MBH-N PAPER

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ABSTRACT

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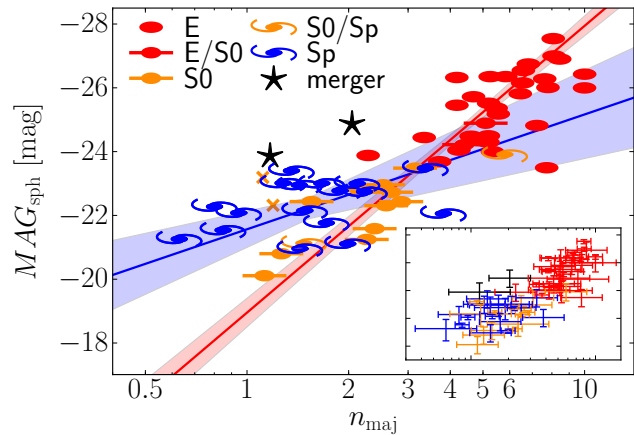*Subject headings:* keywords

1. INTRODUCTION
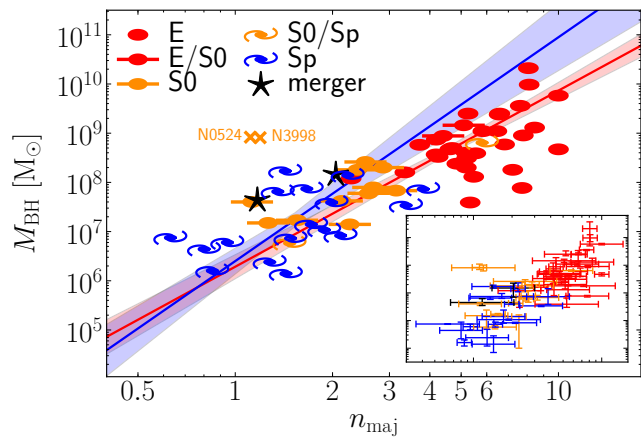2. DATA
3. RESULTS

Fig. 1.—

Fig. 2.—

REFERENCES

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Savorgnan et al.

TABLE 1
Galaxy sample.

