

CAVITY, Calar Alto Void Integral-field Treasury survey

I. First public data release: tables & catalogs

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ABSTRACT

The Calar Alto Void Integral-field Treasury survey (CAVITY) is a legacy project aimed at characterizing the population of galaxies inhabiting voids, the most under-dense regions of the Cosmic Web, located in the Local Universe. This paper describes the first public data release (DR1) of CAVITY, comprising science-grade optical datacubes for the initial 100 out of a total of ~300 galaxies in the Local Universe ($0.005 < z < 0.050$). These data were acquired using the integral-field spectrograph PMAS/PPak mounted on the 3.5m telescope at the Calar Alto observatory. The DR1 galaxy sample encompasses diverse characteristics in the color–magnitude space, morphological type, stellar mass, and gas ionization conditions, providing a rich resource for addressing key questions in galaxy evolution through spatially resolved spectroscopy. Galaxies were observed with the low-resolution V500 setup spanning the wavelength range 3745–7500 Å with a spectral resolution of 6.0 Å (FWHM). **This document serves as a companion to the published CAVITY DR1 paper. It provides detailed descriptions of the Quality Control (QC) parameters outlined in the DR1 paper, as well as catalog tables. These tables are also available on the project website.**

Key words. Techniques: spectroscopic – Galaxies: general – Galaxies: evolution – Surveys – Astronomical data bases

1. Automatic QC parameters

Tables 1–3 show the values of all the QC flags described in Section 6.2 ‘Automatic quality checks’ of the paper for the galaxies in the DR1 sample. These numbers are compared with the defined thresholds for each flag in order to decide whether the galaxy is suitable for science and therefore can be included in the sample or should be discarded. In some cases a warning is raised when some minor issues affecting the quality of the data are found. We refer the reader to paper for more details.

Table 1. Values of the quality control flags on the observing conditions defined for the CAVITY DR1 sample based on the automatic checks described in Section 6.2 ‘Automatic quality checks’ of the paper.

Name	OBS_AIRMASS_MEAN	OBS_AIRMASS_MAX	OBS_AIRMASS_STD	OBS_SKYMASS_MEAN [mag arcsec ⁻²]	OBS_SKYMASS_STD [mag arcsec ⁻²]	OBS_EXT_MEAN [mag]	OBS_EXT_MAX [mag]	OBS_EXT_STD [mag]
CAVITY10595	1.14	1.38	0.16	21.11	0.2	0.18	0.32	0.1
CAVITY11248	1.26	1.35	0.06	20.64	0.06	0.3	0.32	0.03
CAVITY12190	1.04	1.12	0.04	21.39	0.18	0.17	0.33	0.08
CAVITY16768	1.03	1.06	0.02	21.08	0.02	0.13	0.14	0.01
CAVITY16769	1.24	1.37	0.09	20.54	0.12	0.28	0.28	0.0
CAVITY16881	1.07	1.13	0.05	21.32	0.02	0.13	0.13	0.0
CAVITY17302	1.13	1.35	0.12	21.03	0.05	0.14	0.15	0.01
CAVITY17344	1.08	1.15	0.05	21.12	0.05	0.17	0.21	0.03
CAVITY17370	1.06	1.13	0.05	21.07	0.06	0.14	0.14	0.0
CAVITY17616	1.16	1.26	0.07	21.08	0.06	0.15	0.16	0.01
CAVITY18857	1.04	1.08	0.02	21.34	0.07	0.26	0.32	0.04
CAVITY18904	1.22	1.49	0.15	20.96	0.19	0.14	0.17	0.02
CAVITY19279	1.06	1.12	0.04	21.12	0.01	0.12	0.12	0.01
CAVITY20424	1.07	1.16	0.05	20.91	0.06	0.15	0.18	0.02
CAVITY20787	1.03	1.06	0.02	21.08	0.03	0.14	0.14	0.0
CAVITY29349	1.03	1.06	0.01	21.25	0.02	0.14	0.17	0.02
CAVITY29867	1.26	1.41	0.09	20.87	0.15	0.15	0.21	0.04
CAVITY30685	1.04	1.06	0.01	20.96	0.08	0.15	0.2	0.03
CAVITY31671	1.06	1.1	0.03	20.93	0.18	0.14	0.14	0.0
CAVITY32250	1.38	1.75	0.18	21.13	0.1	0.16	0.19	0.02
CAVITY32895	1.15	1.25	0.07	21.03	0.06	0.12	0.13	0.01
CAVITY32896	1.31	1.49	0.12	21.28	0.19	0.16	0.23	0.05
CAVITY33005	1.05	1.15	0.05	21.39	0.06	0.16	0.35	0.07
CAVITY33678	1.07	1.15	0.05	21.6	0.04	0.15	0.16	0.01
CAVITY33695	1.01	1.02	0.01	20.36	0.32	0.22	0.31	0.07
CAVITY34100	1.02	1.04	0.01	21.3	0.1	0.36	0.37	0.01
CAVITY34101	1.15	1.26	0.08	21.17	0.07	0.3	0.31	0.02
CAVITY34170	1.06	1.19	0.06	20.93	0.18	0.13	0.15	0.01
CAVITY34234	1.1	1.29	0.1	21.21	0.16	0.19	0.22	0.01
CAVITY3430	1.11	1.17	0.04	21.32	0.02	0.19	0.24	0.04
CAVITY35487	1.04	1.12	0.04	21.17	0.08	0.13	0.18	0.02
CAVITY36541	1.11	1.2	0.06	21.01	0.19	0.14	0.14	0.0
CAVITY3666	1.08	1.19	0.06	21.15	0.13	0.27	0.32	0.04
CAVITY3670	1.08	1.12	0.03	21.18	0.03	0.14	0.14	0.0
CAVITY37527	1.07	1.23	0.08	20.96	0.22	0.13	0.17	0.02
CAVITY37605	1.06	1.12	0.04	20.98	0.07	0.36	0.4	0.03
CAVITY37820	1.16	1.24	0.05	21.06	0.05	0.15	0.16	0.01
CAVITY37926	1.04	1.1	0.03	21.17	0.09	0.17	0.18	0.01
CAVITY37963	1.09	1.27	0.12	21.06	0.14	0.14	0.14	0.0

Table 1. Continued.

