PS1 Object Flags

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ObjectQualityFlags values for column **qualityFlag** in table ObjectThin

These values are also listed in the system metadata table ObjectQualityFlags.

Flag name	Flag value in hexadecimal form	Flag value in decimal form	Description of the flag
DEFAULT	0x00000000	0	Initial value; resets all bits.
QF_OBJ_EXT	0x00000001	1	Extended in our data (eg, PS).
QF_OBJ_EXT_ALT	0x00000002	2	Extended in external data (eg, 2MASS).
QF_OBJ_GOOD	0x00000004	4	Good-quality measurement in our data (eg,PS).
QF_OBJ_GOOD_ALT	0x00000008	8	Good-quality measurement in external data (eg, 2MASS).
QF_OBJ_GOOD_STACK	0x00000010	16	good-quality object in the stack (> 1 good stack measurement)
QF_OBJ_BEST_STACK	0x00000020	32	the primary stack measurements are the best measurements.
QF_OBJ_SUSPECT_STACK	0x00000040	64	suspect object in the stack (no more than 1 good measurement, 2 or more suspect or good stack measurement).
QF_OBJ_BAD_STACK	0x00000080	128	poor-quality stack object (no more than 1 good or suspect measurement).

ObjectInfoFlags values for column **objInfoFlag** in table ObjectThin

These values are also listed in the system metadata table ObjectInfoFlags.

Flag name	Flag value in hexadecimal form	Flag value in decimal form	Description of the flag
DEFAULT	0x00000000	0	Initial value; resets all bits.
FEW	0x00000001	1	Used within relphot; skip star.
POOR	0x00000002	2	Used within relphot; skip star.
ICRF_QSO	0x00000004	4	object IDed with known ICRF quasar (may have ICRF position measurement)
HERN_QSO_P60	0x00000008	8	identified as likely QSO (Hernitschek et al 2015), P_QSO >= 0.60
HERN_QSO_P05	0x00000010	16	identified as possible QSO (Hernitschek et al 2015), P_QSO >= 0.05
HERN_RRL_P60	0x00000020	32	identified as likely RR Lyra (Hernitschek et al 2015), P_RRLyra >= 0.60
HERN_RRL_P05	0x00000040	64	identified as possible RR Lyra (Hernitschek et al 2015), P_RRLyra >= 0.05
HERN_VARIABLE	0x00000080	128	identified as a variable based on ChiSq (Hernitschek et al 2015)
TRANSIENT	0x00000100	256	identified as a non-periodic (stationary) transient
HAS_SOLSYS_DET	0x00000200	512	at least one detection identified with a known solar-system object (asteroid or other).
MOST_SOLSYS_DET	0x00000400	1024	most detections identified with a known solar-system object (asteroid or other).
LARGE_PM	0x00000800	2048	star with large proper motion
RAW_AVE	0x00001000	4096	simple weighted average position was used (no IRLS fitting)

FIT_AVE	0x00002000	8192	average position was fitted
FIT_PM	0x00004000	16384	proper motion model was fitted
FIT_PAR	0x00008000	32768	parallax model was fitted
USE_AVE	0x00010000	65536	average position used (not PM or PAR)
USE_PM	0x00020000	131072	proper motion used (not AVE or PAR)
USE_PAR	0x00040000	262144	parallax used (not AVE or PM)
NO_MEAN_ASTROM	0x00080000	524288	mean astrometry could not be measured
STACK_FOR_MEAN	0x00100000	1048576	stack position used for mean astrometry
MEAN_FOR_STACK	0x00200000	2097152	mean astrometry used for stack position
BAD_PM	0x00400000	4194304	failure to measure proper-motion model
EXT	0x00800000	8388608	extended in our data (eg, PS)
EXT_ALT	0x01000000	16777216	extended in external data (eg, 2MASS)
GOOD	0x02000000	33554432	good-quality measurement in our data (eg,PS)
GOOD_ALT	0x04000000	67108864	good-quality measurement in external data (eg, 2MASS)
GOOD_STACK	0x08000000	134217728	good-quality object in the stack (> 1 good stack measurement)
BEST_STACK	0x10000000	268435456	the primary stack measurements are the best measurements
SUSPECT_STACK	0x20000000	536870912	suspect object in the stack (no more than 1 good measurement, 2 or more suspect or good stack measurement)
BAD_STACK	0x40000000	1073741824	poor-quality stack object (no more than 1 good or suspect measurement)

AstrometryCorrectionFlags values for column **astrometryCorrectionFlag** in table ObjectThin

These values are also listed in the system metadata table AstrometryCorrectionFlags.