Galaxy	Type	Distance [Mpc]	$M_{\rm BH}$ [10^8 M$_\odot$]	$MAG_{\rm sph}$ [mag]	$n_{\rm sph}$
(1)	(2)	(3)	(4)	(5)	(6)
IC 1459	E	28.4	24^{+10}_{-10}	$-26.15^{+0.18}_{-0.11}$	$6.6^{+0.9}_{-0.8}$
IC 2560	Sp (bar)	40.7	$0.044^{+0.044}_{-0.022}$	$-22.27^{+0.66}_{-0.58}$	$0.8^{+0.4}_{-0.3}$
IC 4296	E	40.7	11^{+2}_{-2}	$-26.35^{+0.18}_{-0.11}$	$5.8^{+0.8}_{-0.7}$
M104	S0/Sp	9.5	$6.4^{+0.4}_{-0.4}$	$-23.91^{+0.66}_{-0.58}$	$5.8^{+2.7}_{-1.8}$
M105	E	10.3	4^{+1}_{-1}	$-24.29^{+0.66}_{-0.58}$	$5.2^{+2.4}_{-1.6}$
M106	Sp (bar)	7.2	$0.39^{+0.01}_{-0.01}$	$-21.11^{+0.18}_{-0.11}$	$2.0^{+0.3}_{-0.2}$
M31	Sp (bar)	0.7	$1.4^{+0.9}_{-0.3}$	$-22.74^{+0.18}_{-0.11}$	$2.2^{+0.3}_{-0.3}$
M49	E	17.1	25^{+3}_{-1}	$-26.54^{+0.18}_{-0.11}$	$6.6^{+0.9}_{-0.8}$
M59	E	17.8	$3.9^{+0.4}_{-0.4}$	$-25.18^{+0.18}_{-0.11}$	$5.5^{+0.8}_{-0.7}$
M64	Sp	7.3	$0.016^{+0.004}_{-0.004}$	$-21.54^{+0.18}_{-0.11}$	$0.8^{+0.1}_{-0.1}$
M81	Sp (bar)	3.8	$0.74^{+0.21}_{-0.11}$	$-23.01^{+0.88}_{-0.66}$	$1.7^{+1.3}_{-0.7}$
M84	E	17.9	$9.0^{+0.9}_{-0.8}$	$-26.01^{+0.66}_{-0.58}$	$7.8^{+3.6}_{-2.5}$
M87	E	15.6	$58.0^{+3.5}_{-3.5}$	$-26.00^{+0.66}_{-0.58}$	$10.0^{+4.7}_{-3.2}$
M89	E	14.9	$4.7^{+0.5}_{-0.5}$	$-24.48^{+0.66}_{-0.58}$	$4.6^{+2.2}_{-1.5}$
M94	Sp (bar)	4.4	$0.060^{+0.014}_{-0.014}$	$-22.08^{+0.18}_{-0.11}$	$0.9^{+0.1}_{-0.1}$
M96	Sp (bar)	10.1	$0.073^{+0.015}_{-0.015}$	$-22.15^{+0.18}_{-0.11}$	$1.5^{+0.2}_{-0.2}$
NGC 0524	S0	23.3	$8.3^{+2.7}_{-1.3}$	$-23.19^{+0.18}_{-0.11}$	$1.1^{+0.2}_{-0.1}$
NGC 0821	E	23.4	$0.39^{+0.26}_{-0.09}$	$-24.00^{+0.88}_{-0.66}$	$5.3^{+4.1}_{-2.3}$
NGC 1023	S0 (bar)	11.1	$0.42^{+0.04}_{-0.04}$	$-22.82^{+0.18}_{-0.11}$	$2.1^{+0.3}_{-0.3}$
NGC 1300	Sp (bar)	20.7	$0.73^{+0.69}_{-0.35}$	$-22.06^{+0.66}_{-0.58}$	$3.8^{+1.8}_{-1.2}$
NGC 1316	merger	18.6	$1.50^{+0.75}_{-0.80}$	$-24.89^{+0.66}_{-0.58}$	$2.0^{+1.0}_{-0.7}$
NGC 1332	E/S0	22.3	14^{+2}_{-2}	$-24.89^{+0.88}_{-0.66}$	$5.1^{+3.9}_{-2.2}$
NGC 1374	E	19.2	$5.8^{+0.5}_{-0.5}$	$-23.68^{+0.18}_{-0.11}$	$3.7^{+0.5}_{-0.5}$
NGC 1399	E	19.4	$4.7^{+0.6}_{-0.6}$	$-26.43^{+0.18}_{-0.11}$	$10.0^{+1.4}_{-1.2}$
NGC 2273	Sp (bar)	28.5	$0.083^{+0.004}_{-0.004}$	$-23.00^{+0.66}_{-0.58}$	$2.1^{+1.0}_{-0.7}$
NGC 2549	S0 (bar)	12.3	$0.14^{+0.02}_{-0.13}$	$-21.25^{+0.18}_{-0.11}$	$2.3^{+0.3}_{-0.3}$