Name	OBS_AIRMASS_MEAN	OBS_AIRMASS_MAX	OBS_AIRMASS_STD	OBS_SKYMAG_MEAN [mag arcsec ⁻²]	OBS_SKYMAG_STD [mag arcsec ⁻²]	OBS_EXT_MEAN [mag]	OBS_EXT_MAX [mag]	OBS_EXT_STD [mag]
CAVITY38659	1.24	1.33	0.06	20.63	0.12	0.29	0.39	0.06
CAVITY40288	1.02	1.06	0.02	21.48	0.09	0.14	0.14	0.0
CAVITY40821	1.29	1.46	0.12	20.9	0.06	0.16	0.18	0.01
CAVITY40822	1.26	1.41	0.1	21.2	0.05	0.16	0.17	0.01
CAVITY40825	1.21	1.36	0.12	20.88	0.09	0.23	0.3	0.05
CAVITY41235	1.3	1.39	0.08	20.81	0.24	0.33	0.44	0.14
CAVITY41398	1.21	1.34	0.09	21.17	0.05	0.16	0.18	0.01
CAVITY41400	1.03	1.06	0.02	21.63	0.02	0.17	0.19	0.02
CAVITY41401	1.18	1.34	0.11	20.76	0.13	0.3	0.39	0.07
CAVITY41448	1.24	1.39	0.11	20.91	0.05	0.26	0.3	0.03
CAVITY41455	1.24	1.42	0.11	20.84	0.2	0.35	0.44	0.1
CAVITY41495	1.16	1.26	0.08	21.18	0.05	0.15	0.16	0.01
CAVITY43294	1.17	1.28	0.08	21.22	0.04	0.14	0.14	0.0
CAVITY43490	1.15	1.25	0.07	21.29	0.13	0.22	0.24	0.02
CAVITY46819	1.1	1.3	0.1	20.9	0.17	0.34	0.38	0.02
CAVITY47120	1.03	1.12	0.04	21.03	0.14	0.14	0.16	0.02
CAVITY48125	1.07	1.19	0.08	21.06	0.09	0.27	0.37	0.05
CAVITY48399	1.12	1.36	0.12	20.8	0.1	0.17	0.28	0.05
CAVITY48997	1.25	1.41	0.11	20.81	0.08	0.12	0.13	0.01
CAVITY49137	1.09	1.18	0.06	20.79	0.19	0.13	0.14	0.01
CAVITY49935	1.16	1.38	0.1	20.29	0.51	0.25	0.31	0.05
CAVITY50031	1.17	1.29	0.08	21.0	0.13	0.2	0.21	0.01
CAVITY50117	1.07	1.16	0.04	20.93	0.06	0.13	0.14	0.01
CAVITY50532	1.1	1.31	0.1	21.04	0.07	0.14	0.14	0.0
CAVITY50943	1.21	1.29	0.07	20.48	0.26	0.25	0.31	0.09
CAVITY51102	1.14	1.29	0.11	20.96	0.05	0.13	0.15	0.01
CAVITY52730	1.22	1.38	0.1	20.75	0.12	0.13	0.13	0.0
CAVITY52954	1.04	1.06	0.01	21.06	0.05	0.14	0.14	0.01
CAVITY53259	1.14	1.24	0.07	21.12	0.06	0.15	0.17	0.02
CAVITY54598	1.25	1.42	0.11	21.34	0.1	0.16	0.19	0.02
CAVITY54706	1.26	1.42	0.11	21.02	0.07	0.25	0.27	0.01
CAVITY55180	1.27	1.42	0.09	20.96	0.05	0.16	0.18	0.01
CAVITY56289	1.22	1.61	0.2	20.94	0.24	0.15	0.15	0.01
CAVITY56627	1.23	1.38	0.1	20.64	0.18	0.17	0.19	0.03
CAVITY57404	1.06	1.15	0.04	20.91	0.04	0.14	0.15	0.0
CAVITY58740	1.17	1.28	0.08	20.94	0.03	0.17	0.17	0.0
CAVITY59465	1.08	1.12	0.03	20.87	0.08	0.14	0.14	0.0
CAVITY59764	1.34	1.56	0.15	20.4	0.09	0.19	0.23	0.03
CAVITY59902	1.15	1.38	0.12	20.89	0.13	0.12	0.17	0.02
CAVITY59906	1.23	1.39	0.1	20.54	0.2	0.14	0.14	0.0

Table 1. Continued.

Name	OBS_AIRMASS_MEAN	OBS_AIRMASS_MAX	OBS_AIRMASS_STD	OBS_SKYMAG_MEAN [mag arcsec ⁻²]	OBS_SKYMAG_STD [mag arcsec ⁻²]	OBS_EXT_MEAN [mag]	OBS_EXT_MAX [mag]	OBS_EXT_STD [mag]
CAVITY59983	1.09	1.16	0.05	20.86	0.04	0.12	0.14	0.01
CAVITY60044	1.08	1.13	0.04	20.93	0.02	0.12	0.15	0.02
CAVITY60187	1.04	1.07	0.01	20.93	0.04	0.13	0.14	0.01
CAVITY60224	1.26	1.52	0.14	20.9	0.11	0.13	0.14	0.01
CAVITY62108	1.2	1.33	0.09	20.96	0.06	0.14	0.14	0.0
CAVITY62262	1.14	1.34	0.1	20.71	0.21	0.14	0.14	0.0
CAVITY62480	1.14	1.26	0.09	21.37	0.09	0.18	0.19	0.01
CAVITY63083	1.13	1.32	0.09	21.1	0.12	0.18	0.22	0.02
CAVITY65288	1.26	1.4	0.1	20.7	0.08	0.43	0.45	0.02
CAVITY65303	1.08	1.09	0.01	21.38	0.03	0.14	0.17	0.02
CAVITY65716	1.29	1.43	0.1	20.59	0.09	0.38	0.4	0.01
CAVITY65887	1.12	1.18	0.04	21.12	0.03	0.17	0.2	0.02
CAVITY66239	1.12	1.18	0.04	20.98	0.02	0.15	0.18	0.02
CAVITY66400	1.16	1.27	0.07	20.52	0.06	0.14	0.14	0.0
CAVITY66803	1.12	1.2	0.05	21.03	0.17	0.29	0.39	0.06
CAVITY67290	1.16	1.26	0.07	20.62	0.04	0.14	0.18	0.03
CAVITY7906	1.06	1.1	0.02	21.14	0.03	0.14	0.17	0.01
CAVITY7926	1.04	1.05	0.01	20.77	0.1	0.25	0.25	0.01
CAVITY8556	1.21	1.33	0.08	21.03	0.08	0.14	0.14	0.0
CAVITY8595	1.13	1.22	0.06	21.07	0.07	0.15	0.18	0.03
CAVITY8646	1.07	1.12	0.03	20.89	0.09	0.37	0.41	0.06

Table 2. Values of the first six quality control flags on the instrumental/data reduction performance defined for the CAVITY DR1 sample based on the automatic checks described in Section 6.2 ‘Automatic quality checks’ of the paper.

Name	RED_MEANSTRAYLIGHT_MAX [counts]	RED_MAXSTRAYLIGHT_MAX [counts]	RED_STDSTRAYLIGHT_MAX [counts]	RED_DISP_MEAN [Å]	RED_DISP_MAX [Å]	RED_DISP_STD [Å]
CAVITY10595	7.53	14.39	2.36	4.57	8.26	0.32
CAVITY11248	8.07	15.02	2.41	4.84	7.84	0.39
CAVITY12190	8.25	13.48	2.04	4.55	10.04	0.31
CAVITY16768	8.01	14.83	2.34	4.77	6.39	0.35
CAVITY16769	10.48	18.36	2.74	4.56	10.28	0.39
CAVITY16881	7.17	13.3	2.14	4.64	6.59	0.3
CAVITY17302	11.84	24.96	3.47	5.08	7.26	0.46
CAVITY17344	9.55	20.58	3.68	4.91	6.8	0.34
CAVITY17370	10.71	18.74	2.51	4.89	6.8	0.41
CAVITY17616	10.59	18.18	2.52	4.88	7.24	0.4
CAVITY18857	8.4	16.42	2.26	4.61	7.26	0.29
CAVITY18904	10.42	20.12	3.16	4.79	7.25	0.37
CAVITY19279	8.47	15.86	2.22	4.9	8.1	0.38
CAVITY20424	9.24	17.42	2.85	4.99	8.09	0.46
CAVITY20787	9.51	19.84	3.34	5.51	8.66	0.63
CAVITY29349	12.08	27.13	4.7	5.13	7.45	0.41
CAVITY29867	8.09	17.33	2.8	5.11	7.81	0.55
CAVITY30685	8.22	15.01	2.51	4.7	7.33	0.34
CAVITY31671	8.53	16.34	2.74	4.76	7.12	0.38
CAVITY32250	11.31	17.29	2.15	4.86	7.79	0.39
CAVITY32895	10.34	17.8	2.72	4.79	6.73	0.39
CAVITY32896	7.17	13.87	2.28	4.53	8.48	0.32
CAVITY33005	8.15	13.65	2.14	4.65	10.74	0.36
CAVITY33678	8.14	16.4	1.7	4.88	7.15	0.4
CAVITY33695	11.31	21.11	3.84	4.94	8.35	0.44
CAVITY34100	8.4	15.66	2.27	4.57	10.24	0.29
CAVITY34101	9.75	14.52	1.83	5.0	7.75	0.43
CAVITY34170	8.86	15.91	2.95	4.74	7.77	0.42
CAVITY34234	9.75	16.12	2.09	4.66	6.73	0.37
CAVITY3430	7.56	13.22	2.12	5.27	7.69	0.53
CAVITY35487	8.99	14.45	2.12	4.58	6.0	0.32
CAVITY36541	8.16	15.45	2.48	4.78	6.37	0.37
CAVITY3666	8.31	15.54	2.19	4.76	7.78	0.33
CAVITY3670	12.05	26.19	4.41	5.11	7.27	0.41
CAVITY37527	15.32	26.4	4.18	4.82	7.25	0.5
CAVITY37605	8.59	13.96	2.05	5.06	8.25	0.44
CAVITY37820	35.72	54.24	10.47	4.87	8.3	0.42
CAVITY37926	10.8	18.41	2.89	4.87	8.13	0.42
CAVITY37963	8.68	13.86	2.43	4.9	8.18	0.43

