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Shaping and Control of Radiation Properties with Seeded FELs

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The use of external lasers to initiate the FEL process has been introduced as a way to prepare the electron beam before entering the FEL radiator and to allow the generation of radiation pulses with increased brightness in shorter undulator. Over the recent years, new methods have been proposed and implemented to extend the capabilities of external seeding toward shorter wavelengths.

The experience gained at the FERMI seeded FEL user facility has boosted the developments of experimental techniques taking full advantage of the high degree of coherence of FEL pulses and the possibility to accurately control the radiation properties such as amplitude and phase.

Recent results together with future plans for externally seeded FEL facilities will be reported.

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Yes

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