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# Galaxy-Gas Kinematics in the OVI Circumgalactic Medium

Stephanie Pointon<sup>1</sup> and Glenn Kacprzak<sup>\*2</sup>

<sup>1</sup>Swinburne University of Technology – Australia

<sup>2</sup>Swinburne University of Technology – Australia

## Abstract

Previous work showed that OVI absorption is preferentially distributed along the host galaxy projected major and minor axes, but that the absorber velocity spreads are similar regardless of azimuthal angle, inclination, and galaxy color. These results pointed to a kinematically uniform halo of OVI gas with variations in the ionization conditions about the host galaxy. However, the previous kinematic work did not consider the relative galaxy-gas motions, which are often used to discriminate between accreting and outflowing gas. We investigate the galaxy-gas kinematics as a function of mass, azimuthal angle, inclination, and redshift for a sample of  $\sim 30$  galaxies with OVI absorption measurements. The data suggest that OVI absorption may trace outflows in lower mass, face-on galaxies, but that the galaxy-gas kinematics are largely dependent on mass. Normalizing galaxy-gas velocities by the galaxy circular velocity shows that lower mass galaxies have larger velocity spreads than higher mass galaxies, suggesting that higher mass galaxies ionize oxygen out of the OVI phase.

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\*Speaker