Karachentsev List notes

October 11, 2023

Contents

This list contains measurements from the galaxies in the Local Cosmological Volume (LCV), and the last update of data is on 2023-06-30. I downloaded the database from [1]

1 Original data set

The data I will use for this project come from the Karachentsev catalog (2022-12-02), which is an updated version of the list used in Kroupa et al. 2020 From the list I use the tables "Catalog of Nearby Galaxies", "Global Parameters of the Nearby Galaxies" and "List of the nearby galaxies with measured SFR"

1.0.1 IDEA I want to merge the coordinate columns into one

1.1 Join the tables

<Table length=1436> name dtype unit description class n_{bad} ——— ——— - ———- - ——————————— ——— —— Name str18 Galaxy name in well-known catalogs Column 0 RAh_1 int64 h Hour of Right Ascension (J2000) Column 0 RAm_1 int64 min Minute of Right Ascension (J2000) Column 0 RAs_1 float64 s Second of Right Ascension (J2000) Column 0 $DE\text{-}_1$ str1 Sign of the Declination (J2000) Column 0 DEd_1 int64 deg Degree of Declination (J2000) Column 0 DEm_1 int64 arcmin Arcminute of Declination (J2000) Column 0 DEs_1 int64 arcsec Arcsecond of Declination (J2000) Column 0 $a26_1$ float64 arcmin Major angular diameter (1) MaskedColumn

11 b/a float64 Apparent axial ratio (1) MaskedColumn 11 AB_1 float64 mag Galactic extinction in B band (2) MaskedColumn 1 l_{FUVmag} str1 Limit flag on FUVmag MaskedColumn 1104 FUVmag float64 mag GALEX FUV band magnitude (3) MaskedColumn 311 Bmag float64 mag Integral B band magnitude (4) MaskedColumn 8 l_{Hamag} str1 Limit flag on Hamag MaskedColumn 1306 Hamag float64 mag Integral H{alpha} line emission magnitude (5) MaskedColumn 700 Kmag float64 mag 2MASS K_S_ band magnitude (6) MaskedColumn 11 f_{Kmag} str1 [*] Flag on Kmag (7) MaskedColumn 362 l_{21mag} str1 Limit flag on 21mag MaskedColumn 1226 21mag float64 mag H I 21 cm line magnitude (8) MaskedColumn 494 W50 int64 km / s H I line with at 50% level from maximum (9) MaskedColumn 623 TType int64 Morphology type code (10) MaskedColumn 4 Tdw1 str5 Dwarf galaxy morphology (11) MaskedColumn 233 Tdw2 str1 Dwarf galaxy surface brightness morphology (12) MaskedColumn 250 RVel int64 km / s Heliocentric radial velocity (13) MaskedColumn 454 Dis float64 Mpc Distance Column 0 f_{Dis} str4 Method flag used to obtain Dis (14) Column 0 RAh_2 int64 h Hour of Right Ascension (J2000) Column 0 RAm_2 int64 min Minute of Right Ascension (J2000) Column 0 RAs_2 float64 s Second of Right Ascension (J2000) Column 0 DE-$_2$ str1 Sign of the Declination (J2000) Column 0 DEd_2 int64 deg Degree of Declination (J2000) Column 0 DEm_2 int64 arcmin Arcminute of Declination (J2000) Column 0 DEs_2 int64 arcsec Arcsecond of Declination (J2000) Column 0 $a26_2$ float64 kpc Major linear diameter (1) MaskedColumn 11 inc int64 deg Inclination MaskedColumn 11 Vm int64 km / s Amplitude of rotational velocity (2) MaskedColumn 635 AB_2 float64 mag Internal B band extinction (3) MaskedColumn 11 BMag float64 mag Absolute B band magnitude (4) MaskedColumn 8 SBB float64 mag / arcsec2 Average B band surface brightness (5) MaskedColumn 11 logKLum float64 dex(Lsun) Log K_S_ band luminosity (6) MaskedColumn 10 logM26 float64 dex(Msun) Log mass within Holmberg radius (7) MaskedColumn 634 l_{logMHI} str1 Limit flag on logMHI MaskedColumn 1226 logMHI float64 dex(Msun) Log hydrogen mass (8) MaskedColumn 494 VLG int64 km / s Radial velocity (9) MaskedColumn 454 Theta1 float64 Tidal index (10) MaskedColumn 76 MD str19 Main disturber name (11) MaskedColumn 76 Theta5 float64 Another tidal index (12) MaskedColumn 76 Thetaj float64 dex(—) Log K band luminosity density (13) MaskedColumn 180