

# PS1 Database object and detection tables

This page describes the contents of the PanSTARRS-1 database object and detection tables. These tables have information such as positions, magnitudes, and morphological descriptions for the objects in the PS1 catalogs. They also include time-dependent measurements of those parameters. Tables with multi-epoch measurements are not included in the DR1 data release and are listed separately.

These descriptions are extracted from the PSPS Schema Browser interface created by the University of Hawaii. For a high-level overview of the tables, see the [PS1 Source extraction and catalogs](#) documentation page.

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The starting point for the PS1 data archive is at [Pan-STARRS1 data archive home page](#).

## Tables included in DR1

### ObjectThin

**Description:** Contains the positional information for objects in a number of coordinate systems. The objects associate single epoch detections and the stacked detections within a one arcsecond radius. The mean position from the single epoch data is used as the basis for coordinates when available, or the position of an object in the stack when it is not. The right ascension and declination for both the stack and single epoch mean is provided. The number of detections in each filter from single epoch data is listed, along with which filters the object has a stack detection. References: Szalay, A. S., Gray, J., Fekete, G., et al. 2007, arXiv:cs/0701164.

| Name               | Unit          | Data Type   | Size | Default Value | Description                                |
|--------------------|---------------|-------------|------|---------------|--|
| <b>objName</b>     | dimensionless | VARCHAR(32) | 32   | NA            | IAU name for this object.                  |
| <b>objPSO Name</b> | dimensionless | VARCHAR(32) | 32   | NA            | Alternate Pan-STARRS name for this object. |

|                          |               |              |     |      |   |
|--------------------------|---------------|--------------|-----|------|---|
| <b>objAltName1</b>       | dimensionless | VARCHAR(32)  | 32  | NA   | Alternate name for this object.   |
| <b>objAltName2</b>       | dimensionless | VARCHAR(32)  | 32  |      | Alternate name for this object.   |
| <b>objAltName3</b>       | dimensionless | VARCHAR(32)  | 32  |      | Alternate name for this object.   |
| <b>objPopularName</b>    | dimensionless | VARCHAR(140) | 140 |      | Well known name for this object.  |
| <b>objID</b>             | dimensionless | BIGINT       | 8   | NA   | Unique object identifier.   |
| <b>uniquePSPSObjID</b>   | dimensionless | BIGINT       | 8   | NA   | Unique internal PSPS object identifier.   |
| <b>ippObjID</b>          | dimensionless | BIGINT       | 8   | NA   | IPP internal object identifier.   |
| <b>surveyID</b>          | dimensionless | TINYINT      | 1   | NA   | Survey identifier. Details in the Survey table.   |
| <b>htmlID</b>            | dimensionless | BIGINT       | 8   | NA   | Hierarchical triangular mesh (Szalay 2007) index.   |
| <b>zoneID</b>            | dimensionless | INT          | 4   | NA   | Local zone index, found by dividing the sky into bands of declination 1/2 arcminute in height: zoneID = floor((90 + declination)/0.0083333).        |
| <b>tessID</b>            | dimensionless | TINYINT      | 1   | 0    | Tessellation identifier. Details in the TessellationType table.   |
| <b>projectionID</b>      | dimensionless | SMALLINT     | 2   | -1   | Projection cell identifier.   |
| <b>skyCellID</b>         | dimensionless | TINYINT      | 1   | 255  | Skycell region identifier.  |
| <b>randomID</b>          | dimensionless | FLOAT        | 8   | NA   | Random value drawn from the interval between zero and one.  |
| <b>batchID</b>           | dimensionless | BIGINT       | 8   | NA   | Internal database batch identifier.   |
| <b>dvoRegionID</b>       | dimensionless | INT          | 4   | -1   | Internal DVO region identifier.   |
| <b>processingVersion</b> | dimensionless | TINYINT      | 1   | NA   | Data release version.   |
| <b>objInfoFlag</b>       | dimensionless | INT          | 4   | 0    | Information flag bitmask indicating details of the photometry. Values listed in ObjectInfoFlags and <a href="#">here</a>                            |
| <b>qualityFlag</b>       | dimensionless | TINYINT      | 1   | 0    | Subset of objInfoFlag denoting whether this object is real or a likely false positive. Values listed in ObjectQualityFlags and <a href="#">here</a> |
| <b>raStack</b>           | degrees       | FLOAT        | 8   | -999 | Right ascension from stack detections, weighted mean value across filters, in equinox J2000. See StackObjectThin for stack epoch information.       |
| <b>decStack</b>          | degrees       | FLOAT        | 8   | -999 | Declination from stack detections, weighted mean value across filters, in equinox J2000. See StackObjectThin for stack epoch information.           |
| <b>raStackErr</b>        | arcsec        | REAL         | 4   | -999 | Right ascension standard deviation from stack detections.   |
| <b>decStackErr</b>       | arcsec        | REAL         | 4   | -999 | Declination standard deviation from stack detections.   |
| <b>raMean</b>            | degrees       | FLOAT        | 8   | -999 | Right ascension from single epoch detections (weighted mean) in equinox J2000 at the mean epoch given by epochMean.                                 |
| <b>decMean</b>           | degrees       | FLOAT        | 8   | -999 | Declination from single epoch detections (weighted mean) in equinox J2000 at the mean epoch given by epochMean.                                     |
| <b>raMeanErr</b>         | arcsec        | REAL         | 4   | -999 | Right ascension standard deviation from single epoch detections.  |
| <b>decMeanErr</b>        | arcsec        | REAL         | 4   | -999 | Declination standard deviation from single epoch detections.  |

|                         |               |          |   |      |   |
|-------------------------|---------------|----------|---|------|---|
| <b>epochMean</b>        | days          | FLOAT    | 8 | -999 | Modified Julian Date of the mean epoch corresponding to raMean, decMean (equinox J2000). Note that Gaia DR1 data is sometimes included in the mean position (see the FAQ for details); in those cases, the epochMean value is near the Gaia DR1 epoch 2015.5 = MJD 15023. As a result, epochMean is not necessarily near the mean value of the PS1 measurement dates. |
| <b>posMeanChisq</b>     | dimensionless | REAL     | 4 | -999 | Reduced chi squared value of mean position.   |
| <b>cx</b>               | dimensionless | FLOAT    | 8 | NA   | Cartesian x on a unit sphere.   |
| <b>cy</b>               | dimensionless | FLOAT    | 8 | NA   | Cartesian y on a unit sphere.   |
| <b>cz</b>               | dimensionless | FLOAT    | 8 | NA   | Cartesian z on a unit sphere.   |
| <b>lambda</b>           | degrees       | FLOAT    | 8 | -999 | Ecliptic longitude.   |
| <b>beta</b>             | degrees       | FLOAT    | 8 | -999 | Ecliptic latitude.  |
| <b>l</b>                | degrees       | FLOAT    | 8 | -999 | Galactic longitude.   |
| <b>b</b>                | degrees       | FLOAT    | 8 | -999 | Galactic latitude.  |
| <b>nStackObjects</b>    | dimensionless | SMALLINT | 2 | -999 | Number of independent StackObjectThin rows associated with this object.   |
| <b>nStackDetections</b> | dimensionless | SMALLINT | 2 | -999 | Number of stack detections.   |
| <b>nDetections</b>      | dimensionless | SMALLINT | 2 | -999 | Number of single epoch detections in all filters.   |
| <b>ng</b>               | dimensionless | SMALLINT | 2 | -999 | Number of single epoch detections in g filter.  |
| <b>nr</b>               | dimensionless | SMALLINT | 2 | -999 | Number of single epoch detections in r filter.  |
| <b>ni</b>               | dimensionless | SMALLINT | 2 | -999 | Number of single epoch detections in i filter.  |
| <b>nz</b>               | dimensionless | SMALLINT | 2 | -999 | Number of single epoch detections in z filter.  |
| <b>ny</b>               | dimensionless | SMALLINT | 2 | -999 | Number of single epoch detections in y filter.  |

## MeanObject

**Description:** Contains the mean photometric information for objects based on the single epoch data, calculated as described in Magnier et al (2013). To be included in this table, an object must be bright enough to have been detected at least once in an individual exposure. PSF, Kron (1980), and aperture magnitudes and statistics are listed for all filters. References: Kron, R. G. 1980, ApJS, 43, 305; Magnier, E. A., Schlafly, E., Finkbeiner, D., et al. 2013, ApJS, 205, 20.

| Name                  | Unit          | Data Type | Size | Default Value | Description  |
|-----------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>          | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.  |
| <b>uniquePspSOBid</b> | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS object identifier.  |
| <b>gQfPerfect</b>     | dimensionless | REAL      | 4    | -999          | Maximum PSF weighted fraction of pixels totally unmasked from g filter detections. |
| <b>gMeanPSFMag</b>    | AB magnitude  | REAL      | 4    | -999          | Mean PSF magnitude from g filter detections.                                       |
| <b>gMeanPSFMagErr</b> | AB magnitude  | REAL      | 4    | -999          | Error in mean PSF magnitude from g filter detections.                              |

|                        |               |          |   |      |   |
|------------------------|---------------|----------|---|------|---|
| <b>gMeanPSF MagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of PSF magnitudes from g filter detections.  |
| <b>gMeanPSF MagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean PSF magnitude from g filter detections.   |
| <b>gMeanPSF MagMin</b> | AB magnitudes | REAL     | 4 | -999 | Minimum PSF magnitude from g filter detections.   |
| <b>gMeanPSF MagMax</b> | AB magnitudes | REAL     | 4 | -999 | Maximum PSF magnitude from g filter detections.   |
| <b>gMeanKronMag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean Kron (1980) magnitude from g filter detections.  |
| <b>gMeanKronMagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean Kron (1980) magnitude from g filter detections.   |
| <b>gMeanKronMagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of Kron (1980) magnitudes from g filter detections.  |
| <b>gMeanKronMagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean Kron (1980) magnitude from g filter detections.                                 |
| <b>gMeanApMag</b>      | AB magnitudes | REAL     | 4 | -999 | Mean aperture magnitude from g filter detections.   |
| <b>gMeanApMagErr</b>   | AB magnitudes | REAL     | 4 | -999 | Error in mean aperture magnitude from g filter detections.  |
| <b>gMeanApMagStd</b>   | AB magnitudes | REAL     | 4 | -999 | Standard deviation of aperture magnitudes from g filter detections.   |
| <b>gMeanApMagNpt</b>   | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean aperture magnitude from g filter detections.                                    |
| <b>gFlags</b>          | dimensionless | INT      | 4 | 0    | Information flag bitmask for mean object from g filter detections. Values listed in <a href="#">ObjectFilterFlags</a> . |
| <b>rQfPerfect</b>      | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from r filter detections.                                      |
| <b>rMeanPSF Mag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean PSF magnitude from r filter detections.  |
| <b>rMeanPSF MagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean PSF magnitude from r filter detections.   |
| <b>rMeanPSF MagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of PSF magnitudes from r filter detections.  |
| <b>rMeanPSF MagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean PSF magnitude from r filter detections.   |
| <b>rMeanPSF MagMin</b> | AB magnitudes | REAL     | 4 | -999 | Minimum PSF magnitude from r filter detections.   |
| <b>rMeanPSF MagMax</b> | AB magnitudes | REAL     | 4 | -999 | Maximum PSF magnitude from r filter detections.   |
| <b>rMeanKronMag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean Kron (1980) magnitude from r filter detections.  |
| <b>rMeanKronMagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean Kron (1980) magnitude from r filter detections.   |
| <b>rMeanKronMagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of Kron (1980) magnitudes from r filter detections.  |
| <b>rMeanKronMagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean Kron (1980) magnitude from r filter detections.                                 |

|                         |               |          |   |      |   |
|-------------------------|---------------|----------|---|------|---|
| <b>rMeanApMag</b>       | AB magnitudes | REAL     | 4 | -999 | Mean aperture magnitude from r filter detections.   |
| <b>rMeanApMagErr</b>    | AB magnitudes | REAL     | 4 | -999 | Error in mean aperture magnitude from r filter detections.  |
| <b>rMeanApMagStd</b>    | AB magnitudes | REAL     | 4 | -999 | Standard deviation of aperture magnitudes from r filter detections.   |
| <b>rMeanApMagNpt</b>    | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean aperture magnitude from r filter detections.                                    |
| <b>rFlags</b>           | dimensionless | INT      | 4 | 0    | Information flag bitmask for mean object from r filter detections. Values listed in <a href="#">ObjectFilterFlags</a> . |
| <b>iQfPerfect</b>       | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from i filter detections.                                      |
| <b>iMeanPSF Mag</b>     | AB magnitudes | REAL     | 4 | -999 | Mean PSF magnitude from i filter detections.  |
| <b>iMeanPSF MagErr</b>  | AB magnitudes | REAL     | 4 | -999 | Error in mean PSF magnitude from i filter detections.   |
| <b>iMeanPSF MagStd</b>  | AB magnitudes | REAL     | 4 | -999 | Standard deviation of PSF magnitudes from i filter detections.  |
| <b>iMeanPSF MagNpt</b>  | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean PSF magnitude from i filter detections.   |
| <b>iMeanPSF MagMin</b>  | AB magnitudes | REAL     | 4 | -999 | Minimum PSF magnitude from i filter detections.   |
| <b>iMeanPSF MagMax</b>  | AB magnitudes | REAL     | 4 | -999 | Maximum PSF magnitude from i filter detections.   |
| <b>iMeanKron Mag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean Kron (1980) magnitude from i filter detections.  |
| <b>iMeanKron MagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean Kron (1980) magnitude from i filter detections.   |
| <b>iMeanKron MagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of Kron (1980) magnitudes from i filter detections.  |
| <b>iMeanKron MagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean Kron (1980) magnitude from i filter detections.                                 |
| <b>iMeanApMag</b>       | AB magnitudes | REAL     | 4 | -999 | Mean aperture magnitude from i filter detections.   |
| <b>iMeanApMagErr</b>    | AB magnitudes | REAL     | 4 | -999 | Error in mean aperture magnitude from i filter detections.  |
| <b>iMeanApMagStd</b>    | AB magnitudes | REAL     | 4 | -999 | Standard deviation of aperture magnitudes from i filter detections.   |
| <b>iMeanApMagNpt</b>    | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean aperture magnitude from i filter detections.                                    |
| <b>iFlags</b>           | dimensionless | INT      | 4 | 0    | Information flag bitmask for mean object from i filter detections. Values listed in <a href="#">ObjectFilterFlags</a> . |
| <b>zQfPerfect</b>       | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from z filter detections.                                      |
| <b>zMeanPSF Mag</b>     | AB magnitudes | REAL     | 4 | -999 | Mean PSF magnitude from z filter detections.  |
| <b>zMeanPSF MagErr</b>  | AB magnitudes | REAL     | 4 | -999 | Error in mean PSF magnitude from z filter detections.   |

|                         |               |          |   |      |   |
|-------------------------|---------------|----------|---|------|---|
| <b>zMeanPSF MagStd</b>  | AB magnitudes | REAL     | 4 | -999 | Standard deviation of PSF magnitudes from z filter detections.  |
| <b>zMeanPSF MagNpt</b>  | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean PSF magnitude from z filter detections.   |
| <b>zMeanPSF MagMin</b>  | AB magnitudes | REAL     | 4 | -999 | Minimum PSF magnitude from z filter detections.   |
| <b>zMeanPSF MagMax</b>  | AB magnitudes | REAL     | 4 | -999 | Maximum PSF magnitude from z filter detections.   |
| <b>zMeanKron Mag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean Kron (1980) magnitude from z filter detections.  |
| <b>zMeanKron MagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean Kron (1980) magnitude from z filter detections.   |
| <b>zMeanKron MagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of Kron (1980) magnitudes from z filter detections.  |
| <b>zMeanKron MagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean Kron (1980) magnitude from z filter detections.                                 |
| <b>zMeanApMag</b>       | AB magnitudes | REAL     | 4 | -999 | Mean aperture magnitude from z filter detections.   |
| <b>zMeanApMagErr</b>    | AB magnitudes | REAL     | 4 | -999 | Error in mean aperture magnitude from z filter detections.  |
| <b>zMeanApMagStd</b>    | AB magnitudes | REAL     | 4 | -999 | Standard deviation of aperture magnitudes from z filter detections.   |
| <b>zMeanApMagNpt</b>    | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean aperture magnitude from z filter detections.                                    |
| <b>zFlags</b>           | dimensionless | INT      | 4 | 0    | Information flag bitmask for mean object from z filter detections. Values listed in <a href="#">ObjectFilterFlags</a> . |
| <b>yQfPerfect</b>       | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from y filter detections.                                      |
| <b>yMeanPSF Mag</b>     | AB magnitudes | REAL     | 4 | -999 | Mean PSF magnitude from y filter detections.  |
| <b>yMeanPSF MagErr</b>  | AB magnitudes | REAL     | 4 | -999 | Error in mean PSF magnitude from y filter detections.   |
| <b>yMeanPSF MagStd</b>  | AB magnitudes | REAL     | 4 | -999 | Standard deviation of PSF magnitudes from y filter detections.  |
| <b>yMeanPSF MagNpt</b>  | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean PSF magnitude from y filter detections.   |
| <b>yMeanPSF MagMin</b>  | AB magnitudes | REAL     | 4 | -999 | Minimum PSF magnitude from y filter detections.   |
| <b>yMeanPSF MagMax</b>  | AB magnitudes | REAL     | 4 | -999 | Maximum PSF magnitude from y filter detections.   |
| <b>yMeanKron Mag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean Kron (1980) magnitude from y filter detections.  |
| <b>yMeanKron MagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean Kron (1980) magnitude from y filter detections.   |
| <b>yMeanKron MagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of Kron (1980) magnitudes from y filter detections.  |
| <b>yMeanKron MagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean Kron (1980) magnitude from y filter detections.                                 |

|                      |               |          |   |      |   |
|----------------------|---------------|----------|---|------|---|
| <b>yMeanApMag</b>    | AB magnitudes | REAL     | 4 | -999 | Mean aperture magnitude from y filter detections.   |
| <b>yMeanApMagErr</b> | AB magnitudes | REAL     | 4 | -999 | Error in mean aperture magnitude from y filter detections.  |
| <b>yMeanApMagStd</b> | AB magnitudes | REAL     | 4 | -999 | Standard deviation of aperture magnitudes from y filter detections.   |
| <b>yMeanApMagNpt</b> | dimensionless | SMALLINT | 2 | -999 | Number of measurements included in mean aperture magnitude from y filter detections.                                    |
| <b>yFlags</b>        | dimensionless | INT      | 4 | 0    | Information flag bitmask for mean object from y filter detections. Values listed in <a href="#">ObjectFilterFlags</a> . |

## StackObjectThin

**Description:** Contains the positional and photometric information for point-source photometry of stack detections. The information for all filters are joined into a single row, with metadata indicating if this stack object represents the primary detection. Due to overlaps in the stack tessellations, an object may appear in multiple stack images. The primary detection is the unique detection from the stack image that provides the best coverage with minimal projection stretching. All other detections of the object in that filter are secondary, regardless of their properties. The detection flagged as best is the primary detection if that detection has a psfQf value greater than 0.98; if that is not met, then any of the primary or secondary detections with the highest psfQf value is flagged as best. **References:** Kron, R. G. 1980, ApJS, 43, 305; Magnier et al. 2015, in prep.

| Name                    | Unit          | Data Type | Size | Default Value | Description  |
|-------------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.  |
| <b>uniquePspSTid</b>    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.   |
| <b>ippObjID</b>         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.  |
| <b>surveyID</b>         | dimensionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.  |
| <b>tessID</b>           | dimensionless | TINYINT   | 1    | 0             | Tessellation identifier. Details in the TessellationType table.  |
| <b>projectionID</b>     | dimensionless | SMALLINT  | 2    | -1            | Projection cell identifier.  |
| <b>skyCellID</b>        | dimensionless | TINYINT   | 1    | 255           | Skycell region identifier.   |
| <b>randomStackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.   |
| <b>primaryDetection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection. Note that in the DR1 database, about 0.5% of the objects have more than one entry with primaryDetection=1. This may be fixed in a future modification of the DR2 database. Note also that as primaryDetection is entirely a geometric issue within a skycell, it is possible for an object (particularly if near the detection limit) to be undetected on the primary area within a skycell, but to appear on the overlapping non-primary area in an adjacent skycell. Such objects will not have any measurement which is flagged as a primaryDetection. |
| <b>bestDetection</b>    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection. The entries in this column are currently corrupted in the DR2 database and should not be used. We recommend using the primaryDetection flag instead (although it also has shortcomings - see above). This is planned to be fixed in DR2.1.   |
| <b>dvoRegionID</b>      | dimensionless | INT       | 4    | -1            | Internal DVO region identifier.  |

|                       |               |         |   |      |   |
|-----------------------|---------------|---------|---|------|---|
| <b>processVersion</b> | dimensionless | TINYINT | 1 | NA   | Data release version.   |
| <b>gippDetectID</b>   | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |
| <b>gstackDetectID</b> | dimensionless | BIGINT  | 8 | NA   | Unique stack detection identifier.  |
| <b>gstackImageID</b>  | dimensionless | BIGINT  | 8 | NA   | Unique stack identifier for g filter detection.   |
| <b>gra</b>            | degrees       | FLOAT   | 8 | -999 | Right ascension from g filter stack detection.  |
| <b>gdec</b>           | degrees       | FLOAT   | 8 | -999 | Declination from g filter stack detection.  |
| <b>graErr</b>         | arcsec        | REAL    | 4 | -999 | Right ascension error from g filter stack detection.  |
| <b>gdecErr</b>        | arcsec        | REAL    | 4 | -999 | Declination error from g filter stack detection.  |
| <b>gEpoch</b>         | days          | FLOAT   | 8 | -999 | Modified Julian Date of the mean epoch of images contributing to the the g-band stack (equinox J2000).          |
| <b>gPSFMag</b>        | AB magnitudes | REAL    | 4 | -999 | PSF magnitude from g filter stack detection.  |
| <b>gPSFMagErr</b>     | AB magnitudes | REAL    | 4 | -999 | Error in PSF magnitude from g filter stack detection.   |
| <b>gApMag</b>         | AB magnitudes | REAL    | 4 | -999 | Aperture magnitude from g filter stack detection.   |
| <b>gApMagErr</b>      | AB magnitudes | REAL    | 4 | -999 | Error in aperture magnitude from g filter stack detection.  |
| <b>gKronMag</b>       | AB magnitudes | REAL    | 4 | -999 | Kron (1980) magnitude from g filter stack detection.  |
| <b>gKronMagErr</b>    | AB magnitudes | REAL    | 4 | -999 | Error in Kron (1980) magnitude from g filter stack detection.   |
| <b>ginfoFlag</b>      | dimensionless | BIGINT  | 8 | 0    | Information flag bitmask indicating details of the g filter stack photometry. Values listed in DetectionFlags.  |
| <b>ginfoFlag2</b>     | dimensionless | INT     | 4 | 0    | Information flag bitmask indicating details of the g filter stack photometry. Values listed in DetectionFlags2. |
| <b>ginfoFlag3</b>     | dimensionless | INT     | 4 | 0    | Information flag bitmask indicating details of the g filter stack photometry. Values listed in DetectionFlags3. |
| <b>gnFrames</b>       | dimensionless | INT     | 4 | -999 | Number of input frames/exposures contributing to the g filter stack detection.                                  |
| <b>rippDetectID</b>   | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |
| <b>rstackDetectID</b> | dimensionless | BIGINT  | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>  | dimensionless | BIGINT  | 8 | NA   | Unique stack identifier for r filter detection.   |
| <b>rra</b>            | degrees       | FLOAT   | 8 | -999 | Right ascension from r filter stack detection.  |
| <b>rdec</b>           | degrees       | FLOAT   | 8 | -999 | Declination from r filter stack detection.  |
| <b>rraErr</b>         | arcsec        | REAL    | 4 | -999 | Right ascension error from r filter stack detection.  |
| <b>rdecErr</b>        | arcsec        | REAL    | 4 | -999 | Declination error from r filter stack detection.  |
| <b>rEpoch</b>         | days          | FLOAT   | 8 | -999 | Modified Julian Date of the mean epoch of images contributing to the the r-band stack (equinox J2000).          |
| <b>rPSFMag</b>        | AB magnitudes | REAL    | 4 | -999 | PSF magnitude from r filter stack detection.  |
| <b>rPSFMagErr</b>     | AB magnitudes | REAL    | 4 | -999 | Error in PSF magnitude from r filter stack detection.   |



|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>rApMag</b>         | AB magnitudes | REAL   | 4 | -999 | Aperture magnitude from r filter stack detection.   |
| <b>rApMagErr</b>      | AB magnitudes | REAL   | 4 | -999 | Error in aperture magnitude from r filter stack detection.  |
| <b>rKronMag</b>       | AB magnitudes | REAL   | 4 | -999 | Kron (1980) magnitude from r filter stack detection.  |
| <b>rKronMagErr</b>    | AB magnitudes | REAL   | 4 | -999 | Error in Kron (1980) magnitude from r filter stack detection.   |
| <b>rinfoFlag</b>      | dimensionless | BIGINT | 8 | 0    | Information flag bitmask indicating details of the r filter stack photometry. Values listed in DetectionFlags.  |
| <b>rinfoFlag2</b>     | dimensionless | INT    | 4 | 0    | Information flag bitmask indicating details of the r filter stack photometry. Values listed in DetectionFlags2. |
| <b>rinfoFlag3</b>     | dimensionless | INT    | 4 | 0    | Information flag bitmask indicating details of the r filter stack photometry. Values listed in DetectionFlags3. |
| <b>rnFrames</b>       | dimensionless | INT    | 4 | -999 | Number of input frames/exposures contributing to the r filter stack detection.                                  |
| <b>iippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.   |
| <b>ira</b>            | degrees       | FLOAT  | 8 | -999 | Right ascension from i filter stack detection.  |
| <b>idec</b>           | degrees       | FLOAT  | 8 | -999 | Declination from i filter stack detection.  |
| <b>iraErr</b>         | arcsec        | REAL   | 4 | -999 | Right ascension error from i filter stack detection.  |
| <b>idecErr</b>        | arcsec        | REAL   | 4 | -999 | Declination error from i filter stack detection.  |
| <b>iEpoch</b>         | days          | FLOAT  | 8 | -999 | Modified Julian Date of the mean epoch of images contributing to the the i-band stack (equinox J2000).          |
| <b>iPSFMag</b>        | AB magnitudes | REAL   | 4 | -999 | PSF magnitude from i filter stack detection.  |
| <b>iPSFMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in PSF magnitude from i filter stack detection.   |
| <b>iApMag</b>         | AB magnitudes | REAL   | 4 | -999 | Aperture magnitude from i filter stack detection.   |
| <b>iApMagErr</b>      | AB magnitudes | REAL   | 4 | -999 | Error in aperture magnitude from i filter stack detection.  |
| <b>iKronMag</b>       | AB magnitudes | REAL   | 4 | -999 | Kron (1980) magnitude from i filter stack detection.  |
| <b>iKronMagErr</b>    | AB magnitudes | REAL   | 4 | -999 | Error in Kron (1980) magnitude from i filter stack detection.   |
| <b>iinfoFlag</b>      | dimensionless | BIGINT | 8 | 0    | Information flag bitmask indicating details of the i filter stack photometry. Values listed in DetectionFlags.  |
| <b>iinfoFlag2</b>     | dimensionless | INT    | 4 | 0    | Information flag bitmask indicating details of the i filter stack photometry. Values listed in DetectionFlags2. |
| <b>iinfoFlag3</b>     | dimensionless | INT    | 4 | 0    | Information flag bitmask indicating details of the i filter stack photometry. Values listed in DetectionFlags3. |
| <b>inFrames</b>       | dimensionless | INT    | 4 | -999 | Number of input frames/exposures contributing to the i filter stack detection.                                  |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |

