Editorial: Outstanding PRST-AB Articles from 2010

Under an initiative of PRST-AB Editorial Board Member Vladimir Shiltsev, six outstanding PRST-AB papers from the year 2010 have been selected and approved by the PRST-AB Editors. The selection criteria included the original referee assessments, the number of citations since publication, and the editors' own impression of a paper's importance. The selected PRST-AB articles from 2010 provide a well balanced picture of PRST-AB coverage:

1. Z. Huang, A. Brachmann, F.-J. Decker, Y. Ding, D. Dowell, P. Emma, J. Frisch, S. Gilevich, G. Hays, Ph. Hering, R. Iverson, H. Loos, A. Miahnahri, H.-D. Nuhn, D. Ratner, G. Stupakov, J. Turner, J. Welch, W. White, J. Wu, and D. Xiang, Measurements of the linac coherent light source laser heater and its impact on the x-ray free-electron laser performance, *Phys. Rev. ST Accel. Beams* **13**, 020703 (2010).

2. Christopher M. S. Sears, Alexander Buck, Karl Schmid, Julia Mikhailova, Ferenc Krausz, and Laszlo Veisz, Emittance and divergence of laser wakefield accelerated electrons, *Phys. Rev. ST Accel. Beams* **13**, 092803 (2010).

3. F. Stephan, C. H. Boulware, M. Krasilnikov, J. Bähr, G. Asova, A. Donat, U. Gensch, H. J. Grabosch, M. Hänel, L. Hakobyan, H. Henschel, Y. Ivanisenko, L. Jachmann, S. Khodyachykh, M. Khojoyan, W. Köhler, S. Korepanov, G. Koss, A. Kretzschmann, H. Leich, H. Lüdecke, A. Meissner, A. Oppelt, B. Petrosyan, M. Pohl, S. Riemann, S. Rimjaem, M. Sachwitz, B. Schöneich, T. Scholz, H. Schulze, J. Schultze, U. Schwendicke, A. Shapovalov, R. Spesyvtsev, L. Staykov, F. Tonisch, T. Walter, S. Weisse, R. Wenndorff, M. Winde, L. v. Vu, H. Dürr, T. Kamps, D. Richter, M. Sperling, R. Ovsyannikov, A. Vollmer, J. Knobloch, E. Jaeschke, J. Boster, R. Brinkmann, S. Choroba, K. Flechsenhar, K. Flöttmann, W. Gerdau, V. Katalev, W. Koprek, S. Lederer, C. Martens, P. Pucyk, S. Schreiber, S. Simrock, E. Vogel, V. Vogel, K. Rosbach, I. Bonev, I. Tsakov, P. Michelato, L. Monaco, C. Pagani, D. Sertore, T. Garvey, I. Will, I. Templin, W. Sandner, W. Ackermann, E. Arévalo, E. Gjonaj, W. F. O. Müller, S. Schnepf, T. Weiland, F. Wolfheimer, J. Rösner, and J. Rossbach, Detailed characterization of electron sources yielding first demonstration of European X-ray Free-Electron Laser beam quality, *Phys. Rev. ST Accel. Beams* **13**, 020704 (2010).

4. V. Danilov and S. Nagaitsev, Nonlinear accelerator lattices with one and two analytic invariants, *Phys. Rev. ST Accel. Beams* **13**, 084002 (2010).

5. Yuantao Ding, Zhirong Huang, and Ronald D. Ruth, Two-bunch self-seeding for narrow-bandwidth hard x-ray free-electron lasers, *Phys. Rev. ST Accel. Beams* **13**, 060703 (2010).

6. K. R. LeChien, W. A. Stygar, M. E. Savage, P. E. Wakeland, V. Anaya, D. S. Artery, M. J. Baremore, D. E. Bliss, R. Chavez, G. D. Coombs, J. P. Corley, P. A. Jones, A. K. Kipp, B. A. Lewis, J. A. Lott, J. J. Lynch, G. R. McKee, S. D. Ploor, K. R. Prestwich, S. A. Roznowski, D. C. Spencer, S. D. White, and J. R. Woodworth, 6.1-MV, 0.79-MA laser-triggered gas switch for multimodule, multiterawatt pulsed-power accelerators, *Phys. Rev. ST Accel. Beams* **13**, 030401 (2010).

This identification of six key articles from 2010 represents a first step towards bringing important papers to the attention of our readers. Improved mechanisms and modes for highlighting outstanding PRST-AB articles are presently under development.

Frank Zimmermann
Editor

Published 17 January 2012

DOI: [10.1103/PhysRevSTAB.15.010001](https://doi.org/10.1103/PhysRevSTAB.15.010001)

PACS numbers: 01.30.Ww