

Bounds on the Dark Matter lifetime from Cosmic Dawn

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The observation of the cosmic 21-cm spectrum can serve as a probe for Dark Matter properties. We point out that the knowledge of the signal amplitude at a given redshift allows one to put conservative bounds on the DM decay rate which are independent of astrophysical parameters. Using the experimental results reported by the EDGES collaboration, we derive bounds that are stronger than the ones derived from other CMB observations and competitive with the ones from indirect detection.

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