

Database Schema

This page will list the database tables provided in the LSST simulations database and the columns they contain.

As discussed on [this page](#), sub-classes of DBObject give the user access to database tables. The following is a list of classes (all found in sims_catUtils/python/lsst/sims/catUtils/baseCatalogModels/) and the tables they link to

- OpSim3_61DBObject links to the table 'output_opsim3_61' (found in Opsim3_61DBObject.py)
- SolarSystemObj calls the table valued SQL function fSSMAllBase, which returns all types of solar system objects (found in SsmModels.py)
- ExampleGalaxyObj links to the table 'galaxies' (found in GalaxyModels.py)

Note: because galaxies are so dense on the sky, most galaxy classes only return results on a small patch of sky. GalaxyTileObj and the classes that inherit from it (GalaxyBulgeObj, GalaxyDiskObj, GalaxyAgnObj) repeat this patch over the whole sky to simulate a full-sky distribution of galaxies.

- GalaxyObj links to the table 'galaxy' (found in GalaxyModels.py)
- GalaxyTileObj links to the table 'galaxy' (found in GalaxyModels.py)
- GalaxyBulgeObj links to the table 'galaxy_bulge' (found in GalaxyModels.py) - **do not trust this class; the best way to get galaxy information is with GalaxyTileObj**
- GalaxyDiskObj links to the table 'galaxy' (found in GalaxyModels.py) - **do not trust this class; the best way to get galaxy information is with GalaxyTileObj**
- GalaxyAgnObj links to the table 'galaxy_agn' (found in GalaxyModels.py) - **do not trust this class; the best way to get galaxy information is with GalaxyTileObj**
- ImageAgnObj links to the table 'image' (found in GalaxyModels.py)
- LensGalaxyObj links to the table 'lens' (found in GalaxyModels.py)

Note: see the first section of [this page](#) for a discussion of which stellar tables are based on physically meaningful models.

- StarObj links to the table valued function StarAllForceseek (found in StarModels.py)
- MsStarObj links to the table valued function StarMSRGBForceseek (found in StarModels.py)
- WdStarObj links to the table 'StarWhiteDwarf' (found in StarModels.py)
- RRLyStarObj links to the table 'StarRRLy' (found in StarModels.py)
- BhbStarObj links to the table 'StarBHB' (found in StarModels.py)
- EbStarObj links to the table 'StarEclipsingBinary' (found in StarModels.py)
- CepheidStarObj links to the table 'StarCepheid' (found in StarModels.py)
- EasterEggStarObj links to the table 'AstromEasterEggs' (found in StarModels.py)
- DwarfGalStarObj links to the table 'StarDwarfGalaxy' (found in StarModels.py)

Stars

- **Object Type:** TABLE
- **Last Modified:** Jan 20 2016 10:40PM
- **Row Count:** 917277
- **Description:** Blue horizontal branch stars

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|--------------------|-------------|----------|----|---|
| htmID | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | True | PK | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| version_id | varchar | 10 | True | | | Identifier for catalog run: Star_Model.ID |
| mura | float | 8 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | float | 8 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | float | 8 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| distance | float | 8 | True | | | Distance from sun (kpc) |
| sedfile_name | varchar | -1 | True | | | Filename of SED for star |

| | | | | | |
|--------------|-------|----|------|--|--|
| sedid | int | 4 | True | | Identifier of SED: Spectrum_meta.ID |
| flux_sc ale | float | 8 | True | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | float | 8 | True | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | float | 8 | True | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | float | 8 | True | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | float | 8 | True | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | float | 8 | True | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| absmr | float | 8 | True | | Absolute magnitude in r |
| newSDSSu | float | 8 | True | | Observed magnitude from SDSS in u, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSg | float | 8 | True | | Observed magnitude from SDSS in g, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSr | float | 8 | True | | Observed magnitude from SDSS in r, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSI | float | 8 | True | | Observed magnitude from SDSS in i, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSz | float | 8 | True | | Observed magnitude from SDSS in z, extincted by O'Donnell 94 dust model, std. atm. |
| ebv | float | 8 | True | | B-V extinction |
| especid | int | 4 | True | | Id of reddening spectrum in spectrum table |
| pop | int | 4 | True | | Population (0=Thin Disk, 1=Thick Disk, |
| type | int | 4 | True | | Identifier of model type (0=Kurucz, 1=M-Dwarf) |
| t | float | 8 | True | | Surface temperature of the model (K) |
| feh | float | 8 | True | | Metallicity of the model |
| logg | float | 8 | True | | log(g) for the model |
| vr | float | 8 | True | | Velocity in R coordinate (cylindrical) |
| vphi | float | 8 | True | | Velocity in phi coordinate (cylindrical) |
| vz | float | 8 | True | | Velocity in z coordinate (cylindrical) |
| ismulti ple | int | 4 | True | | |
| isvar | int | 4 | True | | ID of variable source. zero if not variable. isvar = StarVar.ID |
| timescale | float | 8 | True | | Time scale of variability (days). If the lightcurve is non-periodic, this is understood to be the lightcurve lifetime. Zero if not variable. |
| varflux peak | float | 8 | True | | Amplitude of deviation in magnitude. Zero |
| t0 | float | 8 | True | | Time in MJD of beginning of variability. |
| x | float | 8 | True | | Cartesian coordinate in heliocentric galactic coordinates (pc) +X toward GC |
| y | float | 8 | True | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| z | float | 8 | True | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| cx | float | 8 | True | | X position on unit sphere |
| cy | float | 8 | True | | Y position on unit sphere |
| cz | float | 8 | True | | Z position on unit sphere |
| run | int | 4 | True | | |
| runobjid | int | 4 | True | | |
| geopoint | None | -1 | True | | Binary representation of position (Microsoft Spatial) |
| varParamStr | text | 16 | True | | Variability parameters in JSON format |

| | | | | | | |
|--------------|--------|---|------|--|--|--|
| varsimo_bjid | bigint | 8 | True | | | |
|--------------|--------|---|------|--|--|--|

Indexes

| Index Name | Columns |
|------------------------------|-----------------------------|
| gmag_sedname | gmag, sedfilename |
| htm_covering | htmID, ra, decl, cx, cy, cz |
| idx_RaDec | ra, decl |
| PK_starsBHB_94D998685C37ACAD | htmID, simobjid |

- **Object Type:** TABLE
- **Last Modified:** Jan 20 2016 10:34PM
- **Row Count:** 263
- **Description:** Cepheid variable stars

