

AMIR CASPI

Senior Research Scientist
Southwest Research Institute

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CURRENT RESEARCH and INTERESTS:

- High-energy solar physics, especially particle acceleration, energy transport, and plasma heating resulting from the explosive release of energy in magnetized plasma during solar eruptive events (flares and coronal mass ejections), particularly using X-ray and extreme ultraviolet (EUV) remote sensing observations.
- The relation of energetic processes on the Sun to similar processes elsewhere, e.g., stellar flares, magnetar bursts, accretion disk flares, planetary magnetotail reconnection, etc.
- The effects of solar variability and solar eruptive events on the heliosphere, including space weather and its interaction with Earth and other planets, e.g., relativistic particle storms, auroral X-rays, ionospheric effects, etc.
- Developing new instrumentation and mission concepts to further studies of the above

EDUCATION:

- Ph.D.* University of California, Berkeley (2010 May)
Physics
Dissertation: Super-hot ($T > 30$ MK) Thermal Plasma in Solar Flares
Ph.D. Advisor: Robert P. Lin
- M.A.* University of California, Berkeley (2010 May)
Physics
- B.S.* University of Maryland, College Park (2001 May)
Physics (*High Honors, cum laude*)
Astronomy (*High Honors, cum laude*)
Computer Science & Mathematics (*Honors, cum laude*)
University Honors Citation (1998 December)

WORK EXPERIENCE:

- 2016–present* **Senior Research Scientist** – Southwest Research Institute, Boulder
- 2014–2016* **Research Scientist** – Southwest Research Institute, Boulder
Analyzing data from EVE and RHESSI, emphasizing solar flares, flare energetics, super-hot thermal plasma, electron acceleration, coronal temperature distributions, and the influence of their X-ray and EUV emission on geospace; Co-I of 3U CubeSat (MinXSS); PI of SMASH (Antarctic balloon piggyback); PI of mission to observe August 2017 total solar eclipse with WB-57 airplanes
- 2011–2014* **Research Associate** – Lab. for Atmos. & Space Physics, Univ. of CO, Boulder
Analyzed EUV and X-ray data from EVE and RHESSI, emphasizing solar flares, flare energetics, super-hot thermal plasma, and electron acceleration; Co-I of 3U CubeSat for solar X-ray observations (MinXSS); instrument scientist for GOES-R series EXIS (EUV & X-ray Irradiance Sensors); Co-I of two EVE calibration rocket underflights with new solar X-ray instrumentation

- 2010–2011* **Postdoctoral Scholar** – Space Sciences Lab, Univ. of CA, Berkeley
Analyzed data from RHESSI, emphasizing hard X-rays from solar flares, flare energetics, super-hot thermal plasma, and electron acceleration, in continuation of graduate work
- 2001–2010* **Graduate Student Researcher** – Space Sciences Lab, Univ. of CA, Berkeley
Studied solar flares, incl. thermal plasma and electron acceleration, focusing on the study of super-hot plasma via RHESSI X-ray spectra and images; investigated concepts for hard X-ray spectro-polarimetry; performed extensive data-driven calibration of RHESSI low-energy response for highly accurate spectroscopy below 10 keV; performed lab tests to determine post-anneal performance of RHESSI germanium detectors

TEACHING EXPERIENCE:

- 2014–present* **Dissertation progress committee** – Christopher S. Moore, Univ. of CO, Boulder
External member on 5-member committee to periodically evaluate progress towards Ph.D. dissertation in solar flare X-ray studies and technology development of high-reflectivity UV optical coatings for astrophysics
- 2012–2016* **Assistant Ph.D. advisor** – James P. Mason, Univ. of CO, Boulder
Providing science mentorship and guidance for studies of solar flares and coronal mass ejections, under primary advisorship of Dr. Thomas N. Woods
- 2012–2014* **Mentor, guest lecturer** – Aerospace Eng. Sci. Dept., Univ. of CO, Boulder
CubeSat Graduate Student Projects – mentoring and advising graduate students on development of [funded] NASA CubeSat for solar flare X-ray observations (MinXSS: Miniature X-ray Solar Spectrometer)
- 2012–2014* **Mentor** – Research Experience for Undergraduates (REU), Univ. of CO, Boulder
- Christina Wilson (Wichita State Univ., aerospace) – IDL programming for CubeSat data processing and end-to-end testing
 - Seth Folley (St. Mary’s Univ., physics) – programming and performance testing of CubeSat electrical power system
 - Jordan Stone (Univ. of AR, Fayetteville, physics) – analysis of solar soft X-ray data from Amptek X123 on June 2012 SDO/EVE sounding rocket
- 2007, fall* **Graduate Reader** – Physics Dept., Univ. of CA, Berkeley
Physics 242A: Theoretical Plasma Physics
- 2003, fall* **Graduate Student Instructor** – Astronomy Dept., Univ. of CA, Berkeley
Astro 10: Introduction to General Astronomy (2 sections)
- 2001, spring* **Undergraduate Teaching Assistant** – Astronomy Dept., UMD, College Park
Astro 430: The Solar System
- 2001, spring* **Undergraduate Grader** – Physics Dept., Univ. of Maryland, College Park
Physics 161: General Physics: Mechanics and Particle Dynamics
- 1997–2001* **Instructor** – Sleiman Technologies, Inc. – Falls Church, VA
Taught computer programming in C/C++/Perl/UNIX at George Washington University’s Center for Career Education in Washington, D.C., including development of a custom curriculum, class projects, and exams

PROFESSIONAL SOCIETIES:

2003–present American Astronomical Society, Solar Physics Division

2002–present American Geophysical Union

REFEREED PUBLICATIONS – published or submitted:

21. Kaufmann, P., Abrantes, A., Bortolucci, E. C., **Caspi, A.**, Fernandes, L. O. T., Francile, C., Kropotov, G. I., Kudaka, A. S., Laurent, G., Machado, N., Marcon, R., Marun, A., Morosi, A., Nicolaev, V., Pereyra, P., Hidalgo Ramirez, R. F., Raulin, J.-P., Saint-Hilaire, P., Shih, A. Y., Silva, C. M., & Timofeevsky, A. 2016, “The THz Solar Flare Balloon Experiment (SO-LAR-T).” *Experimental Astronomy*, submitted
20. Aschwanden, M. J., **Caspi, A.**, Cohen, C. M. S., Holman, G., Jing, J., Kretzschmar, M., Kontar, E. P., McTiernan, J. M., Mewaldt, R. A., O’Flannagain, A., Richardson, I. G., Ryan, D., Warren, H. P., & Xu, Y. 2016, “Global Energetics of Solar Flares: V. Energy Closure in Flares and Coronal Mass Ejections.” *Astrophys. J.*, **836**, 17 [DOI: 10.3847/1538-4357/836/1/17]
19. Woods, T. N., **Caspi, A.**, Chamberlin, P. C., Jones, A., Kohnert, R., Mason, J. P., Moore, C. S., Palo, S., Rouleau, C., Solomon, S. C., Machol, J., & Viereck, R. 2016, “New Solar Irradiance Measurements from the *Miniature X-Ray Solar Spectrometer* CubeSat.” *Astrophys. J.*, **835**, 122 [DOI: 10.3847/1538-4357/835/2/122]
18. Aschwanden, M. J., Holman, G., O’Flannagain, A., **Caspi, A.**, McTiernan, J. M., & Kontar, E. 2016, “Global Energetics of Solar Flares: III. Nonthermal Energies.” *Astrophys. J.*, **832**, 27 [DOI: 10.3847/0004-637X/832/1/27]
17. Grefenstette, B. W., Glesener, L., Krucker, S., Hudson, H., Hannah, I. G., Smith, D. M., Vogel, J. K., White, S., Madsen, K. K., Marsh, A. J., **Caspi, A.**, Chen, B., Shih, A., Kuhar, M., Boggs, S. E., Christensen, F. E., Craig, W. W., Forster, K., Hailey, C. J., Harrison, F. A., Miyasaka, H., Stern, D., & Zhang, W. W. 2016, “The First Focused Hard X-ray Images of the Sun with *NuSTAR*.” *Astrophys. J.*, **826**, 20 [DOI: 10.3847/0004-637X/826/1/20]
16. Lin, C. Y., Bailey, S. M., Jones, A. R., Woodraska, D., Woods, T. N., Eparvier, F. G., **Caspi, A.**, Wieman, S. R., & Didkovsky, L. V. 2016, “Soft X-ray irradiance measured by the Solar Aspect Monitor on the *Solar Dynamics Observatory* Extreme ultraviolet Variability Experiment.” *J. Geophys. Res.: Space Phys.*, **121**, 3648 [DOI: 10.1002/2015JA021726]
15. Mason, J. P., Woods, T. N., **Caspi, A.**, Chamberlin, P., Moore, C., Jones, A., Kohnert, R., Li, X., Palo, S., & Solomon, S. 2016, “*Miniature X-ray Solar Spectrometer (MinXSS)* – A Science-Oriented, University 3U CubeSat.” *J. Spacecraft Rockets*, **53**, 328 [DOI: 10.2514/1.A33351]
14. Hannah, I. G., Grefenstette, B. W., Smith, D. M., Glesener, L., Krucker, S., Hudson, H. S., Madsen, K. K., Marsh, A., White, S. M., **Caspi, A.**, Shih, A. Y., Harrison, F. A., Stern, D., Boggs, S. E., Christensen, F. E., Craig, W. W., Hailey, C. J., & Zhang, W. W. 2016, “The first X-ray imaging spectroscopy of quiescent solar active regions with *NuSTAR*.” *Astrophys. J. Lett.*, **820**, L14 [DOI: 10.3847/2041-8205/820/1/L14]
13. Doschek, G. A., Warren, H. P., Dennis, B. R., Reep, J. W., & **Caspi, A.** 2015, “Flare Footpoint Regions and a Surge Observed by the *Hinode*/EUV Imaging Spectrometer (EIS), *RHESSI*, and *SDO/AIA*.” *Astrophys. J.*, **813**, 32 [DOI: 10.1088/0004-637X/813/1/32]