|                            |                      |        |   |      |   |
|----------------------------|----------------------|--------|---|------|---|
| <b>zstackI<br/>magelD</b>  | dimens<br>ionless    | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.   |
| <b>zra</b>                 | degrees              | FLOAT  | 8 | -999 | Right ascension from z filter stack detection.  |
| <b>zdec</b>                | degrees              | FLOAT  | 8 | -999 | Declination from z filter stack detection.  |
| <b>zraErr</b>              | arcsec               | REAL   | 4 | -999 | Right ascension error from z filter stack detection.  |
| <b>zdecErr</b>             | arcsec               | REAL   | 4 | -999 | Declination error from z filter stack detection.  |
| <b>zEpoch</b>              | days                 | FLOAT  | 8 | -999 | Modified Julian Date of the mean epoch of images contributing to the the z-band stack (equinox J2000).          |
| <b>zPSFMag</b>             | AB<br>magnit<br>udes | REAL   | 4 | -999 | PSF magnitude from z filter stack detection.  |
| <b>zPSFMa<br/>gErr</b>     | AB<br>magnit<br>udes | REAL   | 4 | -999 | Error in PSF magnitude from z filter stack detection.   |
| <b>zApMag</b>              | AB<br>magnit<br>udes | REAL   | 4 | -999 | Aperture magnitude from z filter stack detection.   |
| <b>zApMag<br/>Err</b>      | AB<br>magnit<br>udes | REAL   | 4 | -999 | Error in aperture magnitude from z filter stack detection.  |
| <b>zKronM<br/>ag</b>       | AB<br>magnit<br>udes | REAL   | 4 | -999 | Kron (1980) magnitude from z filter stack detection.  |
| <b>zKronM<br/>agErr</b>    | AB<br>magnit<br>udes | REAL   | 4 | -999 | Error in Kron (1980) magnitude from z filter stack detection.   |
| <b>zinfoFlag</b>           | dimens<br>ionless    | BIGINT | 8 | 0    | Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags.  |
| <b>zinfoFla<br/>g2</b>     | dimens<br>ionless    | INT    | 4 | 0    | Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags2. |
| <b>zinfoFla<br/>g3</b>     | dimens<br>ionless    | INT    | 4 | 0    | Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags3. |
| <b>znFram<br/>es</b>       | dimens<br>ionless    | INT    | 4 | -999 | Number of input frames/exposures contributing to the z filter stack detection.                                  |
| <b>yippDet<br/>ectID</b>   | dimens<br>ionless    | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>ystackD<br/>etectID</b> | dimens<br>ionless    | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackI<br/>magelD</b>  | dimens<br>ionless    | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.   |
| <b>yra</b>                 | degrees              | FLOAT  | 8 | -999 | Right ascension from y filter stack detection.  |
| <b>ydec</b>                | degrees              | FLOAT  | 8 | -999 | Declination from y filter stack detection.  |
| <b>yraErr</b>              | arcsec               | REAL   | 4 | -999 | Right ascension error from y filter stack detection.  |
| <b>ydecErr</b>             | arcsec               | REAL   | 4 | -999 | Declination error from y filter stack detection.  |
| <b>yEpoch</b>              | days                 | FLOAT  | 8 | -999 | Modified Julian Date of the mean epoch of images contributing to the the y-band stack (equinox J2000).          |
| <b>yPSFMag</b>             | AB<br>magnit<br>udes | REAL   | 4 | -999 | PSF magnitude from y filter stack detection.  |
| <b>yPSFMa<br/>gErr</b>     | AB<br>magnit<br>udes | REAL   | 4 | -999 | Error in PSF magnitude from y filter stack detection.   |
| <b>yApMag</b>              | AB<br>magnit<br>udes | REAL   | 4 | -999 | Aperture magnitude from y filter stack detection.   |
| <b>yApMag<br/>Err</b>      | AB<br>magnit<br>udes | REAL   | 4 | -999 | Error in aperture magnitude from y filter stack detection.  |
| <b>yKronM<br/>ag</b>       | AB<br>magnit<br>udes | REAL   | 4 | -999 | Kron (1980) magnitude from y filter stack detection.  |

|                    |               |        |   |      |   |
|--------------------|---------------|--------|---|------|---|
| <b>yKronMagErr</b> | AB magnitudes | REAL   | 4 | -999 | Error in Kron (1980) magnitude from y filter stack detection.   |
| <b>yinfoFlag</b>   | dimensionless | BIGINT | 8 | 0    | Information flag bitmask indicating details of the y filter stack photometry. Values listed in DetectionFlags.  |
| <b>yinfoFlag2</b>  | dimensionless | INT    | 4 | 0    | Information flag bitmask indicating details of the y filter stack photometry. Values listed in DetectionFlags2. |
| <b>yinfoFlag3</b>  | dimensionless | INT    | 4 | 0    | Information flag bitmask indicating details of the y filter stack photometry. Values listed in DetectionFlags3. |
| <b>ynFrames</b>    | dimensionless | INT    | 4 | -999 | Number of input frames/exposures contributing to the y filter stack detection.                                  |

## StackObjectAttributes

**Description: Contains the PSF, Kron (1980), and aperture fluxes for all filters in a single row, along with point-source object shape parameters. See StackObjectThin table for discussion of primary, secondary, and best detections. References: Kron, R. G. 1980, ApJS, 43, 305.**

| Name                    | Unit          | Data Type | Size | Default Value | Description  |
|-------------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.  |
| <b>uniquePspSTid</b>    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.   |
| <b>ippObjID</b>         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.  |
| <b>randomStackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                                   |
| <b>primaryDetection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.                                       |
| <b>bestDetection</b>    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.  |
| <b>gippDetectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.   |
| <b>gstackDetectID</b>   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.   |
| <b>gstackImageID</b>    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.  |
| <b>gxPos</b>            | sky pixels    | REAL      | 4    | -999          | PSF x center location from g filter stack detection.   |
| <b>gyPos</b>            | sky pixels    | REAL      | 4    | -999          | PSF y center location from g filter stack detection.   |
| <b>gxPosErr</b>         | sky pixels    | REAL      | 4    | -999          | Error in PSF x center location from g filter stack detection.                                |
| <b>gyPosErr</b>         | sky pixels    | REAL      | 4    | -999          | Error in PSF y center location from g filter stack detection.                                |
| <b>gpsfMajorFWHM</b>    | arcsec        | REAL      | 4    | -999          | PSF major axis FWHM from g filter stack detection.   |
| <b>gpsfMinorFWHM</b>    | arcsec        | REAL      | 4    | -999          | PSF minor axis FWHM from g filter stack detection.   |
| <b>gpsfTheta</b>        | degrees       | REAL      | 4    | -999          | PSF major axis orientation from g filter stack detection.                                    |
| <b>gpsfCore</b>         | dimensionless | REAL      | 4    | -999          | PSF core parameter k from g filter stack detection, where $F = F_0 / (1 + k r^2 + r^3.33)$ . |
| <b>gpsfLikelihood</b>   | dimensionless | REAL      | 4    | -999          | Likelihood that this g filter stack detection is best fit by a PSF.                          |
| <b>gpsfQf</b>           | dimensionless | REAL      | 4    | -999          | PSF coverage factor for g filter stack detection.  |

|                            |                              |        |   |      |  |
|----------------------------|------------------------------|--------|---|------|--|
| <b>gpsfQfP<br/>erfect</b>  | dimens<br>ionless            | REAL   | 4 | -999 | PSF-weighted fraction of pixels totally unmasked for g filter stack detection.   |
| <b>gpsfChi<br/>Sq</b>      | dimens<br>ionless            | REAL   | 4 | -999 | Reduced chi squared value of the PSF model fit for g filter stack detection.   |
| <b>gmome<br/>ntXX</b>      | arcsec<br>^2                 | REAL   | 4 | -999 | Second moment M <sub>xx</sub> for g filter stack detection.  |
| <b>gmome<br/>ntXY</b>      | arcsec<br>^2                 | REAL   | 4 | -999 | Second moment M <sub>xy</sub> for g filter stack detection.  |
| <b>gmome<br/>ntYY</b>      | arcsec<br>^2                 | REAL   | 4 | -999 | Second moment M <sub>yy</sub> for g filter stack detection.  |
| <b>gmome<br/>ntR1</b>      | arcsec                       | REAL   | 4 | -999 | First radial moment for g filter stack detection.  |
| <b>gmome<br/>ntRH</b>      | arcsec<br>^0.5               | REAL   | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting) for g filter stack detection.  |
| <b>gPSFFI<br/>ux</b>       | Janskys                      | REAL   | 4 | -999 | PSF flux from g filter stack detection.  |
| <b>gPSFFI<br/>uxErr</b>    | Janskys                      | REAL   | 4 | -999 | Error in PSF flux from g filter stack detection.   |
| <b>gApFlux</b>             | Janskys                      | REAL   | 4 | -999 | Aperture flux from g filter stack detection.   |
| <b>gApFlux<br/>Err</b>     | Janskys                      | REAL   | 4 | -999 | Error in aperture flux from g filter stack detection.  |
| <b>gApFillF<br/>ac</b>     | dimens<br>ionless            | REAL   | 4 | -999 | Aperture fill factor from g filter stack detection.  |
| <b>gApRad<br/>ius</b>      | arcsec                       | REAL   | 4 | -999 | Aperture radius for g filter stack detection.  |
| <b>gKronFl<br/>ux</b>      | Janskys                      | REAL   | 4 | -999 | Kron (1980) flux from g filter stack detection.  |
| <b>gKronFl<br/>uxErr</b>   | Janskys                      | REAL   | 4 | -999 | Error in Kron (1980) flux from g filter stack detection.   |
| <b>gKronR<br/>ad</b>       | arcsec                       | REAL   | 4 | -999 | Kron (1980) radius from g filter stack detection.  |
| <b>gexpTi<br/>me</b>       | seconds                      | REAL   | 4 | -999 | Exposure time of the g filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>gExtNSi<br/>gma</b>     | dimens<br>ionless            | REAL   | 4 | -999 | An extendedness measure for the g filter stack detection based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty. |
| <b>gsky</b>                | Jansky<br>s<br>/arcsec<br>^2 | REAL   | 4 | -999 | Residual background sky level at the g filter stack detection.   |
| <b>gskyErr</b>             | Jansky<br>s<br>/arcsec<br>^2 | REAL   | 4 | -999 | Error in residual background sky level at the g filter stack detection.  |
| <b>gzp</b>                 | magnit<br>udes               | REAL   | 4 | 0    | Photometric zeropoint for the g filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.                                     |
| <b>gPlateS<br/>cale</b>    | arcsec<br>/pixel             | REAL   | 4 | 0    | Local plate scale for the g filter stack.  |
| <b>rippDet<br/>ectID</b>   | dimens<br>ionless            | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>rstackD<br/>etectID</b> | dimens<br>ionless            | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>rstackI<br/>magelD</b>  | dimens<br>ionless            | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.  |
| <b>rxPos</b>               | sky<br>pixels                | REAL   | 4 | -999 | PSF x center location from r filter stack detection.   |
| <b>ryPos</b>               | sky<br>pixels                | REAL   | 4 | -999 | PSF y center location from r filter stack detection.   |
| <b>rxPosErr</b>            | sky<br>pixels                | REAL   | 4 | -999 | Error in PSF x center location from r filter stack detection.  |

|                       |                               |      |   |      |  |
|-----------------------|-------------------------------|------|---|------|--|
| <b>ryPosErr</b>       | sky pixels                    | REAL | 4 | -999 | Error in PSF y center location from r filter stack detection.  |
| <b>rpsfMajorFWHM</b>  | arcsec                        | REAL | 4 | -999 | PSF major axis FWHM from r filter stack detection.   |
| <b>rpsfMinorFWHM</b>  | arcsec                        | REAL | 4 | -999 | PSF minor axis FWHM from r filter stack detection.   |
| <b>rpsfTheta</b>      | degrees                       | REAL | 4 | -999 | PSF major axis orientation from r filter stack detection.  |
| <b>rpsfCore</b>       | dimensionless                 | REAL | 4 | -999 | PSF core parameter k from r filter stack detection, where $F = F_0 / (1 + k r^2 + r^3.33)$ .   |
| <b>rpsfLikelihood</b> | dimensionless                 | REAL | 4 | -999 | Likelihood that this r filter stack detection is best fit by a PSF.  |
| <b>rpsfQf</b>         | dimensionless                 | REAL | 4 | -999 | PSF coverage factor for r filter stack detection.  |
| <b>rpsfQfPercent</b>  | dimensionless                 | REAL | 4 | -999 | PSF-weighted fraction of pixels totally unmasked for r filter stack detection.   |
| <b>rpsfChiSq</b>      | dimensionless                 | REAL | 4 | -999 | Reduced chi squared value of the PSF model fit for r filter stack detection.   |
| <b>rmomentXX</b>      | arcsec <sup>2</sup>           | REAL | 4 | -999 | Second moment M <sub>xx</sub> for r filter stack detection.  |
| <b>rmomentXY</b>      | arcsec <sup>2</sup>           | REAL | 4 | -999 | Second moment M <sub>xy</sub> for r filter stack detection.  |
| <b>rmomentYY</b>      | arcsec <sup>2</sup>           | REAL | 4 | -999 | Second moment M <sub>yy</sub> for r filter stack detection.  |
| <b>rmomentR1</b>      | arcsec                        | REAL | 4 | -999 | First radial moment for r filter stack detection.  |
| <b>rmomentRH</b>      | arcsec <sup>0.5</sup>         | REAL | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting) for r filter stack detection.  |
| <b>rPSFFlux</b>       | Janskys                       | REAL | 4 | -999 | PSF flux from r filter stack detection.  |
| <b>rPSFFluxErr</b>    | Janskys                       | REAL | 4 | -999 | Error in PSF flux from r filter stack detection.   |
| <b>rApFlux</b>        | Janskys                       | REAL | 4 | -999 | Aperture flux from r filter stack detection.   |
| <b>rApFluxErr</b>     | Janskys                       | REAL | 4 | -999 | Error in aperture flux from r filter stack detection.  |
| <b>rApFillFactor</b>  | dimensionless                 | REAL | 4 | -999 | Aperture fill factor from r filter stack detection.  |
| <b>rApRadius</b>      | arcsec                        | REAL | 4 | -999 | Aperture radius for r filter stack detection.  |
| <b>rKronFlux</b>      | Janskys                       | REAL | 4 | -999 | Kron (1980) flux from r filter stack detection.  |
| <b>rKronFluxErr</b>   | Janskys                       | REAL | 4 | -999 | Error in Kron (1980) flux from r filter stack detection.   |
| <b>rKronRadius</b>    | arcsec                        | REAL | 4 | -999 | Kron (1980) radius from r filter stack detection.  |
| <b>rexpTime</b>       | seconds                       | REAL | 4 | -999 | Exposure time of the r filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>rExtNSigma</b>     | dimensionless                 | REAL | 4 | -999 | An extendedness measure for the r filter stack detection based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty. |
| <b>rsky</b>           | Janskys / arcsec <sup>2</sup> | REAL | 4 | -999 | Residual background sky level at the r filter stack detection.   |
| <b>rskyErr</b>        | Janskys / arcsec <sup>2</sup> | REAL | 4 | -999 | Error in residual background sky level at the r filter stack detection.  |
| <b>rzp</b>            | magnitudes                    | REAL | 4 | 0    | Photometric zeropoint for the r filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.                                     |
| <b>rPlateScale</b>    | arcsec / pixel                | REAL | 4 | 0    | Local plate scale for the r filter stack.  |

|                       |                       |        |   |      |  |
|-----------------------|-----------------------|--------|---|------|--|
| <b>iippDetectID</b>   | dimensionless         | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>istackDetectID</b> | dimensionless         | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>istackImageID</b>  | dimensionless         | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.  |
| <b>ixPos</b>          | sky pixels            | REAL   | 4 | -999 | PSF x center location from i filter stack detection.   |
| <b>iyPos</b>          | sky pixels            | REAL   | 4 | -999 | PSF y center location from i filter stack detection.   |
| <b>ixPosErr</b>       | sky pixels            | REAL   | 4 | -999 | Error in PSF x center location from i filter stack detection.  |
| <b>iyPosErr</b>       | sky pixels            | REAL   | 4 | -999 | Error in PSF y center location from i filter stack detection.  |
| <b>ipsfMajorFWHM</b>  | arcsec                | REAL   | 4 | -999 | PSF major axis FWHM from i filter stack detection.   |
| <b>ipsfMinorFWHM</b>  | arcsec                | REAL   | 4 | -999 | PSF minor axis FWHM from i filter stack detection.   |
| <b>ipsfTheta</b>      | degrees               | REAL   | 4 | -999 | PSF major axis orientation from i filter stack detection.  |
| <b>ipsfCore</b>       | dimensionless         | REAL   | 4 | -999 | PSF core parameter k from i filter stack detection, where $F = F_0 / (1 + k r^2 + r^3.33)$ .   |
| <b>ipsfLikelihood</b> | dimensionless         | REAL   | 4 | -999 | Likelihood that this i filter stack detection is best fit by a PSF.  |
| <b>ipsfQf</b>         | dimensionless         | REAL   | 4 | -999 | PSF coverage factor for i filter stack detection.  |
| <b>ipsfQFPEffect</b>  | dimensionless         | REAL   | 4 | -999 | PSF-weighted fraction of pixels totally unmasked for i filter stack detection.   |
| <b>ipsfChiSq</b>      | dimensionless         | REAL   | 4 | -999 | Reduced chi squared value of the PSF model fit for i filter stack detection.   |
| <b>imomentXX</b>      | arcsec <sup>2</sup>   | REAL   | 4 | -999 | Second moment M <sub>xx</sub> for i filter stack detection.  |
| <b>imomentXY</b>      | arcsec <sup>2</sup>   | REAL   | 4 | -999 | Second moment M <sub>xy</sub> for i filter stack detection.  |
| <b>imomentYY</b>      | arcsec <sup>2</sup>   | REAL   | 4 | -999 | Second moment M <sub>yy</sub> for i filter stack detection.  |
| <b>imomentR1</b>      | arcsec                | REAL   | 4 | -999 | First radial moment for i filter stack detection.  |
| <b>imomentRH</b>      | arcsec <sup>0.5</sup> | REAL   | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting) for i filter stack detection.  |
| <b>iPSFFlux</b>       | Janskys               | REAL   | 4 | -999 | PSF flux from i filter stack detection.  |
| <b>iPSFFluxErr</b>    | Janskys               | REAL   | 4 | -999 | Error in PSF flux from i filter stack detection.   |
| <b>iApFlux</b>        | Janskys               | REAL   | 4 | -999 | Aperture flux from i filter stack detection.   |
| <b>iApFluxErr</b>     | Janskys               | REAL   | 4 | -999 | Error in aperture flux from i filter stack detection.  |
| <b>iApFillFactor</b>  | dimensionless         | REAL   | 4 | -999 | Aperture fill factor from i filter stack detection.  |
| <b>iApRadius</b>      | arcsec                | REAL   | 4 | -999 | Aperture radius for i filter stack detection.  |
| <b>iKronFlux</b>      | Janskys               | REAL   | 4 | -999 | Kron (1980) flux from i filter stack detection.  |
| <b>iKronFluxErr</b>   | Janskys               | REAL   | 4 | -999 | Error in Kron (1980) flux from i filter stack detection.   |
| <b>iKronRadius</b>    | arcsec                | REAL   | 4 | -999 | Kron (1980) radius from i filter stack detection.  |
| <b>iexpTime</b>       | seconds               | REAL   | 4 | -999 | Exposure time of the i filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>iExtNSigma</b>     | dimensionless         | REAL   | 4 | -999 | An extendedness measure for the i filter stack detection based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty. |

|                       |                              |        |   |      |  |
|-----------------------|------------------------------|--------|---|------|--|
| <b>isky</b>           | Janskys /arcsec <sup>2</sup> | REAL   | 4 | -999 | Residual background sky level at the i filter stack detection.   |
| <b>iskyErr</b>        | Janskys /arcsec <sup>2</sup> | REAL   | 4 | -999 | Error in residual background sky level at the i filter stack detection.  |
| <b>izp</b>            | magnitudes                   | REAL   | 4 | 0    | Photometric zeropoint for the i filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts. |
| <b>iPlateScale</b>    | arcsec/pixel                 | REAL   | 4 | 0    | Local plate scale for the i filter stack.  |
| <b>zippDetectID</b>   | dimensionless                | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>zstackDetectID</b> | dimensionless                | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>zstackImageID</b>  | dimensionless                | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.  |
| <b>zxPos</b>          | sky pixels                   | REAL   | 4 | -999 | PSF x center location from z filter stack detection.   |
| <b>zyPos</b>          | sky pixels                   | REAL   | 4 | -999 | PSF y center location from z filter stack detection.   |
| <b>zxPosErr</b>       | sky pixels                   | REAL   | 4 | -999 | Error in PSF x center location from z filter stack detection.  |
| <b>zyPosErr</b>       | sky pixels                   | REAL   | 4 | -999 | Error in PSF y center location from z filter stack detection.  |
| <b>zpsfMajorFWHM</b>  | arcsec                       | REAL   | 4 | -999 | PSF major axis FWHM from z filter stack detection.   |
| <b>zpsfMinorFWHM</b>  | arcsec                       | REAL   | 4 | -999 | PSF minor axis FWHM from z filter stack detection.   |
| <b>zpsfTheta</b>      | degrees                      | REAL   | 4 | -999 | PSF major axis orientation from z filter stack detection.  |
| <b>zpsfCore</b>       | dimensionless                | REAL   | 4 | -999 | PSF core parameter k from z filter stack detection, where $F = F_0 / (1 + k r^2 + r^3.33)$ .                                     |
| <b>zpsfLikelihood</b> | dimensionless                | REAL   | 4 | -999 | Likelihood that this z filter stack detection is best fit by a PSF.  |
| <b>zpsfQf</b>         | dimensionless                | REAL   | 4 | -999 | PSF coverage factor for z filter stack detection.  |
| <b>zpsfQfPercent</b>  | dimensionless                | REAL   | 4 | -999 | PSF-weighted fraction of pixels totally unmasked for z filter stack detection.   |
| <b>zpsfChiSq</b>      | dimensionless                | REAL   | 4 | -999 | Reduced chi squared value of the PSF model fit for z filter stack detection.   |
| <b>zmomentXX</b>      | arcsec <sup>2</sup>          | REAL   | 4 | -999 | Second moment M <sub>xx</sub> for z filter stack detection.  |
| <b>zmomentXY</b>      | arcsec <sup>2</sup>          | REAL   | 4 | -999 | Second moment M <sub>xy</sub> for z filter stack detection.  |
| <b>zmomentYY</b>      | arcsec <sup>2</sup>          | REAL   | 4 | -999 | Second moment M <sub>yy</sub> for z filter stack detection.  |
| <b>zmomentR1</b>      | arcsec                       | REAL   | 4 | -999 | First radial moment for z filter stack detection.  |
| <b>zmomentRH</b>      | arcsec <sup>0.5</sup>        | REAL   | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting) for z filter stack detection.  |
| <b>zPSFFlux</b>       | Janskys                      | REAL   | 4 | -999 | PSF flux from z filter stack detection.  |
| <b>zPSFFluxErr</b>    | Janskys                      | REAL   | 4 | -999 | Error in PSF flux from z filter stack detection.   |
| <b>zApFlux</b>        | Janskys                      | REAL   | 4 | -999 | Aperture flux from z filter stack detection.   |
| <b>zApFluxErr</b>     | Janskys                      | REAL   | 4 | -999 | Error in aperture flux from z filter stack detection.  |
| <b>zApFillFactor</b>  | dimensionless                | REAL   | 4 | -999 | Aperture fill factor from z filter stack detection.  |

|                       |                               |        |   |      |  |
|-----------------------|-------------------------------|--------|---|------|--|
| <b>zApRadius</b>      | arcsec                        | REAL   | 4 | -999 | Aperture radius for z filter stack detection.  |
| <b>zKronFlux</b>      | Janskys                       | REAL   | 4 | -999 | Kron (1980) flux from z filter stack detection.  |
| <b>zKronFluxErr</b>   | Janskys                       | REAL   | 4 | -999 | Error in Kron (1980) flux from z filter stack detection.   |
| <b>zKronRad</b>       | arcsec                        | REAL   | 4 | -999 | Kron (1980) radius from z filter stack detection.  |
| <b>zexpTime</b>       | seconds                       | REAL   | 4 | -999 | Exposure time of the z filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>zExtNSigma</b>     | dimensionless                 | REAL   | 4 | -999 | An extendedness measure for the z filter stack detection based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty. |
| <b>zsky</b>           | Janskys / arcsec <sup>2</sup> | REAL   | 4 | -999 | Residual background sky level at the z filter stack detection.   |
| <b>zskyErr</b>        | Janskys / arcsec <sup>2</sup> | REAL   | 4 | -999 | Error in residual background sky level at the z filter stack detection.  |
| <b>zpz</b>            | magnitudes                    | REAL   | 4 | 0    | Photometric zeropoint for the z filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.                                     |
| <b>zPlateScale</b>    | arcsec / pixel                | REAL   | 4 | 0    | Local plate scale for the z filter stack.  |
| <b>yippDetectID</b>   | dimensionless                 | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>ystackDetectID</b> | dimensionless                 | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>ystackImageID</b>  | dimensionless                 | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.  |
| <b>yxPos</b>          | sky pixels                    | REAL   | 4 | -999 | PSF x center location from y filter stack detection.   |
| <b>yyPos</b>          | sky pixels                    | REAL   | 4 | -999 | PSF y center location from y filter stack detection.   |
| <b>yxPosErr</b>       | sky pixels                    | REAL   | 4 | -999 | Error in PSF x center location from y filter stack detection.  |
| <b>yyPosErr</b>       | sky pixels                    | REAL   | 4 | -999 | Error in PSF y center location from y filter stack detection.  |
| <b>ypsfMajorFWHM</b>  | arcsec                        | REAL   | 4 | -999 | PSF major axis FWHM from y filter stack detection.   |
| <b>ypsfMinorFWHM</b>  | arcsec                        | REAL   | 4 | -999 | PSF minor axis FWHM from y filter stack detection.   |
| <b>ypsfTheta</b>      | degrees                       | REAL   | 4 | -999 | PSF major axis orientation from y filter stack detection.  |
| <b>ypsfCore</b>       | dimensionless                 | REAL   | 4 | -999 | PSF core parameter k from y filter stack detection, where $F = F_0 / (1 + k r^2 + r^3.33)$ .   |
| <b>ypsfLikelihood</b> | dimensionless                 | REAL   | 4 | -999 | Likelihood that this y filter stack detection is best fit by a PSF.  |
| <b>ypsfQf</b>         | dimensionless                 | REAL   | 4 | -999 | PSF coverage factor for y filter stack detection.  |
| <b>ypsfQfPercent</b>  | dimensionless                 | REAL   | 4 | -999 | PSF-weighted fraction of pixels totally unmasked for y filter stack detection.   |
| <b>ypsfChiSq</b>      | dimensionless                 | REAL   | 4 | -999 | Reduced chi squared value of the PSF model fit for y filter stack detection.   |
| <b>ymomentXX</b>      | arcsec <sup>2</sup>           | REAL   | 4 | -999 | Second moment M <sub>xx</sub> for y filter stack detection.  |
| <b>ymomentXY</b>      | arcsec <sup>2</sup>           | REAL   | 4 | -999 | Second moment M <sub>xy</sub> for y filter stack detection.  |
| <b>ymomentYY</b>      | arcsec <sup>2</sup>           | REAL   | 4 | -999 | Second moment M <sub>yy</sub> for y filter stack detection.  |



