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## Efficient RF components of solid-state amplifiers for Sirius storage ring's RF plant

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Solid-state RF amplifiers (SSAs) are being developed to compose SIRIUS storage ring's RF plant for operation with superconducting cavities. Each amplifier must deliver up to 65 kW of RF power at 500 MHz and a high AC-to-RF efficiency is desired to minimize operation costs. To this end, amplifier modules able to deliver 900 W with approximately 70 % DC-to-RF efficiency were designed. To combine the output of 80 modules, a cavity combiner was simulated and a prototype was assembled. This paper presents the performance of the RF modules obtained from a pilot batch, as well as measurement results from the cavity combiner at low RF power. Finally, a summary on the ongoing development of solid-state amplifiers is presented.

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## Footnotes

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