



Contribution ID: 1441 Contribution code: MOPM085

Type: **Poster Presentation**

## **Beam injection using a nonlinear kicker for the HLS-II storage ring**

*Monday, 8 May 2023 16:30 (2 hours)*

The single nonlinear kicker (NLK) injection has been adopted by several synchrotron radiation light source facilities or their upgrades. The injected beam receives a kick from an NLK and goes into the acceptance of the storage ring while the stored beam passes through the center of the NLK where the magnetic field is almost zero. Compared with the local-bump injection, NLK injection requires less space for kickers and causes less oscillation amplitude for the stored beam during injection. Currently, a conventional local bump injection including four pulsed dipole kicker magnets is adopted in the HLS-II storage ring. In this paper, we propose an NLK injection scheme by only replacing one kicker with a pulsed NLK for HLS-II. The simulation result is also presented.

### **Funding Agency**

### **Footnotes**

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

Yes

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**Session Classification:** Monday Poster Session

**Track Classification:** MC2: Photon Sources and Electron Accelerators: MC2.T12: Beam Injection/Extraction and Transport