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Design considerations for the free electron laser oscillators of Anhui University

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An infrared free electron laser user device will be constructed at the Anhui University in Hefei. The facility integrate free electron laser, strong magnetic field, and low-temperature environment aiming at materials science and other fields research. It consists of two FEL oscillators driven by one normal-conducting S-band linac and five experimental stations. The two oscillators generate the mid-infrared and far-infrared lasers covering the spectral range of 3-40 μm and 30-200 μm , respectively. In this paper the main considerations on optimizing design, especially reducing diffraction loss and mitigating power gap issues, are briefly presented, and basic design parameters of the FEL oscillators are given.

Footnotes

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