

# **First Photon Factory ISAC Meeting**

## **Executive Summary and Closing Remarks**

**K. Hodgson, Committee Chairperson**

**April 4, 2007**

## **ISAC Committee Members**

### **– 1<sup>st</sup> ISAC Meeting – April 3-4, 2007**

E. Fontes – Cornell University

H. Fukuyama – Tokyo University of Science

K. Hodgson – Stanford University, Chairperson

H. Kamitsubo – Riken Wako Institute

I. Lindau – Stanford University

G. Materlik – Diamond Light Source\*

K. Miki – Kyoto University

T. Ohta – Ritsumeikan University

V. Saile – University of Karlsruhe

H. Suematsu – Riken Harima Institute

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\*not present for April 3-4, 2007 meeting

# Perspective of ISAC Since 3-2006 Meeting



- ISAC now acknowledges and strongly supports the management's strategy of developing hard x-ray beam lines on the AR and expanding the undulator-based SX beam lines on PF. This strategy takes advantage of the unique short-bunch capabilities of the AR for innovative x-ray science in the short time domain and the expansion capacity for undulators on PF and AR.
- ISAC recognizes the prioritization of SX at PF is addressing the concerns raised earlier about the VUV/SX community and its access to cutting edge resources. PF is encouraged to make this role a more visible part of its overall mission and identity – at minimum this global strategy should be considered by the Japanese science community.
- ISAC supports the efforts towards prioritization, consolidation and reduction in the number of operational stations on PF and AR. More effort in this direction is strongly needed with the involvement of the planned ISAC subcommittees.

# Photon Science at KEK, Budget, PF Reorganization



- ISAC recognizes the strategic importance of photon science playing a larger role in the future of KEK. ISAC strongly encourages that KEK management recognize the opportunities for synergy in areas like accelerator science and the importance for next generation light source development in Japan and indeed worldwide. We would like to compare the situation at KEK with that at Cornell, DESY and SLAC, recognizing that KEK also has J-PARC as a major long term investment.
- ISAC sees the declining budget situation as very limiting and one that will have to be managed. Utilizing committees like ISAC and input from the user community and other advisory bodies is key to future success. Industrial involvement is a promising area where technology transfer is an important factor. ISAC strongly encourages continuing to develop competitively awarded sources of funding.
- ISAC welcomes the initiative to coordinate photon science activities in Japan through bodies like the “roundtable” and JSSRR.
- ISAC welcomes the new group structure and in particular congratulates the management on achieving such a complex task in only one year. Going further, we suggest augmenting the senior management in ways that help the PF director deal with a large and diverse portfolio and range of issues.

## Strategic (Action) Plan for Beam Lines

- ISAC strongly supports the engagement of external investment in the form of new beam lines and instrumentation. In particular, ISAC supports the Pharma beam line development.
- Management is strongly encouraged to continue to actively develop additional investment through the competitively awarded grants process, including expanding the center concept beyond structural biology and structural materials science.
- ISAC recognizes the significant effort in prioritization and reorganization of the beam line program. A good start has been made in this regard and ISAC strongly supports continued evaluation of the existing stations on the basis of the criteria presented to ISAC. However, the chosen metrics need to be adjusted by area of science and in comparison with international standards.
- In the process of reorganizing beam lines, it is important to find means to minimize the disruption that will be caused to the users.

# ERL Project



- ISAC continues to strongly support the ERL development in that it offers a route to next generation performance that compliments Spring-8, XFELs and other Japanese light sources. Further, it can strongly engage the KEK accelerator competence and position KEK to be at the forefront of future light sources.
- Developing a compelling science case for the ERL project and facility, including organizing and involving the user community.
- Develop the ERL within the vision of “photon sciences” as a core competency for KEK.
- Develop a realistic, multi-phase project time line based on milestones and incremental successes – utilizing technology proven at KEK.
- Organize, galvanize and strengthen the VUV/SX community in Japan .
- Identify commonality among the future accelerator projects at KEK and better integrate and include the ERL (and PF) in this core accelerator technologies” program.
- Rename the “test facility” and plan it for cutting edge scientific applications in addition to its key R&D role. It is important to identify a “champion” for this project.
- Seek international partners within the Asia-Pacific region for developing and financing and utilizing the large ERL project.

## PF ISAC – Processes and Recommendations

- Experience of ISAC members with other advisory bodies suggests that a 3-year cycle is more effective. Membership should rotate on a staggered basis.
- ISAC strongly supports the formation of the proposed review subcommittees and expresses its willingness to fully engage in this process. Scheduling should be such that the reviews are completed in a timely manner prior to the following ISAC meeting but need not be immediately preceding it.
- ISAC should meet at minimum as a full body twice per year.
- ISAC membership – addition of a strong accelerator scientist should be considered. Another area of future need is the area of time domain science.

## Other Conclusions and Comments

- ISAC observes that there are several areas where science leadership needs further development (e.g. the PF Director also acting as head of the “Electronic Properties” Group). It is important in future strategic planning to pay close attention to these issues.
- While ISAC did not have time to fully consider the “XYZ” projects strategy, we find it very innovative and look forward to hearing more at a future meeting.
- ISAC appreciates the first look at the mission statement for the facility and the groups and looks forward to discussing it in more detail at the next meeting.
- ISAC would like to applaud the PF senior management for its strong leadership and vision during this past year.
- We thank the staff for their excellent science and technical presentations and openness in discussion. Also we thank the administrative staff for their outstanding organizational and logistical support.