

# PS1 ForcedWarpLensing table fields

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

**Description:** Contains the 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                                                                                                                                                                                                    |
|-----------------|---------------------|-----------|------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| objID           | dimensionless       | BIGINT    | 8    | NA            | Unique object identifier.                                                                                                                                                                                      |
| uniquePspFWid   | dimensionless       | BIGINT    | 8    | NA            | Unique internal PSPS forced warp identifier.                                                                                                                                                                   |
| detectID        | dimensionless       | BIGINT    | 8    | NA            | Unique detection identifier.                                                                                                                                                                                   |
| ippObjID        | dimensionless       | BIGINT    | 8    | NA            | IPP internal object identifier.                                                                                                                                                                                |
| ippDetectID     | dimensionless       | BIGINT    | 8    | NA            | IPP internal detection identifier.                                                                                                                                                                             |
| filterID        | dimensionless       | TINYINT   | 1    | NA            | Filter identifier. Details in the Filter table.                                                                                                                                                                |
| surveyID        | dimensionless       | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.                                                                                                                                                                |
| forcedWarpID    | dimensionless       | BIGINT    | 8    | NA            | Unique forced warp identifier.                                                                                                                                                                                 |
| randomWarpID    | dimensionless       | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                                                                                                                                                     |
| tessID          | dimensionless       | TINYINT   | 1    | 0             | Tessellation identifier. Details in the TessellationType table.                                                                                                                                                |
| projectionID    | dimensionless       | SMALLINT  | 2    | -1            | Projection cell identifier.                                                                                                                                                                                    |
| skyCellID       | dimensionless       | TINYINT   | 1    | 255           | Skycell region identifier.                                                                                                                                                                                     |
| dvoRegionID     | dimensionless       | INT       | 4    | -1            | Internal DVO region identifier.                                                                                                                                                                                |
| obsTime         | 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. |
| lensObjSmearX11 | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A11) smear polarizability X11 term from forced photometry.                                                                                                                      |
| lensObjSmearX12 | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A11) smear polarizability X12 term from forced photometry.                                                                                                                      |
| lensObjSmearX22 | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A11) smear polarizability X22 term from forced photometry.                                                                                                                      |
| lensObjSmearE1  | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A12) smear polarizability e1 term from forced photometry.                                                                                                                       |
| lensObjSmearE2  | arcsec <sup>2</sup> | REAL      | 4    | -999          | Kaiser et al. (1995) equation (A12) smear polarizability e2 term from forced photometry.                                                                                                                       |
| lensObjShearX11 | dimensionless       | REAL      | 4    | -999          | Kaiser et al. (1995) equation (B11) shear polarizability X11 term from forced photometry.                                                                                                                      |
| lensObjShearX12 | dimensionless       | REAL      | 4    | -999          | Kaiser et al. (1995) equation (B11) shear polarizability X12 term from forced photometry.                                                                                                                      |
| lensObjShearX22 | dimensionless       | REAL      | 4    | -999          | Kaiser et al. (1995) equation (B11) shear polarizability X22 term from forced photometry.                                                                                                                      |
| lensObjShearE1  | dimensionless       | REAL      | 4    | -999          | Kaiser et al. (1995) equation (B12) shear polarizability e1 term from forced photometry.                                                                                                                       |
| lensObjShearE2  | dimensionless       | REAL      | 4    | -999          | Kaiser et al. (1995) equation (B12) shear polarizability e2 term from forced photometry.                                                                                                                       |

|                             |                   |      |   |      |                                                                                                         |
|-----------------------------|-------------------|------|---|------|---------------------------------------------------------------------------------------------------------|
| <b>lensPSFS<br/>mearX11</b> | arcsec<br>^2      | REAL | 4 | -999 | Kaiser et al. (1995) equation (A11) smear polarizability X11 term from PSF model for forced photometry. |
| <b>lensPSFS<br/>mearX12</b> | arcsec<br>^2      | REAL | 4 | -999 | Kaiser et al. (1995) equation (A11) smear polarizability X12 term from PSF model for forced photometry. |
| <b>lensPSFS<br/>mearX22</b> | arcsec<br>^2      | REAL | 4 | -999 | Kaiser et al. (1995) equation (A11) smear polarizability X22 term from PSF model for forced photometry. |
| <b>lensPSFS<br/>mearE1</b>  | arcsec<br>^2      | REAL | 4 | -999 | Kaiser et al. (1995) equation (A12) smear polarizability e1 term from PSF model for forced photometry.  |
| <b>lensPSFS<br/>mearE2</b>  | arcsec<br>^2      | REAL | 4 | -999 | Kaiser et al. (1995) equation (A12) smear polarizability e2 term from PSF model for forced photometry.  |
| <b>lensPSFS<br/>hearX11</b> | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B11) shear polarizability X11 term from PSF model for forced photometry. |
| <b>lensPSFS<br/>hearX12</b> | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B11) shear polarizability X12 term from PSF model for forced photometry. |
| <b>lensPSFS<br/>hearX22</b> | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B11) shear polarizability X22 term from PSF model for forced photometry. |
| <b>lensPSFS<br/>hearE1</b>  | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B12) shear polarizability e1 term from PSF model for forced photometry.  |
| <b>lensPSFS<br/>hearE2</b>  | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) equation (B12) shear polarizability e2 term from PSF model for forced photometry.  |
| <b>psfE1</b>                | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) polarization parameter e1 = (Mxx - Myy) / (Mxx + Myy) from forced photometry.      |
| <b>psfE2</b>                | dimens<br>ionless | REAL | 4 | -999 | Kaiser et al. (1995) polarization parameter e2 = (2 Mxy) / (Mxx + Myy) from forced photometry.          |