Table 2. Continued.

Name	RED_MEANSTRAYLIGHT_MAX [counts]	RED_MAXSTRAYLIGHT_MAX [counts]	RED_STDSTRAYLIGHT_MAX [counts]	RED_DISP_MAX [Å]	RED_DISP_STD [Å]
CAVITY38659	9.14	15.93	2.59	4.78	0.41
CAVITY40288	12.37	16.88	1.76	5.04	0.46
CAVITY40821	9.26	17.05	2.57	5.24	0.51
CAVITY40822	8.8	14.85	1.98	5.08	0.45
CAVITY40825	11.94	19.18	3.02	4.89	0.45
CAVITY41235	9.53	16.6	2.49	5.08	0.52
CAVITY41398	8.52	13.5	2.11	4.95	0.42
CAVITY41400	8.4	13.73	1.82	4.87	0.46
CAVITY41401	9.07	17.64	2.53	4.98	0.43
CAVITY41448	9.59	17.4	2.85	4.97	0.44
CAVITY41455	10.07	16.9	2.28	5.19	0.49
CAVITY41495	8.83	13.68	2.13	4.92	0.4
CAVITY43294	8.12	13.91	1.96	4.65	0.36
CAVITY43490	16.8	44.94	4.21	4.86	0.42
CAVITY46819	10.23	18.66	3.02	4.79	0.36
CAVITY47120	12.16	18.34	2.21	4.73	0.42
CAVITY48125	8.57	16.91	2.57	4.55	0.31
CAVITY48399	12.8	22.55	3.71	4.81	0.41
CAVITY48997	10.72	19.89	3.28	5.07	0.45
CAVITY49137	11.51	18.22	2.96	4.73	0.41
CAVITY49935	13.09	22.34	3.83	4.94	0.42
CAVITY50031	12.22	19.18	2.4	4.81	0.41
CAVITY50117	12.94	20.27	2.42	4.75	0.43
CAVITY50532	9.57	17.8	2.58	4.74	0.39
CAVITY50943	12.45	22.09	3.36	4.87	0.42
CAVITY51102	9.01	17.73	2.74	5.05	0.45
CAVITY52730	9.49	19.05	3.05	4.75	0.43
CAVITY52954	9.18	18.57	2.51	4.64	0.36
CAVITY53259	9.08	15.66	2.46	4.83	0.39
CAVITY54598	7.58	14.49	2.11	4.48	0.25
CAVITY54706	8.13	14.0	2.15	5.12	0.47
CAVITY55180	9.1	16.39	2.62	5.11	0.47
CAVITY56289	7.91	18.5	3.36	4.71	0.43
CAVITY56627	9.23	17.62	2.82	4.71	0.38
CAVITY57404	9.38	15.9	2.46	4.59	0.33
CAVITY58740	10.92	23.97	2.83	4.8	0.39
CAVITY59465	10.96	20.51	2.58	4.7	0.4
CAVITY59764	12.76	20.62	3.14	4.77	0.44
CAVITY59902	14.17	23.12	3.43	4.8	0.33
CAVITY59906	9.63	18.58	3.52	4.73	0.37

Table 2. Continued.

Name	RED_MEANSTRAYLIGHT_MAX [counts]	RED_MAXSTRAYLIGHT_MAX [counts]	RED_STDSTRAYLIGHT_MAX [counts]	RED_DISP_MAX [Å]	RED_DISP_STD [Å]
CAVITY59983	9.49	18.27	2.72	5.0	0.42
CAVITY60044	8.76	16.63	2.54	4.89	0.37
CAVITY60187	10.79	31.39	2.52	4.68	0.35
CAVITY60224	10.15	16.2	2.5	4.69	0.41
CAVITY62108	10.41	15.81	2.46	4.7	0.41
CAVITY62262	8.7	19.11	3.33	4.71	0.39
CAVITY62480	8.89	15.6	2.08	4.82	0.38
CAVITY63083	9.9	15.29	2.4	4.77	0.37
CAVITY65288	11.79	19.22	2.32	4.79	0.44
CAVITY65303	9.09	16.14	2.27	4.49	0.28
CAVITY65716	8.36	15.52	2.54	5.09	0.45
CAVITY65887	9.04	14.7	1.97	4.77	0.43
CAVITY66239	13.12	35.11	6.04	5.46	0.55
CAVITY66400	9.62	17.49	3.0	4.72	0.38
CAVITY66803	7.86	14.54	2.51	4.57	0.33
CAVITY67290	8.66	16.52	2.77	4.83	0.47
CAVITY7906	9.89	14.64	2.09	4.67	0.33
CAVITY7926	8.06	15.36	2.78	4.51	0.32
CAVITY8556	9.46	22.72	3.8	5.52	0.62
CAVITY8595	8.03	14.19	2.12	4.49	0.28
CAVITY8646	8.97	15.8	2.3	4.77	0.44

Table 3. Values of the remaining quality control flags on the instrumental/data reduction performance and calibrated data products defined for the CAVITY DR1 sample based on the automatic checks described in Section 6.2 ‘Automatic quality checks’ of the paper.

