

Selected papers for a focus issue in the Physica Medica Journal

| Abstract | Submitter | | Country | Institution | Department | Author Block |
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| NEW R&D PLATFORM WITH UNIQUE CAPABILITIES FOR ELECTRON FLASH AND VHEE RADIATION THERAPY AND RADIATION BIOLOGY UNDER PREPARATION AT PITZ | Frank | Stephan | Germany | DESY, Zeuthen site | PITZ | *F. Stephan* ¹ , Z. Aboulbanine ^{1,2} , Z. Amirkhanyan ^{1,3} , J. Good ¹ , M. Gross ¹ , M. Krasilnikov ¹ , X. Li, O. Lishilin ¹ , A. Oppelt ¹ , S. Philipp ¹ , H. Qian ¹ , C. Stegmann ¹ , S. Worm ¹ , W. Leemans ¹ , M. Schmitz ¹ , T. Schnautz ¹ , H. Weise ¹ , V. Budach ¹ , V. Ehrhardt ¹ , M.-C. Vozenin ⁴ , A. Faus-Golfe ⁵ , G. Tsakanova ³ , A. Schüller ¹ , M. Frohme ¹ , A. Grebinyk ¹ , J. Reindl ¹ , F. Grüner ¹ , T. Staufer ¹ ; ¹ Germany, ² Morocco, ³ Armenia, ⁴ Switzerland, ⁵ France |
| PROOF OF PRINCIPLE OF A PYROELECTRIC CALORIMETER WITH ELECTROMETER READOUT FOR THE ABSOLUTE DOSIMETRY OF FLASH RADIATION | Bryan | Muir | Canada | National Research Council of Canada | Metrology Research Centre | *B. Muir*, J. Renaud; Canada |
| GRAPHITE CALORIMETRY AND ALANINE FOR TRACEABLE DOSIMETRY IN PROTON FLASH BEAMS | Claus E. | Andersen | Denmark | Technical University of Denmark | DTU Health Tech | *C.E. Andersen* ¹ , C. Ankjærgaard ¹ , M. Sitarz ¹ , J.B. Christensen ² , J. Johansen ¹ , P. Poulsen ¹ ; ¹ Denmark, ² Switzerland |
| ION RECOMBINATION CORRECTION FACTORS AND BENCHMARK OF DETECTORS IN A VERY-HIGH DOSE RATE PROTON SCANNING BEAM | Amélia | Maia Leite | France | Institut Curie | PSL Research University, Radiation Oncology Department, Proton Therapy Centre | *A. Maia Leite*, M. Cavallone, M.G. Ronga, F. Trompier, A. Patriarca, L. De Marzi; France |

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| A NOVEL X-RAY SOURCE FOR MICROBEAM AND FLASH RADIOTHERAPY: NUMERICAL SIMULATIONS SHOW THE FEASIBILITY OF THE PRECLINICAL PROTOTYPE | Johanna | Winter | Germany | Helmholtz Zentrum München GmbH, German Research Center for Environmental Health | Institute of Radiation Medicine | *J. Winter*, C. Matejcek, K. Aulenbacher, S. Combs, J. Wilkens, S. Bartzsch; Germany |
| CHARACTERIZE THE ELF: THE NOVEL ELECTRON FLASH IRRADIATION SYSTEM UNVEILED WITH STANDARD DOSIMETRIC TOOLS | Alessia | Gasparini | Belgium | University of Antwerp | Radiotherapy | *A. Gasparini* ¹ , V. Vanreusel ¹ , F. Di Martino ² , F. Galante ² , M. Pacitti ² , B. Reniers ¹ , G. Felici ² , X. XXX ¹ ; ¹ Belgium, ² Italy |
| PERSPECTIVES IN LINEAR ACCELERATOR FOR FLASH VHEE : STUDY OF A COMPACT C BAND SYSTEM | Lucia | Giuliano | Italy | La Sapienza University of Rome | Department of Basic Sciences for Engineering | *L. Faillace* ¹ , D. Alesini ¹ , G. Cuttone ¹ , V. Favaudon ² , S. Heinrich ² , L. Giuliano ^{1,2} , A. Mostacci ¹ , L. Palumbo ¹ , V. Patera ¹ , A. Patriarca ² , G. Torrisi ¹ , M. Migliorati ¹ ; ¹ Italy, ² France |
| Spectral - and intensity-sensitive characterization of pulsed FLASH proton fields with the pixel detector TimePIX3 | Cristina | Oancea | Czech Republic | Advacam | research and development | *C. Oancea* ¹ , E. Bodenstein ² , C. Granja ¹ , J. Jakubek ¹ , L. Marek ¹ , J. Pawelke ² , J. Pivec ¹ , S. Polansky ¹ , J. Šolc ¹ ; ¹ Czech Republic, ² Germany |
| ULTRA-HIGH DOSE RATE DOSIMETRY FOR PRE-CLINICAL EXPERIMENTS WITH MM-SMALL PROTON FIELDS | Michele | Togno | Switzerland | Paul Scherrer Institute | Center for Proton Therapy | *M. Togno*, K. Nesteruk, M. Grossmann, A. Dutschler, D.C. Weber, A.J. Lomax, D. Meer, S. Psoroulas, S. Safai; Switzerland |
| MONTE CARLO MODELLING OF PIXEL CLUSTERS IN TIMEPIX DETECTORS USING THE MCNP CODE | Jaroslav | Šolc | Czech Republic | Czech Metrology Institute | Department of Primary Metrology of Ionizing Radiation | *J. Šolc*, J. Jakubek, L. Marek, C. Oancea, J. Pivec, V. Sochor, J. Smoldasova, Z. Vykydal; Czech Republic |

