

Alessandro Bemporad  
**PUBLICATIONS**  
(January 2014)

• **REFEREED PUBLICATIONS (H index = 11)**

- 1) “Characteristics of polar coronal hole jets”, Chandrashekhar K., **Bemporad A.**, Banerjee D., Gupta G. R., Teriaca L., *A&A*, 561, id.A104, 2014
- 2) “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
- 3) “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
- 4) “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
- 5) “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
- 6) “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.
- 7) “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.
- 8) “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.
- 9) “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.
- 10) “Identification of Super- and Subcritical Regions in Shocks Driven by Coronal Mass Ejections”, **Bemporad A.** & Mancuso S., *ApJ*, 739, L64, 2012.
- 11) “Rotation of an erupting filament observed by STEREO EUVI and COR1 instruments”, **Bemporad A.**, Mierla M., Tripathi D., *A&A*, 531, id.A147, 2011.
- 12) “Prominence 3D reconstruction in the STEREO era: A review”, **Bemporad A.**, *Journ. of Atmosph. & Sol.-Terr. Phys.*, 73, 1117, 2011.
- 13) “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.
- 14) “First Complete Determination of Plasma Physical Parameters Across a Coronal Mass Ejection-driven Shock”, **Bemporad A.**, & Mancuso S., *ApJ*, 720, 130, 2010.
- 15) “Stereoscopic Reconstruction from STEREO/EUV Imagers Data of the Three-dimensional Shape and Expansion of an Erupting Prominence”, **Bemporad A.**, *ApJ*, 701, 298, 2009.
- 16) “Multispacecraft observations of a Prominence Eruption”, **Bemporad A.**, Del Zanna G., Andretta V., Poletto G., Magri M., *Ann. Geophys.*, 27, 3841, 2009.
- 17) “The role of lateral magnetic reconnection in solar eruptive events”, Soenen A., **Bemporad A.**, Jacobs C., Poedts S., *Ann. Geophys.*, 27, 3941, 2009.
- 18) “Interpretation of the SOHO/UVCS Observations of two CME-driven Shocks”, Mancuso S. & **Bemporad A.**, *Adv. Space Res.*, 44, 451, 2009.
- 19) “Morphology and Density of post-CME Current Sheets”, Vršnak B., Poletto G., Vujić 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.
- 20) “Spectroscopic detection of turbulence in post-CME Current Sheets”, **Bemporad A.**, *ApJ*, 689, 572, 2008.
- 21) “Reconnection in a slow Coronal Mass Ejection”, Poletto G., **Bemporad A.**, Landini F., Romoli M., *Ann. Geoph.*, 26, 3067, 2008.

- 22) "Magnetic Reconnection processes induced by a CME expansion", **Bemporad A.**, Poletto G., Landini F., Romoli M., *Ann. Geoph.*, 26, 10, 2008.
- 23) "Low-frequency Lyman- $\alpha$  power spectra observed by UVCS in a polar coronal hole", **Bemporad A.**, Matthaeus W. H., Poletto G., *ApJL*, 677, 137, 2008.
- 24) "A Comprehensive Study of the Initiation and Early Evolution of a CME from UV and White Light Data", **Bemporad A.**, Raymond J. C., Poletto G., Romoli M., *ApJ*, 655, 576, 2007.
- 25) "Density and magnetic field signatures of interplanetary 1/f noise", Matthaeus W. H., Breech B., Dmitruk P., **Bemporad A.**, Poletto G., Velli M., Romoli M., *ApJL*, 657, 121, 2007.
- 26) "A review of SOHO/UVCS observations of sungrazing comets", **Bemporad A.**, Poletto G., Raymond J. C., Giordano S., *Planetary & Space Sc.*, 55, 1021, 2007.
- 27) "Current sheet evolution in the aftermath of a CME event", **Bemporad A.**, Poletto G., Suess S.T., Ko Y.-K., Schwadron N.A., Elliott H.A., Raymond J.C., *ApJ*, 638, 1110, 2006.
- 28) "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.
- 29) "Lyman- $\alpha$  observations of sungrazing comets with the SOHO/UVCS instruments", **Bemporad A.**, Poletto G., Raymond J. C., Giordano S., *Adv. in Geosc.*, vol.3 "Planetary Science", 171, 2005.
- 30) "A new variety of CMEs: streamer puffs", **Bemporad A.**, Moore R. T., Sterling A. C., Poletto G., *ApJL*, v635, 189, 2005.
- 31) "UVCS observation of sungrazer C/2001 C2: possible comet fragmentation and plasma-dust interactions", **Bemporad A.**, Poletto G., Raymond J. C., Biasecker D. A., Ko Y. K., P. Lamy, Marsden B., Uzzo M., *ApJ*, v620, 2005.
- 32) "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.
- 33) "A slow streamer blowout at the Sun and Ulysses", Suess S. T., **Bemporad A.**, Poletto G., *GRL*, v. 31, Issue 5, CiteID L05801, 2004.
- 34) "Temporal evolution of a Streamer Complex: Coronal and in situ Plasma Parameters", **Bemporad A.**, Poletto G., Suess S.T., Ko Y.-K., Parenti S., Riley P., Romoli M., Zurbuchen T.Z., *ApJ*, v593, 2003.

