

KIC 003247396

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})
003247396-01	OBS	0121.01	8.811115	136.456096	394.8	4.880	60.3	64.8	2.40	6200	8.20	907.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003247396-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—CENT_UNRESOLVED_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.

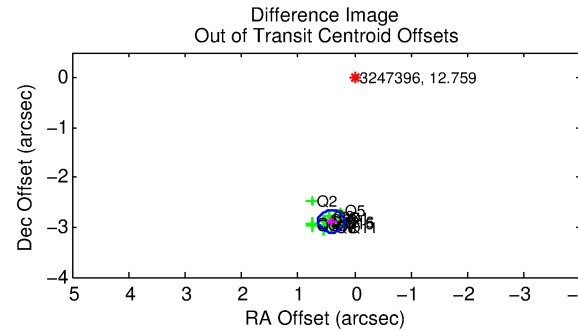
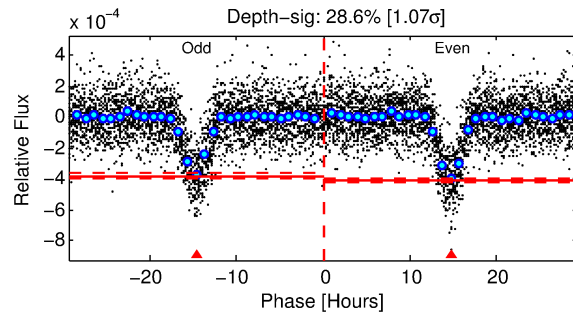
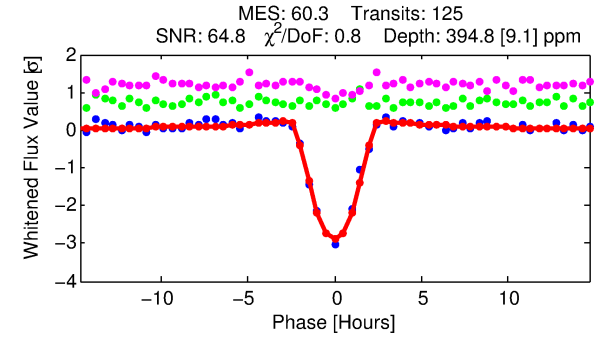
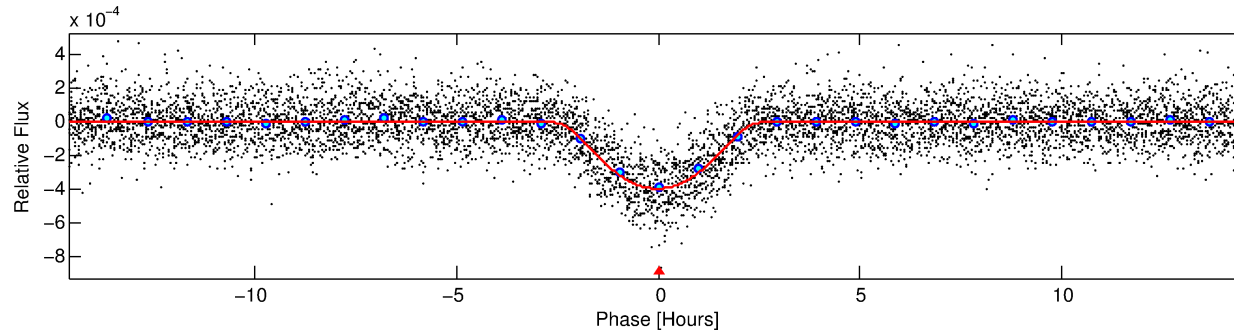
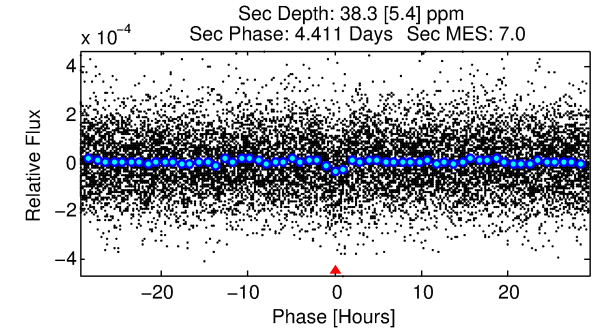
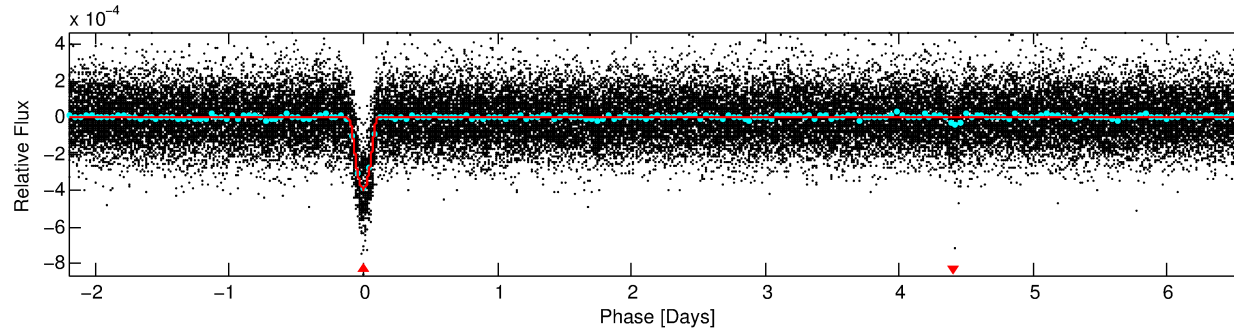
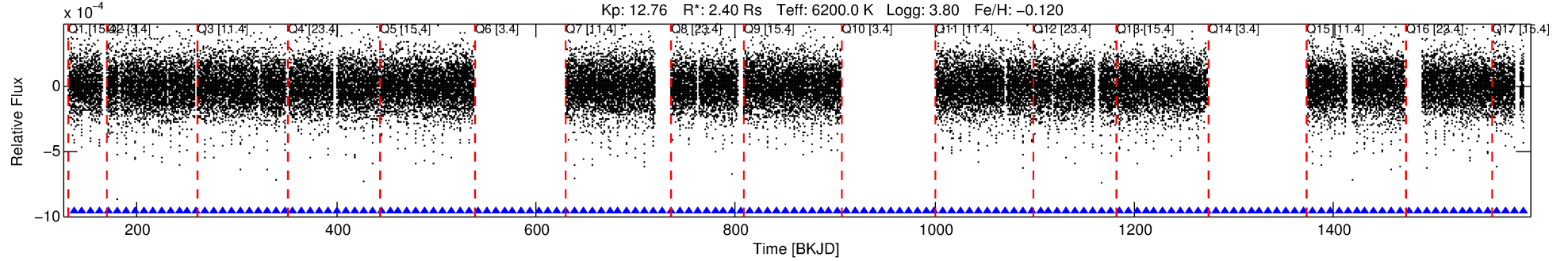
Ephemeris Match Information For 003247396-01

