

**PUBLICATIONS - JULIEN FUCHS, as of August 28, 2017**

**H-index: 42**

**○ PUBLICATIONS IN PEER-REVIEWED JOURNALS:**

My publications are listed with the following color code: w/o color for publications associated to the research mainly driven by my group (“SPRINT”<sup>1</sup>), **blue** for the publications performed jointly, but led by other groups, **green** for publications I did before having my own group (during my first years at CNRS when I was working in the group of C. Labaune), and in **grey** for the publications I did during my PhD.

**Student and postdoctoral advisees are underlined.**

Submitted publications

D. P. Higginson, B. Khair, G. Revet, J. Béard, M. Blecher, M. Borghesi, K. Burdonov, S. N. Chen, E. Filippov, D. Khaghani, K. Naughton, H. Pépin, S. Pikuz, O. Portugall, C. Riconda, R. Riquier, R. Rodriguez, S. N. Ryazantsev, I. Yu. Skobelev, A. Soloviev, M. Starodubtsev, T. Vinci, O. Willi, A. Ciardi, and **J. Fuchs**

« *Enhancement of quasi-stationary shocks and heating via temporal-staging in a magnetized, laser-plasma jet* »

in review at Phys. Rev. Lett.

M. Nakatsutsumi, Y. Sentoku, S. N. Chen, S. Buffechoux, A. Kon, A. Korzhimanov, L. Gremillet, B. Atherton, P. Audebert, M. Geissel, L. Hurd, M. Kimmel, P. Rambo, M. Schollmeier, J. Schwarz, M. Starodubtsev, R. Kodama, and **J. Fuchs**

« *On magnetic inhibition of laser-driven, sheath-accelerated high-energy protons* »

in review at Nat. Comm.

P. Antici, E. Boella, S.N. Chen, M. Barberio, J. Böker, F. Cardelli, M. Glesser, L. Romagnani, M. Sciscio, M. Starodubtsev, O. Willi, J.C. Kieffer, H. Pépin, L. O. Silva, E. d’Humières, **J. Fuchs**

„*Acceleration of 45 MeV protons in low-density plasmas by strong collisionless shocks driven by a  $10^{20}$  W/cm<sup>2</sup>, 1  $\mu$ m wavelength laser*“

in review at Sci. Rep., arxiv: 1708.02539

S.N. Chen, M. Vranic, T. Gangolf, E. Boella, P. Antici, M. Bailly-Grandvaux, P. Loiseau, H. Pépin, G. Revet, J. J. Santos, A.M. Schroer, Mikhail Starodubtsev, O. Willi, L. O. Silva, E. d’Humières, **J. Fuchs**

„*Collimated protons accelerated from an overdense gas jet irradiated by a 1  $\mu$ m wavelength high-intensity short-pulse laser*“

submitted to Sci. Rep., arxiv: 1708.02492

G. Revet, S.N. Chen, R. Bonito, B. Khair, E. Filippov, C. Argiroffi, D. P. Higginson, S. Orlando, J. Béard, M. Blecher, M. Borghesi, K. Burdonov, D. Khaghani, K. Naughton, H. Pépin, O. Portugall, R. Riquier, R. Rodriguez, S.N. Ryazantsev, I.Yu. Skobelev, A. Soloviev, O. Willi, S. Pikuz, A. Ciardi, **J. Fuchs**

„*Laboratory unravelling of matter accretion in young stars*“

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<sup>1</sup> <http://www.luli.polytechnique.fr/home/teams/research-teams/sources-de-particules-de-rayonnement-intenses/>

in review at Science Advances, arxiv: 1708.02528

C. Ruyer, B. Albertazzi, S.N. Chen, P. Antici, J. Böker, V. Dervieux, L. Lancia, M. Nakatsutsumi, L. Romagnani, R. Shepherd, M. Swantusch, M. Borghesi, O. Willi, H. Pépin, M. Starodubtsev, M. Grech, C. Riconda, L. Gremillet, and **J. Fuchs**

„*Experimental evidence of Weibel-type magnetic fluctuations driven by fast electron thermalization in solid targets*“

in review at Nature Phys.

Published:

160 A. Soloviev, K. Burdonov, S. N. Chen, A. Ereemeev, S. Pikuz, G.V. Pokrovskiy, T.A. Pikuz, G. Revet, A. Sladkov, V. Ginzburg, E. Khazanov, A. Kuzmin, R. Osmanov, I. Shaykin, A. Shaykin, I. Yakovlev, M. Starodubtsev, and **J. Fuchs**

« *Experimental evidence for short-pulse laser heating of solid-density target to high bulk temperatures* »

Sci. Rep. (2017); accepted, in print

159 **I. Prencipe**, **J. Fuchs**, S. Pascarelli, D. Shumacher, R. B. Stephens, N. B. Alexander, R. Briggs, M. BuescherBüscher, M. O. Cernaianu, A. Choukourov, M. De Marco, A. Erbe, J. Fassbender, G. Fiquet, P. Fitzsimmons, C. Gheorghiu, J. Hund, L. G. Huang, M. Harmand, N. Hartley, A. Irman, T. Kluge, Z. Konopkova, S. Kraft, D. Kraus, V. Leca, D. Margarone, J. Metzkes, K. Nagai, W. Nazarow, P. Lutoslawski, D. Papp, M. Passoni, A. Pelka, J. P. Perin, J. Schulz, M. Smid, C. Spindloe, S. Steinke, R. Torchio, C. Vass, T. Wiste, R. Zaffino, K. Zeil, T. Tschentscher, U. Schramm, and T. E. Cowan

“*Targets for high repetition rate laser facilities: needs, challenges and perspectives*”

High Power Laser Science and Engineering **5**, e17 (2017); <http://dx.doi.org/10.1017/hpl.2017.18>

158 Alejo, Aaron; Krygier, Andrew; Ahmed, Hamad; Morrison, John; Clarke, Rob; **Fuchs, Julien**; Green, Alexander; Green, James; Jung, Daniel; Kleinschmidt, Annika; Najmudin, Zulfikar; Nakamura, Hiro; Norreys, Peter; Oliver, Matthew; Roth, Markus; Vassura, Laura; Zepf, Matthew; Borghesi, Marco; Freeman, Richard; Kar, Satyabrata

“*High flux, beamed neutron sources employing deuteron-rich ion beams from D<sub>2</sub>O-ice layered targets*”

Plasma Phys. Control. Fusion **59**, 064004 (2017) ; <https://doi.org/10.1088/1361-6587/aa684a>

157 D. P. Higginson, G. Revet, B. Khlar, J. Béard, M. Blecher, M. Borghesi, K. Burdonov, S. N. Chen, E. Filippov, D. Khaghani, K. Naughton, H. Pépin, S. Pikuz, C. Riconda, R. Riquier, S. N. Ryazantsev, A. Soloviev, I. Yu. Skobelev, M. Starodubtsev, T. Vinci, O. Willi, A. Ciardi, and **J. Fuchs**

“*Detailed Characterization of Laser-Produced Astrophysically-Relevant Jets Formed via a Poloidal Magnetic Nozzle*”

High Energy Dens. Physics **23**, 48-59 (2017); <https://doi.org/10.1016/j.hedp.2017.02.003>

156 С. А. Пикуз, И. Ю. Скобелев, М. А. Алхимова, Г. В. Покровский, Дж. Колган, Т. А. Пикуз, А. Я. Фаенов, А. А. Соловьев, К. Ф. Бурдонов, А. А. Еремеев, А. Д. Сладко, Р. Р. Османов, М.В.Стародубцев, В.Н.Гинзбург, А.А.Кузьмин, А.М.Сергеев, **Дж.Фукс**, Е.А.Хазанов, А. А. Шайкин, И. А. Шайкин, И. В. Яковлев

"Формирование плазмы с определяющей ролью радиационных процессов при облучении тонких фольг импульсом субпетаваттного лазера PEARL"

Письма в ЖЭТФ, том 105, вып. 1, с. 15 – 20 (2017).

The English edition (JETP Letters):

S. A. Pikuz, I. Yu. Skobelev, M. A. Alkhimova, G. V. Pokrovskii, J. Colgan, T. A. Pikuz, A. Ya. Faenov, A. A. Soloviev, K. F. Burdonov, A. A. Ereemeev, A. D. Sladko, R. R. Osmanov, M. V. Starodubtsev, V. N. Ginzburg, A. A. Kuz'min, A. M. Sergeev, **J. Fuchs**, E. A. Khazanov, A. A. Shaikin, I. A. Shaikin, I. V. Yakovlev

*“Formation of a plasma with the determining role of radiative processes in thin foils irradiated by a pulse of the PEARL subpetawatt laser”*

JETP Letters **105**, Issue 1, pp 13–17 (2017); <https://doi.org/10.1134/S0021364017010131>

155 F. NEGOITA, M. ROTH, P.G. THIROLF, S. TUDISCO, F. HANNACHI, S. MOUSTAIZIS, I. POMERANTZ, P. MCKENNA, **J. FUCHS**, K. SPHOR, G. ACBAS, A. ANZALONE, P. AUDEBERT, S. BALASCUTA, F. CAPPUZZELLO, M.O. CERNAIANU, S. CHEN, I. DANCUS, R. FREEMAN, H. GEISSEL, P. GHENUCHE, L. GIZZI, F. GOBET, G. GOSSELIN, M. GUGIU, D. HIGGINSON, E. D'HUMIERES, C. IVAN, D. JAROSZYNSKI, S. KAR, L. LAMIA, V. LECA, L. NEAGU, G. LANZALONE, V. MEOT, S.R. MIRFAYZI, I.O. MITU, P. MOREL, C. MURPHY, C. PETCU, H. PETRASCU, C. PETRONE, P. RACZKA, M. RISCA, F. ROTARU, J.J. SANTOS, D. SCHUMACHER, D. STUTMAN, M. TARISIEN, M. TATARU, B. TATULEA, I.C.E. TURCU, M. VERSTEEGEN, D. URSESCU, S. GALES, N.V. ZAMFIR  
*„Laser driven nuclear physics at ELI-NP“*  
 Romanian Rept. in Phys. **68**, S37 (2016); [http://www.rpp.infim.ro/2016\\_68\\_S/S37.pdf](http://www.rpp.infim.ro/2016_68_S/S37.pdf)

154 Sergey Ryazantsev, Igor Skobelev, Anatoly Faenov, Tatiana Pikuz, Drew Higginson, Sophia Chen, Guilhem Revet, Jérôme Béard, Oliver Portugall, Alexander Soloviev, Alexei Grum-Grzhimailo, **Julien Fuchs**, and Sergey Pikuz.  
*„Diagnostics of laser-produced plasmas based on the analysis of intensity ratios of He-like ions X-ray emission“*  
 Physics of Plasmas **23**, 123301 (2016); <http://doi.org/10.1063/1.4971805>

153 M. Chiaramello, C. Riconda, F. Amiranoff, **J. Fuchs**, M. Grech, L. Lancia, J.-R. Marquès, T. Vinci, and S. Weber  
*“Optimization of interaction conditions for efficient short laser pulse amplification by Stimulated Brillouin Scattering in the Strongly Coupled regime”*  
 Phys. Plasmas **23**, 072103 (2016); <http://dx.doi.org/10.1063/1.4955322>

152 S. N. Chen, M. Gauthier, M. Bazalova-Carter, S. Glenzer, R. Riquier, G. Revet, P. Antici, A. Morabito, A. Propp, M. Starodubstev, **J. Fuchs**  
*“Absolute dosimetric characterization of GAFCHROMIC EBT3 and HDv2 films using commercial flat-bed scanners and evaluation of the scanner response function variability”*  
 Rev. Sci. Inst. **87**, 073301 (2016); <http://dx.doi.org/10.1063/1.4954921>

151 K. F. Burdonov, A. A. Ereemeev, N. I. Ignatova, R. R. Osmanov, A. D. Sladkov, A. A. Soloviev, M. V. Starodubtsev, V. N. Ginzburg, A. A. Kuz'min, A. V. Maslennikova, G. Revet, A. M. Sergeev, **J. Fuchs**, E. A. Khazanov, S. Chen, A. A. Shaykin, I. A. Shaikin, and I. V. Yakovlev  
*“Experimental stand for studying the impact of laser-accelerated protons on biological objects”*  
 Quantum Electronics **46**, 4 (2016); <http://dx.doi.org/10.1070/QEL16043>

Citations: 0

AI: 0.2

- 150 L. Lancia, A. Giribono, L. Vassura, M. Chiamello, C. Riconda, S. Weber, A. Castan, A. Chatelain, A. Frank, T. Gangolf, M. Quinn, **J. Fuchs**, and J.-R. Marquès  
 “Signatures of the self similar regime of strongly-coupled stimulated Brillouin scattering for efficient short laser pulse amplification”  
 Phys. Rev. Lett. **116**, 075001 (2016); <http://dx.doi.org/10.1103/PhysRevLett.116.075001>  
 Citations: 0  
 AI: 3.5
- 149 S.N. Chen, T. Iwawaki, K. Morita, P. Antici, S. Baton, F. Filippi, H. Habara, M. Nakatsutsumi, P. Nicolai, W. Nazarov, C. Rousseaux, M. Starodubstev, K.A. Tanaka, **J. Fuchs**  
 “Density and temperature characterization of long-scale length, near-critical density controlled plasma produced from ultra-low density plastic foam”  
 Scientific Reports **6**, 21495 (2016); doi:10.1038/srep21495  
 Citations: 0  
 AI: 2
- 148 N P Dover, C A J Palmer, M J V Streeter, H Ahmed, B Albertazzi, M Borghesi, D C Carroll, **J Fuchs**, R Heathcote, P Hilz, K F Kakolee, S Kar, R Kodama, A Kon, D A MacLellan, P McKenna, S R Nagel, D Neely, M M Notley, M Nakatsutsumi, R Prasad, G Scott, M Tampo, M Zepf, J Schreiber and Z Najmudin  
 „Buffered high charge spectrally-peaked proton beams in the relativistic-transparency regime“  
 New Journal of Physics **18**, 013038 (2016); <http://dx.doi.org/10.1088/1367-2630/18/1/013038>  
 Citations: 1  
 AI: 2
- 147 B. Albertazzi, E. d’Humières, L. Lancia, V. Dervieux, P. Antici, J. Bocker, M. Borghesi, J. Breil, S.N. Chen, J.L. Feugeas, M. Nakatsutsumi, P. Nicolai, L. Romagnagni, R. Shepherd, Y. Sentoku, M. Starodubtsev, M. Swantusch, V. T. Tikhonchuk, O. Willi, H. Pépin, **J. Fuchs**  
 “Dynamics and Structure of Self-generated Magnetic Fields on solids following high contrast, high intensity laser irradiation”  
 Phys. Plasmas **22**, 123108 (2015); <http://dx.doi.org/10.1063/1.4936095>  
 Citations: 0  
 AI: 0.6
- 146 Seyed R. Mirfayzi, Satyabrata Kar, Hamad Ahmed, Andrew Krygier, Alexander Green, Aaron Alejo, Robert Clarke, R.R. Freeman, **Julien Fuchs**, D. Jung, Annika Kleinschmidt, John Morrison, Zulfikar Najmudin, Hiroataka Nakamura, Peter Norreys, Matthew Oliver, Markus Roth, Laura Vassura, Matt Zepf, and Marco Borghesi  
 “Calibration of Time Of Flight Detectors Using Laser-driven Neutron Source”  
 Rev. Sci. Inst. **86**, 073308 (2015); <http://dx.doi.org/10.1063/1.4923088>  
 Citations: 2  
 AI: 0.6
- 145 D. P. Higginson, L. Vassura, M. M. Gugui, F. Negoita, S. Brauckmann, C. Diouf, A. Green, S. Kar, H. Petruscu, S. Sofia, M. Stardubtsev, M. Borghesi, O. Willi, and **J. Fuchs**  
 “Temporal Narrowing of Neutrons Produced by High-Intensity, Short-Pulse Lasers”  
 Phys. Rev. Lett. **115**, 054802 (2015),  
<http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.115.054802>  
 Citations: 0

AI: 3.5

- 144 T. Iwawaki; H. Habara; S. Baton; K. Morita; **J. Fuchs**; S. Chen; M. Nakatsutsumi; C. Rousseaux; F. Filippi; W. Nazarov; K.A. Tanaka  
 “Collimation of fast electrons in critical density plasma channel”  
 Plasma and Fusion Research **10**, 1304005 (2015),  
[http://www.jspf.or.jp/PFR/PFR\\_articles/pfr2015/pfr2015\\_10-1304005.html](http://www.jspf.or.jp/PFR/PFR_articles/pfr2015/pfr2015_10-1304005.html)  
 Citations: 0

- 143 A.G. Krygier, J.T. Morrison, S. Kar, H. Ahmed, A. Alejo, R. Clarke, **J. Fuchs**, A. Green, D. Jung, A. Kleinschmidt, Z. Najmudin, H. Nakamura, G. Nersisyan, P. Norreys, M. Notley, M. Oliver, M. Roth, L. Vassura, M. Zepf, M. Borghesi, and R.R. Freeman  
 “*Selective Deuterium Ion Acceleration Using the Vulcan PW Laser*”  
 Phys. Plasmas **22**, 053102 (2015), <http://dx.doi.org/10.1063/1.4919618>  
 Citations: 2  
 AI: 0.6

- 142 B. Albertazzi, E. d’Humières, L. Lancia, V. Dervieux, P. Antici, J. Böcker, J. Bonlie, J. Breil, B. Cauble, S.N. Chen, J.L. Feugeas, M. Nakatsutsumi, P. Nicolaï, L. Romagnani, R. Shepherd, Y. Sentoku, M. Swantusch, V. T. Tikhonchuk, M. Borghesi, O. Willi, H. Pépin, **J. Fuchs**  
 “*A compact broadband ion beam focusing device based on laser-driven MG thermoelectric magnetic fields*”  
 Rev. Sci. Inst. **86**, 043502 (2015); <http://dx.doi.org/10.1063/1.4917273>  
 Citations: 1  
 AI: 0.6

