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## Alpha-rich dSph galaxy stellar streams

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In Galactic archaeology, the “alpha-knee” –where the slope of the  $[\alpha/\text{Fe}]$ – $[\text{Fe}/\text{H}]$  relation changes –is a chemical feature that serves as a powerful diagnostic of star formation histories in galaxies. The characteristics of this knee depend on the nucleosynthetic sources of the  $\alpha$ -elements (O, Mg, Si, S, and Ca) and their evolution relative to  $[\text{Fe}/\text{H}]$  enrichment, providing us with information on the fundamental properties of a galaxy, such as its initial mass and its star formation timescales and intensities. In this work, we compare  $\alpha$ -element abundances in 6 disrupted dwarf galaxies, obtained using high-resolution spectra from the Southern Stellar Stream Spectroscopic Survey (S5), to literature values for surviving (i.e., undisrupted) dSph galaxies. Our findings show significant enhancements in  $\alpha$ -elements in stars from stellar streams compared to those found in intact dwarfs. These differences in alpha abundances –indicative of different star formation history –point to differences in the initial properties of these two categories of dwarfs, and/or the impact of environmental factors on their evolution. We discuss and evaluate a number of possible scenarios which could be responsible for the observed distinct abundance patterns.

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