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
003247396-01	3247396	4035.01	3247404	1:1	6.8	2	0	18.53	12.76	62.86	Direct-PRF	0	0.24	0.06

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: 3247396 Candidate: 1 of 1 Period: 8.811 d
KOI: K00121.01 Corr: 0.978



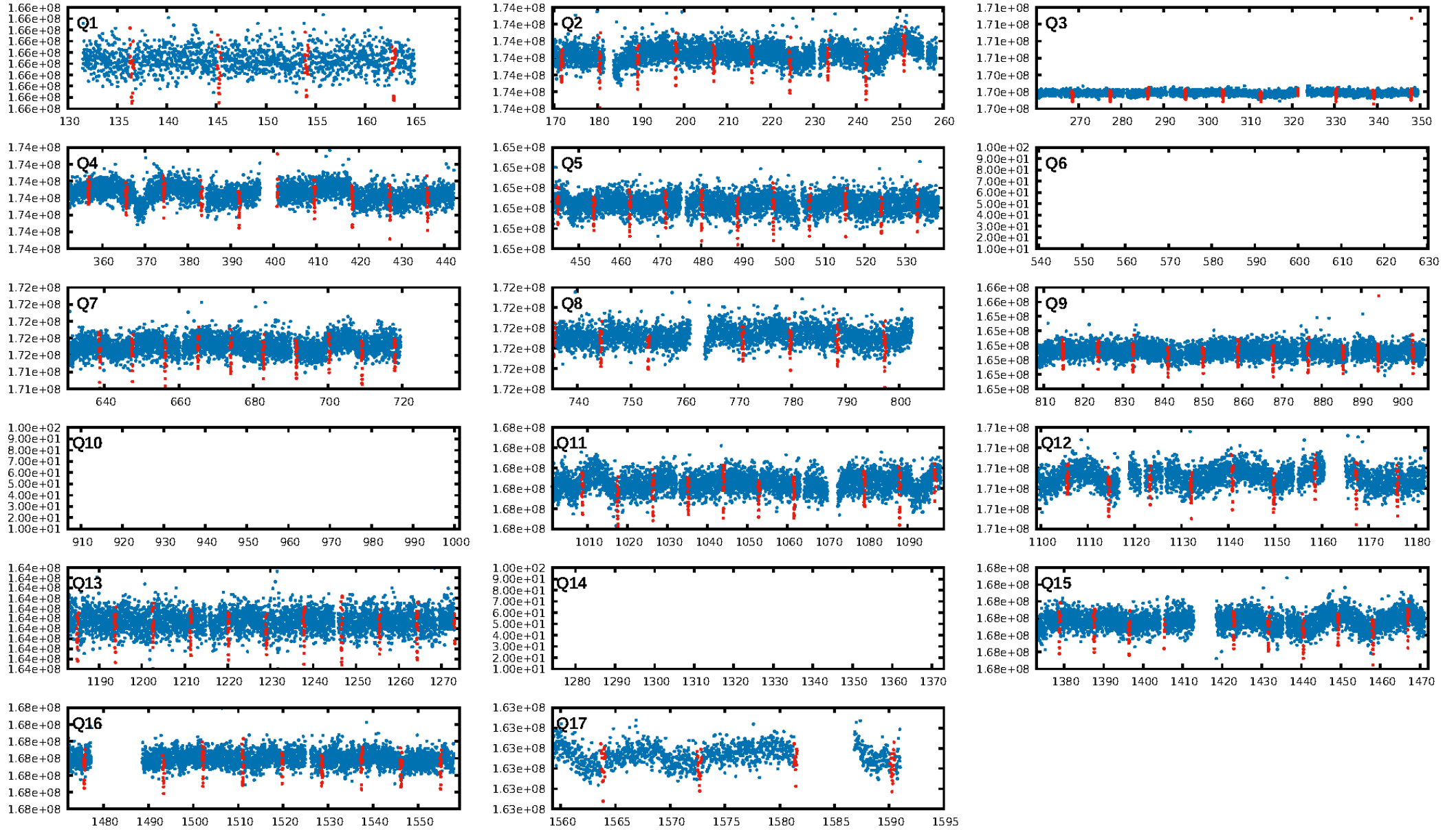
DV Fit Results:

Period = 8.81111 [0.00002] d
Epoch = 136.4561 [0.0016] BKJD
Rp/R* = 0.0312 [0.0103]
a/R* = 3.97 [0.39]
b = 0.99 [0.02]
Seff = 907.21 [364.18]
Teq = 1399 [140] K
Rp = 8.20 [3.56] Re
a = 0.0918 [0.0234] AU
Ag = 2.65 [2.07] [0.80σ]
Teffp = 2759 [469] K [2.78σ]

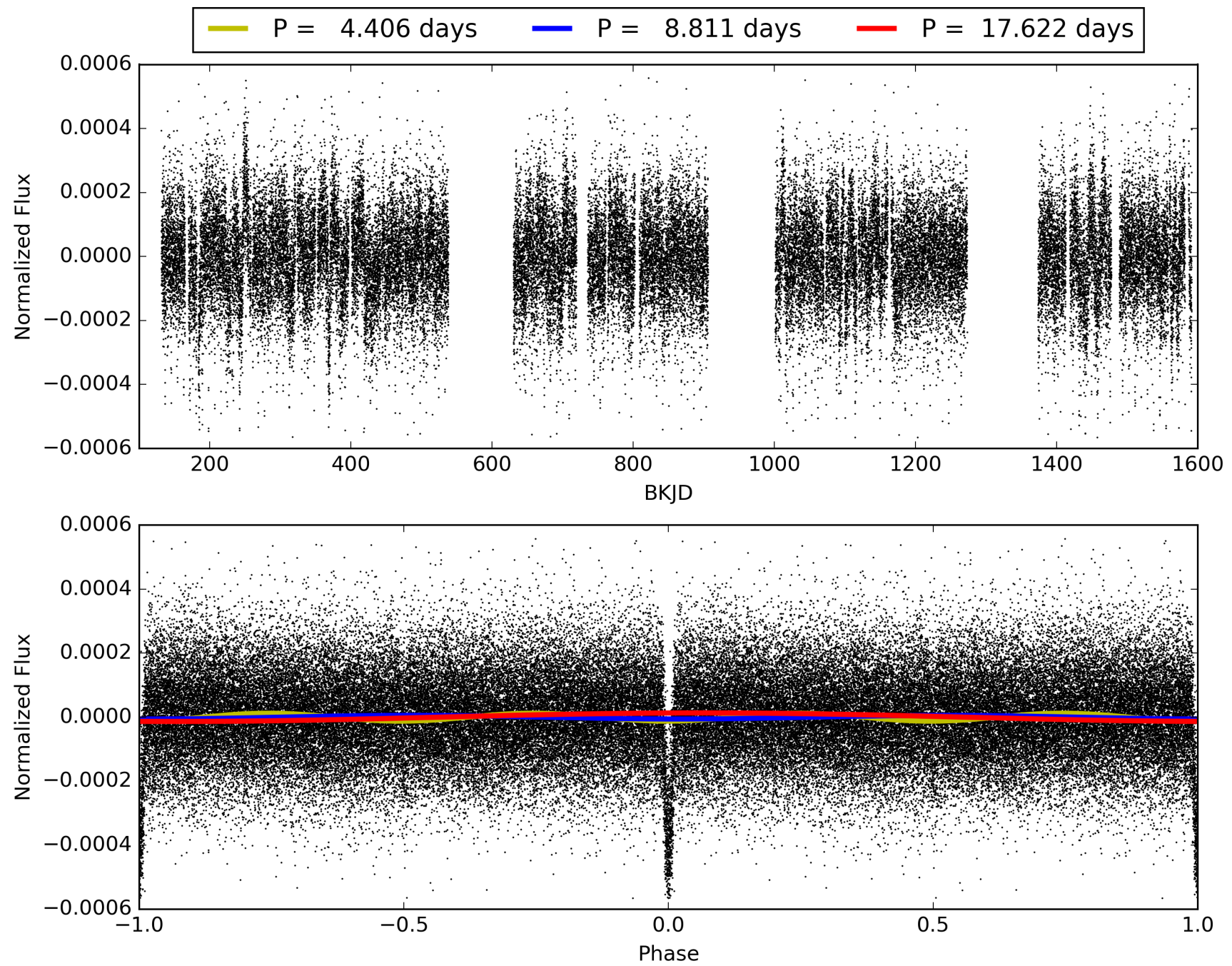
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [117/117]
GhostDiagnostic-chr: 2.459
Centroid-sig: 0.0%
Centroid-so: 2.853 arcsec [14.11σ]
OotOffset-rm: 2.914 arcsec [38.77σ]
KicOffset-rm: 2.827 arcsec [38.31σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003247396-01, PDC Light Curves

