

Stanford



Steven Kahn

Cassius Lamb Kirk Professor of Natural Sciences and Professor of Particle Physics and Astrophysics, Emeritus
SLAC General Program

CONTACT INFORMATION

- **Administrative Contact**

Ping Feng

Email pfeng@stanford.edu

Bio

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, SLAC General Program

Teaching

STANFORD ADVISEES

Doctoral Dissertation Advisor (AC)

Guillem Megias i Homar

Publications

PUBLICATIONS

- **The LSST DESC DC2 Simulated Sky Survey** *ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES*
Abolfathi, B., Alonso, D., Armstrong, R., Aubourg, E., Awan, H., Babuji, Y. N., Bauer, F., Bean, R., Beckett, G., Biswas, R., Bogart, J. R., Boutigny, D., Chard, et al
2021; 253 (1)
- **Improving Astronomy Image Quality Through Real-time Wavefront Estimation**
Thomas, D., Meyers, J., Kahn, S. M., IEEE Comp Soc
IEEE COMPUTER SOC.2021: 2076-2085
- **LSST: From Science Drivers to Reference Design and Anticipated Data Products** *ASTROPHYSICAL JOURNAL*
Ivezic, Z., Kahn, S. M., Tyson, J., Abel, B., Acosta, E., Allsman, R., Alonso, D., AlSayyad, Y., Anderson, S. F., Andrew, J., Angel, J. P., Angeli, G. Z., Ansari, et al
2019; 873 (2)
- **Searching for Subsecond Stellar Variability with Wide-field Star Trails and Deep Learning** *ASTROPHYSICAL JOURNAL*
Thomas, D., Kahn, S. M.
2018; 868 (1)
- **EVIDENCE FOR NONLINEAR GROWTH OF STRUCTURE FROM AN X-RAY-SELECTED CLUSTER SURVEY USING A NOVEL JOINT ANALYSIS OF THE CHANDRA AND XMM-NEWTON ARCHIVES** *ASTROPHYSICAL JOURNAL*
Peterson, J. R., Jernigan, J. G., Gupta, R. R., Bankert, J., Kahn, S. M.
2009; 707 (2): 878-889

