**HERA: Illuminating our Early Universe**

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The Hydrogen Epoch of Reionization Arrays (HERA) roadmap is a staged program that uses the unique properties of the 21-cm line from neutral hydrogen to probe the Epoch of Reionization (EoR) and the preceding Dark Ages. During these epochs, roughly 0.31 Gyr after the Big Bang, the first stars and black holes heat and reionize the Universe following cosmic recombination. Direct observation of the large scale structure of reionization and its evolution with time will have a profound impact on our understanding of the birth of the first galaxies and black holes, their influence on the intergalactic medium (IGM), and cosmology.

Detecting, characterizing and ultimately imaging this epoch is a key goal for the community and was the top priority in the Radio, Millimeter, and Sub-millimeter category of recommended new facilities for mid-scale funding in the most recent decadal survey. Current projects (PAPER, MWA, LOFAR, GMRT) are striving to make the first detection of the statistical power spectrum of the signal, but current best limits still fall above even optimistic predictions of its intrinsic strength. While these projects are still taking data, it is recognized that an optimized array based on our new understanding of the signal characteristics is needed to make a strong detection and begin to characterize this signal over multiple scales and redshifts.

The planned incarnation of HERA will have a staged deployment of 14-meter antennas in a close-packed hexagonal configuration to maximize sensitivity in the EoR "window":

- HERA 127 will measure the rise and fall of the EoR power spectrum, constraining the timing and duration of reionization;
- HERA 331 will measure EoR fluctuations over a variety of spatial scales to determine the features and distribution of the first objects that dominate cosmic reionization;
- HERA 568 will extend precision power-spectrum observations into the Dark Ages and directly image the IGM during reionization.

It is planned to be built at the Karoo site in South Africa where PAPER is currently deployed and that is being further developed for the SKA. This paper will present a summary of the current understanding of the signal characteristics and measurements and describe this planned HERA telescope to be built to detect and characterize the EoR power spectrum.