

# SwissFEL UNDULATOR CONTROL SYSTEM

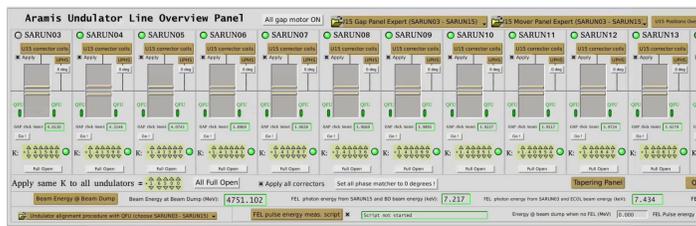
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SwissFEL has successfully commissioned the Aramis beamline, hard x-rays (2 – 12.4 keV), and the Athos line, soft x-rays (200 eV to 2 keV), will start commissioning in 2020. The Aramis undulator line is currently composed of 13 variable-gap in-vacuum undulators. The Athos line will be made of 16 APPLE II type undulators (Advanced Planar Polarized Light Emitter). Both beamlines have each undulator segment on a 5D mover system; they both also have phase shifters and movable quadrupole tables in between segments. PLCs and DeltaTau motor controllers are used to control motion, for I/O interface, and interlocks. EPICS IOCs communicate with the controllers and provide additional logic and some high level functionality.

## SwissFEL Aramis Undulator

KSET	GAP-READ	X1-B-SET	Y1-B-SET	X2-B-SET	Y2-B-SET	Earth Coil B-SET	DELTA-PH-U	Gap
SARUN03	1.6000	4.0130 mm	-1.838e-04 T	1.864e-03 T	-1.209e-03 T	-6.999e-04 T	-3.627e-01 A	430.0   15.9980 mm

Gap to k, orbit correction, and phase shifter matching



SwissFEL Aramis Intensity [uJ]