Contribution ID: **1365** Contribution code: **MOPM115** Type: **Poster Presentation**

Preliminary design of insertion devices at Hefei Advanced Light Facility

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

Hefei Advance Light Facility (HALF) is a 2.2 GeV diffraction-limited storage ring, which is developed by National Synchrotron Radiation Laboratory in China. It has 20 long straight sections and 20 middle straight sections. All the experimental stations in the first stage will employ undulator as the light source. In this paper, we introduce the preliminary design of insertion devices of HALF, which includes 11 undulators and 2 wigglers. The undulator design is carefully optimized based on the current undulator technology and experiment user demands. The photon flux of these undulators can cover the photon energy from 5 eV to 10 keV with the flux greater than 10^{14} phs/s/0.1\% B.W. It can reach an ultra-high brilliance at the soft X-ray wavelength region. Most of the insertion devices are the elliptically polarized undulators and the in-vacuum undulators, therefore the light source of HALF will be charactered by a flexible tunability on polarization state and a broad range of photon energy from VUV to X-ray wavelength region.

Funding Agency

National Natural Science Foundation of China under Grants (No. 11905221 and No. 11975233) and USTC Research Funds of the Double First-Class Initiative (YD2310002009).

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary authors: ZHAO, Zhouyu (University of Science and Technology of China); XU, Yuanfang (University of Science and Technology of China); LI, Heting (University of Science and Technology of China)

Presenter: ZHAO, Zhouyu (University of Science and Technology of China)

Session Classification: Monday Poster Session

Track Classification: MC2: Photon Sources and Electron Accelerators: MC2.T15: Undulators and Wigglers