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Mon-Af-Po1.18-08 [65]: Operational Analysis of KSTAR CS Magnet

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The KSTAR magnet system has stably operated since the first plasma in 2008. Scientifically important results have been achieved such as long-pulse plasma operation up to approximately 80 seconds, ion temperature more than 100 million degrees, the world-longest ELM suppression, and so on. During more than 20,000 shots, the CS magnet has experienced temperature rise especially due to AC losses as well as electro-magnetic loads. In this paper, the operational characteristics are analyzed with accumulated data such as coil voltages, temperatures, pressures, flow rates, and so on. Based on these results, conductor performance and stability issues are discussed.

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