Name	RED_CDISP_MEAN [pixels]	RED_CDISP_MAX [pixels]	RED_CDISP_STD [pixels]	RED_RES577_MIN [counts]	RED_RES577_MAX [counts]	RED_STDRES577_MAX [counts]	CAL_SPECPHOT_FLUXRATIO
CAVITY10595	2.31	3.51	0.17	0.08	0.21	0.77	1.37
CAVITY11248	2.38	3.13	0.15	-0.02	0.02	0.87	0.84
CAVITY12190	2.27	3.39	0.13	0.0	0.16	0.55	1.4
CAVITY16768	2.36	2.86	0.15	0.05	0.09	0.48	0.88
CAVITY16769	2.28	3.3	0.14	0.1	0.15	0.46	1.32
CAVITY16881	2.29	3.15	0.15	0.12	0.16	0.67	1.43
CAVITY17302	2.63	3.39	0.21	0.0	0.04	0.41	0.92
CAVITY17344	2.43	3.32	0.13	-0.0	0.02	0.18	1.2
CAVITY17370	2.46	3.23	0.18	0.02	0.06	0.6	1.02
CAVITY17616	2.48	3.33	0.18	0.01	0.06	0.5	0.97
CAVITY18857	2.34	3.61	0.17	0.06	0.13	0.42	1.39
CAVITY18904	2.3	2.86	0.1	0.0	0.05	0.6	0.9
CAVITY19279	2.45	3.14	0.15	-0.0	0.06	0.47	0.83
CAVITY20424	2.52	3.22	0.21	0.01	0.03	0.42	0.85
CAVITY20787	2.89	4.0	0.29	-0.0	0.02	0.38	0.98
CAVITY29349	2.64	3.53	0.17	-0.01	0.01	0.38	1.04
CAVITY29867	2.55	3.55	0.28	0.02	0.14	0.84	0.93
CAVITY30685	2.26	3.26	0.13	0.01	0.07	0.54	0.95
CAVITY31671	2.29	3.05	0.14	0.02	0.04	0.64	0.92
CAVITY32250	2.4	3.05	0.17	-0.02	0.02	0.43	0.82
CAVITY32895	2.29	2.87	0.1	0.01	0.05	0.66	0.9
CAVITY32896	2.26	3.22	0.14	0.09	0.15	0.46	1.39
CAVITY33005	2.44	3.47	0.2	0.09	0.19	0.68	1.22
CAVITY33678	2.52	3.29	0.22	0.01	0.04	0.28	1.09
CAVITY33695	2.42	3.19	0.16	-0.02	0.02	0.56	0.78
CAVITY34100	2.28	3.51	0.15	0.07	0.21	0.74	1.45
CAVITY34101	2.53	3.37	0.22	-0.03	0.01	0.72	0.94
CAVITY34170	2.21	2.92	0.13	-0.01	0.05	0.78	0.92
CAVITY34234	2.25	3.1	0.14	-0.15	0.01	1.57	0.91
CAVITY3430	2.71	3.55	0.28	0.01	0.03	0.32	1.07
CAVITY35487	2.22	3.01	0.12	-0.01	0.05	0.72	0.91
CAVITY36541	2.31	2.87	0.14	0.01	0.04	0.29	0.95
CAVITY3666	2.29	3.05	0.12	-0.02	0.06	0.46	0.78
CAVITY3670	2.6	3.52	0.17	-0.01	0.02	0.35	1.05
CAVITY37527	2.21	2.83	0.11	-0.05	0.02	0.52	0.9
CAVITY37605	2.56	3.32	0.21	-0.02	0.03	0.75	0.86
CAVITY37820	2.39	3.2	0.16	-0.01	0.03	0.53	0.87
CAVITY37926	2.4	3.18	0.15	-0.01	0.02	0.59	0.85
CAVITY37963	2.42	3.22	0.16	0.01	0.03	0.72	0.84

Table 3. Continued.

Name	RED_CDISP_MEAN [pixels]	RED_CDISP_MAX [pixels]	RED_CDISP_STD [pixels]	RED_RES5577_MIN [counts]	RED_RES5577_MAX [counts]	RED_STDRES5577_MAX [counts]	CAL_SPECPHOT_FLUXRATIO
CAVITY38659	2.32	3.11	0.14	0.01	0.05	1.05	0.79
CAVITY40288	2.59	3.37	0.24	0.01	0.04	0.23	1.24
CAVITY40821	2.64	4.0	0.26	-0.01	0.52	0.84	0.85
CAVITY40822	2.56	3.42	0.22	-0.03	0.02	0.39	0.88
CAVITY40825	2.42	3.15	0.17	-0.06	0.01	0.76	0.89
CAVITY41235	2.51	3.74	0.26	-0.05	0.03	0.72	0.9
CAVITY41398	2.47	3.21	0.19	-0.02	0.03	0.55	0.86
CAVITY41400	2.48	3.42	0.26	-0.0	0.04	0.27	1.08
CAVITY41401	2.5	3.33	0.2	-0.05	0.03	0.84	0.91
CAVITY41448	2.42	3.34	0.18	-0.01	0.03	0.53	0.9
CAVITY41455	2.65	3.59	0.24	-0.15	0.06	0.89	0.89
CAVITY41495	2.41	3.35	0.18	-0.06	0.02	0.53	0.88
CAVITY43294	2.28	2.99	0.14	-0.03	0.05	0.64	0.92
CAVITY43490	2.38	3.22	0.17	0.01	0.03	0.64	0.73
CAVITY46819	2.28	3.09	0.11	0.0	0.11	0.69	0.91
CAVITY47120	2.21	2.89	0.12	-0.01	0.04	0.62	0.94
CAVITY48125	2.27	3.73	0.15	0.08	0.14	0.51	1.51
CAVITY48399	2.37	2.95	0.17	0.01	0.08	0.61	0.8
CAVITY48997	2.56	3.41	0.2	-0.0	0.03	0.89	0.9
CAVITY49137	2.21	2.85	0.12	0.01	0.03	0.43	0.96
CAVITY49935	2.44	3.22	0.19	-0.03	0.05	0.69	0.85
CAVITY50031	2.36	3.14	0.15	-0.04	0.01	0.93	0.85
CAVITY50117	2.22	2.88	0.13	-0.08	0.06	0.91	0.89
CAVITY50532	2.24	2.96	0.12	0.0	0.07	0.57	0.85
CAVITY50943	2.39	3.2	0.15	-0.01	0.02	0.99	0.87
CAVITY51102	2.55	3.4	0.2	0.0	0.05	0.56	0.91
CAVITY52730	2.25	2.75	0.12	0.03	0.08	1.05	0.86
CAVITY52954	2.21	2.88	0.12	-0.08	0.06	0.9	0.86
CAVITY53259	2.38	3.19	0.15	-0.08	0.03	0.65	0.8
CAVITY54598	2.21	3.27	0.13	0.13	0.2	1.02	1.46
CAVITY54706	2.59	3.44	0.22	-0.0	0.04	0.44	0.84
CAVITY55180	2.53	3.46	0.21	-0.02	0.03	0.6	0.86
CAVITY56289	2.22	2.94	0.12	-0.04	0.05	0.42	0.9
CAVITY56627	2.28	2.97	0.13	-0.0	0.03	0.71	0.96
CAVITY57404	2.2	2.84	0.11	-0.02	0.06	0.9	0.89
CAVITY58740	2.35	3.17	0.14	-0.01	0.03	0.54	0.82
CAVITY59465	2.22	2.88	0.12	-0.0	0.06	0.69	0.89
CAVITY59764	2.27	3.12	0.12	-0.05	-0.0	0.58	0.79
CAVITY59902	2.35	3.09	0.15	-0.0	0.04	0.52	0.93
CAVITY59906	2.25	2.86	0.12	0.01	0.05	0.72	1.03

Table 3. Continued.

