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310 kW Solid State CW RF Amplifier for the NSLS-II Third RF System

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The National Synchrotron Light Source II (NSLS-II) Storage Ring was originally commissioned in 2014 with two 310 kW CW Klystron transmitters supplying their respective cavities with RF power. Late in 2017 the process of procuring a third RF 310 kW CW transmitter for the Storage Ring was started. Proposals from multiple vendors offering both Klystron and Solid-State Amplifier (SSA) solutions were all considered with the contract being awarded to purchase a Solid-State Amplifier. There were many bumps in the road along the way to a successful Site Acceptance Test and completion of commissioning which were both accomplished in April of 2021. This paper will detail some of the pitfalls which were encountered along the way as well as demonstrating some of the superior technical performance specifications that can be achieved with this technology.

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