- 141 A. Lévy, P. Audebert, R. Shepherd, J. Dunn, M. Cammarata, O. Ciricosta, F. Deneuille, F. Dorchies, M. Fajardo, C. Fourment, D. Fritz, **J. Fuchs**, J. Gaudin, M. Gauthier, A. Graf, H.J. Lee, H. Lemke, B. Nagler, J. Park, O. Peyrusse, A. B. Steel, S. M. Vinko, J. S. Wark, G. O. Williams, D. Zhu and R. W. Lee  
 “*The Creation of Large-Volume, Gradient-Free Warm Dense Matter with an X-ray Free-Electron Laser*”  
 Phys. Plasmas **22**, 030703 (2015); <http://dx.doi.org/10.1063/1.4916103>  
 Citations: 6  
 AI: 0.6

- 140 C. Riconda, S. Weber, L. Lancia, J.-R. Marquès, G. Mourou and **J. Fuchs**  
 “*Plasma-based creation of short light pulses: analysis and simulation of amplification and focusing*”  
 Plasma Phys. Contr. Fusion **57**, 014002 (2015), [doi:10.1088/0741-3335/57/1/014002](https://doi.org/10.1088/0741-3335/57/1/014002)  
 Citations: 2  
 AI: 0.8

- 139 T.Iwawaki, H.Habara, S.Baton, K.Morita, **J.Fuchs**, S.Chen, M.Nakatsutsumi, C.Rousseaux, F.Filippi, W.Nazarov, and K.A.Tanaka  
 « *Collimated fast electron beam generation by direct laser acceleration from critical density plasma* »  
 Phys. Plasmas **21**, 113103 (2014) ; <http://dx.doi.org/10.1063/1.4900868>  
 Citations: 3  
 AI: 0.6

- 138 L. Lancia, B. Albertazzi, C. Boniface, A. Grisollet, R. Riquier, F. Chaland, K.-C. Le Thanh, Ph. Mellor, P. Antici, S. Buffechoux, S. N. Chen, D. Doria, M. Nakatsutsumi, C. Peth, M. Swantusch, M. Stardubtsev, L. Palumbo, M. Borghesi, O. Willi, H. Pépin, **J. Fuchs**  
*“Topology of Megagauss Magnetic Fields and of Heat-Carrying Electrons Produced in a High-Power Laser-Solid Interaction”*  
 Phys. Rev. Lett. **113**, 235001 (2014),  
<http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.113.235001>  
 Citations: 3  
 AI: 3.5
- 137 B. Albertazzi A. Ciardi, M. Nakatsutsumi, T. Vinci, J. Béard, R. Bonito, J. Billette, Z. Burkley, S.N. Chen, T. E. Cowan, T. Herrmannsdörfer, D. P. Higginson, F. Kroll, S. A. Pikuz, K. Naughton, L. Romagnani, C. Riconda, G. Revet, R. Riquier, H-P. Schlenvoigt, I.Yu. Skobelev, A.Ya. Faenov, A. Soloviev, M. Huarte-Espinosa, A. Frank, O. Portugall, H. Pépin, and **J. Fuchs**  
*“Laboratory formation of a scaled protostellar jet by co-aligned poloidal magnetic field”*  
 Science **346**, 325 (2014); doi:10.1126/science.1259694 (2014),  
<http://www.sciencemag.org/lookup/doi/10.1126/science.1259694>.  
 Citations: 15  
 AI: 18
- 136 P. Korneev, E. d’Humières, D. P. Higginson, J. Béard, S. N. Chen, R. Riquier, V. Tikhonchuk, **J. Fuchs**, H. Pépin, B. Pollock  
*“TNSA-like plasmas collision in an ambient magnetic field as a route to astrophysical collisionless shock observation in a laboratory”*  
 HEDP **17**, 183–189 (2015), doi:10.1016/j.hedp.2014.10.002  
 Citations: 1  
 AI: 0.5
- 135 D. P. Higginson, Ph. Korneev, J. Béard, S. N. Chen, E. d’Humières, H. Pépin, S. Pikuz, B. Pollock, R. Riquier, V. Tikhonchuk, **J. Fuchs**  
*“A Novel Platform to Study Magnetized High-Velocity Collisionless Shocks”*  
 HEDP **17**, 190–197 (2015), doi:10.1016/j.hedp.2014.11.007  
 Citations: 0  
 AI: 0.5
- 134 P.R. Bolton, M. Borghesi, C. Brenner, D.C. Carroll, C. De Martinis, A. Flacco, V. Floquet, **J. Fuchs**, P. Gallegos, D. Giove, J. S. Green, S. Green, B. Jones, D. Kirby, P. McKenna, D. Neely, F. Nuesslin, R. Prasad, S. Reinhardt, M. Roth, U. Schramm, G.G. Scott, A. Ter-Avetisyan, M. Tolley, G. Turchetti, and J.J. Wilkens  
*“Instrumentation for diagnostics and control of laser-accelerated proton (ion) beams”*,  
 Physica Medica **30**, 255-270 (2014),  
<http://www.sciencedirect.com/science/article/pii/S1120179713003979>  
 Citations: 8  
 AI: 0.6
- 133 R. Smets, N. Aunai, G. Belmont, C. Boniface and **J. Fuchs**  
*“On the relationship between quadrupolar magnetic field and collisionless reconnection”*  
 Phys. Plasmas **21**, 062111 (2014),  
<http://scitation.aip.org/content/aip/journal/pop/21/6/10.1063/1.4885097>

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AI: 0.6

- 132 **J. Fuchs**, A.A. Gonoskov, M. Nakatsutsumi, W. Nazarov, F. Quéré, A.M. Sergeev, and X.Q. Yan  
*“Plasma devices for focusing extreme light pulses”*  
 Eur. Phys. J. Special Topics **223**, 1169–1173 (2014), <http://dx.doi.org/10.1140/epjst/e2014-02169-y>  
 Citations: 6

- 131 Aaron Alejo, Satyabrata Kar, Hamad Ahmed, Andrew Krygier, Domenico Doria, Robert Clarke, Javier Fernandez, R.R. Freeman, **Julien Fuchs**, Alexander Green, James Green, D. Jung, Annika Kleinschmidt, Ciaran Lewis, John Morrison, Zulfikar Najmudin, Hirotaka Nakamura, Gagik Nersisyan, Peter Norreys, Margaret Notley, Matthew Oliver, Markus Roth, Jesus Ruiz, Laura Vassura, Matt Zepf, and Marco Borghesi  
*“Characterisation of deuterium spectra from laser driven multispecies sources by employing differentially filtered image plate detectors in Thomson spectrometers”*  
 Rev. Sci. Instr. **85**, 093303 (2014) ; <http://dx.doi.org/10.1063/1.4893780>  
 Citations: 5  
 AI: 0.6

- 130 A. Frank, **J. Fuchs**, L. Lancia, G. Lehmann, J.-R. Marquès, G. Mourou, C. Riconda, K.H. Spatschek, T. Toncian, L. Vassura, S. Weber, and O. Willi  
*“Amplification of ultra-short light pulses by ion collective modes in plasmas - The use of damage-less optics for high laser intensities”*  
 Eur. Phys. J. Special Topics **223**, 1153–1156 (2014), <http://dx.doi.org/10.1140/epjst/e2014-02167-1>  
 Citations: 0

- 129 S. N. Chen, M. Gauthier, D. P. Higginson, S. Dorard, F. Mangia, R. Riquier, S. Atzeni, J.-R. Marquès and **J. Fuchs**  
*« Monochromatic short pulse laser produced ion beam using a compact passive magnetic device »*  
 Rev. Sci. Instrum. **85**, 043504 (2014) ; <http://dx.doi.org/10.1063/1.4870250>  
 Citations: 1  
 AI: 0.6

- 128 S. N. Chen, A. P. L. Robinson, P. Antici, E. Brambrink, E. d'Humières, S. Gaillard, T. Grismayer, A. Mancic, P. Mora, L. Romagnani, P. Audebert, H. Pépin and **J. Fuchs**  
*“Passive tailoring of laser-accelerated ion beam cut-off energy by using double foil assembly”*  
 Phys. Plasmas **21**, 023119 (2014), <http://dx.doi.org/10.1063/1.4867181>  
 Citations: 0  
 AI: 0.6

- 127 S.N. Chen, S Atzeni, M. Gauthier, D.P Higginson, F. Mangia, J-R Marques, R. Riquier, **J. Fuchs**  
*„Proton stopping power measurements using high intensity short pulse lasers produced proton beams“*  
 Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment **740**, 105-106 (2014),  
<http://www.sciencedirect.com/science/article/pii/S0168900213015027>

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#### **o PRESENTATIONS AT CONFERENCES (ORAL):**

##### Invited:

Julien Fuchs

“Laser-produced plasmas for investigating astrophysics“

*High-Energy Phenomena in Relativistic Outflows VI*

Moscow, Russia, September 11-15, 2017

<https://hepro6.cosmos.ru>

Julien Fuchs

“Advances and future prospects in laser-based ion acceleration”

*ELI-France international workshop*

5-7 JULY 2017, CNRS headquarters, France

[http://www.cnrs.fr/inp/IMG/pdf/pochette\\_eli\\_france\\_user\\_workshop.pdf](http://www.cnrs.fr/inp/IMG/pdf/pochette_eli_france_user_workshop.pdf)

Julien Fuchs

“Advances in young star formation dynamics using laboratory high-power laser produced plasmas”

*International School for young scientists «Visions in Fundamental Physics»*

National Research Nuclear University MEPhI, Moscow, Russia on December 10-16, 2016

<http://theor.mephi.ru/nbschool/index.html>

J. Fuchs

“Strong magnetization of laser-produced plasmas as a new tool for investigating astrophysics and fusion physics “

*Frontiers of Nonlinear Physics-2016*

July 17-23, 2016, Russia

<http://www.fnp.sci-nnov.ru>

J. Fuchs

“Strong magnetization of laser-produced plasmas as a new tool for investigating astrophysics and fusion physics “

*Colloque annuel “Plasma-Québec”*

June 1-3, 2016, Montréal, Canada

[http://plasmaquebec.ca/colloque2016/Programme\\_colloque\\_2016.pdf](http://plasmaquebec.ca/colloque2016/Programme_colloque_2016.pdf)

J. Fuchs et al.

“Collisionless fast plasma interpenetration and particle energization in an external magnetic field”, and

Guilhem Revet, and Julien Fuchs

“Jet formation and accretion studies using magnetized laser-produced plasmas”

*LaB workshop 2015*

11-13 November 2015, PPPL, Princeton

<http://pcts.princeton.edu/pcts/LaB2015/LaB2015.html>

J. Fuchs, J.-R. Marquès, S. Bolanos, M. Chieramello, C. Riconda, A. Castan, A. Chatelain, T. Gangolf, K. Glize, L. Lancia, A. Giribono, L. Vassura, M. Quinn, G. Mourou, A. Frank, S. Weber, M. Cerchez, M. Bleicher, O. Willi, R. Prasad

“Plasma amplification: creating short, intense light pulses using plasmas”

*IZEST workshop*

CERN, oct. 2015

J. Fuchs

“How can high-power lasers help understand pending issues in astrophysics? -questions and methodology in experimental “laboratory astrophysics”

*International School on Ultra-Intense Lasers, Moscow region (Russia)*

08 and 09/10/2015

<http://isuil.iapras.ru>

J. Fuchs

“Laser-acceleration of ions for science and applications”  
*5<sup>th</sup> international symposium on Topical Problems in Bio-Photonics*  
20-24 July, 2015, Nizhny Novgorod-Elabuga, Russia  
<http://www.biophotonics.sci-nnov.ru>

J. Fuchs

“Laboratory investigation of magnetized dense plasma for astrophysics and fusion science”  
*11<sup>th</sup> International Conference on Research in High Magnetic Fields*  
July 1-4, 2015, Grenoble, France  
<http://rhmf2015.lncmi.cnrs.fr>

J. Fuchs

“Laser-acceleration of ions”  
*Workshop on intense lasers and applications in the frame of the « Entretiens J. Cartier »*  
Oct. 17-19, 2014, Montréal, Québec, Canada

J. Fuchs et al.

“Laboratory and numerical investigation of plasma phenomena in extreme astrophysical objects”  
*Science of the future*  
Sept. 17-20, 2014, St Petersburg (Russia)

J. Fuchs

“Laser-based astrophysics: en route to PETAL”  
*IZEST – ELI-NP Conference Extreme Light’s New Horizons - Introducing Zepto and Zetawatt Science & Societal applications*  
Sept. 17, 2014, Paris

L. Lancia, A. Giribono, L. Vassura, J.-R. Marquès, A. Frank, A. Castan, A. Chatelain, M. Quinn, C. Riconda, S. Weber, J. Fuchs

“A plasma based laser amplifier via the SBS mechanism”  
*44th Anomalous Absorption Conference:*  
June 8-13, 2014 Estes Park, Colorado, USA

J. Fuchs, E. d’Humières et al.

“Toward ion acceleration at high-repetition rate in low-density targets”  
*Photonics North*  
May 28th to the 30th, 2014, Montréal, Canada

J. Fuchs

“Magnetized laboratory astrophysics”  
*NIF/JLF users workshop*  
Feb 9-12, 2014, LLNL, Livermore, CA, USA

J. Fuchs, L. Lancia, J.-R. Marquès, C. Riconda, S. Weber, G. Mourou

“Exploiting plasmas: Overcoming the conventional limitation of laser technology”  
*IZEST: From Fundamental Physics to Societal Applications*  
November 18 & 19, 2013, Embassy of France, Tokyo - Japan

J. Fuchs et al.



“Production of narrow bandwidth laser-accelerated proton beams by passive energy selection.”

*Micro-beam workshop*

3-4 octobre 2013, Bordeaux.

J. Fuchs

“Modeling in the Laboratory Magnetized Astrophysical Jets: Experiments and Simulations”

*Frontiers on Nonlinear Physics*

July 27, Aug 3, 2013, Nizhny-Novogorod, Russia

J. Fuchs et al.

“Experimental studies of ion charge equilibrium in the warm dense matter regime using laser-based plasma accelerators”

*APPC12 The 12th Asia Pacific Physics Conference (& ASEPS2013 Asia-Europe Physics Summit)* -plenary

July 14-19, 2013, Makuhari Messe, Chiba, JAPAN

J. Fuchs et al.

“A tunable achromatic optics for focusing of kA laser generated ions beams using B-fields”

*1st European Advanced Accelerator Concepts Workshop (EAAC2013)*

2-7 June 2013, La Biodola, Isola d'Elba, Italy

J. Fuchs et al.

“Example of application of laser-based ion accelerators to nuclear physics: Experimental studies of ion charge equilibrium in warm dense matter”

*THE ADVANCED PHOTON SOURCE WORKSHOP*

20-22/2/2013, Val David, Québec (Canada)

S. Buffechoux, [...], J. Fuchs.

“Recent experimental results on focusing of high-energy density proton beams and their interaction with solid targets.”