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------------|-----------|--------------------|-------------|----------|----|--|
| htmID | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| version_id | varchar | 10 | True | | | Identifier for catalog run: Star_Model.ID |
| mura | real | 4 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | real | 4 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | real | 4 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| distance | float | 8 | True | | | Distance from sun (kpc) |
| sedfilename | varchar | -1 | True | | | Filename of SED for star |
| sedid | int | 4 | True | | | Identifier of SED: Spectrum_meta.ID |
| flux_scale | float | 8 | True | | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | real | 4 | True | | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | real | 4 | True | | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | real | 4 | True | | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | real | 4 | True | | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | real | 4 | True | | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| absmr | real | 4 | True | | | Absolute magnitude in r |
| newSDSSu | float | 8 | True | | | Observed magnitude from SDSS in u, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSg | float | 8 | True | | | Observed magnitude from SDSS in g, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSr | float | 8 | True | | | Observed magnitude from SDSS in r, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSI | float | 8 | True | | | Observed magnitude from SDSS in i, extincted by O'Donnell 94 dust model, std. atm. |

| | | | | | | |
|--------------|---------|----|------|------|----|--|
| newSDSSz | float | 8 | True | | | Observed magnitude from SDSS in z, extinguished by O'Donnell 94 dust model, std. atm. |
| ebv | float | 8 | True | | | B-V extinction |
| especid | tinyint | 1 | True | | | Id of reddening spectrum in spectrum table |
| pop | tinyint | 1 | True | | | Population (0=Thin Disk, 1=Thick Disk, |
| type | tinyint | 1 | True | | | Identifier of model type (0=Kurucz, 1=M-Dwarf) |
| t | float | 8 | True | | | Surface temperature of the model (K) |
| feh | real | 4 | True | | | Metallicity of the model |
| logg | real | 4 | True | | | log(g) for the model |
| vr | real | 4 | True | | | Velocity in R coordinate (cylindrical) |
| vphi | real | 4 | True | | | Velocity in phi coordinate (cylindrical) |
| vz | real | 4 | True | | | Velocity in z coordinate (cylindrical) |
| ismultiple | tinyint | 1 | True | | | |
| isvar | tinyint | 1 | True | | | ID of variable source. zero if not variable. isvar = StarVar.ID |
| timescale | float | 8 | True | | | Time scale of variability (days). If the lightcurve is non-periodic, this is understood to be the lightcurve lifetime. Zero if not variable. |
| varflux_peak | float | 8 | True | | | Amplitude of deviation in magnitude. Zero |
| t0 | float | 8 | True | | | Time in MJD of beginning of variability. |
| x | real | 4 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) +X toward GC |
| y | real | 4 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| z | real | 4 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| cx | float | 8 | True | | | X position on unit sphere |
| cy | float | 8 | True | | | Y position on unit sphere |
| cz | float | 8 | True | | | Z position on unit sphere |
| run | int | 4 | True | | | |
| runobjid | int | 4 | True | | | |
| geopoint | None | -1 | True | | | Binary representation of position (Microsoft Spatial) |
| varParamStr | varchar | -1 | True | | | Variability parameters in JSON format |
| varsimobjid | bigint | 8 | True | | | |
| randomVar | float | 8 | True | | | |
| simobjid | int | 4 | | True | PK | unique identifier |

Indexes

| Index Name | Columns |
|------------------------------|-----------------|
| htm_covering | htmID |
| idx_RaDec | ra, decl |
| PK_cephoids_94D8A4A00C46B282 | htmID, simobjid |

- **Object Type:** TABLE
- **Last Modified:** Jan 20 2016 10:34PM
- **Row Count:** 1842
- **Description:** Eclipsing binary stars

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------|-----------|--------------------|-------------|----------|----|---|
| htmID | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| ra | float | 8 | True | | | Right Ascension (deg) |

| | | | | | |
|--------------|---------|----|------|--|--|
| decl | float | 8 | True | | Declination (deg) |
| gal_l | float | 8 | True | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | Galactic longitude (deg) |
| version_id | varchar | 10 | True | | Identifier for catalog run: Star_Model.ID |
| mura | real | 4 | True | | Proper motion in RA (milliarcsec/yr) |
| mudecl | real | 4 | True | | Proper motion in DEC (milliarcsec/yr) |
| vrad | real | 4 | True | | Radial velocity (km/s) |
| parallax | float | 8 | True | | Parallax (milliarcsec) |
| distance | float | 8 | True | | Distance from sun (kpc) |
| sedfile_name | varchar | -1 | True | | Filename of SED for star |
| sedid | int | 4 | True | | Identifier of SED: Spectrum_meta.ID |
| flux_sc ale | float | 8 | True | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | real | 4 | True | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | real | 4 | True | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | real | 4 | True | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | real | 4 | True | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | real | 4 | True | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| absmr | real | 4 | True | | Absolute magnitude in r |
| newSDSSu | float | 8 | True | | Observed magnitude from SDSS in u, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSg | float | 8 | True | | Observed magnitude from SDSS in g, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSr | float | 8 | True | | Observed magnitude from SDSS in r, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSI | float | 8 | True | | Observed magnitude from SDSS in i, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSz | float | 8 | True | | Observed magnitude from SDSS in z, extincted by O'Donnell 94 dust model, std. atm. |
| ebv | float | 8 | True | | B-V extinction |
| especid | tinyint | 1 | True | | Id of reddening spectrum in spectrum table |
| pop | tinyint | 1 | True | | Population (0=Thin Disk, 1=Thick Disk, |
| type | tinyint | 1 | True | | Identifier of model type (0=Kurucz, 1=M-Dwarf) |
| t | float | 8 | True | | Surface temperature of the model (K) |
| feh | real | 4 | True | | Metallicity of the model |
| logg | real | 4 | True | | log(g) for the model |
| vr | real | 4 | True | | Velocity in R coordinate (cylindrical) |
| vphi | real | 4 | True | | Velocity in phi coordinate (cylindrical) |
| vz | real | 4 | True | | Velocity in z coordinate (cylindrical) |
| ismultiple | tinyint | 1 | True | | |
| isvar | tinyint | 1 | True | | ID of variable source. zero if not variable. isvar = StarVar.ID |
| timescale | float | 8 | True | | Time scale of variability (days). If the lightcurve is non-periodic, this is understood to be the lightcurve lifetime. Zero if not variable. |
| varflux_peak | float | 8 | True | | Amplitude of deviation in magnitude. Zero |
| t0 | float | 8 | True | | Time in MJD of beginning of variability. |

| | | | | | | |
|-------------|---------|----|------|------|----|---|
| x | real | 4 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) +X toward GC |
| y | real | 4 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| z | real | 4 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| cx | float | 8 | True | | | X position on unit sphere |
| cy | float | 8 | True | | | Y position on unit sphere |
| cz | float | 8 | True | | | Z position on unit sphere |
| run | int | 4 | True | | | |
| runobjid | int | 4 | True | | | |
| geopoint | None | -1 | True | | | Binary representation of position (Microsoft Spatial) |
| varParamStr | varchar | -1 | True | | | Variability parameters in JSON format |
| varsimobjid | bigint | 8 | True | | | |
| simobjid | int | 4 | | True | PK | unique identifier |

Indexes

| Index Name | Columns |
|-----------------------------|-----------------|
| htm_covering | htmID |
| idx_RaDec | ra, decl |
| PK_ebstars_94D8A4A00F231F2D | htmID, simobjid |