Name	RED_CDISP_MEAN [pixels]	RED_CDISP_MAX [pixels]	RED_CDISP_STD [pixels]	RED_RES5577_MIN [counts]	RED_RES5577_MAX [counts]	RED_STDRES5577_MAX [counts]	CAL_SPECPHOT_FLUXRATIO
CAVITY59983	2.51	3.25	0.19	0.0	0.06	0.66	0.93
CAVITY60044	2.43	3.1	0.14	0.03	0.07	0.46	0.85
CAVITY60187	2.32	3.05	0.15	0.02	0.06	0.49	0.86
CAVITY60224	2.24	3.07	0.12	-0.01	0.03	0.68	0.85
CAVITY62108	2.24	3.07	0.12	-0.01	0.01	0.37	0.82
CAVITY62262	2.21	2.83	0.1	-0.03	0.08	1.18	1.0
CAVITY62480	2.45	3.12	0.19	0.02	0.06	0.36	1.1
CAVITY63083	2.29	3.28	0.13	-0.0	0.06	0.56	0.87
CAVITY65288	2.29	3.07	0.14	-0.04	0.08	0.63	0.91
CAVITY65303	2.21	3.13	0.13	0.07	0.14	0.7	1.33
CAVITY65716	2.52	3.66	0.21	-0.01	0.05	0.67	0.93
CAVITY65887	2.26	3.03	0.12	-0.03	0.01	0.51	0.87
CAVITY66239	2.82	4.0	0.24	0.02	0.05	0.28	1.04
CAVITY66400	2.28	2.94	0.13	-0.03	0.02	0.57	1.12
CAVITY66803	2.27	3.53	0.15	0.1	0.17	0.52	1.21
CAVITY67290	2.24	2.85	0.14	-0.12	0.03	0.6	0.86
CAVITY7906	2.31	2.9	0.15	0.02	0.08	0.44	0.89
CAVITY7926	2.22	3.18	0.12	0.15	0.35	1.08	1.66
CAVITY8556	2.91	3.97	0.28	0.0	0.03	0.54	0.84
CAVITY8595	2.23	3.28	0.13	0.1	0.2	0.94	1.39
CAVITY8646	2.4	3.07	0.2	0.1	0.16	0.66	1.38

Table 4. PPAK_cubes

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
name	CAVITY name	nan	meta.id;	char
date	Observation date	nan	time.epoch;	date
version	Pipeline version	nan	nan	char
file	Fits file of the galaxy	nan	meta.ref;meta.file;meta.fits;	char

Table 5. PPAK_images

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
img_footprint	PPak footprint on the SDSS image of the galaxy.	nan	meta.ref;meta.image;	char
img_moment	Moment 0 map (from 450 to 700 nm) of the galaxy.	nan	meta.ref;meta.image;	char
img_spectrum	Spectrum of the center of the galaxy.	nan	meta.ref;meta.image;	char

2. Database tables

In this section, we review the details of all the catalogs provided through CAVITY DR1. These catalogs are accessible from the CAVITY database and are available in both IVOA VOTable and CSV formats. Below, we briefly review the main properties of each:

- **PPAK_cubes:** This table contains the FITS files of observed CAVITY galaxies provided by the PPAK data reduction pipeline.
- **PPAK_images:** This table contains the footprint and radar imagery of the CAVITY galaxies. In all the images, the effective radius of the galaxy is marked in white, and the PPAK hexagonal footprint is marked in green.
- **Master:** This table contains the main physical properties of CAVITY galaxies and is a summary of all the catalogs described here. The majority of parameters presented in this table are taken from publicly available catalogs. A few parameters are derived by the team members, for which we will discuss their details here. The "effr_frac" is the effective radius fraction of the location of galaxies within voids, assuming them as spheres with similar volume as the actual void. "d25" represents the galaxy's major axis, which is three times the value of its "petroR90-r". The "petroR90-r" is the radius encompassing 90% of the Petrosian flux in the R-band. These values are taken from [Alam et al. \(2015\)](#). "incl" is galaxy's inclination defined as $\arccos(b/a)$ where b and a are minor and major axes, respectively (caution: this approximation is correct only in the case of circular disk galaxies). "Ar" is Galactic r band extinction along line-of-sight and is derived following the steps outlined for table AG in the following.
- **Voids:** This table describes the main physical properties of CAVITY voids. All the properties are directly taken from [Pan et al. \(2012\)](#) public void catalog. All x,y,z coordinates reported in this table are calculated as distances in Mpc/h, using the following equations: $x = r \cos(ra) \cos(dec)$; $y = r \sin(ra) \cos(dec)$; $z = r \sin(dec)$. Their assumed cosmology is $\Omega_l = 0.73$ and $\Omega_m = 0.27$.
- **AG:** This table contains the Galactic extinction data for CAVITY galaxies. Optical Galactic extinctions in different SDSS filters are calculated based on the SFD Dust survey ([Schlegel et al. 1998](#)) and SDSS filters ([Schlafly & Finkbeiner 2011](#)) publicly available gdpvc python package¹.
- **ALFALFA_SDSS:** ALFALFA-SDSS Galaxy Catalog for CAVITY galaxies.
- **IFU:** This table contains information on IFU data availability from CALIFA² and MaNGA³ surveys for CAVITY galaxies. Columns are set to 1 if the corresponding data is available and 0 otherwise.
- **PAN_MAGLIM:** This table contains properties of CAVITY galaxies directly taken from the publicly available magnitude limited catalog of [Pan et al. \(2012\)](#).
- **SDSS:** This table contains photometric properties of CAVITY galaxies, directly taken from the 12th data release of the Sloan Digital Sky Survey ([Alam et al. 2015](#)).
- **Morpho:** The morphological classification catalog of CAVITY galaxies, constructed from four public catalog and studies ([Lintott et al. 2008](#); [Willett et al. 2013](#); [Huertas-Company et al. 2011](#); [Domínguez Sánchez et al. 2018](#)).
- **MPA:** This table contains properties of CAVITY galaxies, directly taken from the MPA-JHU Catalog⁴ ([Brinchmann et al. 2004](#); [Kauffmann et al. 2003](#); [Tremonti et al. 2004](#)).
- **LEDA:** This table contains properties of CAVITY galaxies directly taken from the Hyperleda Catalog⁵.

¹ <https://gdpvc.readthedocs.io/en/latest/>

² <https://califa.caha.es/>

³ <https://www.sdss4.org/surveys/manga/>

⁴ https://live-sdss4org-dr12.pantheonsite.io/spectro/galaxy_mpa_jhu/

⁵ <http://leda.univ-lyon1.fr/leda/meandata.html>

Table 6. Voids

column	description	unit	UCD	datatype
void	CAVITY Void ID	nan	meta.id;meta.main;	int
ra	Right ascension of the center of the maximal sphere	[degree]	pos.eq.ra;	float
dec	Declination of the center of the maximal sphere	[degree]	pos.eq.dec;	float
x	Equatorial x coordinate of the center of the maximal sphere	[Mpc/h]	pos.cartesian.x;	float
y	Equatorial y coordinate of the center of the maximal sphere	[Mpc/h]	pos.cartesian.y;	float
z	Equatorial z coordinate of the center of the maximal sphere	[Mpc/h]	pos.cartesian.z;	float
r	Radius of the maximal sphere	[Mpc/h]	pos.spherical.r;	float
volx	Equatorial x coordinate of the center of the void region	[Mpc/h]	pos.cartesian.x;	float
voly	Equatorial y coordinate of the center of the void region	[Mpc/h]	pos.cartesian.y;	float
volz	Equatorial z coordinate of the center of the void region	[Mpc/h]	pos.cartesian.z;	float
effr	Radius of the sphere which has the same volume as the void region	[Mpc/h]	pos.spherical.r;	float
numgals	Number of volume limited galaxies that reside in the entire void region	nan	meta.number;	int

Table 7. AG

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
LEDA	Galactic extinction in B-band (ag from Hyperleda catalog)	[mag]	phys.absorption.gal;em.opt.B;	float
SDSS_u	Galactic extinction using SDSS U-Band filter	[mag]	phys.absorption.gal;em.opt.U;	float
SDSS_g	Galactic extinction using SDSS G-Band filter	[mag]	phys.absorption.gal;em.opt.B;	float
SDSS_r	Galactic extinction using SDSS R-Band filter	[mag]	phys.absorption.gal;em.opt.R;	float
SDSS_i	Galactic extinction using SDSS I-Band filter	[mag]	phys.absorption.gal;em.opt.I;	float
SDSS_z	Galactic extinction using SDSS Z-Band filter	[mag]	phys.absorption.gal;em.opt.I;	float

