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## Advancements in superconducting undulator technology: deployment of the first Nb<sub>3</sub>Sn-based SCU at the Advanced Photon Source

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A state-of-the-art Nb<sub>3</sub>Sn-based Superconducting Undulator (SCU) has been designed and built at the Advanced Photon Source (APS) of Argonne National Laboratory in collaboration with Fermi and Berkeley National labs. Following the successful completion of its commissioning phase, this SCU in February 2023 began delivering high energy x-ray beam to APS users. The successful realization of the Nb<sub>3</sub>Sn-based SCU paves the way for short-period, high-field undulators that greatly benefit current and future light sources. The presentation will provide details on the fabrication, magnetic characterization, installation and commissioning of the APS Nb<sub>3</sub>Sn SCU.

### Footnotes

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