NGC 2778	S0 (bar)	22.3	$0.15^{+0.09}_{-0.10}$	$-20.80^{+0.66}_{-0.58}$	$1.3^{+0.6}_{-0.4}$
NGC 2787	S0 (bar)	7.3	$0.40^{+0.04}_{-0.05}$	$-20.11^{+0.66}_{-0.58}$	$1.1^{+0.5}_{-0.4}$
NGC 2974	Sp (bar)	20.9	$1.7^{+0.2}_{-0.2}$	$-22.95^{+0.66}_{-0.58}$	$1.4^{+0.7}_{-0.5}$
NGC 3079	Sp (bar)	20.7	$0.024^{+0.024}_{-0.012}$	$-23.01^{+0.66}_{-0.58}$	$1.3^{+0.6}_{-0.4}$
NGC 3091	E	51.2	36^{+1}_{-2}	$-26.28^{+0.18}_{-0.11}$	$7.6^{+1.0}_{-0.9}$
NGC 3115	E/S0	9.4	$8.8^{+10.0}_{-2.7}$	$-24.22^{+0.18}_{-0.11}$	$4.4^{+0.6}_{-0.5}$
NGC 3227	Sp (bar)	20.3	$0.14^{+0.10}_{-0.06}$	$-21.76^{+0.66}_{-0.58}$	$1.7^{+0.8}_{-0.5}$
NGC 3245	S0 (bar)	20.3	$2.0^{+0.5}_{-0.5}$	$-22.43^{+0.18}_{-0.11}$	$2.9^{+0.4}_{-0.3}$
NGC 3377	E	10.9	$0.77^{+0.04}_{-0.06}$	$-23.49^{+0.66}_{-0.58}$	$7.7^{+3.6}_{-2.5}$
NGC 3384	S0 (bar)	11.3	$0.17^{+0.01}_{-0.02}$	$-22.43^{+0.18}_{-0.11}$	$1.6^{+0.2}_{-0.2}$
NGC 3393	Sp (bar)	55.2	$0.34^{+0.02}_{-0.02}$	$-23.48^{+0.66}_{-0.58}$	$3.4^{+1.6}_{-1.1}$
NGC 3414	E	24.5	$2.4^{+0.3}_{-0.3}$	$-24.35^{+0.18}_{-0.11}$	$4.8^{+0.7}_{-0.6}$
NGC 3489	S0/Sp (bar)	11.7	$0.058^{+0.008}_{-0.008}$	$-21.13^{+0.66}_{-0.58}$	$1.5^{+0.7}_{-0.5}$
NGC 3585	E	19.5	$3.1^{+1.4}_{-0.6}$	$-25.52^{+0.66}_{-0.58}$	$5.2^{+2.4}_{-1.7}$
NGC 3607	E	22.2	$1.3^{+0.5}_{-0.5}$	$-25.36^{+0.66}_{-0.58}$	$5.5^{+2.6}_{-1.7}$
NGC 3608	E	22.3	$2.0^{+1.1}_{-0.6}$	$-24.50^{+0.66}_{-0.58}$	$5.2^{+2.4}_{-1.7}$
NGC 3842	E	98.4	97^{+30}_{-26}	$-27.00^{+0.18}_{-0.11}$	$8.1^{+1.1}_{-1.0}$
NGC 3998	S0 (bar)	13.7	$8.1^{+2.0}_{-1.9}$	$-22.32^{+0.88}_{-0.66}$	$1.2^{+0.9}_{-0.5}$
NGC 4026	S0 (bar)	13.2	$1.8^{+0.6}_{-0.3}$	$-21.58^{+0.88}_{-0.66}$	$2.4^{+1.8}_{-1.0}$
NGC 4151	Sp (bar)	20.0	$0.65^{+0.07}_{-0.07}$	$-23.40^{+0.66}_{-0.58}$	$1.4^{+0.6}_{-0.4}$
NGC 4261	E	30.8	5^{+1}_{-1}	$-25.72^{+0.66}_{-0.58}$	$4.7^{+2.2}_{-1.5}$
NGC 4291	E	25.5	$3.3^{+0.9}_{-2.5}$	$-24.05^{+0.66}_{-0.58}$	$4.2^{+2.0}_{-1.4}$
NGC 4388	Sp (bar)	17.0	$0.075^{+0.002}_{-0.002}$	$-21.26^{+0.88}_{-0.66}$	$0.6^{+0.5}_{-0.3}$
NGC 4459	S0	15.7	$0.68^{+0.13}_{-0.13}$	$-23.48^{+0.66}_{-0.58}$	$3.1^{+1.5}_{-1.0}$
NGC 4473	E	15.3	$1.2^{+0.4}_{-0.9}$	$-23.88^{+0.66}_{-0.58}$	$2.3^{+1.1}_{-0.7}$
NGC 4564	S0	14.6	$0.60^{+0.03}_{-0.09}$	$-22.30^{+0.18}_{-0.11}$	$2.6^{+0.4}_{-0.3}$
NGC 4596	S0 (bar)	17.0	$0.79^{+0.38}_{-0.33}$	$-22.73^{+0.18}_{-0.11}$	$2.7^{+0.4}_{-0.3}$

