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BESSY VSR - Upgrade for BESSY II

Summary

The major upgrade of the BESSY II synchrotron light source aims at developing a Variable pulse length Storage Ring - BESSY-VSR, by introducing strongly focusing superconducting cavities in order to manipulate the longitudinal phase space. This will bring up a voltage beating pattern and allows to store simultaneously long and short electron bunches. In the regular user optics rms bunch lengths of ≈ 15 ps and down to 1.7 ps are expected for high current operation. Bunches as short as 300 fs can be provided by using a low-α optics.

This poster will give a short overview of the concept and realization of BESSY VSR.

Primary author: Dr GOSLAWSKI, Paul (Helmholtz-Zentrum Berlin, HZB)

Presenter: Dr GOSLAWSKI, Paul (Helmholtz-Zentrum Berlin, HZB)