

PUBLICATIONS for PASCAL SAINT-HILAIRE

Publication summary:

- 41 articles in refereed journals, including 15 as first author, and 4 book review chapters.
- Topics most frequently covered: solar (flare) observations at X-rays and radio wavelengths, some hardware, and some “first of their kind” observations.

List of peer-reviewed publications:

41. A Modeling Investigation for Solar Flare X-Ray Stereoscopy with Solar Orbiter/STIX and Earth Orbiting Missions

Natasha Jeffrey et al.

The Astrophysical Journal **964**, 145 (2024)

40. Observations of Thomson Scattering from a Loop-prominence System

Martínez Oliveros, Juan Carlos; Guevara Gómez, Juan Camilo; Saint-Hilaire, Pascal; Hudson, Hugh; Krucker, Säm

The Astrophysical Journal, Volume **936**, Issue 1, id.56, 10 pp. (2022)

39. Grid-based imaging of X-rays and gamma-rays with high angular resolution

Pascal Saint-Hilaire, Albert Y. Shih, Gordon J. Hurford, Brian Dennis,

Book chapter of the “Handbook of X-ray and Gamma-Ray Astrophysics” (2022)

38. Ramaty High Energy Spectroscopic Imager (RHESSI)

Brian Dennis, Albert Y. Shih, Gordon J. Hurford, Pascal Saint-Hilaire

Book chapter of the “Handbook of X-ray and Gamma-Ray Astrophysics” (2022)

37. Thomson scattering in the low corona in the presence of sunspots

Pascal Saint-Hilaire, Juan-Carlos Martinez Oliveros, Hugh S. Hudson

ApJ, **293**, 276 (2021)

36. Precise Formation-Flying Telescope in Target-Centric Orbit: the Solar Case

Pascal Saint-Hilaire & Jeffrey E. Marchese

The Journal of Astronautical Sciences, **67**, 1391-1411 (2020)

35. Probing solar flare electron acceleration with prospective X-ray polarimetry missions

Jeffrey, Natasha; Kontar, Eduard; Saint-Hilaire, Pascal

Astronomy & Astrophysics, **642**, 79 (2020)

34. Statistical Study of Hard X-Ray Spectral Breaks in Solar Flares

Alaoui, Meriem; Krucker, Säm; Saint-Hilaire, Pascal

Solar Physics, **294**, 105A (2019)

33. Hard X-ray Emission from Partially Occulted Solar Flares: RHESSI Observations in Two Solar Cycles

Frederic Effenberger, Fatima Rubio da Costa, Mitsuo Oka, Pascal Saint-Hilaire, Wei Liu, Vahe Petrosian, Lindsay Glesener, Sam Krucker
Astrophysical Journal, **835**, 124E (2017)

32. Evidence of Significant Energy Input in the late phase of a solar flare from NuStar X-ray observations

Matej Kuhar, Sam Krucker, Iain Hannah, Lindsay Glesener, Pascal Saint-Hilaire, et al.
Astrophysical Journal, **835**, 6K (2017)

31. The Solar Probe Plus Radio Frequency Spectrometer: Measurement Requirements, Analog Design, and Digital Signal Processing

M. Pulupa, S.D. Bale, T.A. Bowen, K. Goetz, D. Gordon, P.R. Harvey, M. Maksimovic, J.C. Martinez-Oliveros, M. Moncuquet, P. Saint-Hilaire, D. Seitz
JGRA, **122**, 2836 (2017)

30. STEREO-Wind Radio Positioning of an Unusually Slow Drifting Event

J.C. Martínez-Oliveros, C. Raftery, H. Bain, Y. Liu, M. Pulupa, P. Saint-Hilaire, P. Higgins, V. Krupar, Säm Krucker, S.D. Bale
Solar Physics, **290**, Issue 3, pp.891-901 (2015)

29. Co-Spatial White Light and Hard X-Ray Flare Footpoints Seen Above the Solar Limb

Säm Krucker, Pascal Saint-Hilaire, Hugh S. Hudson, Margit Haberreiter, Juan Carlos Martinez-Oliveros, Martin D. Fivian, Gordon Hurford, Lucia Kleint, Marina Battaglia, Matej Kuhar, and Nicolas G. Arnold
ApJ, **802**, 19 (2015).

