

# PS1 Database system metadata tables

This page describes the contents of the PanSTARRS-1 system metadata database tables. These tables include information on the flag values, filters, surveys, and other similar metadata. The information is not specific to individual objects but is useful in interpreting values from the [object data tables](#). These descriptions are extracted from the PSPS Schema Browser interface created by the University of Hawaii.

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## Filter

**Description:** Contains a description of the optical filters used in the survey (Tonry et al 2012, ApJ 750, 99).

Name	Unit	Data Type	Size	Default Value	Description
<b>filterID</b>	dimensionless	TINYINT	1	NA	Filter identifier.
<b>filterType</b>	dimensionless	VARCHAR(100)	100		Filter name.

## FitModel

**Description:** Contains descriptions of the models used in fitting detections in images, both PSF-like and extended galaxies. References: de Vaucouleurs, G. 1948, Annales d'Astrophysique, 11, 247; 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>fitModelID</b>	dimensionless	SMALLINT	2	NA	Model fit identifier.
<b>name</b>	dimensionless	VARCHAR(100)	100		Model name.
<b>description</b>	dimensionless	VARCHAR(100)	100		Description of the model.
<b>param1</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 1.
<b>param2</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 2.
<b>param3</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 3.
<b>param4</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 4.
<b>param5</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 5.
<b>param6</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 6.
<b>param7</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 7.
<b>param8</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 8.

<b>param9</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 9.
<b>param10</b>	dimensionless	VARCHAR(100)	100		Description of model parameter 10.

## Survey

**Description: Contains descriptions of the various PS1 Science Consortium Surveys.**

Name	Unit	Data Type	Size	Default Value	Description
<b>surveyID</b>	dimensionless	TINYINT	1	NA	Survey identifier.
<b>name</b>	dimensionless	VARCHAR(100)	100		Survey name.
<b>description</b>	dimensionless	VARCHAR(100)	100		Survey description.

## PhotoCal

**Description: Contains photometric calibration information for each filter and detector image combinations.**

Name	Unit	Data Type	Size	Default Value	Description
<b>photoCalID</b>	dimensionless	INT	4	NA	Photometric calibration identifier.
<b>filterID</b>	dimensionless	TINYINT	1	NA	Filter identifier. Details in the Filter table.
<b>photoCodeDesc</b>	dimensionless	VARCHAR(100)	100		Photometry reduction code name.
<b>AB</b>	magnitudes	REAL	4	NA	AB magnitude.
<b>zeropoint</b>	magnitudes	REAL	4	NA	Photometric zeropoint (excluding long term variation).
<b>extinction</b>	magnitudes / airmass	REAL	4	NA	Photometric extinction term (excluding long term variation).
<b>colorterm</b>	dimensionless	REAL	4	NA	Photometric color term (excluding long term variation).
<b>colorExtn</b>	dimensionless	REAL	4	NA	Photometric color dependent extinction (excluding long term variation).
<b>orphanCalColor</b>	dimensionless	REAL	4	NA	Color adopted for magnitude calculation.
<b>orphanCalColorErr</b>	dimensionless	REAL	4	NA	Error in calibrating color.
<b>startDate</b>	days	REAL	4	NA	Modified Julian Date of the start of this configuration.

## StackType

**Description: Contains descriptions of the types of stacked images constructed.**

Name	Unit	Data Type	Size	Default Value	Description
<b>stackTypeID</b>	dimensionless	TINYINT	1	NA	Stack type identifier.
<b>name</b>	dimensionless	VARCHAR(100)	100		Stack type name.
<b>description</b>	dimensionless	VARCHAR(100)	100		Stack type description.

## DiffType

**Description: Contains descriptions of the types of difference images constructed.**

Name	Unit	Data Type	Size	Default Value	Description
diffTypeID	dimensionless	TINYINT	1	NA	Diff type identifier.
name	dimensionless	VARCHAR(100)	100		Diff type name.
description	dimensionless	VARCHAR(100)	100		Diff type description.

## TessellationType

**Description: Contains descriptions of the types of image tessellations for the sky.**

Name	Unit	Data Type	Size	Default Value	Description
tessID		TINYINT	1	NA	Tessellation identifier.
name		VARCHAR(100)	100		Tessellation name.
description		VARCHAR(100)	100		Tessellation description.

## ImageFlags

**Description: Contains information flag values for images.**

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		BIGINT	8	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## DetectionFlags

**Description: Contains information flag values for detections.**

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		BIGINT	8	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## DetectionFlags2

**Description: Contains information flag values for detections. References: Petrosian, V. 1976, ApJL, 209, L1.**

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## DetectionFlags3

**Description:** Contains information flag values for detections. **References:** Kron, R. G. 1980, ApJS, 43, 305.

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## ObjectInfoFlags

**Description:** Contains information flag values for objects.

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag

## ObjectQualityFlags

**Description:** Contains information flag values that denote if an object is real or a possible false positive.

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## ObjectFilterFlags

**Description:** Contains information flags for the photometric calibration of an object.

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## AstrometryCorrectionFlags

**Description:** Contains information flags that denote if an object has had its astrometry corrected and other information related to the astrometry correction process using Gaia EDR3. See [PS1 Astrometry Correction Using Gaia EDR3](#) for details.

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.

## ForcedGalaxyShapeFlags

**Description:** Contains information flag values that define ForcedGalaxyShape chisq surface failures.

Name	Unit	Data Type	Size	Default Value	Description
name		VARCHAR(100)	100		Name of flag.
hexadecimal		VARCHAR(16)	16		Flag value in hexadecimal form.
value		INT	4	NA	Flag value in decimal form.
description		VARCHAR(100)	100		Description of the flag.