*15th Advanced Accelerator Concepts Workshop (AAC 2012)*

June 10-June 15, 2012, Austin, Texas, USA

J. Fuchs

“Development of ultrafast plasma photonics devices for the control of ultra-intense light and particles”

*High Energy Density Science 2012*

April 25-27, 2012, Yokohama (Japan)

J. Fuchs

“Perspectives on plasma photonics devices for the control of ultra-intense light and particles”

*ICHEDS Plasma Conference 2011*

Nov 25-30, 2011, Kanazawa (Japan)

J. Fuchs

“Plasma photonics devices for laser-plasma accelerators”

*ULIS 2011 - 3rd international conference on Ultra-intense Laser Interaction Science*

Oct 10-13, 2011, Lisbonne, Portugal

J. Fuchs

“Plasma photonics devices for the control of intense light and particle beams”

*Symposium on high Power Lasers and Applications for Ultrafast Science*

(A Symposium celebrating the 10th anniversary of APRI foundation)

Sept 29-30, 2011, APRI, Gwangju Institute of Science and Technology, Gwangju, Korea

J. Fuchs

“Plasma photonics devices for laser-plasma accelerators”

*EPS 2011, Plasma physics meeting*

June 27, July 1, 2011, Strasbourg

J. Fuchs

« Les Nouvelles Technologies : Protons Lasers »

*Colloque sur "les enjeux des lasers pour la protonthérapie"*

30/3/2011, Bordeaux, France

J. Fuchs, Y. Sentoku, E. d’Humières

“Transport of MA electron currents in ultra-fast heated metal targets”

*11th Fast Ignitor Workshop*

16-21 oct 2010, Shanghai (China)

J. Fuchs, L. Romagnani

“Plasma-photonic devices for intense light and particle beams handling”

*TR18-meeting: „Advances in high-intensity laser plasma physics“*

3rd – 7th Oct 2010, Frauenchiemsee, Germany

J. Fuchs, P. Antici, S. Buffechoux, A. Mancic, M. Nakatsutsumi, P. Audebert

“Measurement of electron and proton characteristics through calibrated diagnostics and correlation between their observables”

*Workshop on ion beam instrumentation*

8-8/8/10, Abingdon (UK)

J. Fuchs et al.

“Generation and probing of warm dense matter created by laser-accelerated proton beam”

*Workshop on Matter under Extreme Conditions*

July 7-9, 2010, Institut Henri Poincaré, Paris, France

J. Fuchs

“Ultra-high intensity laser-matter interactions and applications”

*25th Symposium on the Physics of Ionized Gases (SPIG 2010)*

29/8-3/9/10, Donji Milanovac (Serbia)

J. Fuchs

“Ultrafast Plasma-photonic devices for the generation and control of intense laser pulses and associated particle beams”

*Frontiers in Non Linear Physics*

July 13 – July 20, 2010, Nizni-Novgorod, Volga (Russia)

J. Fuchs

“Development of plasma photonics devices for applications”

*Laser Optics '10*

28/6/10-2/7/10, St Petersburg (Russia)

J. Fuchs

“Towards ultra-relativistic optics: opportunities & challenges for an Extreme Light Infrastructure (ELI)”

*Applied Optoelectronics conference*

plenary talk

20-21/5/10, Vologda (Russia)

J. Fuchs

“Laser-acceleration of high-energy ions: principles and present / future applications”

*Light at Extreme Intensities Conference*

plenary talk

16-21/10/09, Brasov (Romania)

J. Fuchs

« Resultats récents sur l'accélération d'ions : optimisation de faisceau et applications »

*Journées accélérateurs de la SFP*

12-14/10/09, Roscoff (France)

J. Fuchs

“Possible strategies for beam optimization of laser-driven proton beams”

*Laser and Plasma Accelerators Workshop*

21/6/9-24/6/9, Kardamili (Greece)

J. Fuchs

“Optimization of high-energy laser-acceleration of ions”

*COULOMB Conference*

13/6/9-16/6/9, Senigalia (Italy)

J. Fuchs

“Recent results on acceleration mechanisms and beam optimization of laser-driven proton beams”

*Ultra-intense Laser Interactions Sciences*

24/5/9-28/5/9, Frascati (Italy)

J. Fuchs et al.

“Laser-accelerated energetic protons for isochoric heating of matter”

*Warm Dense Matter conference*

18/3/9 - 21/3/9, Hakone (Japan)

J. Fuchs

“Laser-accelerated high-energy protons for isochoric heating of matter”

*Radiative Properties of Hot Dense Matter*

10-14 November 2008, Santa Barbara, CA, USA

J. Fuchs

« Production de plasmas d'Al denses et dégénérés par faisceau de protons accélérés par laser »

*Workshop : Interaction Rayonnement-matière du solide au plasma*  
24-26/09/2008, CEA-INSTN, Gif s/Yvette, France

J. Fuchs

“Novel diagnostics for ICF physics: proton radiography and 2D time-resolved imaging”  
*Anomalous Absorption Conference 08*

June 1 - June 6, 2008, Williamsburg, Virginia, USA

J. Fuchs

“Ion acceleration: study of optimization for various applications”

*KPSI-PMRC workshop on Laser-Driven Ion Sources Applied to Industry and Medicine*

March 17 – 18, 2008, JAEA, Kizu, Japan

J. Fuchs

“Overview of high-power laser interaction with matter (plasmas)”

*GRK1203 workshop on laser plasma physics and magnetic plasma confinement*

14-15/02/08, Oelde, RFA

J. Fuchs

“How can high power lasers take advantage of plasmas: high energy plasma photonic devices”

plenary talk

*1st Global COE International Symposium on Electronic Devices Innovation*

Jan 21-22, 2008, Osaka University, Osaka, Japan

J. Fuchs

“Heating of solids by laser-accelerated ions”

*Warm dense matter workshop*

13-16 June 2007, Porquerolles, France

J. Fuchs

“Laser acceleration of ultra cold and high energy ions and applications”

*Ion Beam Technology and Applications Symposium*

September 19-21, 2007, BHABHA ATOMIC RESEARCH CENTRE, Bombay, India

J. Fuchs

“Post-acceleration of laser-generated ion beams using conventional accelerator structures”

*International Symposium on Laser-Driven Relativistic Plasmas Applied for Science, Industry and Medicine*

17-20 September, 2007, Kansai Photon Science Institute, Kizu-gawa, Kyoto, Japan

J. Fuchs

“Space and time resolved observation of single filaments propagation in an underdense plasma and of beam coupling between neighbouring filaments.”

*European Physical Society meeting 07*

July 2-6, 2007, Warsaw, Poland

J. Fuchs

“Review of laser-acceleration of high-energy ions”

*Topical Workshop of the SPARC Collaboration: Novel Research Opportunities for Atomic Physics with Heavy Ions: Facilities and Instrumentation*  
Paris, February 12-15, 2007

J. Fuchs

“Use of proton beams accelerated by relativistic lasers for fusion plasma physics”  
*International Workshop on "Atomic Physics"*  
Max-Planck-Institut für Physik komplexer Systeme, Dresden (Germany)  
November 27 - December 1, 2006

J. Fuchs

“Proton acceleration: new developments for focusing and energy selection, and applications in plasma physics”  
*9th International Fast Ignition Workshop*  
November 3-5, 2006, Cambridge MA, USA

J. Fuchs

“Review of High-Brightness Proton & Ion Acceleration Using Pulsed Lasers”  
*39th ICFA Advanced Beam Dynamics Workshop on High Intensity High Brightness Hadron Beams, HB2006*  
EPOCHAL International Congress Center in Tsukuba City, Japan, May 29 to June 2, 2006

J. Fuchs

“Recent results regarding the acceleration mechanisms and beam handling of laser-accelerated high energy protons”  
*Joint Meeting of Trilateral Workshop on Ultrashort Pulse High Intensity Laser Research Collaboration and JAEA-KPSI 7th Symposium on Advanced Photon Research*  
Kansai Photon Science Institute, Japan Atomic Energy Agency (JAEA-KPSI) from May 10th to 12th, 2006

J. Fuchs

“Laser-acceleration of high energy protons: study of acceleration mechanisms and beam handling”  
*German Trans-Regio Meeting on short pulse lasers physics (TR18)*  
Bad Breisig, Germany, 1-3 March 2006

J. Fuchs

“Detection and use of ultrafast charge dynamics initiated by high-intensity laser-solid interaction”  
*Frontiers in Optics, OSA annual meeting*  
Tucson, Arizona, USA, 17-21 October 2005

J. Fuchs, et al.

“Scaling Laws For Proton Acceleration From The Rear Surface Of Laser-Irradiated Thin Foils”  
*Superstrong fields in plasmas*  
Varenna, Italy, 19-24 September 2005

J. Fuchs et al.

“Accélération d’ions énergétiques par laser ultra-intense et applications”

*1er séminaire ILP*

Autrans (France), mars 2005

J. Fuchs et al.

“Acceleration of ultra-low emittance proton and ion beams with high intensity lasers and applications”

*CLEO/IQEC*

San Francisco, CA, USA, May 16-20, 2004

J. Fuchs

« Laser-accelerated protons: interest, generation, measurement, applications »

*2004 Lake Tahoe School of Plasma Physics*

Incline Village, Lake Tahoe, Nevada, USA, March 21 - 26, 2004

J. Fuchs

“Acceleration of ultra-low emittance proton and ion beams with high intensity lasers and applications”

*SILAP '03*

Dallas, TX, Nov. 16-19 2003

J. Fuchs, T.E. Cowan, H. Ruhl, et al.

“Acceleration of ultra-low emittance proton and ion beams with high intensity lasers”

*Japanese Physical Society Annual Meeting*

Nagoya, Japon, Nov. 27-29 2002

J. Fuchs, B. Wattellier, H. Bandulet, P. Michel, J.P. Zou, J.C. Chanteloup, C. Labaune, A. Michard, S. Depierreux, A. Kudryashov, A. Aleksandrov

“ Wavefront correction for diffraction-limited focal spot on 80 J/1 ns laser facility ”

*IQEC/LAT*

Moscou, juin 2002

J. Fuchs

“Expériences laser-plasma en régime relativiste”

*VI<sup>ème</sup> congrès plasmas de la Société Française de Physique*

Orléans, avril 1999

J. Fuchs *et al.* (présenté par F. Amiranoff)

“Propagation in underdense and overdense plasmas in the context of the Fast Ignitor concept”

*European Conference on Laser-Matter Interaction (ECLIM)*

Roma, mai 98

J. Fuchs *et al.*

“Experimental results on the interaction of a short relativistic laser pulse with highly overdense plasmas”

*Topical Workshop on Fast Ignition Physics*

Garching, septembre 97

Seminars:

“Laser-driven neutron beams and applications”

*Laboratoire de métrologie et de dosimétrie des neutrons (LMDN) de l'IRSN, Cadarache (France)*  
29/09/2017

“Advances in young star formation dynamics using laboratory high-power laser produced plasmas”  
*ELI-NP, Magurele, Romania,*  
June 13, 2017

“Laser-generated hot plasmas & matter in extreme conditions”  
*UPMC, Paris, France*  
May 18, 2017  
Plas@par scientific days

“Strong magnetization of laser-produced plasmas as a new tool for investigating astrophysical and fusion phenomena”  
*CEA-DAM, France*  
23/01/2017

“Strong magnetization of laser-produced plasmas as a new tool for investigating astrophysical and fusion phenomena”  
*LMU, Munich (Germany)*  
01/12/2016

“Laboratory investigation of magnetized accretion dynamics in young stars”  
*LLNL (USA)*  
Oct. 10, 2016

“Laser-driven neutron beams and applications”  
*UCSD (USA)*  
26/09/2016

“Recent results on high-intensity ion shock acceleration and in strong magnetization of plasmas”  
*KPSI, QST, Nara (Japan)*  
30/06/2016

“New gates for astrophysical phenomena investigations opened by high-power and high-intensity lasers”  
*Institute of Chemistry, Kyoto U. (Japan)*  
29/06/2016

“New gates for astrophysical phenomena investigations opened by high-power and high-intensity lasers”  
*ILE-Osaka, Osaka U. (Japan)*  
28/06/2016

“Recent results on high-intensity ion shock acceleration and in strong magnetization of plasmas”  
*Spring-8, SACLA XFEL, Aioi (Japan)*  
27/06/2016

“Recent results on high-intensity ion shock acceleration and in strong magnetization of plasmas”  
*GIST, Gwangju (Korea)*

23/06/2016

“Recent results on high-intensity ion shock acceleration and in strong magnetization of plasmas”

*Shanghai Jiaotong U., Shanghai (China)*

22/06/2016

“New gates for astrophysical phenomena investigations opened by high-power and high-intensity lasers”

*SIOM, Shanghai (China)*

21/06/2016

“New gates for astrophysical phenomena investigations opened by high-power and high-intensity lasers”

*Institute of Physics, Chinese Academy of Science, Beijing (China)*

20/06/2016

“Recent results on high-intensity ion shock acceleration and in strong magnetization of plasmas”

*Peking U., Beijing (China)*

17/06/2016

“New gates for astrophysical phenomena investigations opened by high-power and high-intensity lasers”

*Space Research Institute, Russian Academy of Science, Moscow (Russia)*

29/10/2015

“Strong magnetization of laser-produced plasmas as a new tool for investigating astrophysical phenomena”

*Joint Institute for High Temperatures, Russian Academy of Science, Moscow (Russia)*

12/10/2015

« Modeling in the Laboratory Magnetized Protostellar Jets: Simulations and Experiments”

*IRAP, Toulouse*

26 juin 2014

“CONTROL OF LASER ACCELERATED IONS”

*U. of California, San Diego*

Friday, January 31, 2014

"Modeling Magnetized Astrophysics in the Laboratory using high-power lasers: Jets and Shocks"

*LNMC, Toulouse*

Jan. 17, 2014

"Modeling Magnetized Astrophysics in the Laboratory using high-power lasers: Jets and Shocks"

*Institute of Physics, Chinese Academy of Science, Beijing, China*

Dec. 26, 2013

“Plasma optics as a novel tool for control of extreme light and particle beams”

*Institute of Heavy Ion Physics, Peking University, China*

Dec. 28, 2013



“Exploiting plasmas: Overcoming the conventional limitation of laser technology”  
*Shanghai Institute of Optics and Fine Mechanics (SIOM)*  
Nov. 22, 2013

"Modeling in the Laboratory Magnetized Astrophysical Jets: Simulations and Experiments"  
*Physical and Life Sciences, Physics Division, LLNL, Livermore, USA*  
Sept. 20, 2013

“Plasma photonics devices for laser-plasma accelerators »  
*Institute of Applied Physics-Russian Academy of Science, Nizhny-Novgorod, Russia*  
11/07/2011

« Accélération de faisceaux d’ions par laser intense ultracourt et applications »  
*Laboratoire ISMO (U. P-Sud)*  
13/06/2011

“Development of plasma photonic devices for applications”  
*France-Japan Workshop*  
CNRS headquarters, Paris, France  
25/03/2010

“Développement de dispositifs plasma photoniques pour les applications »  
CELIA Laboratory, Bordeaux, France  
17/03/2010

“Isochoric heating by laser particle acceleration”  
*“ULTRASHORT AND INTENSE LASER TECHNOLOGY AND METROLOGY” school*  
Université Bordeaux I, Bordeaux  
10/12/2009

« Accélération par laser UHI d’ions et applications »  
½ journée sur les lasers ultra-haute-intensité  
Réseau Thématique de Recherche Avancée « Triangle de la Physique »  
Ecole Polytechnique, Palaiseau  
20/10/2009

“Generation and probing of solid-density isochorically heated matter by laser-accelerated energetic protons”  
LLNL, Livermore, CA, USA  
08/10/2009

“Generation and probing of solid-density isochorically heated matter by laser-accelerated energetic protons”  
U. of Nevada, Reno, NV, USA  
02/10/2009

« Accélération de faisceaux d’ions par laser intense ultracourt et applications »  
*Centre d’Etudes Nucléaires Bordeaux Gradignan*  
Université Bordeaux I  
04 June 2009

“Un nouvel outil de diagnostic pour la FCI : la radiographie de plasmas par faisceaux de protons courts et laminaires”

*Département de Physique Théorique et Appliquée*

CEA Bruyères le Chatel, France

15 Dec. 2008

“Laser-acceleration of high-energy protons: principle and applications”

*Clarendon Laboratory*

University of Oxford (UK)

1st Dec. 2008

“Probing Warm Dense Aluminum produced by laser-accelerated ion beams”

*Forschungszentrum Dresden*

Dresden, Allemagne

16 juin 2008

« Application des faisceaux de protons pour la physique des plasmas et la FCI »

et

« Les diagnostics optiques pour la physique des plasmas et la FCI »

*Ecole d'été Aquitaine « Ondes et Matière »*

LES DIAGNOSTICS POUR LES PLASMAS ET LEUR MODELISATION

Carcans-Maubuisson, France

15-19/09/2008

« Accélération de faisceaux d'ions par laser intense ultracourt et applications »

*INRS-Energie, Matériaux et Télécommunications*

Montréal, Canada

14 Déc 2007

« Accélération d'ions par laser ultra-intense et applications à la FCI »

*Département de Physique Théorique et Appliquée*

CEA Bruyères le Chatel, France

22/02/2007

« Accélérateurs « laser - plasma » de faisceaux d'ions laminaires et énergétiques »

*Université Paris VI*

20/12/2006

“Proton acceleration: new developments for focusing and energy selection, and applications in plasma physics”

*Institute for Laser Engineering*

Osaka University, Japan

17/05/2006

“Diagnostics of plasmas using energetic and laminar proton beams”

*Laserlab and Lasernet Workshops*

Rutherford Appleton Laboratory, Didcot, UK

April 4th 2005

« Ultra-low emittance, high current laser-accelerated protons: Beam characterization and manipulation »  
*INFN Frascati*  
Roma, Italie  
22/09/2005

“Accélération d’ions énergétiques par laser ultra-intense et applications”  
*DRECAM*  
CEA Saclay, France  
03/02/2005

“Laser-accelerated protons: interest, generation, measurement, applications”  
*2004 Lake Tahoe School of Plasma Physics*  
March 21 - 26, 2004, Incline Village, Lake Tahoe, Nevada, USA,

Other conferences:

- ▶ G. Revet, (...) and J. Fuchs  
“Laboratory investigation of magnetized accretion dynamics in young stars”  
  
S. Bolanos (...) and J. Fuchs  
« Magnetic reconnection in high-energy density plasmas »  
*LaB2017 workshop*  
22-28/07/2017, Moscow, Russia
- ▶ G. Revet, (...) and J. Fuchs  
“Laboratory investigation of magnetized accretion dynamics in young stars”  
*230th AAS meeting*  
4-8 June 2017, Austin, Texas (USA)
- ▶ G. Revet, D. P. Higginson, J. Béard, M. Blecher, R. K. Burdonov, S. N. Chen, D. Khagani, B. Khiar, K. Naughton, S. Pikuz, C. Riconda, R. Riquier, T. Vinci, O. Portugall, H. Pépin, A. Ciardi, J. Fuchs  
« Laboratory investigations of magnetized jet formation and interaction with ambient medium »  
*The 3rd International Conference on High Energy Density Physics (ICHEDP-3)*  
23-26 September 2016, South University of Science and Technology of China, Shenzhen, China
- ▶ T. Gangolf, M. Blecher, S. Bolanos, L. Lancia, J.-R. Marquès, M. Cerchez, R. Prasad, B. Aurand, O. Willi, J. Fuchs, F. Schluck, M. Chiaramello, G. Mourou, S. Weber, C. Riconda, G. Lehmann  
« Amplification of short laser pulses by Stimulated Brillouin Backscattering »  
*EPS 2016*  
June 2016, Leuven, Belgique
- ▶ J. Fuchs et al.  
« Collisionless plasma magnetization and resulting particle acceleration in laboratory-astrophysical studies »  
*11th International Conference on High Energy Density Laboratory Astrophysics*

May 16-20, 2016, SLAC National Accelerator Laboratory, Menlo Park, California

- ▶ D.P. Higginson, G. Revet, B. Khair, E. Filippov, D. Khaghani, K. Naughton, H. Pépin, S. Pikuz, C. Riconda, R. Riquier, A. Soloviev, M. Stardubtsev, T. Vinci, O. Willi, A. Ciardi, J. Beard, M. Blecher, M. Borghesi, K. Burdonov, S.N. Chen, J. Fuchs.  
« Temporal Stability and Fidelity of Astrophysically-Relevant Magnetically Collimated Jets in the Laboratory. » (invited)

J. Fuchs et al.

« In-target electron thermalization by the Weibel instability during intense irradiation of a thin aluminum foil »

*57th Annual Meeting of the APS Division of Plasma Physics*

Savannah, USA, November 16-20, 2015.

