

Abstract Submitted
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Probing the outermost radii of classical dSphs with Gaia EDR3

YUEWEN QI, PAUL ZIVICK, Texas A&M University, ANDREW PACE, Carnegie Mellon University, ALEXANDER RILEY, LOUIS STRIGARI, Texas A&M University — We use Gaia EDR3 data to identify stars associated with six classical dwarf spheroidals (Draco, Ursa Minor, Sextans, Carina, Fornax, Sculptor) at their outermost radii, beyond their tidal limits. For four of the star candidates selected from EDR3 astrometry (two in Sextans, one in Sculptor, and one in Draco) we find radial velocity matches, indicating that these stars are associated with their respective dwarf spheroidals (dSphs) at high probability, even though they reside beyond the King tidal limit. Many of our candidates, including stars with radial velocity confirmation, lie along the orbital track of the satellites. Follow-up spectra on all of our candidates, including possible metallicity information, will help confirm their association with their respective dSphs, and could represent the first evidence for extended stellar halos or tidal debris around these classical dSphs.

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