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A Particle Physicist's Perspective on the EDGES Anomaly

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In a recent pair of Nature papers, Bowman *et al.* claimed a detection of an anomalously low 21 cm brightness temperature at a redshift of 17, and Barkana interpreted this as evidence of cold dark matter that was scattering with baryons at that cosmic epoch. In this talk, I will discuss constraints available in the particle physics literature, and future directions for particle, astro, and nuclear physics in the wake of the EDGES observation. A number of independent groups have found that cosmological constraints limit only a subdominant fraction of the dark matter particles to be able to participate in this scattering, and that even this limited scenario is strongly bounded by complementary terrestrial considerations. The prospects for investigating this small remaining region of viable parameter space are discussed in both terrestrial and astrophysical contexts.

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