

# PS1 ForcedGalaxyShape table fields

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

**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                                                                                                          |
|-------------------|---------------|-----------|------|---------------|----------------------------------------------------------------------------------------------------------------------|
| objID             | dimensionless | BIGINT    | 8    | NA            | Unique object identifier.                                                                                            |
| uniquePspFGid     | dimensionless | BIGINT    | 8    | NA            | Unique internal PSPS forced galaxy identifier.                                                                       |
| ippObjID          | dimensionless | BIGINT    | 8    | NA            | IPP internal object identifier.                                                                                      |
| surveyID          | dimensionless | TINYINT   | 1    | NA            | Survey identifier. Details in the Survey table.                                                                      |
| randomForcedGalID | dimensionless | FLOAT     | 8    | NA            | Random value drawn from the interval between zero and one.                                                           |
| galModelType      | dimensionless | TINYINT   | 1    | -999          | Galaxy model identifier.                                                                                             |
| nFilter           | dimensionless | TINYINT   | 1    | -999          | Number of filters with valid model measurements.                                                                     |
| gippDetectID      | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.                                                                                   |
| gstackImageID     | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for the g filter stack that was the original detection source.                               |
| gGalMajor         | arcsec        | REAL      | 4    | -999          | Galaxy major axis for g filter measurement.                                                                          |
| gGalMajorErr      | arcsec        | REAL      | 4    | -999          | Error in galaxy major axis for g filter measurement.                                                                 |
| gGalMinor         | arcsec        | REAL      | 4    | -999          | Galaxy minor axis for g filter measurement.                                                                          |
| gGalMinorErr      | arcsec        | REAL      | 4    | -999          | Error in galaxy minor axis for g filter measurement.                                                                 |
| gGalMag           | AB magnitudes | REAL      | 4    | -999          | Galaxy fit magnitude for g filter measurement.                                                                       |
| gGalMagErr        | AB magnitudes | REAL      | 4    | -999          | Error in galaxy fit magnitude for g filter measurement.                                                              |
| gGalPhi           | degrees       | REAL      | 4    | -999          | Major axis position angle of the model fit for the g filter measurement.                                             |
| gGalIndex         | dimensionless | REAL      | 4    | -999          | Sersic index of the model fit for the g filter measurement.                                                          |
| gGalFlags         | dimensionless | SMALLINT  | 2    | -999          | Analysis flags for the galaxy model chi-square fit (g filter measurement, values defined in ForcedGalaxyShapeFlags). |
| gGalChisq         | dimensionless | REAL      | 4    | -999          | Reduced chi squared value for g filter measurement.                                                                  |
| rippDetectID      | dimensionless | BIGINT    | 8    | NA            | IPP internal detection identifier.                                                                                   |
| rstackImageID     | dimensionless | BIGINT    | 8    | NA            | Unique stack identifier for the r filter stack that was the original detection source.                               |
| rGalMajor         | arcsec        | REAL      | 4    | -999          | Galaxy major axis for r filter measurement.                                                                          |
| rGalMajorErr      | arcsec        | REAL      | 4    | -999          | Error in galaxy major axis for r filter measurement.                                                                 |
| rGalMinor         | arcsec        | REAL      | 4    | -999          | Galaxy minor axis for r filter measurement.                                                                          |
| rGalMinorErr      | arcsec        | REAL      | 4    | -999          | Error in galaxy minor axis for r filter measurement.                                                                 |
| rGalMag           | AB magnitudes | REAL      | 4    | -999          | Galaxy fit magnitude for r filter measurement.                                                                       |
| rGalMagErr        | 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>yippDetectID</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.                                                                  |