- **Object Type:** TABLE
- **Last Modified:** Jan 20 2016 10:40PM
- **Row Count:** 945116
- **Description:** RR Lyrae stars

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|--------------------|-------------|----------|----|--|
| htmID | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | True | PK | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| version_id | varchar | 10 | True | | | Identifier for catalog run: Star_Model.ID |
| mura | float | 8 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | float | 8 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | float | 8 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| distance | float | 8 | True | | | Distance from sun (kpc) |
| sedfile_name | varchar | -1 | True | | | Filename of SED for star |
| sedid | int | 4 | True | | | Identifier of SED: Spectrum_meta.ID |
| flux_sc ale | float | 8 | True | | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | | Apparent magnitude in i (extincted, std. atm.) |

| | | | | | |
|--------------|--------|----|------|--|--|
| zmag | float | 8 | True | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | float | 8 | True | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | float | 8 | True | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | float | 8 | True | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | float | 8 | True | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | float | 8 | True | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| absmr | float | 8 | True | | Absolute magnitude in r |
| newSDSSu | float | 8 | True | | Observed magnitude from SDSS in u, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSg | float | 8 | True | | Observed magnitude from SDSS in g, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSr | float | 8 | True | | Observed magnitude from SDSS in r, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSI | float | 8 | True | | Observed magnitude from SDSS in i, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSz | float | 8 | True | | Observed magnitude from SDSS in z, extincted by O'Donnell 94 dust model, std. atm. |
| ebv | float | 8 | True | | B-V extinction |
| especid | int | 4 | True | | Id of reddening spectrum in spectrum table |
| pop | int | 4 | True | | Population (0=Thin Disk, 1=Thick Disk, |
| type | int | 4 | True | | Identifier of model type (0=Kurucz, 1=M-Dwarf) |
| t | float | 8 | True | | Surface temperature of the model (K) |
| feh | float | 8 | True | | Metallicity of the model |
| logg | float | 8 | True | | log(g) for the model |
| vr | float | 8 | True | | Velocity in R coordinate (cylindrical) |
| vphi | float | 8 | True | | Velocity in phi coordinate (cylindrical) |
| vz | float | 8 | True | | Velocity in z coordinate (cylindrical) |
| ismultiple | int | 4 | True | | |
| isvar | int | 4 | True | | ID of variable source. zero if not variable. isvar = StarVar.ID |
| timescale | float | 8 | True | | Time scale of variability (days). If the lightcurve is non-periodic, this is understood to be the lightcurve lifetime. Zero if not variable. |
| varflux_peak | float | 8 | True | | Amplitude of deviation in magnitude. Zero |
| t0 | float | 8 | True | | Time in MJD of beginning of variability. |
| x | float | 8 | True | | Cartesian coordinate in heliocentric galactic coordinates (pc) +X toward GC |
| y | float | 8 | True | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| z | float | 8 | True | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| cx | float | 8 | True | | X position on unit sphere |
| cy | float | 8 | True | | Y position on unit sphere |
| cz | float | 8 | True | | Z position on unit sphere |
| run | int | 4 | True | | |
| runobjid | int | 4 | True | | |
| geopoint | None | -1 | True | | Binary representation of position (Microsoft Spatial) |
| varParamStr | ntext | 16 | True | | Variability parameters in JSON format |
| varsimobjid | bigint | 8 | True | | |

Indexes

| Index Name | Columns |
|--------------|-----------------------------|
| gmag_sedname | gmag, sedfilename |
| htm_covering | htmID, ra, decl, cx, cy, cz |

| | |
|------------------------------|-----------------|
| idx_RaDec | ra, decl |
| PK_starsRRL_94D998685F141958 | htmID, simobjid |

- **Object Type:** TABLE
- **Last Modified:** Jan 20 2016 10:40PM
- **Row Count:** 124130489
- **Description:** White dwarfs

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|--------------------|-------------|----------|----|--|
| htmID | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | True | PK | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| version_id | varchar | 10 | True | | | Identifier for catalog run: Star_Model.ID |
| mura | float | 8 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | float | 8 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | float | 8 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| distance | float | 8 | True | | | Distance from sun (kpc) |
| sedfile_name | varchar | -1 | True | | | Filename of SED for star |
| sedid | int | 4 | True | | | Identifier of SED: Spectrum_meta.ID |
| flux_sc ale | float | 8 | True | | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | float | 8 | True | | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | float | 8 | True | | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | float | 8 | True | | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | float | 8 | True | | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | float | 8 | True | | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| absmr | float | 8 | True | | | Absolute magnitude in r |
| newSDSSu | float | 8 | True | | | Observed magnitude from SDSS in u, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSg | float | 8 | True | | | Observed magnitude from SDSS in g, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSr | float | 8 | True | | | Observed magnitude from SDSS in r, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSI | float | 8 | True | | | Observed magnitude from SDSS in i, extincted by O'Donnell 94 dust model, std. atm. |
| newSDSSz | float | 8 | True | | | Observed magnitude from SDSS in z, extincted by O'Donnell 94 dust model, std. atm. |
| ebv | float | 8 | True | | | B-V extinction |
| especid | int | 4 | True | | | Id of reddening spectrum in spectrum table |
| pop | int | 4 | True | | | Population (0=Thin Disk, 1=Thick Disk, |
| type | int | 4 | True | | | Identifier of model type (0=Kurucz, 1=M-Dwarf) |

| | | | | | | |
|--------------|--------|----|------|--|--|--|
| t | float | 8 | True | | | Surface temperature of the model (K) |
| feh | float | 8 | True | | | Metallicity of the model |
| logg | float | 8 | True | | | log(g) for the model |
| vr | float | 8 | True | | | Velocity in R coordinate (cylindrical) |
| vphi | float | 8 | True | | | Velocity in phi coordinate (cylindrical) |
| vz | float | 8 | True | | | Velocity in z coordinate (cylindrical) |
| ismultiple | int | 4 | True | | | |
| isvar | int | 4 | True | | | ID of variable source. zero if not variable. isvar = StarVar.ID |
| timescale | float | 8 | True | | | Time scale of variability (days). If the lightcurve is non-periodic, this is understood to be the lightcurve lifetime. Zero if not variable. |
| varflux_peak | float | 8 | True | | | Amplitude of deviation in magnitude. Zero |
| t0 | float | 8 | True | | | Time in MJD of beginning of variability. |
| x | float | 8 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) +X toward GC |
| y | float | 8 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| z | float | 8 | True | | | Cartesian coordinate in heliocentric galactic coordinates (pc) |
| cx | float | 8 | True | | | X position on unit sphere |
| cy | float | 8 | True | | | Y position on unit sphere |
| cz | float | 8 | True | | | Z position on unit sphere |
| run | int | 4 | True | | | |
| runobjid | int | 4 | True | | | |
| geopoint | None | -1 | True | | | Binary representation of position (Microsoft Spatial) |
| varParamStr | text | 16 | True | | | Variability parameters in JSON format |
| varsimobjid | bigint | 8 | True | | | |

