

KIC 006546528

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})
006546528-01	OBS	1235.01	3.053558	133.884364	390.1	3.142	43.6	40.2	0.86	5764	2.31	446.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006546528-01	OBS	FP	0.00	0	1	1	1	MOD_ODDEVEN_DV—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 006546528-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006546528-01	6546528	006546508-01	6546508	1:1	10.3	1	-2	15.74	14.60	121.30	Direct-PRF	0	0.78	0.57

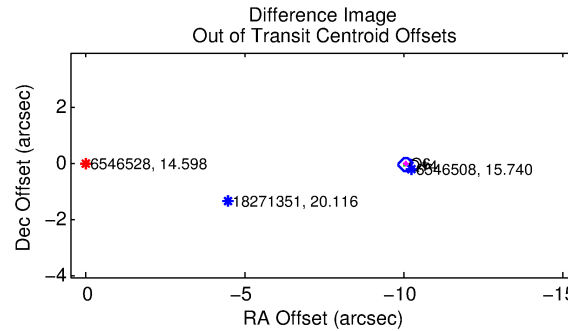
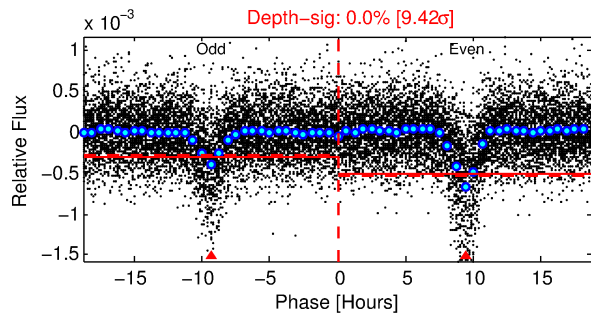
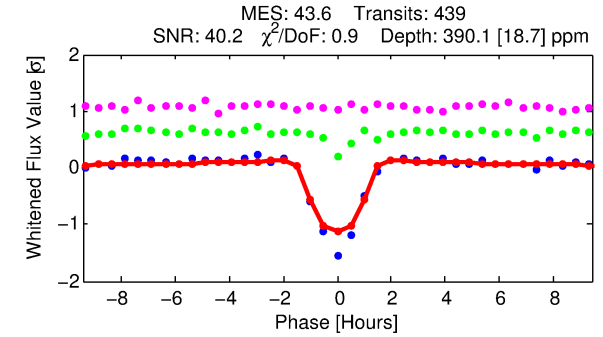
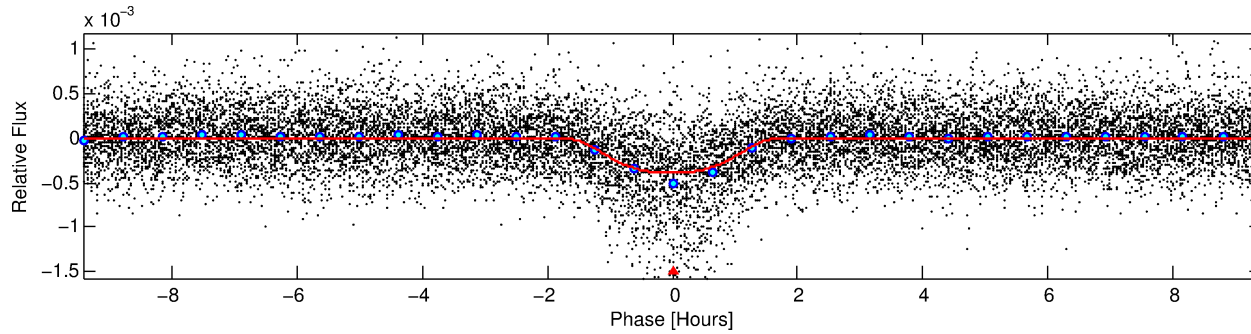
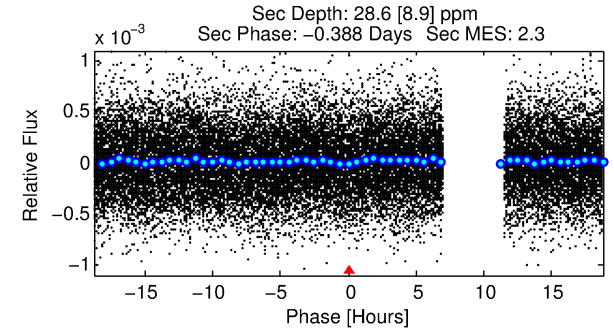
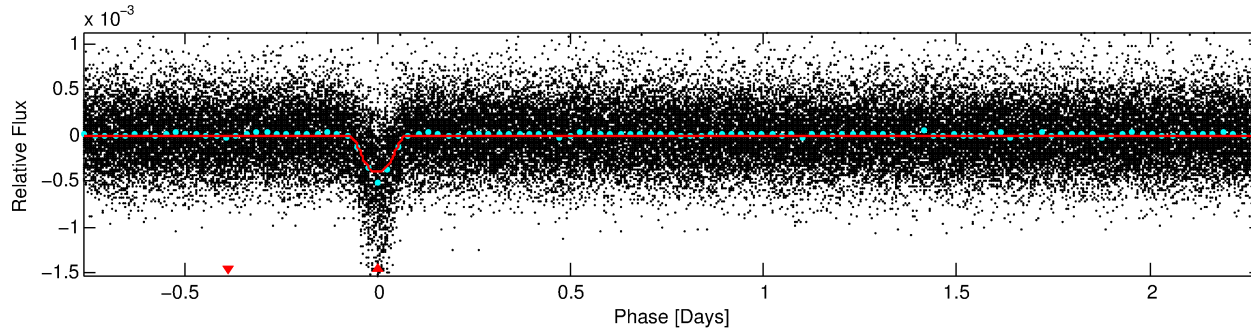
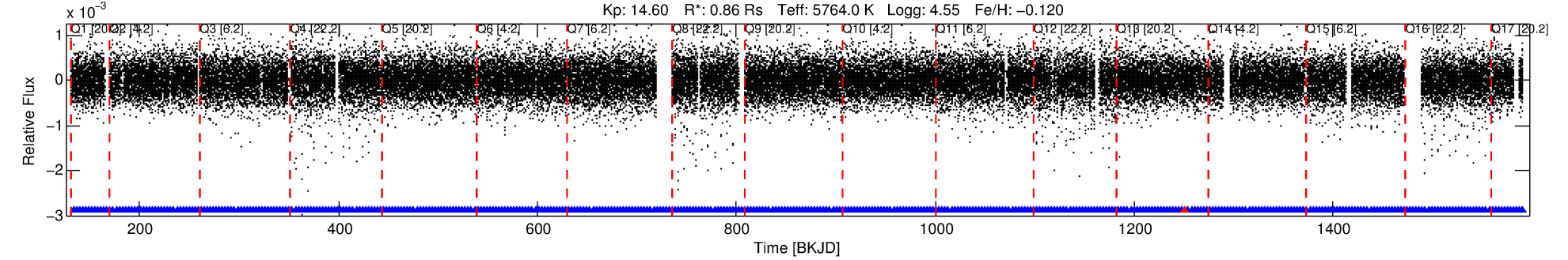
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6546528 Candidate: 1 of 1 Period: 3.054 d

KOI: K01235.01 Corr: 0.962

Kp: 14.60 R*: 0.86 Rs Teff: 5764.0 K Logg: 4.55 Fe/H: -0.120



DV Fit Results:

Period = 3.05356 [0.00001] d
Epoch = 133.8844 [0.0013] BKJD
Rp/R* = 0.0246 [0.0009]
a/R* = 2.54 [0.12]
b = 0.98 [0.00]
Seff = 446.06 [138.38]
Teq = 1172 [91] K
Rp = 2.31 [0.55] Re
a = 0.0406 [0.0081] AU
Ag = 4.85 [2.10] [1.83σ]
Teff = 2689 [227] K [6.20σ]

