KIC 006544888

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_\star$ ($R_\odot$)	$T_\star$ (K)	R_p ($R_\oplus$)	S_p ($S_\oplus$)
006544888-01	OBS	No	0.959702	131.594552	48.1	3.759	8.1	6.5	0.87	5500	0.72	1742.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006544888-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

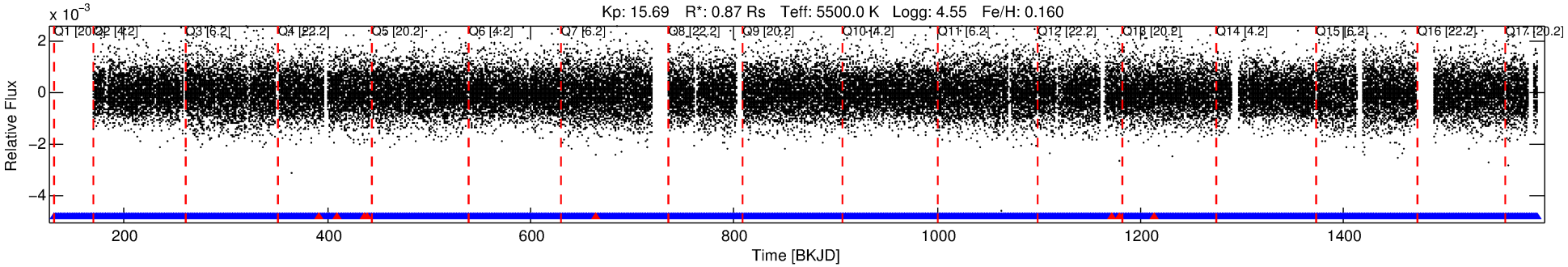
Ephemeris Match Information For 006544888-01

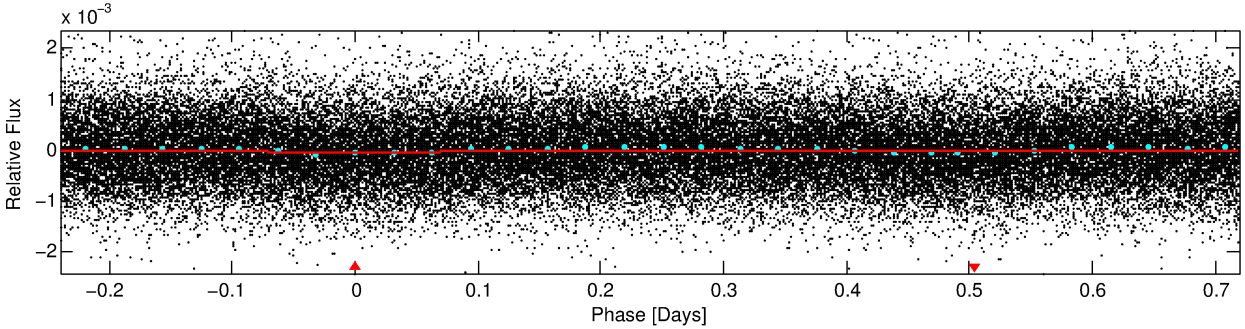
No Significant Match Found

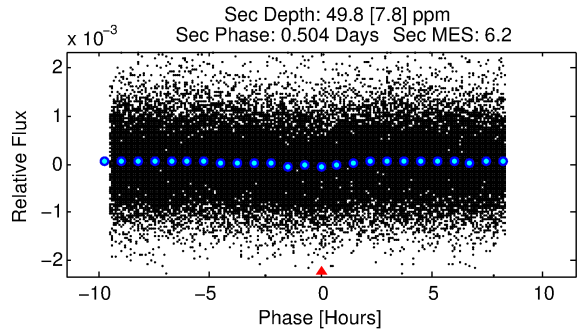
DV One-Page Summary

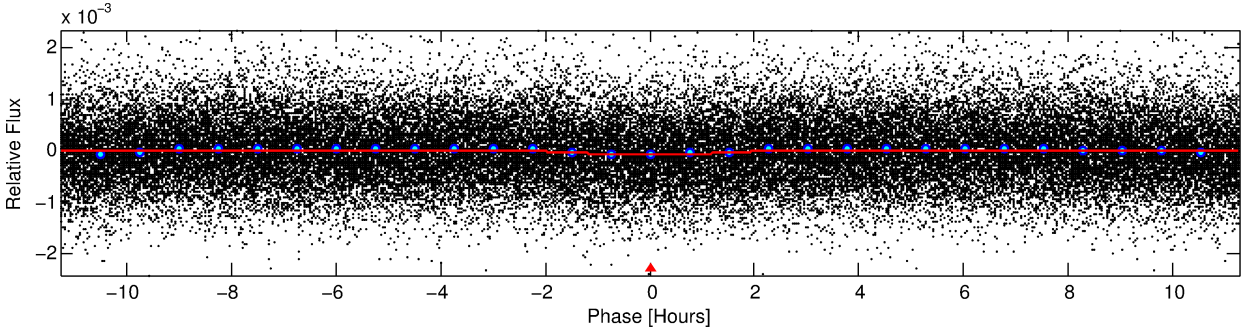
KIC: 6544888 Candidate: 1 of 1 Period: 0.960 d

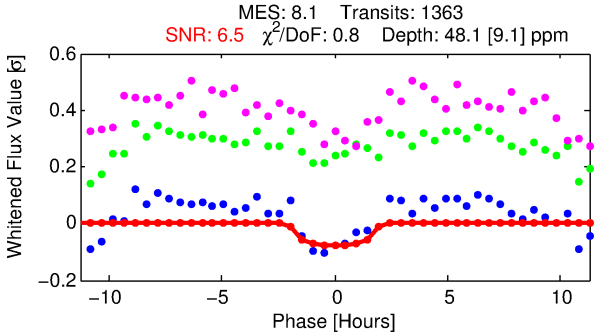
Kp: 15.69 R*: 0.87 Rs Teff: 5500.0 K Logg: 4.55 Fe/H: 0.160

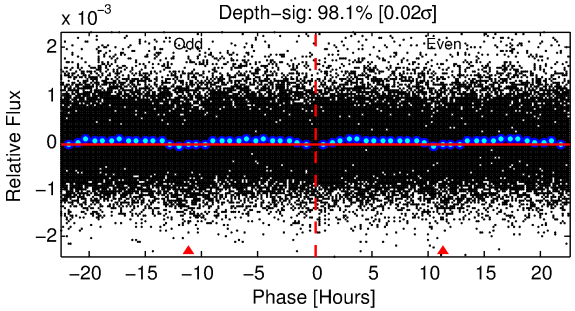


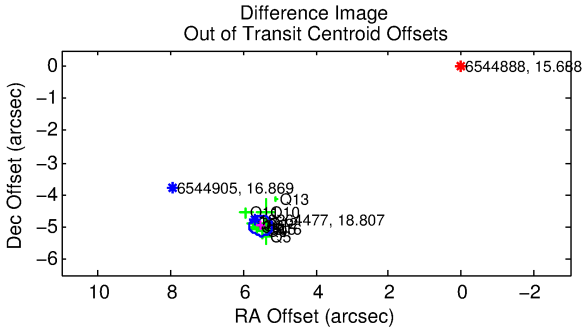












DV Fit Results:

Period = 0.95970 [0.00002] d
Epoch = 131.5946 [0.0073] BKJD
Rp/R* = 0.0076 [0.0088]
a/R* = 1.29 [2.68]
b = 0.90 [1.13]

Seff = 1742.51 [575.87]
Teq = 1647 [136] K
Rp = 0.72 [0.85] Re
a = 0.0189 [0.0040] AU

Ag = 18.63 [43.35] [0.41σ]
Teffp = 5292 [3055] K [1.19σ]

DV Diagnostic Results:

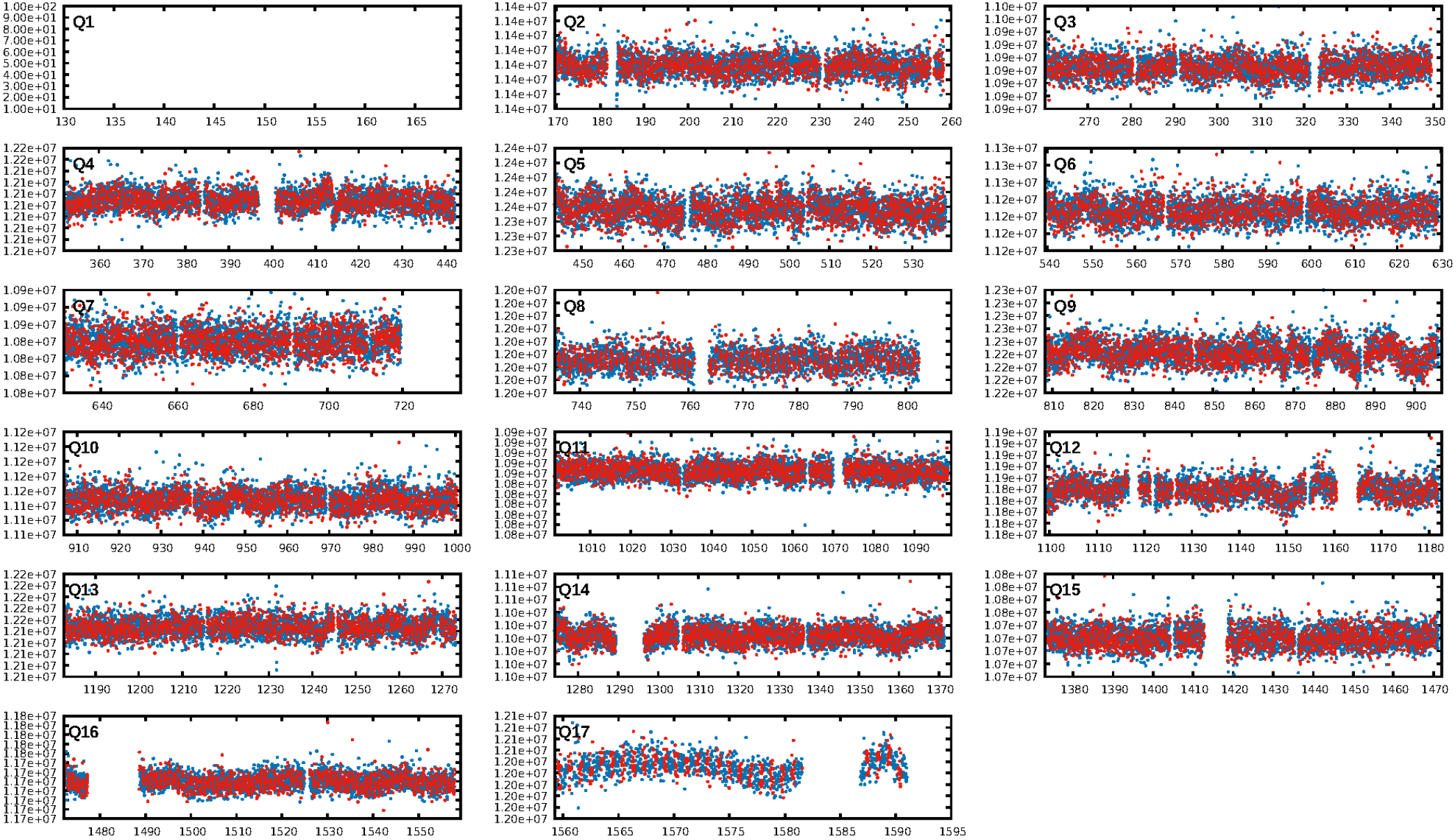
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 8.79e−16
RollingBand−fgt: 0.99 [1328/1336]
GhostDiagnostic−chr: −0.39

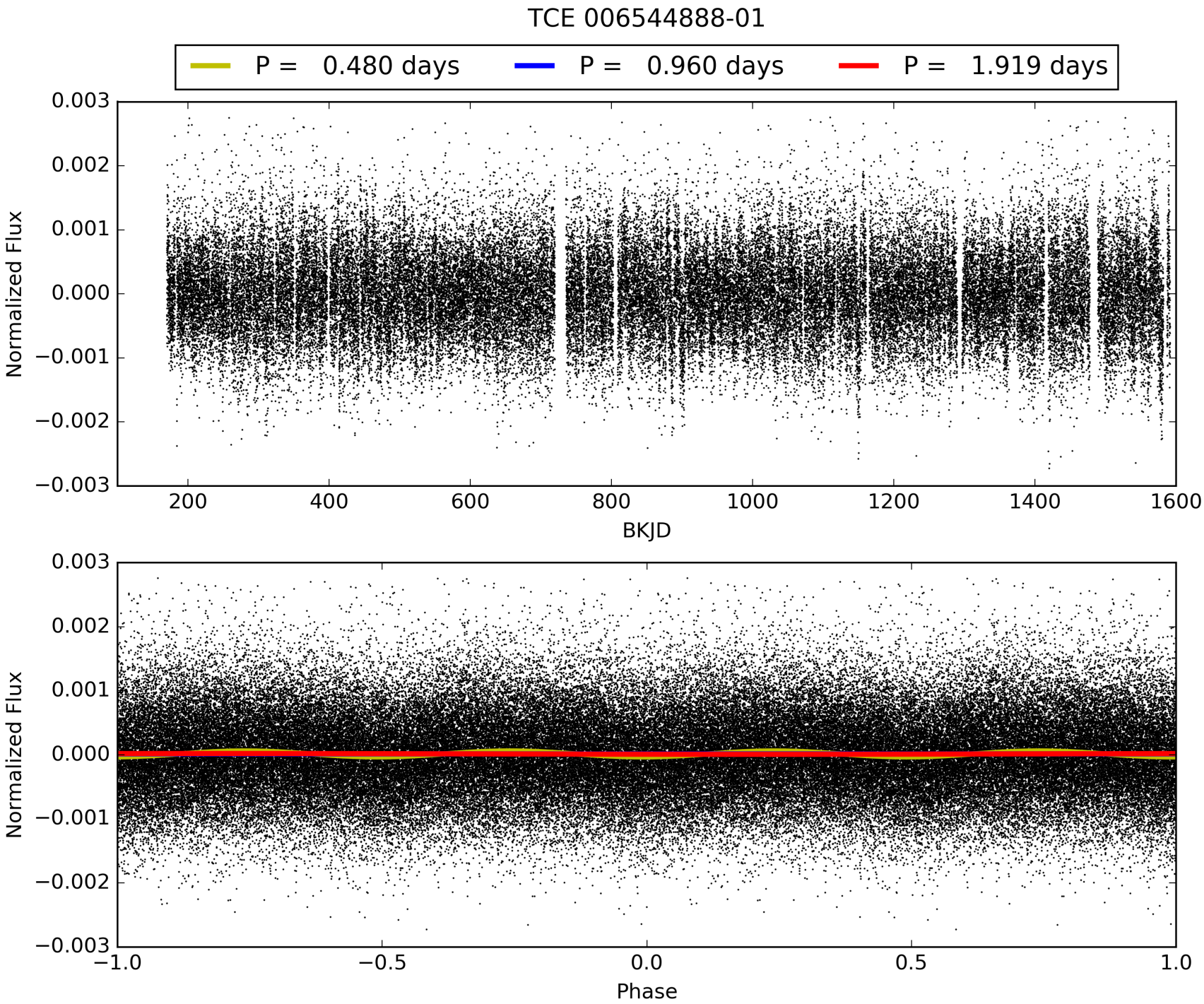
Centroid−sig: 0.0%
Centroid−so: 12.243 arcsec [5.70σ]
OotOffset−rm: 7.418 arcsec [71.43σ]
KicOffset−rm: 7.448 arcsec [66.99σ]
OotOffset−st: 1/4/3/3 [11]
KicOffset−st: 1/4/3/3 [11]
DiffImageQuality−fgm: 1.00 [11/11]
DiffImageOverlap−fno: 1.00 [16/16]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 07:14:11 Z

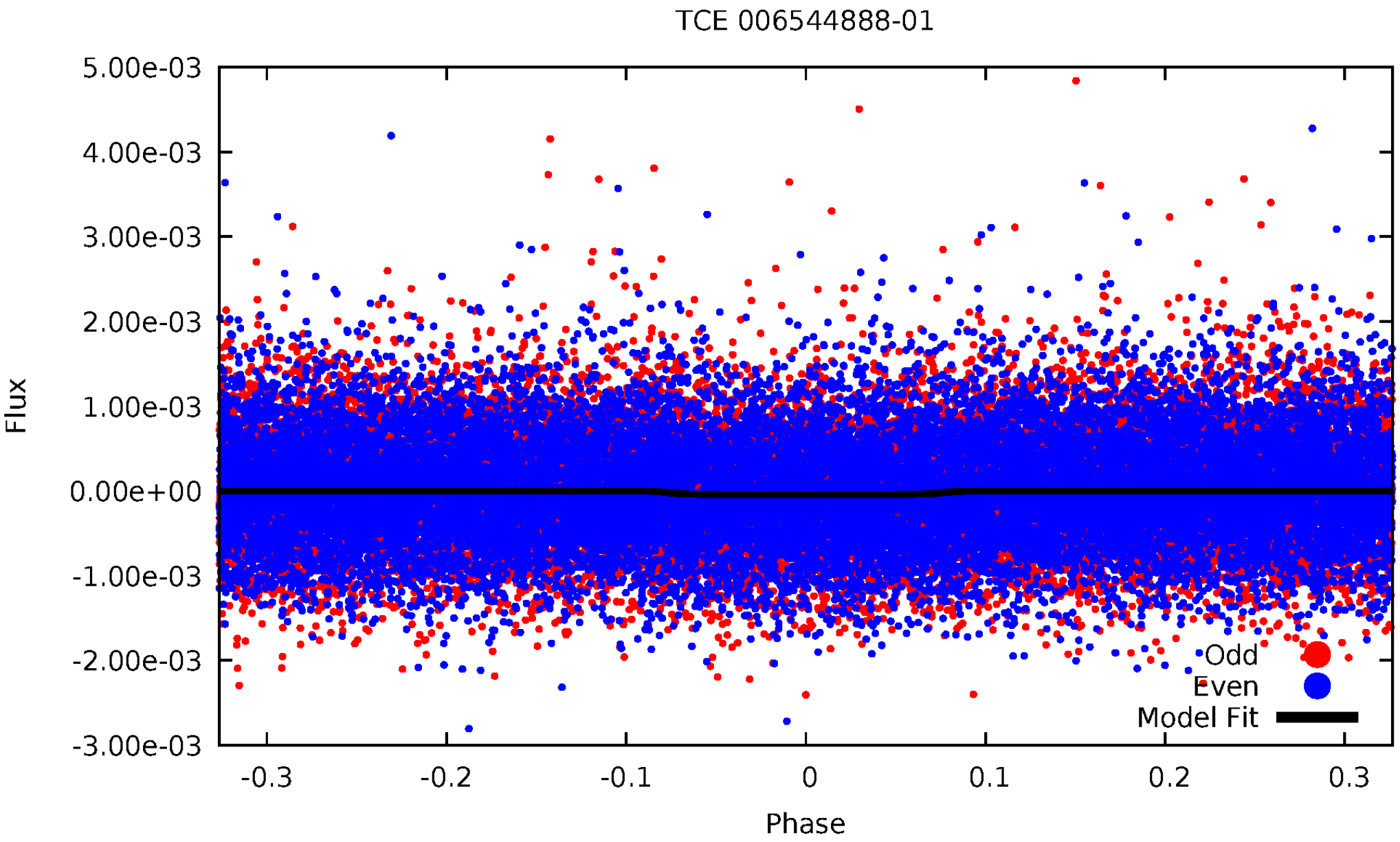
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006544888-01, PDC Light Curves

