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
objID	dimensionless	BIGINT	8	NA	Unique object identifier.
uniquePspsSTid	dimensionless	BIGINT	8	NA	Unique internal PSPS stack identifier.
ippObjID	dimensionless	BIGINT	8	NA	IPP internal object identifier.
surveyID	dimensionless	TINYINT	1	NA	Survey identifier. Details in the Survey table.
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.
randomStackObjID	dimensionless	FLOAT	8	NA	Random value drawn from the interval between zero and one.
primaryDetection	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.
bestDetection	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.
dvoRegionID	dimensionless	INT	4	-1	Internal DVO region identifier.
processingVersion	dimensionless	TINYINT	1	NA	Data release version.
gippDetectID	dimensionless	BIGINT	8	NA	IPP internal detection identifier.
gstackDetectID	dimensionless	BIGINT	8	NA	Unique stack detection identifier.
gstackImageID	dimensionless	BIGINT	8	NA	Unique stack identifier for g filter detection.
gra	degrees	FLOAT	8	-999	Right ascension from g filter stack detection.
gdec	degrees	FLOAT	8	-999	Declination from g filter stack detection.
graErr	arcsec	REAL	4	-999	Right ascension error from g filter stack detection.
gdecErr	arcsec	REAL	4	-999	Declination error from g filter stack detection.
gEpoch	days	FLOAT	8	-999	Modified Julian Date of the mean epoch of images contributing to the the g-band stack (equinox J2000).
gPSFMag	AB magnitudes	REAL	4	-999	PSF magnitude from g filter stack detection.

gPSFMagErr	AB magnitudes	REAL	4	-999	Error in PSF magnitude from g filter stack detection.
gApMag	AB magnitudes	REAL	4	-999	Aperture magnitude from g filter stack detection.
gApMagErr	AB magnitudes	REAL	4	-999	Error in aperture magnitude from g filter stack detection.
gKronMag	AB magnitudes	REAL	4	-999	Kron (1980) magnitude from g filter stack detection.
gKronMagErr	AB magnitudes	REAL	4	-999	Error in Kron (1980) magnitude from g filter stack detection.
ginfoFlag	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the g filter stack photometry. Values listed in DetectionFlags.
ginfoFlag2	dimensionless	INT	4	0	Information flag bitmask indicating details of the g filter stack photometry. Values listed in DetectionFlags2.
ginfoFlag3	dimensionless	INT	4	0	Information flag bitmask indicating details of the g filter stack photometry. Values listed in DetectionFlags3.
gnFrames	dimensionless	INT	4	-999	Number of input frames/exposures contributing to the g filter stack detection.
rippDetectID	dimensionless	BIGINT	8	NA	IPP internal detection identifier.
rstackDetectID	dimensionless	BIGINT	8	NA	Unique stack detection identifier.
rstackImageID	dimensionless	BIGINT	8	NA	Unique stack identifier for r filter detection.
rra	degrees	FLOAT	8	-999	Right ascension from r filter stack detection.
rdec	degrees	FLOAT	8	-999	Declination from r filter stack detection.
rraErr	arcsec	REAL	4	-999	Right ascension error from r filter stack detection.
rdecErr	arcsec	REAL	4	-999	Declination error from r filter stack detection.
rEpoch	days	FLOAT	8	-999	Modified Julian Date of the mean epoch of images contributing to the the r-band stack (equinox J2000).
rPSFMag	AB magnitudes	REAL	4	-999	PSF magnitude from r filter stack detection.
rPSFMagErr	AB magnitudes	REAL	4	-999	Error in PSF magnitude from r filter stack detection.
rApMag	AB magnitudes	REAL	4	-999	Aperture magnitude from r filter stack detection.
rApMagErr	AB magnitudes	REAL	4	-999	Error in aperture magnitude from r filter stack detection.
rKronMag	AB magnitudes	REAL	4	-999	Kron (1980) magnitude from r filter stack detection.
rKronMagErr	AB magnitudes	REAL	4	-999	Error in Kron (1980) magnitude from r filter stack detection.
rinfoFlag	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the r filter stack photometry. Values listed in DetectionFlags.
rinfoFlag2	dimensionless	INT	4	0	Information flag bitmask indicating details of the r filter stack photometry. Values listed in DetectionFlags2.
rinfoFlag3	dimensionless	INT	4	0	Information flag bitmask indicating details of the r filter stack photometry. Values listed in DetectionFlags3.
rnFrames	dimensionless	INT	4	-999	Number of input frames/exposures contributing to the r filter stack detection.
iippDetectID	dimensionless	BIGINT	8	NA	IPP internal detection identifier.