|                     |                             |      |   |      |  |
|---------------------|-----------------------------|------|---|------|--|
| <b>ymomentR1</b>    | arcsec                      | REAL | 4 | -999 | First radial moment for y filter stack detection.  |
| <b>ymomentRH</b>    | arcsec <sup>0.5</sup>       | REAL | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting) for y filter stack detection.  |
| <b>yPSFFlux</b>     | Janskys                     | REAL | 4 | -999 | PSF flux from y filter stack detection.  |
| <b>yPSFFluxErr</b>  | Janskys                     | REAL | 4 | -999 | Error in PSF flux from y filter stack detection.   |
| <b>yApFlux</b>      | Janskys                     | REAL | 4 | -999 | Aperture flux from y filter stack detection.   |
| <b>yApFluxErr</b>   | Janskys                     | REAL | 4 | -999 | Error in aperture flux from y filter stack detection.  |
| <b>yApFillFac</b>   | dimensionless               | REAL | 4 | -999 | Aperture fill factor from y filter stack detection.  |
| <b>yApRadius</b>    | arcsec                      | REAL | 4 | -999 | Aperture radius for y filter stack detection.  |
| <b>yKronFlux</b>    | Janskys                     | REAL | 4 | -999 | Kron (1980) flux from y filter stack detection.  |
| <b>yKronFluxErr</b> | Janskys                     | REAL | 4 | -999 | Error in Kron (1980) flux from y filter stack detection.   |
| <b>yKronRad</b>     | arcsec                      | REAL | 4 | -999 | Kron (1980) radius from y filter stack detection.  |
| <b>yexpTime</b>     | seconds                     | REAL | 4 | -999 | Exposure time of the y filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>yExtNSigma</b>   | dimensionless               | REAL | 4 | -999 | An extendedness measure for the y filter stack detection based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty. |
| <b>ysky</b>         | Janskys/arcsec <sup>2</sup> | REAL | 4 | -999 | Residual background sky level at the y filter stack detection.   |
| <b>yskyErr</b>      | Janskys/arcsec <sup>2</sup> | REAL | 4 | -999 | Error in residual background sky level at the y filter stack detection.  |
| <b>yzp</b>          | magnitudes                  | REAL | 4 | 0    | Photometric zeropoint for the y filter stack. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.                                     |
| <b>yPlateScale</b>  | arcsec/pixel                | REAL | 4 | 0    | Local plate scale for the y filter stack.  |

## StackApFlx

**Description:** Contains the unconvolved fluxes within the SDSS R5 ( $r = 3.00$  arcsec), R6 ( $r = 4.63$  arcsec), and R7 ( $r = 7.43$  arcsec) apertures (Stoughton 2003). Convolved fluxes within these same apertures are also provided for images convolved to 6 sky pixels (1.5 arcsec) and 8 sky pixels (2.0 arcsec). All filters are matched into a single row. See StackObjectThin table for discussion of primary, secondary, and best detections. References: Stoughton, C., Lupton, R. H., Bernardi, M., et al. 2003, AJ, 123, 485.

| Name                    | Unit          | Data Type | Size | Default Value | Description  |
|-------------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.                                  |
| <b>uniquePspSTid</b>    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.                     |
| <b>ippObjID</b>         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                            |
| <b>randomStackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one. |
| <b>primaryDetection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.     |

|                          |               |         |   |      |   |
|--------------------------|---------------|---------|---|------|---|
| <b>bestDetection</b>     | dimensionless | TINYINT | 1 | 255  | Identifies if this row is the best detection.   |
| <b>gstackDetectionID</b> | dimensionless | BIGINT  | 8 | NA   | Unique stack detection identifier.  |
| <b>gstackImageID</b>     | dimensionless | BIGINT  | 8 | NA   | Unique stack identifier for g filter detection.   |
| <b>gippDetectionID</b>   | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |
| <b>gflxR5</b>            | Janskys       | REAL    | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>gflxR5Err</b>         | Janskys       | REAL    | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>gflxR5Std</b>         | Janskys       | REAL    | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>gflxR5Fill</b>        | dimensionless | REAL    | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>gflxR6</b>            | Janskys       | REAL    | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>gflxR6Err</b>         | Janskys       | REAL    | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>gflxR6Std</b>         | Janskys       | REAL    | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>gflxR6Fill</b>        | dimensionless | REAL    | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>gflxR7</b>            | Janskys       | REAL    | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>gflxR7Err</b>         | Janskys       | REAL    | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>gflxR7Std</b>         | Janskys       | REAL    | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>gflxR7Fill</b>        | dimensionless | REAL    | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>gc6flxR5</b>          | Janskys       | REAL    | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>gc6flxR5Err</b>       | Janskys       | REAL    | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>gc6flxR5Std</b>       | Janskys       | REAL    | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>gc6flxR5Fill</b>      | dimensionless | REAL    | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>gc6flxR6</b>          | Janskys       | REAL    | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>gc6flxR6Err</b>       | Janskys       | REAL    | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>gc6flxR6Std</b>       | Janskys       | REAL    | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>gc6flxR6Fill</b>      | dimensionless | REAL    | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>gc6flxR7</b>          | Janskys       | REAL    | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>gc6flxR7Err</b>       | Janskys       | REAL    | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>gc6flxR7Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>gc6flxR7Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>gc8flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>gc8flxR5Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>gc8flxR5Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>gc8flxR5Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>gc8flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>gc8flxR6Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>gc8flxR6Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>gc8flxR6Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>gc8flxR7</b>       | Janskys       | REAL   | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>gc8flxR7Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>gc8flxR7Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>gc8flxR7Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>rstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.   |
| <b>rippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>rflxR5</b>         | Janskys       | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>rflxR5Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>rflxR5Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>rflxR5Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>rflxR6</b>         | Janskys       | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>rflxR6Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>rflxR6Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>rflxR6Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 4.63$ arcsec.   |

|                     |               |      |   |      |   |
|---------------------|---------------|------|---|------|---|
| <b>rflxR7</b>       | Janskys       | REAL | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>rflxR7Err</b>    | Janskys       | REAL | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>rflxR7Std</b>    | Janskys       | REAL | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>rflxR7Fill</b>   | dimensionless | REAL | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>rc6flxR5</b>     | Janskys       | REAL | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>rc6flxR5Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>rc6flxR5Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>rc6flxR5Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>rc6flxR6</b>     | Janskys       | REAL | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>rc6flxR6Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>rc6flxR6Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>rc6flxR6Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>rc6flxR7</b>     | Janskys       | REAL | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>rc6flxR7Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>rc6flxR7Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>rc6flxR7Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>rc8flxR5</b>     | Janskys       | REAL | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>rc8flxR5Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>rc8flxR5Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>rc8flxR5Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>rc8flxR6</b>     | Janskys       | REAL | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>rc8flxR6Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>rc8flxR6Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec. |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>rc8flxR6 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>rc8flxR7</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>rc8flxR7 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>rc8flxR7 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>rc8flxR7 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.   |
| <b>iippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>iflxR5</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>iflxR5Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>iflxR5Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>iflxR5Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>iflxR6</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>iflxR6Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>iflxR6Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>iflxR6Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>iflxR7</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>iflxR7Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>iflxR7Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>iflxR7Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>ic6flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>ic6flxR5 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>ic6flxR5 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>ic6flxR5 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>ic6flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>ic6flxR6 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>ic6flxR6 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>ic6flxR6 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>ic6flxR7</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>ic6flxR7 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>ic6flxR7 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>ic6flxR7 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>ic8flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>ic8flxR5 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>ic8flxR5 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>ic8flxR5 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>ic8flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>ic8flxR6 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>ic8flxR6 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>ic8flxR6 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>ic8flxR7</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>ic8flxR7 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>ic8flxR7 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>ic8flxR7 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.   |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zflxR5</b>         | Janskys       | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>zflxR5Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>zflxR5Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 3.00$ arcsec.  |

|                     |               |      |   |      |   |
|---------------------|---------------|------|---|------|---|
| <b>zflxR5Fill</b>   | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>zflxR6</b>       | Janskys       | REAL | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>zflxR6Err</b>    | Janskys       | REAL | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>zflxR6Std</b>    | Janskys       | REAL | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>zflxR6Fill</b>   | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>zflxR7</b>       | Janskys       | REAL | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>zflxR7Err</b>    | Janskys       | REAL | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>zflxR7Std</b>    | Janskys       | REAL | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>zflxR7Fill</b>   | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>zc6flxR5</b>     | Janskys       | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>zc6flxR5Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>zc6flxR5Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>zc6flxR5Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>zc6flxR6</b>     | Janskys       | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>zc6flxR6Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>zc6flxR6Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>zc6flxR6Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>zc6flxR7</b>     | Janskys       | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>zc6flxR7Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>zc6flxR7Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>zc6flxR7Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>zc8flxR5</b>     | Janskys       | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>zc8flxR5Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>zc8flxR5Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>zc8flxR5Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |

|                          |               |        |   |      |   |
|--------------------------|---------------|--------|---|------|---|
| <b>zc8flxR6</b>          | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>zc8flxR6 Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>zc8flxR6 Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>zc8flxR6 Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>zc8flxR7</b>          | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>zc8flxR7 Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>zc8flxR7 Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>zc8flxR7 Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>ystackDetectionID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackImageID</b>     | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.   |
| <b>yippDetectionID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>yflxR5</b>            | Janskys       | REAL   | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>yflxR5Err</b>         | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>yflxR5Std</b>         | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>yflxR5Fill</b>        | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 3.00$ arcsec.   |
| <b>yflxR6</b>            | Janskys       | REAL   | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>yflxR6Err</b>         | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>yflxR6Std</b>         | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>yflxR6Fill</b>        | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 4.63$ arcsec.   |
| <b>yflxR7</b>            | Janskys       | REAL   | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>yflxR7Err</b>         | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>yflxR7Std</b>         | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>yflxR7Fill</b>        | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 7.43$ arcsec.   |
| <b>yc6flxR5</b>          | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>yc6flxR5 Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>yc6flxR5 Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec. |



|                          |                   |      |   |      |   |
|--------------------------|-------------------|------|---|------|---|
| <b>yc6flxR5<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>yc6flxR6</b>          | Janskys           | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>yc6flxR6<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>yc6flxR6<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>yc6flxR6<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>yc6flxR7</b>          | Janskys           | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>yc6flxR7<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>yc6flxR7<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>yc6flxR7<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |
| <b>yc8flxR5</b>          | Janskys           | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>yc8flxR5<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>yc8flxR5<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>yc8flxR5<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |
| <b>yc8flxR6</b>          | Janskys           | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                       |
| <b>yc8flxR6<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.              |
| <b>yc8flxR6<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec. |
| <b>yc8flxR6<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.        |
| <b>yc8flxR7</b>          | Janskys           | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                       |
| <b>yc8flxR7<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.              |
| <b>yc8flxR7<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec. |
| <b>yc8flxR7<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.        |

StackApFlxExGalUnc

**Description:** Contains the unconvolved fluxes within the SDSS R3 ( $r = 1.03$  arcsec), R4 ( $r = 1.76$  arcsec), R5 ( $r = 3.00$  arcsec), R6 ( $r = 4.63$  arcsec), R7 ( $r = 7.43$  arcsec), R8 ( $r = 11.42$  arcsec), R9 ( $r = 18.20$  arcsec), R10 ( $r = 28.20$  arcsec), and R11 ( $r = 44.21$  arcsec) apertures (Stoughton 2003) for extended sources. These measurements are only provided for objects in the extragalactic sky, i.e., they are not provided for objects in the Galactic plane because they are not useful in crowded areas. See StackObjectThin table for discussion of primary, secondary, and best detections. References: Stoughton, C., Lupton, R. H., Bernardi, M., et al. 2003, AJ, 123, 485.

| Name             | Unit          | Data Type | Size | Default Value | Description  |
|------------------|---------------|-----------|------|---------------|--|
| objID            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.  |
| uniquePsp sSTid  | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.   |
| ippObjID         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.  |
| randomStackObjID | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.   |
| primaryDetection | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.   |
| bestDetection    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.  |
| gippDetectID     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.   |
| gstackDetectID   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.   |
| gstackImageID    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.  |
| gflxR3           | Janskys       | REAL      | 4    | -999          | Flux from g filter detection within an aperture of radius $r = 1.03$ arcsec.                       |
| gflxR3Err        | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection within an aperture of radius $r = 1.03$ arcsec.              |
| gflxR3Std        | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection within an aperture of radius $r = 1.03$ arcsec. |
| gflxR3Fill       | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection within an aperture of radius $r = 1.03$ arcsec.        |
| gflxR4           | Janskys       | REAL      | 4    | -999          | Flux from g filter detection within an aperture of radius $r = 1.76$ arcsec.                       |
| gflxR4Err        | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection within an aperture of radius $r = 1.76$ arcsec.              |
| gflxR4Std        | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection within an aperture of radius $r = 1.76$ arcsec. |
| gflxR4Fill       | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection within an aperture of radius $r = 1.76$ arcsec.        |
| gflxR5           | Janskys       | REAL      | 4    | -999          | Flux from g filter detection within an aperture of radius $r = 3.00$ arcsec.                       |
| gflxR5Err        | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection within an aperture of radius $r = 3.00$ arcsec.              |
| gflxR5Std        | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection within an aperture of radius $r = 3.00$ arcsec. |
| gflxR5Fill       | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection within an aperture of radius $r = 3.00$ arcsec.        |
| gflxR6           | Janskys       | REAL      | 4    | -999          | Flux from g filter detection within an aperture of radius $r = 4.63$ arcsec.                       |
| gflxR6Err        | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection within an aperture of radius $r = 4.63$ arcsec.              |
| gflxR6Std        | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection within an aperture of radius $r = 4.63$ arcsec. |
| gflxR6Fill       | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection within an aperture of radius $r = 4.63$ arcsec.        |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>gflxR7</b>         | Janskys       | REAL   | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>gflxR7Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 7.43$ arcsec.               |
| <b>gflxR7Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>gflxR7Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 7.43$ arcsec.         |
| <b>gflxR8</b>         | Janskys       | REAL   | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>gflxR8Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 11.42$ arcsec.              |
| <b>gflxR8Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 11.42$ arcsec. |
| <b>gflxR8Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 11.42$ arcsec.        |
| <b>gflxR9</b>         | Janskys       | REAL   | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>gflxR9Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 18.20$ arcsec.              |
| <b>gflxR9Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 18.20$ arcsec. |
| <b>gflxR9Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 18.20$ arcsec.        |
| <b>gflxR10</b>        | Janskys       | REAL   | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>gflxR10Err</b>     | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 28.20$ arcsec.              |
| <b>gflxR10Std</b>     | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 28.20$ arcsec. |
| <b>gflxR10Fill</b>    | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 28.20$ arcsec.        |
| <b>gflxR11</b>        | Janskys       | REAL   | 4 | -999 | Flux from g filter detection within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>gflxR11Err</b>     | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection within an aperture of radius $r = 44.21$ arcsec.              |
| <b>gflxR11Std</b>     | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection within an aperture of radius $r = 44.21$ arcsec. |
| <b>gflxR11Fill</b>    | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection within an aperture of radius $r = 44.21$ arcsec.        |
| <b>rippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>rstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.   |
| <b>rflxR3</b>         | Janskys       | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>rflxR3Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 1.03$ arcsec.               |
| <b>rflxR3Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 1.03$ arcsec.  |
| <b>rflxR3Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 1.03$ arcsec.         |
| <b>rflxR4</b>         | Janskys       | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>rflxR4Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 1.76$ arcsec.               |
| <b>rflxR4Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 1.76$ arcsec.  |

|                     |                   |        |   |      |   |
|---------------------|-------------------|--------|---|------|---|
| <b>rflxR4Fill</b>   | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 1.76$ arcsec.         |
| <b>rflxR5</b>       | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>rflxR5Err</b>    | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 3.00$ arcsec.               |
| <b>rflxR5Std</b>    | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>rflxR5Fill</b>   | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 3.00$ arcsec.         |
| <b>rflxR6</b>       | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>rflxR6Err</b>    | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 4.63$ arcsec.               |
| <b>rflxR6Std</b>    | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>rflxR6Fill</b>   | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 4.63$ arcsec.         |
| <b>rflxR7</b>       | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>rflxR7Err</b>    | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 7.43$ arcsec.               |
| <b>rflxR7Std</b>    | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>rflxR7Fill</b>   | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 7.43$ arcsec.         |
| <b>rflxR8</b>       | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>rflxR8Err</b>    | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 11.42$ arcsec.              |
| <b>rflxR8Std</b>    | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 11.42$ arcsec. |
| <b>rflxR8Fill</b>   | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 11.42$ arcsec.        |
| <b>rflxR9</b>       | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>rflxR9Err</b>    | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 18.20$ arcsec.              |
| <b>rflxR9Std</b>    | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 18.20$ arcsec. |
| <b>rflxR9Fill</b>   | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 18.20$ arcsec.        |
| <b>rflxR10</b>      | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>rflxR10Err</b>   | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 28.20$ arcsec.              |
| <b>rflxR10Std</b>   | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 28.20$ arcsec. |
| <b>rflxR10Fill</b>  | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 28.20$ arcsec.        |
| <b>rflxR11</b>      | Janskys           | REAL   | 4 | -999 | Flux from r filter detection within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>rflxR11Err</b>   | Janskys           | REAL   | 4 | -999 | Error in flux from r filter detection within an aperture of radius $r = 44.21$ arcsec.              |
| <b>rflxR11Std</b>   | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from r filter detection within an aperture of radius $r = 44.21$ arcsec. |
| <b>rflxR11Fill</b>  | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for r filter detection within an aperture of radius $r = 44.21$ arcsec.        |
| <b>iippDetectID</b> | dimensi<br>onless | BIGINT | 8 | NA   | IPP internal detection identifier.  |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.   |
| <b>iflxR3</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>iflxR3Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 1.03$ arcsec.               |
| <b>iflxR3Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 1.03$ arcsec.  |
| <b>iflxR3Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 1.03$ arcsec.         |
| <b>iflxR4</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>iflxR4Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 1.76$ arcsec.               |
| <b>iflxR4Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 1.76$ arcsec.  |
| <b>iflxR4Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 1.76$ arcsec.         |
| <b>iflxR5</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>iflxR5Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 3.00$ arcsec.               |
| <b>iflxR5Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>iflxR5Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 3.00$ arcsec.         |
| <b>iflxR6</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>iflxR6Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 4.63$ arcsec.               |
| <b>iflxR6Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>iflxR6Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 4.63$ arcsec.         |
| <b>iflxR7</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>iflxR7Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 7.43$ arcsec.               |
| <b>iflxR7Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>iflxR7Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 7.43$ arcsec.         |
| <b>iflxR8</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>iflxR8Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 11.42$ arcsec.              |
| <b>iflxR8Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 11.42$ arcsec. |
| <b>iflxR8Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 11.42$ arcsec.        |
| <b>iflxR9</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>iflxR9Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius $r = 18.20$ arcsec.              |
| <b>iflxR9Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius $r = 18.20$ arcsec. |
| <b>iflxR9Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius $r = 18.20$ arcsec.        |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>iflxR10</b>        | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius r = 28.20 arcsec.                       |
| <b>iflxR10Err</b>     | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius r = 28.20 arcsec.              |
| <b>iflxR10Std</b>     | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius r = 28.20 arcsec. |
| <b>iflxR10Fill</b>    | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius r = 28.20 arcsec.        |
| <b>iflxR11</b>        | Janskys       | REAL   | 4 | -999 | Flux from i filter detection within an aperture of radius r = 44.21 arcsec.                       |
| <b>iflxR11Err</b>     | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection within an aperture of radius r = 44.21 arcsec.              |
| <b>iflxR11Std</b>     | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection within an aperture of radius r = 44.21 arcsec. |
| <b>iflxR11Fill</b>    | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection within an aperture of radius r = 44.21 arcsec.        |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.   |
| <b>zflxR3</b>         | Janskys       | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius r = 1.03 arcsec.                        |
| <b>zflxR3Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius r = 1.03 arcsec.               |
| <b>zflxR3Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius r = 1.03 arcsec.  |
| <b>zflxR3Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius r = 1.03 arcsec.         |
| <b>zflxR4</b>         | Janskys       | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius r = 1.76 arcsec.                        |
| <b>zflxR4Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius r = 1.76 arcsec.               |
| <b>zflxR4Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius r = 1.76 arcsec.  |
| <b>zflxR4Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius r = 1.76 arcsec.         |
| <b>zflxR5</b>         | Janskys       | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius r = 3.00 arcsec.                        |
| <b>zflxR5Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius r = 3.00 arcsec.               |
| <b>zflxR5Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius r = 3.00 arcsec.  |
| <b>zflxR5Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius r = 3.00 arcsec.         |
| <b>zflxR6</b>         | Janskys       | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius r = 4.63 arcsec.                        |
| <b>zflxR6Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius r = 4.63 arcsec.               |
| <b>zflxR6Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius r = 4.63 arcsec.  |
| <b>zflxR6Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius r = 4.63 arcsec.         |
| <b>zflxR7</b>         | Janskys       | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius r = 7.43 arcsec.                        |
| <b>zflxR7Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius r = 7.43 arcsec.               |
| <b>zflxR7Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius r = 7.43 arcsec.  |

|                       |                   |        |   |      |   |
|-----------------------|-------------------|--------|---|------|---|
| <b>zflxR7Fill</b>     | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 7.43$ arcsec.         |
| <b>zflxR8</b>         | Janskys           | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>zflxR8Err</b>      | Janskys           | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 11.42$ arcsec.              |
| <b>zflxR8Std</b>      | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 11.42$ arcsec. |
| <b>zflxR8Fill</b>     | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 11.42$ arcsec.        |
| <b>zflxR9</b>         | Janskys           | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>zflxR9Err</b>      | Janskys           | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 18.20$ arcsec.              |
| <b>zflxR9Std</b>      | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 18.20$ arcsec. |
| <b>zflxR9Fill</b>     | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 18.20$ arcsec.        |
| <b>zflxR10</b>        | Janskys           | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>zflxR10Err</b>     | Janskys           | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 28.20$ arcsec.              |
| <b>zflxR10Std</b>     | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 28.20$ arcsec. |
| <b>zflxR10Fill</b>    | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 28.20$ arcsec.        |
| <b>zflxR11</b>        | Janskys           | REAL   | 4 | -999 | Flux from z filter detection within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>zflxR11Err</b>     | Janskys           | REAL   | 4 | -999 | Error in flux from z filter detection within an aperture of radius $r = 44.21$ arcsec.              |
| <b>zflxR11Std</b>     | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from z filter detection within an aperture of radius $r = 44.21$ arcsec. |
| <b>zflxR11Fill</b>    | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for z filter detection within an aperture of radius $r = 44.21$ arcsec.        |
| <b>yippDetectID</b>   | dimensi<br>onless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>ystackDetectID</b> | dimensi<br>onless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackImageID</b>  | dimensi<br>onless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.   |
| <b>yflxR3</b>         | Janskys           | REAL   | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>yflxR3Err</b>      | Janskys           | REAL   | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 1.03$ arcsec.               |
| <b>yflxR3Std</b>      | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 1.03$ arcsec.  |
| <b>yflxR3Fill</b>     | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 1.03$ arcsec.         |
| <b>yflxR4</b>         | Janskys           | REAL   | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>yflxR4Err</b>      | Janskys           | REAL   | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 1.76$ arcsec.               |
| <b>yflxR4Std</b>      | Janskys           | REAL   | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 1.76$ arcsec.  |
| <b>yflxR4Fill</b>     | dimensi<br>onless | REAL   | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 1.76$ arcsec.         |
| <b>yflxR5</b>         | Janskys           | REAL   | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>yflxR5Err</b>      | Janskys           | REAL   | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 3.00$ arcsec.               |

|                    |               |      |   |      |   |
|--------------------|---------------|------|---|------|---|
| <b>yflxR5Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 3.00$ arcsec.  |
| <b>yflxR5Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 3.00$ arcsec.         |
| <b>yflxR6</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>yflxR6Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 4.63$ arcsec.               |
| <b>yflxR6Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 4.63$ arcsec.  |
| <b>yflxR6Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 4.63$ arcsec.         |
| <b>yflxR7</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>yflxR7Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 7.43$ arcsec.               |
| <b>yflxR7Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 7.43$ arcsec.  |
| <b>yflxR7Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 7.43$ arcsec.         |
| <b>yflxR8</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>yflxR8Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 11.42$ arcsec.              |
| <b>yflxR8Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 11.42$ arcsec. |
| <b>yflxR8Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 11.42$ arcsec.        |
| <b>yflxR9</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>yflxR9Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 18.20$ arcsec.              |
| <b>yflxR9Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 18.20$ arcsec. |
| <b>yflxR9Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 18.20$ arcsec.        |
| <b>yflxR10</b>     | Janskys       | REAL | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>yflxR10Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 28.20$ arcsec.              |
| <b>yflxR10Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 28.20$ arcsec. |
| <b>yflxR10Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 28.20$ arcsec.        |
| <b>yflxR11</b>     | Janskys       | REAL | 4 | -999 | Flux from y filter detection within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>yflxR11Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection within an aperture of radius $r = 44.21$ arcsec.              |
| <b>yflxR11Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection within an aperture of radius $r = 44.21$ arcsec. |
| <b>yflxR11Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection within an aperture of radius $r = 44.21$ arcsec.        |

