



Contribution ID: 292

Type: talk

Gamma Factory for CERN: concept and progress report

Tuesday, 17 September 2019 16:50 (20 minutes)

The Gamma Factory (GF) proposal is based on the use of partially stripped ion (PSI) beams as drivers of a novel high intensity and high energy (0.1-400 MeV) photon source. We describe the GF concept, the results of the initial beam tests carried out in 2017-2018 at the SPS and LHC with partially stripped xenon and lead beams and we discuss the preparation for proof-of-principle experiment at the SPS to study collisions of PSI beams with the laser pulses.

Primary authors: CURATOLO, Camilla (PD); ABRAMOV, Andrey (Royal Holloway University of London Egham, Surrey, TW20 0EX, United Kingdom); ALDEN, Siobhan (Royal Holloway University of London Egham, Surrey, TW20 0EX, United Kingdom); ALEMANY FERNANDEZ, Reyes (CERN); ANTISFEROV, P. S. (Institute of Spectroscopy, Russian Academy of Sciences, Troitsk, Moscow Region, Russia); APYAN, A. (A.I. Alikhanyan National Science Laboratory, Yerevan, Armenia); BESSONOV, Evgeny (Lebedev Physical Institute RAS); BUDKER, Dmitry (University of California at Berkeley); CASSOU, Kevin (Laboratoire de l'Accélérateur Linéaire); CASTELLI, Fabrizio (M); CHAIKOVSKA, Iryna (LAL); FEDOSSEEV, Valentin (CERN); NEVAY, Laurence (Royal Holloway University of London); GIBSON, Stephen (CERN); GODDARD, Brennan (CERN); MARTENS, Aurelien (LAL/IN2P3/CNRS); JOWETT, John (CERN); KOWALSKA, Magdalena (CERN); LAMONT, Mike (CERN); LEFEVRE, Thibaut (cern); MARSH, Bruce (CERN); PETRENKO, Alexey (CERN); PETRILLO, Vittoria (Università degli Studi di Milano); REDAELLI, Stefano (CERN); SERAFINI, Luca (MI); SURZHYKOV, Andrey (Physikalisches Institut der Universität Heidelberg); VELOTTI, Francesco (CERN); ZANETTI, Marco (PD); ZIMMERMANN, FRANK (CERN); ZOMER, Fabian (IN2P3/CNRS Université Paris 11); BIANCACCI, Nicolo (CERN); BIERON, J. (Marian Smoluchowski Institute of Physics, Jagiellonian University, Kraków, Poland); BOGACZ, A. (Center for Advanced Studies of Accelerators, Jefferson Lab, USA); BOSCO, A. (Royal Holloway University of London Egham, Surrey, TW20 0EX, United Kingdom); BRUCE, R. (CERN); CZODROWSKI, P. (CERN); DEREVIANKO, A. (University of Nevada, Reno, Nevada 89557, USA); BARTOSIK, Hannes (CERN); DUPRAZ, Kevin (LAL, Univ. Paris-Sud, CNRS/IN2P3, Université Paris-Saclay, Orsay, France); DUTHEIL, Yann (CERN); DZIERZEGA, K. (Marian Smoluchowski Institute of Physics, Jagiellonian University, Kraków, Poland); FUSTER MARTINEZ, N. (CERN); GORZAWSKI, A. (CERN); HIRLANDER, S. (CERN); KERSEVAN, R. (CERN); KRASNY, Mieczyslaw Witold (CERN); KROEGER, F. (HI Jena, IOQ FSU Jena and GSI Darmstadt, Germany); KULCHLER, D. (CERN); MANGULUNKI, D. (CERN); MOLSON, J. (CERN); NUTARELLI, D. (LAL, Univ. Paris-Sud, CNRS/IN2P3, Université Paris-Saclay, Orsay, France); PLACZEK, Wieslaw (Marian Smoluchowski Institute of Physics, Jagiellonian University, Kraków, Poland); PUSTELNY, S. (Marian Smoluchowski Institute of Physics, Jagiellonian University, Kraków, Poland); ROCHESTER, S. (Rochester Scientific, LLC, El Cerrito, CA 94530, USA); SAPINSKI, M. (GSI, Helmholtzzentrum für Schwerionenforschung, 64291 Darmstadt, Germany); SCHAUMANN, M. (CERN); SCRIVENS, M. (CERN); SHEVELKO, V. P. (P.N. Lebedev Physical Institute, Russian Academy of Sciences, Leninskii prospect 53, 119991-Moscow, Russia); STOCHLKER, T. (HI Jena, IOQ FSU Jena and GSI Darmstadt, Germany); TOLSTIKHINA, I. (P.N. Lebedev Physical Institute, Russian Academy of Sciences, Leninskii prospect 53, 119991-Moscow, Russia); WEBER, G. (HI Jena, IOQ FSU Jena and GSI Darmstadt, Germany); WU, Y. K. (FEL Laboratory, Duke University, Durham, USA); YIN-VALLGREN, C. (CERN); ZOLOTOREV, M. S. (Center for Beam Physics, LBNL, Berkeley, USA)

Presenter: CASSOU, Kevin (Laboratoire de l'Accélérateur Linéaire)

Session Classification: WG8

Track Classification: WG8 - Advanced and novel accelerators for High Energy Physics