28. “Electron Energy Partition in the Above-the-looptop Solar Hard X-Ray Sources”

Oka, Mitsuo; Krucker, Säm; Hudson, Hugh S.; Saint-Hilaire, Pascal
ApJ, **799**, 129O (2015)

27. Short-duration Radio Bursts with Apparent Extragalactic Dispersion

P. Saint-Hilaire, A. O. Benz, and C. Monstein
ApJ, 795,19S (2014) (*selected as a Nature Research Highlight*)

26. Observations of linear polarization in a solar coronal loop prominence system near 6173 Å

Pascal Saint-Hilaire, Jesper Schou, Juan-Carlos Martinez Oliveros, Hugh S. Hudson, Sam Krucker, Hazel Bain, Sebastien Couvidat.
ApJL, 786, L19

25. Chromospheric and Coronal Observations of flares with HMI

Juan-Carlos Martinez Oliveros, Sam Krucker, Hugh S. Hudson, Pascal Saint-Hilaire, Hazel Bain, Charles Lindsey, Rick Bogart, Sebastien Couvidat, Phil Scherrer, Jesper Schou.
ApJL, 780, 29

24. Radio Imaging of a Type IVM radio burst on the 14th of August 2010

Hazel Bain, Sam Krucker, Pascal Saint-Hilaire, Claire Raftery,
ApJ, 782, 43.

23. Probing the Solar Magnetic Field With a Sun-Grazing Comet

Cooper Downs, Jon A. Linker, Zoran Mikić, Pete Riley, Carolus J. Schrijver, Pascal Saint-Hilaire
Science 340, 1196 (2013).

22. EUV and X-ray observations of Comet Lovejoy (C/2011 W3) in the Lower Corona

Patrick I. McCauley, Steven H. Saar, John C. Raymond, Yuan-Kuen Ko, Pascal Saint-Hilaire
ApJ 768, 161 (2013).

21. Kappa Distribution Model for Hard X-Ray Coronal Sources of Solar Flares

M. Oka, S. Ishikawa, P. Saint-Hilaire, S. Krucker, and R.P. Lin
ApJ 764, 6 (2013)

20. A decade of solar Type III radio bursts observed by the Nancay Radioheliograph 1998-2008

P. Saint-Hilaire, N. Vilmer, A. Kerdraon
ApJ, 762, 60 (2013)

19. Destruction of Sun-grazing comet C/2011 N3 (SOHO) within the low solar corona

C.J. Schrijver, J.C. Brown, K. Battams, P. Saint-Hilaire, W. Liu, H. Hudson, W.D. Pesnell
Science 335, 324 (2012).

18. Allen Telescope Array Multi-frequency Observations of the Sun

P. Saint-Hilaire, G.J. Hurford, G. Keating, G. Bower, C. Gutierrez-Kraybill
Solar Physics, 277, 431 (2012)

17. The RHESSI microflare height distribution

S. Christe, S. Krucker, P. Saint-Hilaire, and R.P. Lin
Solar Physics, 270, 493C (2011)

16. The Relationship Between Solar Radio and Hard X-ray Emission

S. M. White, K. Arzner, S. Christe, F. Farnik, K.-L. Klein, M. R. Kundu, Z. Ning, J.-P. Raulin, A. V. R. Silva Valio, P. Saint-Hilaire, G. Trottet, A. Warmuth
Space Science Reviews, 159, 225 (2011)

15. Implications of X-ray observations for electron acceleration and propagation in solar flares

Holman, G.D., Aschwanden, M.J., Aurass, H., Battaglia, M., Grigis, P.C., Kontar, E.P., Liu, W., Saint-Hilaire, P., Zharkova, V.V.
Space Science Reviews, 159, 107 (2011)

14. Statistically-derived flaring chromospheric-coronal density structure from non-thermal X-ray observations of the Sun

P. Saint-Hilaire, S. Krucker, R.P. Lin
[ApJ, 721,1933-1940](#) (2010)

13. X-ray emission from the base of a current sheet in the wake of a CME

Pascal Saint-Hilaire, Säm Krucker, and Robert P. Lin,
ApJ, **699**, 245-253 (2009)

12. The X-ray Detectability of Electron Beams Escaping from the Sun

Pascal Saint-Hilaire, Säm Krucker, Steven Christe, Säm Krucker,
ApJ, **696**, 941-952 (2009)

11. Coronal Hard X-Ray Emission Associated with Radio Type III Bursts

Säm Krucker, P. Saint-Hilaire, S. Christe, S. M. White, A. D. Chavier, S. D. Bale, and R. P. Lin
ApJ, **681**, 644-649 (2008)