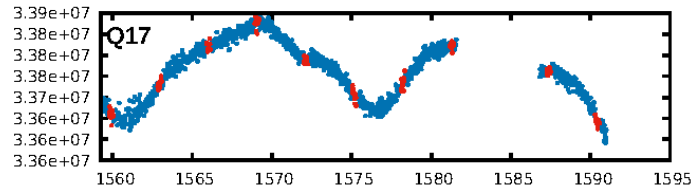
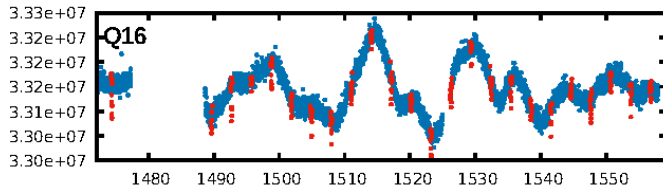
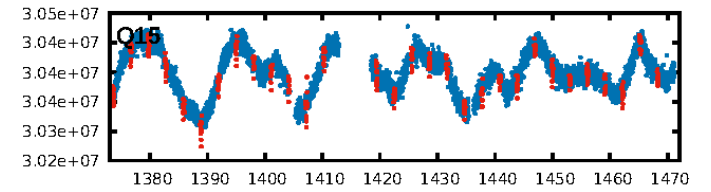
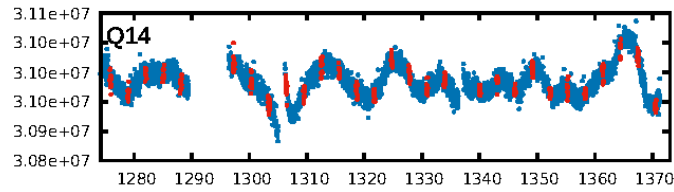
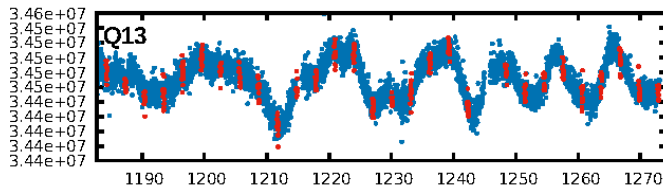
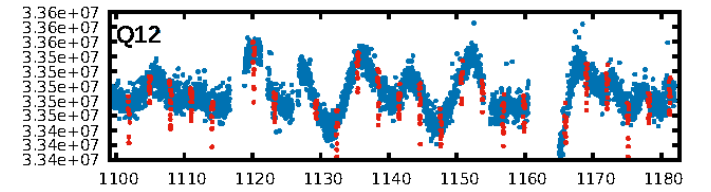
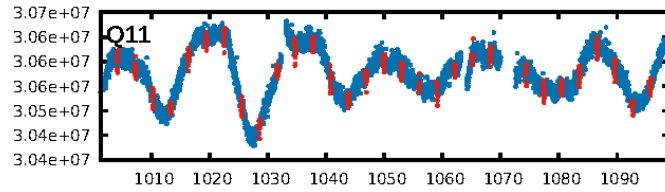
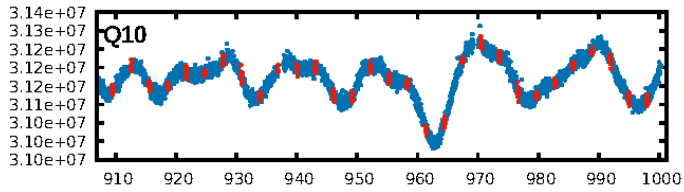
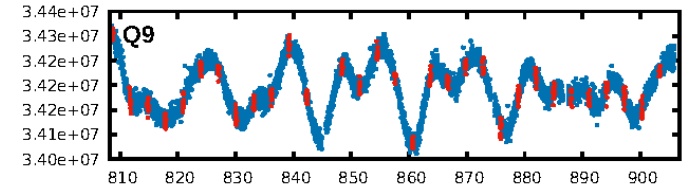
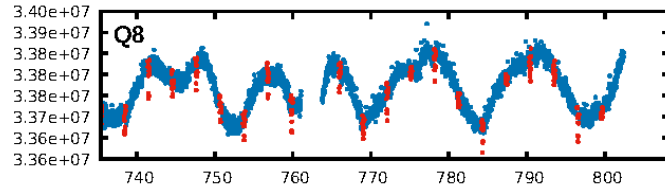
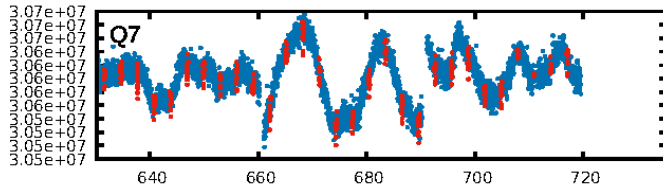
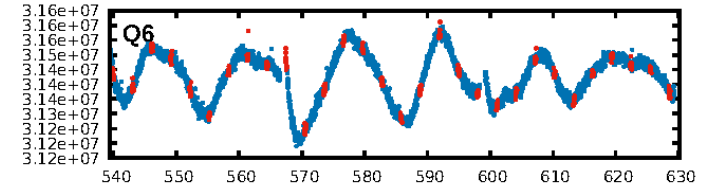
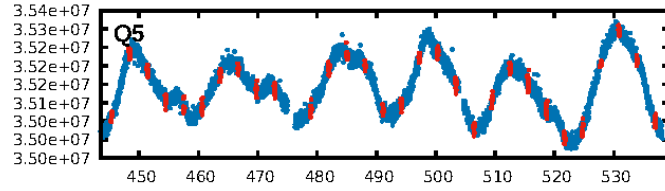
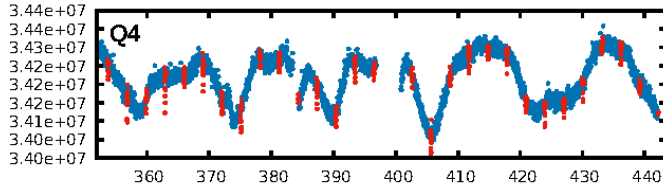
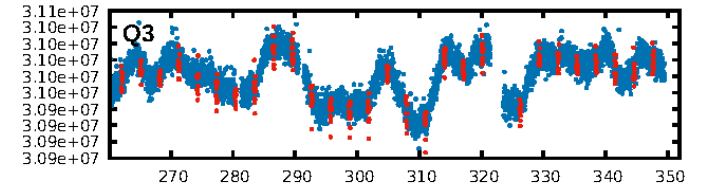
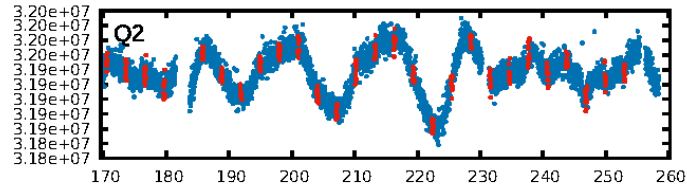
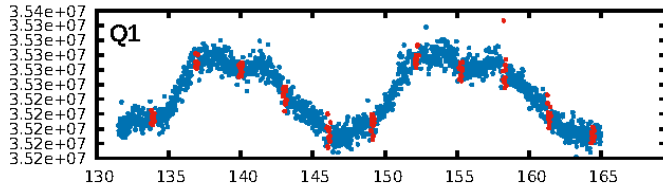
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [417/418]
GhostDiagnostic-chr: -0.4358
Centroid-sig: 0.0%
Centroid-so: 71.743 arcsec [228.78σ]
OotOffset-rm: 10.049 arcsec [137.73σ]
KicOffset-rm: 10.244 arcsec [153.04σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [17/17]

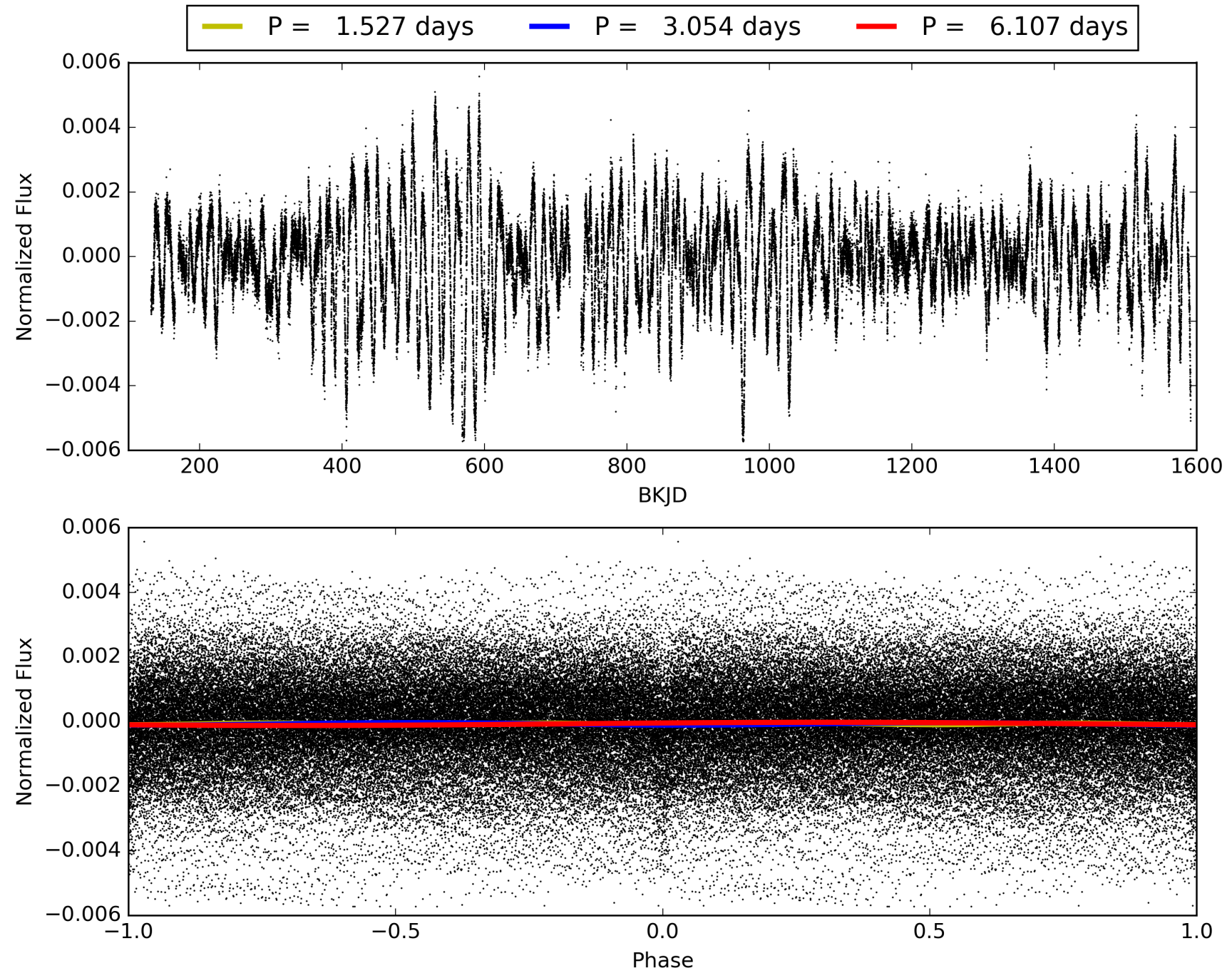
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:35:41 Z