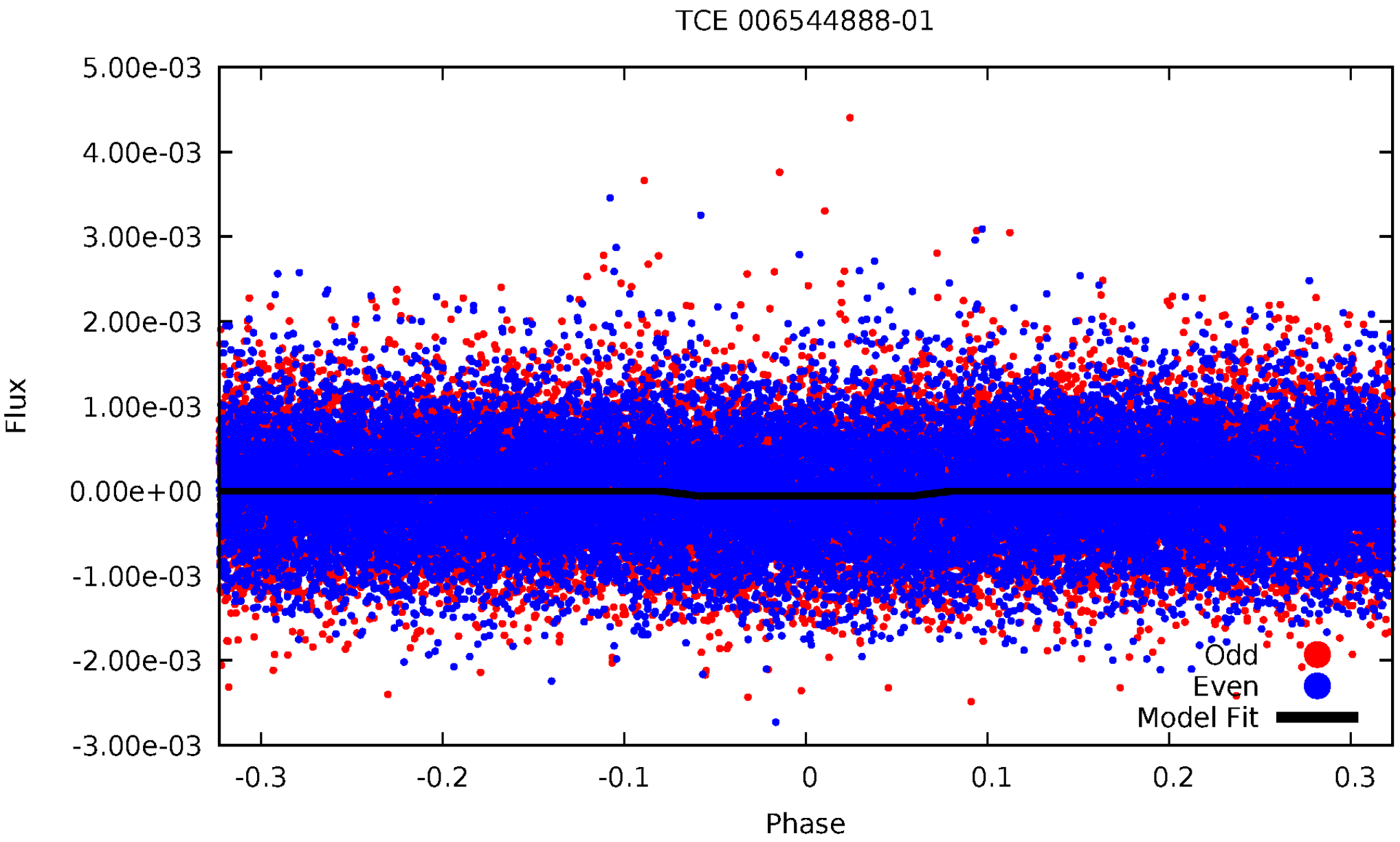



TCE 006544888-01
P = 0.480 days
P = 0.960 days
P = 1.919 days
Normalized Flux
BKJD
Normalized Flux
Phase

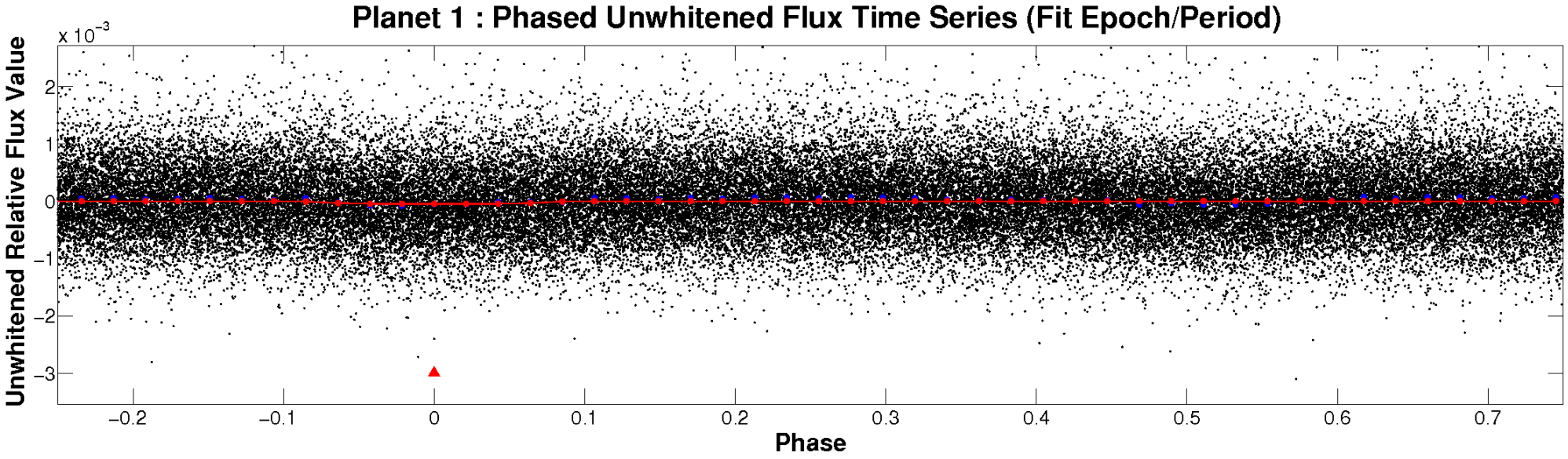
DV Odd/Even

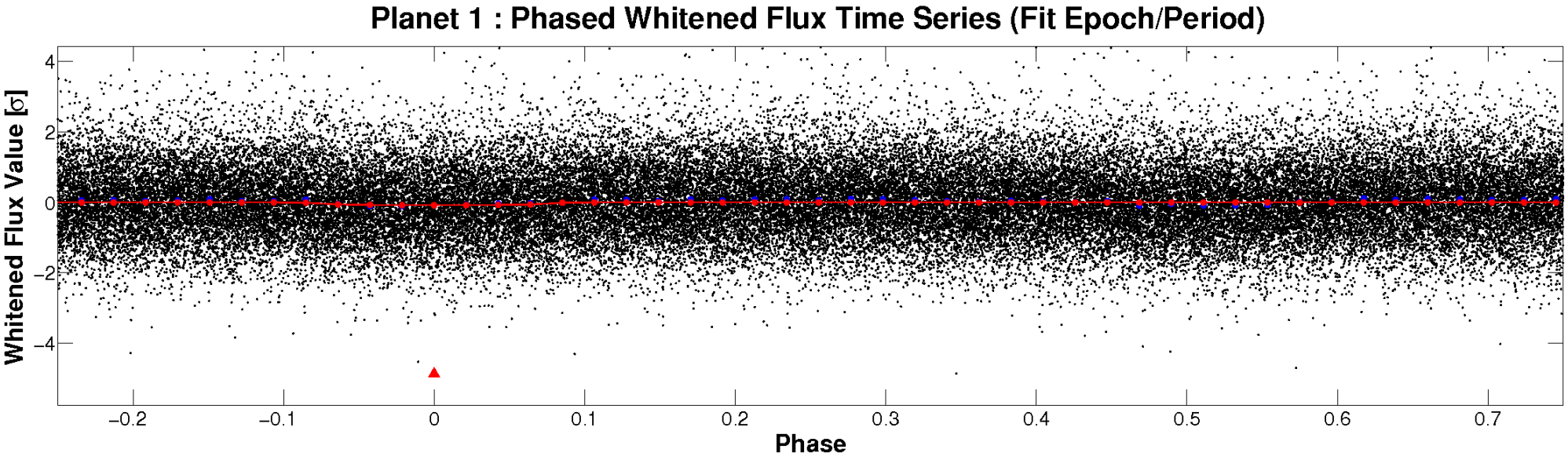

TCE 006544888-01
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006544888-01
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

