Outflowing Winds in DEEP2 Galaxies at z = 1
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A Physical Picture:

Superwinds from the combined effect of supernovae explosions and stellar winds are thought to strongly affect both their host galaxy and the surrounding intergalactic medium:

1) Quench star formation by expelling cold gas
2) Enrich the intergalactic medium (IGM) in metals
3) Limit black hole growth

Need high-resolution spectra inclusive of both outflow features (zout) and systemic lines (zsys)

Systemic redshifts estimated from [OII] λλ3727/3729

UV to radio coverage from the All-Wavelength Extended Groth Strip International Survey

Inflows, Morphology and FeII* Emission:

A small subset of objects show apparent inflows.

It is important to check for galactic rotation.

Mergers are not required to drive winds; objects hosting outflows and those with apparent inflows span the same parameter space.

We found that the area selected by imposing Σ = 0.1 Msun yr⁻¹ kpc⁻² was inclusive of approximately 74% of the flux within the Petrosian radius. We flagged this area as the "clump area".

We find a strong trend between outflow velocity and Σ.

We estimate star formation rates using UV GALEX measurements. These SFRs have been checked against 24 μm observations (inverting LIR using Chary & Elbaz (2001) SED templates).

Interestingly, we do not observe a trend between star formation rate and outflow velocity in the data.

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