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

TCE 006546528-01, PDC Light Curves

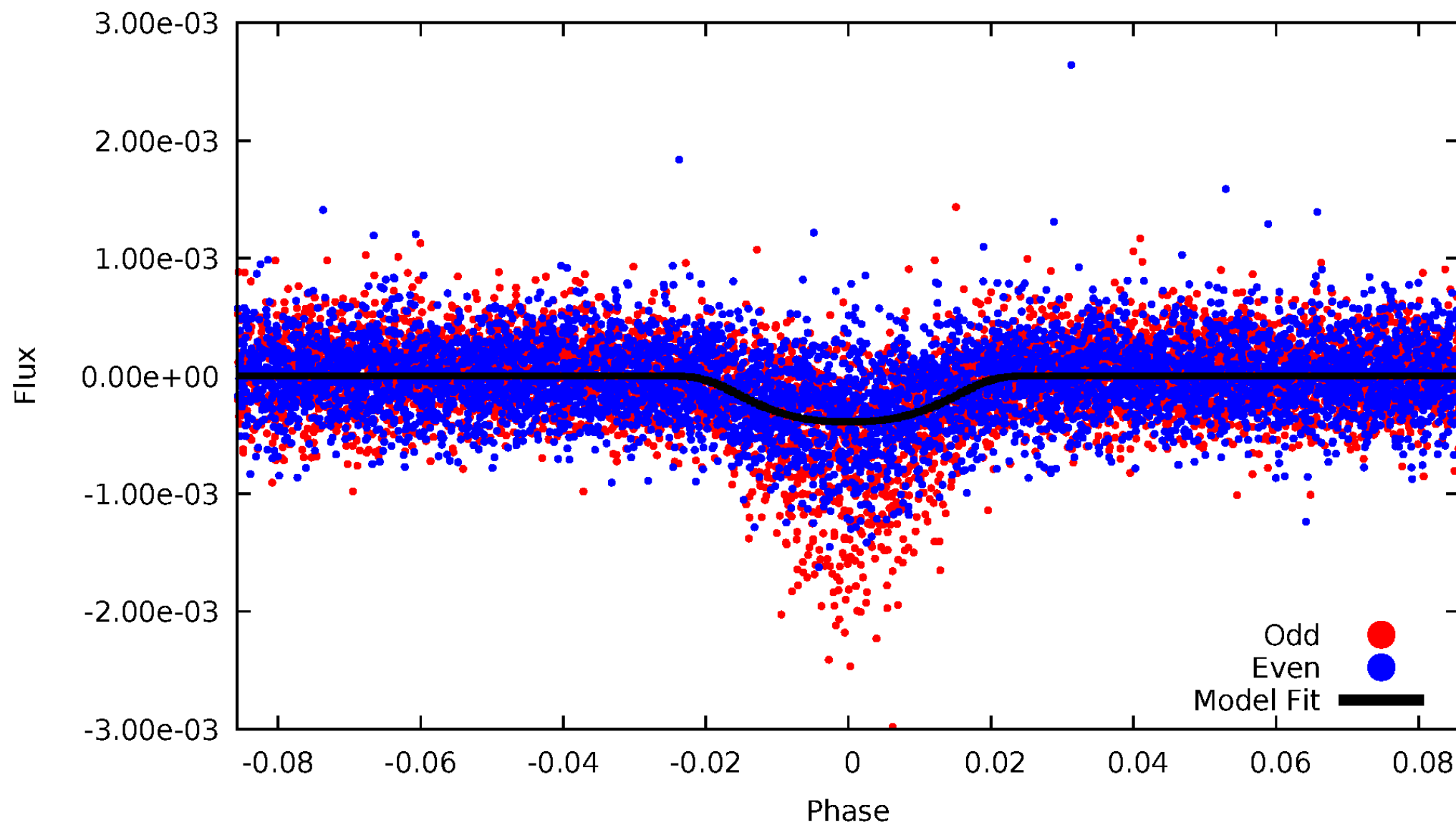


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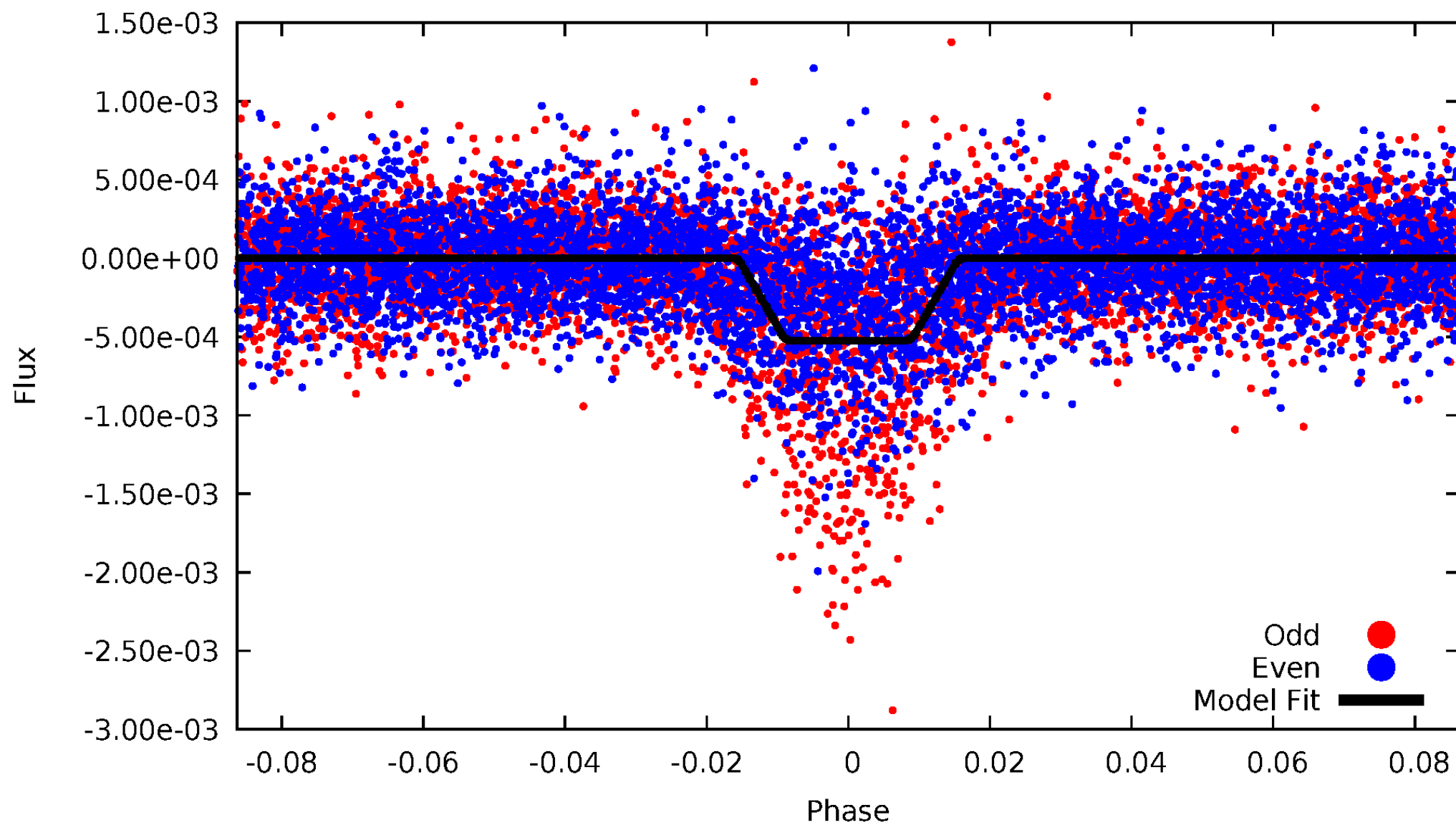
DV Odd/Even

TCE 006546528-01

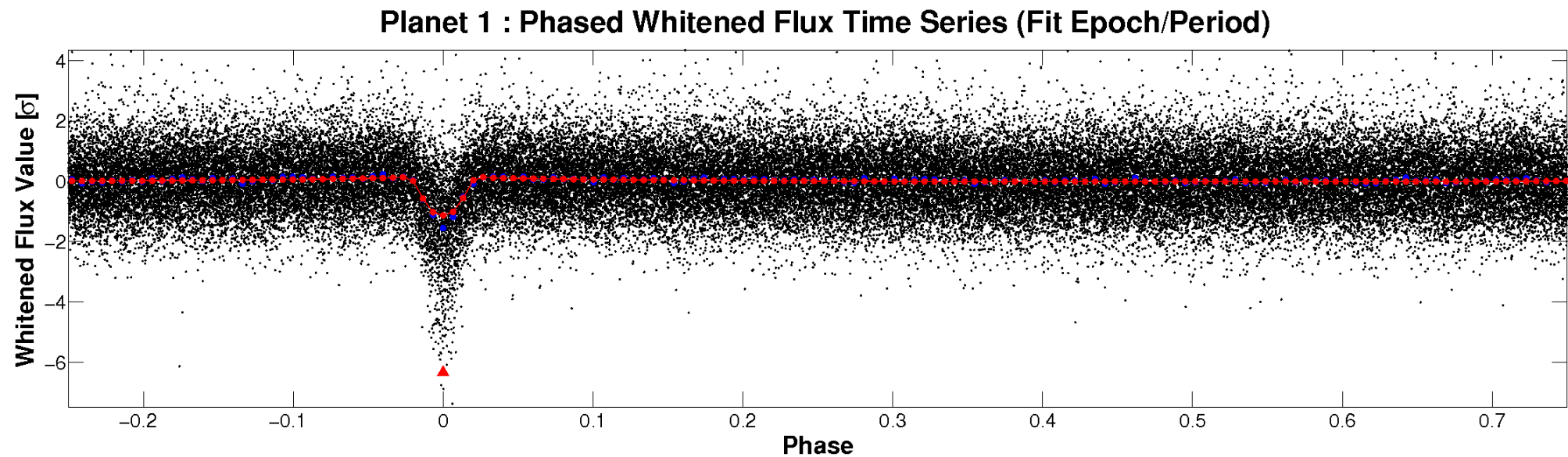
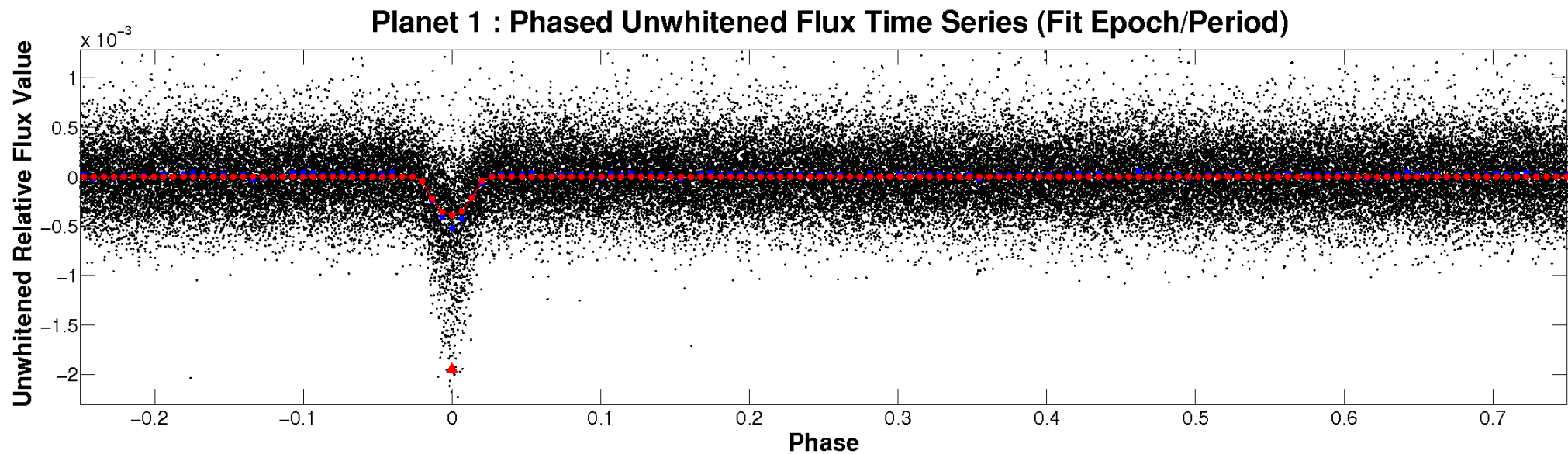


