



**VNiVERSiDAD
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MEASURING ANGULAR DIAMETER DISTANCES OUT TO $z \approx 10$ WITH THE COSMIC INFRARED BACKGROUND FLUCTUTATIONS.

The Cosmic Infrared Background (CIB) contains emissions from the first stars and first black holes. Lyman-break tomography applied to source subtracted images from Euclid can isolate the CIB emissions at redshifts $10 \leq z \leq 20$ and to identify the baryon acoustic oscillations (BAOs) at those epochs even if the data contain only a small fraction from high redshift sources. Probing BAOs at those redshifts is an important self-consistency check of the cosmological paradigm and the derived angular diameter distanteces will reduce the uncertainty on the evolution of the dark energy. Data from the complementary WFIRST mission would add a fourth channel to the near-IR and would reduce uncertainties even further.