Indexes

| Index Name | Columns |
|-----------------------------|-----------------------------------|
| gmag_sedname | gmag, sedfilename |
| htm_covering | htmID, ra, decl, cx, cy, cz, rmag |
| idx_RaDec | ra, decl |
| PK_starsWD_94D9986861F08603 | htmID, simobjid |

- **Object Type:** VIEW
- **Last Modified:** Jan 20 2016 10:41PM
- **Row Count:**
- **Description:** Union of MS/RGB, white dwarf, RR Lyrae, and BHB stars

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|----------|-----------|--------------------|-------------|----------|----|---|
| htmid | bigint | 8 | | | | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | | | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| mura | float | 8 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | float | 8 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | float | 8 | True | | | Radial velocity (km/s) |

| | | | | | |
|-------------|---------|----|------|--|---|
| parallax | float | 8 | True | | Parallax (milliarcsec) |
| sedfilename | varchar | -1 | True | | Filename of SED for star |
| flux_scale | float | 8 | True | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | float | 8 | True | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | float | 8 | True | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | float | 8 | True | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | float | 8 | True | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | float | 8 | True | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| ebv | float | 8 | True | | B-V extinction |
| pop | int | 4 | True | | Population (0=Thin Disk, 1=Thick Disk, |
| cx | float | 8 | True | | X position on unit sphere |
| cy | float | 8 | True | | Y position on unit sphere |
| cz | float | 8 | True | | Z position on unit sphere |
| varParamStr | ntext | 16 | True | | Variability parameters in JSON format |

- **Object Type:** VIEW
- **Last Modified:** Jan 20 2016 10:41PM
- **Row Count:**
- **Description:** Same as starsALL except includes forceseek query hint to ensure proper query plan for spatial search criteria.

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------------|-----------|--------------------|-------------|----------|----|---|
| htmid | bigint | 8 | | | | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | | | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| mura | float | 8 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | float | 8 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | float | 8 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| sedfilename | varchar | -1 | True | | | Filename of SED for star |
| flux_scale | float | 8 | True | | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | float | 8 | True | | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | float | 8 | True | | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | float | 8 | True | | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |

| | | | | | | |
|-------------|-------|----|------|--|--|---|
| sdssi | float | 8 | True | | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | float | 8 | True | | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| ebv | float | 8 | True | | | B-V extinction |
| pop | int | 4 | True | | | Population (0=Thin Disk, 1=Thick Disk, |
| cx | float | 8 | True | | | X position on unit sphere |
| cy | float | 8 | True | | | Y position on unit sphere |
| cz | float | 8 | True | | | Z position on unit sphere |
| varParamStr | ntext | 16 | True | | | Variability parameters in JSON format |

- **Object Type:** VIEW
- **Last Modified:** Jan 20 2016 10:43PM
- **Row Count:**
- **Description:** All MS/RGB stars (union of base tables partitioned by htmlid)

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------------|-----------|--------------------|-------------|----------|----|---|
| htmlid | bigint | 8 | | | | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | | | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| mura | real | 4 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | real | 4 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | real | 4 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| sedfilename | varchar | -1 | True | | | Filename of SED for star |
| flux_scale | float | 8 | True | | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | real | 4 | True | | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | real | 4 | True | | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | real | 4 | True | | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | real | 4 | True | | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | real | 4 | True | | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| ebv | float | 8 | True | | | B-V extinction |
| pop | tinyint | 1 | True | | | Population (0=Thin Disk, 1=Thick Disk, |
| cx | float | 8 | True | | | X position on unit sphere |
| cy | float | 8 | True | | | Y position on unit sphere |
| cz | float | 8 | True | | | Z position on unit sphere |
| varParamStr | varchar | -1 | True | | | Variability parameters in JSON format |

- **Object Type:** VIEW
- **Last Modified:** Jan 20 2016 10:44PM
- **Row Count:**
- **Description:** StarMSRGB for spatial queries using htmlid

Columns

| Name | Data Type | Max Length (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------------|-----------|--------------------|-------------|----------|----|---|
| htmid | bigint | 8 | | | | 20-deep hierarchical triangular mesh ID |
| simobjid | bigint | 8 | | | | unique identifier |
| ra | float | 8 | True | | | Right Ascension (deg) |
| decl | float | 8 | True | | | Declination (deg) |
| gal_l | float | 8 | True | | | Galactic latitude (deg) |
| gal_b | float | 8 | True | | | Galactic longitude (deg) |
| mura | real | 4 | True | | | Proper motion in RA (milliarcsec/yr) |
| mudecl | real | 4 | True | | | Proper motion in DEC (milliarcsec/yr) |
| vrad | real | 4 | True | | | Radial velocity (km/s) |
| parallax | float | 8 | True | | | Parallax (milliarcsec) |
| sedfilename | varchar | -1 | True | | | Filename of SED for star |
| flux_scale | float | 8 | True | | | Scaling constant to be applied to the SED |
| umag | float | 8 | True | | | Apparent magnitude in u (extincted, std. atm.) |
| gmag | float | 8 | True | | | Apparent magnitude in g (extincted, std. atm.) |
| rmag | float | 8 | True | | | Apparent magnitude in r (extincted, std. atm.) |
| imag | float | 8 | True | | | Apparent magnitude in i (extincted, std. atm.) |
| zmag | float | 8 | True | | | Apparent magnitude in z (extincted, std. atm.) |
| ymag | float | 8 | True | | | Apparent magnitude in y (extincted, std. atm.) |
| sdssu | real | 4 | True | | | Observed magnitude from SDSS in u (un-extincted, std. atm.) |
| sdssg | real | 4 | True | | | Observed magnitude from SDSS in g (un-extincted, std. atm.) |
| sdssr | real | 4 | True | | | Observed magnitude from SDSS in r (un-extincted, std. atm.) |
| sdssi | real | 4 | True | | | Observed magnitude from SDSS in i (un-extincted, std. atm.) |
| sdssz | real | 4 | True | | | Observed magnitude from SDSS in z (un-extincted, std. atm.) |
| ebv | float | 8 | True | | | B-V extinction |
| pop | tinyint | 1 | True | | | Population (0=Thin Disk, 1=Thick Disk, |
| cx | float | 8 | True | | | X position on unit sphere |
| cy | float | 8 | True | | | Y position on unit sphere |
| cz | float | 8 | True | | | Z position on unit sphere |
| varParamStr | varchar | -1 | True | | | Variability parameters in JSON format |

Galaxies

- **Object Type:** STORED_PROCEDURE
- **Last Modified:** Apr 15 2015 1:48PM
- **Row Count:**
- **Description:** Return galaxies in an arbitrarily shaped search region.

Param: @ApertureStr = String describing search region (www.skyserver.org/htm/HtmPrimer/regiongrammar.html)

Param: @ColumnNames = String containing list of columns (What goes between SELECT and FROM in a simple query.)