ALT Odd/Even

TCE 006546528-01

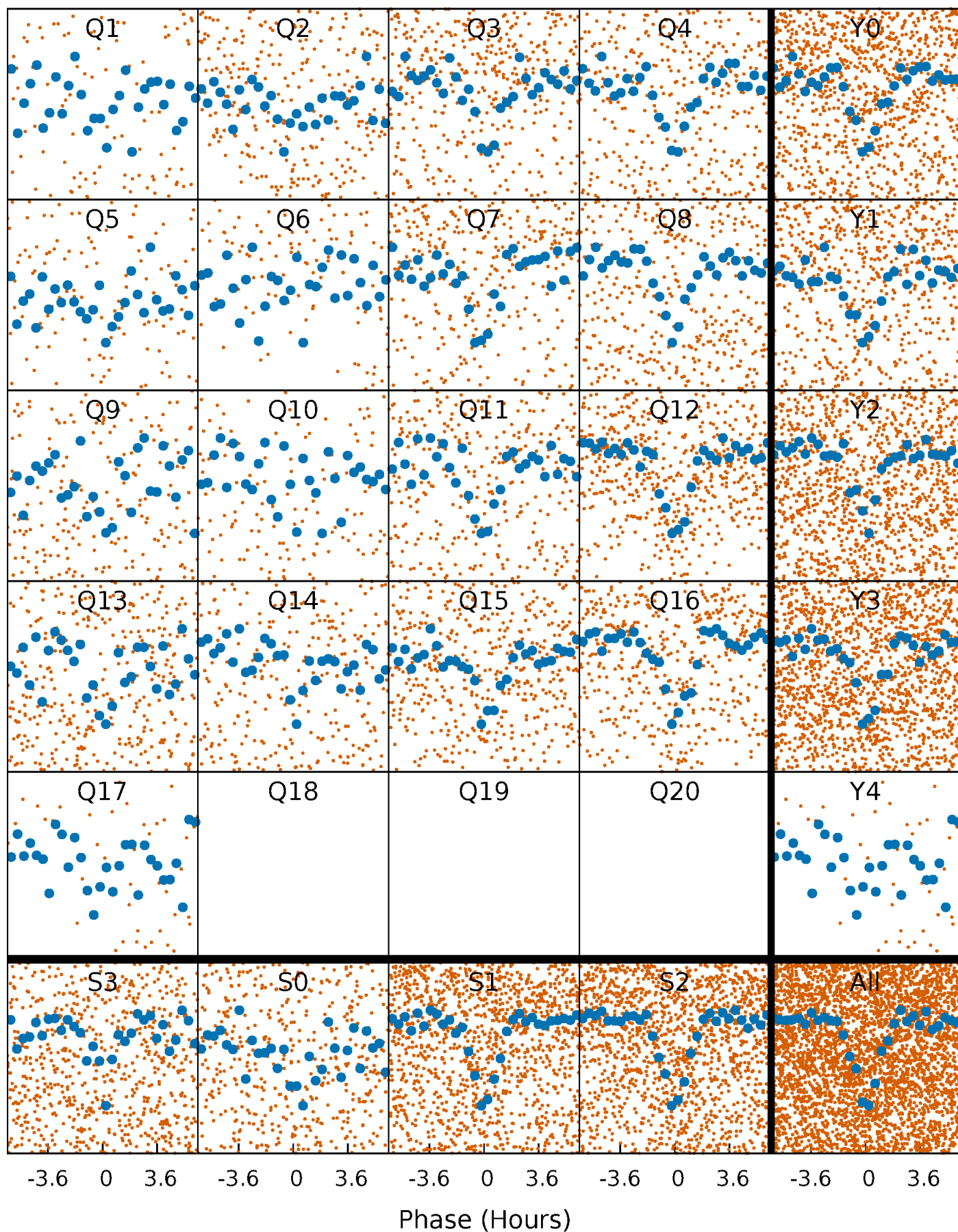


Non-Whitened Vs. Whitened Light Curve



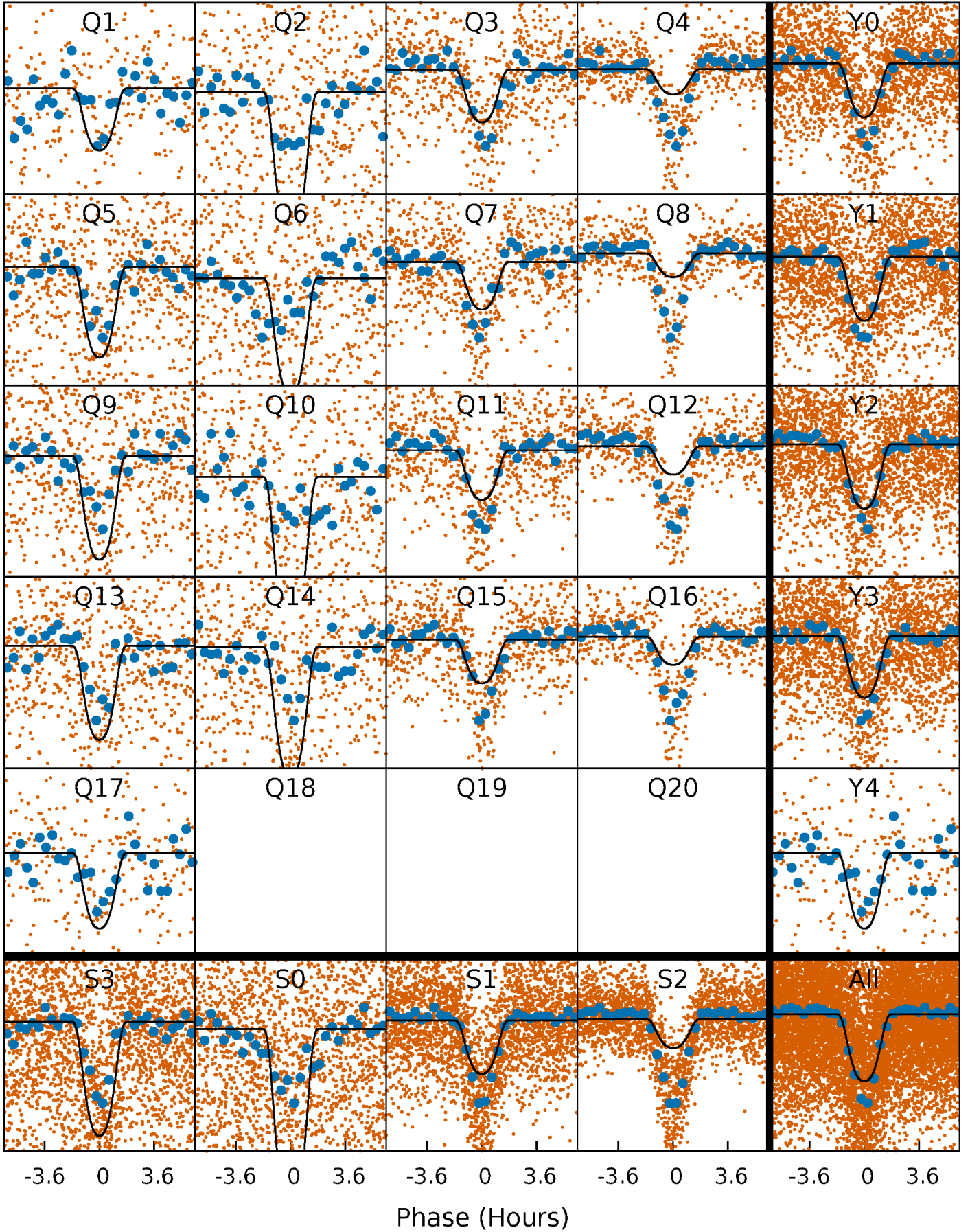
PDC Quarter-Phased Transit Curves

TCE 006546528-01 P= 3.053558 Days $T_0=133.884364$ (BKJD)