Galaxy	Type	Distance [Mpc]	$M_{\rm BH}$ [10^8 M$_\odot$]	$MAG_{\rm sph}$ [mag]	$n_{\rm sph}$
(1)	(2)	(3)	(4)	(5)	(6)
NGC 4697	E	11.4	$1.8^{+0.2}_{-0.1}$	$-24.82^{+0.88}_{-0.66}$	$7.2^{+5.5}_{-3.1}$
NGC 4889	E	103.2	210^{+160}_{-160}	$-27.54^{+0.18}_{-0.11}$	$8.1^{+1.1}_{-1.0}$
NGC 4945	Sp (bar)	3.8	$0.014^{+0.014}_{-0.007}$	$-20.96^{+0.66}_{-0.58}$	$1.4^{+0.7}_{-0.5}$
NGC 5077	E	41.2	$7.4^{+4.7}_{-3.0}$	$-25.45^{+0.18}_{-0.11}$	$4.2^{+0.6}_{-0.5}$
NGC 5128	merger	3.8	$0.45^{+0.17}_{-0.10}$	$-23.89^{+0.88}_{-0.66}$	$1.2^{+0.9}_{-0.5}$
NGC 5576	E	24.8	$1.6^{+0.3}_{-0.4}$	$-24.44^{+0.18}_{-0.11}$	$3.3^{+0.5}_{-0.4}$
NGC 5845	S0	25.2	$2.6^{+0.4}_{-1.5}$	$-22.96^{+0.88}_{-0.66}$	$2.5^{+1.9}_{-1.1}$
NGC 5846	E	24.2	11^{+1}_{-1}	$-25.81^{+0.66}_{-0.58}$	$6.4^{+3.0}_{-2.1}$
NGC 6251	E	104.6	5^{+2}_{-2}	$-26.75^{+0.18}_{-0.11}$	$6.8^{+0.9}_{-0.8}$
NGC 7052	E	66.4	$3.7^{+2.6}_{-1.5}$	$-26.32^{+0.18}_{-0.11}$	$4.2^{+0.6}_{-0.5}$
NGC 7619	E	51.5	25^{+8}_{-3}	$-26.35^{+0.66}_{-0.58}$	$5.3^{+2.5}_{-1.7}$
NGC 7768	E	112.8	13^{+5}_{-4}	$-26.90^{+0.66}_{-0.58}$	$8.4^{+3.9}_{-2.7}$
UGC 03789	Sp (bar)	48.4	$0.108^{+0.005}_{-0.005}$	$-22.77^{+0.88}_{-0.66}$	$1.9^{+1.4}_{-0.8}$