StackApFlxExGalCon6



**Description:** Contains the fluxes within the SDSS R3 ( $r = 1.03$  arcsec), R4 ( $r = 1.76$  arcsec), R5 ( $r = 3.00$  arcsec), R6 ( $r = 4.63$  arcsec), R7 ( $r = 7.43$  arcsec), R8 ( $r = 11.42$  arcsec), R9 ( $r = 18.20$  arcsec), R10 ( $r = 28.20$  arcsec), and R11 ( $r = 44.21$  arcsec) apertures (Stoughton 2003) for extended sources after the images have been convolved to a target of 6 sky pixels (1.5 arcsec). These measurements are only provided for objects in the extragalactic sky, i.e., they are not provided for objects in the Galactic plane because they are not useful in crowded areas. See StackObjectThin table for discussion of primary, secondary, and best detections. **References:** Stoughton, C., Lupton, R. H., Bernardi, M., et al. 2003, AJ, 123, 485.

| Name                         | Unit          | Data Type | Size | Default Value | Description   |
|------------------------------|---------------|-----------|------|---------------|---|
| <b>objID</b>                 | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.   |
| <b>uniqueP<br/>spsSTid</b>   | dimensionless | BIGINT    | 8    | NA            | Unique internal PPS stack identifier.   |
| <b>ippObjID</b>              | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.   |
| <b>random<br/>StackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.  |
| <b>primary<br/>Detection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.  |
| <b>bestDet<br/>ection</b>    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.   |
| <b>gippDet<br/>ectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |
| <b>gstackD<br/>etectID</b>   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.  |
| <b>gstackI<br/>mageID</b>    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.   |
| <b>gc6flxR3</b>              | Janskys       | REAL      | 4    | -999          | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.                       |
| <b>gc6flxR3Err</b>           | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.              |
| <b>gc6flxR3Std</b>           | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec. |
| <b>gc6flxR3Fill</b>          | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.        |
| <b>gc6flxR4</b>              | Janskys       | REAL      | 4    | -999          | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.                       |
| <b>gc6flxR4Err</b>           | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.              |
| <b>gc6flxR4Std</b>           | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec. |
| <b>gc6flxR4Fill</b>          | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.        |
| <b>gc6flxR5</b>              | Janskys       | REAL      | 4    | -999          | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>gc6flxR5Err</b>           | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>gc6flxR5Std</b>           | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec. |
| <b>gc6flxR5Fill</b>          | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.        |

|                      |               |      |   |      |  |
|----------------------|---------------|------|---|------|--|
| <b>gc6flxR6</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>gc6flxR6Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |
| <b>gc6flxR6Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>gc6flxR6Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>gc6flxR7</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>gc6flxR7Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |
| <b>gc6flxR7Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>gc6flxR7Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>gc6flxR8</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>gc6flxR8Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>gc6flxR8Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>gc6flxR8Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>gc6flxR9</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>gc6flxR9Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>gc6flxR9Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>gc6flxR9Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>gc6flxR10</b>     | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>gc6flxR10Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>gc6flxR10Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>gc6flxR10Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>gc6flxR11</b>     | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>gc6flxR11Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |

|                       |               |        |   |      |  |
|-----------------------|---------------|--------|---|------|--|
| <b>gc6flxR11Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>gc6flxR11Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>rippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>rstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.  |
| <b>rc6flxR3</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>rc6flxR3Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |
| <b>rc6flxR3Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.  |
| <b>rc6flxR3Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.         |
| <b>rc6flxR4</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>rc6flxR4Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.               |
| <b>rc6flxR4Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.  |
| <b>rc6flxR4Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.         |
| <b>rc6flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>rc6flxR5Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.               |
| <b>rc6flxR5Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.  |
| <b>rc6flxR5Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.         |
| <b>rc6flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>rc6flxR6Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |
| <b>rc6flxR6Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>rc6flxR6Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>rc6flxR7</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>rc6flxR7Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |

|                       |               |        |   |      |  |
|-----------------------|---------------|--------|---|------|--|
| <b>rc6flxR7 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>rc6flxR7 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>rc6flxR8</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>rc6flxR8 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>rc6flxR8 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>rc6flxR8 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>rc6flxR9</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>rc6flxR9 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>rc6flxR9 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>rc6flxR9 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>rc6flxR10</b>      | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>rc6flxR10 Err</b>  | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>rc6flxR10 Std</b>  | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>rc6flxR10 Fill</b> | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>rc6flxR11</b>      | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>rc6flxR11 Err</b>  | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>rc6flxR11 Std</b>  | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>rc6flxR11 Fill</b> | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>iippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.  |
| <b>ic6flxR3</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>ic6flxR3 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |



|                       |               |        |   |      |  |
|-----------------------|---------------|--------|---|------|--|
| <b>ic6flxR9</b>       | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>ic6flxR9 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>ic6flxR9 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>ic6flxR9 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>ic6flxR10</b>      | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>ic6flxR10 Err</b>  | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>ic6flxR10 Std</b>  | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>ic6flxR10 Fill</b> | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>ic6flxR11</b>      | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>ic6flxR11 Err</b>  | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>ic6flxR11 Std</b>  | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>ic6flxR11 Fill</b> | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.  |
| <b>zc6flxR3</b>       | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>zc6flxR3 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |
| <b>zc6flxR3 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.  |
| <b>zc6flxR3 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.         |
| <b>zc6flxR4</b>       | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>zc6flxR4 Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.               |
| <b>zc6flxR4 Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.  |
| <b>zc6flxR4 Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.         |



|                       |               |        |   |      |  |
|-----------------------|---------------|--------|---|------|--|
| <b>zc6flxR10Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>zc6flxR10Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>zc6flxR11</b>      | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>zc6flxR11Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>zc6flxR11Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>zc6flxR11Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>ystackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>ystackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.  |
| <b>yc6flxR3</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>yc6flxR3Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |
| <b>yc6flxR3Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.  |
| <b>yc6flxR3Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.03$ arcsec.         |
| <b>yc6flxR4</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>yc6flxR4Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.               |
| <b>yc6flxR4Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.  |
| <b>yc6flxR4Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 1.76$ arcsec.         |
| <b>yc6flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>yc6flxR5Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.               |
| <b>yc6flxR5Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.  |
| <b>yc6flxR5Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 3.00$ arcsec.         |
| <b>yc6flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>yc6flxR6Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |



|                      |               |      |   |      |  |
|----------------------|---------------|------|---|------|--|
| <b>yc6flxR6Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>yc6flxR6Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>yc6flxR7</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>yc6flxR7Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |
| <b>yc6flxR7Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>yc6flxR7Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>yc6flxR8</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>yc6flxR8Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>yc6flxR8Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>yc6flxR8Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>yc6flxR9</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>yc6flxR9Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>yc6flxR9Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>yc6flxR9Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>yc6flxR10</b>     | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>yc6flxR10Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>yc6flxR10Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>yc6flxR10Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>yc6flxR11</b>     | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>yc6flxR11Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>yc6flxR11Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>yc6flxR11Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 6 sky pixels (1.5 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |

## StackApFlxExGalCon8

**Description:** Contains the fluxes within the SDSS R3 ( $r = 1.03$  arcsec), R4 ( $r = 1.76$  arcsec), R5 ( $r = 3.00$  arcsec), R6 ( $r = 4.63$  arcsec), R7 ( $r = 7.43$  arcsec), R8 ( $r = 11.42$  arcsec), R9 ( $r = 18.20$  arcsec), R10 ( $r = 28.20$  arcsec), and R11 ( $r = 44.21$  arcsec) apertures (Stoughton 2003) for extended sources after the images have been convolved to a target of 8 sky pixels (2.0 arcsec). These measurements are only provided for objects in the extragalactic sky, i.e., they are not provided for objects in the Galactic plane because they are not useful in crowded areas. See StackObjectThin table for discussion of primary, secondary, and best detections. **References:** Stoughton, C., Lupton, R. H., Bernardi, M., et al. 2003, AJ, 123, 485.

| Name                         | Unit          | Data Type | Size | Default Value | Description   |
|------------------------------|---------------|-----------|------|---------------|---|
| <b>objID</b>                 | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.   |
| <b>uniqueP<br/>spsSTid</b>   | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.  |
| <b>ippObjID</b>              | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.   |
| <b>random<br/>StackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.  |
| <b>primary<br/>Detection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.  |
| <b>bestDet<br/>ection</b>    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.   |
| <b>gippDet<br/>ectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |
| <b>gstackD<br/>etectID</b>   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.  |
| <b>gstackI<br/>mageID</b>    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.   |
| <b>gc8flxR3</b>              | Janskys       | REAL      | 4    | -999          | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.                       |
| <b>gc8flxR<br/>3Err</b>      | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.              |
| <b>gc8flxR<br/>3Std</b>      | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec. |
| <b>gc8flxR<br/>3Fill</b>     | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.        |
| <b>gc8flxR4</b>              | Janskys       | REAL      | 4    | -999          | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.                       |
| <b>gc8flxR<br/>4Err</b>      | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.              |
| <b>gc8flxR<br/>4Std</b>      | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec. |
| <b>gc8flxR<br/>4Fill</b>     | dimensionless | REAL      | 4    | -999          | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.        |
| <b>gc8flxR5</b>              | Janskys       | REAL      | 4    | -999          | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                       |
| <b>gc8flxR<br/>5Err</b>      | Janskys       | REAL      | 4    | -999          | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.              |
| <b>gc8flxR<br/>5Std</b>      | Janskys       | REAL      | 4    | -999          | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec. |

|                      |               |      |   |      |  |
|----------------------|---------------|------|---|------|--|
| <b>gc8flxR5Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.         |
| <b>gc8flxR6</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>gc8flxR6Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |
| <b>gc8flxR6Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>gc8flxR6Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>gc8flxR7</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>gc8flxR7Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |
| <b>gc8flxR7Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>gc8flxR7Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>gc8flxR8</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>gc8flxR8Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>gc8flxR8Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>gc8flxR8Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>gc8flxR9</b>      | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>gc8flxR9Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>gc8flxR9Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>gc8flxR9Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>gc8flxR10</b>     | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>gc8flxR10Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>gc8flxR10Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>gc8flxR10Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>gc8flxR11</b>     | Janskys       | REAL | 4 | -999 | Flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |

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| <b>gc8flxR11Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>gc8flxR11Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>gc8flxR11Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for g filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>rippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>rstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.  |
| <b>rc8flxR3</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>rc8flxR3Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |
| <b>rc8flxR3Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.  |
| <b>rc8flxR3Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.         |
| <b>rc8flxR4</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>rc8flxR4Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.               |
| <b>rc8flxR4Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.  |
| <b>rc8flxR4Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.         |
| <b>rc8flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>rc8flxR5Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.               |
| <b>rc8flxR5Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.  |
| <b>rc8flxR5Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.         |
| <b>rc8flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>rc8flxR6Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |
| <b>rc8flxR6Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>rc8flxR6Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>rc8flxR7</b>       | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |

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| <b>rc8flxR7<br/>Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |
| <b>rc8flxR7<br/>Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>rc8flxR7<br/>Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>rc8flxR8</b>           | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>rc8flxR8<br/>Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>rc8flxR8<br/>Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>rc8flxR8<br/>Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>rc8flxR9</b>           | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>rc8flxR9<br/>Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>rc8flxR9<br/>Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>rc8flxR9<br/>Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>rc8flxR10</b>          | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>rc8flxR10<br/>Err</b>  | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>rc8flxR10<br/>Std</b>  | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>rc8flxR10<br/>Fill</b> | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>rc8flxR11</b>          | Janskys       | REAL   | 4 | -999 | Flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>rc8flxR11<br/>Err</b>  | Janskys       | REAL   | 4 | -999 | Error in flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>rc8flxR11<br/>Std</b>  | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>rc8flxR11<br/>Fill</b> | dimensionless | REAL   | 4 | -999 | Aperture fill factor for r filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>iippDetectID</b>       | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>istackDetectID</b>     | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>istackImageID</b>      | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.  |
| <b>ic8flxR3</b>           | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |



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| <b>ic8flxR8 Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>ic8flxR9</b>          | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>ic8flxR9 Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>ic8flxR9 Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>ic8flxR9 Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>ic8flxR10</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>ic8flxR10Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>ic8flxR10Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>ic8flxR10Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>ic8flxR11</b>         | Janskys       | REAL   | 4 | -999 | Flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>ic8flxR11Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>ic8flxR11Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>ic8flxR11Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for i filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>zippDetectionID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>zstackDetectionID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>zstackImageID</b>     | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.  |
| <b>zc8flxR3</b>          | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>zc8flxR3 Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |
| <b>zc8flxR3 Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.  |
| <b>zc8flxR3 Fill</b>     | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.         |
| <b>zc8flxR4</b>          | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>zc8flxR4 Err</b>      | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.               |
| <b>zc8flxR4 Std</b>      | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.  |

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| <b>zc8flxR4<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.         |
| <b>zc8flxR5</b>          | Janskys           | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>zc8flxR5<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.               |
| <b>zc8flxR5<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.  |
| <b>zc8flxR5<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.         |
| <b>zc8flxR6</b>          | Janskys           | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |
| <b>zc8flxR6<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |
| <b>zc8flxR6<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>zc8flxR6<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>zc8flxR7</b>          | Janskys           | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>zc8flxR7<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |
| <b>zc8flxR7<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>zc8flxR7<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>zc8flxR8</b>          | Janskys           | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>zc8flxR8<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>zc8flxR8<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>zc8flxR8<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>zc8flxR9</b>          | Janskys           | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>zc8flxR9<br/>Err</b>  | Janskys           | REAL | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>zc8flxR9<br/>Std</b>  | Janskys           | REAL | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>zc8flxR9<br/>Fill</b> | dimens<br>ionless | REAL | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>zc8flxR10</b>         | Janskys           | REAL | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |



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| <b>zc8flxR10Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>zc8flxR10Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>zc8flxR10Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>zc8flxR11</b>      | Janskys       | REAL   | 4 | -999 | Flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>zc8flxR11Err</b>   | Janskys       | REAL   | 4 | -999 | Error in flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>zc8flxR11Std</b>   | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
| <b>zc8flxR11Fill</b>  | dimensionless | REAL   | 4 | -999 | Aperture fill factor for z filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.        |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.   |
| <b>ystackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.   |
| <b>ystackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.  |
| <b>yc8flxR3</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.                        |
| <b>yc8flxR3Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.               |
| <b>yc8flxR3Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.  |
| <b>yc8flxR3Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.03$ arcsec.         |
| <b>yc8flxR4</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.                        |
| <b>yc8flxR4Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.               |
| <b>yc8flxR4Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.  |
| <b>yc8flxR4Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 1.76$ arcsec.         |
| <b>yc8flxR5</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.                        |
| <b>yc8flxR5Err</b>    | Janskys       | REAL   | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.               |
| <b>yc8flxR5Std</b>    | Janskys       | REAL   | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.  |
| <b>yc8flxR5Fill</b>   | dimensionless | REAL   | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 3.00$ arcsec.         |
| <b>yc8flxR6</b>       | Janskys       | REAL   | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.                        |

|                      |               |      |   |      |  |
|----------------------|---------------|------|---|------|--|
| <b>yc8flxR6Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.               |
| <b>yc8flxR6Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.  |
| <b>yc8flxR6Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 4.63$ arcsec.         |
| <b>yc8flxR7</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.                        |
| <b>yc8flxR7Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.               |
| <b>yc8flxR7Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.  |
| <b>yc8flxR7Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 7.43$ arcsec.         |
| <b>yc8flxR8</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.                       |
| <b>yc8flxR8Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.              |
| <b>yc8flxR8Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec. |
| <b>yc8flxR8Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 11.42$ arcsec.        |
| <b>yc8flxR9</b>      | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.                       |
| <b>yc8flxR9Err</b>   | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.              |
| <b>yc8flxR9Std</b>   | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec. |
| <b>yc8flxR9Fill</b>  | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 18.20$ arcsec.        |
| <b>yc8flxR10</b>     | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.                       |
| <b>yc8flxR10Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.              |
| <b>yc8flxR10Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec. |
| <b>yc8flxR10Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 28.20$ arcsec.        |
| <b>yc8flxR11</b>     | Janskys       | REAL | 4 | -999 | Flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.                       |
| <b>yc8flxR11Err</b>  | Janskys       | REAL | 4 | -999 | Error in flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec.              |
| <b>yc8flxR11Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of flux from y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec. |

|               |               |      |   |      |   |
|---------------|---------------|------|---|------|---|
| yc8flxR11Fill | dimensionless | REAL | 4 | -999 | Aperture fill factor for y filter detection convolved to a target of 8 sky pixels (2.0 arcsec) within an aperture of radius $r = 44.21$ arcsec. |
|---------------|---------------|------|---|------|---|

## StackModelFitExp

**Description: Contains the exponential fit parameters to extended sources. See StackObjectThin table for discussion of primary, secondary, and best detections.**

| Name             | Unit          | Data Type | Size | Default Value | Description   |
|------------------|---------------|-----------|------|---------------|---|
| objID            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.   |
| uniquePspSTid    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.  |
| ippObjID         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.   |
| randomStackObjID | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                          |
| primaryDetection | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.                              |
| bestDetection    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.                                       |
| gippDetectID     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |
| gstackDetectID   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.  |
| gstackImageID    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.                                     |
| gExpRadius       | arcsec        | REAL      | 4    | -999          | Exponential fit radius for g filter stack detection.                                |
| gExpRadiusErr    | arcsec        | REAL      | 4    | -999          | Error in exponential fit radius for g filter stack detection.                       |
| gExpMag          | AB magnitudes | REAL      | 4    | -999          | Exponential fit magnitude for g filter stack detection.                             |
| gExpMagErr       | AB magnitudes | REAL      | 4    | -999          | Error in exponential fit magnitude for g filter stack detection.                    |
| gExpAb           | dimensionless | REAL      | 4    | -999          | Exponential fit axis ratio for g filter stack detection.                            |
| gExpAbErr        | dimensionless | REAL      | 4    | -999          | Error in exponential fit axis ratio for g filter stack detection.                   |
| gExpPhi          | degrees       | REAL      | 4    | -999          | Major axis position angle, phi, of exponential fit for g filter stack detection.    |
| gExpPhiErr       | degrees       | REAL      | 4    | -999          | Error in major axis position angle of exponential fit for g filter stack detection. |
| gExpRa           | degrees       | FLOAT     | 8    | -999          | Right ascension of exponential fit center for g filter stack detection.             |
| gExpDec          | degrees       | FLOAT     | 8    | -999          | Declination of exponential fit center for g filter stack detection.                 |
| gExpRaErr        | arcsec        | REAL      | 4    | -999          | Error in right ascension of exponential fit center for g filter stack detection.    |
| gExpDecErr       | arcsec        | REAL      | 4    | -999          | Error in declination of exponential fit center for g filter stack detection.        |
| gExpChisq        | dimensionless | REAL      | 4    | -999          | Exponential fit reduced chi squared for g filter stack detection.                   |
| rippDetectID     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |
| rstackDetectID   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.  |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.                                     |
| <b>rExpRadius</b>     | arcsec        | REAL   | 4 | -999 | Exponential fit radius for r filter stack detection.                                |
| <b>rExpRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in exponential fit radius for r filter stack detection.                       |
| <b>rExpMag</b>        | AB magnitudes | REAL   | 4 | -999 | Exponential fit magnitude for r filter stack detection.                             |
| <b>rExpMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in exponential fit magnitude for r filter stack detection.                    |
| <b>rExpAb</b>         | dimensionless | REAL   | 4 | -999 | Exponential fit axis ratio for r filter stack detection.                            |
| <b>rExpAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in exponential fit axis ratio for r filter stack detection.                   |
| <b>rExpPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of exponential fit for r filter stack detection.    |
| <b>rExpPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of exponential fit for r filter stack detection. |
| <b>rExpRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of exponential fit center for r filter stack detection.             |
| <b>rExpDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of exponential fit center for r filter stack detection.                 |
| <b>rExpRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of exponential fit center for r filter stack detection.    |
| <b>rExpDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of exponential fit center for r filter stack detection.        |
| <b>rExpChisq</b>      | dimensionless | REAL   | 4 | -999 | Exponential fit reduced chi squared for r filter stack detection.                   |
| <b>iippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.                                     |
| <b>iExpRadius</b>     | arcsec        | REAL   | 4 | -999 | Exponential fit radius for i filter stack detection.                                |
| <b>iExpRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in exponential fit radius for i filter stack detection.                       |
| <b>iExpMag</b>        | AB magnitudes | REAL   | 4 | -999 | Exponential fit magnitude for i filter stack detection.                             |
| <b>iExpMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in exponential fit magnitude for i filter stack detection.                    |
| <b>iExpAb</b>         | dimensionless | REAL   | 4 | -999 | Exponential fit axis ratio for i filter stack detection.                            |
| <b>iExpAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in exponential fit axis ratio for i filter stack detection.                   |
| <b>iExpPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of exponential fit for i filter stack detection.    |
| <b>iExpPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of exponential fit for i filter stack detection. |
| <b>iExpRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of exponential fit center for i filter stack detection.             |
| <b>iExpDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of exponential fit center for i filter stack detection.                 |
| <b>iExpRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of exponential fit center for i filter stack detection.    |
| <b>iExpDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of exponential fit center for i filter stack detection.        |
| <b>iExpChisq</b>      | dimensionless | REAL   | 4 | -999 | Exponential fit reduced chi squared for i filter stack detection.                   |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.                                     |
| <b>zExpRadius</b>     | arcsec        | REAL   | 4 | -999 | Exponential fit radius for z filter stack detection.                                |
| <b>zExpRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in exponential fit radius for z filter stack detection.                       |
| <b>zExpMag</b>        | AB magnitudes | REAL   | 4 | -999 | Exponential fit magnitude for z filter stack detection.                             |
| <b>zExpMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in exponential fit magnitude for z filter stack detection.                    |
| <b>zExpAb</b>         | dimensionless | REAL   | 4 | -999 | Exponential fit axis ratio for z filter stack detection.                            |
| <b>zExpAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in exponential fit axis ratio for z filter stack detection.                   |
| <b>zExpPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of exponential fit for z filter stack detection.    |
| <b>zExpPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of exponential fit for z filter stack detection. |
| <b>zExpRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of exponential fit center for z filter stack detection.             |
| <b>zExpDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of exponential fit center for z filter stack detection.                 |
| <b>zExpRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of exponential fit center for z filter stack detection.    |
| <b>zExpDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of exponential fit center for z filter stack detection.        |
| <b>zExpChisq</b>      | dimensionless | REAL   | 4 | -999 | Exponential fit reduced chi squared for z filter stack detection.                   |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>ystackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.                                     |
| <b>yExpRadius</b>     | arcsec        | REAL   | 4 | -999 | Exponential fit radius for y filter stack detection.                                |
| <b>yExpRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in exponential fit radius for y filter stack detection.                       |
| <b>yExpMag</b>        | AB magnitudes | REAL   | 4 | -999 | Exponential fit magnitude for y filter stack detection.                             |
| <b>yExpMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in exponential fit magnitude for y filter stack detection.                    |
| <b>yExpAb</b>         | dimensionless | REAL   | 4 | -999 | Exponential fit axis ratio for y filter stack detection.                            |
| <b>yExpAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in exponential fit axis ratio for y filter stack detection.                   |
| <b>yExpPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of exponential fit for y filter stack detection.    |
| <b>yExpPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of exponential fit for y filter stack detection. |
| <b>yExpRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of exponential fit center for y filter stack detection.             |
| <b>yExpDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of exponential fit center for y filter stack detection.                 |
| <b>yExpRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of exponential fit center for y filter stack detection.    |

|            |               |      |   |      |  |
|------------|---------------|------|---|------|--|
| yExpDecErr | arcsec        | REAL | 4 | -999 | Error in declination of exponential fit center for y filter stack detection. |
| yExpChisq  | dimensionless | REAL | 4 | -999 | Exponential fit reduced chi squared for y filter stack detection.            |

## StackModelFitDeV

**Description:** Contains the de Vaucouleurs (1948) fit parameters to extended sources. See StackObjectThin table for discussion of primary, secondary, and best detections.  
**References:** de Vaucouleurs, G. 1948, Annales d'Astrophysique, 11, 247.

