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## High intensity beam operation of J-PARC RCS with minimum beam loss

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The 3-GeV RCS at J-PARC at present operates at a relatively high intensity beam of nearly 1 MW for the spallation neutron source. The beam loss and the corresponding residual radiation, which is the key limitation against beam intensity ramp up, has been well mitigated to a minimum level in a recent series of beam studies and feedback from realistic numerical simulations. The residual beam loss even at the designed 1 MW beam power is now mostly due to the foil scattering of the circulating beam during multi-turn injection, while other beam loss sources have been well optimized to minimize the beam loss for achieving a stable operation presently at 800 kW.

### Funding Agency

### Footnotes

### I have read and accept the Privacy Policy Statement

Yes

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