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## **Study for space charge effect in tune space at CSNS-II/RCS**

*Tuesday, 9 May 2023 16:30 (2 hours)*

CSNSII is an upgrade project of China Spallation Neutron Source (CSNS), which needs to increase the beam power from 100kW to 500kW. In order to find a suitable working point area in advance and evaluate the influence of space charge effect on CSNSII, the measurements of beam loss with different tunes on CSNS was carried out and beam loss simulation in transverse tune space on CSNSII has been performed using PyORBIT code. We gave the relationship between the beam survival rate and the working point, compared four groups of candidate working points and confirmed the influence of the fourth-order resonance on the beam through the single particle model.

### **Funding Agency**

### **Footnotes**

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

Yes

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