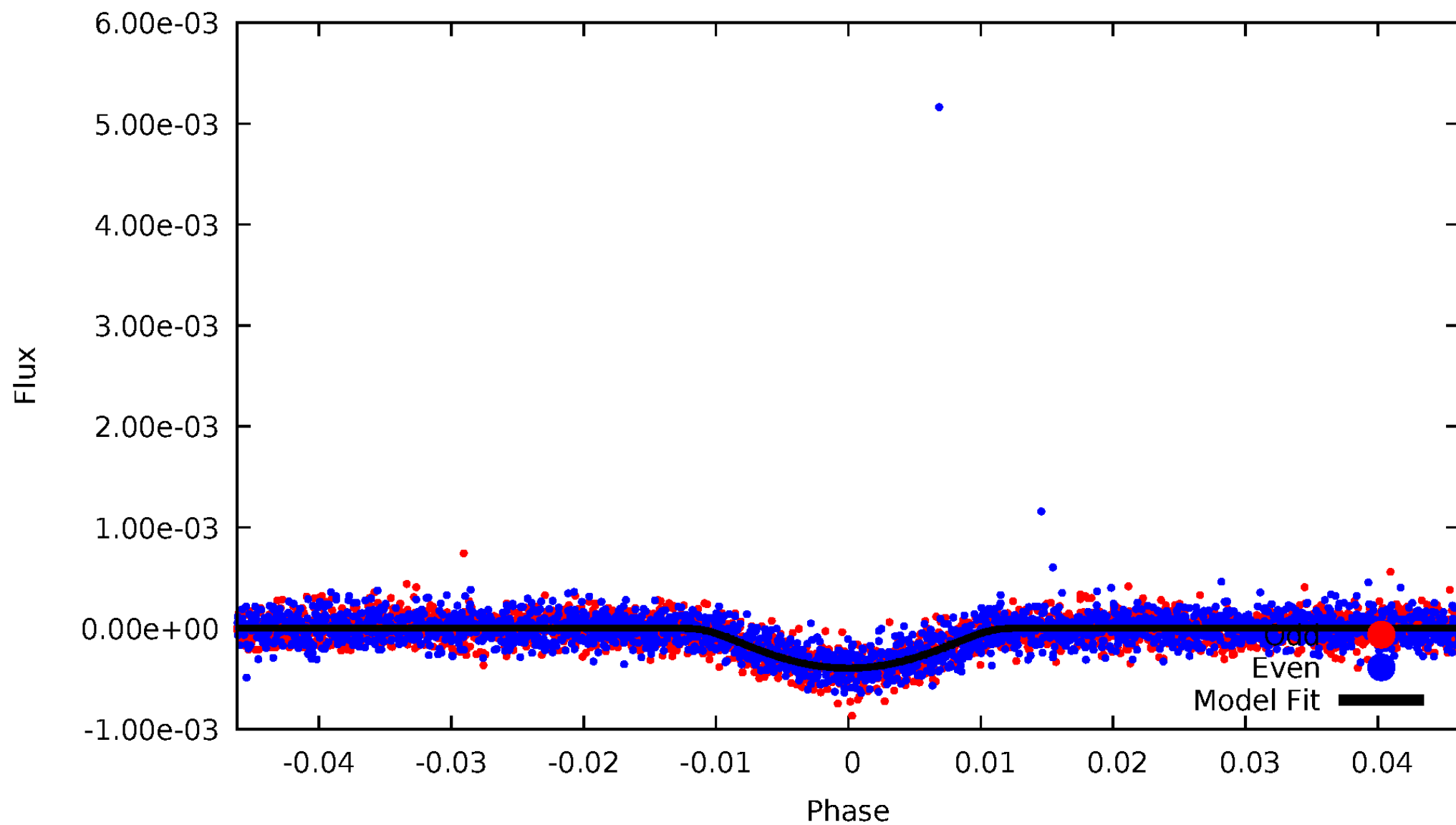


TCE 003247396-01



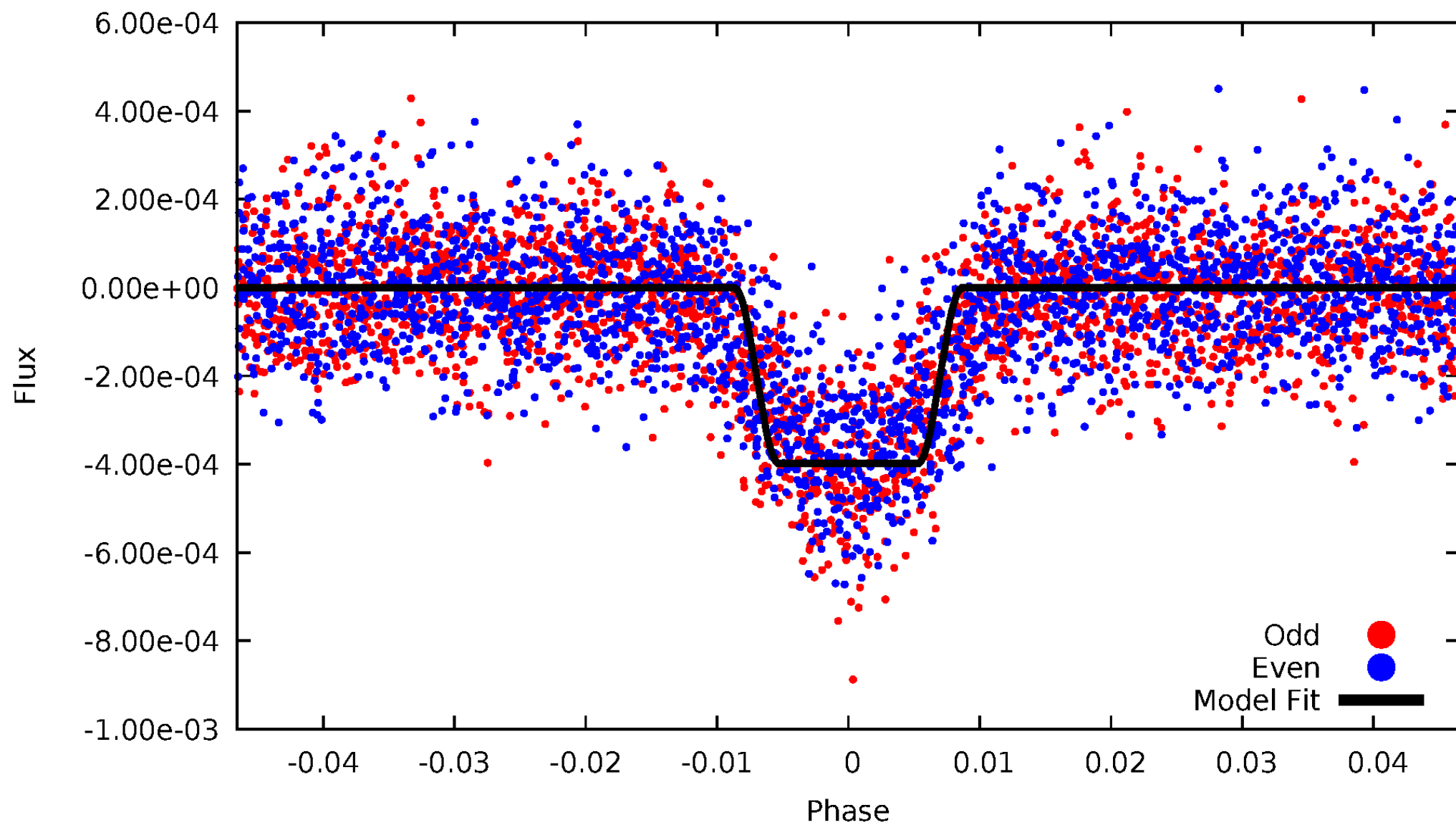