- ▶ T. Gangolf, L. Lancia, J.-R. Marquès, M. Cerchez, M. Blecher, S. Bolanos, A. Giribono, K. Glize, L. Vassura, A. Frank, M. Quinn, C. Riconda, S. Weber, M. Chiaramello, G. Mourou, O. Willi, J. Fuchs  
« Amplification of short laser pulses by Stimulated Brillouin Backscattering »  
*IZEST workshop*  
CERN, oct. 2015

- ▶ P. Loiseau, A. Castan, J-R. Marquès, T. Gangolf, L. Lancia, S. Lemaire, D. Riz and J. Fuchs  
“LASER-PLASMA INTERACTION “AT A GLIMPSE” USING PROTON DEFLECTOMETRY”  
*IFSA 2015*  
Sept 20-25, 2015, Seattle, USA

- ▶ D.P. Higginson, B. Khair, G. Revet, J. Béard, M. Blecher, M. Borghesi, K. Burdonov, S.N. Chen, D. Khaghani, K. Naughton, H. Pépin, S. Pikuz, R. Riquier, A. Soloviev, T. Vinci, O. Willi, A. Ciardi, J. Fuchs.  
« Episodic expansion of magnetized jets via laser plasmas. »

G. Revet, D.P. Higginson, J. Béard, M. Bleicher, K. Burdonov, M. Borghesi, S.N. Chen, D. Khaghani, B. Khair, K. Naughton, S. Pikuz, C. Riconda, R. Riquier, A. Soloviev, T. Vinci, O. Willi, O. Portugall, H. Pépin, A. Ciardi, J. Fuchs.

« Laboratory modeling of magnetized accretion dynamics. »

*5th International Conference on High Energy Density Physics*

San Diego CA, USA, August 23-27, 2015

- ▶ M. Chiaramello, C. Riconda, M. Grech, F. Amiranoff, S. Weber, L. Lancia, T. Vinci, J.R. Marquès, J. Fuchs  
« Studies of stimulated Brillouin amplification of short laser pulse in the strong - coupling regime »  
*Forum ILP 2015*  
June 2015, Porquerolle, France

- ▶ B. Albertazzi, ..., J. Fuchs  
« Laboratory modelling of stable and collimated Astrophysical Jets »

J.-R. Marquès, L. Lancia, A. Giribono, L. Vassura, A. Frank, A. Castan, A. Chatelain, M. Quinn, J. Fuchs, M. Chiaramello, C. Riconda, S. Weber  
« Demonstration of short laser pulse amplification by Brillouin energy transfer from a long pulse; signatures of the self similar regime of strongly-coupled SBS »

*42nd European Physical Society Conference on Plasma Physics*

Lisbon, Portugal, 22nd—26th June 2015

- ▶ B. Albertazzi, A. Ciardi, M. Nakatsutsumi, T. Vinci, J. Béard, R. Bonito, J. Billette, M. Borghesi, Z. Burkley<sup>1</sup>, S.N. Chen, T. E. Cowan, T. Herrmannsdörfer, D. P. Higginson, F. Kroll, S. A. Pikuz, K. Naughton, L. Romagnani, C. Riconda, G. Revet, R. Riquier, H-P. Schlenvoigt, I. Yu. Skobelev, A. Ta. Faenov, A. Soloviev, M. Huarte- Espinosa, A. Franck, O. Portugall, H. Pépin, J. Fuchs  
« Laboratory modelling of stable and collimated Astrophysical Jets »  
*Conference on Laser Energetics (CLE2015)*  
*and INTERNATIONAL CONFERENCE ON HIGH ENERGY DENSITY SCIENCES 2015 (HEDS 2015)*  
Yokohama, Japan, Apr. 22 - Apr. 24, 2015
  
- ▶ E. d'Humières, S. Chen, P. Antici, M. Bailly-Grandvaux, T. Gangolf, M. Lobet, G. Revet, J. Santos, A.M. Schroer, V. Tikhonchuk, H. Pépin, J. Fuchs  
„Longitudinal laser ion acceleration in gas jets: experimental optimization on the Titan laser facility and numerical investigation of the ultra-high intensity limit“  
*SPIE2015*  
<http://spie.org/conferences-and-exhibitions/optics-and-optoelectronics>  
13-16 Apr., 2015, Prague
  
- ▶ R. Bonito, B. Albertazzi, A. Ciardi, M. Nakatsutsumi, T. Vinci, J. Béard, J. Billette, M. Borghesi, Z. Burkley, S.N. Chen, T. E. Cowan, T. Herrmannsdörfer, D. P. Higginson, F. Kroll, S. A. Pikuz, K. Naughton, L. Romagnani, C. Riconda, G. Revet, R. Riquier, H-P. Schlenvoigt, I. Yu. Skobelev, A. Ya. Faenov, A. Soloviev, M. Huarte-Espinosa, A. Frank, O. Portugall, H. Pépin, J. Fuchs  
„X-ray emission from protostellar jets reproduced in laboratory experiments“  
*15 years of Science with CHANDRA*  
Nov 18-21, 2014, Boston, MA, USA
  
- ▶ C. McGuffey, B. Qiao, J. Kim, F.N. Beg, M.S. Wei, M. Evans, P. Fitzsimmons, R.B. Stephens, S.N. Chen, J. Fuchs, P.M. Nilson, D. Canning, D. Mastro Simone, M.E. Foord  
“ENERGY LOSS OF HIGH INTENSITY FOCUSED PROTON BEAMS PENETRATING METAL FOILS”  
*56th Annual Meeting of the APS Division of Plasma Physics*  
October 27-31, 2014, New Orleans, Louisiana
  
- ▶ S. Weber, L. Lancia, J.-R. Marquès, M. Chiaramello, C. Riconda, A. Castan, A. Chatelain, A. Frank, T. Gangolf, A. Giribono, M. Quinn, L. Vassura, G. Mourou, J. Fuchs  
« C3: current status & future perspective »  
*IZEST – ELI-NP Conference Extreme Light's New Horizons - Introducing Zepto and Zetawatt Science & Societal applications*  
Sept. 17-19, 2014, Paris

- ▶ Sophia Chen, D. Higginson, Stefano Atzeni, Maxence Gauthier, Feliciano Mangia, Raphaël Riquier, Julien Fuchs  
"Ion stopping power measurements in warm dense plasmas"  
*Physics of Highly Charged Ions Conference*  
Aug 31, Sept 5, 2014, San Carlos de Bariloche, Argentina
  
- ▶ D. Higginson et al.  
"High-velocity magnetized plasma collisionless interactions using high-intensity lasers."  
*Topical Problems of Nonlinear Wave Physics*  
July 2014, Nizhny Novgorod, Russia
  
- ▶ A. Ciardi et al.  
"Astrophysics of collimated jets"  
  
L. Vassura, D. P. Higginson, F. Negoita, D. Bleuel, J. A. Green, M. M. Gugu, F. Hannachi, H. Petrascu, D. Pietreanu, A. M. Schroer, M. Tarisien, S. Kar, M. Borghesi, O. Willi, P. Antici and J. Fuchs  
"Improvement of neutron sources produced by ultra intense laser using a laser-triggered micro-lens"  
  
L. Lancia, A. Giribono, J.-R. Marquès, L. Vassura, A. Frank, A. Castan, A. Chatelain, M. Quinn, J. Fuchs, C. Riconda, S. Weber  
« Direct amplification of short pulse lasers in plasmas »  
  
*41<sup>st</sup> EPS Conferenze on Plasma Physics 2014*  
23-27 June 2014 (Berlin)
  
- ▶ C. McGuffey, B. Qiao, J. Kim, F.N. Beg, M.S. Wei, M. Evans, P. Fitzsimmons, R.B. Stephens, S.N. Chen, J. Fuchs, P.M. Nilson, D. Canning, D. Mastrosimone, M.E. Foord  
"FOCUSING AND SELF-MODIFIED TRANSPORT OF HIGH INTENSITY PROTON BEAMS"  
*41st IEEE International Conference on Plasma Science*  
25 May - 29 May 2014, Washington, DC, USA
  
- ▶ L. Vassura, D. P. Higginson, F. Negoita, D. Bleuel, J. A. Green, M. M. Gugu, F. Hannachi, H. Petrascu, D. Pietreanu, A. M. Schroer, M. Tarisien, S. Kar, M. Borghesi, O. Willi, P. Antici and J. Fuchs  
"Improvement of neutron sources produced by ultra intense laser using a laser-triggered micro-lens"  
  
*23ème Congrès SFP Toulouse 2014*  
13-15 Mai 2014
  
- ▶ A. Ciardi et al.  
"Astrophysics of magnetized jets generated from laser-produced plasmas"  
  
Ph. Korneev, E. d'Humières, V. Tikhonchuk, D. Higginson, J. Fuchs, J. Béard, H. Pépin, S.N. Chen, S. Pikuz, B. Pollock, R. Riquier  
"Collisionless magnetized plasma interaction in the context of astrophysical experiments"  
  
*High Energy Density Laboratory Astrophysics*  
12-16 May 2014 (Bordeaux)

- ▶ D. Higginson et al.  
“Collision-less Shock Formation In High-Velocity Magnetized Plasmas”  
  
D. Higginson et al.  
“Short-Duration Neutron Production from High-Intensity Lasers”  
  
*International Conference on High Energy Density Sciences*  
April 2014, Yokohama, Japan
- ▶ C. McGuffey, B. Qiao, S.N. Chen, M.S. Wei, F.N. Beg, J. Fuchs, J. Kim, P. Fitzsimmons, M. Evans, R.B. Stephens, P.M. Nilson, M.E. Foord, H.S. McLean  
“DYNAMICS OF HIGH-ENERGY PROTON BEAM FOCUSING AND TRANSITION INTO SOLID TARGETS OF DIFFERENT MATERIALS”  
*2014 Stewardship Science Academic Programs (SSAP) Symposium*  
February 19-20, 2014, North Bethesda, MD, USA
- ▶ A. Hazi, R. Shepherd, Hui Chen, S. Chen, E. Marley, J. Park and J. Fuchs  
“Energetic proton beams with smooth spatial profile generated from intense laser-solid interactions for imaging applications”  
*NIF/JLF users' workshop*  
Feb 9-12, 2014, Livermore, CA, USA
- ▶ A. Ciardi et al.  
« Magnetized jets on high power lasers”  
*ILP Forum, 2014*  
2 au 7 février 2014, Orcières
- ▶ B. Goldblum et al.  
“Laser-based energy-selected and short-duration neutrons”  
*workshop on "Nuclear Science Frontier explored by Ultra-High Power Lasers"*  
Jan 2014, Institute of Laser Engineering at Osaka University
- ▶ D. Higginson et al.  
High-Velocity Collision-less Shock Production in Magnetized Plasmas.  
*Christmas Meeting of the High Power Laser Science Community*  
December 2013, Abingdon, England
- ▶ D. Higginson et al.  
“High-Velocity Collision-less Shock Production in Magnetized Plasmas”  
  
B. Albertazzi et al.  
“Laboratory formation of astrophysical magnetized jets”  
  
*LaB workshop 2013*  
Ecole Polytechnique, December 2-4, 2013
- ▶ D. Higginson, Sophia Chen, Stefano Atzeni, Maxence Gauthier, Feliciano Mangia, Rapha Riquier, Julien Fuchs  
“Proton Stopping Power in Warm Dense Hydrogen”  
*55th Annual Meeting of the APS Division of Plasma Physics*  
November 11-15, 2013, Denver, CO
- ▶ J. Fuchs

« Radiographie protonique »

A.Castan et al.

« Propagation d'une impulsion laser intense dans un plasma sous-dense »

R.Riquier

« Mesure des champs magnétiques par radiographie protonique dans les plasmas denses »

*Workshop sur le transport ionique*

27 Novembre 2013, CEA, Bruyères le Chatel (France)

- ▶ L. Vassura et al.  
"Narrow band neutron sources produced by ultra intense laser"  
*EMMI Workshop on High Energy Density Plasma Diagnostics at FAIR*  
GSI Darmstadt Sept.30 – Oct. 02 2013
- ▶ Sophia Chen, D. Higginson, Stefano Atzeni, Maxence Gauthier, Feliciano Mangia, Raphaël Riquier, Julien Fuchs  
"Ion Charge Equilibrium and Ion stopping power measurements in warm dense plasmas"  
*Atomic Processes in Plasmas*  
October 7-10, 2013, Auburn AL, USA
- ▶ C. McGuffey, J. Kim, B. Qiao, M. S. Wei, R. B. Stephens, S. N. Chen, J. Fuchs, P.M. Nilson, M. E. Foord, F. N. Beg  
"Experiments on self-modified transport and stopping of a laser-driven proton beam in initially cold solid foils"  
*SLAC High-Power Laser Workshop*  
October 1-2, 2013, Stanford U., CA, USA
- ▶ C. McGuffey, J. Kim, B. Qiao, M. S. Wei, R. B. Stephens, S. N. Chen, J. Fuchs, P.M. Nilson, M. E. Foord, F. N. Beg  
"Transport of High Intensity Laser-driven Proton Beams in Solid-density, Isochorically Heated Matter"  
8<sup>th</sup> International Conference on Inertial Fusion Sciences and Applications  
Sept. 2013, Nara, Japan
- ▶ J. Dunn, R. Shepherd, A. Steel, A. Graf, S. J. Moon, and J. Park, R.W. Lee, P. Audebert, A. Levy, M. Gauthier, and J. Fuchs, D.M. Fritz, M. Cammarata, D. Milathianaki, H. J. Lee, and B. Nagler, C. Fourment, and F. Deneuille, G. Williams, and M. Fajardo, J. Gaudin, S. Vinko, O. Ciricosta and J. Wark, H.K. Chung  
"X-ray Spectra from Hard X-ray Free-Electron Laser-Heated mid-Z foils"  
*SPIE Conference "Coherent X-ray Sources: Development and Applications X"*  
San Diego, 25 – 29 August, 2013
- ▶ D. Higginson, Sophia Chen, Stefano Atzeni, Maxence Gauthier, Feliciano Mangia, Raphaël Riquier, Julien Fuchs  
"Proton Stopping Power Measurements in Warm Dense Matter"  
*Eleventh International Topical Meeting on Nuclear Applications of Accelerators*  
August, 2013, Bruges, Belgium



- ▶ Sophia Chen, D. Higginson, Stefano Atzeni, Maxence Gauthier, Feliciano Mangia, Raphaël Riquier, Julien Fuchs  
"Ion Charge Equilibrium and Ion stopping power measurements in warm dense plasmas"  
*Frontiers on Nonlinear Physics*  
July 27, Aug 3, 2013, Nizhny-Novogorod, Russia
  
- ▶ E. d'Humières, P. Antici, M. Glesser, L. Romagnani, S. Chen, J.L. Feugeas, P. Nicolai, V. Tikhonchuk, H. Pépin, J. Fuchs  
"Laser ion acceleration with low density targets: a new path towards high intensity, high energy and high current ion beams"  
*European Physical Society, Plasma Physics Annual Meeting*  
Espoo, Finland, 1st—5th July 2013
  
- ▶ Bruno ALBERTAZZI, Andrea CIARDI, Tommaso VINCI, Martin HUARTE-ESPINOSA, Jérôme BÉARD, Caterina RICONDA, Julien BILLETTE, Sophia CHEN, Thomas HERMANSDORFER, Florian KROLL, Motoaki NAKATSUTSUMI, Lorenzo ROMAGNANI, Hans Peter SCHLENVOIGHT, Tom COWAN, Oliver PORTUGALL, Adam FRANCK, Henri PEPIN, Julien FUCHS  
"Coupling between a laser produced-plasma and external magnetic field up to 40 T. Applications to astrophysical jets"  
[http://www.sfp2013.fr/abstract\\_display!fr!!!!564ac36a-0e01-1031-933c-f3715a722c84!6b51feb8-143c-1031-933c-f3715a722c84](http://www.sfp2013.fr/abstract_display!fr!!!!564ac36a-0e01-1031-933c-f3715a722c84!6b51feb8-143c-1031-933c-f3715a722c84)  
*22<sup>ème</sup> CONGRÈS GÉNÉRAL DE LA SOCIÉTÉ FRANÇAISE DE PHYSIQUE*  
MARSEILLE, 1<sup>er</sup> au 5 Juillet 2013
  
- ▶ G. Faussurier, C. Blancard, S.N. Chen, J. Fuchs, M. Gauthier, B. Siberchicot, and M. Torrent  
"Stopping power modeling in warm and hot dense matter"  
  
S. N. Chen, M. Gauthier, G. Faussurier, J. Fuchs  
"Experimental studies of ion charge equilibrium in the warm dense matter regime"  
  
T.Iwawaki, K. Morita, H.Habara, S.Baton, J.Fuchs, M.Nakatsutsumi, C.Rousseaux, S.Chen, F.Filippi, K.A.Tanaka.  
"Electron beam generation by direct laser acceleration from over critical density plasma"  
  
M. Nakatsutsumi, R. Royle, S. Buffechoux, L. Vassura, H-P. Schlenvoigt, P. Audebert, G. Sarri, L. Romagnani, M. Borghesi, C. L. Ellison, M. Cerchez, T. Toncian, O. Willi, M. Quinn, O. Tresca, P. McKenna, R. Heathcote, R. J. Clark, Y. Sentoku, and J. Fuchs  
"Influence of overlapping high-intensity laser beams on mega-ampere electron transport"  
  
B. Albertazzi, A.Ciardi, T. Vinci, M. Huarte-Espinosa, J. Beard, C.Riconda, J. Billette, Z. Burkley, S.N. Chen, T. Hermansdorfer, F. Kroll, M. Nakatsutsumi, L. Romagnani, H-P. Schlenvoigt, T. Cowan, O. Portugall, A. Franck, H. Pépin, J. Fuchs  
"Modeling in the Laboratory Magnetized Astrophysical Jets: Experiments and Simulations"  
<http://web.luli.polytechnique.fr/ICHED2013/index.php?page=program.php&Lig=3>  
  
*4th International Conference on High Energy Density Physics (ICHED 2013)*  
June 25-28 2013, St Malo (France)

- ▶ S. N. Chen, M. Gauthier, G. Faussurier, J. Fuchs  
“Experimental studies of ion charge equilibrium in the warm dense matter regime”  
  
*1st European Advanced Accelerator Concepts Workshop (EAAC2013)*  
2-7 June 2013, La Biodola, Isola d'Elba, Italy
  
- ▶ Kunioki Mima, Julien Fuchs, Jesus Alvarez, Jean-Raphael Marques, T.Tajima, and J.M.Perlado, S.Nakai, and Y.Kato  
“Effects of Anomalous Stopping of High Energy Ions on IFE Reactor Design”  
*2013 ICENES*  
May 26-30, 2013, Madrid
  
- ▶ D. Higginson et al.  
“Collision-less Shock Formation in High-Velocity Magnetized Plasmas”  
*High Energy Density Science 2013*  
April 23-26, 2013, (Yokohama, Japan)
  
- ▶ M. Glessler, P. Antici, J.Boeker, F. Cardelli,S. Chen,J.L. Feugeas, F. Filippi, E. d'Humières, P. Nicolai, H. Pépin, L. Romagnani, M. Sciscio, V.T. Tikhonchuk, O. Willi, J.C. Kieffer and J. Fuchs  
"Laser ion acceleration with low density targets: a new path towards high intensity, high energy ion beams"  
*Conference on Laser Acceleration of Electrons, Protons and Ions, SPIE Optics + Optoelectronics Meeting*  
15-18 April 2013, Prague, Czech Republic.
  