Table 8. ALFALFA_SDSS

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
AGC	Entry number in the AGC catalog	nan	meta.id.cross;	int
Vhelio	Heliocentric velocity of the HI profile mid-point	[km·s ⁻¹]	spect.dopplerVeloc; em.line.HI;	int
W50	Width at 50% level	[km·s ⁻¹]	nan	int
W20	Width at 20% level	[km·s ⁻¹]	nan	int
HIflux	HI line flux density	[Jy·km·s ⁻¹]	phot.flux.density; em.line.HI; spect.line;	float
sigflux	Uncertainty in HIflux	[Jy·km·s ⁻¹]	stat.error;phot.flux.density;	float
Dist	Distance used in MHI, Mstar, SFR	[Mpc]	nan	float
sigDist	Uncertainty of Dist	[Mpc]	nan	float
logMH	HI mass, where distance is the one adopted in	[log(M _⊙)]	phys.mass;	float
logMH_err	Uncertainty in logMH	nan	stat.error;phys.mass;	float
Hicode	HI source code. Good S/N or tentative detection (1 or 2, respectively)	nan	nan	int
logMstarTaylor	Stellar mass from SDSS optical photometry using the Taylor method	[log(M _⊙)]	phys.mass;	float
logMstarTaylor_err	Uncertainty in logMstarTaylor	nan	stat.error;phys.mass;	float
logMstarMcGaugh	Stellar mass from infrared unWISE photometry using the McGaugh method	[log(M _⊙)]	phys.mass;	float
logMstarMcGaugh_err	Uncertainty in logMstarMcGaugh	nan	stat.error;phys.mass;	float
logMstarGSWLC	Stellar mass from GSWLC-2	[log(M _⊙)]	phys.mass;	float
logMstarGSWLC_err	Uncertainty in logMstarGSWLC	nan	stat.error;phys.mass;	float
logSFR22	Star Formation Rate (SFR) from unWISE infrared photometry using the flux at the frequency of 22 m	[log(M _⊙ yr ⁻¹)]	phys.SFR;	float
logSFR22_err	Uncertainty in SFR22	nan	stat.error;phys.SFR;	float
logSFRNUVIR	Corrected near-ultraviolet SFR from GALEX NUV photometry SFRNUVcor for galaxies with NUV fluxes available in NASA-Sloan Atlas	[log(M _⊙ yr ⁻¹)]	phys.SFR;	float
logSFRNUVIR_err	Uncertainty in logSFRNUVIR	nan	stat.error;phys.SFR;	float
logSFRGSWLC	SFR from GSWLC-2	[log(M _⊙ yr ⁻¹)]	phys.SFR;	float
logSFRGSWLC_err	Uncertainty in logSFRGSWLC	nan	stat.error;phys.SFR;	float

Table 9. IFU

column	description	unit	UCD	datatype
galaxy	CAVITY ID [3]	nan	meta.id;meta.main;	int
CALIFA	Flag for CALIFA galaxies in CAVITY	nan	meta.code;	int
MaNGA	Flag for MaNGA galaxies in CAVITY	nan	meta.code;	int

Table 10. PAN_MAGLIM

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
ra	Right Ascension of the galaxy	[degree]	pos.eq.ra;	float
dec	Declination of the galaxy	[degree]	pos.eq.dec;	float
redshift	Redshift of the void galaxy	nan	src.redshift;	float
dist	Comoving distance to the void galaxy	[Mpc/h]	pos.distance;	float
rabsmag	r-band absolute magnitude of the void galaxy	[mag]	phys.magAbs;em.opt.R;	float
g-r	g-r band color of the void galaxy	[mag]	phot.color;em.opt.B;em.opt.R;	float
x	Equatorial x coordinate of the void galaxy	[Mpc/h]	pos.cartesian.x;	float
y	Equatorial y coordinate of the void galaxy	[Mpc/h]	pos.cartesian.y;	float
z	Equatorial z coordinate of the void galaxy	[Mpc/h]	pos.cartesian.z;	float
plate	SDSS plate number	nan	meta.number;instr.plate;	int
fiber	SDSS fiber number	nan	meta.number;	int
mjd	Modified Julian date of the observation	[day]	time.epoch;obs;	int

Table 11. SDSS

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
objID	Unique SDSS identifier composed from [skyVersion, rerun, run, camcol, field, obj]	nan	meta.id;meta.corr;	char
petroR50_r	Radius containing 50% of Petrosian flux in the R-band	[arcsec]	phys.size.radius;em.opt.R;	float
petroR50Err_r	Error in petroR50_r	[arcsec]	stat.error;	float
petroR90_r	Radius containing 90% of Petrosian flux in the R-band	[arcsec]	phys.size.radius;em.opt.R;	float
petroR90Err_r	Error in petroR90_r	[arcsec]	stat.error;	float
expAB_r	Exponential fit b/a in the R-band	nan	phys.size.axisRatio;em.opt.R;	float
expABErr_r	Error in expAB_r	nan	stat.error;	float
modelMag_u	Model magnitude in u filter	[mag]	phys.size.axisRatio;em.opt.R;	float
modelMag_g	Model magnitude in g filter	[mag]	phot.mag;em.opt.U;	float
modelMag_r	Model magnitude in r filter	[mag]	phot.mag;em.opt.B;	float
modelMag_i	Model magnitude in i filter	[mag]	phot.mag;em.opt.R;	float
modelMag_z	Model magnitude in z filter	[mag]	phot.mag;em.opt.I;	float
modelMagErr_u	Error in modelMag_u	[mag]	phot.mag;em.opt.I;	float
modelMagErr_g	Error in modelMag_g	[mag]	stat.error;	float
modelMagErr_r	Error in modelMag_r	[mag]	phot.mag;em.opt.U;	float
modelMagErr_i	Error in modelMag_i	[mag]	stat.error;	float
modelMagErr_z	Error in modelMag_z	[mag]	phot.mag;em.opt.B;	float
			stat.error;	float
			phot.mag;em.opt.R;	float
			phot.mag;em.opt.I;	float
			stat.error;	float
			phot.mag;em.opt.I;	float

Table 12. Morpho

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
GZ1Ell	GZ1 catalog of ELLIPTICAL classified galaxy. Ellipticals are marked as 1, else as 0	nan	meta.code;src.morph.type;	float
GZ1S	GZ1 catalog of SPIRAL classified galaxy. Spirals are marked as 1, else as 0	nan	meta.code;src.morph.type;	float
GZ1U	GZ1 catalog of UNCERTAIN classified galaxy. Galaxies with high uncertainty in classification are marked as 1, else as 0	nan	meta.code;src.morph.type;	float
GZ2class	The most common morphology for galaxies among different classifications	nan	meta.code.class;src.morph.type;	char
GZ2formula	GZ2 morphology classification	nan	src.morph.type;	float
pdominant	Weighted fraction of GZ2 votes for “dominant bulge”. Galaxies with dominant bulge have higher values	nan	stat.value;	float
pnobulge	Weighted fraction of GZ2 votes for “no bulge”. Galaxies with no bulge have higher values	nan	stat.value;	float
pobvious	Weighted fraction of GZ2 votes for “obvious bulge”. Galaxies with obvious bulge have higher values	nan	stat.value;	float
probaEarly	Probability of a galaxy being a early-type galaxy ('probaEarly' = 'probaE' + 'probaS0')	nan	stat.probability;	float
probaEll	Probability of a galaxy being elliptical	nan	stat.probability;	float
probaLate	Probability of a galaxy being a late-type galaxy ('probaLate' = 'probaSab' + 'probaScd')	nan	stat.probability;	float
probaS0	Probability of a galaxy being lenticular	nan	stat.probability;	float
probaSab	Probability of a galaxy being spiral Sa or Sb type	nan	stat.probability;	float
probaScd	Probability of a galaxy being spiral Sc or Sd type	nan	stat.probability;	float
TType_DS	T-type, early-type galaxies are marked with values 0 and late-type-galaxies with values > 0	nan	meta.code.class;src.morph.type;	float