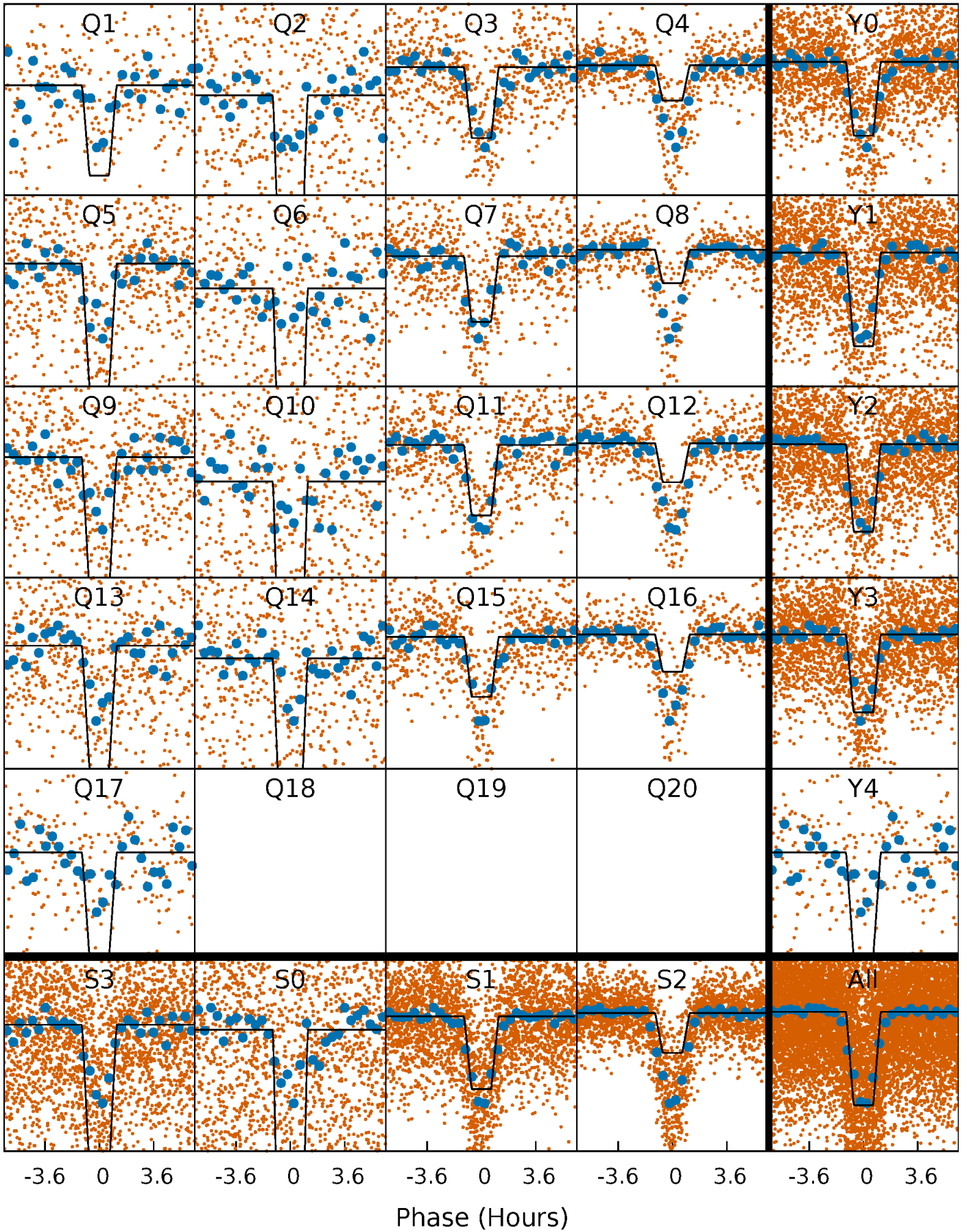
DV Quarter-Phased Transit Curves

TCE 006546528-01 P= 3.053558 Days $T_0=133.884364$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

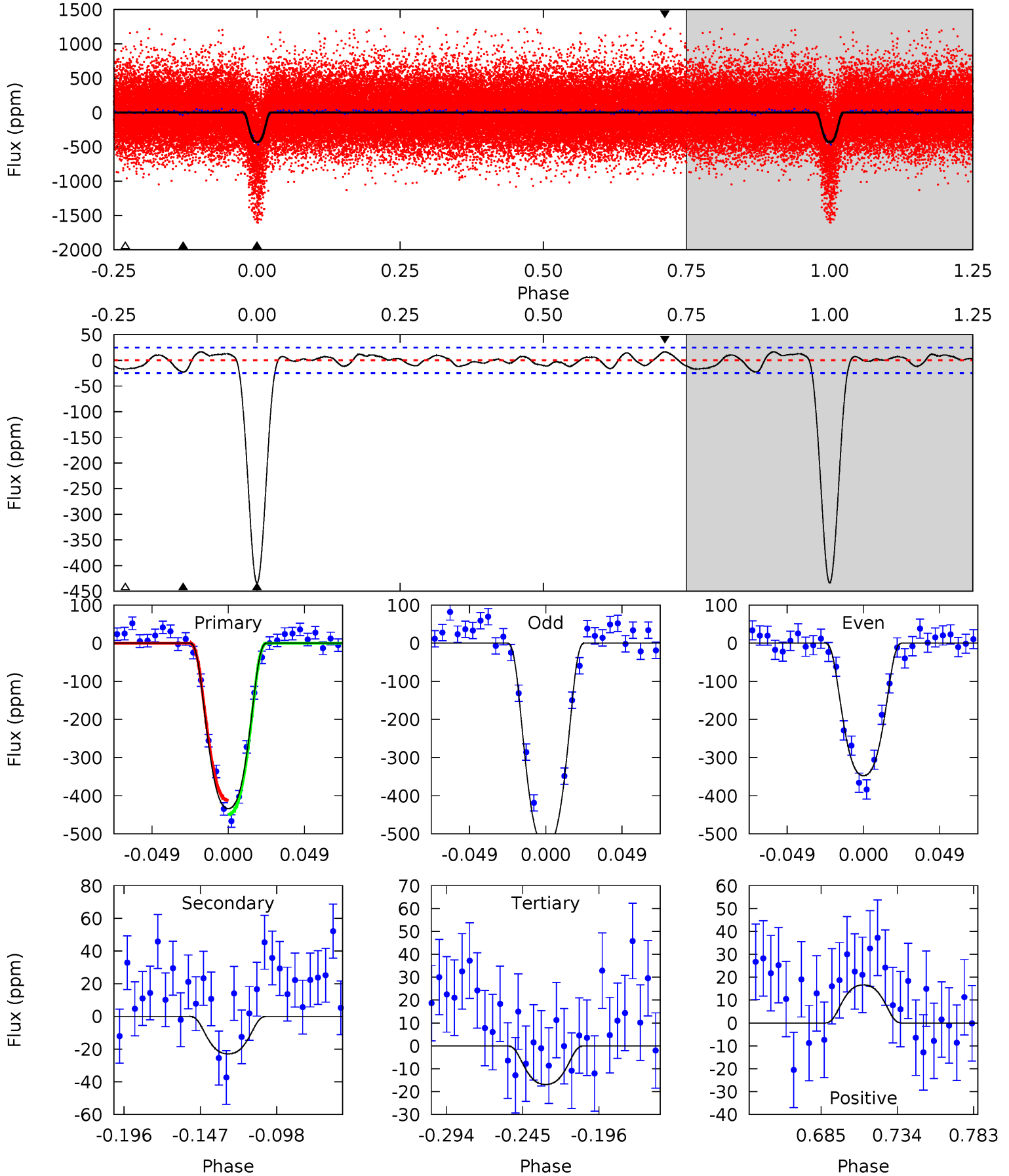
TCE 006546528-01 P= 3.053563 Days $T_0=133.883858$ (BKJD)



DV Model-Shift Uniqueness Test

006546528-01, P = 3.053558 Days, E = 130.830806 Days

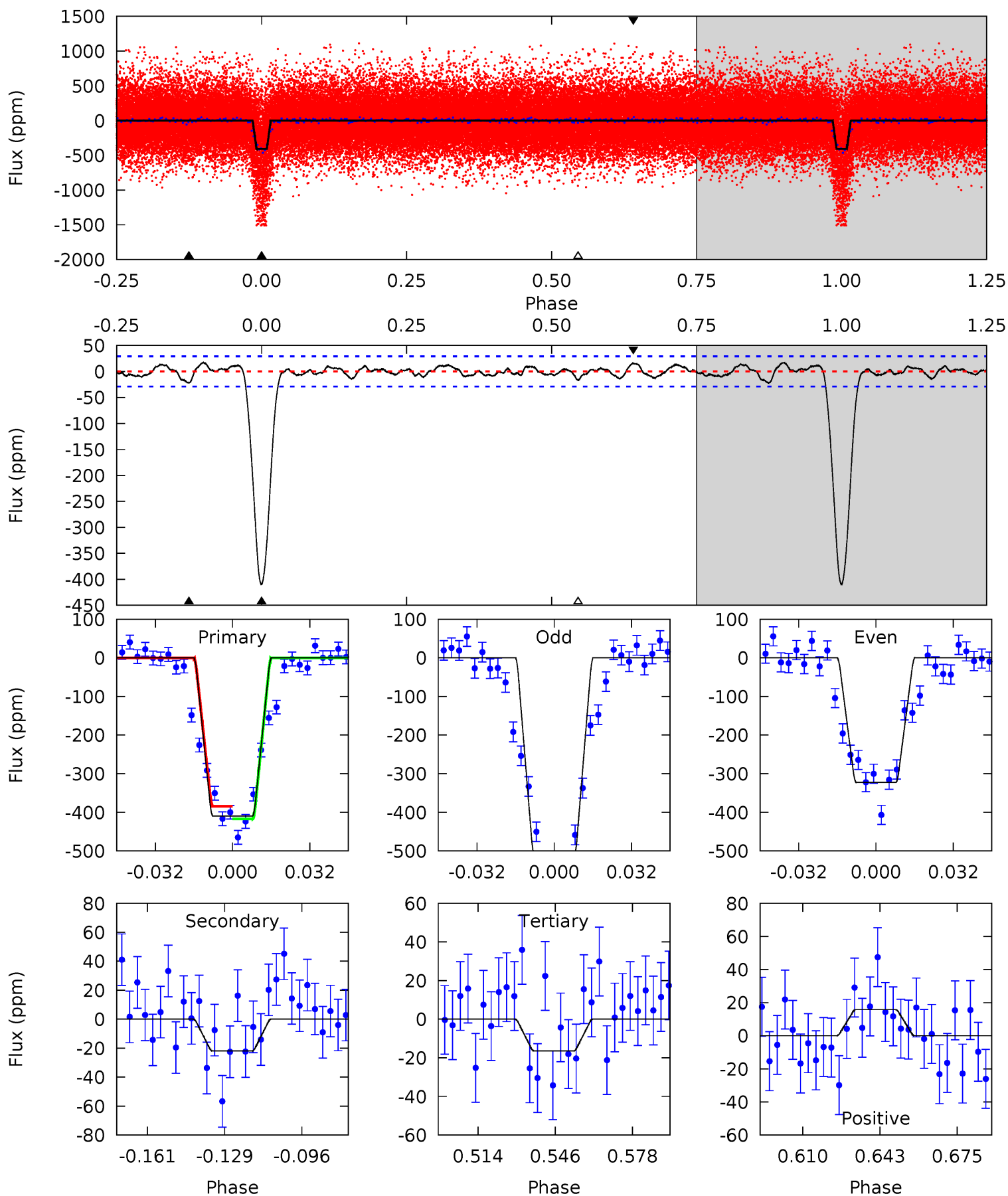
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.8	4.37	3.22	3.17	4.71	1.97	1.54	79.5	79.6	1.15	1.20	17.8	1.33	0.04	3.51