12. Aschwanden, M. J., Boerner, P., **Caspi, A.**, McTiernan, J. M., Ryan, D., & Warren, H. P. 2015, "Benchmark Test of Differential Emission Measure Codes and Multi-Thermal Energies." *Solar Phys.*, **290**, 2733 [DOI: 10.1007/s11207-015-0790-0]
11. **Caspi, A.**, Shih, A. Y., McTiernan, J. M., & Krucker, S. 2015, "Hard X-ray imaging of individual spectral components in solar flares." *Astrophys. J. Lett.*, **811**, L1 [DOI: 10.1088/2041-8205/811/1/L1]
10. Aschwanden, M. J., Boerner, P., Ryan, D., **Caspi, A.**, McTiernan, J. M., and Warren, H. P. 2015, "Global energetics of solar flares: II. Thermal Energies." *Astrophys. J.*, **802**, 53 [DOI: 10.1088/0004-637X/802/1/53]
9. **Caspi, A.**, Woods, T. N., & Warren, H. P. 2015, "New observations of the solar 0.5–5 keV soft x-ray spectrum." *Astrophys. J. Lett.*, **802**, L2 [DOI: 10.1088/2041-8205/802/1/L2]
8. Mason, J. P., Woods, T. N., **Caspi, A.**, Thompson, B. J., & Hock, R. A. 2014, "Mechanisms and Observations of Coronal Dimming for the 2010 August 7 Event." *Astrophys. J.*, **789**, 61 [DOI: 10.1088/0004-637X/789/1/61]
7. **Caspi, A.**, McTiernan, J. M., & Warren, H. P. 2014, "Constraining solar flare differential emission measures with EVE and *RHESSI*." *Astrophys. J. Lett.*, **788**, L31 [DOI: 10.1088/2041-8205/788/2/L31]
6. **Caspi, A.**, Krucker, S., & Lin, R. P. 2014, "Statistical properties of super-hot solar flares." *Astrophys. J.*, **781**, 43 [DOI: 10.1088/0004-637X/781/1/43]
5. Liu, W-J., Qiu, J., Longcope, D. W., & **Caspi, A.** 2012, "Determining Heating Rates in Reconnection Formed Flare Loops of the M8.0 Flare on 2005 May 13." *Astrophys. J.*, **770**, 111 [DOI: 10.1088/0004-637X/770/2/111]
4. Trotter, G., Raulin, J.-P., Giménez de Casto, G., Lüthi, T., **Caspi, A.**, Mandrini, C. H., Luoni, M. L., & Kaufmann, P. 2011 "Origin of the submillimeter radio emission during the time-extended phase of a solar flare." *Solar Phys.*, **273**, 339 [DOI: 10.1007/s11207-011-9875-6]
3. Fletcher, L., Dennis, B. R., Hudson, H. S., Krucker, S., Phillips, K., Veronig, A., Battaglia, M., Bone, L., **Caspi, A.**, Chen, Q., Gallagher, P., Grigis, P. T., Ji, H., Liu, W., Milligan, R. O., & Temmer, M. 2011, "An Observational Overview of Solar Flares." *Space Sci. Rev.*, **159**, 19 [DOI: 10.1007/s11214-010-9701-8]
2. **Caspi, A.**, & Lin, R. P. 2010, "*RHESSI* line and continuum observations of super-hot flare plasma." *Astrophys. J. Lett.*, **725**, L161 [DOI: 10.1088/2041-8205/725/2/L161]
1. **Caspi, A.** 2010, "Super-hot ($T > 30$ MK) thermal plasma in solar flares." *Ph.D. dissertation*, University of California, Berkeley (advisor: R. P. Lin) [arXiv: 1105.1889]

