

BRADFORD J. WARGELIN

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Education

1993 Ph.D. Physics, University of California, Berkeley
1985 S.B. Physics, Massachusetts Institute of Technology

Professional History

2016– *X-Ray Surveyor/Lynx* Science and Technology Definition Team: Stellar Cycles
2009 *International X-ray Observatory (IXO)* Science Team Associate
2008–2009 *Generation-X (Gen-X)* Facility Science Team: Planets, Stars, and the Galaxy
2008 *Constellation-X (Con-X)* Facility Science Teams: Solar System, Planet Formation & Evolution;
MHD Physics in Stellar Environments; Plasma Diagnostics & Atomic Astrophysics
1998– *Chandra* X-Ray Center Calibration Scientist, Smithsonian Astrophysical Observatory
1993–1998 *AXAF* Ground Calibration Scientist, Smithsonian Astrophysical Observatory

Recent Research Grants

2023 PI, “F-Star Stellar Cycles,” *Chandra* Cycle 25 (150 ks)
2021 PI, “The X-Ray View of Stellar Cycles,” *XMM-Newton* Cycle 20 (51 ks)
2021 PI, “Does Proxima Centauri Really Have a Stellar Cycle?,” *Swift* Cycle 76 (36 ks)
2020 PI, “X-Ray Stellar Cycles at Low Rossby Number,” *Chandra* Cycle 22 (90 ks/3 yr)
2020 PI, “Proxima Centauri’s Stellar Cycle,” *Swift* Cycle 16 (42 ks)
2019 PI, “X-Ray Stellar Cycles at Low Rossby Number,” *Chandra* Cycle 21 (105 ks)
2019 PI, “The X-Ray View of Stellar Cycles,” *XMM-Newton* Cycle 18 (25 ks)
2019 PI, “Proxima Centauri’s Stellar Cycle,” *Swift* Cycle 15 (49 ks)
2018 PI, “Stellar Cycle Sampling: the X-Ray Expansion,” *XMM-Newton* Cycle 17 (65 ks)
2017 PI, “Proxima Centauri’s Stellar Cycle,” *Swift* Cycle 13 (38 ks)
2017 PI, “The Stellar Cycle of Proxima Centauri,” *XMM-Newton* Cycle 16 (80 ks)

General Fields of Interest

Stellar astrophysics: coronae, stellar cycles and winds, stellar wind charge exchange, soft X-ray background
Laboratory UV/X-ray physics: high-resolution spectroscopy, charge exchange, optics and detectors

Selected Recent Publications

- “Stellar Cycles in Fully Convective Stars and a New Interpretation of Dynamo Evolution,”
Z.A. Irving, S.H. Saar, B.J. Wargelin, & José-Dias do Nascimento, Jr., *Astrophys. J.* **949**, 51 (2023)
- “Pointing *Chandra* Toward the Extreme Ultraviolet Fluxes of Very Low-Mass Stars,”
J.J. Drake, V.L. Kashyap, B.J. Wargelin, and S.J. Wolk, *Astrophys. J.* **893**, 137 (2020)
- “Optical, UV, and X-Ray Evidence for a 7-Year Stellar Cycle in Proxima Centauri,”
B.J. Wargelin, S.H. Saar, G. Pojmański, J.J. Drake, and V.L. Kashyap, *MNRAS* **464**, 3281 (2017)
- “Observation and Modeling of Geocoronal Charge Exchange X-Ray Emission During Solar Wind Gusts,”
B.J. Wargelin, M. Kornbleuth, P.L. Martin, and M. Juda, *Astrophys. J.* **796**, 28 (2014)
- “Solar Wind Charge Exchange Emission in the *Chandra* Deep Field North,”
J.D. Slavin, B.J. Wargelin, and D. Koutroumpa, *Astrophys. J.* **779**, 13 (2013)
- “X-Ray Flaring on the dMe Star, Ross 154,”
B.J. Wargelin, V.L. Kashyap, J.J. Drake, D. García-Alvarez, and P.W. Ratzlaff, *ApJ* **676**, 610 (2008)
- “EBIT Charge-Exchange Measurements and Astrophysical Applications,”
B.J. Wargelin, P. Beiersdorfer, and G.V. Brown, *Can. J. Phys.* **86**, 151 (2008)