| Name             | Unit          | Data Type | Size | Default Value | Description   |
|------------------|---------------|-----------|------|---------------|---|
| objID            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.   |
| uniquePspSTid    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.  |
| ippObjID         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.   |
| randomStackObjID | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                                    |
| primaryDetection | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.  |
| bestDetection    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.   |
| gippDetectID     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |
| gstackDetectID   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.  |
| gstackImageID    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.   |
| gDeVRadius       | arcsec        | REAL      | 4    | -999          | De Vaucouleurs (1948) fit radius for g filter stack detection.                                |
| gDeVRadiusErr    | arcsec        | REAL      | 4    | -999          | Error in de Vaucouleurs (1948) fit radius for g filter stack detection.                       |
| gDeVMag          | AB magnitudes | REAL      | 4    | -999          | De Vaucouleurs (1948) fit magnitude for g filter stack detection.                             |
| gDeVMagErr       | AB magnitudes | REAL      | 4    | -999          | Error in de Vaucouleurs (1948) fit magnitude for g filter stack detection.                    |
| gDeVAb           | dimensionless | REAL      | 4    | -999          | De Vaucouleurs (1948) fit axis ratio for g filter stack detection.                            |
| gDeVAbErr        | dimensionless | REAL      | 4    | -999          | Error in de Vaucouleurs (1948) fit axis ratio for g filter stack detection.                   |
| gDeVPhi          | degrees       | REAL      | 4    | -999          | Major axis position angle, phi, of de Vaucouleurs (1948) fit for g filter stack detection.    |
| gDeVPhiErr       | degrees       | REAL      | 4    | -999          | Error in major axis position angle of de Vaucouleurs (1948) fit for g filter stack detection. |
| gDeVRa           | degrees       | FLOAT     | 8    | -999          | Right ascension of de Vaucouleurs (1948) fit center for g filter stack detection.             |
| gDeVDec          | degrees       | FLOAT     | 8    | -999          | Declination of de Vaucouleurs (1948) fit center for g filter stack detection.                 |
| gDeVRaErr        | arcsec        | REAL      | 4    | -999          | Error in right ascension of de Vaucouleurs (1948) fit center for g filter stack detection.    |
| gDeVDecErr       | arcsec        | REAL      | 4    | -999          | Error in declination of de Vaucouleurs (1948) fit center for g filter stack detection.        |
| gDeVChisq        | dimensionless | REAL      | 4    | -999          | De Vaucouleurs (1948) fit reduced chi squared for g filter stack detection.                   |
| rippDetectID     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>rstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.   |
| <b>rDeVRadius</b>     | arcsec        | REAL   | 4 | -999 | De Vaucouleurs (1948) fit radius for r filter stack detection.                                |
| <b>rDeVRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit radius for r filter stack detection.                       |
| <b>rDeVMag</b>        | AB magnitudes | REAL   | 4 | -999 | De Vaucouleurs (1948) fit magnitude for r filter stack detection.                             |
| <b>rDeVMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit magnitude for r filter stack detection.                    |
| <b>rDeVAb</b>         | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit axis ratio for r filter stack detection.                            |
| <b>rDeVAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit axis ratio for r filter stack detection.                   |
| <b>rDeVPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of de Vaucouleurs (1948) fit for r filter stack detection.    |
| <b>rDeVPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of de Vaucouleurs (1948) fit for r filter stack detection. |
| <b>rDeVRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of de Vaucouleurs (1948) fit center for r filter stack detection.             |
| <b>rDeVDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of de Vaucouleurs (1948) fit center for r filter stack detection.                 |
| <b>rDeVRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of de Vaucouleurs (1948) fit center for r filter stack detection.    |
| <b>rDeVDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of de Vaucouleurs (1948) fit center for r filter stack detection.        |
| <b>rDeVChisq</b>      | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit reduced chi squared for r filter stack detection.                   |
| <b>iippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.   |
| <b>iDeVRadius</b>     | arcsec        | REAL   | 4 | -999 | De Vaucouleurs (1948) fit radius for i filter stack detection.                                |
| <b>iDeVRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit radius for i filter stack detection.                       |
| <b>iDeVMag</b>        | AB magnitudes | REAL   | 4 | -999 | De Vaucouleurs (1948) fit magnitude for i filter stack detection.                             |
| <b>iDeVMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit magnitude for i filter stack detection.                    |
| <b>iDeVAb</b>         | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit axis ratio for i filter stack detection.                            |
| <b>iDeVAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit axis ratio for i filter stack detection.                   |
| <b>iDeVPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of de Vaucouleurs (1948) fit for i filter stack detection.    |
| <b>iDeVPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of de Vaucouleurs (1948) fit for i filter stack detection. |
| <b>iDeVRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of de Vaucouleurs (1948) fit center for i filter stack detection.             |
| <b>iDeVDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of de Vaucouleurs (1948) fit center for i filter stack detection.                 |
| <b>iDeVRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of de Vaucouleurs (1948) fit center for i filter stack detection.    |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>iDeVDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of de Vaucouleurs (1948) fit center for i filter stack detection.        |
| <b>iDeVChisq</b>      | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit reduced chi squared for i filter stack detection.                   |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.   |
| <b>zDeVRadius</b>     | arcsec        | REAL   | 4 | -999 | De Vaucouleurs (1948) fit radius for z filter stack detection.                                |
| <b>zDeVRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit radius for z filter stack detection.                       |
| <b>zDeVMag</b>        | AB magnitudes | REAL   | 4 | -999 | De Vaucouleurs (1948) fit magnitude for z filter stack detection.                             |
| <b>zDeVMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit magnitude for z filter stack detection.                    |
| <b>zDeVAb</b>         | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit axis ratio for z filter stack detection.                            |
| <b>zDeVAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit axis ratio for z filter stack detection.                   |
| <b>zDeVPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of de Vaucouleurs (1948) fit for z filter stack detection.    |
| <b>zDeVPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of de Vaucouleurs (1948) fit for z filter stack detection. |
| <b>zDeVRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of de Vaucouleurs (1948) fit center for z filter stack detection.             |
| <b>zDeVDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of de Vaucouleurs (1948) fit center for z filter stack detection.                 |
| <b>zDeVRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of de Vaucouleurs (1948) fit center for z filter stack detection.    |
| <b>zDeVDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of de Vaucouleurs (1948) fit center for z filter stack detection.        |
| <b>zDeVChisq</b>      | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit reduced chi squared for z filter stack detection.                   |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>ystackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.   |
| <b>yDeVRadius</b>     | arcsec        | REAL   | 4 | -999 | De Vaucouleurs (1948) fit radius for y filter stack detection.                                |
| <b>yDeVRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit radius for y filter stack detection.                       |
| <b>yDeVMag</b>        | AB magnitudes | REAL   | 4 | -999 | De Vaucouleurs (1948) fit magnitude for y filter stack detection.                             |
| <b>yDeVMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit magnitude for y filter stack detection.                    |
| <b>yDeVAb</b>         | dimensionless | REAL   | 4 | -999 | De Vaucouleurs (1948) fit axis ratio for y filter stack detection.                            |
| <b>yDeVAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in de Vaucouleurs (1948) fit axis ratio for y filter stack detection.                   |
| <b>yDeVPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of de Vaucouleurs (1948) fit for y filter stack detection.    |
| <b>yDeVPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of de Vaucouleurs (1948) fit for y filter stack detection. |



|                   |               |       |   |      |  |
|-------------------|---------------|-------|---|------|--|
| <b>yDeVRa</b>     | degrees       | FLOAT | 8 | -999 | Right ascension of de Vaucouleurs (1948) fit center for y filter stack detection.          |
| <b>yDeVDec</b>    | degrees       | FLOAT | 8 | -999 | Declination of de Vaucouleurs (1948) fit center for y filter stack detection.              |
| <b>yDeVRaErr</b>  | arcsec        | REAL  | 4 | -999 | Error in right ascension of de Vaucouleurs (1948) fit center for y filter stack detection. |
| <b>yDeVDecErr</b> | arcsec        | REAL  | 4 | -999 | Error in declination of de Vaucouleurs (1948) fit center for y filter stack detection.     |
| <b>yDeVChisq</b>  | dimensionless | REAL  | 4 | -999 | De Vaucouleurs (1948) fit reduced chi squared for y filter stack detection.                |

## StackModelFitSer

**Description:** Contains the Sersic (1963) fit parameters to extended sources. Only objects with magnitudes brighter than 21.5 outside the Galactic plane have Sersic fits. See [StackObjectThin](#) table for discussion of primary, secondary, and best detections. **References:** J. L. 1963, *Boletin de la Asociacion Argentina de Astronomia La Plata Argentina*, 6, 41.

| Name                    | Unit          | Data Type | Size | Default Value | Description   |
|-------------------------|---------------|-----------|------|---------------|---|
| <b>objID</b>            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.   |
| <b>uniquePspSTid</b>    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.  |
| <b>ippObjID</b>         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.   |
| <b>randomStackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                            |
| <b>primaryDetection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.                                |
| <b>bestDetection</b>    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.   |
| <b>gippDetectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.  |
| <b>gstackDetectID</b>   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.  |
| <b>gstackImageID</b>    | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for g filter detection.                                       |
| <b>gSerRadius</b>       | arcsec        | REAL      | 4    | -999          | Sersic (1963) fit radius for g filter stack detection.                                |
| <b>gSerRadiusErr</b>    | arcsec        | REAL      | 4    | -999          | Error in Sersic (1963) fit radius for g filter stack detection.                       |
| <b>gSerMag</b>          | AB magnitudes | REAL      | 4    | -999          | Sersic (1963) fit magnitude for g filter stack detection.                             |
| <b>gSerMagErr</b>       | AB magnitudes | REAL      | 4    | -999          | Error in Sersic (1963) fit magnitude for g filter stack detection.                    |
| <b>gSerAb</b>           | dimensionless | REAL      | 4    | -999          | Sersic (1963) fit axis ratio for g filter stack detection.                            |
| <b>gSerAbErr</b>        | dimensionless | REAL      | 4    | -999          | Error in Sersic (1963) fit axis ratio for g filter stack detection.                   |
| <b>gSerNu</b>           | dimensionless | REAL      | 4    | -999          | Sersic (1963) fit index for g filter stack detection.                                 |
| <b>gSerNuErr</b>        | dimensionless | REAL      | 4    | -999          | Error in Sersic (1963) fit index for g filter stack detection.                        |
| <b>gSerPhi</b>          | degrees       | REAL      | 4    | -999          | Major axis position angle, phi, of Sersic (1963) fit for g filter stack detection.    |
| <b>gSerPhiErr</b>       | degrees       | REAL      | 4    | -999          | Error in major axis position angle of Sersic (1963) fit for g filter stack detection. |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>gSerRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of Sersic (1963) fit center for g filter stack detection.             |
| <b>gSerDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of Sersic (1963) fit center for g filter stack detection.                 |
| <b>gSerRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of Sersic (1963) fit center for g filter stack detection.    |
| <b>gSerDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of Sersic (1963) fit center for g filter stack detection.        |
| <b>gSerChisq</b>      | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit reduced chi squared for g filter stack detection.                   |
| <b>rippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>rstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.                                       |
| <b>rSerRadius</b>     | arcsec        | REAL   | 4 | -999 | Sersic (1963) fit radius for r filter stack detection.                                |
| <b>rSerRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in Sersic (1963) fit radius for r filter stack detection.                       |
| <b>rSerMag</b>        | AB magnitudes | REAL   | 4 | -999 | Sersic (1963) fit magnitude for r filter stack detection.                             |
| <b>rSerMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Sersic (1963) fit magnitude for r filter stack detection.                    |
| <b>rSerAb</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit axis ratio for r filter stack detection.                            |
| <b>rSerAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit axis ratio for r filter stack detection.                   |
| <b>rSerNu</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit index for r filter stack detection.                                 |
| <b>rSerNuErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit index for r filter stack detection.                        |
| <b>rSerPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of Sersic (1963) fit for r filter stack detection.    |
| <b>rSerPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of Sersic (1963) fit for r filter stack detection. |
| <b>rSerRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of Sersic (1963) fit center for r filter stack detection.             |
| <b>rSerDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of Sersic (1963) fit center for r filter stack detection.                 |
| <b>rSerRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of Sersic (1963) fit center for r filter stack detection.    |
| <b>rSerDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of Sersic (1963) fit center for r filter stack detection.        |
| <b>rSerChisq</b>      | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit reduced chi squared for r filter stack detection.                   |
| <b>iippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>istackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.                                       |
| <b>iSerRadius</b>     | arcsec        | REAL   | 4 | -999 | Sersic (1963) fit radius for i filter stack detection.                                |
| <b>iSerRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in Sersic (1963) fit radius for i filter stack detection.                       |
| <b>iSerMag</b>        | AB magnitudes | REAL   | 4 | -999 | Sersic (1963) fit magnitude for i filter stack detection.                             |
| <b>iSerMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Sersic (1963) fit magnitude for i filter stack detection.                    |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>iSerAb</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit axis ratio for i filter stack detection.                            |
| <b>iSerAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit axis ratio for i filter stack detection.                   |
| <b>iSerNu</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit index for i filter stack detection.                                 |
| <b>iSerNuErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit index for i filter stack detection.                        |
| <b>iSerPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of Sersic (1963) fit for i filter stack detection.    |
| <b>iSerPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of Sersic (1963) fit for i filter stack detection. |
| <b>iSerRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of Sersic (1963) fit center for i filter stack detection.             |
| <b>iSerDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of Sersic (1963) fit center for i filter stack detection.                 |
| <b>iSerRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of Sersic (1963) fit center for i filter stack detection.    |
| <b>iSerDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of Sersic (1963) fit center for i filter stack detection.        |
| <b>iSerChisq</b>      | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit reduced chi squared for i filter stack detection.                   |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.                                       |
| <b>zSerRadius</b>     | arcsec        | REAL   | 4 | -999 | Sersic (1963) fit radius for z filter stack detection.                                |
| <b>zSerRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in Sersic (1963) fit radius for z filter stack detection.                       |
| <b>zSerMag</b>        | AB magnitudes | REAL   | 4 | -999 | Sersic (1963) fit magnitude for z filter stack detection.                             |
| <b>zSerMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Sersic (1963) fit magnitude for z filter stack detection.                    |
| <b>zSerAb</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit axis ratio for z filter stack detection.                            |
| <b>zSerAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit axis ratio for z filter stack detection.                   |
| <b>zSerNu</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit index for z filter stack detection.                                 |
| <b>zSerNuErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit index for z filter stack detection.                        |
| <b>zSerPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of Sersic (1963) fit for z filter stack detection.    |
| <b>zSerPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of Sersic (1963) fit for z filter stack detection. |
| <b>zSerRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of Sersic (1963) fit center for z filter stack detection.             |
| <b>zSerDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of Sersic (1963) fit center for z filter stack detection.                 |
| <b>zSerRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of Sersic (1963) fit center for z filter stack detection.    |
| <b>zSerDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of Sersic (1963) fit center for z filter stack detection.        |
| <b>zSerChisq</b>      | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit reduced chi squared for z filter stack detection.                   |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>yStackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>yStackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.                                       |
| <b>ySerRadius</b>     | arcsec        | REAL   | 4 | -999 | Sersic (1963) fit radius for y filter stack detection.                                |
| <b>ySerRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in Sersic (1963) fit radius for y filter stack detection.                       |
| <b>ySerMag</b>        | AB magnitudes | REAL   | 4 | -999 | Sersic (1963) fit magnitude for y filter stack detection.                             |
| <b>ySerMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Sersic (1963) fit magnitude for y filter stack detection.                    |
| <b>ySerAb</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit axis ratio for y filter stack detection.                            |
| <b>ySerAbErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit axis ratio for y filter stack detection.                   |
| <b>ySerNu</b>         | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit index for y filter stack detection.                                 |
| <b>ySerNuErr</b>      | dimensionless | REAL   | 4 | -999 | Error in Sersic (1963) fit index for y filter stack detection.                        |
| <b>ySerPhi</b>        | degrees       | REAL   | 4 | -999 | Major axis position angle, phi, of Sersic (1963) fit for y filter stack detection.    |
| <b>ySerPhiErr</b>     | degrees       | REAL   | 4 | -999 | Error in major axis position angle of Sersic (1963) fit for y filter stack detection. |
| <b>ySerRa</b>         | degrees       | FLOAT  | 8 | -999 | Right ascension of Sersic (1963) fit center for y filter stack detection.             |
| <b>ySerDec</b>        | degrees       | FLOAT  | 8 | -999 | Declination of Sersic (1963) fit center for y filter stack detection.                 |
| <b>ySerRaErr</b>      | arcsec        | REAL   | 4 | -999 | Error in right ascension of Sersic (1963) fit center for y filter stack detection.    |
| <b>ySerDecErr</b>     | arcsec        | REAL   | 4 | -999 | Error in declination of Sersic (1963) fit center for y filter stack detection.        |
| <b>ySerChisq</b>      | dimensionless | REAL   | 4 | -999 | Sersic (1963) fit reduced chi squared for y filter stack detection.                   |

## StackPetrosian

**Description:** Contains the Petrosian (1976) magnitudes and radii for extended sources. See **StackObjectThin** table for discussion of primary, secondary, and best detections.  
**References:** Petrosian, V. 1976, ApJL, 209, L1.

| Name                    | Unit          | Data Type | Size | Default Value | Description  |
|-------------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>            | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.                                  |
| <b>uniquePspSTid</b>    | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier.                     |
| <b>ippObjID</b>         | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                            |
| <b>randomStackObjID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one. |
| <b>primaryDetection</b> | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the primary stack detection.     |
| <b>bestDetection</b>    | dimensionless | TINYINT   | 1    | 255           | Identifies if this row is the best detection.              |
| <b>gippDetectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.                         |
| <b>gstackDetectID</b>   | dimensionless | BIGINT    | 8    | NA            | Unique stack detection identifier.                         |

|                       |                |        |   |      |   |
|-----------------------|----------------|--------|---|------|---|
| <b>gstackImageID</b>  | dimension less | BIGINT | 8 | NA   | Unique stack identifier for g filter detection.                                 |
| <b>gpetRadius</b>     | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for g filter stack detection.                       |
| <b>gpetRadiusErr</b>  | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for g filter stack detection.              |
| <b>gpetMag</b>        | AB magnitudes  | REAL   | 4 | -999 | Petrosian (1976) magnitude from g filter stack detection.                       |
| <b>gpetMagErr</b>     | AB magnitudes  | REAL   | 4 | -999 | Error in Petrosian (1976) magnitude from g filter stack detection.              |
| <b>gpetR50</b>        | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for g filter stack detection. at 50% light          |
| <b>gpetR50Err</b>     | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for g filter stack detection. at 50% light |
| <b>gpetR90</b>        | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for g filter stack detection. at 90% light          |
| <b>gpetR90Err</b>     | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for g filter stack detection. at 90% light |
| <b>gpetCf</b>         | dimension less | REAL   | 4 | -999 | Petrosian (1976) fit coverage factor for g filter stack detection.              |
| <b>rippDetectID</b>   | dimension less | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>rstackDetectID</b> | dimension less | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>  | dimension less | BIGINT | 8 | NA   | Unique stack identifier for r filter detection.                                 |
| <b>rpetRadius</b>     | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for r filter stack detection.                       |
| <b>rpetRadiusErr</b>  | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for r filter stack detection.              |
| <b>rpetMag</b>        | AB magnitudes  | REAL   | 4 | -999 | Petrosian (1976) magnitude from r filter stack detection.                       |
| <b>rpetMagErr</b>     | AB magnitudes  | REAL   | 4 | -999 | Error in Petrosian (1976) magnitude from r filter stack detection.              |
| <b>rpetR50</b>        | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for r filter stack detection. at 50% light          |
| <b>rpetR50Err</b>     | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for r filter stack detection. at 50% light |
| <b>rpetR90</b>        | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for r filter stack detection. at 90% light          |
| <b>rpetR90Err</b>     | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for r filter stack detection. at 90% light |
| <b>rpetCf</b>         | dimension less | REAL   | 4 | -999 | Petrosian (1976) fit coverage factor for r filter stack detection.              |
| <b>iippDetectID</b>   | dimension less | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>istackDetectID</b> | dimension less | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>  | dimension less | BIGINT | 8 | NA   | Unique stack identifier for i filter detection.                                 |
| <b>ipetRadius</b>     | arcsec         | REAL   | 4 | -999 | Petrosian (1976) fit radius for i filter stack detection.                       |
| <b>ipetRadiusErr</b>  | arcsec         | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for i filter stack detection.              |
| <b>ipetMag</b>        | AB magnitudes  | REAL   | 4 | -999 | Petrosian (1976) magnitude from i filter stack detection.                       |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>ipetMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Petrosian (1976) magnitude from i filter stack detection.              |
| <b>ipetR50</b>        | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for i filter stack detection. at 50% light          |
| <b>ipetR50Err</b>     | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for i filter stack detection. at 50% light |
| <b>ipetR90</b>        | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for i filter stack detection. at 90% light          |
| <b>ipetR90Err</b>     | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for i filter stack detection. at 90% light |
| <b>ipetCf</b>         | dimensionless | REAL   | 4 | -999 | Petrosian (1976) fit coverage factor for i filter stack detection.              |
| <b>zippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.                                 |
| <b>zpetRadius</b>     | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for z filter stack detection.                       |
| <b>zpetRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for z filter stack detection.              |
| <b>zpetMag</b>        | AB magnitudes | REAL   | 4 | -999 | Petrosian (1976) magnitude from z filter stack detection.                       |
| <b>zpetMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Petrosian (1976) magnitude from z filter stack detection.              |
| <b>zpetR50</b>        | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for z filter stack detection. at 50% light          |
| <b>zpetR50Err</b>     | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for z filter stack detection. at 50% light |
| <b>zpetR90</b>        | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for z filter stack detection. at 90% light          |
| <b>zpetR90Err</b>     | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for z filter stack detection. at 90% light |
| <b>zpetCf</b>         | dimensionless | REAL   | 4 | -999 | Petrosian (1976) fit coverage factor for z filter stack detection.              |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>ystackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.                                 |
| <b>ypetRadius</b>     | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for y filter stack detection.                       |
| <b>ypetRadiusErr</b>  | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for y filter stack detection.              |
| <b>ypetMag</b>        | AB magnitudes | REAL   | 4 | -999 | Petrosian (1976) magnitude from y filter stack detection.                       |
| <b>ypetMagErr</b>     | AB magnitudes | REAL   | 4 | -999 | Error in Petrosian (1976) magnitude from y filter stack detection.              |
| <b>ypetR50</b>        | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for y filter stack detection. at 50% light          |
| <b>ypetR50Err</b>     | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for y filter stack detection. at 50% light |
| <b>ypetR90</b>        | arcsec        | REAL   | 4 | -999 | Petrosian (1976) fit radius for y filter stack detection. at 90% light          |
| <b>ypetR90Err</b>     | arcsec        | REAL   | 4 | -999 | Error in Petrosian (1976) fit radius for y filter stack detection. at 90% light |

|        |               |      |   |      |  |
|--------|---------------|------|---|------|--|
| ypetCf | dimensionless | REAL | 4 | -999 | Petrosian (1976) fit coverage factor for y filter stack detection. |
|--------|---------------|------|---|------|--|

## ForcedMeanObject

**Description:** Contains the mean of single-epoch photometric information for sources detected in the stacked data, calculated as described in Magnier et al. (2013). The mean is calculated for detections associated into objects within a one arcsecond correlation radius. PSF, Kron (1980), and SDSS aperture R5 ( $r = 3.00$  arcsec), R6 ( $r = 4.63$  arcsec), and R7 ( $r = 7.43$  arcsec) apertures (Stoughton 2003) magnitudes and statistics are listed for all filters. References: Kaiser, N., Squires, G., and Broadhurst, T. 1995, ApJ, 449, 460; Kron, R. G. 1980, ApJS, 43, 305; Magnier, E. A., Schlafly, E., Schlafly, E., Finkbeiner, D., et al. 2013, ApJS, 205, 20; Stoughton, C., Lupton, R. H., Bernardi, M., et al. 2003, AJ, 123, 485.

| Name              | Unit          | Data Type | Size | Default Value | Description   |
|-------------------|---------------|-----------|------|---------------|---|
| objID             | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.   |
| uniquePspFOid     | dimensionless | BIGINT    | 8    | NA            | Unique internal PPS forced object identifier.   |
| ippObjID          | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.   |
| randomForcedObjID | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.  |
| nDetections       | dimensionless | SMALLINT  | 2    | -999          | Number of single epoch detections in all filters.   |
| batchID           | dimensionless | BIGINT    | 8    | NA            | Internal database batch identifier.   |
| processingVersion | dimensionless | TINYINT   | 1    | NA            | Data release version.   |
| gnTotal           | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in g filter.   |
| gnIncPSFFlux      | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in PSF flux mean in g filter.                              |
| gnIncKronFlux     | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in Kron (1980) flux mean in g filter.                      |
| gnIncApFlux       | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in aperture flux mean in g filter.                         |
| gnIncR5           | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in R5 ( $r = 3.00$ arcsec) aperture flux mean in g filter. |
| gnIncR6           | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in R6 ( $r = 4.63$ arcsec) aperture flux mean in g filter. |
| gnIncR7           | dimensionless | SMALLINT  | 2    | -999          | Number of forced single epoch detections in R7 ( $r = 7.43$ arcsec) aperture flux mean in g filter. |
| gFSPFFlux         | Janskys       | REAL      | 4    | -999          | Mean PSF flux from forced single epoch g filter detections.   |
| gFSPFFluxErr      | Janskys       | REAL      | 4    | -999          | Error in mean PSF flux from forced single epoch g filter detections.                                |
| gFSPFFluxStd      | Janskys       | REAL      | 4    | -999          | Standard deviation of PSF fluxes from forced single epoch g filter detections.                      |
| gFSPFMag          | AB magnitudes | REAL      | 4    | -999          | Magnitude from mean PSF flux from forced single epoch g filter detections.                          |
| gFSPFMagErr       | AB magnitudes | REAL      | 4    | -999          | Error in magnitude from mean PSF flux from forced single epoch g filter detections.                 |
| gFKronFlux        | Janskys       | REAL      | 4    | -999          | Mean Kron (1980) flux from forced single epoch g filter detections.                                 |
| gFKronFluxErr     | Janskys       | REAL      | 4    | -999          | Error in mean Kron (1980) flux from forced single epoch g filter detections.                        |

|                         |               |      |   |      |  |
|-------------------------|---------------|------|---|------|--|
| <b>gFKronFluxStd</b>    | Janskys       | REAL | 4 | -999 | Standard deviation of Kron (198) fluxes from forced single epoch g filter detections.  |
| <b>gFKronMag</b>        | AB magnitudes | REAL | 4 | -999 | Magnitude from mean Kron (1980) flux from forced single epoch g filter detections.   |
| <b>gFKronMagErr</b>     | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean Kron (1980) flux from forced single epoch g filter detections.                                    |
| <b>gFAPFlux</b>         | Janskys       | REAL | 4 | -999 | Mean aperture flux from forced single epoch g filter detections.   |
| <b>gFAPFluxErr</b>      | Janskys       | REAL | 4 | -999 | Error in mean aperture flux from forced single epoch g filter detections.  |
| <b>gFAPFluxStd</b>      | Janskys       | REAL | 4 | -999 | Standard deviation of aperture fluxes from forced single epoch g filter detections.  |
| <b>gFAPMag</b>          | AB magnitudes | REAL | 4 | -999 | Magnitude from mean aperture flux from forced single epoch g filter detections.  |
| <b>gFAPMagErr</b>       | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean aperture flux from forced single epoch g filter detections.                                       |
| <b>gFmeanfluxR5</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch g filter detections within an aperture of radius $r = 3.00$ arcsec.                         |
| <b>gFmeanfluxR5Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch g filter detections within an aperture of radius $r = 3.00$ arcsec.                |
| <b>gFmeanfluxR5Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch g filter detection fluxes within an aperture of radius $r = 3.00$ arcsec.            |
| <b>gFmeanfluxR5Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for forced single epoch g filter detections within an aperture of radius $r = 3.00$ arcsec.               |
| <b>gFmeanMagR5</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch g filter detections within an aperture of radius $r = 3.00$ arcsec.          |
| <b>gFmeanMagR5Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch g filter detections within an aperture of radius $r = 3.00$ arcsec. |
| <b>gFmeanfluxR6</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch g filter detections within an aperture of radius $r = 4.63$ arcsec.                         |
| <b>gFmeanfluxR6Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch g filter detections within an aperture of radius $r = 4.63$ arcsec.                |
| <b>gFmeanfluxR6Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch g filter detection fluxes within an aperture of radius $r = 4.63$ arcsec.            |
| <b>gFmeanfluxR6Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for forced single epoch g filter detections within an aperture of radius $r = 4.63$ arcsec.               |
| <b>gFmeanMagR6</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch g filter detections within an aperture of radius $r = 4.63$ arcsec.          |
| <b>gFmeanMagR6Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch g filter detections within an aperture of radius $r = 4.63$ arcsec. |
| <b>gFmeanfluxR7</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch g filter detections within an aperture of radius $r = 7.43$ arcsec.                         |
| <b>gFmeanfluxR7Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch g filter detections within an aperture of radius $r = 7.43$ arcsec.                |
| <b>gFmeanfluxR7Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch g filter detection fluxes within an aperture of radius $r = 7.43$ arcsec.            |
| <b>gFmeanfluxR7Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for forced single epoch g filter detections within an aperture of radius $r = 7.43$ arcsec.               |
| <b>gFmeanMagR7</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch g filter detections within an aperture of radius $r = 7.43$ arcsec.          |
| <b>gFmeanMagR7Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch g filter detections within an aperture of radius $r = 7.43$ arcsec. |



