

# Workshop on Scintillating Screen Applications in Beam Diagnostics

**Monday February 14<sup>th</sup>, 2011**

**Session 'Material Properties I'**, chairperson: Beata Walasek-Höhne

- 09:00 O. Kester Welcome  
09:05 P. Forck Welcome and workshop overview  
09:15 P. Lecoq Tutorial: Principle and application of scintillators (45 min)  
10:00 M. Toulemonde Tutorial: Swift heavy ions and particles tracks in materials: Material sensitivity and thermal spike model (45 min)

**10:45 Coffee break**

**Session 'Electron accelerators I'**, chairperson: Gero Kube

- 11:15 A. Lumpkin Comparisons and applications of scintillator and OTR screens for bright electron beams (45 min)  
12:00 A. Buck Scintillating screens for laser-accelerated relativistic electron bunch diagnostics  
12:20 All Discussion on screen usage for electron accelerators

**12:30 Buffet-Lunch in the side room of Lecture hall**

**Session 'Hadron accelerators I'**, chairperson: Andreas Peters

- 13:30 E. Bravin Usage of screens at CERN  
13:50 E. Gütlich Screens studies for ions between 3 and 10MeV/u at GSI (30 min)  
14:20 R. Krishnakumar Scintillation screen investigations for 300MeV/u heavy ion beams at GSI  
14:40 All Discussion on screen usage for hadron accelerators

**15:00 Coffee break**

**Session 'Technology'**, chairperson: Peter Forck

- 15:40 J. Tous Crytur single crystal scintillator screens  
16:00 S. Matern Scintillation screen variations  
16:20 W. Tutsch Modern CMOS image sensors for scientific and industrial camera applications  
16:40 D. Diezemann Radiation hardness and commercial cameras  
17:00 All Discussion on technical realization and screen usage, Vendors exhibition

**17:30 Visit of Material Science Experimental area** Bender & Severin

**18:30 End of first day**

**20:00 Dinner at Weißer Schwan, Arheilgen**

## Tuesday February 15<sup>th</sup>, 2011

### Session 'Material Properties II', chairperson: Marcus Schwickert

- 09:00 A. Lushchik Tutorial: Luminescence and defects creation at the relaxation of various electronic excitations in wide-gap materials (45 min)
- 09:45 All Discussion on material properties related to luminescence

### Session 'Electron accelerators II', chairperson: Kay Wittenburg

- 10:00 G. Kube Resolution studies of inorganic scintillation screens for high energetic and high brilliant electron beams

#### 10:20 Coffee break

- 10:50 M. Yan Influence of observation geometry on resolution for beam profile measurements using scintillation screens
- 11:10 R. Ischebeck Scintillators for SwissFEL
- 11:30 S. Bayesteh Conceptual ideas on single shot trans. diagnostics for electron bunches at REGAE
- 11:50 All Discussion on screen usage at electron accelerators

#### 12:10 Buffet-Lunch in the side room of Lecture hall

- 13:10 S. Rimjaem Screen investigations for low energetic electron beams at PITZ
- 13:30 C. Thomas Scintillator screens at Diamond
- 13:50 M. Olvegaard OTR screen development at CTF3
- 14:10 All Discussion on screen usage at electron accelerators

### Session 'Hadron accelerators II', chairperson: Peter Forck

- 14:30 L. Cosentino Screen for low current beams
- 14:50 G. Perdikakis Scintillator-based viewers for the low-energy and low-intensity beams of the ReA3 re-accelerator at Michigan State University

#### 15:10 Coffee break

- 15:40 J. Mäder Usage of screens at the ECR ion source at GSI
- 16:00 M. Strohmeier Scintillator based low energy beam diagnostics at the LBNL 88-Inch Cyclotron
- 16:20 All Discussion on screen usage at hadron accelerators

### Session 'Discussion of workshop results', chairperson: Kay Wittenburg

- 16:40 All Discussion on results, conclusions and perspectives for all subjects

#### 17:40 End of meeting

## Wednesday February 16<sup>th</sup>, 2011

- 09:00 A. Lumpkin Imaging of charged particle beams with OTR and ODR
- 10:30 **Visit of GSI Facility** Forck & Walasek-Höhne