

PS1 DetectionObjectView table fields

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

This page describes a "View", which is a database table created by joining other tables.

Description: -- ObjectThin join Detection joined by objID column.					
Name	Unit	Data Type	Size	Default Value	Description
objName	dimensionless	VARCHAR(32)	32	NA	IAU 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.
objID	dimensionless	BIGINT	8	NA	Unique object identifier.
uniquePspOBid	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 $((90 + \text{declination})/0.0083333)$.
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.
qualityFlag	dimensionless	TINYINT	1	0	Subset of objInfoFlag denoting whether this object is real or a likely false positive. Values listed in ObjectQualityFlags.
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.
epochMean	days	FLOAT	8	-999	Modified Julian Date of the mean epoch corresponding to raMean, decMean (equinox J2000).
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.
gQfPerfect	dimensionless	REAL	4	-999	Maximum PSF weighted fraction of pixels totally unmasked from g filter detections.
gMeanPSFMag	AB magnitude	REAL	4	-999	Mean PSF magnitude from g filter detections.
gMeanPSFMagErr	AB magnitude	REAL	4	-999	Error in mean PSF magnitude from g filter detections.
gMeanPSFMagStd	AB magnitude	REAL	4	-999	Standard deviation of PSF magnitudes from g filter detections.
gMeanPSFMagNpt	dimensionless	SMALLINT	2	-999	Number of measurements included in mean PSF magnitude from g filter detections.
gMeanPSFMagMin	AB magnitude	REAL	4	-999	Minimum PSF magnitude from g filter detections.
gMeanPSFMagMax	AB magnitude	REAL	4	-999	Maximum PSF magnitude from g filter detections.
gMeanKronMag	AB magnitude	REAL	4	-999	Mean Kron (1980) magnitude from g filter detections.
gMeanKronMagErr	AB magnitude	REAL	4	-999	Error in mean Kron (1980) magnitude from g filter detections.
gMeanKronMagStd	AB magnitude	REAL	4	-999	Standard deviation of Kron (1980) magnitudes from g filter detections.
gMeanKronMagNpt	dimensionless	SMALLINT	2	-999	Number of measurements included in mean Kron (1980) magnitude from g filter detections.

gMeanAp Mag	AB magnitu des	REAL	4	-999	Mean aperture magnitude from g filter detections.
gMeanAp MagErr	AB magnitu des	REAL	4	-999	Error in mean aperture magnitude from g filter detections.
gMeanAp MagStd	AB magnitu des	REAL	4	-999	Standard deviation of aperture magnitudes from g filter detections.
gMeanAp MagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean aperture magnitude from g filter detections.
gFlags	dimensio nless	INT	4	0	Information flag bitmask for mean object from g filter detections. Values listed in ObjectFilterFlags.
rQfPerfect	dimensio nless	REAL	4	-999	Maximum PSF weighted fraction of pixels totally unmasked from r filter detections.
rMeanPS FMag	AB magnitu des	REAL	4	-999	Mean PSF magnitude from r filter detections.
rMeanPS FMagErr	AB magnitu des	REAL	4	-999	Error in mean PSF magnitude from r filter detections.
rMeanPS FMagStd	AB magnitu des	REAL	4	-999	Standard deviation of PSF magnitudes from r filter detections.
rMeanPS FMagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean PSF magnitude from r filter detections.
rMeanPS FMagMin	AB magnitu des	REAL	4	-999	Minimum PSF magnitude from r filter detections.
rMeanPS FMagMax	AB magnitu des	REAL	4	-999	Maximum PSF magnitude from r filter detections.
rMeanKro nMag	AB magnitu des	REAL	4	-999	Mean Kron (1980) magnitude from r filter detections.
rMeanKro nMagErr	AB magnitu des	REAL	4	-999	Error in mean Kron (1980) magnitude from r filter detections.
rMeanKro nMagStd	AB magnitu des	REAL	4	-999	Standard deviation of Kron (1980) magnitudes from r filter detections.
rMeanKro nMagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean Kron (1980) magnitude from r filter detections.
rMeanAp Mag	AB magnitu des	REAL	4	-999	Mean aperture magnitude from r filter detections.
rMeanAp MagErr	AB magnitu des	REAL	4	-999	Error in mean aperture magnitude from r filter detections.
rMeanAp MagStd	AB magnitu des	REAL	4	-999	Standard deviation of aperture magnitudes from r filter detections.
rMeanAp MagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean aperture magnitude from r filter detections.
rFlags	dimensio nless	INT	4	0	Information flag bitmask for mean object from r filter detections. Values listed in ObjectFilterFlags.
iQfPerfect	dimensio nless	REAL	4	-999	Maximum PSF weighted fraction of pixels totally unmasked from i filter detections.
iMeanPSF Mag	AB magnitu des	REAL	4	-999	Mean PSF magnitude from i filter detections.
iMeanPSF MagErr	AB magnitu des	REAL	4	-999	Error in mean PSF magnitude from i filter detections.