|                        |               |          |   |      |   |
|------------------------|---------------|----------|---|------|---|
| <b>gFlags</b>          | dimensionless | INT      | 4 | 0    | Information flag bitmask indicating details of the photometry from forced single epoch g filter detections. Values listed in ObjectInfoFlags. |
| <b>gE1</b>             | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e1 = (M_{xx} - M_{yy}) / (M_{xx} + M_{yy})$ from forced single epoch g filter detections.        |
| <b>gE2</b>             | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e2 = (2 M_{xy}) / (M_{xx} + M_{yy})$ from forced single epoch g filter detections.               |
| <b>rnTotal</b>         | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in r filter.   |
| <b>rnIncPSF Flux</b>   | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in PSF flux mean in r filter.  |
| <b>rnIncKron Flux</b>  | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in Kron (1980) flux mean in r filter.  |
| <b>rnIncAp Flux</b>    | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in aperture flux mean in r filter.   |
| <b>rnIncR5</b>         | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R5 ( $r = 3.00$ arcsec) aperture flux mean in r filter.   |
| <b>rnIncR6</b>         | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R6 ( $r = 4.63$ arcsec) aperture flux mean in r filter.   |
| <b>rnIncR7</b>         | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R7 ( $r = 7.43$ arcsec) aperture flux mean in r filter.   |
| <b>rFPSFFlux</b>       | Janskys       | REAL     | 4 | -999 | Mean PSF flux from forced single epoch r filter detections.   |
| <b>rFPSFFluxErr</b>    | Janskys       | REAL     | 4 | -999 | Error in mean PSF flux from forced single epoch r filter detections.  |
| <b>rFPSFFluxStd</b>    | Janskys       | REAL     | 4 | -999 | Standard deviation of PSF fluxes from forced single epoch r filter detections.  |
| <b>rFPSFMag</b>        | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean PSF flux from forced single epoch r filter detections.  |
| <b>rFPSFMagErr</b>     | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean PSF flux from forced single epoch r filter detections.   |
| <b>rFKronFlux</b>      | Janskys       | REAL     | 4 | -999 | Mean Kron (1980) flux from forced single epoch r filter detections.   |
| <b>rFKronFluxErr</b>   | Janskys       | REAL     | 4 | -999 | Error in mean Kron (1980) flux from forced single epoch r filter detections.  |
| <b>rFKronFluxStd</b>   | Janskys       | REAL     | 4 | -999 | Standard deviation of Kron (198) fluxes from forced single epoch r filter detections.   |
| <b>rFKronMag</b>       | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean Kron (1980) flux from forced single epoch r filter detections.  |
| <b>rFKronMagErr</b>    | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean Kron (1980) flux from forced single epoch r filter detections.   |
| <b>rFApFlux</b>        | Janskys       | REAL     | 4 | -999 | Mean aperture flux from forced single epoch r filter detections.  |
| <b>rFApFluxErr</b>     | Janskys       | REAL     | 4 | -999 | Error in mean aperture flux from forced single epoch r filter detections.   |
| <b>rFApFluxStd</b>     | Janskys       | REAL     | 4 | -999 | Standard deviation of aperture fluxes from forced single epoch g filter detections.   |
| <b>rFApMag</b>         | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean aperture flux from forced single epoch r filter detections.   |
| <b>rFApMagErr</b>      | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean aperture flux from forced single epoch r filter detections.  |
| <b>rFmeanfluxR5</b>    | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch r filter detections within an aperture of radius $r = 3.00$ arcsec.  |
| <b>rFmeanfluxR5Err</b> | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch r filter detections within an aperture of radius $r = 3.00$ arcsec.                               |
| <b>rFmeanfluxR5Std</b> | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch r filter detection fluxes within an aperture of radius $r = 3.00$ arcsec.                           |

|                         |               |          |   |      |   |
|-------------------------|---------------|----------|---|------|---|
| <b>rFmeanfluxR5Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch r filter detections within an aperture of radius $r = 3.00$ arcsec.                              |
| <b>rFmeanMagR5</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch r filter detections within an aperture of radius $r = 3.00$ arcsec.                         |
| <b>rFmeanMagR5Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch r filter detections within an aperture of radius $r = 3.00$ arcsec.                |
| <b>rFmeanfluxR6</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch r filter detections within an aperture of radius $r = 4.63$ arcsec.  |
| <b>rFmeanfluxR6Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch r filter detections within an aperture of radius $r = 4.63$ arcsec.                               |
| <b>rFmeanfluxR6Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch r filter detection fluxes within an aperture of radius $r = 4.63$ arcsec.                           |
| <b>rFmeanfluxR6Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch r filter detections within an aperture of radius $r = 4.63$ arcsec.                              |
| <b>rFmeanMagR6</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch r filter detections within an aperture of radius $r = 4.63$ arcsec.                         |
| <b>rFmeanMagR6Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch r filter detections within an aperture of radius $r = 4.63$ arcsec.                |
| <b>rFmeanfluxR7</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch r filter detections within an aperture of radius $r = 7.43$ arcsec.  |
| <b>rFmeanfluxR7Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch r filter detections within an aperture of radius $r = 7.43$ arcsec.                               |
| <b>rFmeanfluxR7Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch r filter detection fluxes within an aperture of radius $r = 7.43$ arcsec.                           |
| <b>rFmeanfluxR7Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch r filter detections within an aperture of radius $r = 7.43$ arcsec.                              |
| <b>rFmeanMagR7</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch r filter detections within an aperture of radius $r = 7.43$ arcsec.                         |
| <b>rFmeanMagR7Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch r filter detections within an aperture of radius $r = 7.43$ arcsec.                |
| <b>rFlags</b>           | dimensionless | INT      | 4 | 0    | Information flag bitmask indicating details of the photometry from forced single epoch r filter detections. Values listed in ObjectInfoFlags. |
| <b>rE1</b>              | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e1 = (M_{xx} - M_{yy}) / (M_{xx} + M_{yy})$ from forced single epoch r filter detections.        |
| <b>rE2</b>              | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e2 = (2 M_{xy}) / (M_{xx} + M_{yy})$ from forced single epoch r filter detections.               |
| <b>inTotal</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in i filter.   |
| <b>inIncPSF Flux</b>    | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in PSF flux mean in i filter.  |
| <b>inIncKron Flux</b>   | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in Kron (1980) flux mean in i filter.  |
| <b>inIncAp Flux</b>     | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in aperture flux mean in i filter.   |
| <b>inIncR5</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R5 ( $r = 3.00$ arcsec) aperture flux mean in i filter.   |
| <b>inIncR6</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R6 ( $r = 4.63$ arcsec) aperture flux mean in i filter.   |
| <b>inIncR7</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R7 ( $r = 7.43$ arcsec) aperture flux mean in i filter.   |
| <b>iFPSFFlux</b>        | Janskys       | REAL     | 4 | -999 | Mean PSF flux from forced single epoch i filter detections.   |
| <b>iFPSFFluxErr</b>     | Janskys       | REAL     | 4 | -999 | Error in mean PSF flux from forced single epoch i filter detections.  |
| <b>iFPSFFluxStd</b>     | Janskys       | REAL     | 4 | -999 | Standard deviation of PSF fluxes from forced single epoch i filter detections.  |

|                         |               |      |   |      |  |
|-------------------------|---------------|------|---|------|--|
| <b>iFPSFMag</b>         | AB magnitudes | REAL | 4 | -999 | Magnitude from mean PSF flux from forced single epoch i filter detections.   |
| <b>iFPSMagErr</b>       | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean PSF flux from forced single epoch i filter detections.  |
| <b>iFKronFlux</b>       | Janskys       | REAL | 4 | -999 | Mean Kron (1980) flux from forced single epoch i filter detections.  |
| <b>iFKronFluxErr</b>    | Janskys       | REAL | 4 | -999 | Error in mean Kron (1980) flux from forced single epoch i filter detections.   |
| <b>iFKronFluxStd</b>    | Janskys       | REAL | 4 | -999 | Standard deviation of Kron (198) fluxes from forced single epoch i filter detections.  |
| <b>iFKronMag</b>        | AB magnitudes | REAL | 4 | -999 | Magnitude from mean Kron (1980) flux from forced single epoch i filter detections.   |
| <b>iFKronMagErr</b>     | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean Kron (1980) flux from forced single epoch i filter detections.                                    |
| <b>iFApFlux</b>         | Janskys       | REAL | 4 | -999 | Mean aperture flux from forced single epoch i filter detections.   |
| <b>iFApFluxErr</b>      | Janskys       | REAL | 4 | -999 | Error in mean aperture flux from forced single epoch i filter detections.  |
| <b>iFApFluxStd</b>      | Janskys       | REAL | 4 | -999 | Standard deviation of aperture fluxes from forced single epoch i filter detections.  |
| <b>iFApMag</b>          | AB magnitudes | REAL | 4 | -999 | Magnitude from mean aperture flux from forced single epoch i filter detections.  |
| <b>iFApMagErr</b>       | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean aperture flux from forced single epoch i filter detections.                                       |
| <b>iFmeanfluxR5</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch i filter detections within an aperture of radius $r = 3.00$ arcsec.                         |
| <b>iFmeanfluxR5Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch i filter detections within an aperture of radius $r = 3.00$ arcsec.                |
| <b>iFmeanfluxR5Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch i filter detection fluxes within an aperture of radius $r = 3.00$ arcsec.            |
| <b>iFmeanfluxR5Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for forced single epoch i filter detections within an aperture of radius $r = 3.00$ arcsec.               |
| <b>iFmeanMagR5</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch i filter detections within an aperture of radius $r = 3.00$ arcsec.          |
| <b>iFmeanMagR5Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch i filter detections within an aperture of radius $r = 3.00$ arcsec. |
| <b>iFmeanfluxR6</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch i filter detections within an aperture of radius $r = 4.63$ arcsec.                         |
| <b>iFmeanfluxR6Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch i filter detections within an aperture of radius $r = 4.63$ arcsec.                |
| <b>iFmeanfluxR6Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch i filter detection fluxes within an aperture of radius $r = 4.63$ arcsec.            |
| <b>iFmeanfluxR6Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for forced single epoch i filter detections within an aperture of radius $r = 4.63$ arcsec.               |
| <b>iFmeanMagR6</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch i filter detections within an aperture of radius $r = 4.63$ arcsec.          |
| <b>iFmeanMagR6Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch i filter detections within an aperture of radius $r = 4.63$ arcsec. |
| <b>iFmeanfluxR7</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch i filter detections within an aperture of radius $r = 7.43$ arcsec.                         |
| <b>iFmeanfluxR7Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch i filter detections within an aperture of radius $r = 7.43$ arcsec.                |
| <b>iFmeanfluxR7Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch i filter detection fluxes within an aperture of radius $r = 7.43$ arcsec.            |

|                         |               |          |   |      |   |
|-------------------------|---------------|----------|---|------|---|
| <b>iFmeanFluxR7Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch i filter detections within an aperture of radius $r = 7.43$ arcsec.                              |
| <b>iFmeanMagR7</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch i filter detections within an aperture of radius $r = 7.43$ arcsec.                         |
| <b>iFmeanMagR7Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch i filter detections within an aperture of radius $r = 7.43$ arcsec.                |
| <b>iFlags</b>           | dimensionless | INT      | 4 | 0    | Information flag bitmask indicating details of the photometry from forced single epoch i filter detections. Values listed in ObjectInfoFlags. |
| <b>iE1</b>              | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e1 = (M_{xx} - M_{yy}) / (M_{xx} + M_{yy})$ from forced single epoch i filter detections.        |
| <b>iE2</b>              | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e2 = (2 M_{xy}) / (M_{xx} + M_{yy})$ from forced single epoch i filter detections.               |
| <b>znTotal</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in z filter.   |
| <b>znIncPSFFlux</b>     | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in PSF flux mean in z filter.  |
| <b>znIncKronFlux</b>    | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in Kron (1980) flux mean in z filter.  |
| <b>znIncApFlux</b>      | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in aperture flux mean in z filter.   |
| <b>znIncR5</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R5 ( $r = 3.00$ arcsec) aperture flux mean in z filter.   |
| <b>znIncR6</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R6 ( $r = 4.63$ arcsec) aperture flux mean in z filter.   |
| <b>znIncR7</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R7 ( $r = 7.43$ arcsec) aperture flux mean in z filter.   |
| <b>zFPSFFlux</b>        | Janskys       | REAL     | 4 | -999 | Mean PSF flux from forced single epoch z filter detections.   |
| <b>zFPSFFluxErr</b>     | Janskys       | REAL     | 4 | -999 | Error in mean PSF flux from forced single epoch z filter detections.  |
| <b>zFPSFFluxStd</b>     | Janskys       | REAL     | 4 | -999 | Standard deviation of PSF fluxes from forced single epoch z filter detections.  |
| <b>zFPSFMag</b>         | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean PSF flux from forced single epoch z filter detections.  |
| <b>zFPSFMagErr</b>      | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean PSF flux from forced single epoch z filter detections.   |
| <b>zFKronFlux</b>       | Janskys       | REAL     | 4 | -999 | Mean Kron (1980) flux from forced single epoch z filter detections.   |
| <b>zFKronFluxErr</b>    | Janskys       | REAL     | 4 | -999 | Error in mean Kron (1980) flux from forced single epoch z filter detections.  |
| <b>zFKronFluxStd</b>    | Janskys       | REAL     | 4 | -999 | Standard deviation of Kron (198) fluxes from forced single epoch z filter detections.   |
| <b>zFKronMag</b>        | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean Kron (1980) flux from forced single epoch z filter detections.  |
| <b>zFKronMagErr</b>     | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean Kron (1980) flux from forced single epoch z filter detections.   |
| <b>zFApFlux</b>         | Janskys       | REAL     | 4 | -999 | Mean aperture flux from forced single epoch z filter detections.  |
| <b>zFApFluxErr</b>      | Janskys       | REAL     | 4 | -999 | Error in mean aperture flux from forced single epoch z filter detections.   |
| <b>zFApFluxStd</b>      | Janskys       | REAL     | 4 | -999 | Standard deviation of aperture fluxes from forced single epoch z filter detections.   |
| <b>zFApMag</b>          | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean aperture flux from forced single epoch z filter detections.   |

|                         |               |          |   |      |   |
|-------------------------|---------------|----------|---|------|---|
| <b>zFapMagErr</b>       | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean aperture flux from forced single epoch z filter detections.  |
| <b>zFmeanfluxR5</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch z filter detections within an aperture of radius $r = 3.00$ arcsec.  |
| <b>zFmeanfluxR5Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch z filter detections within an aperture of radius $r = 3.00$ arcsec.                               |
| <b>zFmeanfluxR5Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch z filter detection fluxes within an aperture of radius $r = 3.00$ arcsec.                           |
| <b>zFmeanfluxR5Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch z filter detections within an aperture of radius $r = 3.00$ arcsec.                              |
| <b>zFmeanMagR5</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch z filter detections within an aperture of radius $r = 3.00$ arcsec.                         |
| <b>zFmeanMagR5Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch z filter detections within an aperture of radius $r = 3.00$ arcsec.                |
| <b>zFmeanfluxR6</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch z filter detections within an aperture of radius $r = 4.63$ arcsec.  |
| <b>zFmeanfluxR6Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch z filter detections within an aperture of radius $r = 4.63$ arcsec.                               |
| <b>zFmeanfluxR6Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch z filter detection fluxes within an aperture of radius $r = 4.63$ arcsec.                           |
| <b>zFmeanfluxR6Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch z filter detections within an aperture of radius $r = 4.63$ arcsec.                              |
| <b>zFmeanMagR6</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch z filter detections within an aperture of radius $r = 4.63$ arcsec.                         |
| <b>zFmeanMagR6Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch z filter detections within an aperture of radius $r = 4.63$ arcsec.                |
| <b>zFmeanfluxR7</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch z filter detections within an aperture of radius $r = 7.43$ arcsec.  |
| <b>zFmeanfluxR7Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch z filter detections within an aperture of radius $r = 7.43$ arcsec.                               |
| <b>zFmeanfluxR7Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch z filter detection fluxes within an aperture of radius $r = 7.43$ arcsec.                           |
| <b>zFmeanfluxR7Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch z filter detections within an aperture of radius $r = 7.43$ arcsec.                              |
| <b>zFmeanMagR7</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch z filter detections within an aperture of radius $r = 7.43$ arcsec.                         |
| <b>zFmeanMagR7Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch z filter detections within an aperture of radius $r = 7.43$ arcsec.                |
| <b>zFlags</b>           | dimensionless | INT      | 4 | 0    | Information flag bitmask indicating details of the photometry from forced single epoch z filter detections. Values listed in ObjectInfoFlags. |
| <b>zE1</b>              | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e1 = (M_{xx} - M_{yy}) / (M_{xx} + M_{yy})$ from forced single epoch z filter detections.        |
| <b>zE2</b>              | dimensionless | REAL     | 4 | -999 | Kaiser et al. (1995) polarization parameter $e2 = (2 M_{xy}) / (M_{xx} + M_{yy})$ from forced single epoch z filter detections.               |
| <b>ynTotal</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in y filter.   |
| <b>ynIncPSFFlux</b>     | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in PSF flux mean in y filter.  |
| <b>ynIncKronFlux</b>    | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in Kron (1980) flux mean in y filter.  |
| <b>ynIncApFlux</b>      | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in aperture flux mean in y filter.   |
| <b>ynIncR5</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R5 ( $r = 3.00$ arcsec) aperture flux mean in y filter.   |

|                         |               |          |   |      |  |
|-------------------------|---------------|----------|---|------|--|
| <b>ynIncr6</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R6 ( $r = 4.63$ arcsec) aperture flux mean in y filter.                            |
| <b>ynIncr7</b>          | dimensionless | SMALLINT | 2 | -999 | Number of forced single epoch detections in R7 ( $r = 7.43$ arcsec) aperture flux mean in y filter.                            |
| <b>yFPSFFIux</b>        | Janskys       | REAL     | 4 | -999 | Mean PSF flux from forced single epoch y filter detections.  |
| <b>yFPSFFIuxErr</b>     | Janskys       | REAL     | 4 | -999 | Error in mean PSF flux from forced single epoch y filter detections.   |
| <b>yFPSFFIuxStd</b>     | Janskys       | REAL     | 4 | -999 | Standard deviation of PSF fluxes from forced single epoch y filter detections.   |
| <b>yFPSFMag</b>         | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean PSF flux from forced single epoch y filter detections.   |
| <b>yFPSFMagErr</b>      | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean PSF flux from forced single epoch y filter detections.  |
| <b>yFKronFIux</b>       | Janskys       | REAL     | 4 | -999 | Mean Kron (1980) flux from forced single epoch y filter detections.  |
| <b>yFKronFIuxErr</b>    | Janskys       | REAL     | 4 | -999 | Error in mean Kron (1980) flux from forced single epoch y filter detections.   |
| <b>yFKronFIuxStd</b>    | Janskys       | REAL     | 4 | -999 | Standard deviation of Kron (1980) fluxes from forced single epoch y filter detections.   |
| <b>yFKronMag</b>        | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean Kron (1980) flux from forced single epoch y filter detections.   |
| <b>yFKronMagErr</b>     | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean Kron (1980) flux from forced single epoch y filter detections.                                    |
| <b>yFApFlux</b>         | Janskys       | REAL     | 4 | -999 | Mean aperture flux from forced single epoch y filter detections.   |
| <b>yFApFluxErr</b>      | Janskys       | REAL     | 4 | -999 | Error in mean aperture flux from forced single epoch y filter detections.  |
| <b>yFApFluxStd</b>      | Janskys       | REAL     | 4 | -999 | Standard deviation of aperture fluxes from forced single epoch y filter detections.  |
| <b>yFApMag</b>          | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean aperture flux from forced single epoch y filter detections.  |
| <b>yFApMagErr</b>       | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean aperture flux from forced single epoch y filter detections.                                       |
| <b>yFmeanfluxR5</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch y filter detections within an aperture of radius $r = 3.00$ arcsec.                         |
| <b>yFmeanfluxR5Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch y filter detections within an aperture of radius $r = 3.00$ arcsec.                |
| <b>yFmeanfluxR5Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch y filter detection fluxes within an aperture of radius $r = 3.00$ arcsec.            |
| <b>yFmeanfluxR5Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch y filter detections within an aperture of radius $r = 3.00$ arcsec.               |
| <b>yFmeanMagR5</b>      | AB magnitudes | REAL     | 4 | -999 | Magnitude from mean flux from forced single epoch y filter detections within an aperture of radius $r = 3.00$ arcsec.          |
| <b>yFmeanMagR5Err</b>   | AB magnitudes | REAL     | 4 | -999 | Error in magnitude from mean flux from forced single epoch y filter detections within an aperture of radius $r = 3.00$ arcsec. |
| <b>yFmeanfluxR6</b>     | Janskys       | REAL     | 4 | -999 | Mean flux from forced single epoch y filter detections within an aperture of radius $r = 4.63$ arcsec.                         |
| <b>yFmeanfluxR6Err</b>  | Janskys       | REAL     | 4 | -999 | Error in mean flux from forced single epoch y filter detections within an aperture of radius $r = 4.63$ arcsec.                |
| <b>yFmeanfluxR6Std</b>  | Janskys       | REAL     | 4 | -999 | Standard deviation of forced single epoch y filter detection fluxes within an aperture of radius $r = 4.63$ arcsec.            |
| <b>yFmeanfluxR6Fill</b> | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced single epoch y filter detections within an aperture of radius $r = 4.63$ arcsec.               |

|                         |               |      |   |      |   |
|-------------------------|---------------|------|---|------|---|
| <b>yFmeanMagR6</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch y filter detections within an aperture of radius $r = 4.63$ arcsec.                         |
| <b>yFmeanMagR6Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch y filter detections within an aperture of radius $r = 4.63$ arcsec.                |
| <b>yFmeanfluxR7</b>     | Janskys       | REAL | 4 | -999 | Mean flux from forced single epoch y filter detections within an aperture of radius $r = 7.43$ arcsec.  |
| <b>yFmeanfluxR7Err</b>  | Janskys       | REAL | 4 | -999 | Error in mean flux from forced single epoch y filter detections within an aperture of radius $r = 7.43$ arcsec.                               |
| <b>yFmeanfluxR7Std</b>  | Janskys       | REAL | 4 | -999 | Standard deviation of forced single epoch y filter detection fluxes within an aperture of radius $r = 7.43$ arcsec.                           |
| <b>yFmeanfluxR7Fill</b> | dimensionless | REAL | 4 | -999 | Aperture fill factor for forced single epoch y filter detections within an aperture of radius $r = 7.43$ arcsec.                              |
| <b>yFmeanMagR7</b>      | AB magnitudes | REAL | 4 | -999 | Magnitude from mean flux from forced single epoch y filter detections within an aperture of radius $r = 7.43$ arcsec.                         |
| <b>yFmeanMagR7Err</b>   | AB magnitudes | REAL | 4 | -999 | Error in magnitude from mean flux from forced single epoch y filter detections within an aperture of radius $r = 7.43$ arcsec.                |
| <b>yFlags</b>           | dimensionless | INT  | 4 | 0    | Information flag bitmask indicating details of the photometry from forced single epoch y filter detections. Values listed in ObjectInfoFlags. |
| <b>yE1</b>              | dimensionless | REAL | 4 | -999 | Kaiser et al. (1995) polarization parameter $e1 = (M_{xx} - M_{yy}) / (M_{xx} + M_{yy})$ from forced single epoch y filter detections.        |
| <b>yE2</b>              | dimensionless | REAL | 4 | -999 | Kaiser et al. (1995) polarization parameter $e2 = (2 M_{xy}) / (M_{xx} + M_{yy})$ from forced single epoch y filter detections.               |

## ForcedMeanLensing

**Description:** Contains the mean Kaiser et al. (1995) lensing parameters measured from the forced photometry of objects detected in stacked images on the individual single epoch data.  
**References:** Kaiser, N., Squires, G., and Broadhurst, T. 1995, ApJ, 449, 460.

| Name                     | Unit                | Data Type | Size | Default Value | Description  |
|--------------------------|---------------------|-----------|------|---------------|--|
| <b>objID</b>             | dimensionless       | BIGINT    | 8    | NA            | Unique object identifier.  |
| <b>uniquePSPSFOID</b>    | dimensionless       | BIGINT    | 8    | NA            | Unique internal PSPS forced object identifier.   |
| <b>ippObjID</b>          | dimensionless       | BIGINT    | 8    | NA            | IPP internal object identifier.  |
| <b>randomForcedObjID</b> | dimensionless       | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.   |
| <b>nDetections</b>       | dimensionless       | SMALLINT  | 2    | -999          | Number of single epoch detections in all filters.  |
| <b>batchID</b>           | dimensionless       | BIGINT    | 8    | NA            | Internal database batch identifier.  |
| <b>processingVersion</b> | dimensionless       | TINYINT   | 1    | NA            | Data release version.  |
| <b>gLensObjSmearX11</b>  | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A11) smear polarizability X11 term from forced g filter detections. |
| <b>gLensObjSmearX12</b>  | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A11) smear polarizability X12 term from forced g filter detections. |
| <b>gLensObjSmearX22</b>  | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A11) smear polarizability X22 term from forced g filter detections. |
| <b>gLensObjSmearE1</b>   | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A12) smear polarizability e1 term from forced g filter detections.  |









|                          |                   |      |   |      |  |
|--------------------------|-------------------|------|---|------|--|
| <b>yLensPSF SmearE2</b>  | arcsec<br>^-2     | REAL | 4 | -999 | Kaiser et al. (1995) equation (A12) smear polarizability e2 term from PSF model for forced y filter detections.  |
| <b>yLensPSF ShearX11</b> | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B11) shear polarizability X11 term from PSF model for forced y filter detections. |
| <b>yLensPSF ShearX12</b> | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B11) shear polarizability X12 term from PSF model for forced y filter detections. |
| <b>yLensPSF ShearX22</b> | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B11) shear polarizability X22 term from PSF model for forced y filter detections. |
| <b>yLensPSF ShearE1</b>  | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B12) shear polarizability e1 term from PSF model for forced y filter detections.  |
| <b>yLensPSF ShearE2</b>  | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B12) shear polarizability e2 term from PSF model forced y filter detections.      |

## Tables included in DR2

These tables were not included in DR1 but are in the DR2 database.

