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NSLS-II magnetron coating system and upgrade

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Subsequent to the commissioning of NSLSII, the Vacuum Group established a vertical magnetron coating facility to support continued NSLSII operations and research activities. Some of the early projects included titanium coating injection kicker ceramic chambers as well as NEG coating standard vacuum chambers. This coating facility was also used to apply copper-oxide coating to the APS-U Injection Strip-line Kickers to manage thermal loads. While these efforts proved successful, the coating system was upgraded with a moveable, higher field-strength water-cooled solenoid to allow small aperture coating of varying length. The upgraded facility was used to develop the titanium coating for the ALS-U injection kickers and will also be used to test small aperture NEG coatings for a potential upgrade to NSLSII. The coating system can now coat chambers up to 2m in length which will allow for photon stimulated desorption measurements here at NSLSII. The facility history and upgrade will be described in detail along with the results of the ALS-U coating effort.

Footnotes

Funding Agency

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