iMeanPSF MagStd	AB magnitu des	REAL	4	-999	Standard deviation of PSF magnitudes from i filter detections.
iMeanPSF MagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean PSF magnitude from i filter detections.
iMeanPSF MagMin	AB magnitu des	REAL	4	-999	Minimum PSF magnitude from i filter detections.
iMeanPSF MagMax	AB magnitu des	REAL	4	-999	Maximum PSF magnitude from i filter detections.
iMeanKro nMag	AB magnitu des	REAL	4	-999	Mean Kron (1980) magnitude from i filter detections.
iMeanKro nMagErr	AB magnitu des	REAL	4	-999	Error in mean Kron (1980) magnitude from i filter detections.
iMeanKro nMagStd	AB magnitu des	REAL	4	-999	Standard deviation of Kron (1980) magnitudes from i filter detections.
iMeanKro nMagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean Kron (1980) magnitude from i filter detections.
iMeanAp Mag	AB magnitu des	REAL	4	-999	Mean aperture magnitude from i filter detections.
iMeanAp MagErr	AB magnitu des	REAL	4	-999	Error in mean aperture magnitude from i filter detections.
iMeanAp MagStd	AB magnitu des	REAL	4	-999	Standard deviation of aperture magnitudes from i filter detections.
iMeanAp MagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean aperture magnitude from i filter detections.
iFlags	dimensio nless	INT	4	0	Information flag bitmask for mean object from i filter detections. Values listed in ObjectFilterFlags.
zQfPerfect	dimensio nless	REAL	4	-999	Maximum PSF weighted fraction of pixels totally unmasked from z filter detections.
zMeanPS FMag	AB magnitu des	REAL	4	-999	Mean PSF magnitude from z filter detections.
zMeanPS FMagErr	AB magnitu des	REAL	4	-999	Error in mean PSF magnitude from z filter detections.
zMeanPS FMagStd	AB magnitu des	REAL	4	-999	Standard deviation of PSF magnitudes from z filter detections.
zMeanPS FMagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean PSF magnitude from z filter detections.
zMeanPS FMagMin	AB magnitu des	REAL	4	-999	Minimum PSF magnitude from z filter detections.
zMeanPS FMagMax	AB magnitu des	REAL	4	-999	Maximum PSF magnitude from z filter detections.
zMeanKro nMag	AB magnitu des	REAL	4	-999	Mean Kron (1980) magnitude from z filter detections.
zMeanKro nMagErr	AB magnitu des	REAL	4	-999	Error in mean Kron (1980) magnitude from z filter detections.
zMeanKro nMagStd	AB magnitu des	REAL	4	-999	Standard deviation of Kron (1980) magnitudes from z filter detections.
zMeanKro nMagNpt	dimensio nless	SMALLI NT	2	-999	Number of measurements included in mean Kron (1980) magnitude from z filter detections.