## • CONFERENCE PROCEEDINGS

- 1) "A decade of coronagraphic and spectroscopic studies of CME-driven shocks", Vourlidas A. & **Bemporad A.**, *Proc. Of the 10<sup>th</sup> AIP Conferenc*, 1436, 279, 2012.
- 2) "Reconnection in the initiation phase of Coronal Mass Ejections", Soenen. A. Jacobs, C., Poedts S., **Bemporad A.**, Selwa M., Parnell C., *EGU General Assembly 2-7 May 2010*, 14462, 2010.
- 3) "Multi-wavelength study of a CME-driven shock at 4.1 solar radii", **Bemporad A.** & Mancuso S., *Proc. of the 38<sup>th</sup> COSPAR Scientific Assembly*, 18-15 July 2010, 3, 2010.
- 4) "Alfvén waves in a polar coronal hole from HINODE/EIS off limb observations", **Bemporad A.** & Abbo L., *Proc. of the 38<sup>th</sup> COSPAR Scientific Assembly*, 18-15 July 2010, 3, 2010.
- 5) "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 "2<sup>nd</sup> Hinode Science Meeting"*, Boulder (CO), September 29 – October 3, 2009.
- 6) "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 "2<sup>nd</sup> Hinode Science Meeting"*, Boulder (CO), September 29 – October 3, 2009.
- 7) "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.
- 8) "A study of Lyman-alpha power spectra observed by UVCS over a polar coronal hole", **Bemporad A.**, Matthaeus, W.H., Poletto G., *Proceedings of the "37<sup>th</sup> COSPAR Meeting"*, Montréal, 13 – 20 July, 2008.
- 9) "Interpretation of the UVCS/SoHO observations of the 2002 March 22 and July 23 CME-driven shocks", Mancuso S. & **Bemporad A.**, *Proceedings of the "37<sup>th</sup> COSPAR Meeting"*, Montréal, 13 – 20 July, 2008.

- 10) "Are CMEs globally affecting the corona by reconnection occurring on different scales?", **Bemporad A.**, Proceedings of the "37<sup>th</sup> COSPAR Meeting", Montréal, 13 – 20 July, 2008.
- 11) "Results from recent studies of CMEs with SOHO/UVCS", **Bemporad A.**, Poletto G., Proceedings of the "LI Congresso della SAIIT", Firenze (Italy), 2007.
- 12) "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. Ouwehand. ESA SP-617, Published on CDROM, p.24.1, 2006.
- 13) "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.
- 14) "Current Sheet Evolution in the Aftermath of a CME", **Bemporad A.**, Poletto G., Sess S.T., et al., Proceedings of the Solar Wind 11 / SOHO 16, "Connecting Sun and Heliosphere" Conference (ESA SP-592). 12 - 17 June 2005 Whistler, Canada. Edited by B. Fleck, T. H. Zurbuchen and H. Lacoste. Published by ESA Publications Division, ESTEC, Postbus 299, 2200 AG Noordwijk, The Netherlands, p.715, 2005.
- 15) "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.
- 16) "Recursive narrow CMEs within a coronal streamer", **Bemporad A.**, Sterling A. C., Moore R. T., Poletto G., Proceedings del "11<sup>th</sup> Solar Physics Meeting", Editors: D. Danesy, S. Poedts, A. De Groof and J. Andries. Published on CDROM., p.153, 2005.
- 17) "Post-CME events: cool jets and current sheet evolution", **Bemporad A.**, Poletto G., Suess S.T., IAU 226 Symposium Proceedings, Cambridge University Press, pp. 77-82, 2005.
- 18) "Evidence for Pyroxene dust grains in C/2001 C2 sungrazing comet", **Bemporad A.**, Poletto G., Raymond J. C., Proceedings del "XXXV Cospar Meeting", Paris, p.3526, 2005 .
- 19) "A Detection of the Same Hot Plasma in the Corona - During a CME - and Later at Ulysses", Suess, S., Poletto, G., **Bemporad, A.**, AGU Fall Meeting 2004 Proceedings (Abstract num. SH21B-0402), 2004.
- 20) "Preliminary analysis of a CME observed by SOHO and Ulysses experiments", **Bemporad A.**, Poletto G., Romoli M., Suess S.T., ISCS 2003 Symposium, ESA Publications Division, ISBN 92-9092-845-X, pp. 567 - 570, 2003.
- 21) "Physical parameters of coronal streamers near the maximum phase of solar cycle", **Bemporad A.**, Poletto G., Romoli M., Mem. S.A.It., v.74, p. 721, 2003.
- 22) "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