Param: @WhereClause = String containing constraints. Use columns names from galaxy base table. Do not include the word "WHERE"

Param: @ComponentSubset = One of ['ALL', 'BULGE', 'DISK' or 'AGN'] return only rows which containing that component. Default='ALL'

- **Object Type:** STORED_PROCEDURE
- **Last Modified:** Jul 25 2014 3:44PM
- **Row Count:**
- **Description:** Return galaxies in an arbitrarily shaped search region.

Param: @ApertureStr = String describing search region (www.skyserver.org/htm/HtmPrimer/regiongrammar.html)

Param: @ColumnNames = String containing list of columns (What goes between SELECT and FROM in a simple query.)

Param: @WhereClause = String containing constraints. Use columns names from galaxy base table. Do not include the word "WHERE"

- **Object Type:** STORED_PROCEDURE
- **Last Modified:** Mar 14 2013 5:36PM
- **Row Count:**
- **Description:** Return galaxies in a search cone.

Param: @RaSearch = R.A Coord of search cone center (deg)

Param: @DecSearch = Dec. Coord of search cone center (deg)

Param: @apertureRadius = Radius of search cone (arcminutes)

Param: @ColumnNames = String containing a list of columns wanted (What goes between SELECT and FROM in a simple query.)

Param: @WhereClause = String containing constraints. Must begin with WHERE, and column names are given names.

- **Object Type:** STORED_PROCEDURE
- **Last Modified:** Oct 10 2013 11:52PM
- **Row Count:**
- **Description:** Return galaxies in a search cone. Same as GalaxySearchSpecColsConstraint, but with alternative interface

Param: @RaSearch = R.A. Coord of search cone center (deg)

Param: @DecSearch = Dec. Coord of search cone center (deg)

Param: @apertureRadius = Radius of search cone (arcminutes)

Param: @ColumnNames = String containing a list of columns wanted (What goes between SELECT and FROM in a simple query.)

Param: @WhereClause = String containing constraints. Use columns names from galaxy base table. Do not include the word "WHERE"

- **Object Type:** TABLE
- **Last Modified:** Oct 15 2013 12:17PM
- **Row Count:** 17428284
- **Description:** Galaxy base table (8 sq. deg. centered on R.A=0, Dec=0). For tiled positions, use stored procedures GalaxySearchSpecColsConstraint, GalaxySearchSpecColsConstraint2013, GalaxySearch2014

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------------|-----------|-----------------|-------------|----------|----|--|
| htmid | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| galid | varchar | 30 | True | | | |
| ra | float | 8 | True | | | Right Ascension (deg) |
| dec | float | 8 | True | | | Declination (deg) |
| redshift | float | 8 | True | | | Redshift |
| rad_vel | float | 8 | True | | | Peculiar velocity in the radial direction (km/ |
| u_ab | float | 8 | True | | | Apparent AB magnitude in u (extincted) |
| g_ab | float | 8 | True | | | Apparent AB magnitude in g (extincted) |
| r_ab | float | 8 | True | | | Apparent AB magnitude in r (extincted) |
| i_ab | float | 8 | True | | | Apparent AB magnitude in i (extincted) |
| z_ab | float | 8 | True | | | Apparent AB magnitude in z (extincted) |
| y_ab | float | 8 | True | | | Apparent AB magnitude in y (extincted) |
| sedid_bulge | int | 4 | True | | | ID of bulge SED metadata: Spectrum_meta.ID |
| sedid_disk | int | 4 | True | | | ID of disk SED metadata: Spectrum_meta.ID |
| sedid_agn | int | 4 | True | | | ID of agn SED metadata: Spectrum_meta.ID |
| av_b | float | 8 | True | | | Reddening value for bulge of galaxy (0.0) |
| rv_b | float | 8 | True | | | R_v for extinction model for bulge (3.1) |
| ext_model_b | varchar | 10 | True | | | Extinction model identifier ('ccm') |
| av_d | float | 8 | True | | | Reddening value for disk of galaxy |
| rv_d | float | 8 | True | | | R_v for extinction model for disk (3.1) |
| ext_model_d | varchar | 10 | True | | | Extinction model identifier for disk ('ccm') |
| glon | float | 8 | True | | | Galactic longitude (deg) |

| | | | | | |
|----------------|---------|----|------|--|---|
| glat | float | 8 | True | | Galactic latitude (deg) |
| pa_bulge | float | 8 | True | | Position angle of bulge (deg) |
| pa_disk | float | 8 | True | | Position angle of disk (deg) |
| inc_bulge_deg | float | 8 | True | | Inclination of bulge to line of sight (deg) |
| inc_disk_deg | float | 8 | True | | Inclination of disk to line of sight (deg) |
| a_b | float | 8 | True | | Semi-major axis of bulge (arcsec) |
| b_b | float | 8 | True | | Semi-minor axis of bulge (arcsec) |
| bulge_n | float | 8 | True | | Sersic index of bulge (4) |
| bra | float | 8 | True | | RA of bulge center (deg) |
| bdec | float | 8 | True | | Dec of bulge center (deg) |
| a_d | float | 8 | True | | Semi-major axis of disk (arcsec) |
| b_d | float | 8 | True | | Semi-minor axis of disk (arcsec) |
| disk_n | float | 8 | True | | Sersic index of disk (1) |
| dra | float | 8 | True | | RA of disk center (deg) |
| ddec | float | 8 | True | | Dec of disk center (deg) |
| agnra | float | 8 | True | | |
| agndec | float | 8 | True | | |
| versionid | float | 8 | True | | ID of simulation version: Galaxy_Model.ID |
| fluxnorm_bulge | float | 8 | True | | Multiplicative scaling factor to apply to the bulge SED |
| fluxnorm_agn | float | 8 | True | | Multiplicative scaling factor to apply to the AGN SED |
| absmag_r_total | float | 8 | True | | Absolute magnitude in r |
| gal_type | float | 8 | True | | Type determined from color (u-r?) |
| mass_stellar | float | 8 | True | | Stellar mass |
| mass_gas | float | 8 | True | | Gas mass |
| mass_halo | float | 8 | True | | Halo mass |
| ug_total_rest | float | 8 | True | | Restframe color u-g |
| gr_total_rest | float | 8 | True | | Restframe color g-r |
| ri_total_rest | float | 8 | True | | Restframe color r-i |
| iz_total_rest | float | 8 | True | | Restframe color i-z |
| zy_total_rest | float | 8 | True | | Restframe color z-y |
| isagn | int | 4 | True | | ID of AGN; zero if none present; isagn = AGN_VAR.ID |
| agn_tau | float | 8 | True | | |
| agn_sf_u | float | 8 | True | | |
| agn_sf_g | float | 8 | True | | |
| agn_sf_r | float | 8 | True | | |
| agn_sf_i | float | 8 | True | | |
| agn_sf_z | float | 8 | True | | |
| agn_sf_y | float | 8 | True | | |
| fluxnorm_disk | float | 8 | True | | |
| magnorm_bulge | float | 8 | True | | |
| magnorm_disk | float | 8 | True | | |
| magnorm_agn | float | 8 | True | | |
| cx | float | 8 | True | | X Cartesian position |
| cy | float | 8 | True | | Y Cartesian position |
| cz | float | 8 | True | | Z Cartesian position |
| geopoint | None | -1 | True | | Binary representation of position (Microsoft Spatial) |
| sedname_agn | varchar | 25 | True | | filename of the AGN SED |

