

# Program of Workshop on Beam Orbit Stabilization

December 4 (Wed.)

## (1) Opening

Chairman: M. Takao

9:00-9:10 "Opening Address"

H. Ohkuma (SPring-8)

9:10-9:40 "Users' Requirements for Orbit Stabilization"

T. Ishikawa (SPring-8)

## (2) Facility Reports on Orbit Stabilization

Chairman: E. Karantzoulis

9:40-10:05 "Status of Beam Stabilization at ESRF"

L. Farvacque (ESRF)

10:05-10:30 "Orbit Stabilization at SPring-8"

H. Tanaka (SPring-8)

10:30-10:55 "Advanced Photon Source Storage Ring Orbit Correction Overview"

L. Emery (APS)

10:55-11:10 Coffee Break

11:10-11:35 "Orbit Stability at the SLS"

M. Boege (SLS)

11:35-12:00 "Orbit Stability and Orbit Feedback Development at the ALS"

C. Steier (ALS)

12:00-12:25 "Facility Report of the Pohang Light Source"

S. H. Nam (PAL)

12:25-13:15 Lunch

Chairman: S. H. Nam

13:15-13:40 "Optimizing Orbit Correction Configuration - Method and Applications"

Y.-C. Chao (Thomas Jefferson National Accelerator Facility)

13:40-14:05 "Activities on Beam Orbit Stabilization at BESSY II"

R. Mueller (BESSY II)

14:05-14:30 "Orbit Stabilization at SPEAR2 and Future Stabilization

Plans for SPEAR3 (tentative)"

J. Safranek (SSRL)

14:30-14:55 "Orbit Stabilization at ELETTRA"

E. Karantzoulis (Elettra)

- 14:55-15:20 "Study of Orbit Stability in the SSRF Storage Ring"  
Z. Dai (SSRF)
- 15:20-15:35 Coffee Break
- 15:35-16:00 "The Electron Equilibrium Orbit Adjustment and the Closed Orbit Correction in Hefei Electron Storage Ring"  
H. Xu (National Synchrotron Radiation Laboratory)
- 16:00-16:25 "Digital BPMs - Experience and Vision from Our Perspective"  
R. Ursic (Instrumentation Technologies)

### (3) Capability of Source Suppression

Chairman: R. Mueller

- 16:25-16:45 "Experience with Damping Links at ESRF"  
L. Farvacque (ESRF)
- 16:45-17:10 "Orbit Fluctuation of Electron Beam due to Vibration of Vacuum Chamber in Quadrupole Magnets"  
M. Oishi / S. Matsui (SPring-8)
- 17:10-17:30 "Activities of Source Suppression for Improving Orbit Stability in PLS"  
S. Park (PLS)
- 17:30-17:50 "Magnet Power Supply Stabilization and Checking System Development"  
H. Takebe (SPring-8)
- 17:50-18:40 Discussion

December 5 (Thu.)

### (4) Slow Orbit Measurement and Correction

Chairman: M.P. Level

- 9:00-9:20 "Slow Orbit Feedback (SOFB) at the SLS"  
M. Boege (SLS)
- 9:20-9:40 "Slow Orbit Correction in the SPring-8 Storage Ring"  
K. Soutome (SPring-8)
- 9:40-10:00 "Slow Orbit Feedbacks at the ALS: Recent Upgrades and Future Plans"  
C. Steier (ALS)
- 10:00-10:20 "Slow-Orbit FB and the Performance of the New 7-bump Algorithm at ELETTRA"  
E. Karantzoulis (Elettra)
- 10:20-10:40 "APS High Level Orbit Correction Software"  
L. Emery (APS)
- 10:40-11:00 Coffee Break

- 11:00-11:20 "Specifics of the BESSY II 0.3Hz Orbit Correction System"  
R. Mueller (BESSY II)
- 11:20-11:40 "Sources of Slow Orbit Movement and Orbit Feedback Systems in PLS  
Storage Ring"  
H.S. Kang (PLS)
- 11:40-12:40 Discussion
- 12:40-13:30 Lunch

**(5) Fast Orbit Measurement and Correction**

Chairman: L. Farvacque

- 13:30-13:50 "APS Orbit Correction Hardware"  
O. Singh (APS)
- 13:50-14:10 "Fast Orbit Feedback (FOFB) at the SLS"  
T. Schilcher (SLS)
- 14:10-14:30 "Operations with Fast Digital Orbit Feedback Systems at NSLS"  
B. Podobedov (BNL)
- 14:30-14:50 "Beam Position Monitoring System for SOLEIL"  
J. C. Denard (SOLEIL)
- 14:50-15:10 Coffee Break
- 15:10-15:30 "Exploiting Digital BPMs at ELETTRA: a fast local orbit feedback and  
the feedforward system for the compensation of an Electromagnetic  
Elliptical Wiggler dynamic orbit distortions"  
Daniele Bulfone (Elettra)
- 15:30-15:50 "Orbit Stability in PLS Storage Ring"  
E.S. Kim (PLS)
- 15:50-16:50 Discussion
- 18:00-20:00 Banquet

December 6 (Fri.)

**(6) SPring-8 Tour + Invited Talk**

- 9:00-9:30 "X-ray Beam Stabilization by MOSTAB"  
Y. Nishino
- 9:30-11:30 Site Tour
- 11:30-11:45 Photo
- 11:45-13:00 Lunch

**(7) Toward sub-micron orbit stability (Strategic Approach)**

Chairman: L. Emery

13:00-13:20 "Strategies for Achieving Sub-micron Orbit Stability at the SLS"

M. Boege / T. Schilcher (SLS)

13:20-13:40 "Strategy for achieving sub-micron orbit stability at the APS"

O. Singh (APS)

13:40-14:00 "Strategy for Soleil Beam Position Stability at Submicron Level"

M.P. Level (SOLEIL)

14:00-14:20 "SPring-8 Closed Orbit Feedback System, a Challenge for Suppression of the Closed Orbit Vibration Down to Sub-micron Level"

S. Sasaki (SPring-8)

14:20-15:20 Discussion

15:20-15:40 Coffee Break

**(8) Closing**

15:40-16:00 "Closing Remarks"

H. Tanaka (SPring-8)