

PGC: Principal Galaxies Catalog number.

coords: RA and Dec formatted in hours, minutes and seconds.

objid: SDSS photometric object identifier.

specObjID: SDSS spectroscopic object identifier.

plate: SDSS spectroscopic plate number.

RA: Right Ascension in deg.

Dec: Declination in deg.

l: Galactic longitude in deg.

b: Galactic latitude in deg.

deVMag_g: g -band apparent magnitude from a deVaucoleurs profile fit.

deVMagErr_g: error on g -band apparent magnitude from a deVaucoleurs profile fit.

deVMag_r: r -band apparent magnitude from a deVaucoleurs profile fit.

deVMagErr_r: error on r -band apparent magnitude from a deVaucoleurs profile fit.

deVRad_r: angular r -band scale radius from a deVaucoleurs profile fit.

deVRadErr_r: error on angular r -band scale radius from a deVaucoleurs profile fit.

deVAB_r: r -band axial ratio from a deVaucoleurs profile fit.

deVABErr_r: error on r -band axial ratio from a deVaucoleurs profile fit.

extinction_g: Milky Way Galactic extinction in the g -band.

extinction_r: Milky Way Galactic extinction in the r -band.

kcors_g: g -band k -correction from Chilingarian et. al., 2014 using $g-r$ colours.

kcors_r: r -band k -correction from Chilingarian et. al., 2014 using $g-r$ colours.

absmag_r: r -band absolute magnitude accounting for k -correction, evolution and Galactic extinction.

zhelio: observed heliocentric redshift.

zhelioerr: error in the observed heliocentric redshift.

zcmb: CMB-frame redshift using Planck CMB dipole.

SIGMA_STARS: velocity dispersion from the Portsmouth catalogue (Thomas et. al., 2013)

SIGMA_STARS_ERR: error on the velocity dispersion from the Portsmouth catalogue (Thomas et. al., 2013)

IDgroupT17: ID for Tempel et. al., 2017 group containing the galaxy.

NgroupT17: Total number of galaxies (including those not in the SDSS PV catalogue) in the Tempel et. al., 2017 group containing the galaxy.

zcmb_group: Group averaged, CMB-frame redshift for Tempel et. al., 2017 group containing the galaxy.

M: Tempel et. al., 2014 morphological classification. 0 = unclear, 1 = spiral, 2 = elliptical (all 1 entries have been removed already).

in_mask: Flag for whether galaxy is within the SDSS NYU-VAGC DR7 large scale structure angular mask. 1 means the galaxy is within the mask, and so can be used for clustering measurements or comparison with the provided random catalogue.

nbar: Number density of SDSS galaxies per unit volume at the galaxy's location. Units of $h^3 \text{Mpc}^{-3}$, used mainly for clustering measurements.

r: \log_{10} (effective radius). One of the fundamental plane parameters. Effective radius has units of $h^{-1} \text{kpc}$.

er: error on r .

i: \log_{10} (surface brightness at the effective radius). One of the fundamental plane parameters. Surface brightness has units of $L_{\text{sun}} \text{pc}^{-2}$.

ei: error on i .

s: \log_{10} (velocity dispersion). One of the fundamental plane parameters. Velocity dispersion has units of km s^{-1} .

es: error on s .

Sn: The weight given to each galaxy when fitting the fundamental plane. See Eqs. 16 & 18.

logdist: Mean of the logarithmic distance ratio distribution *from a single FP fit to the full sample*. Can be treated as the Gaussian mean if **logdist_alpha** is ignored (but is not the skew-normal 'location' parameter). Equivalent to $\log_{10}(d_z/d_H)$, where d_z is the distance to **zcmb** assuming some cosmological model, and d_H is the distance derived from the distance indicator.

logdist_err: Standard deviation of the logdistance ratio distribution *from a single FP fit to the full sample*. Can be treated as the Gaussian standard deviation if **logdist_alpha** is ignored (but is not the skew-normal 'scale' parameter).

logdist_alpha: The "alpha" parameter of the skew-normal pdf calculated for each galaxy's logarithmic distance ratio distribution *from a single FP fit to the full sample*. Gives an overall skewness quite close to zero because the pdf for each galaxy is close to Gaussian.

logdist_corr: Same as **logdist**, but *from multiple FP fits as a function of group richness*. This is the preferred measurement, but zero-point calibration should be carried out at the group-level (i.e., by assuming objects in the same group are at the same distance), not with individual objects.

logdist_corr_err: Same as **logdist_err**, but *from multiple FP fits as a function of group richness*. This is the preferred measurement but see caveat above.

logdist_corr_alpha: Same as **logdist_alpha**, but *from multiple FP fits as a function of group richness*. This is the preferred measurement but see caveat above.