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Fullfilling User Requirements at Synchrotron Light Sources

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Synchrotron light sources (LS) have become the workhorse of research infrastructures all over the world. With more than 70 light sources, each providing several thousands of hours of beamtime per year which allow research to be conducted in multiple areas of science and resulting in several thousands of publications per year, synchrotron light sources have become indispensable research infrastructures.
Synchrotron LS are run as users facilities, meaning that they are open to all potentially interested users and that time allocation is determined by the merit of the proposal. As users facilities they should also run efficiently and serve and adapt to the needs of the scientific community.
The requirements from the users in terms of photon flux, brilliance, photon beam size and beam stability have evolved during the years. Beam sizes of the order of the micron and beam stabilities in the sub-micron range are common requirements for the new light sources.
Fulfilling the requirements of the users has an impact on the design of the light source, not only in terms of reaching the most adequate photon beam properties by using state of the art technology but also in terms of the capital investment and the running cost of a facility. A good balance between the funding and the resources available to run a synchrotron light source and the users requirements to be fulfilled is indispensable to operate successfully a synchrotron light source.
The talk shall discuss the evolution of the users requirements at light sources as well as the recent advances to fulfill the more extreme requirements.

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Session Classification: Fulfilling User Requirements at Various Types of Facilities