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# Experiments of particle guiding and radiation in laser-plasma channels

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Plasma acceleration is a novel technique for a large variety of applications, including radiation sources of new generation. X-ray sources based on betatron radiation from plasma accelerators hold promise as compact, innovative and highly accessible solutions for radiation users. The key feature that makes these sources unique, lies in the shortness of the pulses delivered, falling in the femtosecond range and paving the way for ultrafast photon science in the X-ray range.

In this work, temporal characterizations of the betatron radiation pulses emitted by electron bunches undergoing acceleration and guiding in plasma channels is shown.

**Primary author:** CURCIO, Alessandro (Istituto Nazionale di Fisica Nucleare)

**Presenter:** CURCIO, Alessandro (Istituto Nazionale di Fisica Nucleare)

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