S3 SEX Database Structure

Please note that all data obtained using the S-Cubed SEX database prior to 29 November 2010 was missing Column 21 (250 micron flux density). The bug has now been fixed and the 250 micron flux densities should now appear in the output.

Organization of the database

The database is broken down into three tables, galaxies, components and clusters. A summary of the columns in each table is shown below.

Galaxies table

Column	Attribute	Type	NULL	Description	Comments	Units
1	galaxy	int8	NO	Component index	Unique identifier for each row	
2	cluster	int4	NO	Cluster index	Identical in source and cluster tables	
3	sftype	int2	NO	Star formation type	None [0] Quiescent [1] Starburst [2]	
4	agntype	int2	NO	AGN type	None [0] Radio-Quiet [1] FRI [2] FRII [3] GPS [4]	
5	right_ascension	float8	NO	X position		[degrees]
6	declination	float8	NO	Y position		[degrees]
7	distance	float8	NO	Distance	Comoving distance	[Mpc]
8	redshift	float8	NO	Redshift	Cosmological	
9	modified_redshift	float8	NO	Modified Redshift	Cosmological	
10	itot_151	float8	NO	$\log_{10} I$ @ 151 MHz	Total flux of all components @ 151 MHz	[Jy]
11	itot_610	float8	NO	$\log_{10} I$ @ 610 MHz	Total flux of all components @ 610 MHz	[Jy]
12	itot_1400	float8	NO	$\log_{10} I$ @ 1400 MHz	Total flux of all components @ 1400 MHz	[Jy]
13	itot_4860	float8	NO	$\log_{10} I$ @ 4860 MHz	Total flux of all components @ 4860 MHz	[Jy]
14	itot_18000	float8	NO	$\log_{10} I$ @ 18000 MHz	Total flux of all components @ 18000 MHz	[Jy]
15	m_hi	float8	YES	$\log_{10} M_{HI}$	Applies to star-forming galaxies	[M_{SUN}]
16	cos_va	float8	NO	Viewing angle	Given as cosine. Applies to FRI and FRII	
17	itot_24mic	float8	NO	$\log_{10}$(S) @ 24 Microns		[Jy]
18	itot_70mic	float8	NO	$\log_{10}$(S) @ 70 Microns		[Jy]
19	itot_100mic	float8	NO	$\log_{10}$(S) @ 100 Microns		[Jy]
20	itot_160mic	float8	NO	$\log_{10}$(S) @ 160 Microns		[Jy]
21	itot_250mic	float8	NO	$\log_{10}$(S) @ 250 Microns		[Jy]
22	itot_350mic	float8	NO	$\log_{10}$(S) @ 350 Microns		[Jy]
23	itot_450mic	float8	NO	$\log_{10}$(S) @ 450 Microns		[Jy]
24	itot_500mic	float8	NO	$\log_{10}$(S) @ 500 Microns		[Jy]
25	itot_850mic	float8	NO	$\log_{10}$(S) @ 850 Microns		[Jy]
26	itot_1200mic	float8	NO	$\log_{10}$(S) @ 1200 Microns		[Jy]
27	K_mag	float8	NO	K-band (Vega) magnitude		[mag]
28	RQQ_IR_class	int	NO	RQQ classification flag	1=unobscured; 2=Compton-thin obscured; 3=Compton-thick obscured; -1=Source excluded	
29	SD_flag	int	NO	Space density filter flag	-1=filtered out; 0=retained	
30	dlog_L	float8	NO	1.4 GHz Luminosity boost	Star-forming galaxies only	[dex]

Components table

Column	Attribute	Type	NULL	Description	Comments	Units
1	component	int20	NO	Component index		
2	galaxy	int20	NO	Galaxy index	Identical for all components of the same galaxy	
3	structure	int2	NO	Component type	Core [1] Lobe [2] Hotspot [3] Disk [4]	
4	right_ascension	float8	NO	X position		[degrees]
5	declination	float8	NO	Y position		[degrees]
6	position_angle	float8	NO	Position angle	Counted east from north	[radians]
7	major_axis	float8	NO	Major axis		[arcsecs]
8	minor_axis	float8	NO	Minor axis		[arcsecs]
9	i_151	float8	NO	$\log_{10} I$ @ 151 MHz		[Jy]
10	q_151	float8	YES	$\log_{10} Q$ @ 151 MHz	Currently NULL	[Jy]
11	u_151	float8	YES	$\log_{10} U$ @ 151 MHz	Currently NULL	[Jy]
12	v_151	float8	YES	$\log_{10} V$ @ 151 MHz	Currently NULL	[Jy]
13	i_610	float8	NO	$\log_{10} I$ @ 610 MHz		[Jy]
14	q_610	float8	YES	$\log_{10} Q$ @ 610 MHz	Currently NULL	[Jy]
15	u_610	float8	YES	$\log_{10} U$ @ 610 MHz	Currently NULL	[Jy]
16	v_610	float8	YES	$\log_{10} V$ @ 610 MHz	Currently NULL	[Jy]
17	i_1400	float8	NO	$\log_{10} I$ @ 1400 MHz		[Jy]
18	q_1400	float8	YES	$\log_{10} Q$ @ 1400 MHz	Currently NULL	[Jy]
19	u_1400	float8	YES	$\log_{10} U$ @ 1400 MHz	Currently NULL	[Jy]
20	v_1400	float8	YES	$\log_{10} V$ @ 1400 MHz	Currently NULL	[Jy]
21	i_4860	float8	NO	$\log_{10} I$ @ 4860 MHz		[Jy]
22	q_4860	float8	YES	$\log_{10} Q$ @ 4860 MHz	Currently NULL	[Jy]
23	u_4860	float8	YES	$\log_{10} U$ @ 4860 MHz	Currently NULL	[Jy]
24	v_4860	float8	YES	$\log_{10} V$ @ 4860 MHz	Currently NULL	[Jy]
25	i_18000	float8	NO	$\log_{10} I$ @ 18000 MHz		[Jy]
26	q_18000	float8	YES	$\log_{10} Q$ @ 18000 MHz	Currently NULL	[Jy]
27	u_18000	float8	YES	$\log_{10} U$ @ 18000 MHz	Currently NULL	[Jy]
28	v_18000	float8	YES	$\log_{10} V$ @ 18000 MHz	Currently NULL	[Jy]

Clusters table

Column	Attribute	Type	NULL	Description	Comments	Units
1	cluster	int10	NO	Cluster index	Identical in source and cluster tables	
2	right_ascension	float8	NO	X position		[degrees]
3	declination	float8	NO	Y position		[degrees]
4	redshift	float8	NO	Redshift	Cosmological	
5	redshift	float8	NO	Modified Redshift	Cosmological	
6	virial_mass	float8	NO	Mass		
7	virial_radius	float8	NO	Virial Radius		
8	velocity_dispersion	float8	NO	Velocity Dispersion		