Flag name	Flag value in hexadecimal form	Flag value in decimal form	Description of the flag
AC_CORRECTED	0x00000001	1	Astrometry Corrected using Gaia EDR3.
AC_DCR	0x00000002	2	DIfferential Chromatic Aberration Correction was performed.
AC_PM	0x00000004	4	Proper Motions were calculated.
DEFAULT	0x00000000	0	Initial value; resets all bits.

ObjectFilterFlags values, e.g., column **gFlags** in table MeanObject

These values are also listed in the system metadata table ObjectFilterFlags.

Flag name	Flag value in hexadecimal form	Flag value in decimal form	Description of the flag
DEFAULT	0x00000000	0	Initial value; resets all bits.
SECF_STAR_FEW	0x00000001	1	Used within relphot: skip star.
SECF_STAR_POOR	0x00000002	2	Used within relphot: skip star.
SECF_USE_SYNTH	0x00000004	4	Synthetic photometry used in average measurement.
SECF_USE_UBERCAL	0x00000008	8	Ubercal photometry used in average measurement.
SECF_HAS_PS1	0x00000010	16	PS1 photometry used in average measurement.
SECF_HAS_PS1_STACK	0x00000020	32	PS1 stack photometry exists.
SECF_HAS_TYCHO	0x00000040	64	Tycho photometry used for synthetic magnitudes.
SECF_FIX_SYNTH	0x00000080	128	Synthetic magnitudes repaired with zeropoint map.
SECF_RANK_0	0x00000100	256	Average magnitude uses only rank 0 detections.
SECF_RANK_1	0x00000200	512	Average magnitude uses only rank 1 detections.
SECF_RANK_2	0x00000400	1024	Average magnitude uses only rank 2 detections.
SECF_RANK_3	0x00000800	2048	Average magnitude uses only rank 3 detections.

SECF_RANK_4	0x00001000	4096	Average magnitude uses only rank 4 detections.
SECF_STACK_PRIMARY	0x00004000	16384	PS1 stack photometry comes from primary skycell.
SECF_STACK_BESTDET	0x00008000	32768	PS1 stack best measurement is a detection (not forced).
SECF_STACK_PRIMDET	0x00010000	65536	PS1 stack primary measurement is a detection (not forced).
SECF_HAS_SDSS	0x00100000	1048576	This photcode has SDSS photometry.
SECF_HAS_HSC	0x00200000	2097152	This photcode has HSC photometry.
SECF_HAS_CFH	0x00400000	4194304	This photcode has CFH photometry (mostly Megacam).
SECF_HAS_DES	0x00800000	8388608	This photcode has DES photometry.
SECF_OBJ_EXT	0x01000000	16777216	Extended in this band.

ForcedGalaxyShapeFlags values, e.g., column **gGalFlags** in table ForcedGalaxyShape

These values are also listed in the system metadata table ForcedGalaxyShapeFlags.

Flag name	Flag value in hexadecimal form	Flag value in decimal form	Description of the flag
NO_ERROR	0x00000000	0	No error condition raised.
FAIL_FIT	0x00000001	1	Fit failed to converge or was degenerate
TOO_FEW	0x00000002	2	Not enough points to fit the model
OUT_OF_RANGE	0x00000004	4	Fit minimum too far outside data range
BAD_ERROR	0x00000008	8	Invalid size error (nan or inf)

Column **XinfoFlag** (X one of g,r,i,z,y) in StackObjectThin

See DetectionFlags in PS1 Detection Flags

Column **XinfoFlag2** (X one of g,r,i,z,y) in StackObjectThin

See DetectionFlags2 in PS1 Detection Flags

Column **XinfoFlag3** (X one of g,r,i,z,y) in StackObjectThin

See DetectionFlags3 in PS1 Detection Flags