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SKA radio probes on axion-like particles and MeV scale dark matter

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We discuss the sensitivity of the SKA radio telescope to sub-GeV dark matter and axion-like particles.
Specifically, we explore how these light dark matter candidates affect large-scale structure formation and generate 21 cm radio signals detectable by the forthcoming SKA radio telescope.
Additionally, we demonstrate that MeV-scale dark matter can be probed through radio emissions from the magnetospheres of white dwarfs. The complementary nature of these future radio signal bounds with current experimental bounds from other experiments will also be discussed.

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