



Laser driven micro-wire for electron diffraction

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We have created a 150keV, 0.1pC, picosecond electron bunch based on laser solid-density plasma interaction.

Due to the conditions of laser irradiation and target have not been optimized in the present experiment, the brightness can be improved through various approaches such as increasing the laser pulse energy, adding focusing electric fields and(or) bunch compression section. We have proved that it is realizable for almost single-shot picosecond electron diffraction with 150keV electron pulses generated by a tungsten wire target irradiating by intense femtosecond laser pulses.

References

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