NOTE. — *Column (1)*: Galaxy name. *Column (2)*: Morphological type (E=elliptical, S0=lenticular, Sp=spiral, merger). The morphological classification of four galaxies is uncertain (E/S0 or S0/Sp). The presence of a bar is indicated. *Column (3)*: Distance. *Column (4)*: Black hole mass. *Column (5)*: Absolute 3.6 μm spheroid magnitude. *Column (6)*: Spheroid major-axis Sérsic index. Spheroid magnitudes and Sérsic indices come from our state-of-the-art multicomponent galaxy decompositions (*Paper I*), which include bulges, disks, bars, spiral arms, rings, haloes, extended or unresolved nuclear sources and partially depleted cores, and that – for the first time – were checked to be consistent with the galaxy kinematics. The uncertainties were estimated with a method that takes into account systematic errors, which are typically not considered by popular 2D fitting codes.

TABLE 2
LINEAR REGRESSION ANALYSIS OF THE $L_{\mathrm{sph}} - n_{\mathrm{sph}}$ DIAGRAM.

Subsample (size)	Regression	α	β	$\langle \log n_{\mathrm{sph}} \rangle$	ϵ	Δ
	$MAG_{\mathrm{sph}}/[\mathrm{mag}] = \alpha + \beta\left(\log n_{\mathrm{sph}} - \langle \log n_{\mathrm{sph,maj}} \rangle\right)$					
All (62)	BCES $(Y\vert X)$	-23.88 ± 0.15	-7.17 ± 0.80	0.51	$-$	1.18
	mFITEXY $(Y\vert X)$	-23.95 ± 0.13	-6.70 ± 0.45	0.51	$0.56^{+0.15}_{-0.10}$	0.98
	linmix_err $(Y\vert X)$	-23.92 ± 0.15	-6.40 ± 0.57	0.51	0.74 ± 0.13	1.07
	BCES $(X\vert Y)$	-23.88 ± 0.14	-6.70 ± 0.51	0.51	$-$	1.11
	mFITEXY $(X\vert Y)$	-23.94 ± 0.14	-7.50 ± 0.52	0.51	$0.59^{+0.17}_{-0.11}$	1.23
	linmix_err $(X\vert Y)$	-23.94 ± 0.16	-7.51 ± 0.62	0.51	0.81 ± 0.16	1.23
	BCES Bisector	-23.88 ± 0.14	-6.93 ± 0.60	0.51	$-$	1.14
	mFITEXY Bisector	-23.94 ± 0.13	-7.08 ± 0.34	0.51	$-$	1.16
	linmix_err Bisector	-23.93 ± 0.16	-6.91 ± 0.42	0.51	$-$	1.14
Elliptical (30)	BCES $(Y\vert X)$	-25.46 ± 1.12	38.47 ± 114.45	0.76	$-$	6.37
	mFITEXY $(Y\vert X)$	-25.74 ± 0.18	-9.74 ± 1.59	0.76	$0.24^{+0.32}_{-0.24}$	0.94
	linmix_err $(Y\vert X)$	-25.65 ± 0.21	-7.87 ± 2.15	0.76	0.61 ± 0.22	1.06
	BCES $(X\vert Y)$	-25.46 ± 0.23	-10.73 ± 3.21	0.76	$-$	1.29
	mFITEXY $(X\vert Y)$	-25.74 ± 0.20	-10.42 ± 1.79	0.76	$0.22^{+0.38}_{-0.22}$	1.29
	linmix_err $(X\vert Y)$	-25.72 ± 0.28	-10.92 ± 2.70	0.76	0.73 ± 0.34	1.33
	BCES Bisector	-25.46 ± 0.20	0.03 ± 0.05	0.76	$-$	1.14
	mFITEXY Bisector	-25.74 ± 0.19	-10.07 ± 1.19	0.76	$-$	1.26
	linmix_err Bisector	-25.68 ± 0.25	-9.15 ± 1.74	0.76	$-$	1.16
Lenticular (11)	BCES $(Y\vert X)$	-22.08 ± 1.66	33.52 ± 98.87	0.33	$-$	6.09
	mFITEXY $(Y\vert X)$	-22.11 ± 0.24	-6.31 ± 2.45	0.33	$0.42^{+0.28}_{-0.17}$	0.71
	linmix_err $(Y\vert X)$			0.33		
	BCES $(X\vert Y)$	-22.08 ± 0.19	-6.83 ± 1.16	0.33	$-$	0.71
	mFITEXY $(X\vert Y)$	-21.94 ± 0.44	-13.16 ± 7.91	0.33	$0.61^{+0.60}_{-0.56}$	1.39
	linmix_err $(X\vert Y)$			0.33		
	BCES Bisector	-22.08 ± 0.30	0.06 ± 0.05	0.33	$-$	1.09
	mFITEXY Bisector	-22.05 ± 0.35	-8.55 ± 2.79	0.33	$-$	0.84
	linmix_err Bisector			0.33	$-$	
Spiral (17)	BCES $(Y\vert X)$	-22.33 ± 0.26	-5.31 ± 5.83	0.18	$-$	1.15
	mFITEXY $(Y\vert X)$	-22.22 ± 0.19	-2.17 ± 0.98	0.18	$0.53^{+0.24}_{-0.13}$	0.72
	linmix_err $(Y\vert X)$	-22.26 ± 0.24	-1.53 ± 1.88	0.18	0.71 ± 0.22	0.78
	BCES $(X\vert Y)$	-22.33 ± 0.26	-5.19 ± 3.77	0.18	$-$	1.13
	mFITEXY $(X\vert Y)$	-22.28 ± 0.44	-9.08 ± 5.31	0.51	$1.12^{+0.54}_{-0.31}$	1.83
	linmix_err $(X\vert Y)$	-22.24 ± 0.71	-11.12 ± 13.59	0.18	1.95 ± 2.47	2.24
	BCES Bisector	-22.33 ± 0.26	-5.25 ± 3.38	0.18	$-$	1.14
	mFITEXY Bisector	-22.23 ± 0.33	-3.60 ± 1.29	0.18	$-$	0.92
	linmix_err Bisector	-22.25 ± 0.53	-2.88 ± 2.66	0.18	$-$	0.84