Alt Model-Shift Uniqueness Test

006546528-01, P = 3.053563 Days, E = 130.830295 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.9	3.64	2.73	2.62	4.80	2.14	1.14	65.2	65.3	0.91	1.02	15.7	1.31	0.04	2.68



Stellar Parameters For KIC 006546528

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5764^{+155}_{-155}	$4.548^{+0.040}_{-0.160}$	$-0.120^{+0.300}_{-0.300}$	$0.863^{+0.202}_{-0.072}$	$0.959^{+0.092}_{-0.112}$	$2.100^{+0.446}_{-0.927}$
	+3%/-3%	+1%/-4%	+250%/-250%	+23%/-8%	+10%/-12%	+21%/-44%
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 006546528-01 / KOI 1235.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 5	$2.37^{+0.29}_{-0.17}$	1665^{+94}_{-67}	3110^{+125}_{-148}	$3.588^{+1.010}_{-1.066}$
Alt.	-22 ± 6	$2.21^{+0.29}_{-0.18}$	1669^{+101}_{-71}	3168^{+144}_{-157}	$3.940^{+1.384}_{-1.241}$

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 $A_{obs} \gg 1.0$

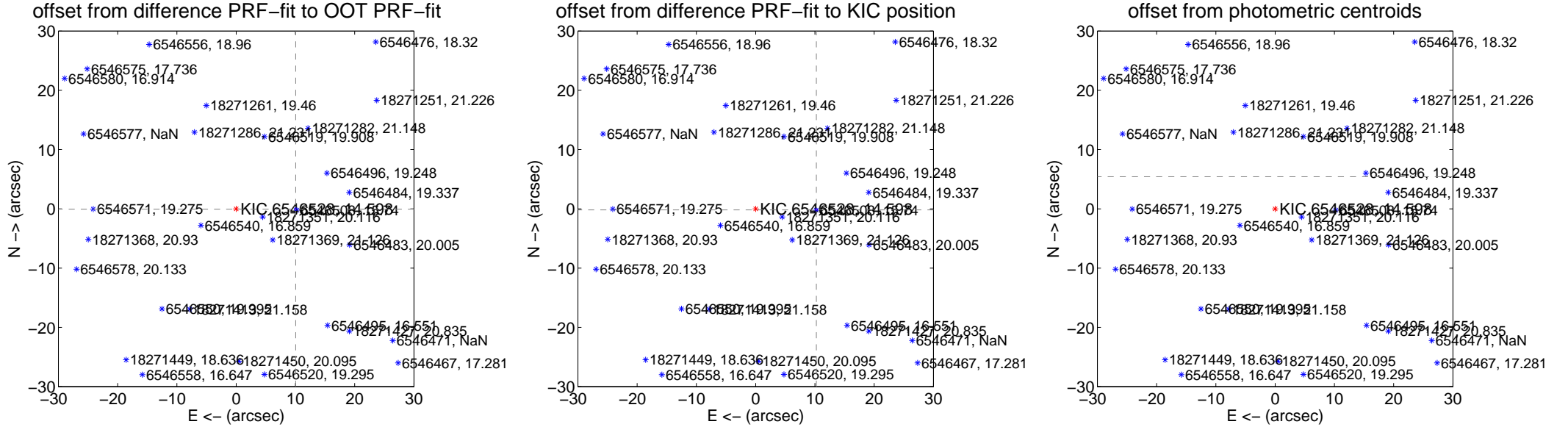
DV Centroid Data

Supplemental centroid analysis for 006546528-01. Kepler magnitude: 14.60. Transit SNR 40.25

There are 2 quarters with good PRF difference image offsets

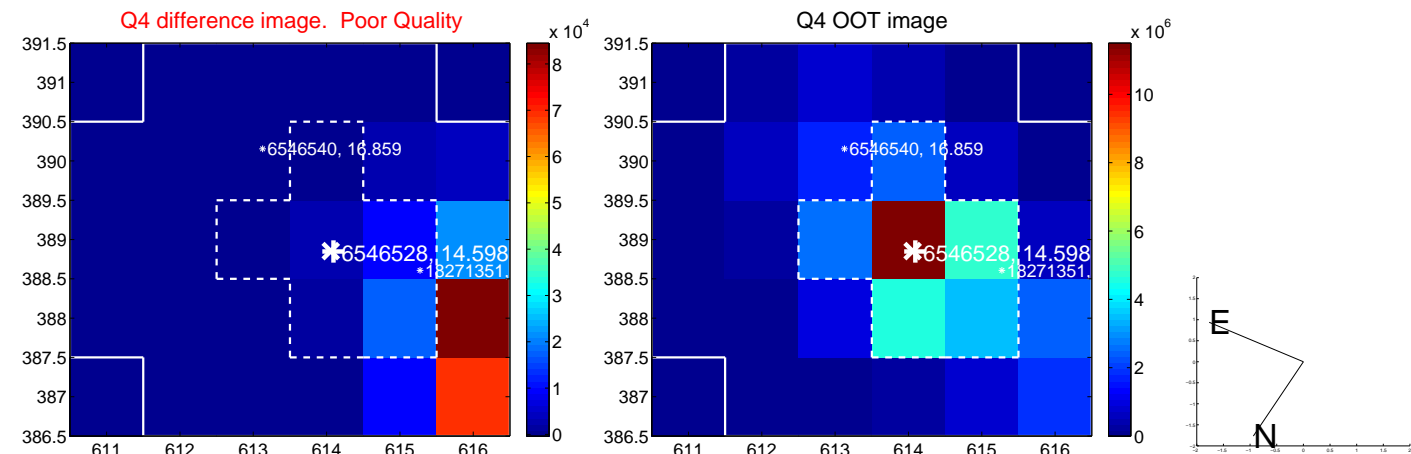
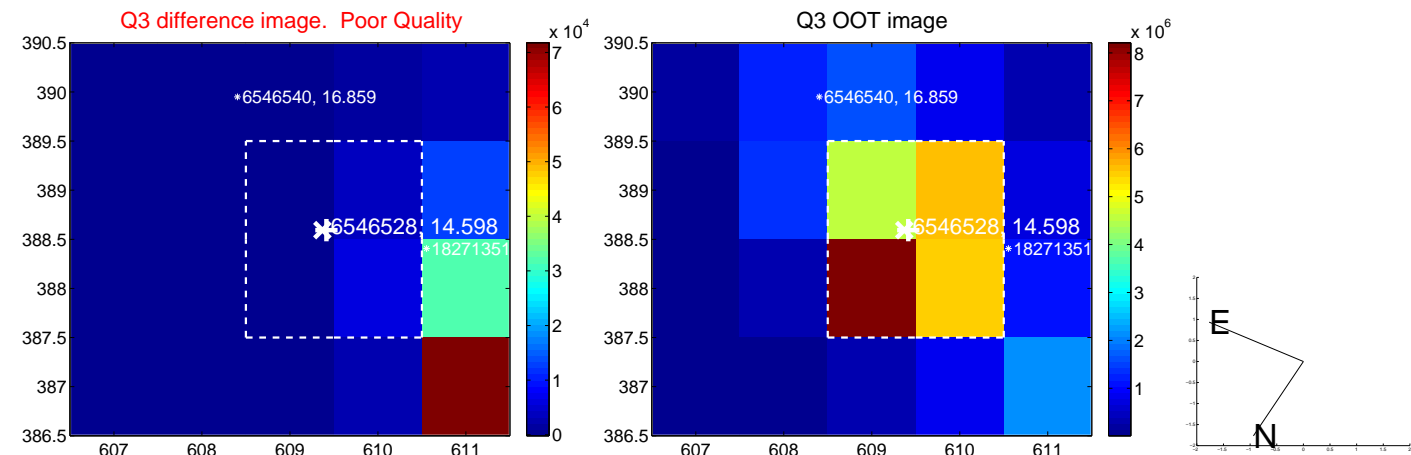
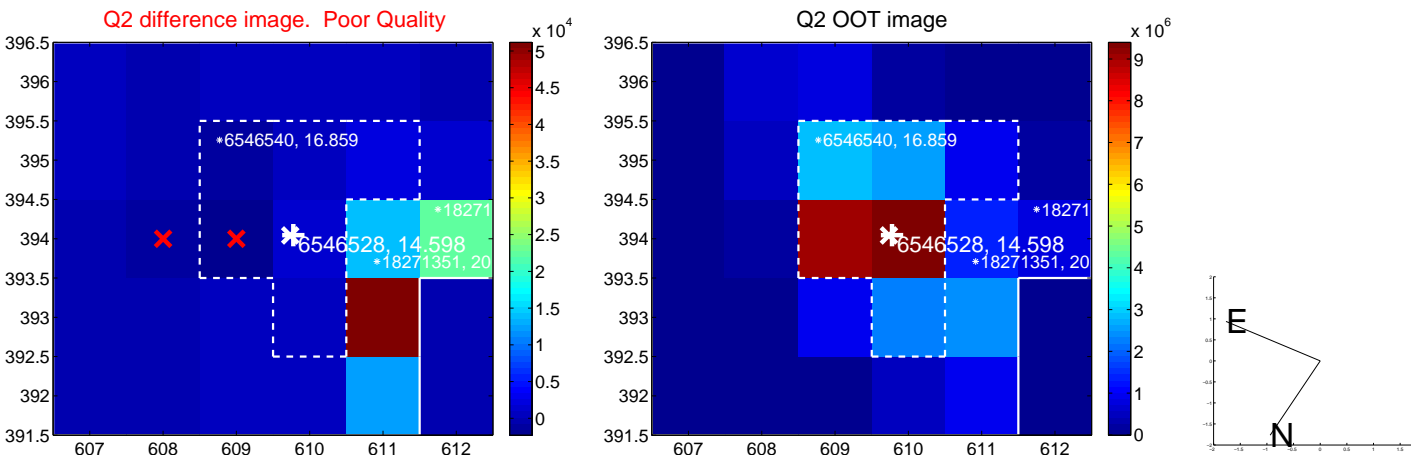
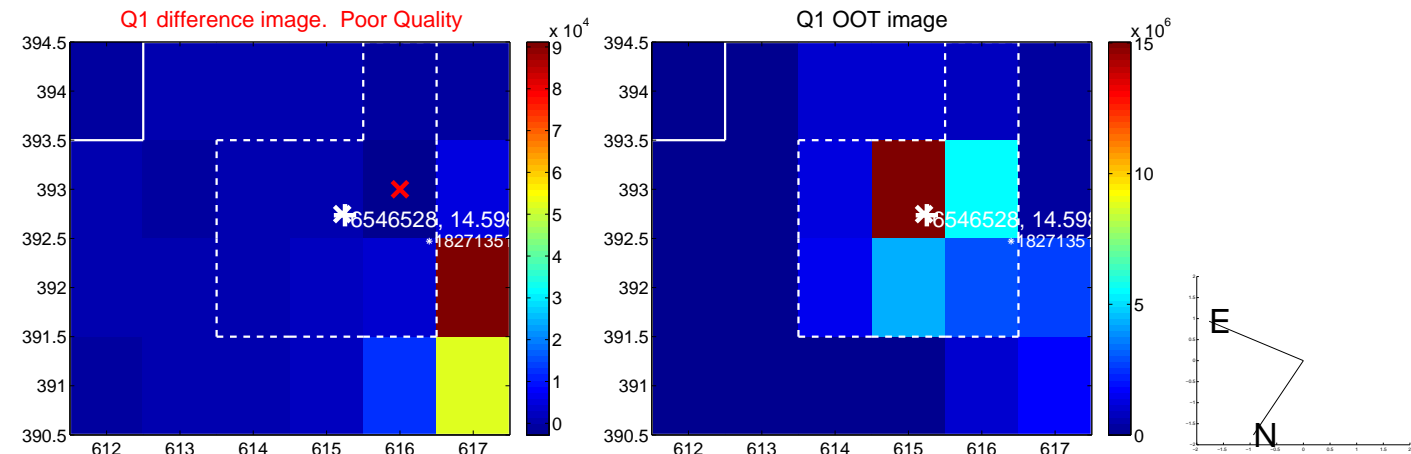
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.049 ± 0.073	137.73	-10.049 ± 0.073	-0.049 ± 0.067
PRF-fit source offset from KIC position	10.244 ± 0.067	153.04	-10.242 ± 0.067	-0.180 ± 0.068
photometric centroid source offset	71.74 ± 0.31	228.78	-71.54 ± 0.31	5.42 ± 0.26

