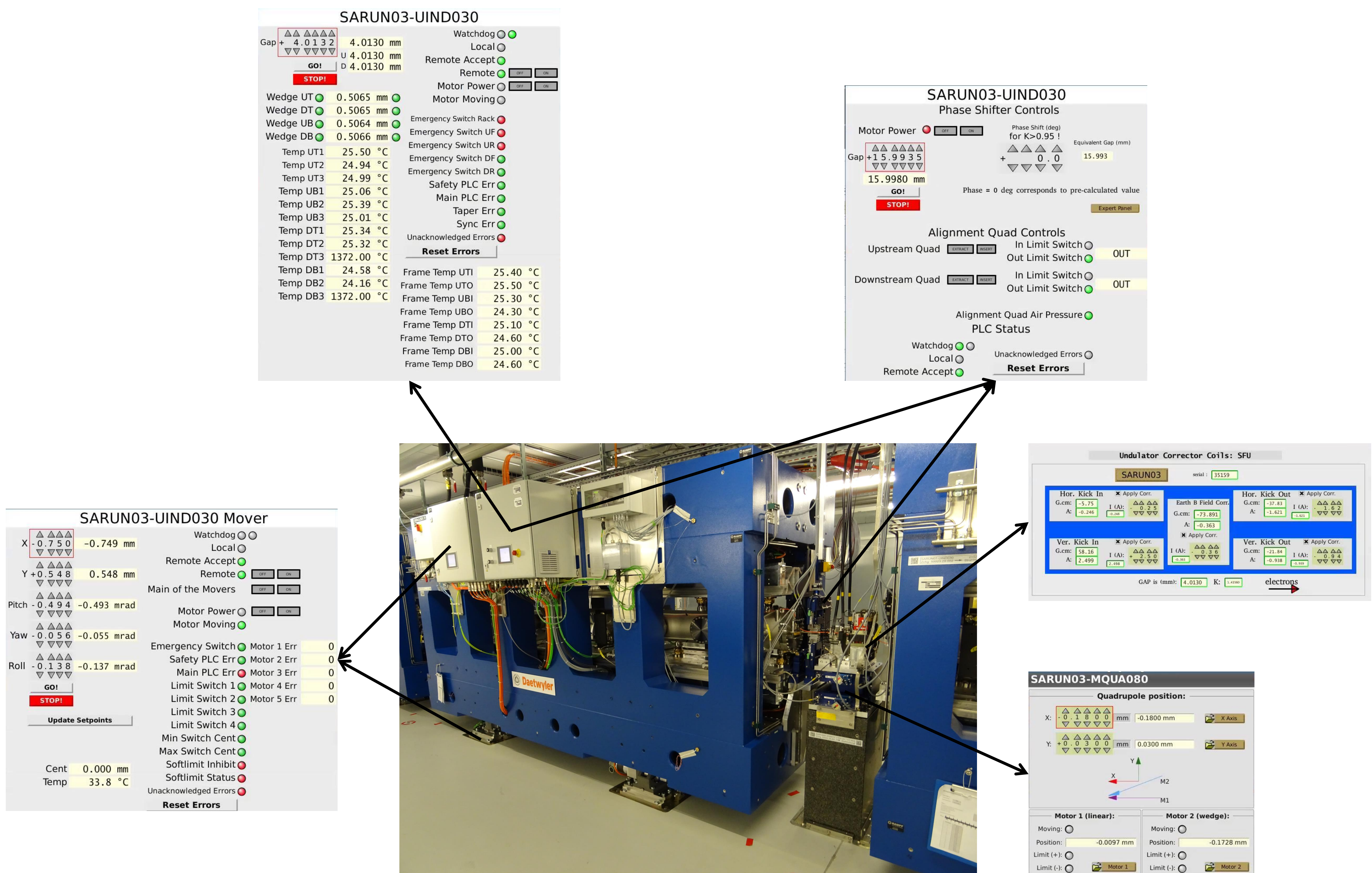


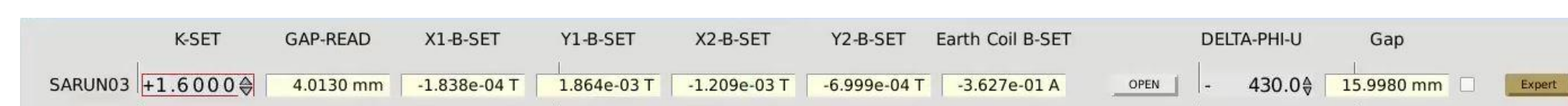
SwissFEL UNDULATOR CONTROL SYSTEM

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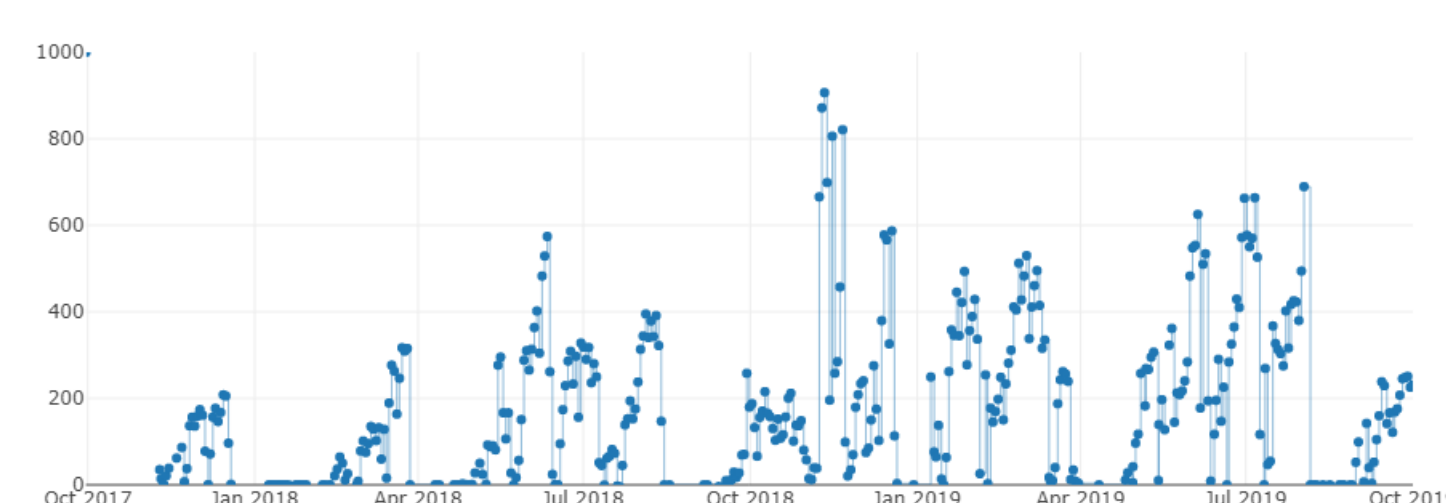
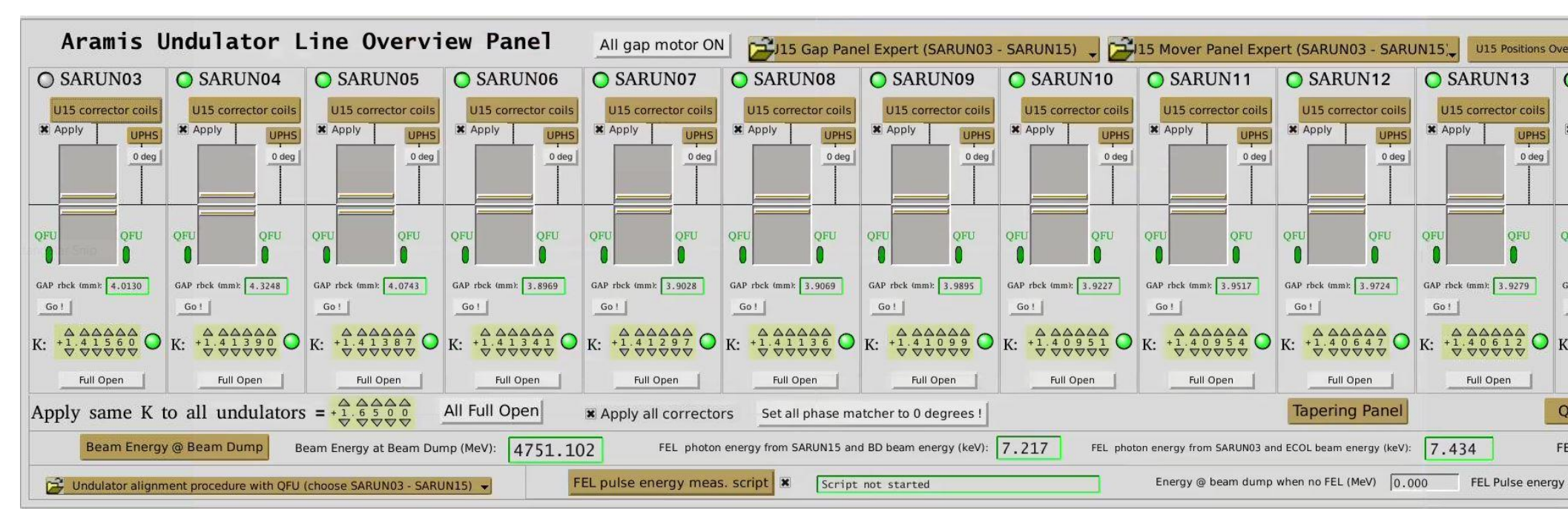
SwissFEL has successfully commissioned the Aramis beamline, hard x-rays (2 – 12.4 keV), and the Athos line, soft x-rays (200 eV to 2 keV), will start commissioning in 2020. The Aramis undulator line is currently composed of 13 variable-gap in-vacuum undulators. The Athos line will be made of 16 APPLE 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



Gap to k, orbit correction, and phase shifter matching



SwissFEL Aramis Intensity [uJ]