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User and Staff FEL/Light Sources Publications

2012 Publications, Conferences and JLab Technical Notes

1. G. Ciovatti, Steven M. Anlage, C. Baldwin, G. Cheng, R. Flood, K. Jordan, P. Kneisel, M. Morrone, G. Nemes, L. Turlington, H. Wang, K. Wilson and S. Zhang, "Low temperature laser scanning microscopy of a superconducting radio-frequency cavity", Review of Scientific Instruments **83** 034704 (2012).
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3. S. Benson, D. Douglas, G. Neil, M. Shinn and G. Williams, "A synchronized VUV/THz Light Source at Jefferson Lab", abstract compiled for IPAC'12, New Orleans, LA May 20-25, 2012.
4. Michelle Shinn, Stephen Benson, George Biallas, Donald Bullard, Lawrence Dillon-Townes, Joseph Gubeli, Christopher Gould, George Neil, John Rathke and Tom Schultheiss, "Design and performance of an adjustable radius of curvature mirror using a thermal gradient", prepared for Review of Scientific Instruments.
5. S. V. Benson, D. R. Douglas, P. Evtushenko, F. E. Hannon, C. Hernandez-Garcia, J. M. Klopf, R. A. Legg, G. R. Neil, M. D. Shinn, C. D. Tennant, S. Zhang and G.P. Williams, "Photon Source Capabilities of the Jefferson Lab FEL", Synchrotron Radiation Instrumentation, Lyon, France, July 9-13, 2012.
6. Stephen Benson, Pavel Evtushenko, Carlos Hernanadez-Garcia, Christopher Tennant, "Longitudinal space charge effects in the JLab FEL", invited talk, abstract compiled for 4th Microbunching Instability Workshop, College Park, MD, April 11-13, 2012.
7. James R. Boyce, George Biallas, Taylor Robinson, Michelle Shinn, Olover Keith Baker, Kevin Beard, Mimi Minarni, "LIPSS status and LIPSS-2 future experiments", abstract compiled for the APS April meeting, Atlanta, Georgia, March 31 – April 3, 2012.
8. Carlos Hernandez-Garcia, Fay Hannon, Marcy Stutzman, V. Shutthanandan, Z. Zhu, N. Nadrasi, S. V. Kuchibhatla, S. Thevuthasan, W.P .Hess, "Surface science analysis of GaAS photocathodes following sustained beam delivery", Physical Review Special Topics AB **15,** 063501 (2012).
9. J. M. Klopf, G. P. Williams, "The Jefferson Lab High Power Broadband THz Facility", abstract compiled for Workshop on THz sources for time resolved studies of matter, Argonne National Lab, July 30-31, 2012.

10. Yaroslav Derbenev, David Douglas, Andrew Hutton, Geoffrey Krafft, Yuhong Zhang, “A test facility for MEIC ERL-circulator-ring based electron cooler”, abstract compiled for IPAC’12, New Orleans, LA May 20-25, 2012.
11. Yaroslav Derbenev, David Douglas, Andrew Hutton, Geoffrey Krafft, Rui Li, Fanglei Lin, Vasily Morozov, Edward Nissen, Fulvia Pilat, Todd Satogata, Christopher Tennant, Balsa Terzic, Byung Yunn, Yuhong Zhang, “MEIC Design Progress”, abstract compiled for IPAC’12, New Orleans, LA May 20-25, 2012.
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13. David Douglas, Stephen Benson, Pavel Evtushenko, Joseph Gubeli, Carlos Hernandez-Garcia, Robert Legg, George Neil, Thomas Powers, Michelle Shinn, Christipher Tennant and Gwyn Williams, “High Average Power UV Free-Electron Laser Experiments at JLab”, Invited talk at IPAC’12, New Orleans, LA May 20-25, 2012.
14. Charles Forman and Michael Kelley, “Surface replication and characterization of a high-performing niobium superconducting radiofrequency cavity”, compiled for Phys. Rev. Special Topics AB (2012).
15. J.G. Kulpin, K. J. Kleman and Robert Legg, “The use of a solid state television transmitter as a superconducting electron gun power amplifier”, abstract compiled for IPAC’12, New Orleans, LA May 20-25, 2012.
16. Michael Kelley, “Topography management for niobium SRF accelerator cavities”, abstract compiled for the American Vacuum Society Meeting, October 28 – November 2, 2012.
17. The Jefferson Lab FEL: User operation and safety in its user labs”, abstract compiled for 8th Annual DOE Laser Safety Office Workshop, SLAC, September 11-13, 2012.
18. R.A. Bosch, K. J. Kleman and Robert Legg, “Simulated performance of the Wisconsin superconducting electron gun”, paper compiled for IPAC’12, New Orleans, LA May 20-25, 2012.
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20. Gwyn Williams, “Looking back at international synchrotron radiation instrumentation”, Synchrotron Radiation News, **25#2** 32 (2012).
21. Pavel Evtushenko, David Douglas, Robert Legg, Christopher Tennant, “Hugh dynamic range beam imaging with two simultaneously sampling ccds”, paper compiled for FEL 2012, Nara, Japan, August 26-31 2012.
22. Carlos Hernandez-Garcia, Fay Hannon, C. Boulware, J. Corlett, Katherine Harkay, T. Kamps, M. Krasilnikov, Boris Militsyn, T. Quast, F. Sannibale and

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25. Shukui Zhang, “An overview of new laser technologies for applications in beam instrumentation”, abstract compiled for Beam Instrumentation Workshop, Jefferson Lab, April 15-19, 2012.
26. David Hardy and John Musson, “Adaptive filter techniques for vibration suppression in the IR and UV FELs”, poster compiled for FEL 2012, Nara, Japan, August 26-31 2012.
27. Michelle D. Shinn, Stephen V. Benson, Anne M. Watson, Henry P. Freund, Dinh C. Nguyen, Peter J.M. van der Slot, “A new approach to improving the efficiency of FEL oscillator simulations”, paper compiled for FEL 2012, Nara, Japan, August 26-31 2012.
28. Stephen Gottschalk, Stephen Benson and Wesley Moore, “The JLAB UV Undulator”, paper compiled for FEL 2012, Nara, Japan, August 26-31 2012.
29. C. Tennant and D. Douglas, "Coherent Synchrotron Radiation Induced Beam Degradation in the MEIC Circulator Cooler Ring", Jefferson Lab TN-12-027 (2012).
30. C. Tennant and D. Douglas, “Initial Parametric Study of Coherent Synchrotron Radiation Effects in the MEIC Circulator Cooler Ring”, Jefferson Lab TN-12-028 (2012).
31. C. Tennant, "Measured HOM Frequency Shifts from a Detuned Cavity", Jefferson Lab TN-12-039 (2012).
32. C. Tennant and D. Douglas, “Overview of Existing ERLs”, ICFA Beam Dynamics Newsletter, **58** 100 (2012).
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8. C. Tennant & D. Douglas, Design Concept for a Compact ERL to Drive a VUV/Soft X-Ray FEL”, Proceedings of PAC 2011, New York, USA p. 2468 (2011).
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21. C. Tennant, S. Benson, D. Douglas, P. Evtushenko and R. Legg, "An Electron Bunch Compression Scheme for a Superconducting Radio Frequency Linear Accelerator Driven Light Source", Proceedings of IPAC 2011, San Sebastian, Spain p. 3134 (2011).

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