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## **Beam Based Undulator Trajectory Alignment at European XFEL**

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Precise alignment of the undulator trajectory onto a straight line is a per-requisite for high fidelity SASE operation, which in turn also enables non-standard operation modes like self-seeding or two-color operation. At European XFEL electron and photon beam based method are combined with a step-by-step performance based optimization to ensure that the trajectory is on a straight line over most of the length of the about 250 m long undulator system.

### **Footnotes**

### **Funding Agency**

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