

# PS1 StackObjectThin table fields

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

**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>uniqueP spsSTid</b>	dimensionless	BIGINT	8	NA	Unique internal PPSPS 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>random StackObjID</b>	dimensionless	FLOAT	8	NA	Random value drawn from the interval between zero and one.
<b>primary Detection</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>processingVersion</b>	dimensionless	TINYINT	1	NA	Data release version.
<b>gippDetectionID</b>	dimensionless	BIGINT	8	NA	IPP internal detection identifier.
<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>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>gPSFMagnitude</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>rstackID</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>zstackImageID</b>	dimensionless	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 magnitudes	REAL	4	-999	PSF magnitude from z filter stack detection.
<b>zPSFMagErr</b>	AB magnitudes	REAL	4	-999	Error in PSF magnitude from z filter stack detection.
<b>zApMag</b>	AB magnitudes	REAL	4	-999	Aperture magnitude from z filter stack detection.
<b>zApMagErr</b>	AB magnitudes	REAL	4	-999	Error in aperture magnitude from z filter stack detection.
<b>zKronMag</b>	AB magnitudes	REAL	4	-999	Kron (1980) magnitude from z filter stack detection.

<b>zKronMagErr</b>	AB magnitudes	REAL	4	-999	Error in Kron (1980) magnitude from z filter stack detection.
<b>zinfoFlag</b>	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags.
<b>zinfoFlag2</b>	dimensionless	INT	4	0	Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags2.
<b>zinfoFlag3</b>	dimensionless	INT	4	0	Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags3.
<b>znFrames</b>	dimensionless	INT	4	-999	Number of input frames/exposures contributing to the 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>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 magnitudes	REAL	4	-999	PSF magnitude from y filter stack detection.
<b>yPSFMagErr</b>	AB magnitudes	REAL	4	-999	Error in PSF magnitude from y filter stack detection.
<b>yApMag</b>	AB magnitudes	REAL	4	-999	Aperture magnitude from y filter stack detection.
<b>yApMagErr</b>	AB magnitudes	REAL	4	-999	Error in aperture magnitude from y filter stack detection.
<b>yKronMag</b>	AB magnitudes	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.