DV Odd/Even

TCE 003247396-01

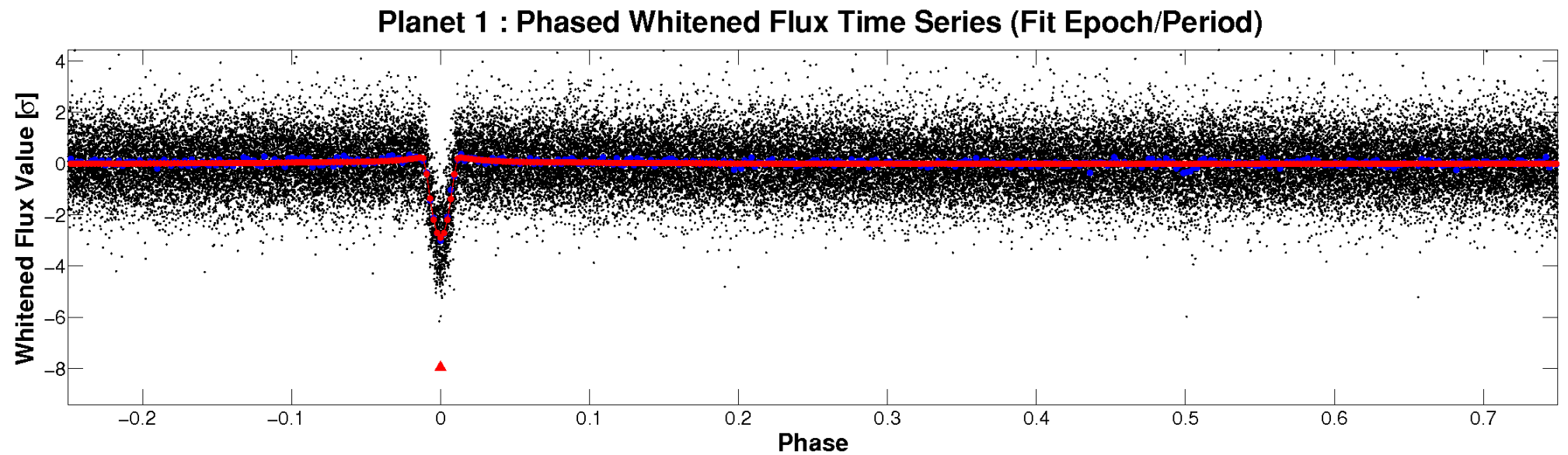
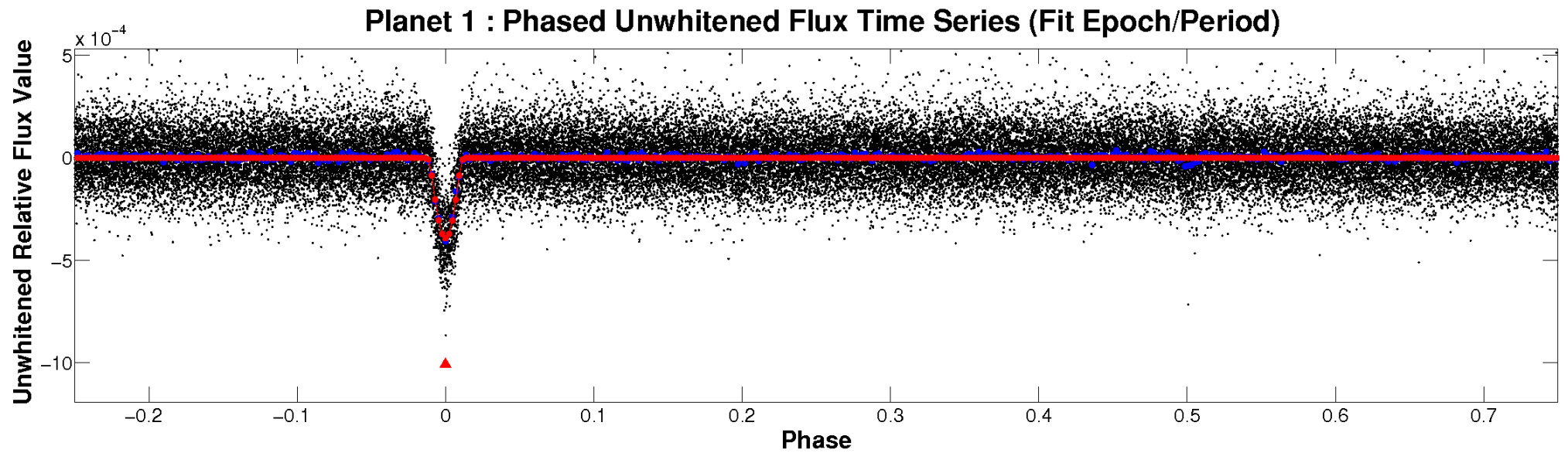


