

PS1 ObjectThin table fields

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

Description: Contains the positional information for objects in a number of coordinate systems. The objects associate single epoch detections and the stacked detections within a one arcsecond radius. The mean position from the single epoch data is used as the basis for coordinates when available, or the position of an object in the stack when it is not. The right ascension and declination for both the stack and single epoch mean is provided. The number of detections in each filter from single epoch data is listed, along with which filters the object has a stack detection. References: Szalay, A. S., Gray, J., Fekete, G., et al. 2007, arXiv:cs/0701164.

Note that as of June 2022 the raMean and decMean positions have been updated using Gaia EDR3 and new columns have been added with proper motions for a subset of objects. See the [PS1 Astrometry Correction Using Gaia EDR3](#) for more information.

Name	Unit	Data Type	Size	Default Value	Description
objName	dimensionless	VARCHAR(32)	32	NA	IAU name for this object.
objPSOName	dimensionless	VARCHAR(32)	32	NA	Alternate Pan-STARRS name for this object.
objAltName1	dimensionless	VARCHAR(32)	32	NA	Alternate name for this object.
objAltName2	dimensionless	VARCHAR(32)	32		Alternate name for this object.
objAltName3	dimensionless	VARCHAR(32)	32		Alternate name for this object.
objPopularName	dimensionless	VARCHAR(140)	140		Well known name for this object.
objID	dimensionless	BIGINT	8	NA	Unique object identifier.
uniquePSPsOBid	dimensionless	BIGINT	8	NA	Unique internal PSPS object identifier.
ippObjID	dimensionless	BIGINT	8	NA	IPP internal object identifier.
surveyID	dimensionless	TINYINT	1	NA	Survey identifier. Details in the Survey table.
htmlID	dimensionless	BIGINT	8	NA	Hierarchical triangular mesh (Szalay 2007) index.
zoneID	dimensionless	INT	4	NA	Local zone index, found by dividing the sky into bands of declination 1/2 arcminute in height: zoneID = floor((90 + declination)/0.0083333).
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.
randomID	dimensionless	FLOAT	8	NA	Random value drawn from the interval between zero and one.
batchID	dimensionless	BIGINT	8	NA	Internal database batch identifier.
dvoRegionID	dimensionless	INT	4	-1	Internal DVO region identifier.
processingVersion	dimensionless	TINYINT	1	NA	Data release version.
objInfoFlag	dimensionless	INT	4	0	Information flag bitmask indicating details of the photometry. Values listed in ObjectInfoFlags and here
astrometryCorrectionFlag	dimensionless	INT	4	0	Information flag bitmask indicating details of the astrometry correction. Values listed in AstrometryCorrectionFlags and here
qualityFlag	dimensionless	TINYINT	1	0	Subset of objInfoFlag denoting whether this object is real or a likely false positive. Values listed in ObjectQualityFlags and here
raStack	degrees	FLOAT	8	-999	Right ascension from stack detections, weighted mean value across filters, in equinox J2000. See StackObjectThin for stack epoch information.
decStack	degrees	FLOAT	8	-999	Declination from stack detections, weighted mean value across filters, in equinox J2000. See StackObjectThin for stack epoch information.
raStackErr	arcsec	REAL	4	-999	Right ascension standard deviation from stack detections.
decStackErr	arcsec	REAL	4	-999	Declination standard deviation from stack detections.

raMean	degrees	FLOAT	8	-999	Right ascension from single epoch detections (weighted mean) in equinox J2000 at the mean epoch given by epochMean.
decMean	degrees	FLOAT	8	-999	Declination from single epoch detections (weighted mean) in equinox J2000 at the mean epoch given by epochMean.
raMeanErr	arcsec	REAL	4	-999	Right ascension standard deviation from single epoch detections.
decMeanErr	arcsec	REAL	4	-999	Declination standard deviation from single epoch detections.
pmra	milliarcseconds per year	FLOAT	8	NULL	Proper motion in right ascension direction from single epoch detections.
pmdec	milliarcseconds per year	FLOAT	8	NULL	Proper motion in right ascension direction from single epoch detections.
pmraErr	milliarcseconds per year	FLOAT	8	NULL	RA proper motion standard deviation.
pmdecErr	milliarcseconds per year	FLOAT	8	NULL	Dec proper motion standard deviation.
epochMean	days	FLOAT	8	-999	Modified Julian Date of the mean epoch corresponding to raMean, decMean and pmra, pmdec (equinox J2000). This is a weighted mean of the PS1 observation epochs.
posMeanChisq	dimensionless	REAL	4	-999	Reduced chi squared value of mean position.
cx	dimensionless	FLOAT	8	NA	Cartesian x on a unit sphere.
cy	dimensionless	FLOAT	8	NA	Cartesian y on a unit sphere.
cz	dimensionless	FLOAT	8	NA	Cartesian z on a unit sphere.
lambda	degrees	FLOAT	8	-999	Ecliptic longitude.
beta	degrees	FLOAT	8	-999	Ecliptic latitude.
l	degrees	FLOAT	8	-999	Galactic longitude.
b	degrees	FLOAT	8	-999	Galactic latitude.
nStackObjectRows	dimensionless	SMALLINT	2	-999	Number of independent StackObjectThin rows associated with this object.
nStackDetections	dimensionless	SMALLINT	2	-999	Number of stack detections.
nDetections	dimensionless	SMALLINT	2	-999	Number of single epoch detections in all filters.
ng	dimensionless	SMALLINT	2	-999	Number of single epoch detections in g filter.
nr	dimensionless	SMALLINT	2	-999	Number of single epoch detections in r filter.
ni	dimensionless	SMALLINT	2	-999	Number of single epoch detections in i filter.
nz	dimensionless	SMALLINT	2	-999	Number of single epoch detections in z filter.
ny	dimensionless	SMALLINT	2	-999	Number of single epoch detections in y filter.