TABLE 3
Linear regression analysis of the $L_{\mathrm{sph}} - n_{\mathrm{sph}}$ diagram.

Subsample (size)	Regression	α	β	$\langle \log n_{\mathrm{sph}} \rangle$	ϵ	Δ
Early-type (43)	BCES $(Y\|X)$	-24.55 ± 0.22	-11.84 ± 2.29	0.64	$-$	1.50
	mFITEXY $(Y\|X)$	-24.74 ± 0.14	-8.86 ± 0.66	0.51	$0.27^{+0.20}_{-0.27}$	0.87
	linmix_err $(Y\|X)$	-24.70 ± 0.17	-8.28 ± 0.87	0.64	0.58 ± 0.17	0.98
	BCES $(X\|Y)$	-24.55 ± 0.14	-8.25 ± 0.63	0.64	$-$	0.96
	mFITEXY $(X\|Y)$	-24.74 ± 0.14	-9.13 ± 0.68	0.64	$0.23^{+0.25}_{-0.23}$	1.08
	linmix_err $(X\|Y)$	-24.73 ± 0.18	-9.08 ± 0.87	0.64	0.60 ± 0.21	1.07
	BCES Bisector	-24.55 ± 0.17	-9.73 ± 1.05	0.64	$-$	1.14
	mFITEXY Bisector	-24.74 ± 0.14	-8.99 ± 0.48	0.64	$-$	1.06
	linmix_err Bisector	-24.72 ± 0.17	-8.66 ± 0.63	0.64	$-$	1.02
Bulge (30)	BCES $(Y\|X)$	-22.25 ± 0.20	-5.88 ± 3.06	0.26	$-$	1.16
	mFITEXY $(Y\|X)$	-22.19 ± 0.14	-2.99 ± 0.73	0.26	$0.52^{+0.18}_{-0.10}$	0.75
	linmix_err $(Y\|X)$	-22.20 ± 0.17	-2.48 ± 1.21	0.26	0.67 ± 0.15	0.83
	BCES $(X\|Y)$	-22.25 ± 0.20	-5.85 ± 1.83	0.26	$-$	1.15
	mFITEXY $(X\|Y)$	-22.17 ± 0.25	-7.65 ± 2.43	0.26	$0.87^{+0.30}_{-0.18}$	1.46
	linmix_err $(X\|Y)$	-22.16 ± 0.31	-7.80 ± 3.89	0.26	1.18 ± 0.65	1.48
	BCES Bisector	-22.25 ± 0.20	-5.87 ± 2.06	0.26	$-$	1.16
	mFITEXY Bisector	-22.18 ± 0.20	-4.34 ± 0.84	0.26	$-$	0.96
	linmix_err Bisector	-22.19 ± 0.25	-3.83 ± 1.39	0.26	$-$	0.91

