

# PS1 DiffDetObject table fields

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

**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                                                                                                                                  |
|--------------------|---------------|---------------|------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| diffObjName        | dimensionless | VARCHAR (32)  | 32   | NA            | IAU name for this object.                                                                                                                    |
| diffObjPSOName     | dimensionless | VARCHAR (32)  | 32   | NA            | Alternate Pan-STARRS name for this object.                                                                                                   |
| diffObjAltName1    | dimensionless | VARCHAR (32)  | 32   |               | Alternate name for this object.                                                                                                              |
| diffObjAltName2    | dimensionless | VARCHAR (32)  | 32   |               | Alternate name for this object.                                                                                                              |
| diffObjAltName3    | dimensionless | VARCHAR (32)  | 32   |               | Alternate name for this object.                                                                                                              |
| diffObjPopularName | dimensionless | VARCHAR (140) | 140  |               | Well known name for this object.                                                                                                             |
| diffObjID          | dimensionless | BIGINT        | 8    | NA            | Unique difference object identifier.                                                                                                         |
| uniquePspSDOid     | dimensionless | BIGINT        | 8    | NA            | Unique internal PSPS difference object identifier.                                                                                           |
| ippObjID           | dimensionless | BIGINT        | 8    | NA            | IPP internal object identifier.                                                                                                              |
| surveyID           | dimensionless | TINYINT       | 1    | NA            | Survey identifier. Details in the Survey table.                                                                                              |
| htmlID             | dimensionless | BIGINT        | 8    | NA            | Hierarchical triangular mesh (Szalay 2007) index.                                                                                            |
| zoneID             | 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). |
| randomDiffObjID    | dimensionless | FLOAT         | 8    | NA            | Random value drawn from the interval between zero and one.                                                                                   |
| batchID            | dimensionless | BIGINT        | 8    | NA            | Internal database batch identifier.                                                                                                          |
| dvoRegionID        | dimensionless | INT           | 4    | -1            | Internal DVO region identifier.                                                                                                              |
| objInfoFlag        | dimensionless | INT           | 4    | 0             | Information flag bitmask indicating details of the photometry. Values listed in ObjectInfoFlags.                                             |
| qualityFlag        | dimensionless | TINYINT       | 1    | 0             | Subset of objInfoFlag denoting whether this object is real or a likely false positive. Values listed in ObjectQualityFlags.                  |
| ra                 | degrees       | FLOAT         | 8    | -999          | Right ascension mean.                                                                                                                        |
| dec                | degrees       | FLOAT         | 8    | -999          | Declination mean.                                                                                                                            |
| cx                 | dimensionless | FLOAT         | 8    | NA            | Cartesian x on a unit sphere.                                                                                                                |
| cy                 | dimensionless | FLOAT         | 8    | NA            | Cartesian y on a unit sphere.                                                                                                                |
| cz                 | dimensionless | FLOAT         | 8    | NA            | Cartesian z on a unit sphere.                                                                                                                |
| lambda             | degrees       | FLOAT         | 8    | -999          | Ecliptic longitude.                                                                                                                          |
| beta               | degrees       | FLOAT         | 8    | -999          | Ecliptic latitude.                                                                                                                           |
| l                  | degrees       | FLOAT         | 8    | -999          | Galactic longitude.                                                                                                                          |
| 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.                                       |