- ▶ J. Alvarez, K. Mima, J. Fuchs, J.R.Marques, J.M. Perlado  
“Collective effects in Ion propagation in a laser fusion chamber”  
*2013 NIF workshop*  
February 10-13, 2013, Livermore, CA
  
- ▶ C. McGuffey, J. Kim, B. Qiao, M. S. Wei, R. B. Stephens, S. N. Chen, J. Fuchs, P.M. Nilson, M. E. Foord, F. N. Beg  
"Dynamics of High-Energy Proton Beam Focusing"  
*55th Annual Meeting of the APS Division of Plasma Physics*  
November 11-15, 2013, Denver, CO
  
- ▶ M. Gauthier, S.N. Chen, P. Audebert, A. Lévy, L. Romagnani, M. Cerchez, C. Perth, T. Toncian, O. Willi, M. Borghesi, D. Doria, R. Shepherd, A. Hazi, D. Vernhet, E. Lamour, J-P. Rozet, C. Blancard, P. Combis, G. Faussurier, M. Torrent, J. Fuchs  
“Experimental studies of ion stopping power & charge equilibrium in warm dense matter”  
  
S. Chen, P. Antici, E. Brambrink, A. Mancic, L. Romagnani, P. Audebert, J. Fuchs, T. Grismayer, P. Mora, E. Lefebvre, E. d’Humières, T. Toncian, T. Kudyakov, A. Pipahl, O. Willi, C. A. Cecchetti, M. Borghesi, Y. Sentoku, S. Gaillard, A.P.L. Robinson, H. Pépin  
“Studies on laser-driven proton beam dynamics for applications”  
  
*Fast Ignitor Workshop 2012*  
5-8 Nov 2012, Napa (CA, USA)

- ▶ J. Fuchs et al.  
“Plasma photonics devices for the control of ultra-intense light”  
*Ultra Fast Optics 2011*  
September 26-30, 2011, Monterey (CA, USA)
  
- ▶ B. Albertazzi, P. Antici, J. Bocker, S. Chen, V. Dervieux, L. Lancia, M. Nakatsutsumi, H. Pépin, L. Romagnagni, M. Swantusch, O. Willi, M. Borghesi, J. Fuchs  
« Measurements of Magnetic Field Dynamics in Dense Plasmas Irradiated by Short Pulse Lasers”  
*ULIS 2011 - 3rd international conference on Ultra-intense Laser Interaction Science*  
Oct 10-13, 2011, Lisbonne, Portugal
  
- ▶ A. Lévy et al.  
“Generation and investigation of hard X-ray Free Electron Laser heated foils”  
  
B. Albertazzi et al.  
“Measurement of magnetic field dynamics in short pulse laser-plasmas interactions by proton deflectometry”  
  
Y. Sentoku et al.  
“Shaping transport of MA currents in metals by ionization-driven resistive magnetic fields”  
  
*International Fusion Science and Applications 2011*  
September 12-16, 2011, Bordeaux, France
  
- ▶ A. HAZI, HUI CHEN, S. CHEN, LLNL, J. FUCHS, LULI, E. MARLEY, J. PARK, R. SHEPHERD  
“Ion emission from thin foils isochorically heated by laser-produced proton beam”  
*53rd Annual Meeting of the APS Division of Plasma Physics*  
November 14-18, 2011, Salt Lake City, UT, USA
  
- ▶ M. Harmand, F. Dorchie, C. Fourment, S. Hulin, A. Lévy, O. Peyrusse, J.J. Santos, P. Audebert, J. Fuchs, A. Mancic, M. Nakatsutsumi, S. Mazevet, V. Recoules, P. Renaudin, S. Fourmaux.  
“Ultrafast XANES as a diagnostic of WDM local structure”  
*30th International Workshop on Physics of High Energy Density in Matter*  
January 31st - February 5th, 2010 Hirschegg, Austria
  
- ▶ J. Fuchs et al.,  
“Enhanced TNSA laser-acceleration of ions using mass-limited targets”  
*Christmas Meeting of the High Power Laser Science Community*  
Dec 16-18, 2009, Chilton, G.B.
  
- ▶ C. Ellison, J. Fuchs  
“Picosecond Neutron Yields from Ultra-Intense Laser-Target Interactions”  
  
M. Nakatsutsumi, J. Fuchs, S. Buffechoux, P. Audebert, A. Kon, R. Kodama, A. Zani, M. Passoni  
“Tight focusing of ultra-intense laser pulses by innovative plasma optics toward extreme intensity”

Yasuhiko Sentoku , Julien Fuchs , Emmanuel d'Humieres  
“Transport of MA electron currents in ultra-fast heated conducting solids”

*APS-DPP 09*

November 2 - 6, 2009, Atlanta, Georgia, USA

- ▶ P. Antici, P. Audebert, S. Buffechoux, A. Mancic, J. Fuchs  
“Measurements of hot electrons distributions in intense laser-matter interaction”  
*Light at Extreme Intensities Conference*  
16-21/10/09, Brasov (Romania)
- ▶ F. Dorchies, C. Fourment, M. Harmand, S. Hulin, A. Lévy, O. Peyrusse, J. Santos, P. Audebert, J. Fuchs, A. Mancic, M. Nakatsutsumi, S. Mazevet, V. Recoules, P. Renaudin, S. Fourmaux  
“Time-resolved XANES measurements of warm dense matter using ultra-short laser-plasma X-ray source”  
*Ultrafast x-ray methods for studying transient electronic structure and nuclear dynamics*  
441. Wilhelm und Else Heraeus Seminar  
Wilhelm und Else Heraeus Stiftung  
28 September - 1 October 2009, Physikzentrum Bad Honnef, Germany
- ▶ A. Kon, M. Nakatsutsumi, J. Fuchs, Z. L. Chen, S. Buffechoux, P. Audebert and R. Kodama  
“Geometrical optimization of an ellipsoidal plasma mirror toward tight focusing of ultra-intense laser pulse”  
  
P. Antici, M. Borghesi, P. Audebert, T. Cowan, Y. Sentoku, J. Fuchs  
“Transport of hot electron currents in solid targets irradiated by high intensity short laser pulses”  
  
*IFSA '09 conference*  
Sept. 6-11, 2009, San Francisco, CA, USA
- ▶ A. Lévy, F. Dorchies, M. Harmand, C. Fourment, S. Hulin, O. Peyrusse, J.J. Santos, P. Audebert, J. Fuchs, A. Mancic, M. Nakatsutsumi, S. Mazevet, V. Recoules, P. Renaudin, S. Fourmaux  
“Ultrafast X-ray Absorption Near-edge Spectroscopy for the study of Warm Dense Matter”  
*UltraFast Optics / High Field Short Wavelength conference*  
31 Août - 4 Septembre 2009, Arcachon, France
- ▶ A. Lévy, F. Dorchies, C. Fourment, M. Harmand, S. Hulin, O. Peyrusse, J. J. Santos, A. Mancic, P. Audebert, J. Fuchs, L. Lancia, M. Nakatsutsumi, P. Antici, S. Mazevet, V. Recoules, P. Renaudin, S. Fourmaux  
“X-ray absorption for the study of warm dense matter”  
*EPS-DPP 09*  
June 29 - July 3, 2009, Sofia, Bulgaria
- ▶ P. Antici, P. Audebert, S. Buffechoux, A. Mancic, J. Fuchs  
“Enhancement laser-generation of electrons in ultra-thin targets”  
*Laser and Plasma Accelerators Workshop*

21/6/9-24/6/9, Kardamili (Greece)

- ▶ M. Nakatsutsumi, A. Kon, J. Fuchs, S. Buffechoux, P. Audebert and R. Kodama  
“Tight focusing of ultra-intense laser pulses by innovative plasma optics toward extreme intensity”

L. Lancia, C. Fourment, M. Nakatsutsumi, S. Hulin, S. Bastiani-Ceccotti, J.J. Santos, M. Gauthier, M. Rabec, J.-L. Feugeas, Ph. Nicolaï, G. Schurtz, P. Audebert, J. Fuchs  
‘Measurements of Self-Generated Magnetic Fields Influence on Electron Heat Conduction in Dense Plasmas’

*Forum "Lasers & Plasmas"*

14 - 19 juin 2009, Giens, France

- ▶ P. Antici, J. Fuchs, E. Lefebvre, L. Gremillet, E. Brambrink, P. Audebert, H. Pépin  
“Fast Decompression Of Ultra-Thin Targets For High-Energy, High-Contrast Laser Pulses”

L. Lancia, C. Fourment, M. Nakatsutsumi, S. Hulin, S. Bastiani-Ceccotti, J. J. Santos, M. Gauthier, M. Rabec Le Gloahec, J.-L. Feugeas, Ph. Nicolaï, G. Schurtz, P. Audebert, J. Fuchs and M. Migliorati  
“Measurements of Self-Generated Magnetic Fields Influence on Electron Heat Conduction in Dense Plasmas”

*Ultra-intense Laser Interactions Sciences*

24/5/9-28/5/9, Frascati (Italy)

- ▶ S. Buffechoux, J. Fuchs, M. Nakatsutsumi, A. Kon, R. Kodama, P. Audebert, S. Fourmaux, J.C. Kieffer, H. Pepin  
“Recent results on acceleration mechanism and optimisation of laser-driven proton beam”

*Particle Acceleration Conference*

4-8 May 2009, Vancouver, Canada

- ▶ L. Lancia, J.-R. Marquès, J. Fuchs, et al,  
“Experimental investigation of identical wavelength short light pulses crossing in underdense plasma”

*‘Harnessing Relativistic Plasma Waves as Novel radiation Sources from Terahertz to X-rays and beyond’.*

Conferenza SPIE Europe Optics+Optoelectronics.

20-23 April 2009, Prague (Czech Republic)

- ▶ O. Peyrusse, S. Mazevet, V. Recoules, F. Dorchies, M. Harmand, A. Levy, J. Fuchs, A. Mancic, M. Nakatsutsumi and P. Audebert  
“K-edge Absorption Spectra in Warm Dense Matter”

*16th International Conference on Atomic Processes in Plasmas*

22/3-26/3 2009, Monterey, CA, USA

- ▶ M. Nakatsutsumi, J. Fuchs, A. Mancic, J. Robiche, P. Renaudin, P. Combis, F. Dorchies, M. Harmand, G. Maynard, J. Vassaux, P. Mora, P. Antici, S. Fourmaux, and P. Audebert  
“Characterization of warm dense matter produced by laser-accelerated high-energy protons”

Livia Lancia, Jean-Raphaël Marquès, Julien Fuchs, Caterina Riconda, Ana Mancic, Patrizio Antici, Patrick Audebert, M. Nakatsutsumi, Stefan Weber, Vladimir T. Tikhonchuk, Stefan Hueller, Jean-Claude Adam, Anne Héron  
“Experimental investigation of short light pulse amplification using stimulated Brillouin backscattering”

J. Fuchs, P. Antici, M. Borghesi, E. d’Humières, L. Gremillet, T. Grismayer, P. Mora, E. Lefebvre, C. Cecchetti, A. Mancic, M. Nakatsutsumi, A. Piphal, L. Romagnani, Y. Sentoku, O. Willi, P. Audebert  
“MeV electron generation and transport in ultrathin and thick solids”

*50th Annual Meeting of the Division of Plasma Physics*  
November 17-21, 2008, Dallas, TX, USA

- ▶ P. Bolton, et al.  
“Laser-Driven Proton Accelerator Development at the Photo-Medical Research Centre in Japan”  
*ICUIL 2008, China*  
Oct 27-31, 2008, Shanghai-Tongli, China
  - ▶ K. Quinn, M. Borghesi, P.A. Wilson, G. Sarri, L. Romagnani, B. Ramakrishna, L. Lancia, J. Fuchs, A. Piphal, O. Willi, M. Notley, R.J. Clarke, D. Neely, R. G. Evans, D. Carroll, M. Quinn, P. Gallegos, X. Yuan, P. McKenna, A. Macchi  
“Ultratransient laser-driven current propagation”  
*ELI Workshop and School on "Fundamental Physics with Ultra-High Fields"*  
29.09.-02.10.2008, Frauenwörth Monastery, Germany
  - ▶ P. Antici, J. Fuchs et al.,  
“Hot and cold electron dynamics following high-intensity laser matter interaction”  
*Laser Optics 2008 Conference*  
23-28 of June 2008, St. Petersburg, Russia
  - ▶ P. Wilson, L. Romagnani, M. Borghesi, K. Quinn, B. Ramakrishna, J. Fuchs, L. Lancia, P. Antici, C.A. Piphal, O. Willi, M. Tambo, H. Nakamura, R. Kodama  
“Study of Hot Electron Propagation in Cone-Wire Targets and Foams” (Invited Keynote)  
*ICOPS 2008*  
15-19 June 2008, Karlsruhe, Germany
  - ▶ Livia Lancia, Jean-Raphaël Marquès, Julien Fuchs, Caterina Riconda, Ana Mancic, Patrizio Antici, Patrick Audebert, Stefan Weber, Vladimir T. Tikhonchuk, Stefan Hueller, Jean-Claude Adam, Anne Héron  
“Experimental investigation of short light pulse amplification using stimulated Brillouin backscattering”
- J. Fuchs, L. Lancia, J.-R. Marquès, L. Romagnani, M. Grech, T. Grismayer, S. Weber, P. Antici, N. Bourgeois, T. Lin, M. Nakatsutsumi, R. Kodama, P. Audebert  
“Experimental demonstration of ion viscosity and non-local heat transport effects in high-power laser propagation in underdense plasmas”

J. Robiche, J. Fuchs, A. Mancic, P. Antici, P. Audebert, P. Combis, P. Renaudin, G. Maynard and J. Vassaux

“Hydrodynamics of metal foil isochorically heated by protons in the warm dense regime”

L.Romagnani, P.A. Wilson, K.Quinn, B.Ramahkrishna, M.Borghesi, L.Lancia, J. Fuchs, P.Antici, M.Amin, C.A. Pipahl, T.Toncian, O. Willi, M.Tampo, R.Kodama, R.J.Clarke, M. Notley

“[Relativistic electron dynamics in high intensity laser matter interactions](#)”

*35<sup>th</sup> EPS Plasma Physics Conference*  
9-13 June 2008, Hersonissos, Grèce

- ▶ J. Fuchs, A. Mancic, P. Antici, L. Lancia, J. Robiche, P. Audebert et al.  
“Isochoric heating of matter by laser-accelerated high-energy protons”  
*April Meeting 2008 of the American Physical Society*

B.Ramakrishna, P. A. Wilson, K.Quinn, L.Romagnani, M.Borghesi, A.Pipahl, O.Willi. L.Lancia, J.Fuchs, M.Notley, R.J.Clarke

“Study of Hot Electron Propagation in Low Density Foams in Ultra Intense Laser Pulse Interaction“

*April Meeting 2008 of the American Physical Society*  
April 12-15, 2008, St. Louis, MO, USA  
<http://www.hedla.org/>

- ▶ K. Quinn, M. Borghesi, P.A. Wilson, L. Romagnani, B. Ramakrishna, L. Lancia, J. Fuchs, A. Pipahl, O. Willi, M. Notley, R.J. Clarke  
“Investigation of fast electron dynamics in laser-irradiated wires”  
*IOP Plasma Physics Group Annual Meeting*  
London (UK), 1-4 April 2008

- ▶ J. Fuchs, P. Antici, A. Mancic, L.Lancia, P. Audebert  
« Accélération de faisceaux d’ions par laser intense ultracourt et applications »  
*Journées Accélérateurs de la SFP*  
15 - 16 - 17 octobre 2007, Roscoff, France  
[https://users.lal.in2p3.fr/mouton/miroir/accelerateur/journees\\_2007/sommaire.html](https://users.lal.in2p3.fr/mouton/miroir/accelerateur/journees_2007/sommaire.html)

- ▶ P. Antici, J. Fuchs, S.Atzeni, S. Gaillard, T. Kimura, L. Lancia, A. Mancic, M. Nakatsutsumi, A.Schiavi, P. Audebert  
“Laser-accelerated high-energy protons for isochoric heating of matter”  
*Ultra-intense Laser Interaction Sciences (ULIS2007) Conference*  
October 1st to 5th, 2007, Bordeaux, France.

