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Design Considerations for the Extraction Line of the Proposed Third Beamline Porthos at SwissFEL

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It is planned to extend SwissFEL by a third beamline, named Porthos, operating in the hard X-ray regime. Three bunches will be accelerated within one RF pulse and distributed into the different beamlines with resonant kickers operating at the bunch spacing of a few tens of nanoseconds.

While the full extent of Porthos will not be realized before the end of this decade the extraction line from the main linac will also serve the P³ experiment for the demonstration of a possible positron source for the FCC-ee project at CERN. We present the design of the switchyard, which will serve both purposes with only minimal changes.

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Yes

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