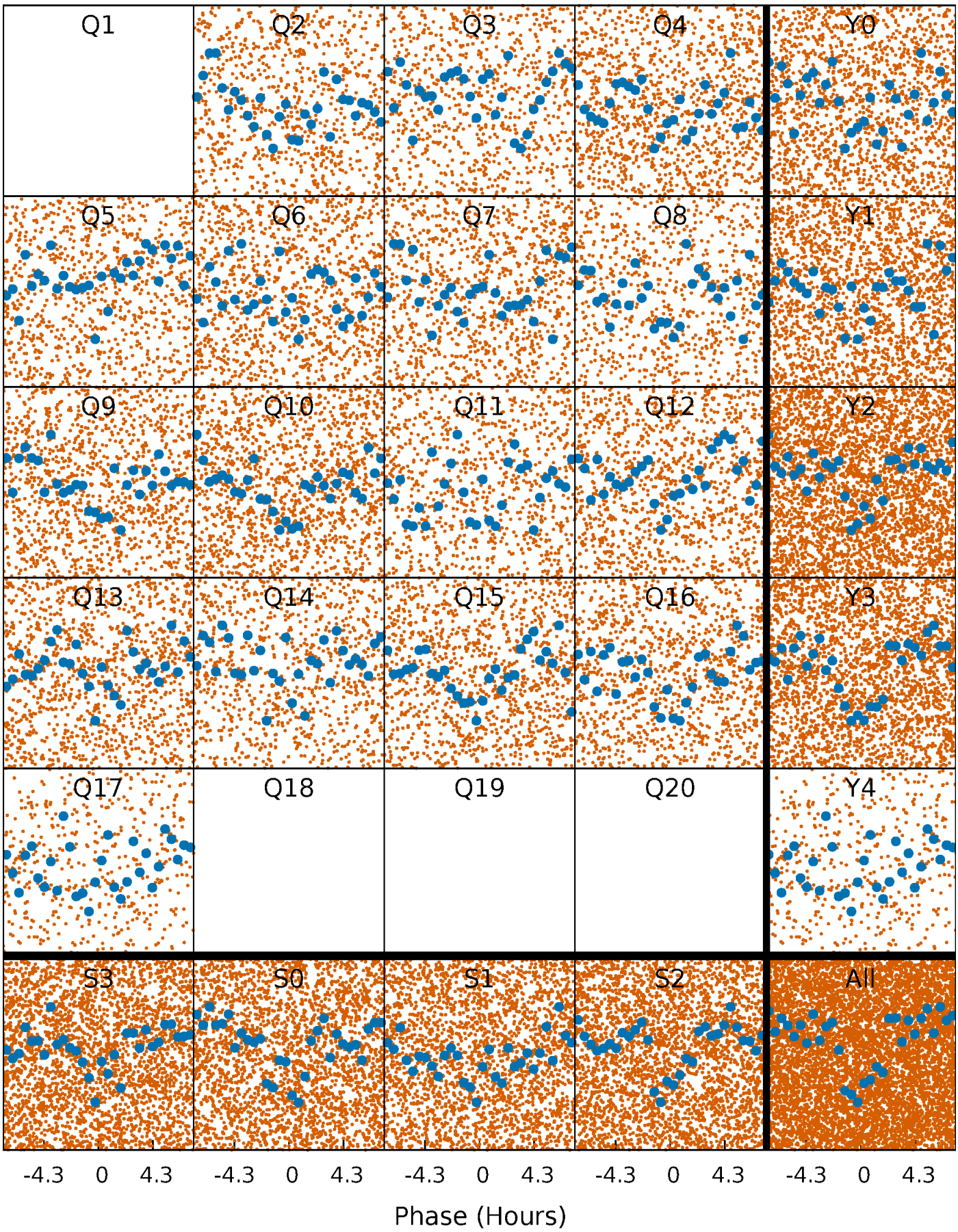
Non-Whitened Vs. Whitened Light Curve





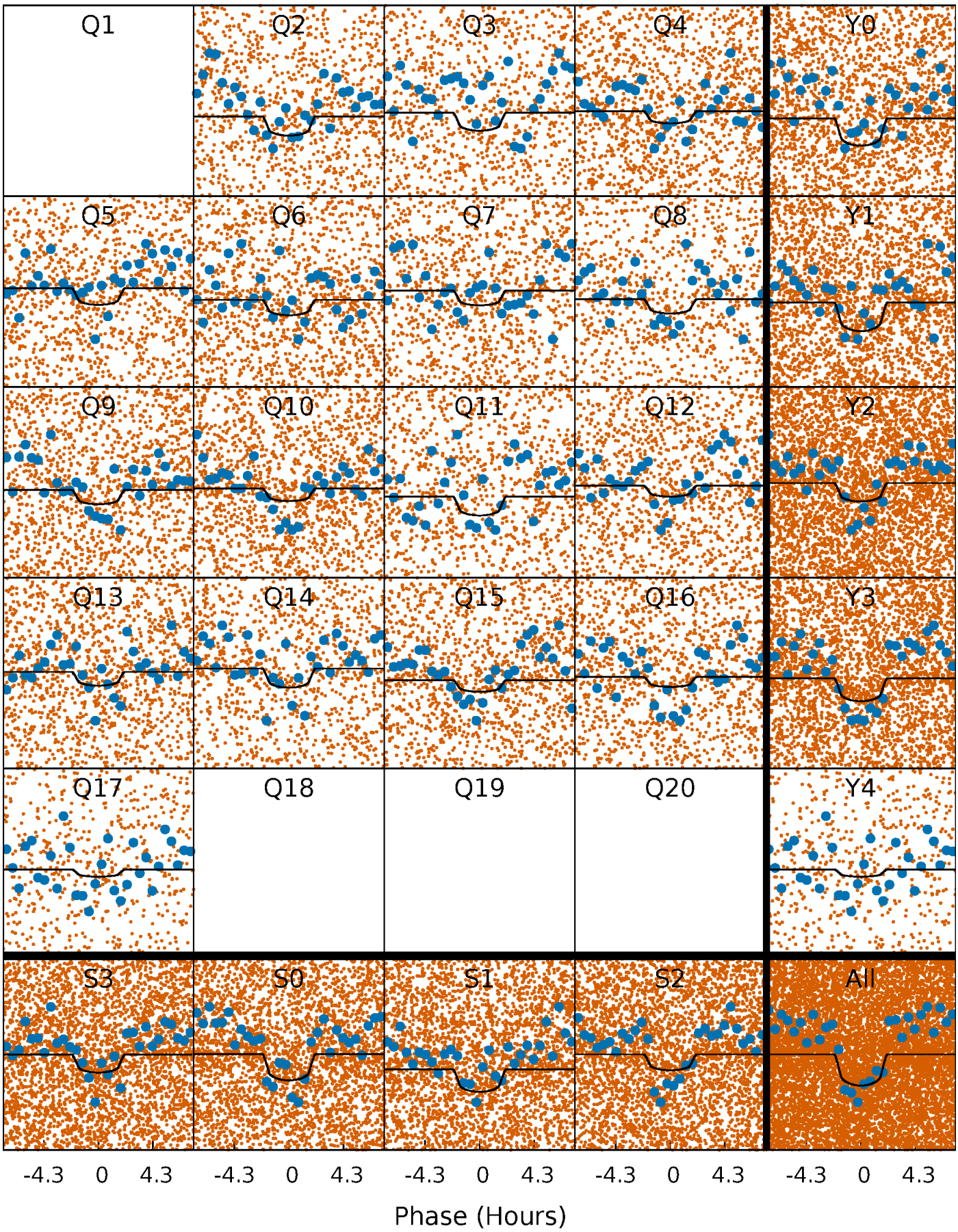
PDC Quarter-Phased Transit Curves

TCE 006544888-01 P= 0.959702 Days T_0=131.594552 (BKJD)



