739, L64, 2012.
35. “Rotation of an erupting filament observed by STEREO EUVI and COR1 instruments”, **Bemporad A.**, Mierla M., Tripathi D., A&A, 531, id.A147, 2011.
36. “Prominence 3D reconstruction in the STEREO era: A review”, **Bemporad A.**, Journ. of Atmosph. & Sol.-Terr. Phys., 73, 1117, 2011.
37. “Side Magnetic Reconnections Induced by Coronal Mass Ejections: Observations and Simulations”, **Bemporad A.**, Soenen A., Jacobs C., Landini F., Poedts, S., ApJ, 718, 251, 1010.
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40. “Multispacecraft observations of a Prominence Eruption”, **Bemporad A.**, Del Zanna G., Andretta V., Poletto G., Magri M., Ann. Geophys., 27, 3841, 2009.
41. “The role of lateral magnetic reconnection in solar eruptive events”, Soenen A., **Bemporad A.**, Jacobs C., Poedts S., Ann. Geophys., 27, 3941, 2009.
42. “Interpretation of the SOHO/UVCS Observations of two CME-driven Shocks”, Mancuso S. & **Bemporad A.**, Adv. Space Res., 44, 451, 2009.
43. “Morphology and Density of post-CME Current Sheets”, Vršnak B., Poletto G., Vujčić E., Vourlidas A., Ko Y.-K., Raymond J. C., Ciaravella A., Žic T., Webb D. F., **Bemporad A.**, Landini F., Schettino G., Jacobs C., Suess S. T., A&A, 499, 905, 2009.
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47. "Low-frequency Lyman- α power spectra observed by UVCS in a polar coronal hole", **Bemporad A.**, Matthaeus W. H., Poletto G., *ApJL*, 677, 137, 2008.
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50. "A review of SOHO/UVCS observations of sungrazing comets", **Bemporad A.**, Poletto G., Raymond J. C., Giordano S., *Planetary & Space Sc.*, 55, 1021, 2007.
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52. "Evidence for pyroxene dust grains in C/2001 C2 sungrazing comet", **Bemporad A.**, Poletto G., Raymond J.C., *Advances in Space Research*, Vol. 38, Issue 9, pp. 1972-1975, 2006.
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54. "A new variety of CMEs: streamer puffs", **Bemporad A.**, Moore R. T., Sterling A. C., Poletto G., *ApJL*, v635, 189, 2005.
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56. "Evidence for the same hot plasma after CME events in both remote and in situ observations", Poletto G., Suess S., **Bemporad A.**, Zurbuchen T., Ko Y. K., *ApJL*, v613, L173, 2004.
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- **CONFERENCE PROCEEDINGS**

1. "Temporal Characterization of the Remote Sensors Response to Radiation Damage in L2", De March R., Busonero Deborah; Messineo, R., **Bemporad, A.**, and 4 coauthors, *Proceedings of the 2016 conference on Big Data from Space BiDS16 Santa Cruz de Tenerife Spain, 15-17 March 2016.*
2. "A decade of coronagraphic and spectroscopic studies of CME-driven shocks", Vourlidas A. & **Bemporad A.**, *Proc. Of the 10th AIP Conference*, 1436, 279, 2012.
3. "The solar orbiter METIS coronagraph data signal processing chain", Pancrazzi M., Focardi M., Uslenghi M., Nicolini G., Magli E., Landini F., Romoli M., **Bemporad A.**, and 6 coauthors, *Proceedings of the SPIE*, 8167, 81672C, 2011.
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8. "An erupting filament and associated CME observed by Hinode, STEREO and SOHO", **Bemporad A.**, Del Zanna G., Andretta V., Magri M., Poletto G., Ko Y.-K., *Proceedings of the "2nd Hinode Science Meeting"*, Boulder (CO), September 29 – October 3, 2009.
9. "Multi-instruments campaigns to observe the off-limb corona", Del Zanna G., Andretta V., Poletto G., Teriaca L., Ko Y.-K., Mason H.E., Vourlidas A., **Bemporad A.**, Magri M., *Proceedings of the "2nd Hinode Science Meeting"*, Boulder (CO), September 29 – October 3, 2009.
10. "Comparison of Large-Scale Density Fluctuations in the Outer Corona and in the Inner Heliosphere for Both Fast and Slow Solar Wind", Telloni, D., Bruno, R., Antonucci, E., D'Amicis, R., **Bemporad, A.**, *Proceedings of the "AGU Fall Meeting 2008"*, San Francisco, 15 – 19 December, 2008.