zMeanApMag	AB magnitudes	REAL	4	-999	Mean aperture magnitude from z filter detections.
zMeanApMagErr	AB magnitudes	REAL	4	-999	Error in mean aperture magnitude from z filter detections.
zMeanApMagStd	AB magnitudes	REAL	4	-999	Standard deviation of aperture magnitudes from z filter detections.
zMeanApMagNpt	dimensionless	SMALLINT	2	-999	Number of measurements included in mean aperture magnitude from z filter detections.
zFlags	dimensionless	INT	4	0	Information flag bitmask for mean object from z filter detections. Values listed in ObjectFilterFlags.
yQfPerfect	dimensionless	REAL	4	-999	Maximum PSF weighted fraction of pixels totally unmasked from y filter detections.
yMeanPSFMag	AB magnitudes	REAL	4	-999	Mean PSF magnitude from y filter detections.
yMeanPSFMagErr	AB magnitudes	REAL	4	-999	Error in mean PSF magnitude from y filter detections.
yMeanPSFMagStd	AB magnitudes	REAL	4	-999	Standard deviation of PSF magnitudes from y filter detections.
yMeanPSFMagNpt	dimensionless	SMALLINT	2	-999	Number of measurements included in mean PSF magnitude from y filter detections.
yMeanPSFMagMin	AB magnitudes	REAL	4	-999	Minimum PSF magnitude from y filter detections.
yMeanPSFMagMax	AB magnitudes	REAL	4	-999	Maximum PSF magnitude from y filter detections.
yMeanKronMag	AB magnitudes	REAL	4	-999	Mean Kron (1980) magnitude from y filter detections.
yMeanKronMagErr	AB magnitudes	REAL	4	-999	Error in mean Kron (1980) magnitude from y filter detections.
yMeanKronMagStd	AB magnitudes	REAL	4	-999	Standard deviation of Kron (1980) magnitudes from y filter detections.
yMeanKronMagNpt	dimensionless	SMALLINT	2	-999	Number of measurements included in mean Kron (1980) magnitude from y filter detections.
yMeanApMag	AB magnitudes	REAL	4	-999	Mean aperture magnitude from y filter detections.
yMeanApMagErr	AB magnitudes	REAL	4	-999	Error in mean aperture magnitude from y filter detections.
yMeanApMagStd	AB magnitudes	REAL	4	-999	Standard deviation of aperture magnitudes from y filter detections.
yMeanApMagNpt	dimensionless	SMALLINT	2	-999	Number of measurements included in mean aperture magnitude from y filter detections.
yFlags	dimensionless	INT	4	0	Information flag bitmask for mean object from y filter detections. Values listed in ObjectFilterFlags.
uniquePSPSP2id	dimensionless	BIGINT	8	NA	Unique internal PSPS detection identifier.
detectID	dimensionless	BIGINT	8	NA	Unique detection identifier.
filterID	dimensionless	TINYINT	1	NA	Filter identifier. Details in the Filter table.
imageID	dimensionless	BIGINT	8	NA	Unique image identifier. Constructed as (100 * frameID + ccdID).