ALT Odd/Even

TCE 003247396-01

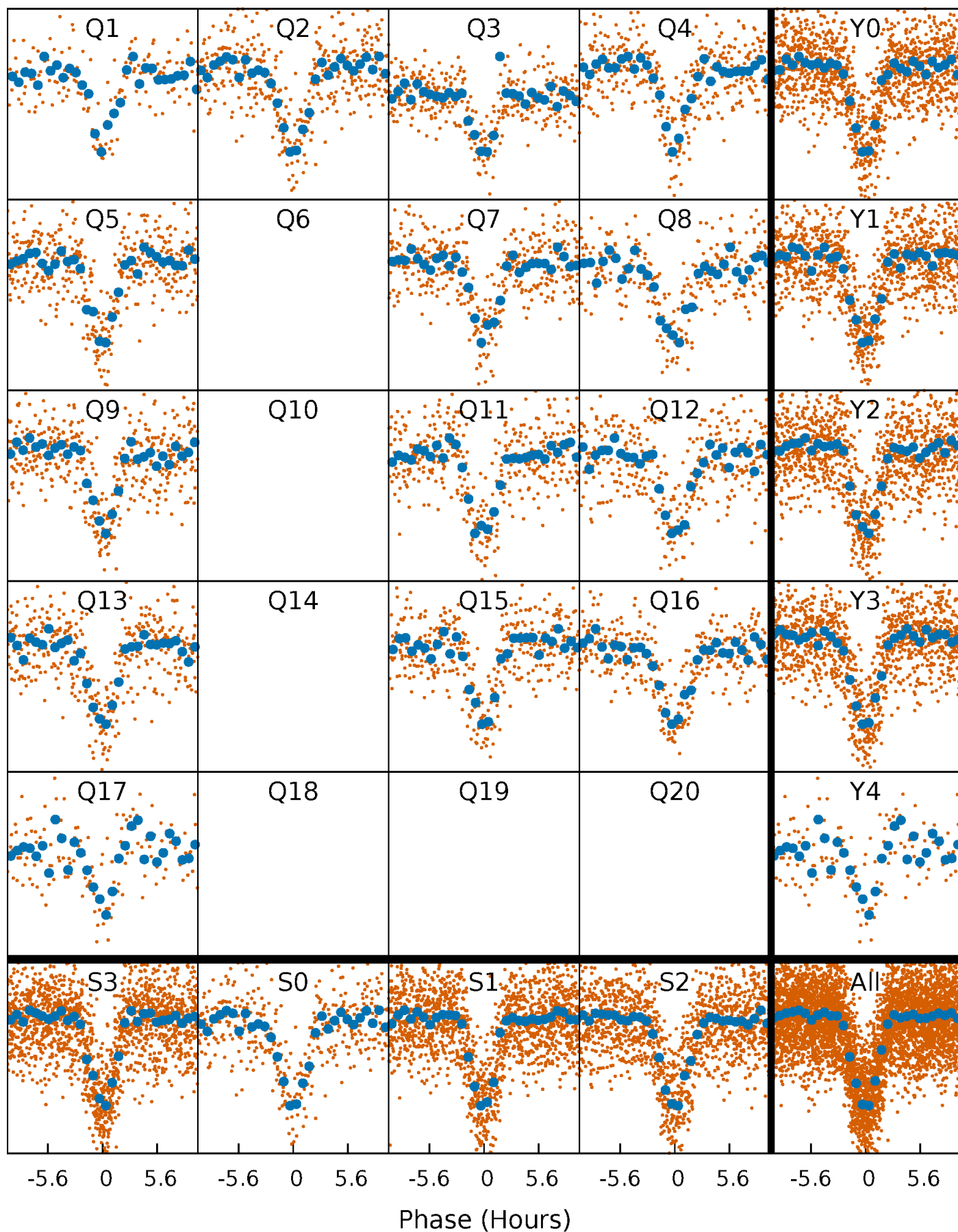


Non-Whitened Vs. Whitened Light Curve



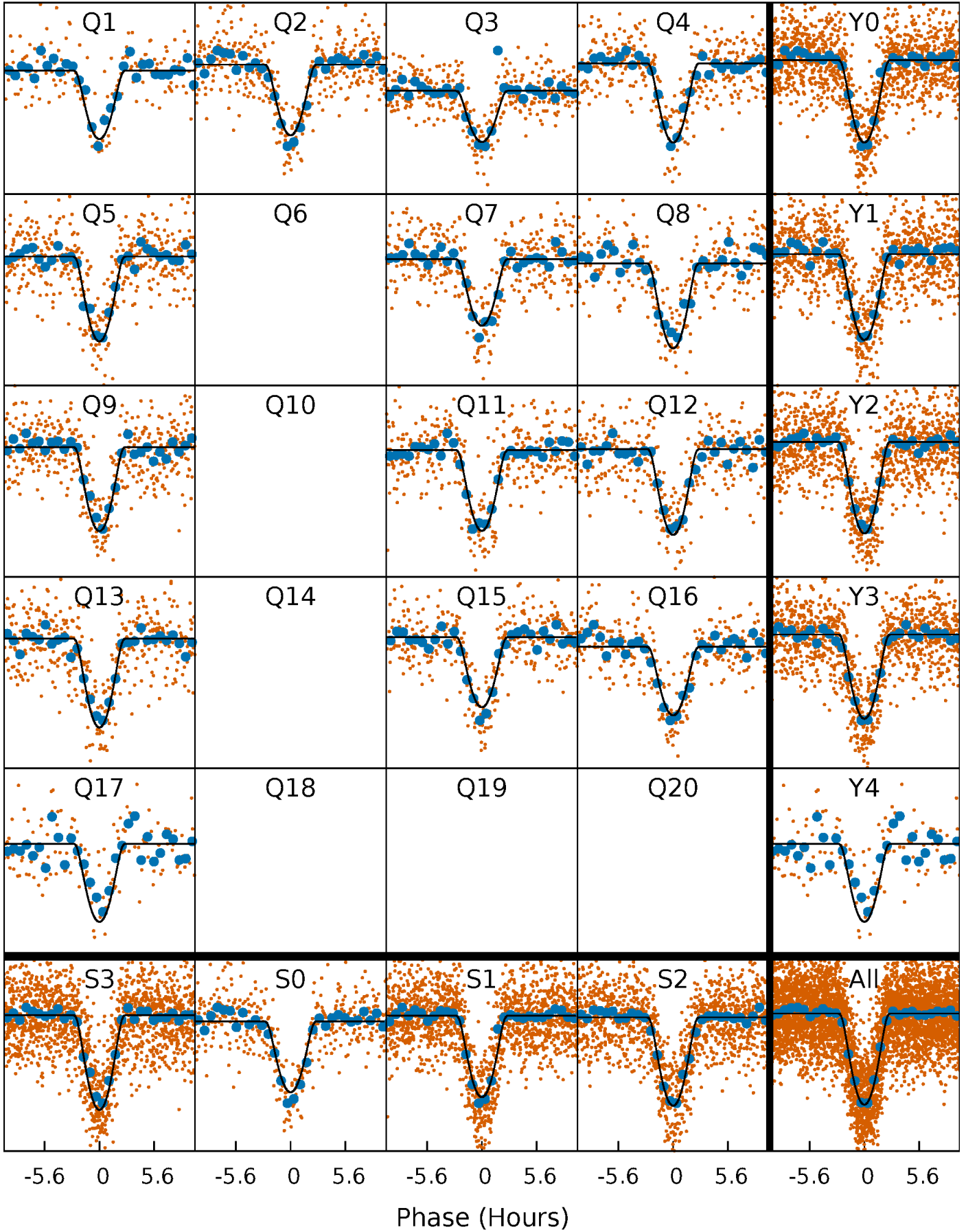
PDC Quarter-Phased Transit Curves

TCE 003247396-01 P= 8.811115 Days $T_0=136.456096$ (BKJD)



