

SDSS **A Uniform Measurement of the Galactic Abundance Gradient**

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OCCAM Survey Overview: Despite living inside the Milky Way, we do not know well basic quantities such as its detailed chemical makeup at the level needed to fundamentally tie the Milky Way to studies of evolution in other galaxies. One key observable is the radial chemical abundance gradient. Open star clusters provide an age datable sample by which to measure this gradient. This measurement has previously been made using a diverse and regularly conflicting compilation of clusters from various literature studies. We present the first measurement using a large (462 stars in 28 open clusters), uniform sample of open clusters abundances. Our measurements show a general agreement with recent studies of the overall metallicity gradient, with a measured Δ [Fe/H]/ Δ RGC of -0.050 ± 0.004 dex kpc⁻¹. We also explore trends with distance from the galactic plane and cluster age, and finally investigate the existence of a "knee" in the overall abundance gradient, between 12-14 kpc, within the range suggested by previous work. We show strong evidence for this phenomenon.





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