REFEREED PUBLICATIONS – in preparation:

- Caspi, A.**, Eparvier, F. G., Woods, T. N., Jones, A. R., Snow, M., McClintock, W., and the GOES-R EXIS Team, "The *GOES-R* series X-ray Sensor." In prep for *Astrophys. J. Suppl.*
- Plowman, J. E., & **Caspi, A.**, "A fast, simple, robust algorithm for coronal temperature reconstruction." In prep for *Astrophys. J. Lett.*

- Moore, C. S., **Caspi, A.**, Woods, T. N., Chamberlin, P. C., Jones, A. R., Mason, J. P., Schwartz, R. A., & Tolbert, A. K., “The instruments of the Miniature X-ray Solar Spectrometer (MinXSS) CubeSats.” In prep for *Solar Physics*
- Marsh, A. J., Smith, D. M., Glesener, L., Hannah, I. G., Grefenstette, B. W., **Caspi, A.**, Krucker, S., Hudson, H. S., Madsen, K. K., White, S. M., Boggs, S. E., Christensen, F. E., Craig, W.W., Hailey, C. J., Harrison, F. A., Stern, D., & Zhang, W. W., “First *NuSTAR* limits on quiet Sun hard X-ray transient events.” In prep for *Astrophys. J. Lett.*
- Young, E. F., *et al.*, “Pluto’s evolving haze opacity from 2002 to 2015: correlation to solar activity.” In prep for *Icarus*

PROPOSALS FUNDED or PENDING:

- Christe, S. D. (PI), Shih, A. Y. (DPI), Krucker, S. (Co-I), Glesener, L. (Co-I), Saint-Hilaire, P. (Co-I), Gubarev, M. (Co-I), **Caspi, A. (Co-I)**, Woods, T. N. (Co-I), Gburek, S. (Co-I), Allred, J. C. (Co-I), Battaglia, M. (Co-I), Drake, J. (Co-I), Goetz, K. (Co-I), Grefenstette, B. (Co-I), Hannah, I. G. (Co-I), Holman, G. (Co-I), Hudson, H. S. (Co-I), Inglis, A. (Co-I), Ireland, J. (Co-I), Ishikawa, S-n. (Co-I), Klimchuk, J. (Co-I), Kontar, E. (Co-I), Massone, A. M. (Co-I), Piana, M. (Co-I), Ramsey, B. (Co-I), Schwartz, R. (Co-I), Steslicki, M. (Co-I), Turin, P. (Co-I), White, S. (Co-I), Chen, B. (Collab.), Gary, D. (Collab.), Kowalski, A. (Collab.), Warmuth, A. (Collab.), Veronig, A. (Collab.), Vilmer, N. (Collab.), & Manthripragada, S. (PM) 2016, “Focusing Optics X-ray Solar Imager (FOXSI).” NASA *2016 Heliophysics Small Explorer* (**pending**: \$165M)
- Woods, T. N. (PI), **Caspi, A. (Co-I)**, Chamberlin, P. C. (Co-I), Jones, A. R. (Co-I), Mason, J. P. (Co-I), Palo, S. E. (Co-I), Solomon, S. (Co-I), Warren, H. P. (Co-I), & Kohnert, R. (PM) 2016, “Solar Cycle Studies for the Miniature X-ray Solar Spectrometer (MinXSS) CubeSat Missions.” NASA *2016 Heliophysics Explorer Mission of Opportunity* (**pending**: \$2,242,633; 5 yrs)
- Caspi, A. (PI)**, Allred, J. C. (Co-I), Martínez Oliveros, J. C. (Co-I), Rubio da Costa, F. (Co-I), & Shih, A. Y. (Co-I) 2016, “Studying Ion-Driven Flare Heating from Acceleration Models to Multi-Wavelength Observations.” NASA *Heliophysics Supporting Research* (**pending**: \$799,804; 3 yrs)
- Plowman, J. E. (PI), **Caspi, A. (Co-I)**, DeForest, C. E. (Co-I), Bradshaw, S. (Co-I), & Klimchuk, J. (Co-I) 2016, “Understanding the Distribution of Small-Scale Impulsive Coronal Heating Events.” NASA *Heliophysics Supporting Research* (**pending**: \$811,083; 3 yrs)
- Glesener, L. (PI), Bradshaw, S. (Co-I), **Caspi, A. (Co-I)**, Chen, B. (Co-I), Grefenstette, B. (Co-I), Hannah, I. G. (Co-I), Hudson, H. S. (Co-I), Klimchuk, J. (Co-I), Krucker, S. (Co-I), & Smith, D. M. (Co-I) 2016, “Robustly Constraining Impulsive Coronal Heating with Combined *NuSTAR* HXR Observations and Numerical Models.” NASA *Heliophysics Supporting Research* (**pending**: \$838,502; 3 yrs)
10. **Caspi, A. (PI)**, Tsang, C. (Co-I), DeForest, C. E. (Co-I), Seaton, D. (Co-I), Bryans, P. (Co-I), Steffl, A. (Collab.), Durda, D. (Collab.), Judge, P. (Collab.), Tomczyk, S. (Collab.), Burkepille, J. (Collab.), DeLuca, E. (Collab.), Golub, L. (Collab.), Zhukov, A. (Collab.), West, M. (Collab.), & Gallagher, P. (Collab.) 2016, “Chasing the 2017 Eclipse: Interdisciplinary Airborne Science with NASA’s WB-57.” NASA *Interdisciplinary Science For Eclipse 2017* (**funded**: \$121,962; 1 yr)

9. Woods, T. N. (PI), **Caspi, A. (Co-I)**, Chamberlin, P. C. (Co-I), Jones, A. R. (Co-I), Kohnert, R. (Co-I), Mason, J. P. (Co-I), Palo, S. E. (Co-I), Solomon, S. (Co-I), & Warren, H. P. (Co-I) 2016, “Solar Cycle Studies for the Miniature X-ray Solar Spectrometer (MinXSS) CubeSat Missions.” NASA *Heliophysics Technology & Instrument Development for Science* (**fund**: \$553,687; 2 yrs)
8. **Caspi, A. (PI)**, & DeForest, C. (Co-I) 2015, “Demonstration Flight of New Technology for Solar Hard X-ray Spectroscopy for Future CubeSat Missions.” SwRI *Internal Research & Development (Applied Research)* (15.R8565: \$278,244; 1 yr)
7. **Caspi, A. (PI)** 2015, “Laboratory Calibration and Environmental Testing of New Hard X-ray Spectrometer for Future CubeSat Missions.” SwRI *Internal Research & Development (QuickLook)* (15.R8558: \$49,860; 4 mos)
6. Thompson, B. J. (PI), **Caspi, A. (Co-I)**, Krista, L. D. (Co-I), Mason, J. P. (Co-I), Reinard, A. A. (Co-I), & Webb, D. F. (Co-I) 2014, “An Investigation of Coronal Dimming and their relationship to CMEs.” NASA *Heliophysics Supporting Res.* (NNX15AQ68G: \$533,075; 3 yrs)
5. Woods, T. (PI), **Caspi, A. (Co-I)**, Chamberlin, P. (Co-I), Jones, A. (Co-I), Kohnert, R. (Co-I), Li, X. (Co-I), Palo, S. (Co-I), & Solomon, S. (Co-I) 2013, “Miniature X-ray Solar Spectrometer (MinXSS) CubeSat Mission.” NASA *Heliophysics Technology and Instrument Development for Science (Low Cost Access to Space)* (NNX14AN84G: \$1,050,362; 3 yrs)
4. Randall, C. (PI), Woods, T. (Co-I), **Caspi, A. (Co-I)**, Harvey, V. L. (Co-I), Kinnison, D. (Co-I), Liu, H.-L. (Co-I), Marsh, D. (Co-I), Qian, L. (Co-I), Solomon, S. (Co-I), Coster, A. (Co-I), Jackman, C. (Co-I), Funke, B. (Collab.), Langematz, U. (Collab.), Matthes, K. (Collab.), Schmidt, H. (Collab.), Seppala, A. (Collab.), Sinnhuber, M. (Collab.), Verronen, P. (Collab.), 2013, “Response of the Atmosphere to Impulsive Solar Events (RAISE).” NASA *Heliophysics Living With a Star Science* (NNX14AH54G: \$2,281,126; 4 yrs)
3. Qiu, J. (PI), Longcope, D. (Co-I), **Caspi, A. (Co-I)** 2013, “Energetics of flare heating from magnetic reconnection.” NASA *Heliophysics Guest Investigators* (NNX14AC06G: \$382,072; 3 yrs)
2. **Caspi, A. (PI)**, McTiernan, J. (Co-I), & Warren, H. (Collab.) 2011, “Determining Temperature Distributions in Solar Flares with RHESSI and EVE.” NASA *Heliophysics Guest Investigators* (NNX12AH48G + NNX15AK26G: \$250,563; 3 yrs)
1. McTiernan, J. (PI), & **Caspi, A. (Grad)** 2007, “Thermal Soft X-ray Spectroscopy with RHESSI.” NASA *Heliophysics Guest Investigators* (NNX08AJ18G: \$215,101; 3 yrs)