E. d’Humières, S. Gaillard, C. Geddes, E. Esarey, W. Leemans, E. Michel, C. Schroeder, T. Cowan, J. Fuchs, Y.Sentoku

“Investigation of proton acceleration with high intensity lasers in a density gradient”

P. Antici, J. Fuchs, T.Grismayer, M.Borghesi, E.Brambrink, C.A.Cechetti, L. Lancia, A. Mancic, P. Mora, A.C.Pipahl, T.Toncian, O.Willi, P. Audebert

“Space- and time-resolved dynamics of fast electrons and of the energy partition into cold electrons”

*Ultra-intense Laser Interaction Sciences (ULIS2007) Conference*

October 1st to 5th, 2007, Bordeaux, France.

- ▶ M. Nakatsutsumi, J. Fuchs, R. Kodama, P. Antici, N. Bourgeois, T. Lin, J.-R. Marquès, L. Romagnani, and P. Audebert  
"Experimental observation of two parallel beams dynamics in low-density plasmas"

P. Audebert, J. Fuchs, L. Lecherbourg, P. Antici, S. Bastiani-Ceccotti, J.-P. Geindre, L. Lancia, A. Mancic, P. Renaudin, C. Blancard, P. Cossé, G. Faussurier, R. Shepherd

“Atomic processes in plasmas using ultra-short laser pulse”

J. Fuchs, P. Antici, T. Grismayer, M. Borghesi, E. Brambrink, C.A. Cecchetti, L. Gremillet, L. Lancia, A. Mancic, P. Mora,

A.C. Pipahl, T. Toncian, O. Willi, P. Audebert

“Space- and time-resolved dynamics of fast electrons and the energy partition into cold electrons”

J.Fuchs, C.A.Cecchetti, M.Borghesi, T.Grismayer, E. d’Humières, P.Antici, S. Atzeni, P.Mora, A. Pipahl, L.Romagnani A. Schiavi, Y. Sentoku, T.Toncian, P.Audebert, O.Willi

“Laser-acceleration of high-energy protons in small-scale gradients”

*Fifth International Conference on Inertial Fusion Sciences and Applications*

9-14th Sept. 2007, Kobe, Japan

- ▶ P. Antici, J. Fuchs, T.Grismayer, M.Borghesi, E.Brambrink, C.A.Cecchetti, L. Lancia, A. Mancic, P. Mora, A.C.Pipahl, T.Toncian, O.Willi, P. Audebert  
“Space- and time-resolved dynamics of fast electrons and of the energy partition into cold electrons”

P. Antici, J. Fuchs, E. d’Humières, E. Lefebvre, M. Borghesi, E. Brambrink, C.A.

Cecchetti, S. Gaillard, L. Romagnani, Y. Sentoku, T. Toncian, P. Audebert, H. Pépin

“Energetic protons generated by ultrahigh contrast laser pulses interacting with ultra-thin targets”

P. Antici, M.Fazi, A.Lombardi, M.Migliorati, L. Palumbo, P. Audebert and J. Fuchs.

“Postacceleration of laser-accelerated beams using conventional accelerator structures”

M.Borghesi, C.A. Cecchetti, S.Kar, K.Markey, K.Quinn, L.Romagnani, P.A. Wilson, M.Zepf, P.Antici, P.Audebert, J.Fuchs, M.Amin, R.Jung, A.Pipahl, T.Toncian, O.Willi, R.J.Clarke, M.Notley, D.Neely P.Mora, T. Grismayer

“Proton acceleration and applications at Queen’s University Belfast”

*Laser and Plasma Accelerators Workshop 2007*

9-13 July 2007, Terceira, Portugal

- ▶ P. Antici, J. Fuchs, P. Audebert, A. Lombardi, M. Fazi, M. Migliorati, L. Palumbo



"Postacceleration of Laser-generated High Energy Protons through Conventional Accelerators"

*Particle Accelerator Conference*

25-30 June 2007, Albuquerque, USA

- ▶ C. Gautier, M. J. Schmitt, K. Flippo, J. C. Fernandez, B. M. Hegelich, J. Fuchs  
"Time Resolved Analysis of the Expansion of Isochorically Heated Thin Foils"  
*ICOPS 07/ IEEE Pulsed power and plasma science conference*  
Albuquerque, NM, June 17-22 2007
- ▶ P. Antici, J. Fuchs, S. Atzeni, S. Gaillard, T. Kimura, L. Lancia, A. Mancic, M. Nakatsutsumi, A. Schiavi, P. Audebert  
"Measurement of hot and cold electron temperature on a target rear surface irradiated by an ultra-intense laser by space- and time-resolved interferometry"  
*International Conference on Warm Dense Matter*  
13-16 June 2007, Porquerolles, France
- ▶ C. A. Cecchetti, M. Borghesi, J. Fuchs, G. Schurtz, S. Kar, P. A. Wilson, P. Antici, L. Romagnani, R. Jung, J. Osterholtz, C. A. Pipahl, O. Willi, A. M. M. Schiavi, S. Bandhoupadajay, M. Notley, D. Neely,  
"Proton deflectometry measurements of large self-generated magnetic fields in laser-plasma interaction"

P. Wilson, L. Romagnani, M. Borghesi, K. Quinn, B. Ramakrishna, J. Fuchs, L. Lancia, P. Antici, C. A. Pipahl, O. Willi,

"Investigations of hot electron propagations in dense plasmas"

*IOP Plasma Physics Group Annual Meeting*

2-5 April 2007, Dublin, Ireland

- ▶ S. Baton, M. Koenig, P. Guillou, J. Fuchs et al.  
"Recent experiment on fast electron transport in ultra-high intensity laser interaction"
- L. Romagnani, M. Borghesi, C. A. Cecchetti, S. Kar, P. Antici, P. Audebert, S. Bandhoupadajay, F. Ceccherini, T. Cowan, J. Fuchs, M. Galimberti, L. A. Gizzi, T. Grismayer, R. Heathcote, R. Jung, T. V. Liseykina, A. Macchi, P. Mora, D. Neely, M. Notley, J. Osterholtz, C. A. Pipahl, G. Pretzler, A. Schiavi, G. Schurtz, T. Toncian, P. A. Wilson  
"Proton Probing Measurement of Electric and Magnetic Fields Generated by ns and ps Laser-Matter Interactions"

*3rd CONFERENCE ON THE FRONTIERS OF PLASMA PHYSICS AND TECHNOLOGY*

March 5-9, 2007. Bangkok, Thailand

- ▶ C. A. Cecchetti, M. Borghesi, J. Fuchs, G. Schurtz, S. Kar, P. A. Wilson, P. Antici, L. Romagnani, R. Jung, J. Osterholtz, C. A. Pipahl, O. Willi, A. M. M. Schiavi, S. Bandhoupadajay, M. Notley, D. Neely  
"Measurements of large self-generated magnetic fields produced in the interaction of high-power lasers with solid targets"  
*385. Wilhelm and Else Heraeus Seminar "Laser-Particle-Acceleration"*,  
12.02.-14.02.2007 - Physikzentrum Bad Honnef, Germany

- ▶ Emmanuel d’Humières, Julien Fuchs, Toma Toncian, Patrizio Antici, Patrick Audebert, Marco Borghesi, Erik Brambrink, Carlo Alberto Cecchetti, Erik Lefebvre, Patrick Mora, Ariane Pipahl, Lorenzo Romagnani, Yasuhiko Sentoku, Oswald Willi.  
« Generation of quasi-monoenergetic ion beams using short and intense laser pulses”  
*5<sup>th</sup> Asia Pacific Laser Symposium*  
November 23 – 27, 2006 at Guilin Royal Garden Hotel, Guilin, Guangxi Province, China.
  
- ▶ Juan C. Fernandez, B.J. Albright, K.A. Flippo, C. Gautier, B.M. Hegelich, M.J. Schmitt, R.K. Schulze, L. Yin, E. Brambrink, M. Geissel, P. Antici, J. Fuchs, T. Cowan, M. Bakeman, S. Gaillard, J. Rassuchine, G. Korgan, N. LeGalloudec, S. Malekos  
“The LANL Research Program on Ion-Based Fast Ignition”  
  
B.M. Hegelich, K.A. Flippo, C. Gautier, Juan C. Fernandez, M.J. Schmitt, B.J. Albright, L. Yin, D. Gericke, J. Fuchs, P. Antici, P. Audebert, E. Brambrink, M. Geissel, M. Schollmeier, F. Nürnberger, M. Roth, J. Schreiber, A. Henig  
“Ion driven Fast Ignition, transport, stopping and energy loss of MeV/amu ions in WDM”  
  
*9th International Fast Ignition Workshop*  
November 3-5, 2006, Cambridge MA, USA
  
- ▶ Emmanuel d’Humières, Julien Fuchs, Patrizio Antici, Patrick Audebert, Erik Brambrink, Erik Lefebvre, Victor Malka,, Patrick Mora, Yasuhiko Sentoku.  
PIC simulations of proton acceleration with high intensity lasers: the transparency regime, and interaction with underdense targets,  
  
Emmanuel d’Humières, Julien Fuchs, Patrizio Antici, Patrick Audebert, Marco Borghesi, Erik Brambrink, Carlo Alberto Cecchetti, Malte Kaluza, Erik Lefebvre, Victor Malka, Mauro Manclossi, Samuel Meyroneinc, Patrick Mora, Henri Pépin, Ariane Pipahl, Lorenzo Romagnani, Yasuhiko Sentoku, Jorg Schreiber, Toma Toncian, Oswald Willi.  
Proton Acceleration: New Developments in Energy Increase, Focusing and Energy Selection,  
  
*AAC’06*  
Lake Geneva, WI (USA), July 10-15, 2006
  
- ▶ M.Borghesi, C.Cecchetti, L.Romagnani, A.Pipahl, T.Toncian, O.Willi. P.Antici, P.Audebert, E.Brambrink, E.d’Humieres, J.Fuchs,  
“Use of impulsive electric fields for tailoring of ion beam properties”  
*Institute of Physics Plasma Physics Group Meeting*  
Crieff (UK), 10-13 April 2006
  
- ▶ Motoaki Nakatsutsumi, Julien Fuchs, Patrizio Antici, Patrick Audebert, Nicolas Bourgeois, Mickael Grech, Ryosuke Kodama, Teh Lin, Jean-Raphael Marques, Gilles Riazuelo, Lorenzo Romagnani, and Vladimir Tikhonchuk  
"Dynamics of high power and long pulse laser propagation and its control in underdense plasmas"

B. Manuel Hegelich, Brian Albright, Lin Yin, Mark Schmitt, Julien Fuchs, Lorenzo Romagnani, Patricio Antici, Patrik Audebert, Toma Toncian, Timur Kudyakov, Oswald Willi, Carlo Cecchetti, P. Wilson, Marco Borghesi  
“Focusing and spectral control of laser-driven, picosecond ion beams”

Lorenzo Romagnani, Julien Fuchs, Patrick Audebert, Patrizio Antici, Marco Borghesi, Satyabrata Kar, Oswald Willi, Georg Pretzler, Toma Toncian, Francesco Ceccherini, Andrea Macchi, Patrick Mora, Toma Grismayer, Angelo Schiavi, Tom Cowan  
“Dynamics of electric fields driving the laser acceleration of multi-MeV protons”

Juan C. Fernandez, B.J. Albright, K.A. Flippo, C. Gautier, B.M. Hegelich, M.J. Schmitt, R.K. Schulze, L. Yin, E. Brambrink, M. Geissel, P. Antici, J. Fuchs  
“The LANL Research Program on Ion-Based Fast Ignition”

B. Manuel Hegelich, Kirk Flippo, Cort Gautier, Brian Albright, Lin Yin, Mark Schmitt, Juan Fernandez, Erik Brambrink, Matthias Geissel, Julien Fuchs, Patricio Antici, Patrik Audebert, Dirk Gericke  
“Laser-driven, picosecond ion beams as probes for warm dense matter”

Emmanuel d’Humières, Patrizio Antici, Patrick Audebert, Thomas Cowan, Kirk Flippo, Julien Fuchs, Sandrine Gaillard, Manuel Hegelich, Nathalie Le Galloudec, Jenny Rassuchine, Yasuhiko Sentoku.  
“Investigation of proton acceleration with high intensity lasers interacting on micro-cone targets”

*48th Annual Meeting of the Division of Plasma Physics October 30-November 3, 2006*  
Philadelphia Marriott Downtown Hotel, Philadelphia, PA (USA), October 30 - November 3, 2006

- ▶ M. Nakatsutsumi, R. Kodama, J. Fuchs, P. Antici, N. Bourgeois, J. R. Marques, L. Romagnani, P. Audebert, T. Lin  
"High power laser propagation dynamics and its control in plasmas"  
*The Physical Society of Japan 61th Autumn meeting*  
Chiba, Japan, 23-26th September, 2006

- ▶ M. Borghesi, J. Fuchs, O. Willi  
“Laser-accelerated high energy ions: state-of-the-art and applications”  
*13<sup>th</sup> International conference on the physics of highly charged ions*  
Queen’s University, Belfast (UK), Aug.28-Sept.1 2006.

- ▶ P. Antici, J. Fuchs, T. Grismayer, E. d’Humières, M. Borghesi, E. Brambrink, C.-A. Cecchetti, E. Lefebvre, P. Mora, C.-A. Pipahl, T. Toncian, O. Willi, P. Audebert  
“Study of laser-accelerated proton sources and of methods for energy increase”

P. Audebert, J. Fuchs, P. Antici, E. d’Humières, E. Brambrink, L. Romagnani, J.-R. Marquès, N. Bourgeois, C.-A. Cecchetti, M. Borghesi, T. Toncian, C.-A. Pipahl, O. Willi, T. Grismayer, P. Mora, T. Lin, M. Nakatsutsumi  
“Intense laser-produced proton/ion beams”

T.Toncian, M.Borghesi, J. Fuchs, E. d'Humieres, P.Antici, P.Audebert, E. Brambrink, C.A.Cecchetti, A. Pipahl, L.Romagnani, O. Willi  
"Ultrafast laser driven micro-lens to focus and energy select MeV protons"

*33rd European Physical Society Conference on Plasma Physics 2006.*  
Roma (Italy), June 19-23 2006

- ▶ M. Borghesi, L. Romagnani, S. Kar, T. Toncian, P. Antici, P. Audebert, E. Brambrink, F. Ceccherini, C. A. Cecchetti, J. Fuchs, M. Galimberti, L.A.Gizzi, T. Grismayer, T.Lyseikina, R. Jung, A. Macchi, P. Mora, J. Osterholtz, A. Schiavi, O.Willi  
"Impulsive electric fields driven by high-intensity interactions: detection and application to ion beam tailoring"

O. Willi, T. Toncian, M. Borghesi, J. Fuchs, E. d'Humières, P. Antici, P. Audebert, E. Brambrink, C. Cecchetti, A. Pipahl and L. Romagnani  
"Laser Triggered Micro-Lens for Focusing and Energy Selection of MeV Protons"

*29<sup>th</sup> European Conference on Laser Interaction with Matter*  
Madrid (Spain), 11-16 June 2006 (invited)

- ▶ S. Gaillard, N. Renard-Le Galloudec, J. Fuchs, T. Cowan  
"Limitations of the use of CR39 detectors in high-energy short-pulse laser experiments"  
*33rd IEEE International Conference on Plasma Science*  
Traverse City, Michigan (USA), June 4-8, 2006.