| | | | | | | |
|--------------------------|---------|----|------|----|--------------------------|---------------------------------------|
| sedname_bulge | varchar | 25 | True | | | |
| sedname_disk | varchar | 25 | True | | | |
| varsimobjid | bigint | 8 | True | | | |
| varParamStr | ntext | 16 | True | | | Variability parameters in JSON format |
| type | int | 4 | True | | | |
| mass_bulge | float | 8 | True | | | |
| BulgeMinusDiskLSSTr | float | 8 | True | | | |
| log10BulgeToTotLSSTrFlux | float | 8 | True | | | |
| AbsiMag | float | 8 | True | | | |
| AbsiMag0_1 | float | 8 | True | | | |
| z0_lumg | float | 8 | True | | | |
| z0_lgmr | float | 8 | True | | | |
| z0_lrmi | float | 8 | True | | | |
| z0_limz | float | 8 | True | | | |
| z0_lzmy | float | 8 | True | | | |
| ba_disk | float | 8 | True | | | |
| ba_bulge | float | 8 | True | | | |
| DiskHalfLightRadius | float | 8 | True | | | |
| DiskLSSTu | float | 8 | True | | | |
| DiskLSSTg | float | 8 | True | | | |
| DiskLSSTr | float | 8 | True | | | |
| DiskLSSTi | float | 8 | True | | | |
| DiskLSSTz | float | 8 | True | | | |
| DiskLSSTy | float | 8 | True | | | |
| BulgeLSSTu | float | 8 | True | | | |
| BulgeLSSTg | float | 8 | True | | | |
| BulgeLSSTr | float | 8 | True | | | |
| BulgeLSSTi | float | 8 | True | | | |
| BulgeLSSTz | float | 8 | True | | | |
| BulgeLSSTy | float | 8 | True | | | |
| AGNID | bigint | 8 | True | | | |
| BulgeHalfLightRadius | float | 8 | True | | | |
| t0_agn | float | 8 | True | | | |
| id | int | 4 | | PK | Primary index of catalog | |
| myid | int | 4 | True | | | |

Indexes

| Index Name | Columns |
|------------------------------|-----------|
| gidx | g_ab |
| iidx | i_ab |
| PK_galaxy_s_B1D44B2F6A3BB341 | htmid, id |
| redshiftidx | redshift |
| ridx | r_ab |
| uidx | u_ab |
| yidx | y_ab |
| zidx | z_ab |

- **Object Type:** TABLE
- **Last Modified:** Mar 1 2013 5:41PM
- **Row Count:** 181599
- **Description:** Materialized view of galaxy table containing only rows with AGN

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|----------------|-----------|-----------------|-------------|----------|----|---|
| htmid | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| galid | varchar | 30 | True | | | |
| ra | float | 8 | True | | | Right Ascension (deg) |
| dec | float | 8 | True | | | Declination (deg) |
| redshift | float | 8 | True | | | Redshift |
| rad_vel | float | 8 | True | | | Peculiar velocity in the radial direction (km/ |
| u_ab | float | 8 | True | | | Apparent AB magnitude in u (extincted) |
| g_ab | float | 8 | True | | | Apparent AB magnitude in g (extincted) |
| r_ab | float | 8 | True | | | Apparent AB magnitude in r (extincted) |
| i_ab | float | 8 | True | | | Apparent AB magnitude in i (extincted) |
| z_ab | float | 8 | True | | | Apparent AB magnitude in z (extincted) |
| y_ab | float | 8 | True | | | Apparent AB magnitude in y (extincted) |
| sedid_bulge | int | 4 | True | | | ID of bulge SED metadata: Spectrum_meta.ID |
| sedid_disk | int | 4 | True | | | ID of disk SED metadata: Spectrum_meta.ID |
| sedid_agn | int | 4 | True | | | ID of agn SED metadata: Spectrum_meta.ID |
| av_b | float | 8 | True | | | Reddening value for bulge of galaxy (0.0) |
| rv_b | float | 8 | True | | | R_v for extinction model for bulge (3.1) |
| ext_model_b | varchar | 10 | True | | | Extinction model identifier ('ccm') |
| av_d | float | 8 | True | | | Reddening value for disk of galaxy |
| rv_d | float | 8 | True | | | R_v for extinction model for disk (3.1) |
| ext_model_d | varchar | 10 | True | | | Extinction model identifier for disk ('ccm') |
| glon | float | 8 | True | | | Galactic longitude (deg) |
| glat | float | 8 | True | | | Galactic latitude (deg) |
| pa_bulge | float | 8 | True | | | Position angle of bulge (deg) |
| pa_disk | float | 8 | True | | | Position angle of disk (deg) |
| inc_bulge_deg | float | 8 | True | | | Inclination of bulge to line of sight (deg) |
| inc_disk_deg | float | 8 | True | | | Inclination of disk to line of sight (deg) |
| a_b | float | 8 | True | | | Semi-major axis of bulge (arcsec) |
| b_b | float | 8 | True | | | Semi-minor axis of bulge (arcsec) |
| bulge_n | float | 8 | True | | | Sersic index of bulge (4) |
| bra | float | 8 | True | | | RA of bulge center (deg) |
| bdec | float | 8 | True | | | Dec of bulge center (deg) |
| a_d | float | 8 | True | | | Semi-major axis of disk (arcsec) |
| b_d | float | 8 | True | | | Semi-minor axis of disk (arcsec) |
| disk_n | float | 8 | True | | | Sersic index of disk (1) |
| dra | float | 8 | True | | | RA of disk center (deg) |
| ddec | float | 8 | True | | | Dec of disk center (deg) |
| agnra | float | 8 | True | | | |
| agndec | float | 8 | True | | | |
| versionid | float | 8 | True | | | ID of simulation version: Galaxy_Model.ID |
| fluxnorm_bulge | float | 8 | True | | | Multiplicative scaling factor to apply to the bulge SED |