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12. "Interpretation of the UVCS/SoHO observations of the 2002 March 22 and July 23 CME-driven shocks", Mancuso S. & **Bemporad A.**, Proceedings of the "37th COSPAR Meeting", Montréal, 13 – 20 July, 2008.
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14. "Results from recent studies of CMEs with SOHO/UVCS", **Bemporad A.**, Poletto G., Proceedings of the "LI Congresso della SAIT", Firenze (Italy), 2007.
15. "SOHO/UVCS and Mauna Loa Mark IV observations of a slow CME below 2 solar radii", **Bemporad A.**, Poletto G., Raymond J. C., Proceedings of the "SOHO 17" Meeting, Giardini Naxos (Italy), Edited by H. Lacoste and L. Ouweland. ESA SP-617, Published on CDROM, p.24.1, 2006.
16. "Structure of a slow CME in the low corona", **Bemporad A.**, Poletto G., Raymond J. C., Proceedings of the "IV Convegno della Ricerca Italiana in Fisica Solare", Trieste, 2005.
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18. "Early Evolution of a CME from White Light and UV Observations", **Bemporad A.**, Poletto G., Raymond J.C., Proceedings of the Solar Wind 11 / SOHO 16, "Connecting Sun and Heliosphere" Conference (ESA SP-592). 12 - 17 June 2005 Whistler, Canada. Editors: B. Fleck, T.H. Zurbuchen, H. Lacoste. Published by ESA Publications Division, ESTEC, Postbus 299, 2200 AG Noordwijk, The Netherlands, p. 711, 2005.
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25. "Spatial and temporal behavior of the oxygen abundance in a streamer complex", **Bemporad A.**, Poletto G., Romoli M., In: Solar variability: from core to outer frontiers., ESA SP-506, p.545-548, 2002.

- **TECHNICAL PAPERS**

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2. "Formation flying metrology system for the ESA-PROBA3 mission: the Shadow Positioning Sensors (SPS)", Loreggia, D.; Fineschi, S.; **Bemporad, A.**, and 22 coauthors, SPIE, 10695, id. 1069503, 2018
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4. "Test plan for the PROBA3/ASPIICS scaled model measurement campaign", Landini F., Baccani, C., Vives S., and 14 coauthors, SPIE, 10397, id. 103971C, 2017
5. "An improved version of the Shadow Position Sensor readout electronics on-board the ESA PROBA-3 Mission", Noce, V.; Focardi, M.; Buckley, S.; **Bemporad, A.**, and 12 coauthors, SPIE, 10397, id. 103971B, 2017

6. “The satellite formation flying in lab: PROBA-3/ASPIICS metrology subsystems test-bed”, Capobianco, G., Loreggia, D., Fineschi, S., Focardi, M., **Bemporad, A.**, and 17 coauthors, SPIE, 9904, id. 99046E, 2016
7. “Characterization of the ASPIICS/OPSE metrology sub-system and PSF centroiding procedure”, Loreggia, D., Fineschi, S., Capobianco, G., **Bemporad, A.**, and 15 coauthors, SPIE, 9904, id. 99045O, 2016
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10. “OPSE metrology system onboard of the PROBA3 mission of ESA”, Loreggia, D., Bemporad, A., Capobianco, G., and 13 coauthors, SPIE, 9604, id. 96040F, 2015
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15. “Polarimetric calibrations and astronomical polarimetry in the V-band with Solar Orbiter/METIS instrument”, Capobianco, G., Fineschi, S., Focardi, M., Andretta, V., Massone, G., **Bemporad, A.**, and 6 coauthors, SPIE, 9143, id. 91434V, 2014
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21. “Novel Space Coronagraphs: METIS, a flexible optical design for multi-wavelength imaging and spectrography”, Fineschi S., Antonucci E., Romoli M., **Bemporad A.**, and 22 coauthors, SPIE, 8862, 88620G, 2013.
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- **TECHNICAL REPORTS** (available on-line at <http://www.oato.inaf.it/biblioteca/pdf/RappTech.html>)

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- **OUTREACH PUBLICATIONS**

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