Table 13. MPA

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
bestObjID	Unique ID in SDSS database	nan	meta.id;meta.corr;	char
specObjID	Spectral ID in SDSS database	nan	meta.id;meta.corr;	char
sn_median	Median S/N per pixel of the whole spectrum [from galSpecInfo]	nan	stat.snr;stat.median;	float
oii_3726_flux	[OII]3726 Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
oii_3726_flux_err	Uncertainty in oii_3726_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
oii_3729_flux	[OII]3729 Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
oii_3729_flux_err	Uncertainty in oii_3729_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
h_beta_flux	H Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
h_beta_flux_err	Uncertainty in the h_beta_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
oiii_5007_flux	[OIII]5007 Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
oiii_5007_flux_err	Uncertainty in oiii_5007_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
h_alpha_cont	Continuum at line center from 200 pixel median smoothing of the emission-line subtracted continuum	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1} \text{ Å}^{-1}]$	phot.flux;spect.continuum;	float
h_alpha_cont_err	Uncertainty in h_alpha_cont	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1} \text{ Å}^{-1}]$	stat.error;phot.flux;	float
h_alpha_reqw	The equivalent width of the continuum-subtracted emission line computed from straight integration over the bandpasses listed in [galSpecLine] (emission is negative). In this case the continuum comes from a running 200 pixel median and does not properly account for stellar absorption. In general the EQW measurements provide a better measure of the true equivalent width. The purpose of this measurement is to help characterize the stellar absorption affecting the line. (EW_stellar = REQW - EQW)	Å	spect.line.eqWidth;spect.continuum;	float
h_alpha_reqw_err	Uncertainty in h_alpha_reqw	Å	stat.error;spect.line.eqWidth;	float
h_alpha_eqw	The equivalent width of the CB08 continuum-subtracted emission line computed from straight integration over the bandpasses listed in [galSpecLine] (emission is negative). This properly takes into account stellar absorption. Note that it will not be correct in the case of blended lines (i.e., NII & H)	Å	spect.line.eqWidth;spect.continuum;	float
h_alpha_eqw_err	Uncertainty in h_alpha_eqw	Å	stat.error;spect.line.eqWidth;	float
h_alpha_flux	H Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
h_alpha_flux_err	Uncertainty in h_alpha_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
nii_6584_flux	[NII]6584 Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
nii_6584_flux_err	Uncertainty in nii_6584_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
sii_6717_flux	[SII]6717 Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
sii_6717_flux_err	Uncertainty in sii_6717_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
sii_6731_flux	[SII]6731 Flux from Gaussian fit to continuum subtracted data.	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	phot.flux;	float
sii_6731_flux_err	Uncertainty in sii_6731_flux	$[10^{-17} \text{ erg cm}^{-2} \text{ s}^{-1}]$	stat.error;phot.flux;	float
oh_p16	The 16th percentile of the Oxygen abundance derived using Charlot & Longhetti models. The values are reported as $12 + \text{Log O/H}$. See Tremonti et al (2004) and Brinchmann et al (2004) for details. [from galSpecExtra]	nan	phys.abund;stat.median;	float

Table 13 MPA (Continued)

column	description	unit	UCD	datatype
oh_p50	The median estimate of the Oxygen abundance derived using Charlot & Longhetti models. The values are reported as $12 + \text{Log O/H}$. See Tremonti et al (2004) and Brinchmann et al (2004) for details. [from galSpecExtra]	nan	phys.abund;stat.median;	float
oh_p84	The 84th percentile of the Oxygen abundance derived using Charlot & Longhetti models. The values are reported as $12 + \text{Log O/H}$. See Tremonti et al (2004) and Brinchmann et al (2004) for details. [from galSpecExtra]	nan	phys.abund;stat.median;	float
lgm_tot_p16	The 16th percentile of the Log total stellar mass PDF using model photometry. [from galSpecExtra]	$[\text{log}(\text{M}_{\odot})]$	phys.mass;stat.median;	float
lgm_tot_p50	The median estimate of the Log total stellar mass PDF using model photometry. [from galSpecExtra]	$[\text{log}(\text{M}_{\odot})]$	phys.mass;stat.median;	float
lgm_tot_p84	The 84th percentile of the Log total stellar mass PDF using model photometry. [from galSpecExtra]	$[\text{log}(\text{M}_{\odot})]$	phys.mass;stat.median;	float
sfr_tot_p16	The 16th percentile of the Log total SFR PDF. This is derived by combining emission line measurements from within the fiber where possible and aperture corrections are done by fitting models ala Gallazzi et al (2005), Salim et al (2007) to the photometry outside the fiber. For those objects where the emission lines within the fiber do not provide an estimate of the SFR, model fits were made to the integrated photometry. [from galSpecExtra]	$[\text{log}(\text{M}_{\odot}\text{yr}^{-1})]$	phys.SFR;stat.median;	float
sfr_tot_p50	The median estimate of the Log total SFR PDF. This is derived by combining emission line measurements from within the fiber where possible and aperture corrections are done by fitting models ala Gallazzi et al (2005), Salim et al (2007) to the photometry outside the fiber. For those objects where the emission lines within the fiber do not provide an estimate of the SFR, model fits were made to the integrated photometry. [from galSpecExtra]	$[\text{log}(\text{M}_{\odot}\text{yr}^{-1})]$	phys.SFR;stat.median;	float
sfr_tot_p84	The 84th percentile of the Log total SFR PDF. This is derived by combining emission line measurements from within the fiber where possible and aperture corrections are done by fitting models ala Gallazzi et al (2005), Salim et al (2007) to the photometry outside the fiber. For those objects where the emission lines within the fiber do not provide an estimate of the SFR, model fits were made to the integrated photometry. [from galSpecExtra]	$[\text{log}(\text{M}_{\odot}\text{yr}^{-1})]$	phys.SFR;stat.median;	float
specsftr_tot_p16	The 16th percentile of the Log total SPECISFR PDF. This is derived by combining emission line measurements from within the fiber where possible and aperture corrections are done by fitting models ala Gallazzi et al (2005), Salim et al (2007) to the photometry outside the fiber. For those objects where the emission lines within the fiber do not provide an estimate of the SFR, model fits were made to the integrated photometry. [from galSpecExtra]	$[\text{log}(\text{yr}^{-1})]$	phys.SFR;stat.median;	float

