BLIN4 June 29, 2020 - programme draft

(all talks are 15 minute summaries; presentation slides (including fuller slide set) can be posted to https://www.alpa.physik.uni-muenchen.de/; speaker's name is underlined)

09:30 **Welcome and BLIN4 Introduction**

1. Beam Lines

09:45 **Magnetic beam line to transport a few MeV laser-produced protons in air for PIXE applications**
F. Brandi, L. Labate, S. Kumar, D. Palla, L. Fulgentini, P. Koester, F. Baffigi, M. Chiari, D. Panetta and L. A. Gizzi

10:00 **The Achromat beamline design of the PLAPA**
K.D. Wang, K. Zhu , Y.J. Li, Matthew J. Eastona, J.G. Zhu, S.Y. Chen, Y.X. Geng , X.Q. Yan

10:15 **Spectral and spatial shaping of laser-driven proton beams using a pulsed high-field magnet beamline**
F. Brack, F. Kroll, L. Gaus, C. Bernert, E. Beyreuther, T. Cowan, L. Karsch, S. Kraft, L. Kunz-Schughart, E. Lessmann, J. Metzkes-Ng, J. Pawelke, M. Rehwald, H.-P. Schlenvoigt, U. Schramm, M. Sobiella, E. Rita Szabo, T. Ziegler and K. Zeil

10:30 **Completion of ELIMAIA: a laser-based ion beamline for multidisciplinary applications**
F. Schillaci, D. Margarone, G. A. P. Cirrone

10:45 **Laser-hybrid Accelerator for Radiobiological Applications (LhARA)**
K. Long for the LhARA collaboration

11:00 to 11:30 **Break** (30 minutes)

2. Instrumentation (Particle and Photon)

2.1 Source Characterization

11:30 **Salamanca experience on the high repletion rate experiments challenges**
L. Roso

11:45 **Heavy ions and X/γ ray diagnostics used in PW laser-plasma experiments**
Wenjun Ma, Pengjie Wang, Yinren Shou, Il Woo Choi, Seong Geun, Defeng Kong, Zhuo Pan, Zheng Gong, Yong Joo Lee, Xueqing Yan, Chang Hee Nam

12:00 **An optically multiplexed single-shot time-resolved probe of laser–plasma dynamics**
R. J. Gray, Z. E. Davidson, B. Gonzalez-Izquierdo, A. Higginson, K. L. Lancaster, S. D. R. Williamson, M. King, D. Farley, D. Neely and P. McKenna

12:15 **Electromagnetic pulses measurement in the fs TW system VEGA II @ CLPU**
M. De Marco, K. Nelissen, V. Ospina, M. Liszi, I. Drotr, C. Kamperidis, Josè A. Perez-Hernández, G. Gatti, L. Roso, L. Volpe

12:30 **Neutron detection techniques and possible applications for diagnostics in high-power laser environments**
Pär-Anders Söderström

12:45 to 13:45 **Lunch Break** (1 hour)

13:45 **Sub-GeV gamma spectrometry**
Florin Rotaru

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14:00 **X-ray All-In-One – a novel diagnostic combination design to characterise the spectral and spatial emission from laser-solid interactions**
C. D. Armstrong, J. Patel, C. Brenner, and D. Neely

14:15 **BoCXS: A Compact Multidisciplinary ICS-based X-ray Source**
A. Bazzani, P. Cardarelli, B. Grigolo, G. Paterno, M. Placidi, A. Taibi, G. Turchetti

2.2 Beam Diagnostics

14:30 **Micropattern Gaseous Detectors with Charge and Optical Readout for Charged Particle and Photon Detection**
Jona Bortfeldt, Paulina Lämmer, Sebastian Schinzel, Othmar Belker, Lotta Flaig, Jörg Schreiber, Katia Parodi

14:45 **Development of the I-BEAT: Ionoacoustic diagnostic for laser-driven ion sources**
F. Balling, A.K. Schmidt, S. Gerlach, D. Haffa, R. Yang, S. Lehrack, W. Assmann, K. Parodi, J. Schreiber

15:00 **A transmission ionization chamber for online monitoring of ion - bunch fluence and trajectory**
Lotta Flaig, Jona Bortfeld, Jens Hartmann, Thomas Rösch, Leonard Doyle, Luisa Tischendorf, Marc Berndl, Felix Balling[1] Sonja Gerlach, Anna Schmidt, Jörg Schreiber

15:15 to 15:45 **Break** (30 minutes)

15:45 **A 2D scintillator-based proton detector for high repetition rate experiments**
M. Huault, J. I. Apiñaniz, D. De Luis, M. De Marco, R. Fedosejevs, J. A. Pérez-Hernández, M. Touati, J. Metzkes, U. Schramm, K. Zeil, N. Gordillo, C. Gutiérrez Neira, G. Gatti, L. Roso, 2 and L. Volpe

16:00 **Calorimetry techniques for absolute dosimetry of laser-driven ions beams**
Sean McCallum, Nigel Lee, Anna Subiel, Russell Thomas, M. Borghesi, Giuliana Milluzzo, Hamad Ahmed, Aodhán McIlvenny, Hugo Palmans, Andreas Schueller, Francesco Romano

16:15 **Solutions for the absolute dosimetry of pulsed, high-rate proton beams**
GAP Cirrone, R Catalano, G. Cuttone, D Margarone and G Petringa

16:30 **Laser-driven proton beam diagnostic: feasibility study of a novel technique and possible applications**
D. Vavassori, F. Casamichiela, D. Bortot, D. Mazzucconi, D. Dellasega, A. Pola, M. Passoni

2.3 Diagnostics Specific to Applications

16:45 **First Silicon Carbide characterization for relative dosimetry with flash-radiotherapy**
G. Petringa , G.A.P. Cirrone, R. Catalano, S. Tudisco

17:00 **On-shot dosimetry setup for radiobiology studies on volumetric *in-vivo* samples with laser accelerated proton beams**
M. Reimold, H. Meißner, F. Brack, F. Kroll, C. Bernert, H.-P. Schlenvoigt, U. Schramm, T. Ziegler, K. Zeil and J. Metzkes-Ng

17:15 **Dosimetry for proton irradiation of 3D cell models at ultra-high dose rate**
G. Milluzzo, P. Chaudhary, H. Ahmed, D. Doria, James Green, Sean McCallum, A. McIlvenny, A. McMurray, Boris Odlozilik, K. Prise, M. Borghesi

17:30 **BLIN4 Closing Remarks**