NOTE. — For each subsample, we indicate $\langle \log n_{\mathrm{sph}} \rangle$, its average value of spheroid Sérsic index. In the last two columns, we report ϵ, the intrinsic scatter, and Δ, the total rms scatter in the L_{sph} direction. all - mergers - outliers Both the early- and late-type subsamples do not contain the two galaxies classified as S0/Sp and the two galaxies classified as mergers (45+17=66-2-2).

Savorgnan et al.

TABLE 4
LINEAR REGRESSION ANALYSIS OF THE $M_{\mathrm{BH}} - n_{\mathrm{sph}}$ DIAGRAM.

Subsample (size)	Regression	α	β	$\langle \log n_{\mathrm{sph}} \rangle$	ϵ	Δ
	$\log\big(M_{\mathrm{BH}}/[\mathrm{M_\odot}]\big) = \alpha + \beta\big(\log n_{\mathrm{sph}} - \langle \log n_{\mathrm{sph}} \rangle\big)$					
All (62)	BCES $(Y\|X)$	8.14 ± 0.08	3.56 ± 0.38	0.51	$-$	0.60
	mFITEXY $(Y\|X)$	8.18 ± 0.06	3.27 ± 0.21	0.51	$0.22^{+0.10}_{-0.07}$	0.45
	linmix_err $(Y\|X)$	8.17 ± 0.06	3.17 ± 0.24	0.51	0.29 ± 0.07	0.56
	BCES $(X\|Y)$	8.14 ± 0.08	3.56 ± 0.25	0.51	$-$	0.60
	mFITEXY $(X\|Y)$	8.18 ± 0.06	3.51 ± 0.23	0.51	$0.23^{+0.10}_{-0.07}$	0.60
	linmix_err $(X\|Y)$	8.17 ± 0.07	3.49 ± 0.26	0.51	0.30 ± 0.07	0.60
	BCES Bisector	8.14 ± 0.08	3.56 ± 0.29	0.51	$-$	0.60
	mFITEXY Bisector	8.18 ± 0.06	3.39 ± 0.15	0.51	$-$	0.58
	linmix_err Bisector	8.17 ± 0.07	3.33 ± 0.18	0.51	$-$	0.57
Elliptical (30)	BCES $(Y\|X)$	8.80 ± 0.53	-18.16 ± 53.99	0.76	$-$	3.02
	mFITEXY $(Y\|X)$	8.90 ± 0.10	4.47 ± 0.88	0.76	$0.29^{+0.14}_{-0.10}$	0.56
	linmix_err $(Y\|X)$	8.84 ± 0.12	3.56 ± 1.35	0.76	0.44 ± 0.12	0.59
	BCES $(X\|Y)$	8.80 ± 0.18	8.00 ± 2.55	0.76	$-$	1.01
	mFITEXY $(X\|Y)$	8.92 ± 0.15	6.85 ± 1.75	0.76	$0.36^{+0.20}_{-0.15}$	0.89
	linmix_err $(X\|Y)$	8.89 ± 0.20	6.96 ± 2.49	0.76	0.63 ± 0.30	0.89
	BCES Bisector	8.80 ± 0.11	-0.03 ± 0.10	0.76	$-$	0.64
	mFITEXY Bisector	8.91 ± 0.13	5.42 ± 0.85	0.76	$-$	0.73
	linmix_err Bisector	8.85 ± 0.16	4.73 ± 1.30	0.76	$-$	0.67
Lenticular (11)	BCES $(Y\|X)$	7.75 ± 0.58	-11.51 ± 31.78	0.33	$-$	2.11