AWARDS and HONORS:

- 2016, Aug. AIAA Small Satellite Mission of the Year – *MinXSS* Team
- 2016, Jul. Antarctica Service Medal
- 2016, Mar. NASA R.H.G. Exceptional Achievement for Science Award, *SDO* Team
- 2014, Jul. NASA Group Achievement Award, *GOES-R* EXIS Instrument Dev. Team
- 2013, Aug. NASA Group Achievement Award, *RHESSI* Science and Data Analysis Team
- 2013, May *GOES-R* Project Significant Achievement Award, EXIS Team
- 2013, Mar. Metcalf Lecturer/Fellow (LWS *SDO* Workshop, Cambridge, MD)
- 2012, Dec. NASA LWS Workshop Travel Award (*RHESSI/SDO* Workshop, Petaluma, CA)

2012, *Aug.* NASA Group Achievement Award, *SDO* Science Investigation Team
 2007, *Mar.* Outstanding Student Paper, AGU 2006 Fall Meeting (Abstract #SH43B-1528)
 2006, *Jun.* AAS/SPD Summer School Fellow
 2004, *Feb.* Outstanding Student Paper, AGU 2003 Fall Meeting (Abstract #SH22A-0170)
 2003 *RHESSI* Project Recognition Award, Outstanding Data Analysis
 2003, *Jun.* AAS/SPD Studentship Award
 2001–2002 Graduate Research Fellow, Spaces Sciences Lab, Univ. of California, Berkeley
 2000–2001 Exel Scholar, Univ. of Maryland, College Park
 2000 Who’s Who Among Students in American Universities and Colleges
 1999, *summer* Senior Summer Scholar, Univ. of Maryland, College Park
 1996–2000 Banneker/Key Scholar, Univ. of Maryland, College Park
 1996–2000 Maryland Distinguished Scholar

Honor Society Memberships: Phi Beta Kappa, Sigma Pi Sigma, Omicron Delta Kappa, Phi Eta Sigma, Mortar Board, Pi Mu Epsilon, Phi Kappa Phi, Golden Key, Alpha Lambda Delta

INVITED TALKS, SEMINARS, and COLLOQUIA:

“State of the Art: MinXSS CubeSat Performance ... and CubIXSS future needs.” KISS Workshop on Optical Communication on SmallSats: Enabling the Next Era in Space Science – Part 2 (Pasadena, CA; *Feb. 2017*)

“Some Like it Hot: plasma heating & impulsive energy release in the solar corona.” Presented at:
 – Southwest Research Institute, Boulder – Planetary Science Directorate colloq. (*Aug. 2016*)
 – Boston University – Astronomy Dept., Space Physics seminar (*Mar. 2016*)