### Detection

**Description: Contains single epoch photometry of individual detections from a single exposure. The identifiers connecting the detection back to the original image and to the object association are provided. PSF, aperture, and Kron (1980) photometry are included, along with sky and detector coordinate positions. References: Kron, R. G. 1980, ApJS, 43, 305.**

| Name                       | Unit              | Data Type | Size | Default Value | Description  |
|----------------------------|-------------------|-----------|------|---------------|--|
| <b>objID</b>               | dimens<br>ionless | BIGINT    | 8    | NA            | Unique object identifier.  |
| <b>uniqueP<br/>spsP2id</b> | dimens<br>ionless | BIGINT    | 8    | NA            | Unique internal PPS detection identifier.  |
| <b>detectID</b>            | dimens<br>ionless | BIGINT    | 8    | NA            | Unique detection identifier.   |
| <b>ippObjID</b>            | dimens<br>ionless | BIGINT    | 8    | NA            | IPP internal object identifier.  |
| <b>ippDete<br/>ctID</b>    | dimens<br>ionless | BIGINT    | 8    | NA            | IPP internal detection identifier.   |
| <b>filterID</b>            | dimens<br>ionless | TINYINT   | 1    | NA            | Filter identifier. Details in the Filter table.  |
| <b>surveyID</b>            | dimens<br>ionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.  |
| <b>imageID</b>             | dimens<br>ionless | BIGINT    | 8    | NA            | Unique image identifier. Constructed as (100 * frameID + ccdID).   |
| <b>random<br/>DetID</b>    | dimens<br>ionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.   |
| <b>dvoRegi<br/>onID</b>    | dimens<br>ionless | INT       | 4    | -1            | Internal DVO region identifier.  |
| <b>obsTime</b>             | days              | FLOAT     | 8    | -999          | Modified Julian Date at the midpoint of the observation. Note these are international atomic time rather than UTC, so if you want UTC times you will need to add 34 or 35 seconds to correct for leap seconds. |
| <b>xPos</b>                | raw<br>pixels     | REAL      | 4    | -999          | PSF x center location.   |
| <b>yPos</b>                | raw<br>pixels     | REAL      | 4    | -999          | PSF y center location.   |
| <b>xPosErr</b>             | raw<br>pixels     | REAL      | 4    | -999          | Error in PSF x center location.  |
| <b>yPosErr</b>             | raw<br>pixels     | REAL      | 4    | -999          | Error in PSF y center location.  |

|                      |                       |       |   |      |   |
|----------------------|-----------------------|-------|---|------|---|
| <b>pltScale</b>      | arcsec<br>/pixel      | REAL  | 4 | -999 | Local plate scale at this location.   |
| <b>posAngle</b>      | degrees               | REAL  | 4 | -999 | Position angle (sky-to-chip) at this location.  |
| <b>ra</b>            | degrees               | FLOAT | 8 | -999 | Right ascension.  |
| <b>dec</b>           | degrees               | FLOAT | 8 | -999 | Declination.  |
| <b>raErr</b>         | arcsec                | REAL  | 4 | -999 | Right ascension error.  |
| <b>decErr</b>        | arcsec                | REAL  | 4 | -999 | Declination error.  |
| <b>extNSigma</b>     | dimensionless         | REAL  | 4 | 0    | An extendedness measure based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty.                           |
| <b>zp</b>            | magnitudes            | REAL  | 4 | 0    | Photometric zeropoint. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.   |
| <b>telluricExt</b>   | magnitudes            | REAL  | 4 | NA   | Estimated Telluric extinction due to non-photometric observing conditions. Necessary for converting listed fluxes and magnitudes back to measured ADU counts. |
| <b>expTime</b>       | seconds               | REAL  | 4 | -999 | Exposure time of the frame/exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.                                       |
| <b>airMass</b>       | dimensionless         | REAL  | 4 | 0    | Airmass at midpoint of the exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.                                       |
| <b>psfFlux</b>       | Janskys               | REAL  | 4 | -999 | Flux from PSF fit.  |
| <b>psfFluxErr</b>    | Janskys               | REAL  | 4 | -999 | Error on flux from PSF fit.   |
| <b>psfMajorFWHM</b>  | arcsec                | REAL  | 4 | -999 | PSF major axis FWHM.  |
| <b>psfMinorFWHM</b>  | arcsec                | REAL  | 4 | -999 | PSF minor axis FWHM.  |
| <b>psfTheta</b>      | degrees               | REAL  | 4 | -999 | PSF major axis orientation.   |
| <b>psfCore</b>       | dimensionless         | REAL  | 4 | -999 | PSF core parameter k, where $F = F_0 / (1 + k r^2 + r^3.33)$ .  |
| <b>psfQf</b>         | dimensionless         | REAL  | 4 | -999 | PSF coverage factor.  |
| <b>psfQfPerfect</b>  | dimensionless         | REAL  | 4 | -999 | PSF weighted fraction of pixels totally unmasked.   |
| <b>psfChiSq</b>      | dimensionless         | REAL  | 4 | -999 | Reduced chi squared value of the PSF model fit.   |
| <b>psfLikelihood</b> | dimensionless         | REAL  | 4 | -999 | Likelihood that this detection is best fit by a PSF.  |
| <b>momentXX</b>      | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Second moment M <sub>xx</sub> .   |
| <b>momentXY</b>      | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Second moment M <sub>xy</sub> .   |
| <b>momentYY</b>      | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Second moment M <sub>yy</sub> .   |
| <b>momentR1</b>      | arcsec                | REAL  | 4 | -999 | First radial moment.  |
| <b>momentRH</b>      | arcsec <sup>0.5</sup> | REAL  | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting).  |
| <b>momentM3C</b>     | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Cosine of trefoil second moment term: $r^2 \cos(3 \theta) = M_{xxx} - 3 * M_{xyy}$ .  |
| <b>momentM3S</b>     | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Sine of trefoil second moment: $r^2 \sin(3 \theta) = 3 * M_{xxy} - M_{yyy}$ .   |
| <b>momentM4C</b>     | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Cosine of quadrupole second moment: $r^2 \cos(4 \theta) = M_{xxxx} - 6 * M_{xxyy} + M_{yyyy}$ .   |
| <b>momentM4S</b>     | arcsec <sup>2</sup>   | REAL  | 4 | -999 | Sine of quadrupole second moment: $r^2 \sin(4 \theta) = 4 * M_{xxyy} - 4 * M_{yyyy}$ .  |
| <b>apFlux</b>        | Janskys               | REAL  | 4 | -999 | Flux in seeing-dependent aperture.  |

|                          |                               |         |   |      |  |
|--------------------------|-------------------------------|---------|---|------|--|
| <b>apFluxErr</b>         | Janskys                       | REAL    | 4 | -999 | Error on flux in seeing-dependent aperture.  |
| <b>apFillF</b>           | dimensionless                 | REAL    | 4 | -999 | Aperture fill factor.  |
| <b>apRadius</b>          | arcsec                        | REAL    | 4 | -999 | Aperture radius.   |
| <b>kronFlux</b>          | Janskys                       | REAL    | 4 | -999 | Kron (1980) flux.  |
| <b>kronFluxErr</b>       | Janskys                       | REAL    | 4 | -999 | Error on Kron (1980) flux.   |
| <b>kronRad</b>           | arcsec                        | REAL    | 4 | -999 | Kron (1980) radius.  |
| <b>sky</b>               | Janskys / arcsec <sup>2</sup> | REAL    | 4 | -999 | Background sky level.  |
| <b>skyErr</b>            | Janskys / arcsec <sup>2</sup> | REAL    | 4 | -999 | Error in background sky level.   |
| <b>infoFlag</b>          | dimensionless                 | BIGINT  | 8 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags.  |
| <b>infoFlag2</b>         | dimensionless                 | INT     | 4 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags2. |
| <b>infoFlag3</b>         | dimensionless                 | INT     | 4 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags3. |
| <b>processingVersion</b> | dimensionless                 | TINYINT | 1 | NA   | Data release version.  |

## ForcedWarpMeasurement

**Description: Contains single epoch forced photometry of individual measurements of objects detected in the stacked images. The identifiers connecting the measurement back to the original image and to the object association are provided. PSF, aperture, and Kron (1980) photometry are included, along with sky and detector coordinate positions. References: Kron, R. G. 1980, ApJS, 43, 305.**

| Name                   | Unit          | Data Type | Size | Default Value | Description   |
|------------------------|---------------|-----------|------|---------------|---|
| <b>objID</b>           | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.                                       |
| <b>uniquePspFWid</b>   | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS forced warp identifier.                    |
| <b>detectID</b>        | dimensionless | BIGINT    | 8    | NA            | Unique detection identifier.                                    |
| <b>ippObjID</b>        | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                                 |
| <b>ippDetectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.                              |
| <b>filterID</b>        | dimensionless | TINYINT   | 1    | NA            | Filter identifier. Details in the Filter table.                 |
| <b>surveyID</b>        | dimensionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.                 |
| <b>forcedSummaryID</b> | dimensionless | BIGINT    | 8    | NA            | Unique forced warp summary identifier.                          |
| <b>forcedWarpID</b>    | dimensionless | BIGINT    | 8    | NA            | Unique forced warp identifier.                                  |
| <b>randomWarpID</b>    | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.      |
| <b>tessID</b>          | dimensionless | TINYINT   | 1    | 0             | Tessellation identifier. Details in the TessellationType table. |

|                      |                       |          |   |      |  |
|----------------------|-----------------------|----------|---|------|--|
| <b>projectID</b>     | dimensionless         | SMALLINT | 2 | -1   | Projection cell identifier.  |
| <b>skyCellID</b>     | dimensionless         | TINYINT  | 1 | 255  | Skycell region identifier.   |
| <b>dvoRegionID</b>   | dimensionless         | INT      | 4 | -1   | Internal DVO region identifier.  |
| <b>obsTime</b>       | days                  | FLOAT    | 8 | -999 | Modified Julian Date at the midpoint of the observation. Note these are international atomic time rather than UTC, so if you want UTC times you will need to add 34 or 35 seconds to correct for leap seconds. |
| <b>zp</b>            | magnitudes            | REAL     | 4 | 0    | Photometric zeropoint. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>telluricExt</b>   | magnitudes            | REAL     | 4 | NA   | Estimated Telluric extinction due to non-photometric observing conditions. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>expTime</b>       | seconds               | REAL     | 4 | -999 | Exposure time of the frame/exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>airMass</b>       | dimensionless         | REAL     | 4 | 0    | Airmass at midpoint of the exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>FpsfFlux</b>      | Janskys               | REAL     | 4 | -999 | PSF flux.  |
| <b>FpsfFluxErr</b>   | Janskys               | REAL     | 4 | -999 | Error in PSF flux.   |
| <b>xPosChip</b>      | raw pixels            | REAL     | 4 | -999 | PSF x position in original chip pixels.  |
| <b>yPosChip</b>      | raw pixels            | REAL     | 4 | -999 | PSF y position in original chip pixels.  |
| <b>FccdID</b>        | dimensionless         | SMALLINT | 2 | -999 | OTA identifier of original chip (see ImageMeta).   |
| <b>FpsfMajorFWHM</b> | arcsec                | REAL     | 4 | -999 | PSF major axis FWHM.   |
| <b>FpsfMinorFWHM</b> | arcsec                | REAL     | 4 | -999 | PSF minor axis FWHM.   |
| <b>FpsfTheta</b>     | degrees               | REAL     | 4 | -999 | PSF major axis orientation.  |
| <b>FpsfCore</b>      | dimensionless         | REAL     | 4 | -999 | PSF core parameter k, where $F = F_0 / (1 + k r^2 + r^3.33)$ .   |
| <b>FpsfQf</b>        | dimensionless         | REAL     | 4 | -999 | PSF coverage factor.   |
| <b>FpsfQfPercent</b> | dimensionless         | REAL     | 4 | -999 | PSF weighted fraction of pixels totally unmasked.  |
| <b>FpsfChiSq</b>     | dimensionless         | REAL     | 4 | -999 | Reduced chi squared value of the PSF model fit.  |
| <b>FmomentXX</b>     | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Second moment M <sub>xx</sub> .  |
| <b>FmomentXY</b>     | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Second moment M <sub>xy</sub> .  |
| <b>FmomentYY</b>     | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Second moment M <sub>yy</sub> .  |
| <b>FmomentR1</b>     | arcsec                | REAL     | 4 | -999 | First radial moment.   |
| <b>FmomentRH</b>     | arcsec <sup>0.5</sup> | REAL     | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting).   |
| <b>FmomentM3C</b>    | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Cosine of trefoil second moment term: $r^2 \cos(3 \theta) = M_{xxx} - 3 * M_{xyy}$ .   |
| <b>FmomentM3S</b>    | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Sine of trefoil second moment: $r^2 \sin(3 \theta) = 3 * M_{xxy} - M_{yyy}$ .  |
| <b>FmomentM4C</b>    | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Cosine of quadrupole second moment: $r^2 \cos(4 \theta) = M_{xxxx} - 6 * M_{xxyy} + M_{yyyy}$ .  |
| <b>FmomentM4S</b>    | arcsec <sup>2</sup>   | REAL     | 4 | -999 | Sine of quadrupole second moment: $r^2 \sin(4 \theta) = 4 * M_{xxyy} - 4 * M_{xyyy}$ .   |

|                          |                               |         |   |      |  |
|--------------------------|-------------------------------|---------|---|------|--|
| <b>FapFlux</b>           | Janskys                       | REAL    | 4 | -999 | Aperture flux.   |
| <b>FapFluxErr</b>        | Janskys                       | REAL    | 4 | -999 | Error in aperture flux.  |
| <b>FapFillF</b>          | dimensionless                 | REAL    | 4 | -999 | Aperture fill factor.  |
| <b>FapRadius</b>         | arcsec                        | REAL    | 4 | -999 | Aperture radius for forced warp detection.   |
| <b>FkronFlux</b>         | Janskys                       | REAL    | 4 | -999 | Kron (1980) flux.  |
| <b>FkronFluxErr</b>      | Janskys                       | REAL    | 4 | -999 | Error in Kron (1980) flux.   |
| <b>FkronRad</b>          | arcsec                        | REAL    | 4 | -999 | Kron (1980) radius.  |
| <b>Fsky</b>              | Janskys / arcsec <sup>2</sup> | REAL    | 4 | -999 | Background sky level.  |
| <b>FskyErr</b>           | Janskys / arcsec <sup>2</sup> | REAL    | 4 | -999 | Error in background sky level.   |
| <b>FinfoFlag</b>         | dimensionless                 | BIGINT  | 8 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags.  |
| <b>FinfoFlag2</b>        | dimensionless                 | INT     | 4 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags2. |
| <b>FinfoFlag3</b>        | dimensionless                 | INT     | 4 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags3. |
| <b>processingVersion</b> | dimensionless                 | TINYINT | 1 | NA   | Data release version.  |

## ForcedWarpExtended

**Description:** Contains the single epoch forced photometry fluxes within the SDSS R5 ( $r = 3.00$  arcsec), R6 ( $r = 4.63$  arcsec), and R7 ( $r = 7.43$  arcsec) apertures (Stoughton 2003) for objects detected in the stacked images. References: Stoughton, C., Lupton, R. H., Bernardi, M., et al. 2003, AJ, 123, 485.

| Name                 | Unit          | Data Type | Size | Default Value | Description   |
|----------------------|---------------|-----------|------|---------------|---|
| <b>objID</b>         | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.                                       |
| <b>uniquePspFWid</b> | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS forced warp identifier.                    |
| <b>detectID</b>      | dimensionless | BIGINT    | 8    | NA            | Unique detection identifier.                                    |
| <b>ippObjID</b>      | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                                 |
| <b>ippDetectID</b>   | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.                              |
| <b>filterID</b>      | dimensionless | TINYINT   | 1    | NA            | Filter identifier. Details in the Filter table.                 |
| <b>surveyID</b>      | dimensionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.                 |
| <b>forcedWarpID</b>  | dimensionless | BIGINT    | 8    | NA            | Unique forced warp identifier.                                  |
| <b>randomWarpID</b>  | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.      |
| <b>tessID</b>        | dimensionless | TINYINT   | 1    | 0             | Tessellation identifier. Details in the TessellationType table. |

|                    |               |          |   |      |  |
|--------------------|---------------|----------|---|------|--|
| <b>projectonID</b> | dimensionless | SMALLINT | 2 | -1   | Projection cell identifier.  |
| <b>skyCellID</b>   | dimensionless | TINYINT  | 1 | 255  | Skycell region identifier.   |
| <b>dvoRegionID</b> | dimensionless | INT      | 4 | -1   | Internal DVO region identifier.  |
| <b>obsTime</b>     | days          | FLOAT    | 8 | -999 | Modified Julian Date at the midpoint of the observation. Note these are international atomic time rather than UTC, so if you want UTC times you will need to add 34 or 35 seconds to correct for leap seconds. |
| <b>flxR5</b>       | Janskys       | REAL     | 4 | -999 | Flux from forced photometry measurement within an aperture of radius $r = 3.00$ arcsec.  |
| <b>flxR5Err</b>    | Janskys       | REAL     | 4 | -999 | Error in flux from forced photometry measurement within an aperture of radius $r = 3.00$ arcsec.   |
| <b>flxR5Std</b>    | Janskys       | REAL     | 4 | -999 | Standard deviation of flux from forced photometry measurement within an aperture of radius $r = 3.00$ arcsec.  |
| <b>flxR5Fill</b>   | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced photometry measurement within an aperture of radius $r = 3.00$ arcsec.   |
| <b>flxR6</b>       | Janskys       | REAL     | 4 | -999 | Flux from forced photometry measurement within an aperture of radius $r = 4.63$ arcsec.  |
| <b>flxR6Err</b>    | Janskys       | REAL     | 4 | -999 | Error in flux from forced photometry measurement within an aperture of radius $r = 4.63$ arcsec.   |
| <b>flxR6Std</b>    | Janskys       | REAL     | 4 | -999 | Standard deviation of flux from forced photometry measurement within an aperture of radius $r = 4.63$ arcsec.  |
| <b>flxR6Fill</b>   | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced photometry measurement within an aperture of radius $r = 4.63$ arcsec.   |
| <b>flxR7</b>       | Janskys       | REAL     | 4 | -999 | Flux from forced photometry measurement within an aperture of radius $r = 7.43$ arcsec.  |
| <b>flxR7Err</b>    | Janskys       | REAL     | 4 | -999 | Error in flux from forced photometry measurement within an aperture of radius $r = 7.43$ arcsec.   |
| <b>flxR7Std</b>    | Janskys       | REAL     | 4 | -999 | Standard deviation of flux from forced photometry measurement within an aperture of radius $r = 7.43$ arcsec.  |
| <b>flxR7Fill</b>   | dimensionless | REAL     | 4 | -999 | Aperture fill factor for forced photometry measurement within an aperture of radius $r = 7.43$ arcsec.   |

## ForcedWarpMasked

**Description:** Contains an entry for objects detected in the stacked images which were in the footprint of a single epoch exposure, but for which there are no unmasked pixels at that epoch.

| Name                   | Unit          | Data Type | Size | Default Value | Description                                     |
|------------------------|---------------|-----------|------|---------------|---|
| <b>objID</b>           | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.                       |
| <b>uniquePspFWid</b>   | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS forced warp identifier.    |
| <b>ippObjID</b>        | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                 |
| <b>ippDetectID</b>     | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.              |
| <b>filterID</b>        | dimensionless | TINYINT   | 1    | NA            | Filter identifier. Details in the Filter table. |
| <b>surveyID</b>        | dimensionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table. |
| <b>forcedSummaryID</b> | dimensionless | BIGINT    | 8    | NA            | Forced warp summary meta identifier             |
| <b>forcedWarpID</b>    | dimensionless | BIGINT    | 8    | NA            | Unique forced warp identifier.                  |



|                     |               |          |   |      |  |
|---------------------|---------------|----------|---|------|--|
| <b>randomWarpID</b> | dimensionless | FLOAT    | 8 | NA   | Random value drawn from the interval between zero and one.   |
| <b>tessID</b>       | dimensionless | TINYINT  | 1 | 0    | Tessellation identifier. Details in the TessellationType table.  |
| <b>projectionID</b> | dimensionless | SMALLINT | 2 | -1   | Projection cell identifier.  |
| <b>skyCellID</b>    | dimensionless | REAL     | 4 | -999 | Skycell region identifier.   |
| <b>dvoRegionID</b>  | dimensionless | REAL     | 4 | -999 | Internal DVO region identifier.  |
| <b>obsTime</b>      | days          | FLOAT    | 8 | -999 | Modified Julian Date at the midpoint of the observation. Note these are international atomic time rather than UTC, so if you want UTC times you will need to add 34 or 35 seconds to correct for leap seconds. |

## ForcedGalaxyShape

**Description:** Contains the extended source galaxy shape parameters. All filters are matched into a single row. The positions, magnitudes, fluxes, and Sersic indices are inherited from their parent measurement in the StackModelFit tables, and are reproduced here for convenience. The major and minor axes and orientation are recalculated on a warp-by-warp basis from the best fit given these inherited properties. References: Sersic, J. L. 1963, Boletin de la Asociacion Argentina de Astronomia La Plata Argentina, 6, 41.

| Name                     | Unit          | Data Type | Size | Default Value | Description  |
|--------------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>             | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.  |
| <b>uniquePspFGid</b>     | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS forced galaxy identifier.   |
| <b>ippObjID</b>          | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.  |
| <b>surveyID</b>          | dimensionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.  |
| <b>randomForcedGalID</b> | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                             |
| <b>galModelType</b>      | dimensionless | TINYINT   | 1    | -999          | Galaxy model identifier.   |
| <b>nFilter</b>           | dimensionless | TINYINT   | 1    | -999          | Number of filters with valid model measurements.                                       |
| <b>gippDetectionID</b>   | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.   |
| <b>gstackImageID</b>     | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for the g filter stack that was the original detection source. |
| <b>gGalMajor</b>         | arcsec        | REAL      | 4    | -999          | Galaxy major axis for g filter measurement.  |
| <b>gGalMajorErr</b>      | arcsec        | REAL      | 4    | -999          | Error in galaxy major axis for g filter measurement.                                   |
| <b>gGalMinor</b>         | arcsec        | REAL      | 4    | -999          | Galaxy minor axis for g filter measurement.  |
| <b>gGalMinorErr</b>      | arcsec        | REAL      | 4    | -999          | Error in galaxy minor axis for g filter measurement.                                   |
| <b>gGalMag</b>           | AB magnitudes | REAL      | 4    | -999          | Galaxy fit magnitude for g filter measurement.   |
| <b>gGalMagErr</b>        | AB magnitudes | REAL      | 4    | -999          | Error in galaxy fit magnitude for g filter measurement.                                |
| <b>gGalPhi</b>           | degrees       | REAL      | 4    | -999          | Major axis position angle of the model fit for the g filter measurement.               |
| <b>gGalIndex</b>         | dimensionless | REAL      | 4    | -999          | Sersic index of the model fit for the g filter measurement.                            |

|                      |               |          |   |      |  |
|----------------------|---------------|----------|---|------|--|
| <b>gGalFlags</b>     | dimensionless | SMALLINT | 2 | -999 | Analysis flags for the galaxy model chi-square fit (g filter measurement, values defined in ForcedGalaxyShapeFlags). |
| <b>gGalChisq</b>     | dimensionless | REAL     | 4 | -999 | Reduced chi squared value for g filter measurement.  |
| <b>rippDetectID</b>  | dimensionless | BIGINT   | 8 | NA   | IPP internal detection identifier.   |
| <b>rstackImageID</b> | dimensionless | BIGINT   | 8 | NA   | Unique stack identifier for the r filter stack that was the original detection source.                               |
| <b>rGalMajor</b>     | arcsec        | REAL     | 4 | -999 | Galaxy major axis for r filter measurement.  |
| <b>rGalMajorErr</b>  | arcsec        | REAL     | 4 | -999 | Error in galaxy major axis for r filter measurement.   |
| <b>rGalMinor</b>     | arcsec        | REAL     | 4 | -999 | Galaxy minor axis for r filter measurement.  |
| <b>rGalMinorErr</b>  | arcsec        | REAL     | 4 | -999 | Error in galaxy minor axis for r filter measurement.   |
| <b>rGalMag</b>       | AB magnitudes | REAL     | 4 | -999 | Galaxy fit magnitude for r filter measurement.   |
| <b>rGalMagErr</b>    | AB magnitudes | REAL     | 4 | -999 | Error in galaxy fit magnitude for r filter measurement.  |
| <b>rGalPhi</b>       | degrees       | REAL     | 4 | -999 | Major axis position angle of the model fit for the r filter measurement.   |
| <b>rGalIndex</b>     | dimensionless | REAL     | 4 | -999 | Sersic index of the model fit for the r filter measurement.  |
| <b>rGalFlags</b>     | dimensionless | SMALLINT | 2 | -999 | Analysis flags for the galaxy model chi-square fit (r filter measurement, values defined in ForcedGalaxyShapeFlags). |
| <b>rGalChisq</b>     | dimensionless | REAL     | 4 | -999 | Reduced chi squared value for r filter measurement.  |
| <b>iippDetectID</b>  | dimensionless | BIGINT   | 8 | NA   | IPP internal detection identifier.   |
| <b>istackImageID</b> | dimensionless | BIGINT   | 8 | NA   | Unique stack identifier for the i filter stack that was the original detection source.                               |
| <b>iGalMajor</b>     | arcsec        | REAL     | 4 | -999 | Galaxy major axis for i filter measurement.  |
| <b>iGalMajorErr</b>  | arcsec        | REAL     | 4 | -999 | Error in galaxy major axis for i filter measurement.   |
| <b>iGalMinor</b>     | arcsec        | REAL     | 4 | -999 | Galaxy minor axis for i filter measurement.  |
| <b>iGalMinorErr</b>  | arcsec        | REAL     | 4 | -999 | Error in galaxy minor axis for i filter measurement.   |
| <b>iGalMag</b>       | AB magnitudes | REAL     | 4 | -999 | Galaxy fit magnitude for i filter measurement.   |
| <b>iGalMagErr</b>    | AB magnitudes | REAL     | 4 | -999 | Error in galaxy fit magnitude for i filter measurement.  |
| <b>iGalPhi</b>       | degrees       | REAL     | 4 | -999 | Major axis position angle of the model fit for the i filter measurement.   |
| <b>iGalIndex</b>     | dimensionless | REAL     | 4 | -999 | Sersic index of the model fit for the i filter measurement.  |
| <b>iGalFlags</b>     | dimensionless | SMALLINT | 2 | -999 | Analysis flags for the galaxy model chi-square fit (i filter measurement, values defined in ForcedGalaxyShapeFlags). |
| <b>iGalChisq</b>     | dimensionless | REAL     | 4 | -999 | Reduced chi squared value for i filter measurement.  |
| <b>zippDetectID</b>  | dimensionless | BIGINT   | 8 | NA   | IPP internal detection identifier.   |
| <b>zstackImageID</b> | dimensionless | BIGINT   | 8 | NA   | Unique stack identifier for the z filter stack that was the original detection source.                               |
| <b>zGalMajor</b>     | arcsec        | REAL     | 4 | -999 | Galaxy major axis for z filter measurement.  |

|                        |               |          |   |      |  |
|------------------------|---------------|----------|---|------|--|
| <b>zGalMajorErr</b>    | arcsec        | REAL     | 4 | -999 | Error in galaxy major axis for z filter measurement.   |
| <b>zGalMinor</b>       | arcsec        | REAL     | 4 | -999 | Galaxy minor axis for z filter measurement.  |
| <b>zGalMinorErr</b>    | arcsec        | REAL     | 4 | -999 | Error in galaxy minor axis for z filter measurement.   |
| <b>zGalMag</b>         | AB magnitudes | REAL     | 4 | -999 | Galaxy fit magnitude for z filter measurement.   |
| <b>zGalMagErr</b>      | AB magnitudes | REAL     | 4 | -999 | Error in galaxy fit magnitude for z filter measurement.  |
| <b>zGalPhi</b>         | degrees       | REAL     | 4 | -999 | Major axis position angle of the model fit for the z filter measurement.   |
| <b>zGalIndex</b>       | dimensionless | REAL     | 4 | -999 | Sersic index of the model fit for the z filter measurement.  |
| <b>zGalFlags</b>       | dimensionless | SMALLINT | 2 | -999 | Analysis flags for the galaxy model chi-square fit (z filter measurement, values defined in ForcedGalaxyShapeFlags). |
| <b>zGalChisq</b>       | dimensionless | REAL     | 4 | -999 | Reduced chi squared value for z filter measurement.  |
| <b>yippDetectionID</b> | dimensionless | BIGINT   | 8 | NA   | IPP internal detection identifier.   |
| <b>ystackImageID</b>   | dimensionless | BIGINT   | 8 | NA   | Unique stack identifier for the z filter stack that was the original detection source.                               |
| <b>yGalMajor</b>       | arcsec        | REAL     | 4 | -999 | Galaxy major axis for y filter measurement.  |
| <b>yGalMajorErr</b>    | arcsec        | REAL     | 4 | -999 | Error in galaxy major axis for y filter measurement.   |
| <b>yGalMinor</b>       | arcsec        | REAL     | 4 | -999 | Galaxy minor axis for y filter measurement.  |
| <b>yGalMinorErr</b>    | arcsec        | REAL     | 4 | -999 | Error in galaxy minor axis for y filter measurement.   |
| <b>yGalMag</b>         | AB magnitudes | REAL     | 4 | -999 | Galaxy fit magnitude for y filter measurement.   |
| <b>yGalMagErr</b>      | AB magnitudes | REAL     | 4 | -999 | Error in galaxy fit magnitude for y filter measurement.  |
| <b>yGalPhi</b>         | degrees       | REAL     | 4 | -999 | Major axis position angle of the model fit for the y filter measurement.   |
| <b>yGalIndex</b>       | dimensionless | REAL     | 4 | -999 | Sersic index of the model fit for the y filter measurement.  |
| <b>yGalFlags</b>       | dimensionless | SMALLINT | 2 | -999 | Analysis flags for the galaxy model chi-square fit (y filter measurement, values defined in ForcedGalaxyShapeFlags). |
| <b>yGalChisq</b>       | dimensionless | REAL     | 4 | -999 | Reduced chi squared value for y filter measurement.  |

