

Abstract Submitted
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Discovering the Epoch of Reionization NICHOLE BARRY, BRYNA HAZELTON, IAN SULLIVAN, ADAM BEARDSLEY, JONATHAN POBER, PATRICIA CARROLL, MIGUEL MORALES, University of Washington, MWA COLLABORATION — The Murchison Widefield Array seeks to directly detect the Epoch of Reionization, the era of early structure formation, via the 21 cm hyperfine transition of hydrogen. With a possible detection of 14σ on the anisotropies of ionized hydrogen bubbles during the early universe, significant advancements in astrophysics will be made, including topics on the physics of galaxy formation, quasars, and mean free path of photons in the early universe. Recent breakthroughs in foreground subtraction of the hydrogen signal have prepared the state-of-the-art radio interferometry analysis for the incoming slew of over two petabytes of data in the coming months.

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