

Title: Abundance Gradients in the Galactic bulge
from the Blanco DECam Bulge Survey

Abstract: We have derived metallicity $[Fe/H]$ for 3.6M red clump giant stars in the Galactic bulge, in the region $-10 < l < +10$ and $-3 < b < -10$. This region of the Southern galactic bulge spans most of the mass of the bulge. We find that stars with $[Fe/H] > -0.5$ dex show a strong concentration to the plane, with the trend that at increasing $[Fe/H]$, there is an increasing tendency for the stars to concentrate to the plane. For "metal poor" stars, with $[Fe/H] < -0.5$, the population shows little concentration to the plane of the Milky Way, and does show a clear peak at -0.5 dex. We find no evidence of trends in the radial direction. We present age, abundance distribution, and dynamics (Gaia derived) for this population. We have begun to explore the cosmological hydrodynamical models of Agertz et al. to potentially fit the abundance distributions in a qualitative sense; the metal rich stars show some indication of an age spread in the models.