Probing the shape of the attenuation curve of 1<z<3 galaxies with JWST

Stellar emission and hydrogen recombination lines reflect the star formation process at very different timescales and their combination should allow to get the star formation history of galaxies. However dust attenuation hampers any simple comparison because of the variable shape of dust attenuation curves and the differential amount of attenuation of the continuum and line emission.

We aim to determine the respective amount of attenuation and the attenuation law at work in the ISM and the birth clouds inspired by the original Charlot & Fall (2000) recipe. We select ~10 1<z<3 galaxies observed by the CEERS/JWST program and we combine NIRCam photometry with Paschen and Balmer emission lines from NIRSpec. CFHT, HST and Spitzer measurements are added to obtain a multi-wavelength dataset.

We will show that we are able to simultaneously fit the spectroscopic and photometric data of these objects using a new method based on equivalent widths (EWs) and we calculate consistent dust attenuation parameters.