istackDetectID	dimensionless	BIGINT	8	NA	Unique stack detection identifier.
istackImageID	dimensionless	BIGINT	8	NA	Unique stack identifier for i filter detection.
ira	degrees	FLOAT	8	-999	Right ascension from i filter stack detection.
idec	degrees	FLOAT	8	-999	Declination from i filter stack detection.
iraErr	arcsec	REAL	4	-999	Right ascension error from i filter stack detection.
idecErr	arcsec	REAL	4	-999	Declination error from i filter stack detection.
iEpoch	days	FLOAT	8	-999	Modified Julian Date of the mean epoch of images contributing to the the i-band stack (equinox J2000).
iPSFMag	AB magnitudes	REAL	4	-999	PSF magnitude from i filter stack detection.
iPSFMagErr	AB magnitudes	REAL	4	-999	Error in PSF magnitude from i filter stack detection.
iApMag	AB magnitudes	REAL	4	-999	Aperture magnitude from i filter stack detection.
iApMagErr	AB magnitudes	REAL	4	-999	Error in aperture magnitude from i filter stack detection.
iKronMag	AB magnitudes	REAL	4	-999	Kron (1980) magnitude from i filter stack detection.
iKronMagErr	AB magnitudes	REAL	4	-999	Error in Kron (1980) magnitude from i filter stack detection.
iinfoFlag	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the i filter stack photometry. Values listed in DetectionFlags.
iinfoFlag2	dimensionless	INT	4	0	Information flag bitmask indicating details of the i filter stack photometry. Values listed in DetectionFlags2.
iinfoFlag3	dimensionless	INT	4	0	Information flag bitmask indicating details of the i filter stack photometry. Values listed in DetectionFlags3.
inFrames	dimensionless	INT	4	-999	Number of input frames/exposures contributing to the i filter stack detection.
zippDetectID	dimensionless	BIGINT	8	NA	IPP internal detection identifier.
zstackDetectID	dimensionless	BIGINT	8	NA	Unique stack detection identifier.
zstackImageID	dimensionless	BIGINT	8	NA	Unique stack identifier for z filter detection.
zra	degrees	FLOAT	8	-999	Right ascension from z filter stack detection.
zdec	degrees	FLOAT	8	-999	Declination from z filter stack detection.
zraErr	arcsec	REAL	4	-999	Right ascension error from z filter stack detection.
zdecErr	arcsec	REAL	4	-999	Declination error from z filter stack detection.
zEpoch	days	FLOAT	8	-999	Modified Julian Date of the mean epoch of images contributing to the the z-band stack (equinox J2000).
zPSFMag	AB magnitudes	REAL	4	-999	PSF magnitude from z filter stack detection.
zPSFMagErr	AB magnitudes	REAL	4	-999	Error in PSF magnitude from z filter stack detection.
zApMag	AB magnitudes	REAL	4	-999	Aperture magnitude from z filter stack detection.
zApMagErr	AB magnitudes	REAL	4	-999	Error in aperture magnitude from z filter stack detection.
zKronMag	AB magnitudes	REAL	4	-999	Kron (1980) magnitude from z filter stack detection.

zKronMagErr	AB magnitudes	REAL	4	-999	Error in Kron (1980) magnitude from z filter stack detection.
zinfoFlag	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags.
zinfoFlag2	dimensionless	INT	4	0	Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags2.
zinfoFlag3	dimensionless	INT	4	0	Information flag bitmask indicating details of the z filter stack photometry. Values listed in DetectionFlags3.
znFrames	dimensionless	INT	4	-999	Number of input frames/exposures contributing to the z filter stack detection.
yippDetectID	dimensionless	BIGINT	8	NA	IPP internal detection identifier.
ystackDetectID	dimensionless	BIGINT	8	NA	Unique stack detection identifier.
ystackImageID	dimensionless	BIGINT	8	NA	Unique stack identifier for y filter detection.
yra	degrees	FLOAT	8	-999	Right ascension from y filter stack detection.
ydec	degrees	FLOAT	8	-999	Declination from y filter stack detection.
yraErr	arcsec	REAL	4	-999	Right ascension error from y filter stack detection.
ydecErr	arcsec	REAL	4	-999	Declination error from y filter stack detection.
yEpoch	days	FLOAT	8	-999	Modified Julian Date of the mean epoch of images contributing to the the y-band stack (equinox J2000).
yPSFMag	AB magnitudes	REAL	4	-999	PSF magnitude from y filter stack detection.
yPSFMagErr	AB magnitudes	REAL	4	-999	Error in PSF magnitude from y filter stack detection.
yApMag	AB magnitudes	REAL	4	-999	Aperture magnitude from y filter stack detection.
yApMagErr	AB magnitudes	REAL	4	-999	Error in aperture magnitude from y filter stack detection.
yKronMag	AB magnitudes	REAL	4	-999	Kron (1980) magnitude from y filter stack detection.
yKronMagErr	AB magnitudes	REAL	4	-999	Error in Kron (1980) magnitude from y filter stack detection.
yinfoFlag	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the y filter stack photometry. Values listed in DetectionFlags.
yinfoFlag2	dimensionless	INT	4	0	Information flag bitmask indicating details of the y filter stack photometry. Values listed in DetectionFlags2.
yinfoFlag3	dimensionless	INT	4	0	Information flag bitmask indicating details of the y filter stack photometry. Values listed in DetectionFlags3.
ynFrames	dimensionless	INT	4	-999	Number of input frames/exposures contributing to the y filter stack detection.