- ▶ M. Borghesi, S. Kar, L. Romagnani, C. A. Cecchetti, P. Audebert, J. Fuchs, R. Jung, J. Osterholz, T. Toncian, O. Willi, M. Galimberti, L. Gizzi, F. Ceccherini, T. Lyseikina, A. Macchi, T. Grismayer, P. Mora  
« MeV proton sources for plasma dynamics investigations on ps timescales »

M. Borghesi, C. A. Cecchetti, L. Romagnani, J. Fuchs, E.d'Humières, P. Antici, P. Audebert, E. Brambrink, T. Toncian, A. Pipahl, O. Willi, E. Lefebvre  
« Laser-accelerated protons: perspectives for control/optimization of beam properties »

*ICFA 38<sup>th</sup> Beam Dynamics and 9<sup>th</sup> Advanced & Novel Accelerators, Joint Workshop on "Laser-Beam Interactions and Laser and Plasma Accelerators", 4<sup>th</sup> LBI Workshop and 7<sup>th</sup> LPA Workshop*  
National Taiwan University, Taipei, Taiwan  
December 12-16, 2005

- ▶ S.D. Baton, P. Guillou, M. Koenig, A. Benuzzi-Mounaix, J. Fuchs, B. Loupiau, C. Rousseaux, L. Gremillet, D. Batani, A. Morace, D. Piazza, R. Kodama, T. Norimatsu, M. Nakatsutsumi, Y. Aglitskiy  
"Experimental study of electron transport in high intensity laser solid interaction with and without cone"  
*Annual meeting of the APS-DPP*  
Denver, Colorado, USA, October 24-28 2005

- ▶ Marco Borghesi, Satyabrata Kar, Lorenzo Romagnani, Toma Toncian, Patrizio Antici, Patrick Audebert, Erik Brambrink, Francesco Ceccherini, Carlo A. Cecchetti, Julien Fuchs,

Marco Galimberti, Leonida A. Gizzi, Thomas Grismayer, Ralph Jung, Andrea Macchi, Patrick Mora, Jens Osterholtz, Angelo Schiavi, Oswald Willi  
“Ultrafast Charge Dynamics Initiated by High-Intensity, Ultrashort Laser-Matter Interaction”  
*Superstrong fields in plasmas*  
Varenna, Italy, 19-24 September 2005

- ▶ R. Kodama, Y. Sentoku, Z. L. Chen, G. R. Kumar, S. P. Hatchett, Y. Toyama, D. Batani, S.D. Baton, A. Benuzzi-Mounaix, T. E. Cowan, R. Freeman, J. Fuchs, Y. Izawa, M. H. Key, Y. Kitagawa, M. Koenig, K. Kondo, K. L. Lancaster, T. Matsuoka, H. Nakamura, M. Nakatsutsumi, P. A. Norreys, T. Norimatsu, R. A. Snavely, R. B. Stephens, M. Tampo, K. A. Tanaka and T. Yabuuchi.  
“Plasma Photonic Devices for High Energy Density Science”

J. Fuchs, P. Antici, E. d'Humières, E. Brambrink, E. Lefebvre, P. Audebert  
“Ion acceleration using high-contrast ultra-intense lasers”

A. Kemp, J. Fuchs, Y. Sentoku and T. Cowan  
“Emittance growth mechanisms for laser-accelerated proton beams”

T. Grismayer, P. Antici, P. Audebert, M. Borghesi, F. Ceccherini, J. Fuchs, S. Kar, A. Macchi, P. Mora, G. Pretzler, L. Romagnani, A. Schiavi, T. Toncian, O. Willi  
“Dynamics of high-energy protons accelerating fields in short-pulse solid interaction”

S. Gaillard, N. Renard-Le Galloudec, J. Fuchs, T. Cowan  
“Limitations of the use of CR39 detectors in high-energy short-pulse laser experiments”

P. Antici, J. Fuchs, P. Audebert, A. Benuzzi, E. Brambrink, M. Esposito, M. Koenig, A. Ravasio, J. Schreiber  
“Application of laser-accelerated high-energy protons for isochoric heating of matter”

S.D. Baton, P. Guillou, A. Benuzzi-Mounaix, J. Fuchs, M. Koenig, B. Loupiau, D. Batani, A. Morace, D. Piazza, R. Kodama, T. Norimatsu, M. Nakatsutsumi, Y. Aglitskiy, C. Rousseaux  
“Experimental study of Fast electron Propagation with Cone-targets”

H. Ruhl, J. Fuchs, T. Cowan  
“Collisional transport of fast electrons through solid density material”

*IFSA05*  
Biarritz, France, Sept 5-9 2005

- ▶ P. Antici, J. Fuchs, S. Atzeni, A. Benuzzi, E. Brambrink, M. Esposito, M. Koenig, A. Ravasio, J. Schreiber, A. Schiavi, P. Audebert  
“Application of laser-accelerated high-energy protons for isochoric heating of matter”  
*Summer School in High Energy Density Physics*  
Clark Kerr Campus, UC Berkeley, Berkeley CA, August 7-12, 2005 (Work was awarded the Fusion Science Center Award for Excellence in Graduate Research)

- ▶ L.Romagnani, J.Fuchs, M.Borghesi, P.Antici, P.Audebert, F.Ceccherini, T.Cowan, T.Grismayr, S.Kar, A.Macchi, P.Mora, G.Pretzler, A.Schiavi, T.Toncian and O.Willi, „Charge dynamics and proton acceleration in ultrashort laser-solid interactions“

R. Kodama, Y. Sentoku, Z. L. Chen, G. R. Kumar, S. P. Hatchett, Y. Toyama, D. Batani, S.D. Baton, A. Benuzzi-Mounaix, T. E. Cowan, R. Freeman, J. Fuchs, Y. Izawa, M. H. Key, Y. Kitagawa, M. Koenig, K. Kondo, K. L. Lancaster, T. Matsuoka, H. Nakamura, M. Nakatsutsumi, P. A. Norreys, T. Norimatsu, R. A. Snavely, R. B. Stephens, M. Tampo, K. A. Tanaka and T. Yabuuchi.

“Plasma Photonic Devices for High Energy Density Science”

S.D. Baton, P. Guillou, A. Benuzzi-Mounaix, J. Fuchs, M. Koenig, B. Loupiau, D. Batani, A. Morace, D. Piazza, R. Kodama, T. Norimatsu, M. Nakatsutsumi, Y. Aglitskiy, C. Rousseaux

“Experimental study of Fast electron Propagation with Cone-targets”

S.D.Baton, D.Batani, M.Manclossi, A.Morace, D.Piazza, A.Benuzzi-Mounaix, M.Koenig, P.Guillou, B.Loupiau, J.Fuchs, F.Amiranoff, M.Rabec Le Gloahec, H.Popescu, C.Rousseaux, M.Borghesi, C.Cecchetti, R.Kodama, T. Norimatsu, M.Nakatsutsumi, and Y.Aglitskiy

“Recent experiments on electron transport in high-intensity laser matter interaction”

P. Antici, J. Fuchs, P. Audebert, A. Benuzzi, E. Brambrink, M. Esposito, M. Koenig, A. Ravasio, J. Schreiber

“Application of laser-accelerated high-energy protons for isochoric heating of matter”

J. Fuchs, P. Antici, E. d'Humières, E. Brambrink, E. Lefebvre, P. Audebert

“Ion acceleration using high-contrast ultra-intense lasers”

E. Brambrink, P. Audebert<sup>2</sup>, A. Blazevic<sup>1</sup>, R. Clarke, J.Cobble, T. E. Cowan, J. Fernandez, J. Fuchs, M. Geißel, M. Hegelich, S. Karsch, P. McKenna, K. Ledingham, M. Roth, H. Ruhl, T. Schlegel, J. Schreiber

“Detailed studies of the transverse beam characteristics of laser produced ion beams”

*32st European Physical Society Conference on Plasma Physics and International workshop on Fast Ignition and High Field physics 2005.*

Tarragona (Spain), 27<sup>th</sup> June- 1 July 2005

- ▶ S.Kar, M.Borghesi, L.Romagnani, C.Cecchetti, A.Zayats, R.Jung, J.Osterholtz, O.Willi, J.Fuchs, M.Galimberti, L.Gizzi, S.V.Bulanov, T.Zh.Esirkepov, A.Macchi, F.Ceccherini, F.Pegoraro, T.V.Liseykina, V.Malka, S.Fritzler, R.Heathcote, D.Neely,

“Study of high-intensity laser interaction with underdense plasma via proton imaging technique”

*Rank Prize Funds Mini-symposium on High-intensity laser-plasma interaction, Grassmere, UK, 4-6 April 2005*

- ▶ J. Fuchs  
“Diagnostics of plasmas using energetic and laminar proton beams”  
*LASERLAB-EUROPE, Workshop on Ultra-high Intensity Interaction Plasma Emission Diagnostic*  
CCLRC Rutherford Appleton Laboratory, April 4-5, 2005
  
- ▶ M.Borghesi, L.Romagnani, C.Cecchetti, T.Toncian, O. Willi, G.Pretzler, J. Fuchs, P.Antici, P.Audebert, E.Brambrink, A.Macchi, F.Ceccherini, P.Mora, T.Grismayr, A.Schiavi,  
“Investigation of proton acceleration and focussing in high-intensity laser-foil interaction by proton probing”  
*1<sup>st</sup> LASERLAB-EUROPE User Meeting*  
Oxford, 6th-8th April 2005
  
- ▶ Patrizio Antici, J. Fuchs, E. d’Humières, M. Kaluza, E. Lefebvre, V. Malka, M. Manclossi, S. Meyroneinc, P. Mora, J. Schreiber, P. Audebert, H. Pépin  
“Parametric study of a laser-accelerated proton source as a function of the laser driver and target thickness”  
  
T. Grismayer, P. Mora, J. Fuchs, P. Antici, P. Audebert, L. Romagnani, M. Borghesi  
“Simulation de sondage de détente de plasma par faisceau de protons »  
  
*1er séminaire ILP*  
Autrans (France), mars 2005
  
- ▶ Ralph Jung, Jens Osterholz, Oswald Willi, Marco Borghesi, Satyabrata Kar, Lorenzo Romagnani, Marco Galimberti, Robert Heathcote, Carlo Alberto Cecchetti, and Julien Fuchs.  
“Investigation of high-intensity laser interaction with gaseous targets and the consequent plasma evolution”  
  
Toma Toncian, P. Antici, P. Audebert, M. Borghesi, C. A. Cecchetti, J. Fuchs, G. Pretzler, L. Romagnani, and O. Willi  
“Electric field measurements in dense plasmas using proton imaging”  
  
*Symposium Relativistische Laser-Plasma-Physik, Meeting of Deutschen Physikalischen Gesellschaft*  
Berlin, 4<sup>th</sup>-9<sup>th</sup> March 2005
  
- ▶ S.Kar, M.Borghesi, L.Romagnani, C.Cecchetti, R.Jung, J.Osterholtz, O.Willi, J.Fuchs, M.Galimberti, L.Gizzi, A.Macchi, R.Heathcote, D.Neely,  
"Propagation of high intensity short laser pulses in under-dense plasmas"  
*High Power Laser User Meeting*  
Abingdon (UK), 15th -17th December 2004
  
- ▶ A. Kemp, V. Sotnikov, T. Cowan, J. Fuchs  
“Ultra-low emittance proton beams from a laser virtual cathode plasma accelerator”  
  
H. Ruhl, A. Kemp, J. Fuchs, T. Cowan  
“Essential aspects of the physics of laser-ion acceleration”  
  
*2004 APS Division of Plasma Physics meeting*

Savannah, Georgia, USA, November 15-19, 2004

- ▶ M. Roth, E. Brambrink, P. Audebert, A. Blazevic, R. Clarke, J. Cobble, T. E. Cowan, J. Fernandez, J. Fuchs, M. Geissel, D. Habs, M. Hegelich, S. Karsch, K. Ledingham, D. Neely, H. Ruhl, T. Schlegel, J. Schreiber  
“Laser accelerated ions and electron transport in ultra-intense laser matter interaction”

M. Borghesi, P. Audebert, S.V. Bulanov, T. Cowan, J. Fuchs, J.C. Gauthier, A.J. Mackinnon, P.K. Patel, G. Pretzler, L. Romagnani, A. Schiavi, T. Toncian, O. Willi,  
“High-Intensity laser-plasma interaction studies employing laser-driven proton probes”

*28<sup>th</sup> European Conference on Laser-Matter Interaction (ECLIM)*  
Roma, Italy, Sept. 6-10, 2004

- ▶ M. Borghesi, L. Romagnani, P. Audebert, J. Fuchs, T. Toncian, G. Pretzler, O. Willi, T. Cowan  
“Detection of electrostatic fields driving proton acceleration from solid foils irradiated by high-intensity laser pulses”  
*31st European Physical Society Conference on Plasma Physics*  
London 28 June-2 July 2004

- ▶ M. Roth, A. Blazevic, E. Brambrink, M. Geissel, T.E. Cowan, J. Fuchs, H. Ruhl, P. Audebert, J. Cobble, J. Fernandez, M. Hegelich, S. Letzring, K. Ledingham, P. McKanna, R. Clarke, D. Neely, S. Karsch, D. Habs, U. Schramm, J. Schreiber  
“Laser Acceleration and Laser cooling for ion beams”  
*EPAC 2004*  
Lucerne, Switzerland, 5 - 9 July, 2004

- ▶ J. Fuchs, T.E. Cowan, H. Ruhl, A. Kemp, P. Audebert, M. Roth, R. Stephens, I. Barton, A. Blazevic, E. Brambrink, J. Cobble, J.C. Fernández, J.-C. Gauthier, M. Geissel, M. Hegelich, J. Kaae, S. Karsch, G.P. Le Sage, S. Letzring, M. Manclossi, S. Meyroneinc, A. Newkirk, H. Pépin, N. Renard-LeGalloudec  
“Ultra-high brightness laser-accelerated proton source & novel acceleration schemes”  
*11<sup>th</sup> Advanced accelerator concepts workshop*  
Stony Brook, New York, USA, June 21-26, 2004

- ▶ T. Cowan, J. Fuchs, H. Ruhl, M. Allen, P. Audebert, E. Bambrink, I. Barton, A. Blazevic, M. Borghesi, J. Cobble, M. Cuneo, J. Fernandez, S. Gaillard, J. -C. Gauthier, M. Geissel, M. Hegelich, S. Karsch, A. Kemp, S. Letzring, G. Le Sage, M. Manclossi, J.R. Marquès, S. Meyroneinc, A. Newkirk, H. Pépin, G. Pretzler, N. Renard-Le Galloudec, L. Romagnani, M. Roth, J. Schreiber, Y. Sentoku, R. Stephens, T. Toncian, D. Wenger, O. Willi  
"Ultra-Low Emittance, High Current Proton Beams Produced with a Laser-Virtual Cathode Sheath Accelerator"  
*2004 International Symposium on Heavy Ion Inertial Fusion*  
Princeton, NJ, USA, June 7 - 11, 2004

- ▶ B. Manuel Hegelich, J. Schreiber, P. Audebert, E. Brambrink, J. Cobble, J. C. Cooley, T. Cowan, R. D. Field, J. Fuchs, S. Gaillard, S. Letzring, P. Papin, U. Schramm, E. Veuillot, K. Witte, D. Habs, J. C. Fernández  
“ACCELERATION PHYSICS OF LASER-DRIVEN MEV-ION BEAMS”



*34<sup>th</sup> Anomalous Absorption Conference*  
Glenden Beach, Oregon, USA, May 2-5, 2004

- ▶ J. Fuchs, Y. Sentoku, S. Karsch, J. Cobble, P. Audebert, A. Kemp, A. Nikroo, P. Antici, E. Brambrink, A. Blazevic, E.M. Campbell, J.C. Fernández, J.-C. Gauthier, M. Geissel, M. Hegelich, H. Pépin, H. Popescu, N. Renard-LeGalloudec, M. Roth, J. Schreiber, R. Stephens, and T.E. Cowan  
“Comparison of laser ion acceleration from the front and rear surfaces of thin foils”

Y. Sentoku, T. E. Cowan, A. Kemp, V. Sotonikov, H. Ruhl, R. Presura, J. Fuchs  
“Laser - Magnetized Plasma Interaction - to create a few hundreds eV solid density plasma in laboratory”

S. D. Baton, H. Popescu, F. Amiranoff, L. Gremillet, M. Koenig, E. Martinolli, J.J. Santos, C. Rousseaux, M. Rabec Le Gloahec, D. Batani, M. Manclossi, T. Hall, T.E. Cowan, J. Fuchs, P. Antici, J. King, R. Freeman, M. Key, R. Stephens  
“Fast electron transport at relativistic intensities: from solid to vacuum”

M. Hegelich, J. Schreiber, P. Audebert, E. Bambrink, J. Cobble, J.C. Cooley, T. Cowan, R.D. Field, J. Fuchs, S. Gaillard, S. Letzring, P. Papin, U. Schramm, E. Veuillot, K. Witte, D. Habs, J.C. Fernandez  
“Acceleration physics of laser-driven MeV-ion beams”

*International workshop on Fast Ignition and High Field physics 2004.*  
Kyoto (Japan), April 25-29, 2004.