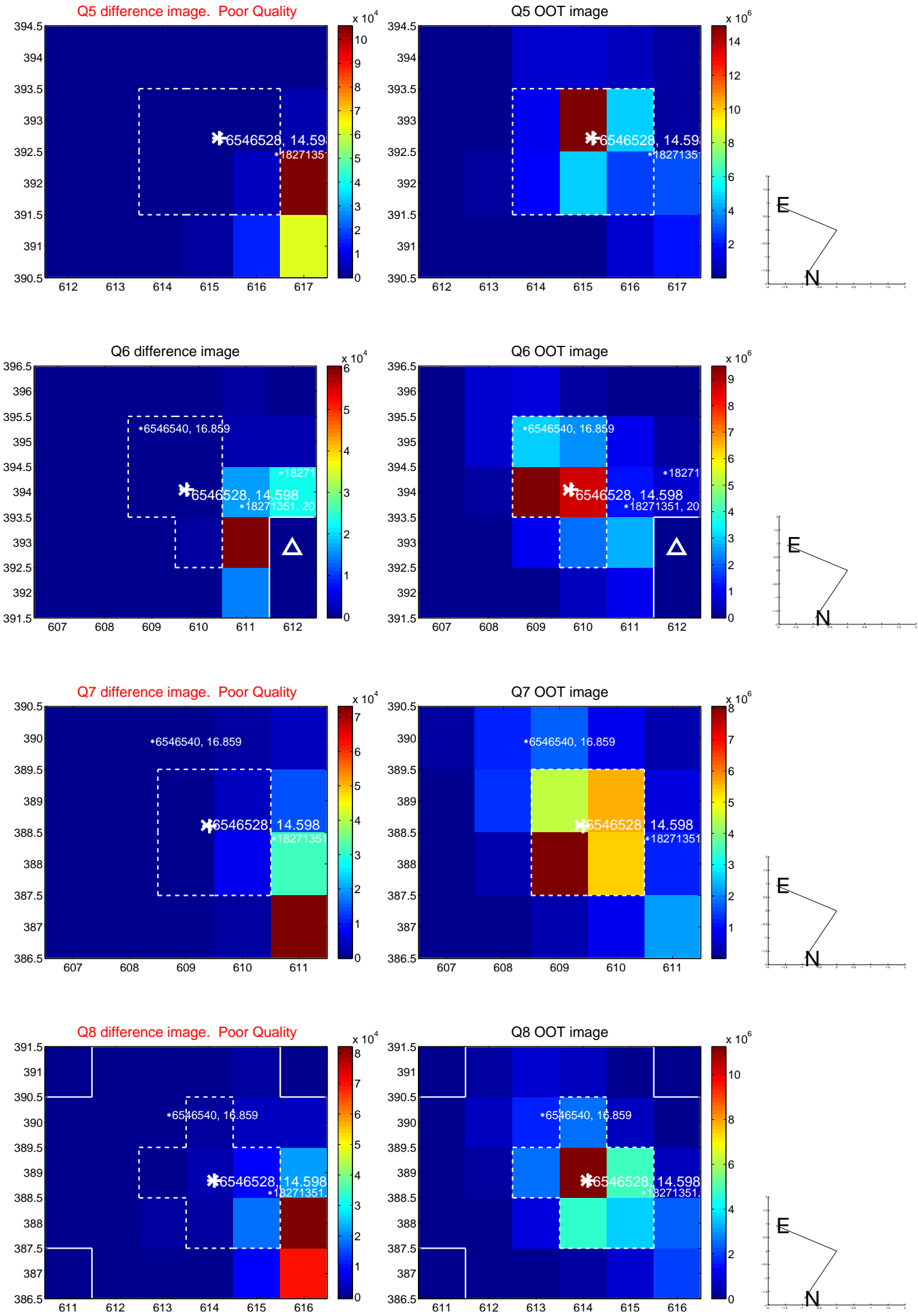


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

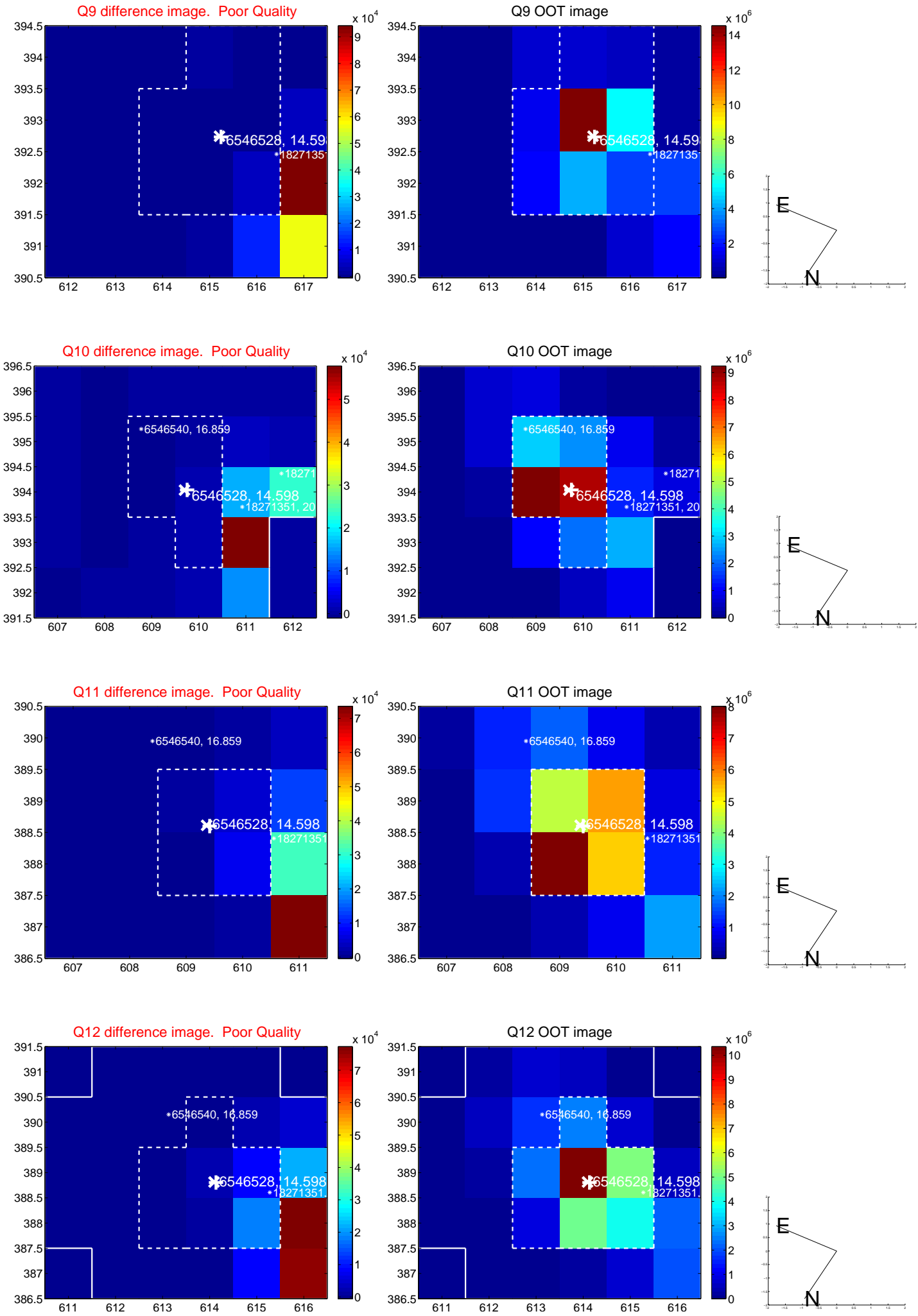
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



