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Advanced Photon Source Upgrade: Commissioning, Initial Science, and Future Outlook.

Wednesday 25 June 2025 16:00 (50 minutes)

The upgrade of the Advanced Photon Source (APS) was recently completed reducing the natural emittance of the APS storage ring from 3000 to 42 pm. This reduction greatly increases the coherent x-ray fraction at high energies providing unique opportunities for interrogating materials at nanometer length-scales with lens-less imaging techniques or exploring the dynamics of systems orders-of-magnitude faster than was previously possible. This talk will detail the APS's recent experience with commissioning of the new storage ring and the newly built beamlines optimized to exploit the high-energy coherence. The talk will also present some initial scientific results produced by APS beamlines over the past year, and an outlook for continued development of the APS accelerator and beamline portfolio.

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