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Development of cold atom electron source in KEK

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A ultra-low emittance electron source utilizing laser-cooled neutral gas as the photo-ionization source has been developed in several laboratories in the accelerator community. We have started the development aiming for using the electron source for the injector of a THz accelerator which has a small aperture and requires a high quality beam.

As the first stage of the development work, we have developed a narrow linewidth laser system and started test experiments of Magneto-Optical Trap of Rb gas.

We will show the present status of the work and discuss the future prospect.

Funding Agency

JST, PRESTO

Footnotes

I have read and accept the Privacy Policy Statement

Yes

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