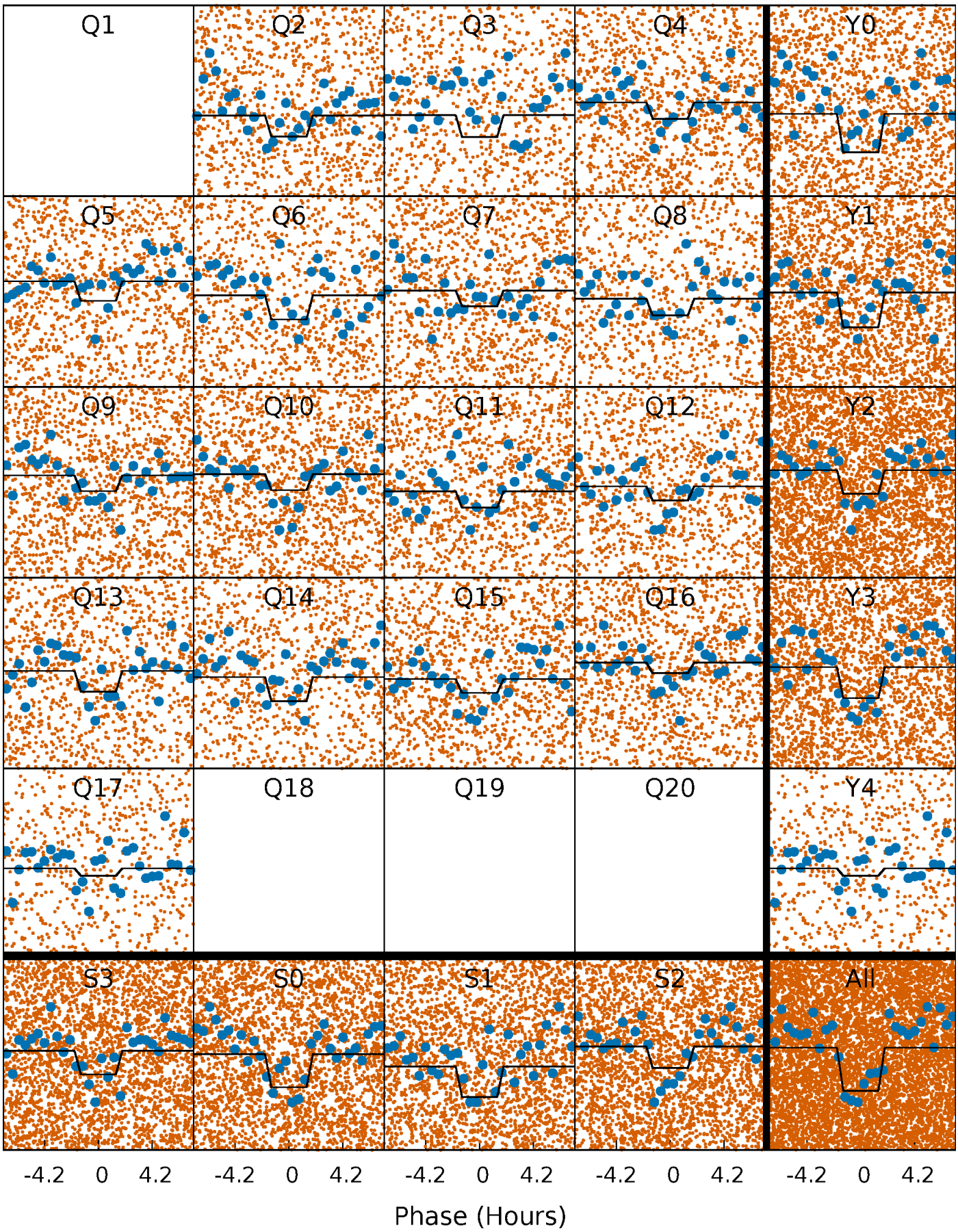
DV Quarter-Phased Transit Curves

TCE 006544888-01 P= 0.959702 Days T_0=131.594552 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

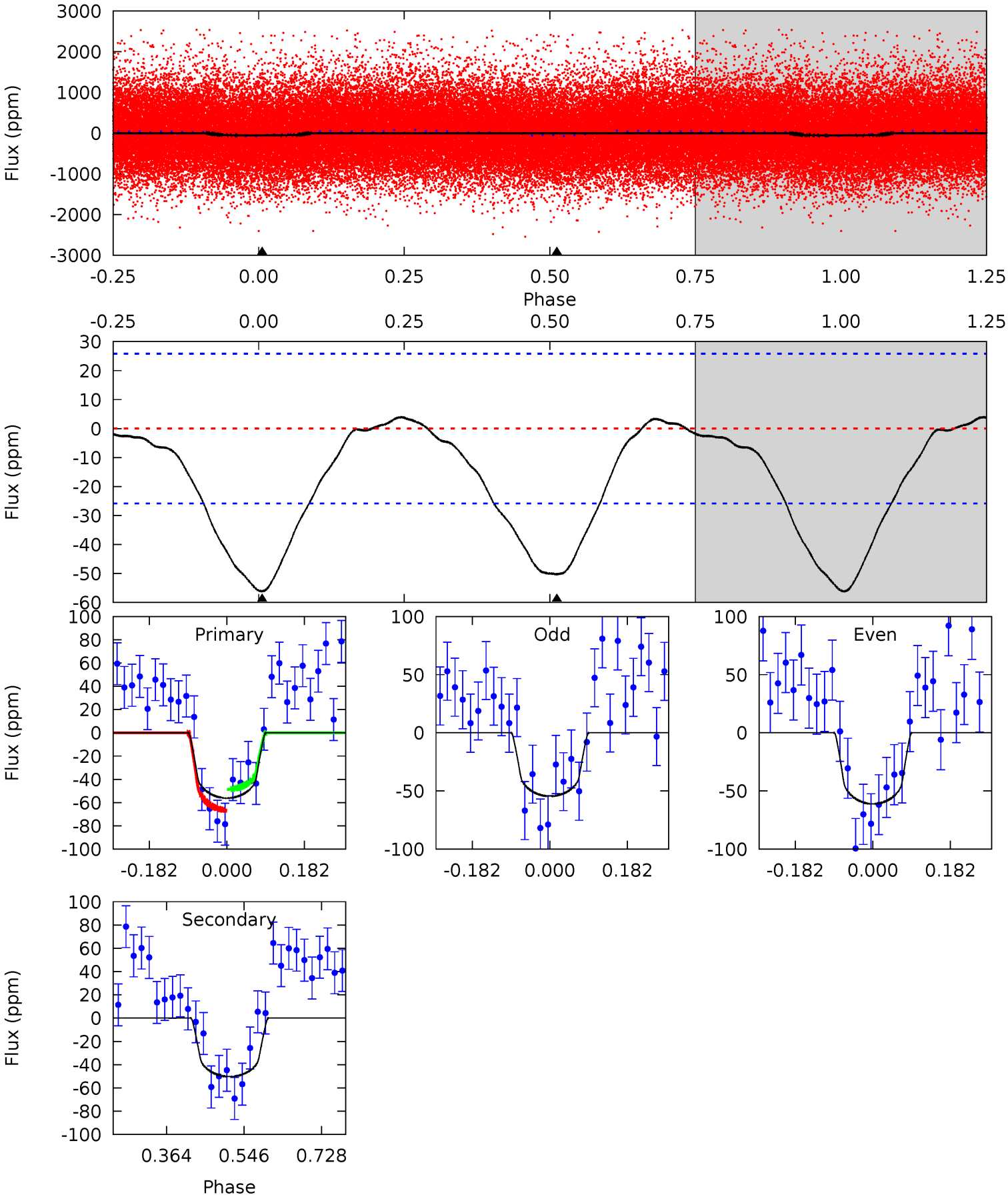
TCE 006544888-01 P= 0.959706 Days T_0=131.594608 (BKJD)



DV Model-Shift Uniqueness Test

006544888-01, P = 0.959702 Days, E = 131.594552 Days

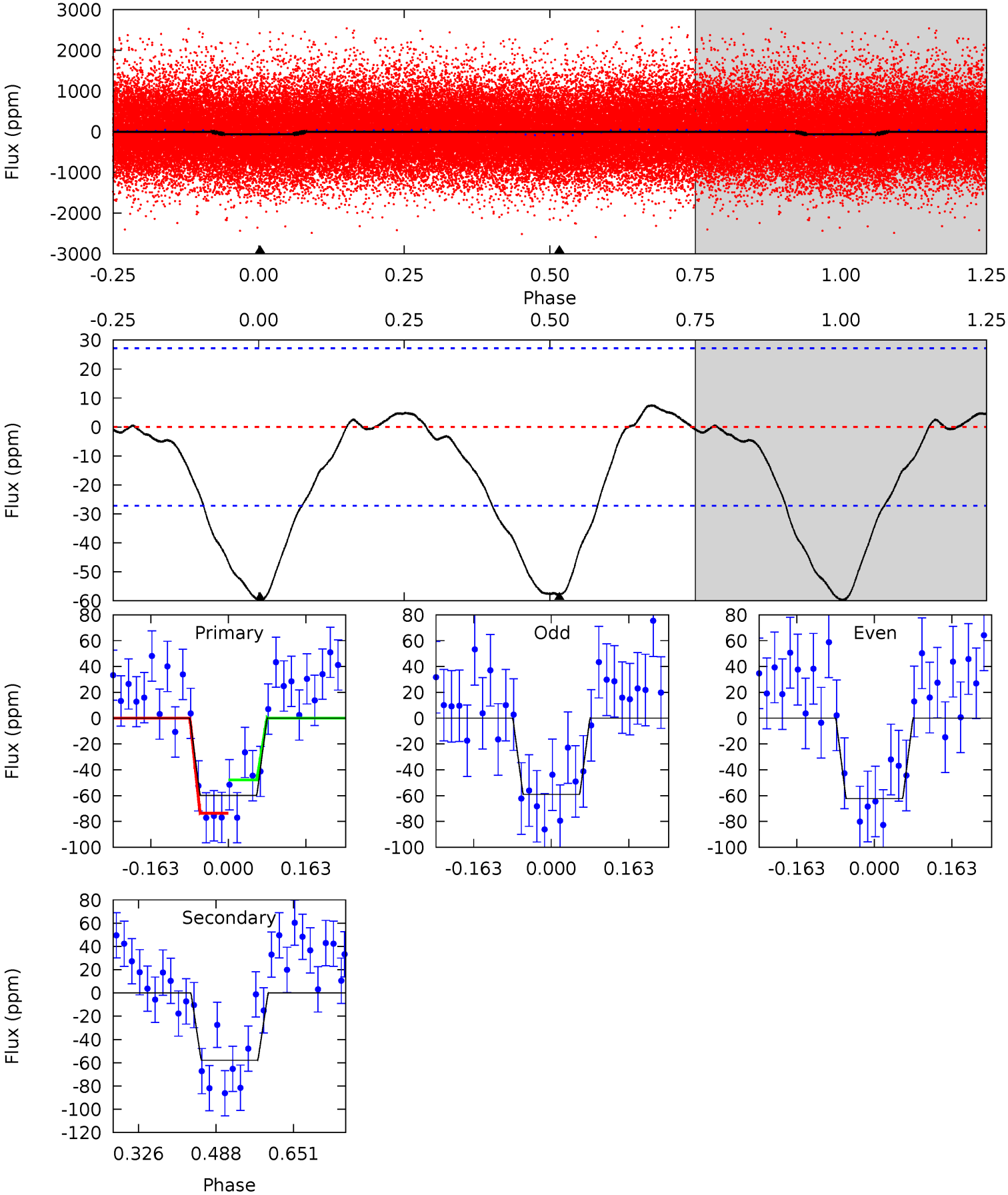
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	8.63	0	0	4.44	1.33	0.47	9.64	9.64	8.63	8.63	0.57	0.83	0.07	1.53