## StackModelFitExtra

**Description:** Contains the galaxy shape and concentration parameters measured from the stack detections. See StackObjectThin table for discussion of primary, secondary, and best detections. References: Blakeslee, J. P., Holden, B. P., Franx, M., et al. 2006, ApJ, 644, 30; Cheng, J. Y., Faber, S. M., Schade, D., Lilly, S. J., Crampton, D., et al. 1995, ApJL, 451, L1; Simard, L., et al. 2011, MNRAS, 412, 727; Simard, L., Willmer, C. N. A., Vogt, N. P., et al. 2003, ApJS, 142, 1.

| Name                 | Unit          | Data Type | Size | Default Value | Description                            |
|----------------------|---------------|-----------|------|---------------|--|
| <b>objID</b>         | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.              |
| <b>uniquePSPSTid</b> | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS stack identifier. |

|                         |               |         |   |      |   |
|-------------------------|---------------|---------|---|------|---|
| <b>ippObjID</b>         | dimensionless | BIGINT  | 8 | NA   | IPP internal object identifier.   |
| <b>randomStackObjID</b> | dimensionless | FLOAT   | 8 | NA   | Random value drawn from the interval between zero and one.  |
| <b>primaryDetection</b> | dimensionless | TINYINT | 1 | 255  | Identifies if this row is the primary stack detection.  |
| <b>bestDetection</b>    | dimensionless | TINYINT | 1 | 255  | Identifies if this row is the best detection.   |
| <b>gippDetectID</b>     | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |
| <b>gstackDetectID</b>   | dimensionless | BIGINT  | 8 | NA   | Unique stack detection identifier.  |
| <b>gstackImageID</b>    | dimensionless | BIGINT  | 8 | NA   | Unique stack identifier for g filter detection.   |
| <b>gS2</b>              | dimensionless | REAL    | 4 | -999 | Smoothness parameter s2 from g filter stack detection (Cheng 2011; Simard 2003).  |
| <b>glogRT</b>           | dimensionless | REAL    | 4 | -999 | Total residual from elliptically symmetric model from g filter stack detection (Cheng 2011; Simard 2003; Schade 1995).      |
| <b>glogRA</b>           | dimensionless | REAL    | 4 | -999 | Asymmetric residual from elliptically symmetric model from g filter stack detection (Cheng 2011; Simard 2003; Schade 1995). |
| <b>gbumpy</b>           | dimensionless | REAL    | 4 | -999 | Bumpiness parameter from g filter stack detection (Blakeslee 2006).   |
| <b>ghalfLightRad</b>    | arcsec        | REAL    | 4 | -999 | Half-light radius from g filter stack detection.  |
| <b>rippDetectID</b>     | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |
| <b>rstackDetectID</b>   | dimensionless | BIGINT  | 8 | NA   | Unique stack detection identifier.  |
| <b>rstackImageID</b>    | dimensionless | BIGINT  | 8 | NA   | Unique stack identifier for r filter detection.   |
| <b>rS2</b>              | dimensionless | REAL    | 4 | -999 | Smoothness parameter s2 from r filter stack detection (Cheng 2011; Simard 2003).  |
| <b>rlogRT</b>           | dimensionless | REAL    | 4 | -999 | Total residual from elliptically symmetric model from r filter stack detection (Cheng 2011; Simard 2003; Schade 1995).      |
| <b>rlogRA</b>           | dimensionless | REAL    | 4 | -999 | Asymmetric residual from elliptically symmetric model from r filter stack detection (Cheng 2011; Simard 2003; Schade 1995). |
| <b>rbumpy</b>           | dimensionless | REAL    | 4 | -999 | Bumpiness parameter from r filter stack detection (Blakeslee 2006).   |
| <b>rhalfLightRad</b>    | arcsec        | REAL    | 4 | -999 | Half-light radius from r filter stack detection.  |
| <b>iippDetectID</b>     | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |
| <b>istackDetectID</b>   | dimensionless | BIGINT  | 8 | NA   | Unique stack detection identifier.  |
| <b>istackImageID</b>    | dimensionless | BIGINT  | 8 | NA   | Unique stack identifier for i filter detection.   |
| <b>iS2</b>              | dimensionless | REAL    | 4 | -999 | Smoothness parameter s2 from i filter stack detection (Cheng 2011; Simard 2003).  |
| <b>ilogRT</b>           | dimensionless | REAL    | 4 | -999 | Total residual from elliptically symmetric model from i filter stack detection (Cheng 2011; Simard 2003; Schade 1995).      |
| <b>ilogRA</b>           | dimensionless | REAL    | 4 | -999 | Asymmetric residual from elliptically symmetric model from i filter stack detection (Cheng 2011; Simard 2003; Schade 1995). |
| <b>ibumpy</b>           | dimensionless | REAL    | 4 | -999 | Bumpiness parameter from i filter stack detection (Blakeslee 2006).   |
| <b>ihalfLightRad</b>    | arcsec        | REAL    | 4 | -999 | Half-light radius from i filter stack detection.  |
| <b>zippDetectID</b>     | dimensionless | BIGINT  | 8 | NA   | IPP internal detection identifier.  |

|                       |               |        |   |      |   |
|-----------------------|---------------|--------|---|------|---|
| <b>zstackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>zstackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for z filter detection.   |
| <b>zS2</b>            | dimensionless | REAL   | 4 | -999 | Smoothness parameter s2 from z filter stack detection (Cheng 2011; Simard 2003).  |
| <b>zlogRT</b>         | dimensionless | REAL   | 4 | -999 | Total residual from elliptically symmetric model from z filter stack detection (Cheng 2011; Simard 2003; Schade 1995).      |
| <b>zlogRA</b>         | dimensionless | REAL   | 4 | -999 | Asymmetric residual from elliptically symmetric model from z filter stack detection (Cheng 2011; Simard 2003; Schade 1995). |
| <b>zbumpy</b>         | dimensionless | REAL   | 4 | -999 | Bumpiness parameter from z filter stack detection (Blakeslee 2006).   |
| <b>zhalfLightRad</b>  | arcsec        | REAL   | 4 | -999 | Half-light radius from z filter stack detection.  |
| <b>yippDetectID</b>   | dimensionless | BIGINT | 8 | NA   | IPP internal detection identifier.  |
| <b>ystackDetectID</b> | dimensionless | BIGINT | 8 | NA   | Unique stack detection identifier.  |
| <b>ystackImageID</b>  | dimensionless | BIGINT | 8 | NA   | Unique stack identifier for y filter detection.   |
| <b>yS2</b>            | dimensionless | REAL   | 4 | -999 | Smoothness parameter s2 from y filter stack detection (Cheng 2011; Simard 2003).  |
| <b>ylogRT</b>         | dimensionless | REAL   | 4 | -999 | Total residual from elliptically symmetric model from y filter stack detection (Cheng 2011; Simard 2003; Schade 1995).      |
| <b>ylogRA</b>         | dimensionless | REAL   | 4 | -999 | Asymmetric residual from elliptically symmetric model from y filter stack detection (Cheng 2011; Simard 2003; Schade 1995). |
| <b>ybumpy</b>         | dimensionless | REAL   | 4 | -999 | Bumpiness parameter from y filter stack detection (Blakeslee 2006).   |
| <b>yhalfLightRad</b>  | arcsec        | REAL   | 4 | -999 | Half-light radius from y filter stack detection.  |

## Tables not included in DR1 or DR2

The tables below are not part of the DR1 or DR2 databases (yet), but their descriptions are included for completeness.

### DiffDetection

**Description: Contains the photometry of individual detections from a difference image. The identifiers connecting the detection back to the difference image and to the object association are provided. PSF, aperture, and Kron (1980) photometry are included, along with sky and detector coordinate positions. Statistics References: Kron, R. G. 1980, ApJS, 43, 305.**

| Name                 | Unit          | Data Type | Size | Default Value | Description   |
|----------------------|---------------|-----------|------|---------------|---|
| <b>diffObjID</b>     | dimensionless | BIGINT    | 8    | NA            | Unique difference object identifier.                  |
| <b>uniquePspDFid</b> | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS difference detection identifier. |
| <b>diffDetID</b>     | dimensionless | BIGINT    | 8    | NA            | Unique difference detection identifier.               |
| <b>diffImageID</b>   | dimensionless | BIGINT    | 8    | NA            | Difference detection meta identifier.                 |
| <b>ippObjID</b>      | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                       |

|                      |               |          |   |      |  |
|----------------------|---------------|----------|---|------|--|
| <b>ippDetectID</b>   | dimensionless | BIGINT   | 8 | NA   | IPP internal detection identifier.   |
| <b>fromPosImage</b>  | dimensionless | TINYINT  | 1 | NA   | Detection is from positive image (if 1) or negative image (if 0).  |
| <b>filterID</b>      | dimensionless | TINYINT  | 1 | NA   | Filter identifier. Details in the Filter table.  |
| <b>surveyID</b>      | dimensionless | TINYINT  | 1 | NA   | Survey identifier. Details in the Survey table.  |
| <b>randomDiffID</b>  | dimensionless | FLOAT    | 8 | NA   | Random value drawn from the interval between zero and one.   |
| <b>tessID</b>        | dimensionless | TINYINT  | 1 | 0    | Tessellation identifier. Details in the TessellationType table.  |
| <b>projectionID</b>  | dimensionless | SMALLINT | 2 | -1   | Projection cell identifier.  |
| <b>skyCellID</b>     | dimensionless | TINYINT  | 1 | 255  | Skycell region identifier.   |
| <b>dvoRegionID</b>   | dimensionless | INT      | 4 | -1   | Internal DVO region identifier.  |
| <b>obsTime</b>       | days          | FLOAT    | 8 | -999 | Modified Julian Date at the midpoint of the observation. Note these are international atomic time rather than UTC, so if you want UTC times you will need to add 34 or 35 seconds to correct for leap seconds. |
| <b>xPos</b>          | sky pixels    | REAL     | 4 | -999 | PSF x center location.   |
| <b>yPos</b>          | sky pixels    | REAL     | 4 | -999 | PSF y center location.   |
| <b>xPosErr</b>       | sky pixels    | REAL     | 4 | -999 | Error in PSF x center location.  |
| <b>yPosErr</b>       | sky pixels    | REAL     | 4 | -999 | Error in PSF y center location.  |
| <b>pltScale</b>      | arcsec/pixel  | REAL     | 4 | -999 | Local plate scale at this location.  |
| <b>posAngle</b>      | degrees       | REAL     | 4 | -999 | Position angle (sky-to-chip) at this location.   |
| <b>ra</b>            | degrees       | FLOAT    | 8 | -999 | Right ascension.   |
| <b>dec</b>           | degrees       | FLOAT    | 8 | -999 | Declination.   |
| <b>raErr</b>         | arcsec        | REAL     | 4 | -999 | Right ascension error.   |
| <b>decErr</b>        | arcsec        | REAL     | 4 | -999 | Declination error.   |
| <b>zp</b>            | magnitudes    | REAL     | 4 | 0    | Photometric zeropoint. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>telluricExt</b>   | magnitudes    | REAL     | 4 | NA   | Estimated Telluric extinction due to non-photometric observing conditions. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>expTime</b>       | seconds       | REAL     | 4 | -999 | Exposure time of the positive single-epoch image. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.   |
| <b>airMass</b>       | dimensionless | REAL     | 4 | 0    | Airmass at midpoint of the exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.  |
| <b>DpsfFlux</b>      | Janskys       | REAL     | 4 | -999 | Flux from PSF fit.   |
| <b>DpsfFluxErr</b>   | Janskys       | REAL     | 4 | -999 | Error in PSF flux.   |
| <b>xPosChip</b>      | raw pixels    | REAL     | 4 | -999 | PSF x position in original chip pixels.  |
| <b>yPosChip</b>      | raw pixels    | REAL     | 4 | -999 | PSF y position in original chip pixels.  |
| <b>ccdID</b>         | dimensionless | SMALLINT | 2 | -999 | OTA identifier of original chip (see ImageMeta).   |
| <b>DpsfMajorFWHM</b> | arcsec        | REAL     | 4 | -999 | PSF major axis FWHM.   |
| <b>DpsfMinorFWHM</b> | arcsec        | REAL     | 4 | -999 | PSF minor axis FWHM.   |

|                       |                               |        |   |      |  |
|-----------------------|-------------------------------|--------|---|------|--|
| <b>DpsfTheta</b>      | degrees                       | REAL   | 4 | -999 | PSF major axis orientation.  |
| <b>DpsfCore</b>       | dimensionless                 | REAL   | 4 | -999 | PSF core parameter k, where $F = F_0 / (1 + k r^2 + r^3.33)$ .   |
| <b>DpsfQf</b>         | dimensionless                 | REAL   | 4 | -999 | PSF coverage factor.   |
| <b>DpsfQfPerfect</b>  | dimensionless                 | REAL   | 4 | -999 | PSF-weighted fraction of pixels totally unmasked.  |
| <b>DpsfChiSq</b>      | dimensionless                 | REAL   | 4 | -999 | Reduced chi squared value of the PSF model fit.  |
| <b>DpsfLikelihood</b> | dimensionless                 | REAL   | 4 | -999 | Likelihood that this detection is best fit by a PSF.   |
| <b>DmomentXX</b>      | arcsec <sup>2</sup>           | REAL   | 4 | -999 | Second moment M <sub>xx</sub> .  |
| <b>DmomentXY</b>      | arcsec <sup>2</sup>           | REAL   | 4 | -999 | Second moment M <sub>xy</sub> .  |
| <b>DmomentYY</b>      | arcsec <sup>2</sup>           | REAL   | 4 | -999 | Second moment M <sub>yy</sub> .  |
| <b>DmomentR1</b>      | arcsec                        | REAL   | 4 | -999 | First radial moment.   |
| <b>DmomentRH</b>      | arcsec <sup>0.5</sup>         | REAL   | 4 | -999 | Half radial moment (r <sup>0.5</sup> weighting).   |
| <b>DapFlux</b>        | Janskys                       | REAL   | 4 | -999 | Aperture flux.   |
| <b>DapFluxErr</b>     | Janskys                       | REAL   | 4 | -999 | Error in aperture flux.  |
| <b>DapFillF</b>       | dimensionless                 | REAL   | 4 | -999 | Aperture fill factor.  |
| <b>DkronFlux</b>      | Janskys                       | REAL   | 4 | -999 | Kron (1980) flux.  |
| <b>DkronFluxErr</b>   | Janskys                       | REAL   | 4 | -999 | Error in Kron (1980) flux.   |
| <b>DkronRad</b>       | arcsec                        | REAL   | 4 | -999 | Kron (1980) radius.  |
| <b>diffNPos</b>       | sky pixels                    | INT    | 4 | -999 | Number of difference pixels within the aperture that are positive.   |
| <b>diffFPosRatio</b>  | dimensionless                 | REAL   | 4 | -999 | Ratio of the sum of positive flux pixel values to the sum of the absolute value of all unmasked pixel within the aperture. |
| <b>diffNPosRatio</b>  | dimensionless                 | REAL   | 4 | -999 | Ratio of the number of positive flux pixels to the number of unmasked pixels within the aperture.                          |
| <b>diffNPosMask</b>   | dimensionless                 | REAL   | 4 | -999 | Ratio of the number of positive flux pixels to the number of positive or masked pixels within the aperture.                |
| <b>diffNPosAll</b>    | dimensionless                 | REAL   | 4 | -999 | Ratio of the number of positive flux pixels to the total number of all pixels within the aperture.                         |
| <b>diffPosDist</b>    | sky pixels                    | REAL   | 4 | -999 | Distance to matching source in positive image.   |
| <b>diffNegDist</b>    | sky pixels                    | REAL   | 4 | -999 | Distance to matching source in negative image.   |
| <b>diffPosSN</b>      | dimensionless                 | REAL   | 4 | -999 | Signal to noise of matching source in positive image.  |
| <b>diffNegSN</b>      | dimensionless                 | REAL   | 4 | -999 | Signal to noise of matching source in negative image.  |
| <b>Dsky</b>           | Janskys / arcsec <sup>2</sup> | REAL   | 4 | -999 | Background sky level.  |
| <b>DskyErr</b>        | Janskys / arcsec <sup>2</sup> | REAL   | 4 | -999 | Error in background sky level.   |
| <b>DinfoFlag</b>      | dimensionless                 | BIGINT | 8 | 0    | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags.                            |

|                          |               |         |   |    |  |
|--------------------------|---------------|---------|---|----|--|
| <b>DinfoFlag2</b>        | dimensionless | INT     | 4 | 0  | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags2. |
| <b>DinfoFlag3</b>        | dimensionless | INT     | 4 | 0  | Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags3. |
| <b>processingVersion</b> | dimensionless | TINYINT | 1 | NA | Data release version.  |

## DiffDetObject

**Description:** Contains the positional information for difference detection objects in a number of coordinate systems. The objects associate difference detections within a one arcsecond radius. The number of detections in each filter from is listed, along with maximum coverage fractions. **References:** Szalay, A. S., Gray, J., Fekete, G., et al. 2007, arXiv:cs/0701164.

| Name                      | Unit          | Data Type    | Size | Default Value | Description  |
|---------------------------|---------------|--------------|------|---------------|--|
| <b>diffObjectName</b>     | dimensionless | VARCHAR(32)  | 32   | NA            | IAU name for this object.  |
| <b>diffObjPSOName</b>     | dimensionless | VARCHAR(32)  | 32   | NA            | Alternate Pan-STARRS name for this object.   |
| <b>diffObjAltName1</b>    | dimensionless | VARCHAR(32)  | 32   |               | Alternate name for this object.  |
| <b>diffObjAltName2</b>    | dimensionless | VARCHAR(32)  | 32   |               | Alternate name for this object.  |
| <b>diffObjAltName3</b>    | dimensionless | VARCHAR(32)  | 32   |               | Alternate name for this object.  |
| <b>diffObjPopularName</b> | dimensionless | VARCHAR(140) | 140  |               | Well known name for this object.   |
| <b>diffObjID</b>          | dimensionless | BIGINT       | 8    | NA            | Unique difference object identifier.   |
| <b>uniquePSPSDOID</b>     | dimensionless | BIGINT       | 8    | NA            | Unique internal PSPS difference object identifier.   |
| <b>ippObjID</b>           | dimensionless | BIGINT       | 8    | NA            | IPP internal object identifier.  |
| <b>surveyID</b>           | dimensionless | TINYINT      | 1    | NA            | Survey identifier. Details in the Survey table.  |
| <b>htmlID</b>             | dimensionless | BIGINT       | 8    | NA            | Hierarchical triangular mesh (Szalay 2007) index.  |
| <b>zoneID</b>             | dimensionless | INT          | 4    | NA            | Local zone index, found by dividing the sky into bands of declination 1/2 arcminute in height: zoneID = floor((90 + declination)/0.0083333). |
| <b>randomDiffObjID</b>    | dimensionless | FLOAT        | 8    | NA            | Random value drawn from the interval between zero and one.   |
| <b>batchID</b>            | dimensionless | BIGINT       | 8    | NA            | Internal database batch identifier.  |
| <b>dvoRegionID</b>        | dimensionless | INT          | 4    | -1            | Internal DVO region identifier.  |
| <b>objInfoFlag</b>        | dimensionless | INT          | 4    | 0             | Information flag bitmask indicating details of the photometry. Values listed in ObjectInfoFlags.   |
| <b>qualityFlag</b>        | dimensionless | TINYINT      | 1    | 0             | Subset of objInfoFlag denoting whether this object is real or a likely false positive. Values listed in ObjectQualityFlags.                  |
| <b>ra</b>                 | degrees       | FLOAT        | 8    | -999          | Right ascension mean.  |
| <b>dec</b>                | degrees       | FLOAT        | 8    | -999          | Declination mean.  |
| <b>cx</b>                 | dimensionless | FLOAT        | 8    | NA            | Cartesian x on a unit sphere.  |
| <b>cy</b>                 | dimensionless | FLOAT        | 8    | NA            | Cartesian y on a unit sphere.  |



|                          |               |          |   |      |  |
|--------------------------|---------------|----------|---|------|--|
| <b>cz</b>                | dimensionless | FLOAT    | 8 | NA   | Cartesian z on a unit sphere.  |
| <b>lambda</b>            | degrees       | FLOAT    | 8 | -999 | Ecliptic longitude.  |
| <b>beta</b>              | degrees       | FLOAT    | 8 | -999 | Ecliptic latitude.   |
| <b>l</b>                 | degrees       | FLOAT    | 8 | -999 | Galactic longitude.  |
| <b>b</b>                 | degrees       | FLOAT    | 8 | -999 | Galactic latitude.   |
| <b>gQfPerfect</b>        | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from g filter detections. |
| <b>rQfPerfect</b>        | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from r filter detections. |
| <b>iQfPerfect</b>        | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from i filter detections. |
| <b>zQfPerfect</b>        | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from z filter detections. |
| <b>yQfPerfect</b>        | dimensionless | REAL     | 4 | -999 | Maximum PSF weighted fraction of pixels totally unmasked from y filter detections. |
| <b>processingVersion</b> | dimensionless | TINYINT  | 1 | NA   | Data release version.  |
| <b>nDetections</b>       | dimensionless | SMALLINT | 2 | -999 | Number of difference detections in all filters.                                    |
| <b>ng</b>                | dimensionless | SMALLINT | 2 | -999 | Number of difference detections in g filter.                                       |
| <b>nr</b>                | dimensionless | SMALLINT | 2 | -999 | Number of difference detections in r filter.                                       |
| <b>ni</b>                | dimensionless | SMALLINT | 2 | -999 | Number of difference detections in i filter.                                       |
| <b>nz</b>                | dimensionless | SMALLINT | 2 | -999 | Number of difference detections in z filter.                                       |
| <b>ny</b>                | dimensionless | SMALLINT | 2 | -999 | Number of difference detections in y filter.                                       |

## Views in DR1 and DR2

There are a number of views in the Pan-STARRS databases, which are generally cases where there are two related tables that are joined to make a wide table that includes columns from both tables. Rather than make this page extremely long, we simply list the relevant views below with links to the individual pages that list the columns in those views.

There are also some views that are created because a very large table is broken up into multiple pieces for practical database implementation reasons. The various chunks of rows are combined together into what looks like a single big table. An example is the Detection table, which was simply too large to put into a single table. Those "virtual" tables are listed above with the regular tables because they are never accessed by users as individual tables. It is a confusing fact that they appear in the MyDB Views tab when exploring the database.

| <b>Name of View</b>                           | <b>Joined tables</b>            | <b>Notes</b>         |
|---|---------------------------------|----------------------|
| <a href="#">DetectionObjectView</a>           | ObjectThin, Detection           | DR2                  |
| <a href="#">DiffDetObjectView</a>             | DiffDetObject, DiffDetection    | Not populated in DR2 |
| <a href="#">ForcedGalaxyModelView</a>         | ObjectThin, ForcedGalaxyShape   | DR2                  |
| <a href="#">ForcedMeanObjectView</a>          | ObjectThin, ForcedMeanObject    | Not yet in DR2       |
| <a href="#">MeanObjectView</a>                | MeanObject, ObjectThin          |                      |
| <a href="#">StackApFixExGalCon6ObjectView</a> | ObjectThin, StackApFixExGalCon6 |                      |

|                               |   |  |
|-------------------------------|---|--|
| StackApFixExGalCon8ObjectView | ObjectThin, StackApFixExGalCon8   |  |
| StackApFixExGalUncView        | ObjectThin, StackApFixExGalUnc  |  |
| StackApFixObjectView          | ObjectThin, StackApFix, StackModelFitSer  |  |
| StackModelFitDeVObjectView    | ObjectThin, StackModelFitDeV  |  |
| StackModelFitExpObjectView    | ObjectThin, StackModelFitExp  |  |
| StackModelFitPetObjectView    | ObjectThin, StackPetrosian  |  |
| StackModelFitSerObjectView    | ObjectThin, StackModelFitSer  |  |
| StackModelObjectView          | ObjectThin, StackModelFitExp, StackModelFitDeVm, StackModelFitSer, StackPetrosian | Note: User beware that this view contains a lot of columns and selecting all of them is not recommended. |
| StackObjectView               | ObjectThin, StackObjectThin, StackObjectAttributes                                |  |