| | | | | | |
|--------------------------|---------|----|------|--|---|
| fluxnorm_agn | float | 8 | True | | Multiplicative scaling factor to apply to the AGN SED |
| absmag_r_total | float | 8 | True | | Absolute magnitude in r |
| gal_type | float | 8 | True | | Type determined from color (u-r?) |
| mass_stellar | float | 8 | True | | Stellar mass |
| mass_gas | float | 8 | True | | Gas mass |
| mass_halo | float | 8 | True | | Halo mass |
| ug_total_rest | float | 8 | True | | Restframe color u-g |
| gr_total_rest | float | 8 | True | | Restframe color g-r |
| ri_total_rest | float | 8 | True | | Restframe color r-i |
| iz_total_rest | float | 8 | True | | Restframe color i-z |
| zy_total_rest | float | 8 | True | | Restframe color z-y |
| isagn | int | 4 | True | | ID of AGN; zero if none present; isagn = AGN_VAR.ID |
| agn_tau | float | 8 | True | | |
| agn_sf_u | float | 8 | True | | |
| agn_sf_g | float | 8 | True | | |
| agn_sf_r | float | 8 | True | | |
| agn_sf_i | float | 8 | True | | |
| agn_sf_z | float | 8 | True | | |
| agn_sf_y | float | 8 | True | | |
| fluxnorm_disk | float | 8 | True | | |
| magnorm_bulge | float | 8 | True | | |
| magnorm_disk | float | 8 | True | | |
| magnorm_agn | float | 8 | True | | |
| cx | float | 8 | True | | X Cartesian position |
| cy | float | 8 | True | | Y Cartesian position |
| cz | float | 8 | True | | Z Cartesian position |
| geopoint | None | -1 | True | | Binary representation of position (Microsoft Spatial) |
| sedname_agn | varchar | 25 | | | filename of the AGN SED |
| sedname_bulge | varchar | 25 | True | | |
| sedname_disk | varchar | 25 | True | | |
| varsimobjid | bigint | 8 | True | | |
| varParamStr | ntext | 16 | True | | Variability parameters in JSON format |
| type | int | 4 | True | | |
| mass_bulge | float | 8 | True | | |
| BulgeMinusDiskLSSTr | float | 8 | True | | |
| log10BulgeToTotLSSTrFlux | float | 8 | True | | |
| AbsiMag | float | 8 | True | | |
| AbsiMag0_1 | float | 8 | True | | |
| z0_lumg | float | 8 | True | | |
| z0_1gmr | float | 8 | True | | |
| z0_lrmi | float | 8 | True | | |
| z0_limz | float | 8 | True | | |
| z0_lzmy | float | 8 | True | | |
| ba_disk | float | 8 | True | | |
| ba_bulge | float | 8 | True | | |
| DiskHalfLightRadius | float | 8 | True | | |
| DiskLSSTu | float | 8 | True | | |

| | | | | | | |
|----------------------|--------|---|------|--|----|--------------------------|
| DiskLSSTg | float | 8 | True | | | |
| DiskLSSTr | float | 8 | True | | | |
| DiskLSSTi | float | 8 | True | | | |
| DiskLSSTz | float | 8 | True | | | |
| DiskLSSTy | float | 8 | True | | | |
| BulgeLSSTu | float | 8 | True | | | |
| BulgeLSSTg | float | 8 | True | | | |
| BulgeLSSTr | float | 8 | True | | | |
| BulgeLSSTi | float | 8 | True | | | |
| BulgeLSSTz | float | 8 | True | | | |
| BulgeLSSTy | float | 8 | True | | | |
| AGNID | bigint | 8 | True | | | |
| BulgeHalfLightRadius | float | 8 | True | | | |
| t0_agn | float | 8 | True | | | |
| myid | int | 4 | | | | |
| id | int | 4 | | | PK | Primary index of catalog |

Indexes

| Index Name | Columns |
|------------------------------|-----------|
| PK_galaxy_a_B1D44B2F10EB6C0E | htmid, id |

- **Object Type:** TABLE
- **Last Modified:** Mar 1 2013 5:40PM
- **Row Count:** 5287342
- **Description:** Materialized view of galaxy table containing only rows with bulges

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------------|-----------|-----------------|-------------|----------|----|--|
| htmid | bigint | 8 | | | PK | 20-deep hierarchical triangular mesh ID |
| galid | varchar | 30 | True | | | |
| ra | float | 8 | True | | | Right Ascension (deg) |
| dec | float | 8 | True | | | Declination (deg) |
| redshift | float | 8 | True | | | Redshift |
| rad_vel | float | 8 | True | | | Peculiar velocity in the radial direction (km/ |
| u_ab | float | 8 | True | | | Apparent AB magnitude in u (extincted) |
| g_ab | float | 8 | True | | | Apparent AB magnitude in g (extincted) |
| r_ab | float | 8 | True | | | Apparent AB magnitude in r (extincted) |
| i_ab | float | 8 | True | | | Apparent AB magnitude in i (extincted) |
| z_ab | float | 8 | True | | | Apparent AB magnitude in z (extincted) |
| y_ab | float | 8 | True | | | Apparent AB magnitude in y (extincted) |
| sedid_bulge | int | 4 | True | | | ID of bulge SED metadata: Spectrum_meta.ID |
| sedid_disk | int | 4 | True | | | ID of disk SED metadata: Spectrum_meta.ID |
| sedid_agn | int | 4 | True | | | ID of agn SED metadata: Spectrum_meta.ID |
| av_b | float | 8 | True | | | Reddening value for bulge of galaxy (0.0) |
| rv_b | float | 8 | True | | | R_v for extinction model for bulge (3.1) |
| ext_model_b | varchar | 10 | True | | | Extinction model identifier ('ccm') |
| av_d | float | 8 | True | | | Reddening value for disk of galaxy |
| rv_d | float | 8 | True | | | R_v for extinction model for disk (3.1) |
| ext_model_d | varchar | 10 | True | | | Extinction model identifier for disk ('ccm') |

| | | | | | |
|----------------|-------|----|------|--|---|
| glon | float | 8 | True | | Galactic longitude (deg) |
| glat | float | 8 | True | | Galactic latitude (deg) |
| pa_bulge | float | 8 | True | | Position angle of bulge (deg) |
| pa_disk | float | 8 | True | | Position angle of disk (deg) |
| inc_bulge_deg | float | 8 | True | | Inclination of bulge to line of sight (deg) |
| inc_disk_deg | float | 8 | True | | Inclination of disk to line of sight (deg) |
| a_b | float | 8 | True | | Semi-major axis of bulge (arcsec) |
| b_b | float | 8 | True | | Semi-minor axis of bulge (arcsec) |
| bulge_n | float | 8 | True | | Sersic index of bulge (4) |
| bra | float | 8 | True | | RA of bulge center (deg) |
| bdec | float | 8 | True | | Dec of bulge center (deg) |
| a_d | float | 8 | True | | Semi-major axis of disk (arcsec) |
| b_d | float | 8 | True | | Semi-minor axis of disk (arcsec) |
| disk_n | float | 8 | True | | Sersic index of disk (1) |
| dra | float | 8 | True | | RA of disk center (deg) |
| ddec | float | 8 | True | | Dec of disk center (deg) |
| agnra | float | 8 | True | | |
| agndec | float | 8 | True | | |
| versionid | float | 8 | True | | ID of simulation version: Galaxy_Model.ID |
| fluxnorm_bulge | float | 8 | True | | Multiplicative scaling factor to apply to the bulge SED |
| fluxnorm_agn | float | 8 | True | | Multiplicative scaling factor to apply to the AGN SED |
| absmag_r_total | float | 8 | True | | Absolute magnitude in r |
| gal_type | float | 8 | True | | Type determined from color (u-r?) |
| mass_stellar | float | 8 | True | | Stellar mass |
| mass_gas | float | 8 | True | | Gas mass |
| mass_halo | float | 8 | True | | Halo mass |
| ug_total_rest | float | 8 | True | | Restframe color u-g |
| gr_total_rest | float | 8 | True | | Restframe color g-r |
| ri_total_rest | float | 8 | True | | Restframe color r-i |
| iz_total_rest | float | 8 | True | | Restframe color i-z |
| zy_total_rest | float | 8 | True | | Restframe color z-y |
| isagn | int | 4 | True | | ID of AGN; zero if none present; isagn = AGN_VAR.ID |
| agn_tau | float | 8 | True | | |
| agn_sfu | float | 8 | True | | |
| agn_sfg | float | 8 | True | | |
| agn_sfr | float | 8 | True | | |
| agn_sfi | float | 8 | True | | |
| agn_sfz | float | 8 | True | | |
| agn_sfz | float | 8 | True | | |
| agn_sfz | float | 8 | True | | |
| fluxnorm_disk | float | 8 | True | | |
| magnorm_bulge | float | 8 | True | | |
| magnorm_disk | float | 8 | True | | |
| magnorm_agn | float | 8 | True | | |
| cx | float | 8 | True | | X Cartesian position |
| cy | float | 8 | True | | Y Cartesian position |
| cz | float | 8 | True | | Z Cartesian position |
| geopoint | None | -1 | True | | Binary representation of position (Microsoft Spatial) |