- **High-resolution x-ray spectroscopy with the EBIT Calorimeter Spectrometer**
Porter, F., Adams, J. S., Beiersdorfer, P., Brown, G. V., Clementson, J., Frankel, M., Kahn, S. M., Kelley, R. L., Kilbourne, C. A., Cabrera, B., Miller, A., Young, B.
AMER INST PHYSICS.2009: 454-+
- **Performance of the EBIT calorimeter spectrometer** *17th Topical Conference on High-Temperature Plasma Diagnostics*
Porter, F. S., Gygax, J., Kelley, R. L., Kilbourne, C. A., King, J. M., Beiersdorfer, P., Brown, G. V., Thorn, D. B., Kahn, S. M.
AMER INST PHYSICS.2008
- **First-year spectroscopy for the Sloan Digital Sky Survey-II supernova survey** *ASTRONOMICAL JOURNAL*
Zheng, C., Romani, R. W., Sako, M., Marriner, J., Bassett, B., Becker, A., Choi, C., Cinabro, D., DeJongh, F., Depoy, D. L., Dilday, B., Doi, M., Frieman, et al
2008; 135 (5): 1766-1784
- **The XRS microcalorimeter spectrometer at the Livermore electron beam ion trap** *12th International Workshop on Electron Beam Ion Trap*
Porter, F. S., Beck, B. R., Beiersdorfer, P., Boyce, K. R., Brown, G. V., Chen, H., Gygax, J., Kahn, S. M., Kelley, R. L., Kilbourne, C. A., Magee, E., Thorn, D. B.
CANADIAN SCIENCE PUBLISHING, NRC RESEARCH PRESS.2008: 231-40
- **The LSST Camera Overview: Design and Performance** *Conference on Ground-Based and Airborne Instrumentation for Astronomy II*
Gilmore, K., Kahn, S., Nordby, M., O'Connor, P., Oliver, J., Radeka, V., Schalk, T., Schindler, R., Van Berg, R.
SPIE-INT SOC OPTICAL ENGINEERING.2008
- **Laboratory astrophysics in the extreme ultraviolet** *12th International Workshop on Electron Beam Ion Trap*
Lepson, J. K., Beiersdorfer, P., Bitter, M., Kahn, S. M.
CANADIAN SCIENCE PUBLISHING, NRC RESEARCH PRESS.2008: 175-82
- **The Sloan Digital Sky Survey-II Supernova Survey: Technical summary** *ASTRONOMICAL JOURNAL*
Frieman, J. A., Bassett, B., Becker, A., Choi, C., Cinabro, D., DeJongh, F., Depoy, D. L., Dilday, B., Doi, M., Garnavich, P. M., Hogan, C. J., Holtzman, J., Im, et al
2008; 135 (1): 338-347
- **Laboratory measurements of 3 -> 2 X-ray line ratios of F-like Fe XVIII and Ni XX** *ASTROPHYSICAL JOURNAL*
Gu, M. F., Chen, H., Brown, G. V., Beiersdorfer, P., Kahn, S. M.
2007; 670 (2): 1504-1509
- **Evidence for the importance of resonance scattering in X-ray emission line profiles of the O star xi Puppis** *ASTROPHYSICAL JOURNAL*
Leutenegger, M. A., Owocki, S. P., Kahn, S. M., Paerels, F. B.
2007; 659 (1): 642-649
- **Wavelength measurements of Ni L-shell lines between 9 and 15 angstrom** *ASTROPHYSICAL JOURNAL*
Gu, M. F., Beiersdorfer, P., Brown, G. V., Chen, H., Thorn, D. B., Kahn, S. M.
2007; 657 (2): 1172-1177
- **On the putative detection of z > 0 X-ray absorption features in the spectrum of Mrk 421** *ASTROPHYSICAL JOURNAL*
Rasmussen, A. P., Kahn, S. M., Paerels, F., Willem den Herder, J., Kaastra, J., de Vries, C.
2007; 656 (1): 129-138
- **Laboratory measurements of high-n iron L-shell X-ray lines** *ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES*
Chen, H., Gu, M. F., Behar, E., Brown, G. V., Kahn, S. M., Beiersdorfer, P.
2007; 168 (2): 319-336
- **First use of a HyViSI H4RG for astronomical observations** *Conference on Focal Plane Arrays for Space Telescopes III*
Simms, L. M., Figer, D. F., Hanold, B. J., Kerr, D. J., Gilmore, D. K., Kahn, S. M., Tyson, J. A.
SPIE-INT SOC OPTICAL ENGINEERING.2007
- **The X-ray observatory Suzaku** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Mitsuda, K., Bautz, M., Inoue, H., Kelley, R. L., Koyama, K., Kunieda, H., Makshima, K., Ogawara, Y., Petre, R., Takahashi, T., Tsunemi, H., White, N. E., Anabuki, et al
2007; 59: S1-S7
- **X-ray spectral study of the photoionized stellar wind in Vela X-1** *ASTROPHYSICAL JOURNAL*

Watanabe, S., Sako, M., Ishida, M., Ishisaki, Y., Kahn, S. M., Kohmura, T., Nagase, F., Paerels, F., Takahashi, T.