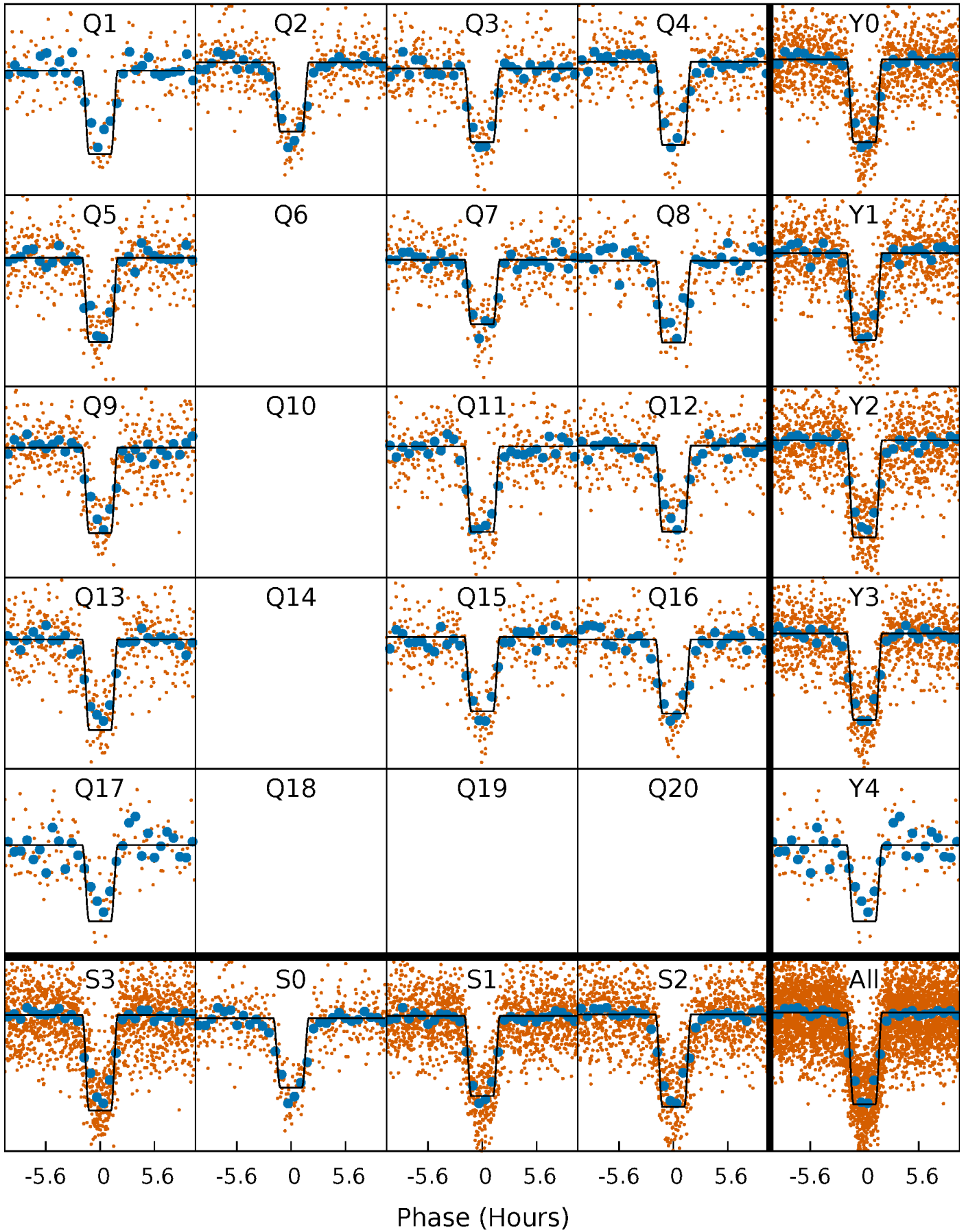
DV Quarter-Phased Transit Curves

TCE 003247396-01 P= 8.811115 Days $T_0=136.456096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