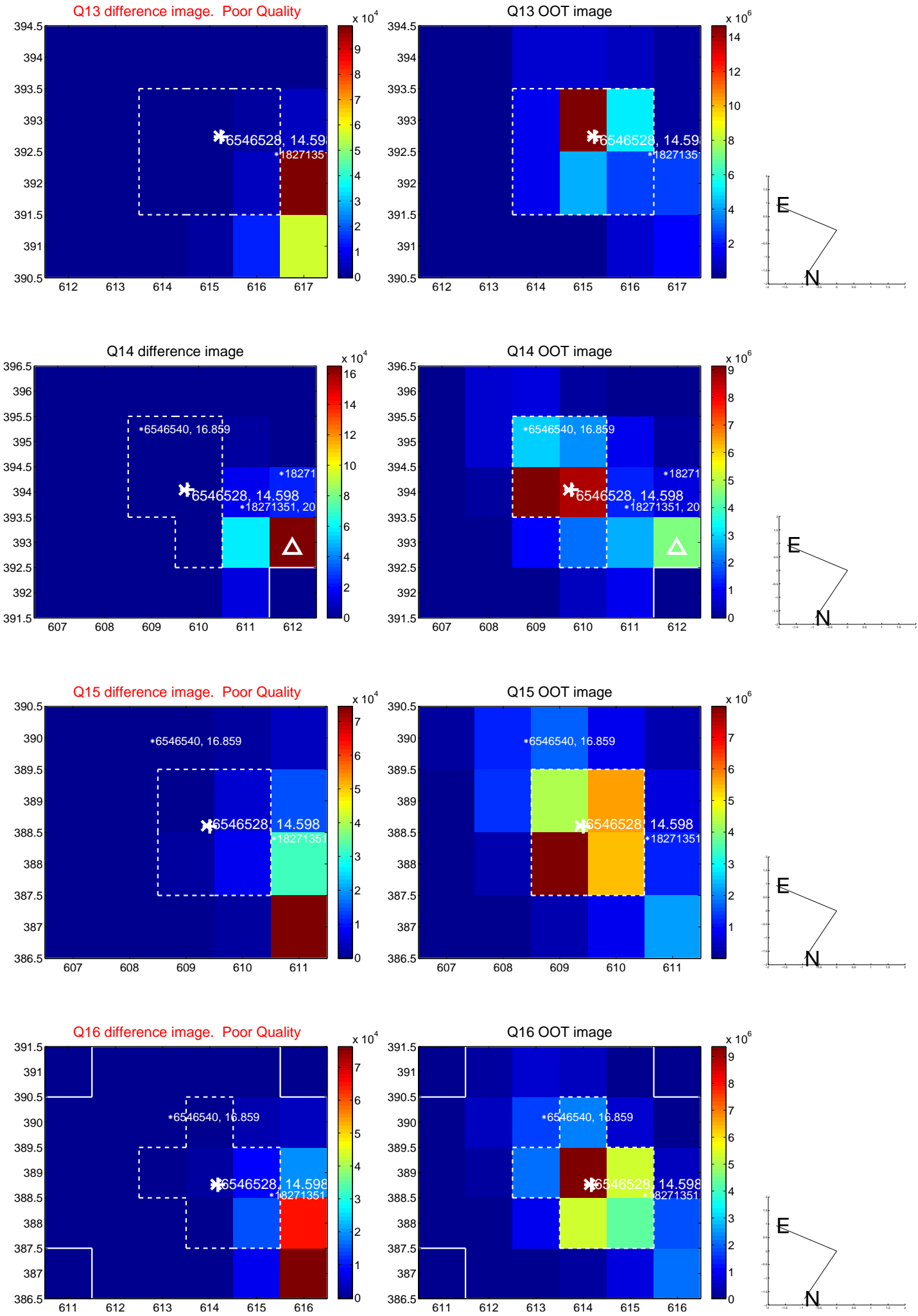
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



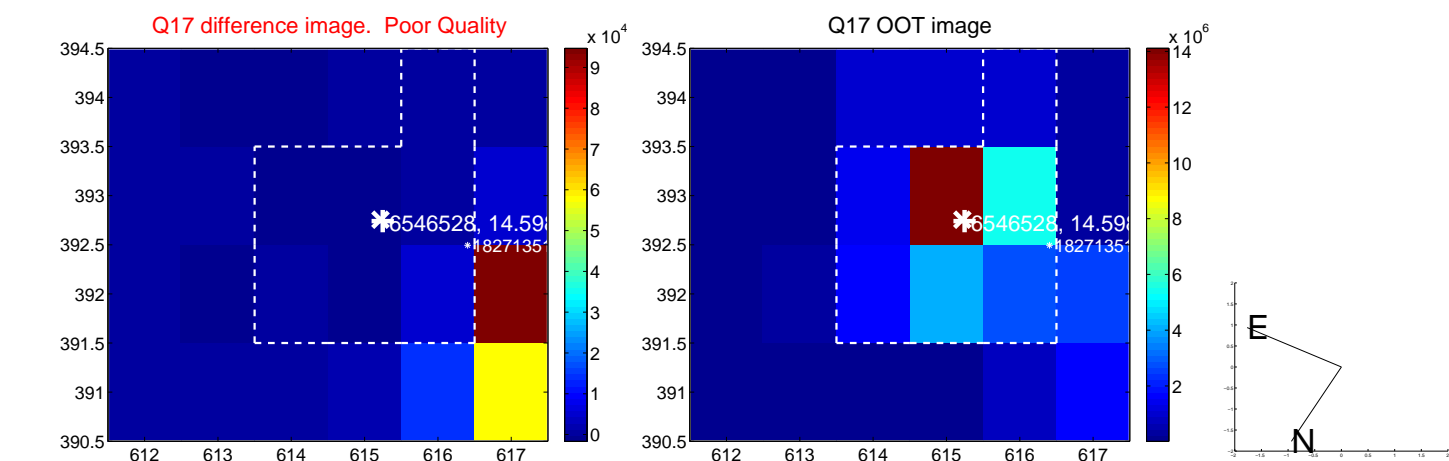
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



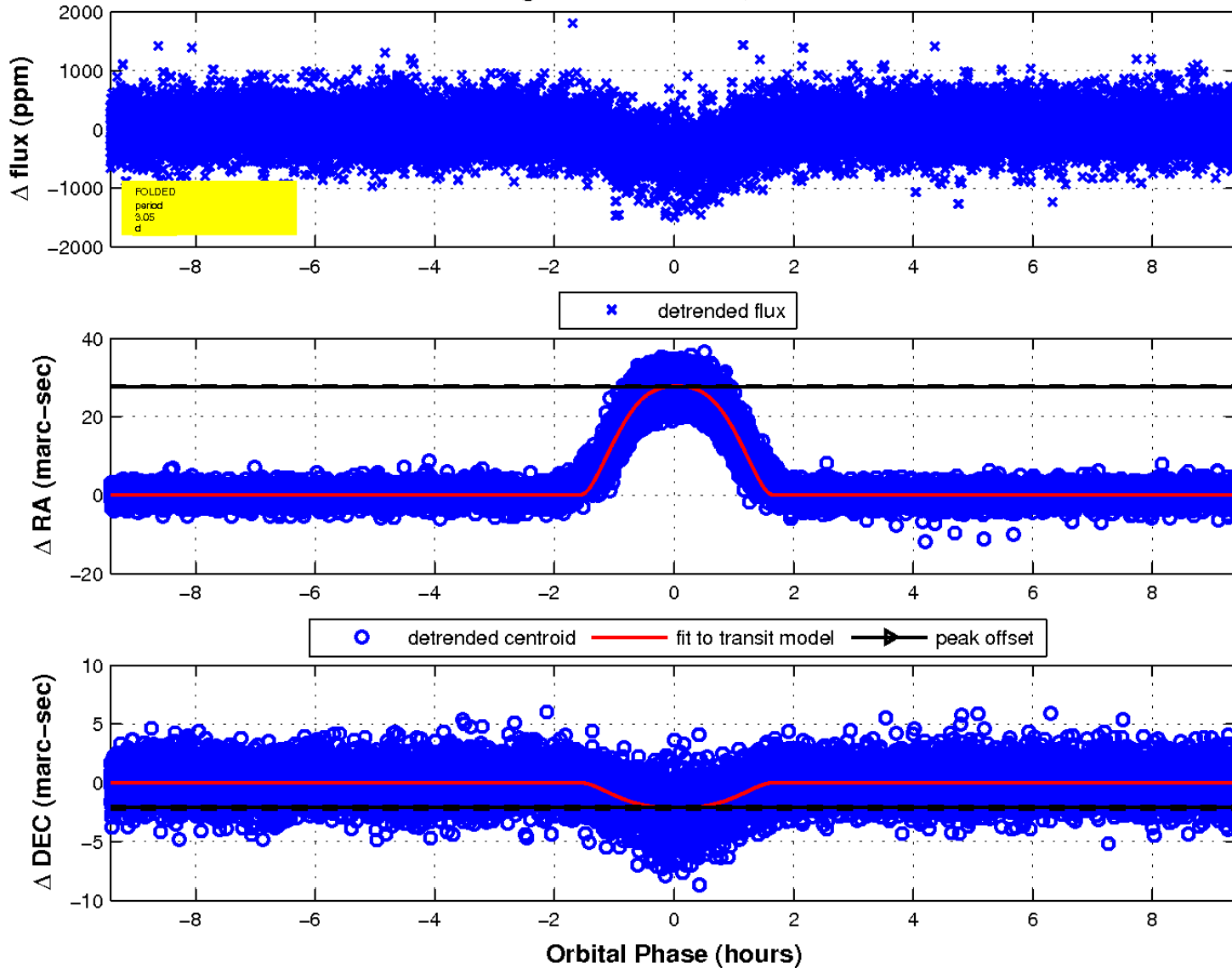
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