Alt Model-Shift Uniqueness Test

006544888-01, P = 0.959706 Days, E = 131.594608 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.79	9.49	0	0	4.46	1.40	0.62	9.79	9.79	9.49	9.49	0.27	0.88	0.11	2.12



Stellar Parameters For KIC 006544888

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5500^{+164}_{-164}	$4.547^{+0.030}_{-0.170}$	$0.160^{+0.200}_{-0.300}$	$0.870^{+0.214}_{-0.071}$	$0.974^{+0.074}_{-0.110}$	$2.081^{+0.353}_{-0.969}$
	+3%/-3%	+1%/-4%	+125%/-188%	+25%/-8%	+8%/-11%	+17%/-47%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006544888-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-50±6	$0.95^{+0.79}_{-0.62}$	2355^{+139}_{-102}	4793^{+3388}_{-1003}	10^{+82}_{-7}
Alt.	-58±6	$0.96^{+0.86}_{-0.60}$	2358^{+147}_{-102}	4919^{+3215}_{-1073}	12^{+74}_{-8}

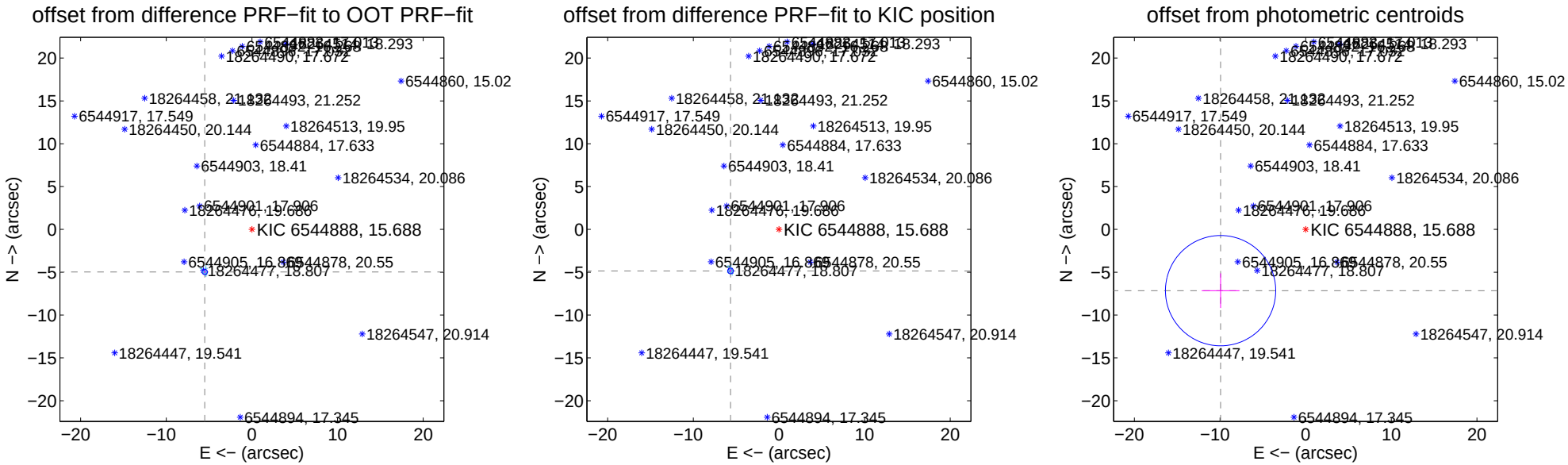
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

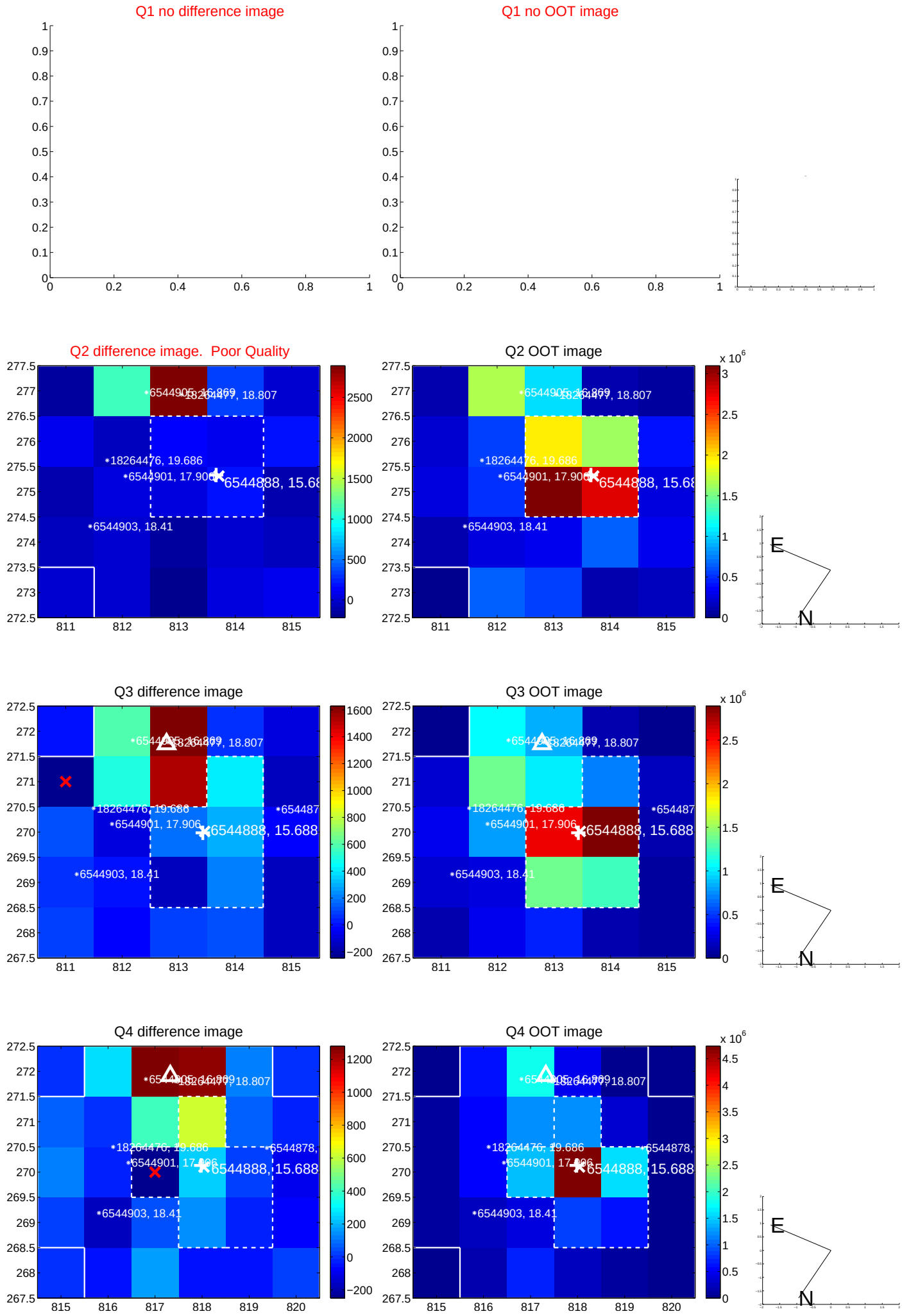
Supplemental centroid analysis for 006544888-01. Kepler magnitude: 15.69. Transit SNR 6.53
There are 11 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.418 ± 0.104	71.43	5.511 ± 0.096	-4.965 ± 0.113
PRF-fit source offset from KIC position	7.448 ± 0.111	66.99	5.653 ± 0.090	-4.850 ± 0.118
photometric centroid source offset	12.24 ± 2.15	5.70	9.94 ± 2.21	-7.15 ± 2.02