	mFITEXY $(Y\|X)$	7.65 ± 0.12	3.78 ± 1.20	0.33	$0.00^{+0.00}_{-0.00}$	0.26
	linmix_err $(Y\|X)$			0.33		
	BCES $(X\|Y)$	7.75 ± 0.13	3.54 ± 0.99	0.33	$-$	0.46
	mFITEXY $(X\|Y)$	7.65 ± 0.12	3.78 ± 1.20	0.33	$0.00^{+0.00}_{-0.00}$	0.49
	linmix_err $(X\|Y)$			0.33		
	BCES Bisector	7.75 ± 0.13	-0.09 ± 0.15	0.33	$-$	0.48
	mFITEXY Bisector	7.65 ± 0.12	3.78 ± 0.85	0.33	$-$	0.49
	linmix_err Bisector			0.33	$-$	
Spiral (17)	BCES $(Y\|X)$	7.18 ± 0.28	6.78 ± 6.62	0.18	$-$	1.23
	mFITEXY $(Y\|X)$	7.24 ± 0.13	4.48 ± 0.90	0.18	$0.13^{+0.42}_{-0.13}$	0.52
	linmix_err $(Y\|X)$	7.22 ± 0.16	3.57 ± 1.36	0.18	0.39 ± 0.19	0.70
	BCES $(X\|Y)$	7.18 ± 0.23	5.48 ± 1.93	0.18	$-$	0.99
	mFITEXY $(X\|Y)$	7.24 ± 0.14	4.62 ± 0.96	0.18	$0.13^{+0.43}_{-0.13}$	0.85
	linmix_err $(X\|Y)$	7.21 ± 0.21	4.86 ± 1.64	0.18	0.45 ± 0.31	0.89
	BCES Bisector	7.18 ± 0.25	6.06 ± 3.66	0.18	$-$	1.10
	mFITEXY Bisector	7.24 ± 0.14	4.55 ± 0.66	0.18	$-$	0.84
	linmix_err Bisector	7.22 ± 0.19	4.12 ± 1.07	0.18	$-$	0.77
Early-type (43)	BCES $(Y\|X)$	8.54 ± 0.10	4.07 ± 0.87	0.64	$-$	0.65
	mFITEXY $(Y\|X)$	8.58 ± 0.07	3.32 ± 0.34	0.64	$0.24^{+0.10}_{-0.07}$	0.45
	linmix_err $(Y\|X)$	8.57 ± 0.08	3.12 ± 0.43	0.64	0.32 ± 0.08	0.53
	BCES $(X\|Y)$	8.54 ± 0.09	3.95 ± 0.55	0.64	$-$	0.63
	mFITEXY $(X\|Y)$	8.59 ± 0.08	3.88 ± 0.43	0.64	$0.26^{+0.11}_{-0.08}$	0.62
	linmix_err $(X\|Y)$	8.59 ± 0.09	3.82 ± 0.50	0.64	0.35 ± 0.10	0.61
	BCES Bisector	8.54 ± 0.10	4.01 ± 0.63	0.64	$-$	0.64
	mFITEXY Bisector	8.59 ± 0.07	3.58 ± 0.27	0.64	$-$	0.58
	linmix_err Bisector	8.58 ± 0.08	3.44 ± 0.33	0.64	$-$	0.56

NOTE. — For each subsample, we indicate $\langle \log n_{\mathrm{sph}} \rangle$, its average value of spheroid Sérsic index. In the last two columns, we report ϵ, the intrinsic scatter, and Δ, the total rms scatter in the L_{sph} direction. all - mergers - outliers Both the early- and late-type subsamples do not contain the two galaxies classified as S0/Sp and the two galaxies classified as mergers (45+17=66-2-2).