



MT 26
International Conference
on Magnet Technology
Vancouver, Canada | 2019

Contribution ID: 916

Type: **Contributed Oral Presentation**

Fri-Mo-Or25-01: Progress in the development of superconducting undulators at the Advanced Photon Source

Friday, 27 September 2019 08:00 (15 minutes)

Development of superconducting undulator (SCU) technology continues at the Advanced Photon Source (APS). Recently, a new helical SCU has been added to the portfolio of two planar SCUs operating at the APS. The concept of a novel Superconducting Arbitrarily Polarizing Emitter, or SCAPE, has been suggested and tested in a prototype. Work on a long SCU which combines two up to 1.9-m long planar SCU undulator magnets in a 4.8-m long cryostat is in progress. In addition, an advantage of Nb₃Sn-based undulator over NbTi-based SCU in generating higher undulator magnetic field will be demonstrated in a new project with a goal of developing and installing in the APS storage ring a Nb₃Sn undulator. Description of these projects and their status are presented.

Primary author: IVANYUSHENKOV, Yury (ANL)

Co-authors: FUERST, Joel (ANL); HASSE, Quentin (Argonne National Laboratory); Mr KASA, Matthew T. (Argonne National Laboratory); Dr KESGIN, Ibrahim (Argonne National Laboratory); SHIROYANAGI, Yuko (Argonne National Laboratory); GLUSKIN, Efim (Argonne National Laboratory)

Presenter: IVANYUSHENKOV, Yury (ANL)

Session Classification: Fri-Mo-Or25 - Accelerator Magnets - Miscellaneous