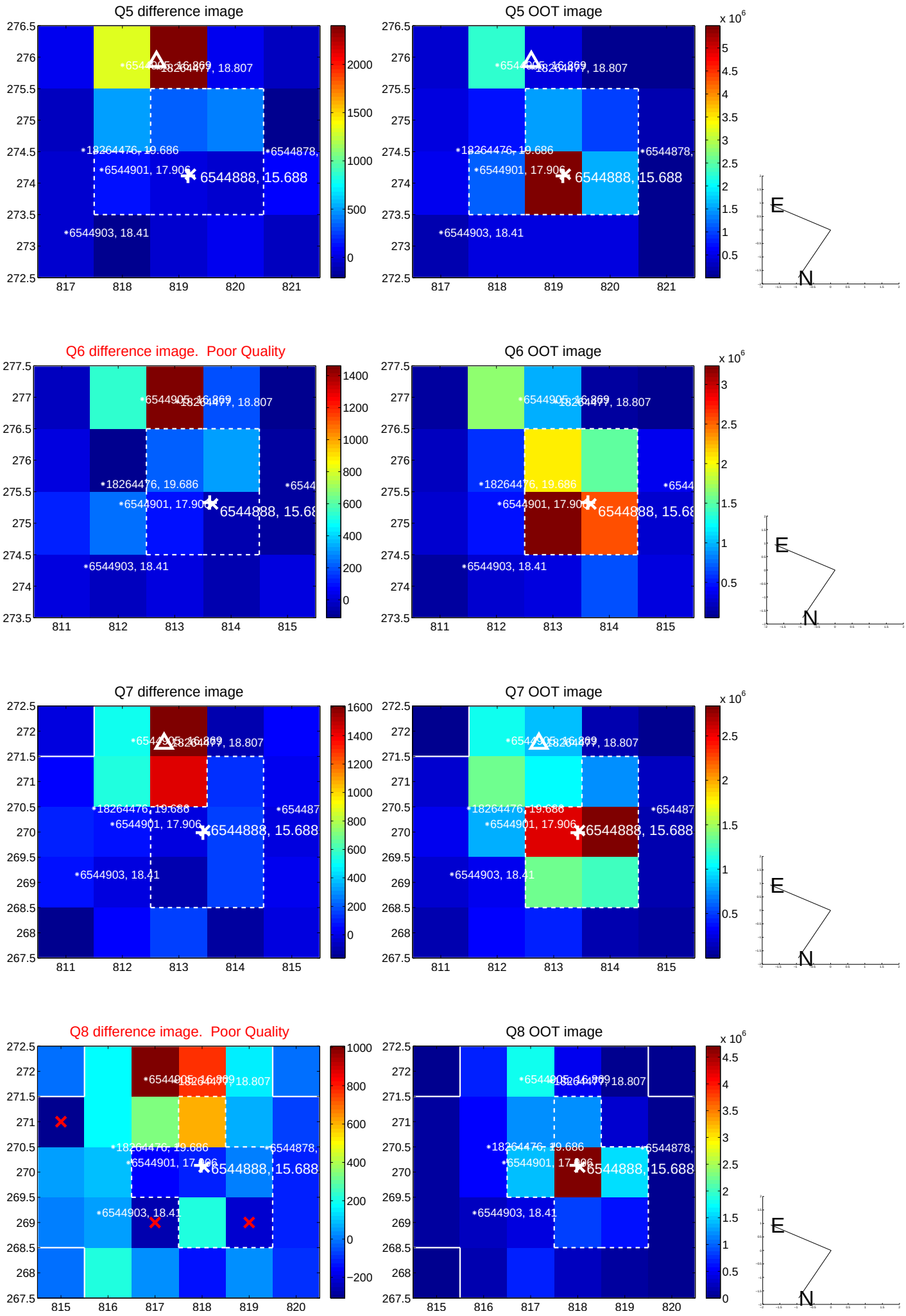


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs $> 15,000,000$ are from the UKIRT catalog.

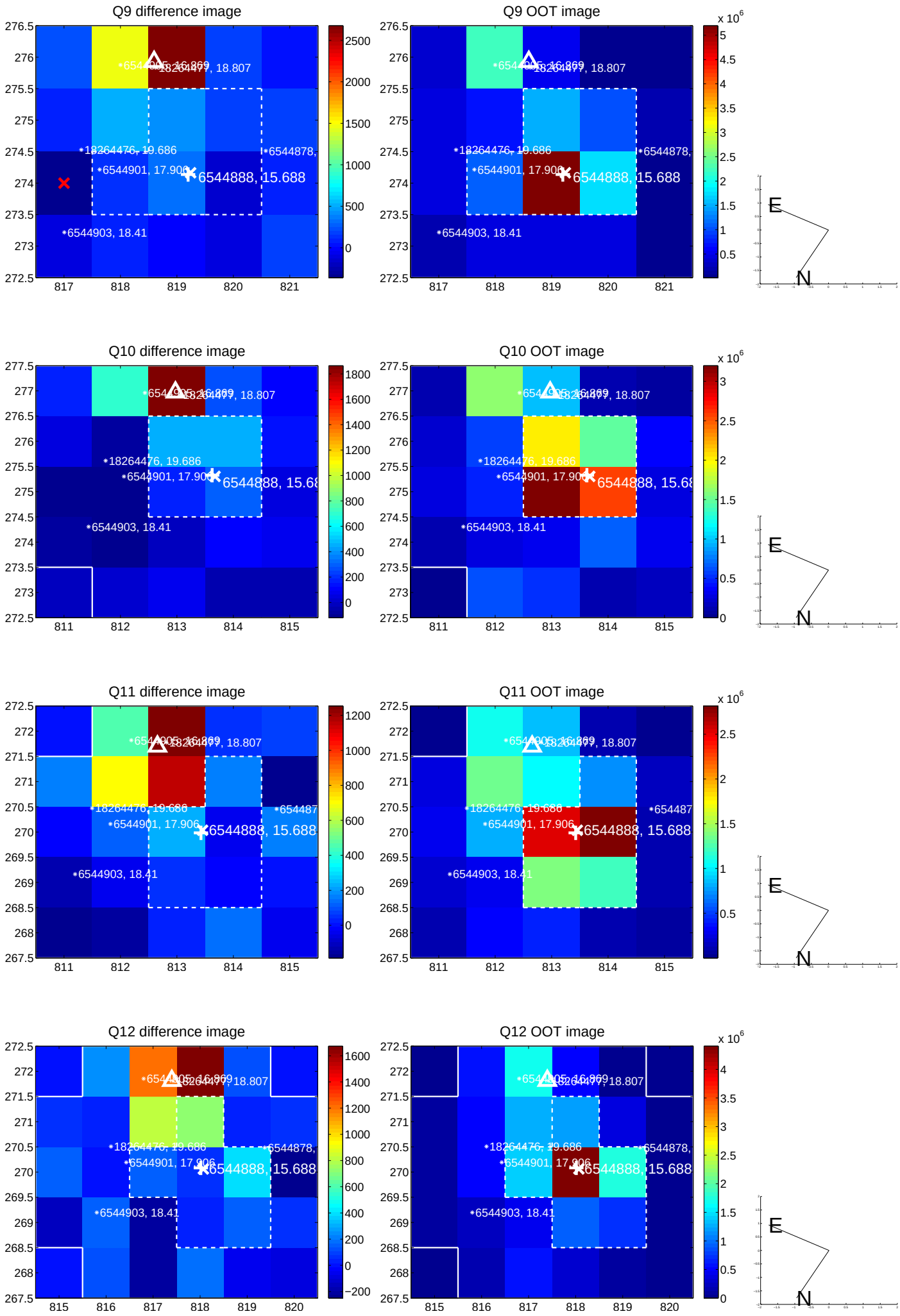
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



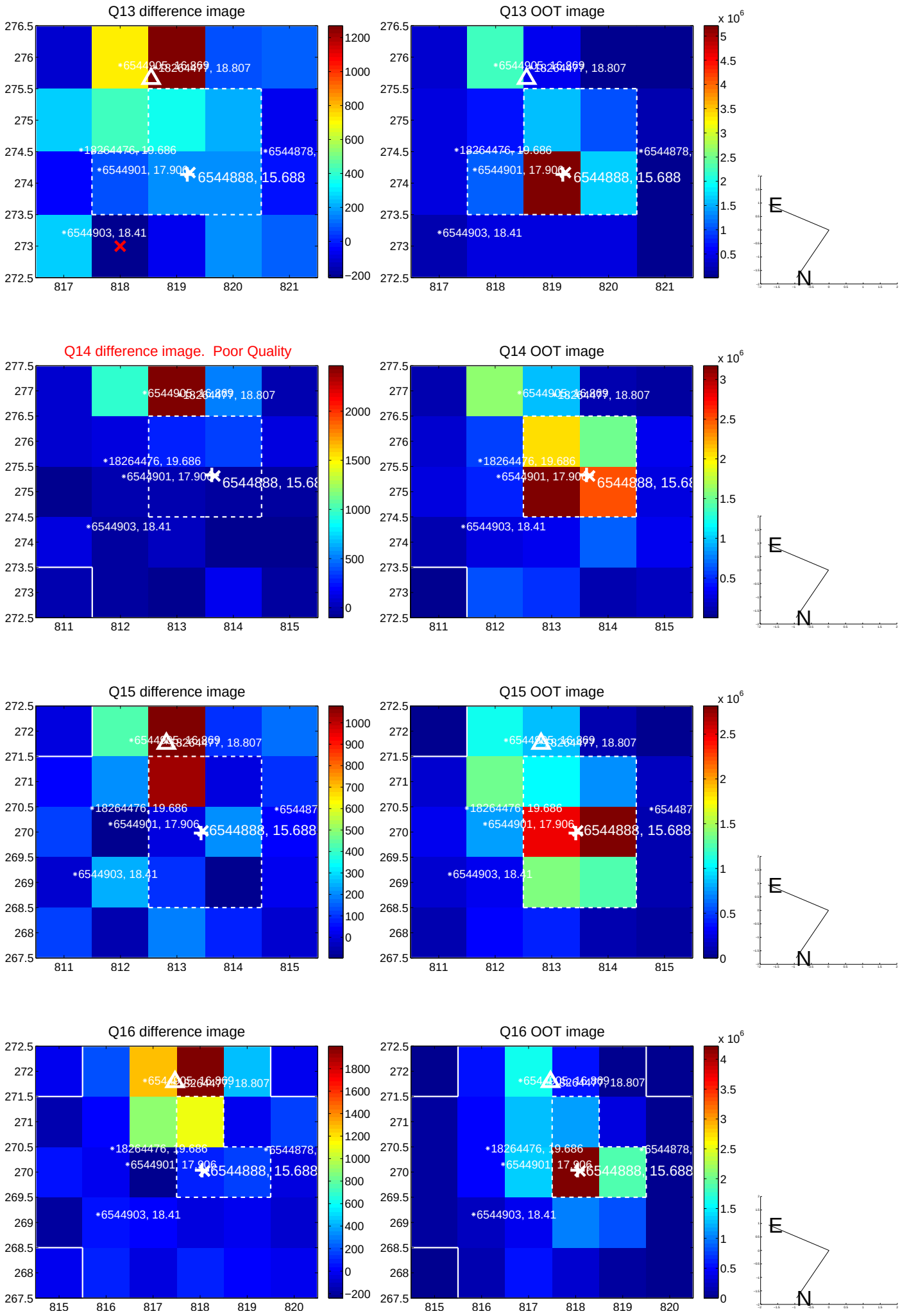
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



