

## DLSR '14 Workshop – November 19-21, 2014

### Day 1 (Wednesday, November 19, 2014)

#### Plenary #1 (Location - Bldg. 402 Auditorium) - Chair: Dennis Mills (APS)

Welcome

Goals

Overview of Lattice Options for Diffraction-Limited Storage Rings

Accelerator Challenges for an MBA Machine

Beamline Challenges

Max IV Update

Peter Littlewood

Stephen Streiffer (APS)

Christoph Steier (LBNL)

Glenn Decker (APS)

Tetsuya Ishikawa (Spring-8)

Pedro Fernandes Tavares (MAX IV)

**Breakout #1: Accelerators (Location - Bldg. 401 Room E1100/E1200) Chairs: Bob Hettel (SLAC) and Simon Leemann (MAX-IV)**

#### Accelerator Physics

**Chair: Bob Hettel (SLAC)**

Modeling of a Passive Bunch-Lengthening Cavity for the APS MBA Lattice

Nonlinear Dynamics Calibration for DLSR with Beam-Based Optimization

Interplay of Touschek Scattering, Intrabeam Scattering, and RF Cavities in Ultralow-Emitance Storage Rings

Michael Borland (APS)

Xiaobiao Huang (SLAC)

Simon Leemann (MAX-IV)

#### Accelerator Implementation

**Chair: Simon Leemann (MAX-IV)**

The Design of BAPS and its R&D

Progress on Injection / Extraction Kickers for ALS-U ESRF-II Engineering Challenges

Magnet Alignment Challenges for an MBA Storage Ring

Qing Qin (IHEP)

Stefano De Santis (LBNL)

Jean-Claude Biasci (ESRF)

Animesh Jain (BNL)

**Breakout #2: Beamlines (Location - Bldg. 401 Room A1100) - Chairs: Christian Schroer (DESY) and Lahsen Assoufid (APS)**

**Chair: Christian Schroer (DESY)**

Introduction: Tutorial Diffraction Limit and Beamline Parameters

The ESRF Upgrade Programme Phase II: The Scientific Instrumentation Roadmap

Optics and Other Beamline Considerations for Coherent X-rays

NanoMAX, the Hard X-ray Nanoprobe Beamline at MAX IV

Christian Schroer (DESY)

Jean Susini (ESRF)

Ian McNulty (APS)

Gerardina (Dina) Carbone (MAX IV)

**Chair: Lahsen Assoufid (APS)**

X-ray Optics Simulation and Beamline Design using a Hybrid Method

X-ray Optics for the Upgraded Ring SPring-8-II

The Optics Challenges for the LCLS and LCLS II

The R&D of Beamline and End-Station Technologies in HEPS

Xianbo Shi (APS)

Shunji Goto (SPring-8)

Daniele Cocco (SLAC)

Ye Tao for Yuhui Dong (IHEP)

[Day 2 \(Thursday, November 20, 2014\)](#)

**Plenary #2 (Location - Bldg. 402 Auditorium) - Chair: Tetsuya Ishikawa (Spring 8)**

[Hard X-ray Science Overview](#)

[Soft X-ray Science Overview](#)

[Sirius Project Status](#)

Overview of ESRF Beamline Upgrade Plans

Paul Evans (U. of Wisconsin)

Steve Kevan (LBNL)

Liu Lin (Sirius)

Harald Reichert (ESRF)

**Breakout #3: Magnets & Vacuum (Location - Bldg. 401 Room A1100) - Chairs: Pedro Fernandes Tavares (MAX IV) and Charles Hetzel (BNL)**

**Chair: Pedro Fernandes Tavares (MAX IV)**

[Status of Magnets for ESRF-II](#)

[Challenges in New Magnet Design for Spring-8-II](#)

[Superconducting Undulators for Next Generation](#)

[Storage Rings](#)

Joel Chavanne (ESRF)

Takahiro Watanabe (SPring-8)

Yury Ivanyushenkov (APS)

**Chair: Charles Hetzel (BNL)**

[Sirius Vacuum System Design](#)

[Diamond DDBA Vacuum](#)

[APS vacuum design](#)

Lin Liu (Sirius)

Matthew Cox (Diamond)

Ben Stillwell (APS)

**Breakout #4: Stability/Feedback/Precision Instrumentation (Location - Bldg.401 Room E1100/1200) - Chairs: Hitoshi Tanaka (SPring-8) and Jean Susini (ESRF)**

**Feedback/Stability**

**Chair: Hitoshi Tanaka (SPring-8)**

[Overview of Particle Beam Stability/Accelerator](#)

[Requirements](#)

[NSLS-II Orbit Feedback System](#)

[Beam Stability R&D at the APS](#)

Bob Hettel (SLAC)

Yuke Tian (BNL)

Nick Sereno (APS)

**Precision Instrumentation**

**Chair: Jean Susini (ESRF)**

[Precision and Stability Issues for X-ray Optics](#)

[Systems.](#)

[Nanopositioning Technique Challenges for Precision](#)

[Instruments Design with DLSR](#)

[Thermal deformation, wavefront distortion, and](#)

[thermal scattering analysis on cryogenic](#)

[monochromator](#)

Ray Barrett (ESRF)

Deming Shu (APS)

Rong Huang (CHESS)

**Day 2 (Thursday, November 20, 2014) Cont.**

**Breakout # 5: Storage Ring Installation and Commissioning (Location - Bldg. 401 Room A5000)**  
**Tom Fornek (APS)**

**Chair:**

[Overview of Commissioning Experience in Recent Light Sources](#)  
[Petra-III Installation Experience](#)  
[Installation at NSLS-II](#)  
[Removal and Installation Plans for the APS Upgrade](#)

Michael Borland (APS)  
Michael Bieler (DESY)  
Bill Wahl (BNL)  
Chuck Prokuski (APS)

[MAX IV Installation experience](#)

Pedro Fernandes Tavares (MAX IV)

**Day 3 (Friday, November 21, 2014)**

Summary Presentation Breakout Session # 1

[Accelerator Physics and Implementation - Bob Hettel and Simon Leemann](#)

Summary Presentation Breakout Session # 2 - Beamlines

[Summary Presentation - Lahsen Assoufid and Christian Schroer](#)

Summary Presentation Breakout Session # 3 - Magnets and Vacuum

[Part # 1 Pedro Tavares](#)  
[Part # 2 Charles Hetzel](#)

Summary Presentation Breakout Session # 4 - Stability/Feedback/Precision Instrumentation

[Part # 1 Hitoshi Tanaka](#)  
[Part # 2 Jean Susini](#)

Summary Presentation Breakout Session # 5 Storage Ring Installation and Commissioning

[Summary Presentation - Tom Fornek](#)