- 1) "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, Proceedings of the SPIE, 8862, 88620G, 2013.
- 2) "MESSI, the METIS instrument Software Simulator", Nicolini G., Andretta V., Abbo L., Antonucci E., **Bemporad A.**, and 12 coauthors, Proceedings of the SPIE, 8449, 84491L, 2012.
- 3) "Multi Element Telescope for Imaging and Spectroscopy (METIS) coronagraph for the Solar Orbiter mission", Antonucci E., Fineschi S., Naletto G., Romoli M., Spadaro D., Nicolini G., Nicolosi P., Abbo L., Andretta V., **Bemporad A.**, and 24 coauthors, Proceedings of the SPIE, 8443, 844309, 2012.
- 4) "METIS: a novel coronagraph design for the Solar Orbiter mission", Fineschi S., Antonucci E., Naletto G., Romoli M., Spadaro D., Nicolini G., Abbo L., Andretta V., **Bemporad A.**, and 18 coauthors, Proceedings of the SPIE, 8443, 84433H, 2012.
- 5) "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.
- 6) "Liquid crystals Lyot filter for solar coronagraphy", Fineschi S., Capobianco G., Massone G., Baur T., **Bemporad A.**, Abbo L., Zangrilli L., Dadeppo V., Proceedings of the SPIE, 8148, 814808, 2011.

- **TECHNICAL REPORTS**

(available on-line at <http://www.oato.inaf.it/biblioteca/biblioteca/index.php/it/pubblicazioni-oato/techrep>)

- 1) “Coronagraphic WL and UV observations of CMEs: requirements for the development of future instrumentation”, **Bemporad A.**, Tec. Rep. n. 165, 2013.
- 2) “Comparative evaluation of METIS image compression algorithms”, **Bemporad A.**, Tec. Rep. n. 157, 2012.
- 3) “Total Solar Eclipse of July 11th, 2010: Data Log And Raw Images”, Fineschi, S., Massone G., Capobianco G., Benna C., Calcidese P., Romoli M., Casetti L., Abbo L., **Bemporad A.**, Tec. Rep. n. 144, 2010.
- 4) “Estimate of the FeXIV 15303 coronal “green line” radiances for the PROBA-3 ASPIICS coronagraph”, **Bemporad A.**, Tec. Rep. n. 134, 2010.
- 5) “Simulation of H Lyman-alpha images for the METIS coronagraph”, **Bemporad A.**, Tec. Rep. n. 132, 2010.
- 6) “The orbit of Solar Orbiter: characterization and implications for the METIS coronagraph (part I)”, **Bemporad A.**, Tec. Rep. n. 125, 2009.
- 7) “Uncertainties in the estimate of SiXI  $\lambda$ 303.32 and HeII  $\lambda$ 303.78 lines contribution to the coronal emission observed by the SCORE coronagraph”, **Bemporad A.**, Tec. Rep. n. 126, 2009.

- **OUTREACH PUBLICATIONS**

- 1) “Alessandro Bemporad, una grande passione per la nostra stella”, **Bemporad A.**, & Razzano M., *Le Stelle*, vol. 103, pp. 44-47, 2012.
- 2) “Il mistero delle tempeste solari”, **Bemporad A.**, *Darwin*, vol. 34, pp. 38-45, 2009.
- 3) “C'è qualcosa che non va sul Sole? - un'inchiesta sull'affidabilità della nostra stella come stabile fonte di energia (PARTE II)”, Andretta V., **Bemporad A.**, Berrilli F., Cauzzi G., Elidoro C., Gianpapa M., Hathaway D.H., Messerotti M., Oliviero M., Pasachoff J.M., Ramelli R., Zuccarello F., *Coelum*, vol. 124, pp. 28-39, 2009.
- 4) “C'è qualcosa che non va sul Sole? - un'inchiesta sull'affidabilità della nostra stella come stabile fonte di energia (PARTE I)”, Andretta V., **Bemporad A.**, Berrilli F., Cauzzi G., Elidoro C., Hathaway D.H., Oliviero M., Pasachoff J.M., Ramelli R., Zuccarello F., *Coelum*, vol. 123, pp. 26-40, 2008.

**Alessandro Bemporad**