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## Development of regenerative-amplifier FEL at the compact ERL

*Monday 2 June 2025 16:00 (2 hours)*

The compact ERL has been built in 2013 at High Energy Accelerator Research Organization (KEK) to a test machine of an energy recovery linac. Afterwards, two undulators have been installed in the compact ERL and a first light amplification (free-electron laser: FEL) in mid-infrared range has been observed in 2021. However, the intensity of light has not been achieved to the intensity saturation because of not enough undulator length. Since we are considering for industrial applications using it, the intensity has to be improved. There are several methods to improve the intensity, and we have decided to try a “regenerative-amplifier (RA) FEL” scheme and now it is under the construction. In this presentation, we will report the status and plan of RA-FEL development using the compact ERL.

### Footnotes

### Paper preparation format

### Region represented

Asia

### Funding Agency

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