- ▶ B. M. Hegelich, J. Schreiber, P. Audebert, E. Brambrink, J. Cobble, J. C. Cooley, T. Cowan, R. D. Field, J. Fuchs, S. Gaillard, S. Letzring, P. Papin, U. Schramm, E. Veuillot, K. Witte, D. Habs, J. C. Fernandez  
“Acceleration Physics of laser-driven MeV-ion beams”

J. Fuchs, Y. Sentoku, S. Karsch, J. Cobble, P. Audebert, A. Kemp, A. Nikroo, P. Antici, E. Brambrink, A. Blazevic, E.M. Campbell, J.C. Fernández, J.-C. Gauthier, M. Geissel, M. Hegelich, H. Pépin, H. Popescu, N. Renard-LeGalloudec, M. Roth, J. Schreiber, R. Stephens, and T.E. Cowan  
“Comparison of laser ion acceleration from the front and rear surfaces of thin foils”

*International Workshop of Physics of High Energy Density in Matter (PHEDP)*  
Hirschegg, Austria, February 1-6, 2004

- ▶ Patrizio Antici, Julien Fuchs, Samuel Meyroneinc, Mauro Manclossi, Henri Pépin  
“Parametric study of a laser-accelerated proton source as a function of the laser driver”

L. Romagnani, M. Borghesi, S. Kar, S.J. Phillips, O. Willi, G. Pretzler, T. Tomcian, P. Audebert, J. Fuchs, T. Cowan, A. Schiavi, F. Pegoraro, A. Macchi, S. Bulanov  
“Probing of ion front expansion using laser-generated proton beams”

*2004 Lake Tahoe School of Plasma Physics*  
Incline Village, Lake Tahoe, Nevada, USA, March 21 - 26, 2004

- ▶ Hartmut Ruhl, T. Cowan, J. Fuchs  
“The characterization of laser-accelerated proton flows with the help of advanced simulations”  
*Workshop on advances in proton-therapy for cancer treatment*  
MD ANDERSON CANCER CENTER, FEB. 13-14, 2004, Houston, Texas
  
- ▶ M. Hegelich, J. Cobble, R. Johnson, S. Letzring, J. Fernandez, P. Audebert, A. Blazevic, E. Brambrink, T. Cowan, J. Fuchs, J. C. Gauthier, M. Geissel, W. Günther, D. Habs, W. Heinrich, A. Kemp, M. Roth, U. Schramm, J. Schreiber, K. J. Witte  
“Laser acceleration of heavy Ions– New Experimental Results on Acceleration Mechanism”  
  
J. Fuchs, Y. Sentoku, S. Karsch, J. Cobble, P. Audebert, E. Bambrink, A. Blazevic, J. Fernandez, J. -C. Gauthier, M. Geissel, M. Hegelich, S. Letzring, H. Pépin, N. Renard-Le Galloudec, M. Roth, J. Schreiber, R. Stephens, T. E. Cowan  
“Laser acceleration of deuterons and protons from the front and the rear surface of thin foils”  
  
*3<sup>rd</sup> Workshop on High Irradiance Laser and Target Diagnostics Techniques.*  
Reno (NV), Nov. 3-5, 2003
  
- ▶ M. Hegelich, J. Schreiber, P. Audebert, E. Brambrink, J. Cobble, J. Fuchs, S. Gaillard, S. Letzring, N. Renard-Le Galloudec, J. C. Fernández  
“Laser acceleration of heavy Ions: new experiments using the LANL Trident and LULI short-pulse lasers”  
*APS-DPP annual meeting*  
Albuquerque (NM), Oct 26-30 2003
  
- ▶ Y. Sentoku, J. Fuchs, S. Karsch, J. Cobble, P. Audebert, E. Bambrink, A. Blazevic, J. Fernandez, J.-C. Gauthier, M. Geissel, M. Hegelich, S. Letzring, H. Pépin, N. Renard-Le Galloudec, M. Roth, H. Ruhl, R. Stephens, and T. E. Cowan  
“Laser acceleration of deuterons and protons from the front and the rear surfaces of thin foils”  
  
A. C. Erlandson, A. Astanovitskiy, S. Batie, B. Bauer, A. Bayramian, J. A. Caird, T. Cowan, C. Ebberts, J. Fuchs, H. Faretto, J. Glassman, V. Ivanov, B. LeGalloudec, N. LeGalloudec, S. Letzring, S. Payne, B. Stuart  
“Design of a 50 TW / 20 J chirped-pulse amplification laser for high-energy-density plasma physics experiments at the Nevada Terawatt Facility of the University of Nevada”  
  
M. Hegelich, J. Schreiber, P. Audebert, E. Brambrink, J. Cobble, J. Fuchs, S. Gaillard, S. Letzring, N. Renard-Le Galloudec, J. C. Fernández  
“Acceleration Physics of laser-driven MeV-ion beams”  
  
B. Wattellier, J. Fuchs, J. P. Zou, K. Abdeli, J.-C. Chanteloup, C. Haefner  
“Diffraction limited focal spots for off-thermal equilibrium 100-TW Nd:Glass laser chain using a dielectric coated deformable mirror”  
  
H. Ruhl, T. Cowan, J. Fuchs  
“The physics of the generation of images of surface structures by laser-accelerated protons”  
  
A. Kemp, Y. Sentoku, T. Cowan, J. Fuchs, H. Ruhl

“Laser-driven electron transport in dense matter: a numerical study”

H. C. Bandulet, C. Labaune, K. Lewis, S. Depierreux, P. Michel, J. Fuchs

“Influence of long wavelength ion acoustic waves on the growth of stimulated Brillouin scattering in an underdense preformed plasma”

*IFSA03*

Monterey, California, Sept 7-12 2003

- ▶ B. Wattellier, J. Fuchs, J.P. Zou, K. Abdeli, J.-C. Chanteloup, C. Haefner  
“Diffraction limited focal spots for off-thermal equilibrium 100-TW Nd:Glass laser chain using a dielectric coated deformable mirror”

*CLEO/QELS*

Baltimore, Maryland, June 2003

- ▶ P. Audebert, J. Fuchs, J. R. Marquès, J-C Gauthier, M Roth, M Allen, A Blazevic, E Brambrink, T E Cowan, M Geißel, M Hegelich, S Karsch, J Meyer-ter-Vehn, H Ruhl, T Schlegel and R B Stephens  
“Recent Laser Ion Acceleration Results”

H. Ruhl, T.E. Cowan, J. Fuchs, A. Kemp, Y. Sentoku, P. Audebert, J.C. Gauthier, M. Roth, E. Brambrink, A. Blazevic, M. Geissel, T. Schlegel, M. Hegelich, S. Karsch, I. Barton, E.M. Campbell, A. Newkirk, M. Rosenbluth, P. Parks, R. Stephens, J. Cobble, J. Fernandez, R. Johnson, N. Le Galloudec, E. Lee, G. Logan, G. Caparasso, Y.-J. Chen, S.P. Hatchett, G. Le Sage, A.J. MacKinnon, P. Patel

“Ultra-high brightness laser-accelerated proton beams for radiography, HED physics & novel accelerators”

*PAC 2003*

Portland, (OR) May 15, 2003

- ▶ P. Audebert, J. Fuchs, J. R. Marquès, J-C Gauthier, M Roth, M Allen, A Blazevic, E Brambrink, T E Cowan, M Geißel, M Hegelich, S Karsch, J Meyer-ter-Vehn, H Ruhl, T Schlegel and R B Stephens

« Faisceaux énergétiques d'ions produits par laser subpicoseconde intense »

*VIII Congrès Plasmas de la SFP*

Cadarache, 5-7 mai 2003

- ▶ J. Fuchs, J.P. Zou, B. Wattellier, J.P. Chanteloup, K. Abdeli, C. Haefner  
“Improvement of the LULI high-energy CPA laser system focusability and repetition rate using an adaptive optical system”

J. Fuchs, B. Wattellier, J.P. Zou, J.C. Chanteloup, H. Bandulet, P. Michel, S. Depierreux, C. Labaune, A. Maximov, J. Myatt, A. Kudryashov, A. Aleksandrov

“Comparative propagation physics of high-energy RPP-smoothed beams and Single-Hot-Spot beams”

T.E. Cowan, J. Fuchs, H. Ruhl, et al.

“Acceleration of ultra-low emittance proton and ion beams with high intensity lasers”

*Workshop on High Irradiance Laser and Target Diagnostics Techniques.*

Institute for Laser Engineering, Osaka, Japan, Jan. 27-29, 2003

- ▶ J. Fuchs, T.E. Cowan, H. Ruhl, et al.  
“Imaging Ultra-High Current Electron Transport in Metals and Insulators by Laser-Accelerated Protons”

J. Fuchs, C. Labaune, H. Bandulet, S. Depierreux

« Short-pulse high-power laser propagation in hollow plasma channels”

*6<sup>th</sup> Fast Ignitor Workshop*

Tampa (FL), Nov. 2002

- ▶ T.E. Cowan, J. Fuchs, H. Ruhl, et al.  
“Acceleration of ultra-low emittance proton and ion beams with high intensity lasers”

M. Hegelich, J. Cobble, J. Fuchs, T. Cowan, Erik Brambrink, Matthias Geissel, N. Renard-Le Galloudec, S. Letzring, R. Johnson, T. Shimada, J. C. Fernández, R. Gibson

« Initial 30-TW Trident and target physics »

*APS-DPP Annual Meeting*

Orlando (FL) Nov.2002.

- ▶ H. Bandulet, C. Labaune, J. Fuchs, P. Michel, S. Depierreux  
“Experimental investigation on the origins of plasma-induced incoherence”

P. Michel, C. Labaune, G. Bonnaud, V.T. Tikhonchuk, J. Fuchs, H. Bandulet, S. Depierreux, Gilles Riazuelo, François Walraet

« Reduction of the spatial coherence of a laser beam propagating in an underdense semicollisional plasma »

C. Labaune, H.A. Baldis, H. Bandulet, S. Depierreux, J. Fuchs, P. Michel, D. Pesme.

« Modification of the coherence properties of a laser beam propagating through a plasma and its consequences for stimulated scattering instabilities”

*27<sup>th</sup> European Conference on Laser-Matter Interaction (ECLIM)*

Moscow, Oct. 2002

- ▶ Andreas Kemp, H. Ruhl, T. Cowan and J. Fuchs  
Collisional electron transport across interfaces: A numerical investigation  
*ICENES*  
Albuquerque, October 2002

- ▶ M. Hegelich, M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, S. Karsch, A. Pukhov, T. Schlegel  
“ Laser acceleration of MeV-Ion jets ”  
*ICPP*  
Sydney, July 2002

- ▶ Markus Roth, Thomas E. Cowan, Jean-Claude Gauthier, Jürgen Meyer-ter Vehn, Matthew Allen, Patrick Audebert, Abel Blazevic, Erik Brambrink, Julien Fuchs, Matthias Geissel, Manuel Hegelich, Stefan Karsch, Hartmut Ruhl, and Theodor Schlegel  
“Intense, High-Quality Ion Beams Generated by Ultra-Intense Lasers”  
*14th International Conference on High-Power Particle Beams*  
Albuquerque, New Mexico (USA) 23-28 June 2002
  
- ▶ D. Pesme, S. Hüller, J. Myatt, C. Riconda, A. Maximov, V. T. Tikhonchuk, C. Labaune, J. Fuchs, S. Depierreux, H. A. Baldis  
“Laser-Plasma interaction studies in the context of MegaJoule Lasers for inertial fusion”  
  
M Roth, M Allen, P Audebert, A Blazevic, E Brambrink, T E Cowan, J Fuchs, J-C Gauthier, M Geißel, M Hegelich, S Karsch, J Meyer-ter-Vehn, H Ruhl, T Schlegel and R B Stephens  
“The generation of high-quality, intense ion beams by ultra-intense lasers”  
  
*29<sup>th</sup> European Physical Society meeting on Plasma Physics and Controlled Fusion*  
Montreux, Switzerland, 17-21 June 2002
  
- ▶ E. Brambrink, A. Blazevic, M. Geißel, M. Roth, T. Schlegel, P. Audebert, J. Fuchs, J.-C. Gauthier, M. Hegelich, S. Karsch, M. Allen, T. E. Cowan, H. Ruhl  
“Intense ion beams from relativistic laser plasmas: a promising acceleration mechanism”  
*Eighth European Particle Accelerator Conference*  
Paris, France, 3 - 7 June 2002
  
- ▶ B. Wattellier, J. Fuchs, J.-C. Chanteloup, J.P. Zou, H. Bandulet, P. Michel, S. Depierreux, A. Kudryashov, A. Aleksandrov  
“ Wavefront Correction and Monospeckle Generation on High Power Laser Chains using a Dielectric Coated Deformable Mirror ”  
*CLEO/QELS*  
Long Beach, California, May 19-24, 2002
  
- ▶ M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“ Short Pulse Laser Driven Ion Beams — Experiments and Applications”  
SCIENCE OF SUPERSTRONG FIELD INTERACTIONS: Seventh International Symposium of the Graduate University for Advanced Studies on Science of Superstrong Field Interactions  
Hayama, Kanagawa, Japan, 13-16.3.2002
  
- ▶ M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“Laser Driven Ion Acceleration”  
*Optical Society of America, Topical Conference on Applications of High Field and Short Wavelength Sources*  
Palm Springs, CA, USA, October 21-24, 2001
  
- ▶ J. Fuchs, C. Labaune, S. Depierreux, , H. Bandulet, P. Michel, H.A. Baldis  
“Direct measurement of strong temporal incoherence induced upon a high-intensity beam by plasma propagation ”

C. Labaune, J. Fuchs, S. Depierreux, H. Bandulet, P. Michel, H.A. Baldis  
“Plasma induced incoherence of a laser beam propagating through a plasma ”

M. Allen, T.E. Cowan, M. Roth, J. C. Gauthier, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, J. Meyer-ter Vehn, A. Pukhov, T. Schlegel, R. Stephens  
“ Laser accelerated proton beam characteristics and prospects for fast ignition ”

M. Hegelich, G. Preztler, S. Karsch, D. Habs, A. Pukhov, J. Meyer-ter Vehn, K. Witte, A. Blazevic, M. Geissel, M. Roth, T. Schlegel, P. Audebert, J. Fuchs, J. C. Gauthier, M. Allen, T.E. Cowan, W. Guenther, W. Heinrich  
“ Neutron generation and spectroscopy of fusion neutrons from relativistic laser plasmas ”

S. Karsch, G. Preztler, M. Hegelich, D. Habs, K. Witte, M. Roth, A. Blazevic, M. Geissel, T. Schlegel, T.E. Cowan, M. Allen, P. Audebert, J. Fuchs, J. C. Gauthier, A. Pukhov, J. Meyer-ter Vehn  
“ Acceleration of laser driven MeV-Ion jets from thin foil targets ”

M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“ Intense ion beams accelerated by ultra-intense lasers – experimental results and future applications ”

*2<sup>nd</sup> Inertial Fusion Science and Applications conference*  
Kyoto, Sept. 9-14 2001

► M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“Low-emittance, Intense Ion Beams Driven by Relativistic Laser Plasmas”  
*2nd International Conference on Superstrong Fields in Plasmas,*  
Varenna, Italy, August 27 - September 1, 2001

► J. C. Gauthier, M. Roth, T.E. Cowan, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“ Intense Ion Beams Accelerated by Relativistic Laser Plasmas ”  
*SPIE meeting on Neutron and Charged Particles Diagnostics in Inertial Confinement Fusion*  
San Diego, July 29 – August 3 2001

► M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“Energetic Ions Generated by Laser Pulses: A Detailed Study on Target Properties”  
*International Committee for Future Accelerators*  
Roma, July 2001

► M. Hegelich, M. Roth, T. Cowan J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“Spectroscopy of laser driven MeV-Ion jets”

M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel

“Tailoring of Laser Accelerated Ion Beams”

M. Geißel, M. Allen, P. Audebert, A. Blazevic, T.E. Cowan, J. Fuchs, J.-C. Gauthier, M. Hegelich, S. Karsch, J. Meyer-ter-Vehn, A. Pukhov, T. Schlegel, M. Roth:

“Target Design for Laser Accelerated Proton Beams”

T.E. Cowan, M. Roth, J.C. Gauthier, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, J. Meyer-ter-Vehn, A. Pukhov, T. Schlegel, R. Stephens  
“Laser Accelerated Proton Beam Characteristics and Prospects for Fast Ignition”

*28th EPS conference on Controlled Fusion and Plasma Physics*

Funchal, Madeira, June 18-22, 2001

- ▶ M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“Intense Ion Beams from Relativistic Laser Plasmas”

*Advanced Accelerator Conference*

Stony Brook, Brookhaven, USA:, June 15-18, 2001

- ▶ V. T. Tikhonchuk, J. Fuchs, C. Labaune, S. Depierreux, S. Hueller, H. A. Baldis  
“Modeling of stimulated Brillouin and Raman scattering from a randomized laser beam in preformed plasmas ”

W. Seka, S. Regan, D.D. Meyerhofer, B. Yaakobi, C. Stoeckl, R.S. Craxton, R. W. Short, H. Baldis, J. Fuchs, C. Labaune

“ Multi-beam SBS interaction experiments in Omega long-scale-length plasmas. ”

S. Depierreux, C. Labaune , H. Baldis, J. Fuchs

“*Influence of the Langmuir decay instability on the saturation of stimulated Raman scattering*”

*31<sup>st</sup> Anomalous Absorption Conference*

Sedona, June 2001

- ▶ B. Wattellier, J.-C. Chanteloup, J. Fuchs, C. Sauteret, J.P. Zou, A. Migus  
“ Wavefront Correction and focusing optimization of partially thermalized Nd :glass high power CPA laser ”

*CLEO/QELS*

Baltimore, May 6-11 2001

- ▶ M. Hegelich, S. Karsch, M. Allen, P. Audebert, A. Blazevicz, T. Cowan, J. Fuchs, J.C. Gauthier, W. Guenther, M. Geissel, D. Habs, W. Heinrich, J. Meyer-ter-Vehn, G. Pretzler, A. Pukhov, T. Schlegel, K. Witte and M. Roth,  
“Particle Acceleration by Ultrahigh Intensity Laser Pulses”

M. Roth, T.E. Cowan, J. C. Gauthier, J. Meyer-ter Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel

“Experimental Results on Ion Acceleration”

*Workshop on Particle Sources from High Intensity Lasers*

Milano, Italy:, March 1-3, 2001

- ▶ W. Seka, S. Regan, D.D. Meyerhofer, B. Yaakobi, C. Stoeckl, R.S. Craxton, R. W. Short, H. Baldis, J. Fuchs  
“Multi-beam interaction experiments under direct-drive NIF conditions. ”  
*Plasma Physics Workshop*  
Banff, Alberta, Canada, 2/20-24,2001
  
- ▶ Markus Roth, T.E. Cowan, J.C. Gauthier, J. Meyer-ter-Vehn, M. Allen, P. Audebert, A. Blazevic, J. Fuchs, M. Geissel, M. Hegelich, S. Karsch, A. Pukhov, T. Schlegel  
“Intense Ion Beams Accelerated in Relativistic Laser Plasmas”  
*International Conference on Lasers (Lasers 2000)*  
Albuquerque, 7/12/2000
  
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