“New Instruments for Spectrally-Resolved Solar Soft X-ray Observations from CubeSats (and Larger Missions).” Hinode 9th workshop (Belfast, N. Ireland; *Sep. 2015*)

“Solar X-ray CubeSats.” Southwest Research Institute, Boulder – Planetary Science Directorate lunch seminar (*May 2015*)

“Measuring Solar Soft X-ray Emission and the Coronal Temperature Distribution.” Boulder Solar Day 2015 (Boulder, CO; *Mar. 2015*)

“New CubeSats for solar X-ray observations: MinXSS & CubIXSS.” NASA Ames Research Center – Heliophysics Modeling & Simulation Group seminar (*Mar. 2015*)

“Thermal processes in the solar corona.” Presented at:

- Lockheed Martin Corp. – Solar and Astrophysics Laboratory seminar (*Mar. 2015*)
- NASA Ames Research Ctr. – Heliophysics Modeling & Simulation Group sem. (*Mar. 2015*)
- Harvard-Smithsonian Ctr. for Astrophysics – Solar & Stellar X-ray Group sem. (*Feb. 2015*)
- Boston University – Astronomy Dept., Space Physics seminar (*Feb. 2015*)
- Southwest Research Institute, San Antonio – Space Science & Eng. Div. colloq. (*Nov. 2014*)
- Southwest Research Institute, Boulder – Planetary Science Directorate colloq. (*Jul. 2014*)
- Univ. of Colorado, Boulder – Lab. for Atmospheric and Space Physics colloq. (*Mar. 2014*)
- Tel Aviv University, Israel – Geophysics and Planetary Sciences Dept. seminar (*Mar. 2014*)

“CubeSats: overview and enabling technologies for solar observations.” RHESSI 13th Workshop

(Windisch, Switzerland; *Apr. 2014*)

“Coronal plasma heating in the flaring and quiescent sun.” Huntsville Workshop 2014 (Orlando, FL; *Mar. 2014*)

“Super-hot ($T > 30$ MK) thermal plasma in solar flares.” West Virginia Univ., Morgantown – Physics Dept. colloquium (*Apr. 2013*)

“Some Like it (super)Hot.” Univ. of California, Berkeley – Space Sciences Lab.; BobFest, a one-day colloquium celebrating the science of Bob Lin and RHESSI (*Feb. 2012*)

“Super-hot ($T > 30$ MK) thermal plasma in solar flares.” Presented at:

- Univ. of New Hampshire, Durham – Physics Dept. and Institute for the Study of Earth, Oceans, and Space; Space Physics Group seminar (*Apr. 2011*)
- Harvard-Smithsonian Ctr. for Astrophysics – Solar & Stellar X-ray Group sem. (*Apr. 2011*)
- Univ. of Colorado, Boulder – Laboratory for Atmospheric and Space Physics; Solar Influences Group seminar (*Mar. 2011*)
- Nat’l. Center for Atmospheric Research – High Altitude Observatory seminar (*Mar. 2011*)
- Lockheed Martin Corp. – Solar and Astrophysics Laboratory seminar (*Feb. 2011*)
- Montana State Univ., Bozeman – Physics Dept.; Solar Physics Group seminar (*Nov. 2010*)
- Jet Propulsion Laboratory – Science Division; Astrophysics and Space Sciences Section colloquium (*Oct. 2010*)
- NASA Marshall Space Flight Center and Univ. of Alabama, Huntsville Center for Space Plasma and Aeronomic Research – Solar Physics Group seminar (*Sep. 2010*)
- Univ. of California, Berkeley – Physics Dept.; 290B (Space Physics) Seminar (*Aug. 2010*)
- NASA Goddard Space Flight Center – Heliophysics Division colloquium (*Aug. 2010*)
- Johns Hopkins Univ. Applied Physics Lab. – Space Dept.; Heliophysics colloq. (*Aug. 2010*)
- Naval Research Laboratory – Space Science Division colloquium (*Aug. 2010*)

“23 July 2002: Calibration and results – two thermal components.” NASA Goddard Space Flight Center – Heliophysics Science Division; Solar Physics Group seminar (*Dec. 2009*)

