

# Development of new pulse driver for high power pulsed magnet

*Tuesday 27 August 2024 16:00 (2 hours)*

The KEK injector linac injects high-charge electron and positron beams into the high-energy-ring and low-energy-ring of SuperKEKB respectively.

The linac also injects electron beams to the two light source rings, PF ring and PF-AR. We operate simultaneous top-up injections into the four rings by using many pulsed magnets. We have been upgrading the linac to attain the higher-quality beam injections for the SuperKEKB rings.

In the summer of 2023, large-aperture quadrupole pulsed magnets have been newly installed upstream of the linac and driven by new large-current pulse driver.

The power of the new pulse driver is 600 A 400 V and is energy recovery type. We achieve high efficiency with simple pulse width control. I would like to introduce this high-power, high-efficiency pulse driver.

## Footnotes

## Funding Agency

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