10. A statistical survey of hard X-ray spectral characteristics of solar flares with two footpoints

Pascal Saint-Hilaire, Säm Krucker, Robert P. Lin,
Solar Physics **250**, 53-73 (2008)

9. Extended Decimeter Radio Emission after Large Solar Flares

Arnold O. Benz, Hubert Perret, Pascal Saint-Hilaire, Paolo Zlobec
Advances in Space Research, **38**, 951-955 (2006)

8. Thermal and non-thermal energies of solar flares

Pascal Saint-Hilaire and Arnold O. Benz,
Astronomy and Astrophysics, **435**, 743 – 752 (2005)

7. Survey on solar X-ray flares and associated coherent radio emissions

Arnold O. Benz, Paolo C. Grigis, Andre Csillaghy and Pascal Saint-Hilaire,
Solar Physics **226**, 121 – 142 (2005)

6. Solar flare electron acceleration: comparing theories and observations

Arnold O. Benz and Pascal Saint-Hilaire,
Advances in Space Research **32**, 2415 – 2423 (2003)

5. Hard X-ray, ejecta, and their associated decimetric radio emission in solar flares

Pascal Saint-Hilaire, and Arnold O. Benz,
Solar Physics **216**, 204 - 224 (2003)

4. Energy budget and imaging spectroscopy of a compact flare

Pascal Saint-Hilaire, and Arnold O. Benz,
Solar Physics **210**, 287 – 306 (2002)

3. The RHESSI Experimental Data Center

Pascal Saint-Hilaire, Christoph von Praun, Etzard Stolte, Gustavo Alonso, Arnold O. Benz, and Thomas Gross,
Solar Physics **210**, 143 – 164 (2002)

2. The solar origin of a slowly drifting decimetric-metric pulsation structure

Josef I. Khan, Nicole R. Vilmer, Pascal Saint-Hilaire, and Arnold O. Benz,
Astronomy and Astrophysics **388**, 363 – 372 (2002)

1. Location of narrowband spikes in solar flares

Arnold O. Benz, Pascal Saint-Hilaire and Nicole R. Vilmer,
Astronomy and Astrophysics **383**, 678-684 (2002)

Some non-refereed publications of note:

6. First Flight of the Gamma-Ray Imager/Polarimeter for Solar flares (GRIPS)

Nicole Duncan, P. Saint-Hilaire, A. Y. Shih, G. J. Hurford, H. M. Bain, M. Amman, B. A. Mochizuki, J. Hoberman, J. Olson, B. A. Maruca, N. M. Godbole, D. M. Smith, J. Sample, N. A. Kelley, A. Zoglauer, A. Caspi, P. Kaufmann, S. Boggs, and R. P. Lin
[SPIE Conference Proceedings](#), 2016 (*SPIE Astronomy top two download of 2017*)

5. Detector and imaging systems for the Gamma-Ray Imager/Polarimeter for Solar flares (GRIPS) instrument

Nicole Duncan, Albert Shih, Gordon Hurford, Pascal Saint-Hilaire, Andreas Zoglauer, Hazel Bain, Mark Amman, Steven Boggs, Robert Lin
SPIE Conference Proceedings, **8862**, 88620W (2013)

4. Dynamic Analysis and Controller Design of the Balloon Point Control System of Gamma-Ray Imager/Polarimeter for Solar Flares

Yao-Ting Mao, David Auslander, David Pankow, Eduardo Wiputra, Pascal Saint-Hilaire ASME conference paper DSCC2014-5894 (2014)

3. The Gamma-Ray Imager/Polarimeter for Solar flares (GRIPS)

Shih, Albert Y.; Lin, Robert P.; Hurford, Gordon J.; Duncan, Nicole A.; Saint-Hilaire, Pascal; Bain, Hazel M.; Boggs, Steven E.; Zoglauer, Andreas C.; Smith, David M.; Tajima, Hiroyasu; Amman, Mark S.; Takahashi, Tadayuki
SPIE Conference Proceedings, **8443**, 84434H (2012)

2. The Focusing Optics X-ray Solar Imager (FOXSI)

Krucker, Sam; Christe, Steven; Glesener, Lindsay; McBride, Steve; Turin, Paul; Glaser, David; Saint-Hilaire, Pascal; Delory, Gregory; Lin, R. P.; Gubarev, Mikhail; and 12 coauthors

Proceedings of SPIE (International Society for Optics and Photonics), **7437**, 743705-2 (2009)

1. Energy release in solar flares (PhD thesis)

Pascal Saint-Hilaire

ETH electronic library, 2005