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Recent progress of Shanghai laser electron gamma source (SLEGS) beamline in SSRF

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Shanghai Laser Electron Gamma Source (SLEGS) beamline, based on laser Compton scattering (LCS), as one of beamlines of Shanghai Synchrotron Radiation Facility (SSRF) in phase II project, has been construct-ed and started test commissioning from July 2021. The results of the commissioning already show a steady experimental proof that SLEGS can produce gamma rays with adjustable maximum energy by consecutive-ly changing the interaction angle between laser beam and electron bunches.
In this paper, the recent progress of SLEGS is given. The newly measured gamma-ray's spectra and flux are presented. The resolution of the gamma-rays is im-proved with the application of external collimator. A gamma spot monitor is setup to measure the spatial distribution of LCS gamma ray. A 4π flat-efficiency 3He neutron detector (FED) array and the neutron time-of-fight (TOF) spectrometer are also designed and installed. Some preliminary results of these devices is introduced.

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