

# SACLA BEAM PERFORMANCE

A large jump in performance has been achieved by introducing BL2 and BL3 pulse-by-pulse switching operations in user experiments [1,2]. Since September 2017 [1], three FEL beamlines, BL1 for soft-X-ray FEL, and BL2 and BL3 for hard X-ray FELs, have been available simultaneously for a variety of experiments. This new operation standard significantly increases

opportunities for user experiments, and the net user time in FY2017 across user shifts at BL1 to BL3 is expected to exceed 5000 hours, while maintaining high laser availability and short-pulse characteristics with efficient multi-beamline operations. Figure 1 shows the typical intensity stability at the three FEL beamlines.

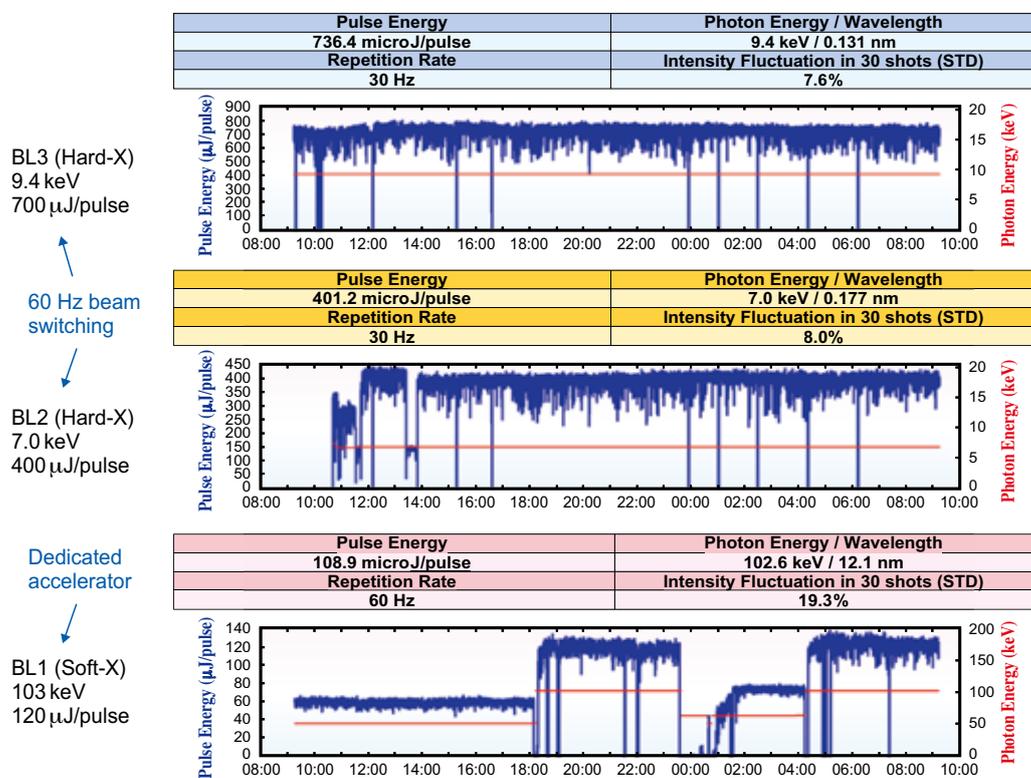


Fig. 1. Typical laser intensity trends during user experiments. The upper, middle, and lower graphs show the intensity stability at BL3, BL2, and BL1, respectively. The repetition rates of SACLA and BL1 dedicated accelerator are 60 Hz.

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## References

- [1] C. Kondo *et al.*: Proc. of IPAC2017, Copenhagen, Denmark (2017) pp. 3404.
- [2] T. Hara *et al.*: Proc. of FEL2017, Santa Fe, USA (2017) - in press.