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Solid state amplifier project at the Advanced Photon Source

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The Advanced Photon Source at Argonne National Laboratory (ANL) is in the process of acquiring solid state amplifiers (SSA) from R&K Limited to replace four 1MW klystron rf systems that provide rf power to the storage ring cavities. This project is necessary primarily due to klystron obsolescence. Based on present needs for the APS Upgrade, twelve 160kW SS rf amplifier systems will be required to replace the legacy klystrons. Each of the 352-MHz SSA systems consist of a rack-mounted control unit, two 85kW amplifier cabinets, four 48-way coaxial combiners, and a single 4-way waveguide final combiner. The system is designed with particular attention to reliability and redundancy to help ensure high reliability metrics for the APS-U rf system.

Footnotes

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