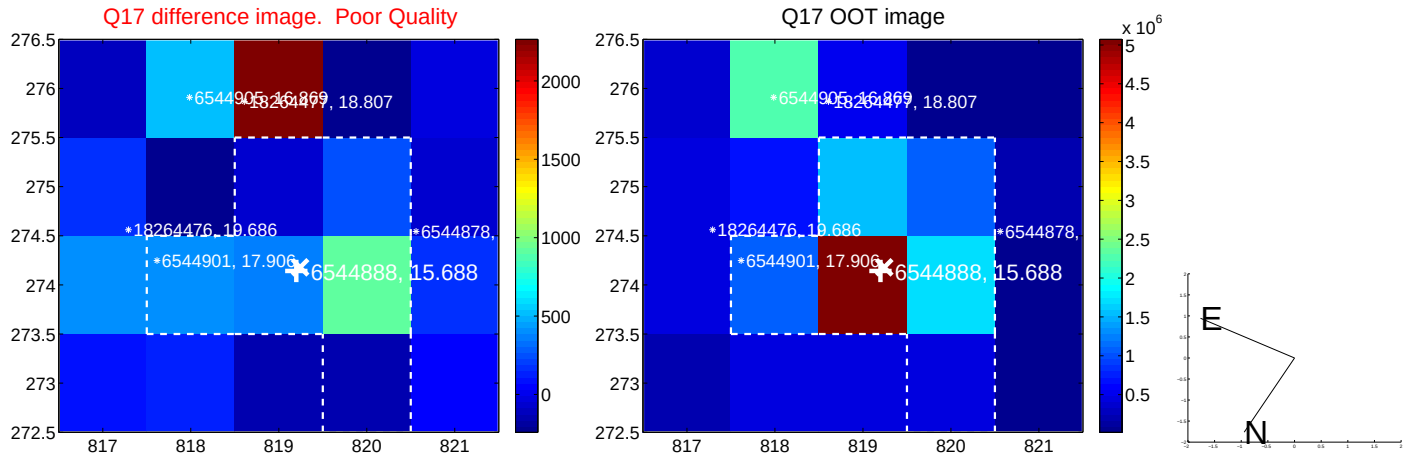
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

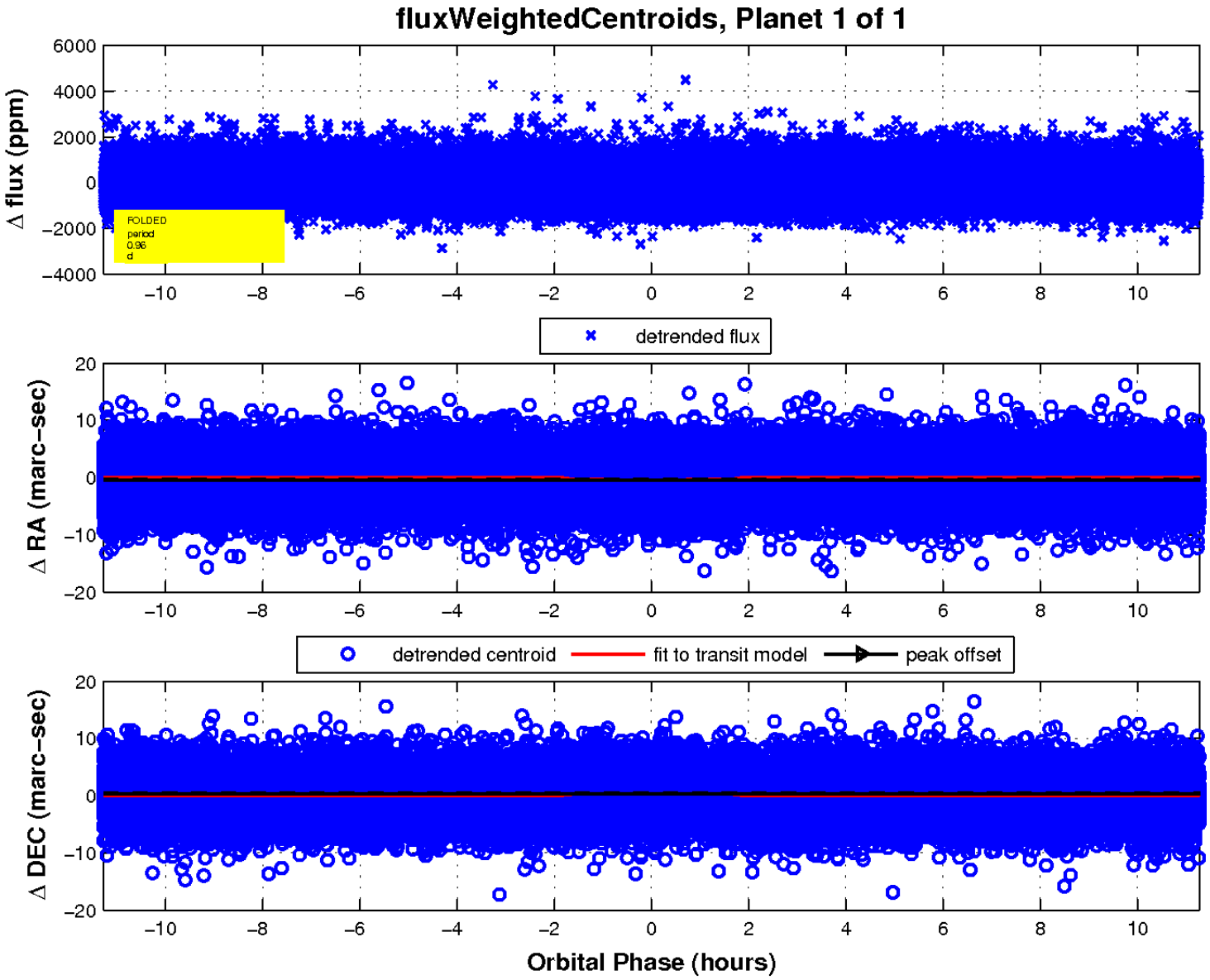


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

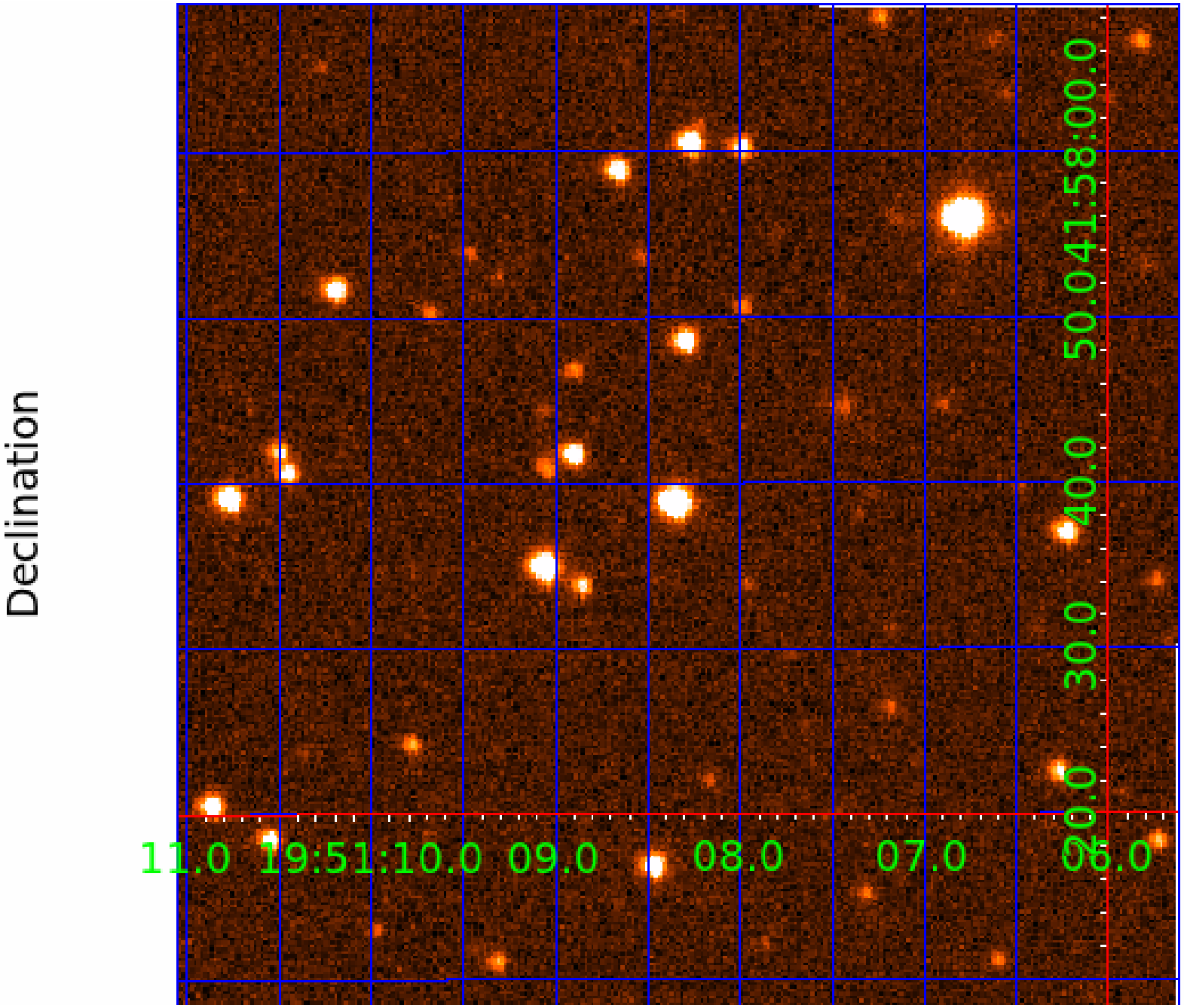


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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