2006; 651 (1): 421-437

- **Measurements and analysis of helium-like triplet ratios in the X-ray spectra of O-type stars** *ASTROPHYSICAL JOURNAL*
Leutenegger, M. A., Paerels, F. B., Kahn, S. M., Cohen, D. H.
2006; 650 (2): 1096-1110
- **Capella corona revisited: A combined view from XMM-Newton RGS and Chandra HETGS and LETGS** *ASTROPHYSICAL JOURNAL*
Gu, M. F., Gupta, R., Peterson, J. R., Sako, M., Kahn, S. M.
2006; 649 (2): 979-991
- **Electron impact excitation cross section measurement for n=3 to n=2 line emission in Fe17+ to Fe23+** *ASTROPHYSICAL JOURNAL*
Chen, H., Gu, M. F., Beiersdorfer, P., Boyce, K. R., Brown, G. V., Kahn, S. M., Kelley, R. L., Kilbourne, C. A., Porter, F. S., Scofield, J. H.
2006; 646 (1): 653-665
- **Energy-dependent excitation cross section measurements of the diagnostic lines of Fe XVII** *PHYSICAL REVIEW LETTERS*
Brown, G. V., Beiersdorfer, P., Chen, H., Scofield, J. H., Boyce, K. R., Kelley, R. L., Kilbourne, C. A., Porter, F. S., Gu, M. F., Kahn, S. M., Szymkowiak, A. E.
2006; 96 (25)
- **Inner-shell absorption lines of FeVI-Fe XVI: A many-body perturbation theory approach** *ASTROPHYSICAL JOURNAL*
Gu, M. F., Holczer, T., Behar, E., Kahn, S. M.
2006; 641 (2): 1227-1232
- **Phonon-mediated distributed transition-edge-sensor X-ray detectors for surveys of galaxy clusters and the warm-hot interstellar medium** *11th International Workshop on Low-Temperature Detectors*
Leman, S. W., Brink, P. L., Cabrera, B., Castle, J. P., Chakraborty, S., Deiker, S., Kahn, S., Martinez-Galarce, D. S., Stern, R. A., Tomada, A.
ELSEVIER SCIENCE BV.2006: 488-90
- **The LSST camera overview** *Conference on Ground-Based and Airborne Instrumentation for Astronomy*
Gilmore, K., Kahn, S., Nordby, M., Burke, D., O'Connor, P., Oliver, J., Radeka, V., Schalk, T., Schindler, R.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Laboratory measurement and theoretical modeling of K-shell X-ray lines from inner-shell excited and ionized ions of oxygen** *ASTROPHYSICAL JOURNAL*
Gu, M. F., Schmidt, M., Beiersdorfer, P., Chen, H., Thorn, D. B., Trabert, E., Behar, E., Kahn, S. M.
2005; 627 (2): 1066-1071
- **Laboratory simulation of cometary X-rays using a high-resolution microcalorimeter** *12th International Conference on the Physics of Highly Charged Ions*
Beiersdorfer, P., Chen, H., Boyce, K. R., Brown, G. V., Kelley, R. L., Kilbourne, C. A., Porter, F. S., Kahn, S. M.
ELSEVIER SCIENCE BV.2005: 116-119
- **Comparisons of laboratory wavelength measurements with theoretical calculations for neon-like through lithium-like argon, sulfur and silicon** *12th International Conference on the Physics of Highly Charged Ions*
Lepson, J. K., Beiersdorfer, P., Behar, E., Kahn, S. M.
ELSEVIER SCIENCE BV.2005: 131-134
- **Emission-line spectra of SVII-S XIV in the 20-75 Å wavelength region** *ASTROPHYSICAL JOURNAL*
Lepson, J. K., Beiersdorfer, P., Behar, E., Kahn, S. M.
2005; 625 (2): 1045-1061
- **XMM-Newton observations of the heavily absorbed Seyfert 1 galaxy IC 4329A** *ASTRONOMY & ASTROPHYSICS*
Steenbrugge, K. C., Kaastra, J. S., Sako, M., Branduardi-Raymont, G., Behar, E., Paerels, F. B., Blustin, A. J., Kahn, S. M.
2005; 432 (2): 453-462
- **Excitation cross section measurement for n=3 to n=2 line emission in Fe20+ to Fe23+** *ASTROPHYSICAL JOURNAL*
Chen, H., Beiersdorfer, P., Scofield, J. H., Brown, G. V., Boyce, K. R., Kelley, R. L., Kilbourne, C. A., Porter, F. S., Gu, M. F., Kahn, S. M.
2005; 618 (2): 1086-1094
- **New results in laboratory X-ray astrophysics** *25th General Assembly of the International-Astronomical-Union*
Beiersdorfer, P., Chen, H., Boyce, K. R., Brown, G. V., Kelley, R. L., Porter, F. S., Stahle, C. K., Lepson, J. K., Jernigan, J. G., Wargelin, B. J., Kahn, S. M.
ASTRONOMICAL SOC PACIFIC.2005: 633-639

- **Multivariate Monte Carlo methods for the reflection grating spectrometers on XMM-Newton** *ASTROPHYSICAL JOURNAL*
Peterson, J. R., Jernigan, J. G., Kahn, S. M.
2004; 615 (1): 545-554
- **The Astro-E2 X-ray spectrometer/EBIT microcalorimeter x-ray spectrometer** *15th Topical Conference on High-Temperature Plasma Diagnostics*
Porter, F. S., Brown, G. V., Boyce, K. R., Kelley, R. L., Kilbourne, C. A., Beiersdorfer, P., Chen, H., Terracol, S., Kahn, S. M., Szymkowiak, A. E.
AMER INST PHYSICS.2004: 3772-74
- **Detection of a fully resolved Compton shoulder of the iron K alpha line in the Chandra X-ray spectrum of GX 301-2** *ASTROPHYSICAL JOURNAL*
Watanabe, S., Sako, M., Ishida, M., Ishisaki, Y., Kahn, S. M., KOHMURA, T., Morita, U., Nagase, F., Paerels, F., Takahashi, T.
2003; 597 (1): L37-L40