Table 13 MPA (Continued)

column	description	unit	UCD	datatype
specsfir_tot_p50	The median estimate of the Log total SPECsFR PDF. This is derived by combining emission line measurements from within the fiber where possible and aperture corrections are done by fitting models ala Gal-lazzi et al (2005), Salim et al (2007) to the photometry outside the fiber. For those objects where the emission lines within the fiber do not provide an estimate of the SFR, model fits were made to the integrated photometry. [from galSpecExtra]	[log(yr ⁻¹)]	phys.SFR;stat.median;	float
specsfir_tot_p84	The 84th percentile of the Log total SPECsFR PDF. This is derived by combining emission line measurements from within the fiber where possible and aperture corrections are done by fitting models ala Gal-lazzi et al (2005), Salim et al (2007) to the photometry outside the fiber. For those objects where the emission lines within the fiber do not provide an estimate of the SFR, model fits were made to the integrated photometry. [from galSpecExtra]	[log(yr ⁻¹)]	phys.SFR;stat.median;	float
d4000_n	4000AA break, Balogh et al (1999) definition. [from galSpecIndx]	nan	phot.flux.density;arithm.ratio;	float
d4000_n_err	Uncertainty in d4000_n	nan	stat.error;phot.flux.density;arithm.ratio;	float

Table 14. LEDA

column	description	unit	UCD	datatype
galaxy	CAVITY ID	nan	meta.id;meta.main;	int
pgc	LEDA internal number	nan	meta.id.cross;	int
name	LEDA search string	nan	meta.id;	char
objname	Principal designation	nan	meta.id;	char
d25	Major axis	[arcsec]	phys.angSize.smajAxis;	float
objtype	Type of object (G=galaxy; S=Star ...)	nan	meta.code;	char
al1950	RA 1950 (hours decimal value)	nan	pos.eq.ra;	float
de1950	DEC 1950 (hours decimal value)	nan	pos.eq.dec;	float
al2000	RA 2000 (hours decimal value)	nan	pos.eq.ra;	float
de2000	DEC 2000 (hours decimal value)	nan	pos.eq.dec;	float
l2	Galactic longitude	[degree]	pos.galactic.lon;	float
b2	Galactic latitude	[degree]	pos.galactic.lat;	float
sgl	Supergalactic longitude	[degree]	pos.supergalactic.lon;	float
sgb	Supergalactic latitude	[degree]	pos.supergalactic.lat;	float
type	Morphological type	nan	meta.code;src.morph.type;	char
bar	Bar (B or blank)	nan	meta.code;src.morph.param;	char
ring	Ring (R or blank)	nan	meta.code;src.morph.param;	char
multiple	Multiple (M or blank)	nan	meta.code;src.morph.param;	char
compactness	Compactness (C=Compact or D=Diffuse or blank)	nan	meta.code;src.morph.param;	char
t	Morphological type code	nan	src.morph.type;	float
e_t	Actual error on t	nan	stat.error;src.morph.type;	float
logd25	log10 of apparent diameter (d25 in 0.1")	[log(arcsec)]	phys.size.diameter;	float
e_logd25	Actual error on logd25	[log(arcsec)]	stat.error;phys.size.diameter;	float
logr25	log10 of axis ratio (major axis/minor axis)	nan	phys.size.axisRatio;	float
e_logr25	Actual error on logr25	nan	stat.error;phys.size.axisRatio;	float

Table 14 LEDA (Continued)

column	description	unit	UCD	datatype
pa	Major axis position angle (North Eastwards)	[degrees]	pos,posAng;	float
brief	Mean effective surface brightness	[mag·arcsec ⁻²]	phot.mag.sb;stat.mean;	float
e_brief	Actual error on brief	[mag·arcsec ⁻²]	stat.error;phot.mag.sb;stat.mean;	float
bt	Total B-band magnitude	[mag]	phot.mag;em.opt.B;	float
e_bt	Actual error on bt	[mag]	stat.error;phot.mag;em.opt.B;	float
it	Total I-band magnitude	[mag]	phot.mag;em.opt.I;	float
e_it	Actual error on it	[mag]	stat.error;phot.mag;em.opt.I;	float
ut	Total U-band magnitude	[mag]	phot.mag;em.opt.U;	float
vmaxg	Apparent maximum rotation velocity of gas	[km·s ⁻¹]	phys.veloc.rotat;stat.max;	float
e_vmaxg	Actual error on vmaxg	[km·s ⁻¹]	stat.error;phys.veloc.rotat;	float
m21	21-cm line flux in magnitude	[mag]	phys.flux;em.line.HI;	float
e_m21	Actual error on m21	[mag]	stat.error;phot.flux;em.line.HI;	float
mfr	Far infrared magnitude	[mag]	phot.mag;	float
vrad	Heliocentric radial velocity from radio measurements	[km·s ⁻¹]	spect.dopplerVeloc.radio;pos.heliocentric;	float
e_vrad	Actual error on vrad	[km·s ⁻¹]	stat.error;spect.dopplerVeloc.radio;	float
vopt	Heliocentric radial velocity from optical measurements	[km·s ⁻¹]	spect.dopplerVeloc.opt;pos.heliocentric;	float
e_vopt	Actual error on vopt	[km·s ⁻¹]	stat.error;spect.dopplerVeloc.opt;	float
ai	Internal extinction in B magnitude	[mag]	phys.absorption;em.opt.B;	float
incl	Inclination	[degree]	src.orbital.inclination;	float
a21	21-cm self absorption	[mag]	phys.absorption;em.line.HI;	float
logdc	log10 of apparent corrected diameter (dc in 0.1')	[log(arcmin)]	phys.size.diameter;	float
btc	Total apparent corrected B-magnitude	[mag]	phot.mag;em.opt.B;	float
bri25	Mean surface brightness within isophote 25	[mag·arcsec ⁻²]	phot.mag.sb;stat.mean;	float
vrot	Maximum velocity rotation corrected for inclination	[km·s ⁻¹]	phys.veloc.rotat;stat.max;	float
e_vrot	Actual error on vrot	[km·s ⁻¹]	stat.error;phys.veloc.rotat;	float
m21c	Corrected 21-cm line flux in magnitude	[mag]	phys.flux;phot.mag;em.line.HI;	float
hic	21-cm color index = m21c - btc	[mag]	phot.color;em.line.HI;em.opt.B;	float
vlg	Radial velocity (cz) with respect to the Local Group	[km·s ⁻¹]	spect.dopplerVeloc;	float
vgsr	Radial velocity (cz) with respect to the GSR	[km·s ⁻¹]	spect.dopplerVeloc;	float
vvir	Radial velocity (cz) corrected for Virgocentric infall	[km·s ⁻¹]	spect.dopplerVeloc;	float
v3k	Radial velocity (cz) with respect to the CMB radiation	[km·s ⁻¹]	spect.dopplerVeloc;	float
modz	Redshift distance modulus	[mag]	phot.mag.distMod;	float
mod0	True distance modulus (from parameters)	[mag]	phot.mag.distMod;	float
mabs	Absolute B-magnitude	[mag]	phys.magAbs;em.opt.B;	float
f_astrom	Precision flag on celestial position	nan	nan	char
e_mod0	Actual error on mod0	[mag]	stat.error;phot.mag.distMod;	float
e_modz	Actual error on modz	[mag]	stat.error;phot.mag.distMod;	float
e_mabs	Actual error on mabs	[mag]	stat.error;phys.magAbs;	float
modbest	True distance modulus, combining mod0 and modz	[mag]	phot.mag.distMod;	float
e_modbest	Actual error on modbest	[mag]	stat.error;phot.mag.distMod;	float
kt	Total K-band magnitude	[mag]	phot.mag;em.IR.K;	float
e_kt	Actual error on kt	[mag]	stat.error;phot.mag;em.IR.K;	float
e_ut	Actual error on ut	[mag]	stat.error;phot.mag;em.opt.U;	float
hl_names(pgc)	List of all names	nan	meta.id;	char

Table 14 LEDA (Continued)

column	description	unit	UCD	datatype
celposb(pgc)	B1950 position (character string)	nan	pos;	char
celposj(pgc)	J2000 position (character string)	nan	pos;	char

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