| | | | | | | |
|--------------------------|---------|----|------|--|----|---------------------------------------|
| sedname_agn | varchar | 25 | True | | | filename of the AGN SED |
| sedname_bulge | varchar | 25 | | | | |
| sedname_disk | varchar | 25 | True | | | |
| varsimobjid | bigint | 8 | True | | | |
| varParamStr | ntext | 16 | True | | | Variability parameters in JSON format |
| type | int | 4 | True | | | |
| mass_bulge | float | 8 | True | | | |
| BulgeMinusDiskLSSTr | float | 8 | True | | | |
| log10BulgeToTotLSSTrFlux | float | 8 | True | | | |
| AbsiMag | float | 8 | True | | | |
| AbsiMag0_1 | float | 8 | True | | | |
| z0_lumg | float | 8 | True | | | |
| z0_lgmr | float | 8 | True | | | |
| z0_lrmi | float | 8 | True | | | |
| z0_limz | float | 8 | True | | | |
| z0_lzmy | float | 8 | True | | | |
| ba_disk | float | 8 | True | | | |
| ba_bulge | float | 8 | True | | | |
| DiskHalfLightRadius | float | 8 | True | | | |
| DiskLSSTu | float | 8 | True | | | |
| DiskLSSTg | float | 8 | True | | | |
| DiskLSSTr | float | 8 | True | | | |
| DiskLSSTi | float | 8 | True | | | |
| DiskLSSTz | float | 8 | True | | | |
| DiskLSSTy | float | 8 | True | | | |
| BulgeLSSTu | float | 8 | True | | | |
| BulgeLSSTg | float | 8 | True | | | |
| BulgeLSSTr | float | 8 | True | | | |
| BulgeLSSTi | float | 8 | True | | | |
| BulgeLSSTz | float | 8 | True | | | |
| BulgeLSSTy | float | 8 | True | | | |
| AGNID | bigint | 8 | True | | | |
| BulgeHalfLightRadius | float | 8 | True | | | |
| t0_agn | float | 8 | True | | | |
| myid | int | 4 | | | | |
| id | int | 4 | | | PK | Primary index of catalog |

Indexes

| Index Name | Columns |
|------------------------------|-----------|
| PK_galaxy_b_B1D44B2F14BBFCF2 | htmid, id |

Asteroids

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Apr 12 2012 4:37AM
- **Row Count:**
- **Description:** Return union of fSSMMBA, fSSMComet, fSSMNEO, fSSMnonMBA

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Jul 21 2014 4:34AM
- **Row Count:**
- **Description:** Return union of fSSMMBABase, fSSMCometBase, fSSMNEOBase, fSSMnonMBABase. Args: @MJD(float), @RegionStr (string)

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Apr 19 2012 12:02PM
- **Row Count:**
- **Description:** Return Comets intersecting circular search region at MJD

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |

| | | | | | | |
|--------------|---------|----|------|--|--|--|
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Jul 21 2014 2:17AM
- **Row Count:**
- **Description:** Return Comets intersecting region described by RegionStr at MJD. Args: @MJD(float), @RegionStr (string)

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Apr 12 2012 5:54AM
- **Row Count:**
- **Description:** Return Main Belt Asteroids intersecting circular search region at MJD

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|-------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |

| | | | | | | |
|--------------|---------|----|------|--|--|--|
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Jul 21 2014 4:05AM
- **Row Count:**
- **Description:** Return Main Belt Asteroids intersecting region described by RegionStr at MJD. Args: @MJD(float), @RegionStr (string)

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Apr 16 2012 1:50PM
- **Row Count:**
- **Description:** Return Near Earth Objects intersecting circular search region at MJD

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|---------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |

| | | | | | | |
|--------------|---------|----|------|--|--|--|
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Jul 21 2014 4:14AM
- **Row Count:**
- **Description:** Return Near Earth Objects intersecting region described by RegionStr at MJD. Args: @MJD(float), @RegionStr (string)

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Apr 19 2012 1:25AM
- **Row Count:**
- **Description:** Return Trans-Neptune Objects, Scattered disk objects and all Trojans intersecting circular search region at MJD

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|---------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |

| | | | | | | |
|--------------|---------|----|------|--|--|--|
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

- **Object Type:** TABLE_VALUED_FUNCTION
- **Last Modified:** Jul 21 2014 4:27AM
- **Row Count:**
- **Description:** Return Trans-Neptune Objects, Scattered disk objects and all Trojans intersecting region described by RegionStr at MJD. Args: @MJD(float), @RegionStr (string)

Columns

| Name | Data Type | Max Len (Bytes) | Allow Nulls | Identity | PK | Descriptions |
|--------------|-----------|-----------------|-------------|----------|----|--------------|
| ssmid | int | 4 | True | | | |
| mjd | float | 8 | True | | | |
| ra | float | 8 | True | | | |
| decl | float | 8 | True | | | |
| dradt | float | 8 | True | | | |
| ddecldt | float | 8 | True | | | |
| dist | float | 8 | True | | | |
| magNorm | real | 4 | True | | | |
| umag | real | 4 | True | | | |
| gmag | real | 4 | True | | | |
| rmag | real | 4 | True | | | |
| imag | real | 4 | True | | | |
| zmag | real | 4 | True | | | |
| ymag | real | 4 | True | | | |
| se | float | 8 | True | | | |
| sed_filename | varchar | 25 | True | | | |

See [this page](#) for a discussion of the physical basis for the different database tables.

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