

## Thirteenth CW and High Average Power RF Workshop



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### **PRESENT DAY RF GROUP POWER SYSTEMS AT THE ADVANCED PHOTON SOURCE**

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The Advanced Photon Source (APS) user facility began operation by delivering first x-ray on March 26, 1995. Over the many years, the RF Group maintains and improves four different types of rf powers systems. One system consists of a high-power pulsed klystron within the Linear Accelerator (LINAC), two different types of rf power systems within the Positron Accumulator Ring (PAR), and a Booster and Storage Ring klystron power system. Beginning with the LINAC, the 2.856GHz modulator system is currently under the third upgrade iteration, with the second upgrade equipment still in operation since 1999. The PAR's 9.77MHz CW fundamental amplifier commenced operation some 28 years ago and the pulsed 117MHz harmonic amplifier system introduced solid-state operation in 2021. Then 352MHz Booster and Storage Ring klystron power supply systems supported operation since the start of the APS. This talk will focus on the description of the RF Group's present power supply systems, performance upgrades, and reliability. Plus, hardware failures will be mentioned.

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