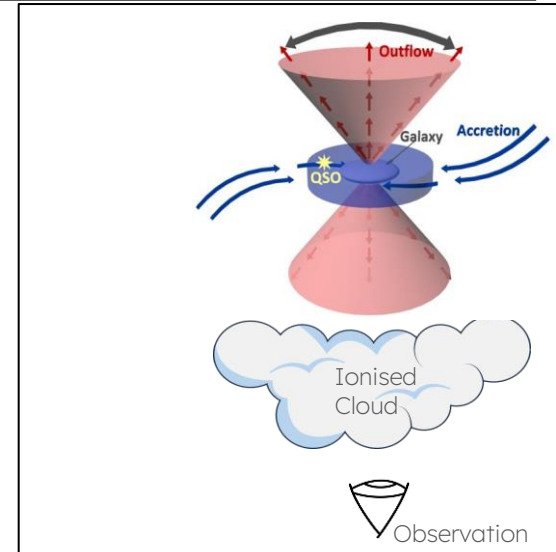


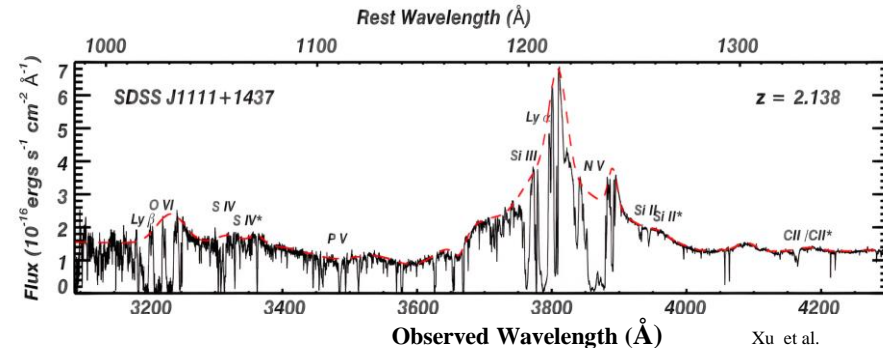
AGN Feedback with Quasar Outflows

Manoj Ghosh

- Quasar outflows are detected through blue-shifted absorption troughs in the rest frame of the quasar.
- Feedback primarily depends on their kinetic luminosity and distance from the central source.
- Extracted column densities from spectra along with Cloudy, give ionization parameter and total hydrogen column density
- Distance $R = \sqrt{\frac{Q_H}{4\pi U_H n_H c}}$
- Kinetic luminosity $\dot{E}_k = \frac{1}{2} \dot{M} v^2$, and $\dot{M} = 4\pi \Omega R N_H \mu m_p v$
- Outflows with $\dot{E}_k \geq 0.5 - 5\%$ of the Eddington luminosity are considered strong candidates for AGN feedback.



Bouché et al. 2013]



Xu et al.