IPAC'23 - 14th International Particle Accelerator Conference



Contribution ID: 1281 Contribution code: MOPA188

Type: Poster Presentation

## Design of a 250 linac injector for the Southern Advanced Photon Source

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

The Southern Advanced Photon Source (SAPS) is a 4th generation storage ring based light source under design started several years ago, which is planned to be constructed

at Guangdong province at China. The equilibrium emittance of the storage ring will be below 100 pm.rad and the beam energy is determined to be 3.5 GeV. During the past two years, the nominal current of the storage ring was increased from 200 to 500 mA, so the injector system has to provide more bunch charge. Besides, the injection beam energy for the booster was increased from 150 to 250 MeV, which means two more accelerating cavities have to been added. In this paper, the update of the linac injector is presented, which consists of a thermionic electron gun, a bunching system, a 200 MeV linac. The beam transfer line from linac to booster is also presented

**Funding Agency** 

## Footnotes

## I have read and accept the Privacy Policy Statement

Yes

Primary author: HAN, Yanliang (Institute of High Energy Physics)

**Co-authors:** HUANG, Liangsheng (Institute of High Energy Physics); WANG, Sheng (Institute of High Energy Physics); LIU, Xingguang (Chinese Academy of Sciences); JIAO, Yi (Institute of High Energy Physics)

Presenters: LIU, Xingguang (Chinese Academy of Sciences); HAN, Yanliang (Institute of High Energy Physics)

Session Classification: Monday Poster Session

**Track Classification:** MC2: Photon Sources and Electron Accelerators: MC2.A05: Synchrotron Radiation Facilities