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**Exploring the Circumgalactic Medium of Quasars: A Search for Nearby Interacting Galaxies** CYNTHIA IBRAHIM, GREG WALTH, San Diego State University, SEAN JOHNSON, University of Michigan, GWEN RUDIE, THOMAS COOPER, JOHN MULCHAEY, Carnegie Observatories, HSIAO-WEN CHEN, University of Chicago — A challenge in the study of the circumgalactic medium (CGM) around quasars is pinpointing what causes quasars with cool circumgalactic gas to be more luminous than ones without. The CGM is the gas surrounding a galaxy, which is outside their stellar disks and within their virial radius. It is important because the CGM is a source of fuel for star-formation which can then drive stellar winds that can help recycle metals. Here we explore galaxies near quasars, at redshifts  $0.4 < z < 1.0$ , to test if they are interacting with the quasar which may dynamically disturb the cool gas in the quasar's CGM. This could possibly lead to gas accretion which would fuel the quasar. One way to test for interaction is by investigating the nebular emission of galaxies near a quasar's environment. We do this by looking for a correlation between intensity of emission lines and distance from quasar. Specifically, we are focusing on nebular emission lines associated with star formation with the goal of searching for enhanced star formation, which could be evidence of an interaction with the nearby quasar. Here we will present the preliminary results of our Magellan/LDSS3 spectroscopic survey of galaxies within quasar environments. From our initial case study, we find no evidence of enhanced star formation for the galaxies near the quasar. Our future work will incorporate the full sample of all 19 quasar fields with optical spectroscopy and determining other physical parameters.

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