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| A NEW MODEL OF GAS CHAMBER FOR UHDR RANGE | Giuseppe | Felici | Italy | SIT | R&D | *F. Di Martino* ¹ , S. Barone ¹ , D. Del Sarto ¹ , M. Di Francesco ¹ , F. Galante ¹ , A. Gasparini ² , L. Grasso ¹ , S. Linsalata ¹ , M. Pacitti ¹ , F. Paiar ¹ , S. Ursino ¹ , V. Vanreusel ² , X. XXX ² , G. Felici ¹ ; ¹ Italy, ² Belgium |
| A NOVEL METHOD FOR DETERMINING IC SATURATION FACTOR (UP TO 0.5 GY/P FOR ADV. MARKUS) | Giuseppe | Felici | Italy | SIT | R&D | *F. Di Martino* ¹ , S. Barone ¹ , D. Del Sarto ¹ , M. Di Francesco ¹ , F. Galante ¹ , A. Gasparini ² , L. Grasso ¹ , S. Linsalata ¹ , M. Pacitti ¹ , F. Paiar ¹ , S. Ursino ¹ , V. Vanreusel ² , X. XXX ² , G. Felici ¹ ; ¹ Italy, ² Belgium |
| STATISTICAL-BASED MODELING AND NANODOT OSL DOSIMETRY FOR EVALUATION OF POTENTIAL FACTORS CONTRIBUTING TO RADIATION-INDUCED SKIN INJURY DURING TRANSARTERIAL CHEMOEMBOLIZATION | Siritorn | Buranurak | Thailand | Khon Kaen University | Physics | *S. Buranurak*, P. Hanpanich, J. Wongwiwatchai, A. Ahooja, V. Pong-Inwong; Thailand |
| ULTRA-HIGH DOSE RATE (FLASH) CARBON ION IRRADIATION: FIRST IN VITRO AND IN VIVO RESULTS | Ulrich | Weber | Germany | GSI Helmholtz Center for Heavy Ion Research | Biophysics | *U. Weber*, W. Tinganelli, O. Sokol, M. Quartieri, A. Puspitasari, I. Dokic, A. Abdollahi, M. Durante, T. Haberer, J. Debus, D. Boscolo, B. Voss, S. Brons, M. Moustafa, C. Schuy, L. Baack, F. Horst, K. Zink, Y. Simeonov; Germany |
| SECONDARY STANDARD DOSIMETRY: UNDERSTANDING THE IONIZATION CHAMBERS FOR THE FUTURE ULTRA-HIGH DOSE RATE APPLICATIONS | Faustino | Gomez | Spain | Universidad de Santiago | Particle Physics | F. Gomez ¹ , *J. Paz-Martin* ¹ , D. Gonzalez-Castaño ¹ , N. Gomez-Fernandez ¹ , A. Schüller ² , A. Bourguoin ² ; ¹ Spain, ² Germany |

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| MULTI-LEAF FARADAY CUP FOR QUALITY ASSURANCE IN RADIATION THERAPY WITH ELECTRON AND ION BEAMS AT CONVETIONAL AND ULTRA-HIGH DOSE RATE | Andreas | Schüller | Germany | Physikalisch-Technische Bundesanstalt (PTB) | 6.2 "Dosimetry for radiation therapy and diagnostic radiology" | C. Makowski ¹ , *A. Schüller* ¹ , M. Deutsch ² , C. Schmitzer ² ; ¹ Germany, ² Austria |
| Laser-Driven Ion Beams and Ultra-High Dose Rate Radiobiology | Marco | Borghesi | United Kingdom | Queen's University Belfast | Centre for Plasma Physics | *M. Borghesi* [*] ; United Kingdom |
| VENTED IONIZATION CHAMBERS FOR ULTRA-HIGH DOSE PER PULS CONDITIONS | Rafael | Kranzer | Germany | PTW-Freiburg | R&D | *R. Kranzer* [*] , A. Schüller, J. Weidner, D. Poppinga, H.K. Looe, B. Poppe; Germany |