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## Neutral outflows in high-redshift dusty galaxies

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# Propositions

accompanying the thesis

## Neutral Outflows in High-Redshift Dusty Galaxies

- I. The OH<sup>+</sup> and OH 119  $\mu\text{m}$  absorption lines are sensitive and reliable tracers of outflowing diffuse neutral-atomic and dense molecular gas, respectively, in high-redshift star-forming and active galaxies (chapters 2-5).
- II. Numerous assumptions are needed in the derivation of galaxy outflow properties for which the range in possible values can greatly change the interpretation of their ejection and impact (chapter 2).
- III. Molecular outflows driven by heavily star-forming unobscured QSO hosts at high-redshift are primarily ejected by feedback associated with their star formation (chapter 3).
- IV. Spatially integrated spectra of outflows in the diffuse neutral gas halos surrounding high-redshift QSOs do not differ from those of star-forming galaxies (chapter 4).
- V. High signal to noise spectra of Galaxy outflows are needed to properly disentangle the outflowing component from that at systemic or redshifted velocities (chapter 5).
- VI. Jobs, such as those in academia, that require you to move great distances should provide in addition to remuneration, grief support.
- VII. Prizes awarded for advancements in science should take into account the obstructions to science caused by their recipients.
- VIII. Chillies can be grown on a West-facing dutch office windowsill during the winter.
- IX. Australia is proud of its overseas citizens until they pose a quarantine threat.
- X. If you try enough times, eventually you can get a bum joke past your supervisor.

Kirsty May Butler  
Leiden, 14 September 2023