“Pitfalls and potential of RHESSI spectroscopy below ~ 20 keV.” NASA Goddard Space Flight Center – Heliophysics Science Division; Solar Physics Group seminar (*Feb. 2009*)

“Super-hot thermal plasmas in solar flares.” Univ. of California, Berkeley – Physics Dept.; 290B (Space Physics) Seminar (*Apr. 2007*)

“Measuring the temperature of hot solar flare plasma with RHESSI.” Univ. of California, Berkeley – Physics Dept.; 290B (Space Physics) Seminar (*Apr. 2006*)

“Pre-impulsive hard X-ray emission from coronal sources.” NASA Goddard Space Flight Center – Heliophysics Science Division; Solar Physics Group seminar (*Dec. 2005*)

“Analyzing high-temperature solar flare plasmas with RHESSI.” Univ. of California, Berkeley – Physics Dept.; 290B (Space Physics) Seminar (*May 2004*)

NON-REFEREED PUBLICATIONS and TECHNICAL DOCUMENTS:

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9. **Caspi, A.**, & Lin, R. P. 2005, “Distinguishing Between Thermal and Non-Thermal Electron Populations in Solar Flares Using *RHESSI*.” *EOS Trans. AGU*, **86(18)**, Jt. Assem. Suppl., Abstract #SP41C-05
8. Hudson, H., **Caspi, A.**, Dennis, B. R., & Phillips, K. J. H. 2005, “*RHESSI* soft X-ray imaging spectroscopy of a flare.” *EOS Trans. AGU*, **86(18)**, Jt. Assem. Suppl., Abstract #SH31A-03
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SERVICE:

- 2017 Local Organizing Committee chair – *RHESSI* 16th Workshop (Boulder, CO)
Referee – *AAS Journals*, *Journal of Geophysical Research: Space Physics*
- 2016 Science Organizing Committee member, working group leader – *RHESSI* 15th Workshop (Graz, Austria)
Session convener/chair – AGU Fall Meeting, sess. SH11D (oral), SH13A (poster)
AAS Congressional Visits Day participant
Referee – *Solar Physics*, *Journal of Geophysical Research: Space Physics*, *AAS Journals*
External reviewer – NASA Heliophysics
- 2015 Session chair – AAS/AGU TESS #1, session 406 (oral)

- Referee – *Astrophysical Journal*
 External reviewer – NASA Heliophysics
- 2014 Science Organizing Committee member, session leader – *RHESSI* 13th Workshop (Windisch, Switzerland)
 Referee – *Astrophysical Journal*
 Review panel member – NASA Heliophysics
 External reviewer – NASA Heliophysics
- 2013 Science Organizing Committee member, working group leader – *SDO/EVE* Science Working Group Meeting (Boulder, CO)
 Organizing Committee member – Coronal Dimming Working Group Meeting (Boulder, CO)
 Referee – *Solar Physics*, *Astrophysical Journal*
 External reviewer – NASA Heliophysics
- 2012 Science Organizing Committee member, working group leader – *RHESSI/SDO* “Tracing the Connections in Solar Eruptive Events” workshop (Petaluma, CA)
 Science Organizing Committee member – *SDO/EVE* Workshop (Yosemite, CA)
 Local Organizing Committee member – Comet Lovejoy Workshop (Boulder, CO)
 Referee – *Astrophysical Journal*
 External reviewer – NASA Heliophysics
- 2011–2014 Steering Committee member – LASP Interactive Solar Irradiance Datacenter
- 2011 Review panel member – NSF / SHINE
- 2010–2011 Lead copy editor, assistant science editor – Emslie, A. G., Dennis, B. R., Lin, R. P., Hudson, H. S. (eds.) 2011, “High-Energy Aspects of Solar Flares,” a special edition of *Space Science Reviews* (vol. 159, issues 1–4). Uncredited – see Preface (pp. 1–2).
- 2010 Session chair – AGU Fall Meeting, session SH53B (oral)
- 2008 Local Organizing Committee student member – *RHESSI/STEREO/Hinode* “Solar Activity During the Onset of Solar Cycle 24” Workshop (Napa, CA)
- 2006 Group leader – AAS/SPD Heliophysics Summer School (Durham, NH)
- 2005 Proofreading and copy-editing assistance – Aschwanden, M. 2006, “Physics of the Solar Corona.” 2nd ed.