randomID	dimensionless	FLOAT	8	NA	Random value drawn from the interval between zero and one.
obsTime	days	FLOAT	8	-999	Modified Julian Date at the midpoint of the observation. Note these are international atomic time rather than UTC, so if you want UTC times you will need to add 34 or 35 seconds to correct for leap seconds.
xPos	raw pixels	REAL	4	-999	PSF x center location.
yPos	raw pixels	REAL	4	-999	PSF y center location.
xPosErr	raw pixels	REAL	4	-999	Error in PSF x center location.
yPosErr	raw pixels	REAL	4	-999	Error in PSF y center location.
pltScale	arcsec/pixel	REAL	4	-999	Local plate scale at this location.
posAngle	degrees	REAL	4	-999	Position angle (sky-to-chip) at this location.
ra	degrees	FLOAT	8	-999	Right ascension.
dec					
raErr	arcsec	REAL	4	-999	Right ascension error.
decErr	arcsec	REAL	4	-999	Declination error.
extNSigma	dimensionless	REAL	4	0	An extendedness measure based on the deviation between PSF and Kron (1980) magnitudes, normalized by the PSF magnitude uncertainty.
zp	magnitudes	REAL	4	0	Photometric zeropoint. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.
telluricExt	magnitudes	REAL	4	NA	Estimated Telluric extinction due to non-photometric observing conditions. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.
expTime	seconds	REAL	4	-999	Exposure time of the frame/exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.
airMass	dimensionless	REAL	4	0	Airmass at midpoint of the exposure. Necessary for converting listed fluxes and magnitudes back to measured ADU counts.
psfFlux	Janskys	REAL	4	-999	Flux from PSF fit.
psfFluxErr	Janskys	REAL	4	-999	Error on flux from PSF fit.
psfMajorFWHM	arcsec	REAL	4	-999	PSF major axis FWHM.
psfMinorFWHM	arcsec	REAL	4	-999	PSF minor axis FWHM.
psfTheta	degrees	REAL	4	-999	PSF major axis orientation.
psfCore	dimensionless	REAL	4	-999	PSF core parameter k, where $F = F_0 / (1 + k r^2 + r^3.33)$.
psfQf	dimensionless	REAL	4	-999	PSF coverage factor.
psfQfPerfect	dimensionless	REAL	4	-999	PSF weighted fraction of pixels totally unmasked.
psfChiSq	dimensionless	REAL	4	-999	Reduced chi squared value of the PSF model fit.
psfLikelihood	dimensionless	REAL	4	-999	Likelihood that this detection is best fit by a PSF.
momentXX	arcsec ²	REAL	4	-999	Second moment M _{xx} .
momentXY	arcsec ²	REAL	4	-999	Second moment M _{xy} .
momentYY	arcsec ²	REAL	4	-999	Second moment M _{yy} .
momentR1	arcsec	REAL	4	-999	First radial moment.
momentRH	arcsec ^{0.5}	REAL	4	-999	Half radial moment (r ^{0.5} weighting).
momentM3C	arcsec ²	REAL	4	-999	Cosine of trefoil second moment term: $r^2 \cos(3 \theta) = M_{xxx} - 3 * M_{xyy}$.
momentM3S	arcsec ²	REAL	4	-999	Sine of trefoil second moment: $r^2 \sin(3 \theta) = 3 * M_{xxy} - M_{yyy}$.

momentM4C	arcsec^2	REAL	4	-999	Cosine of quadrupole second moment: $r^2 \cos(4 \theta) = M_{xxxx} - 6 * M_{xyxy} + M_{yyyy}$.
momentM4S	arcsec^2	REAL	4	-999	Sine of quadrupole second moment: $r^2 \sin(4 \theta) = 4 * M_{xyxy} - 4 * M_{xyyy}$.
apFlux	Janskys	REAL	4	-999	Flux in seeing-dependent aperture.
apFluxErr	Janskys	REAL	4	-999	Error on flux in seeing-dependent aperture.
apFillF	dimensionless	REAL	4	-999	Aperture fill factor.
apRadius	arcsec	REAL	4	-999	Aperture radius.
kronFlux	Janskys	REAL	4	-999	Kron (1980) flux.
kronFluxErr	Janskys	REAL	4	-999	Error on Kron (1980) flux.
kronRad	arcsec	REAL	4	-999	Kron (1980) radius.
sky	Janskys /arcsec^2	REAL	4	-999	Background sky level.
skyErr	Janskys /arcsec^2	REAL	4	-999	Error in background sky level.
infoFlag	dimensionless	BIGINT	8	0	Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags.
infoFlag2	dimensionless	INT	4	0	Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags2.
infoFlag3	dimensionless	INT	4	0	Information flag bitmask indicating details of the photometry. Values listed in DetectionFlags3.