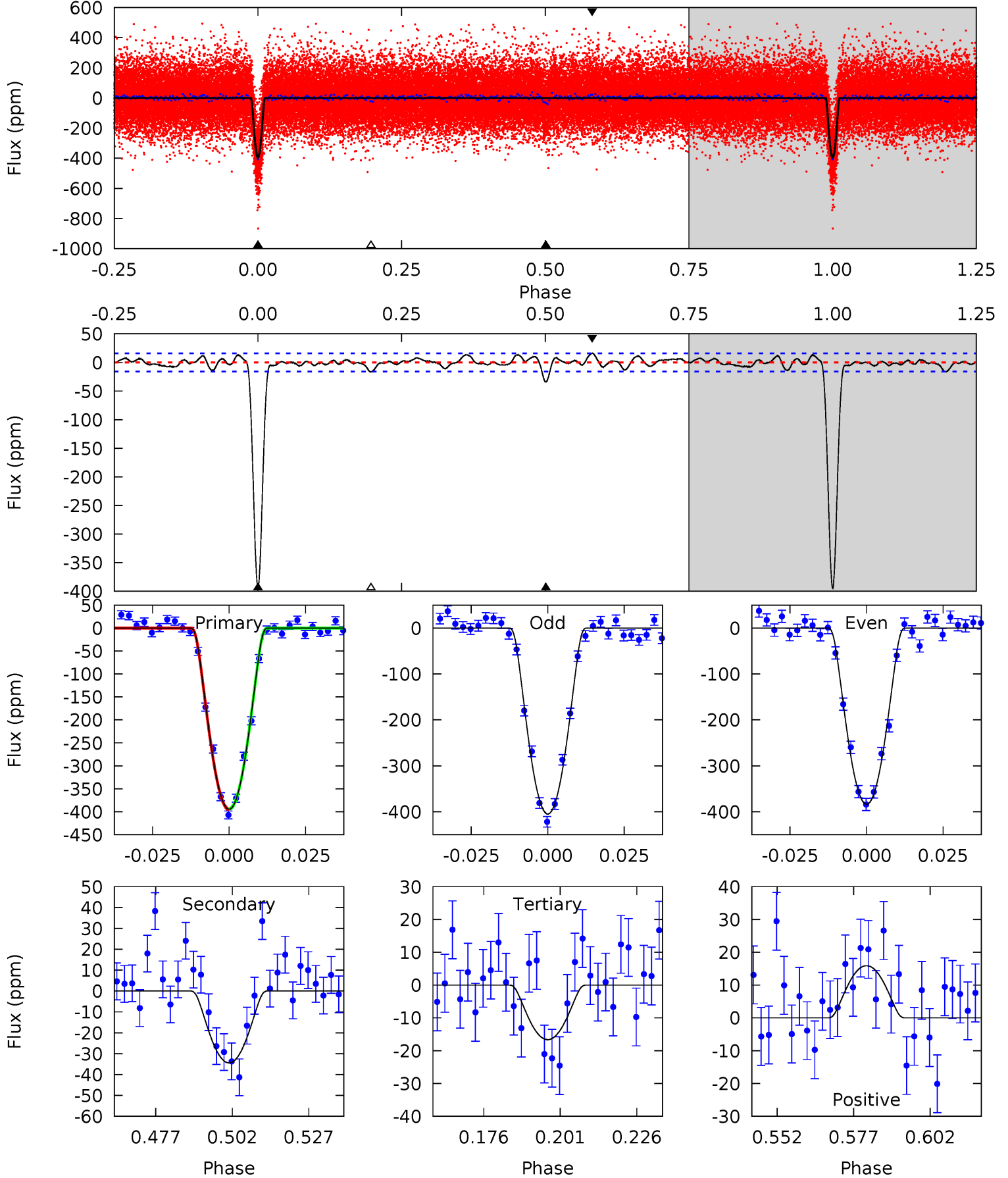
TCE 003247396-01 P= 8.811118 Days $T_0=136.455428$ (BKJD)



DV Model-Shift Uniqueness Test

003247396-01, P = 8.811115 Days, E = 127.644981 Days

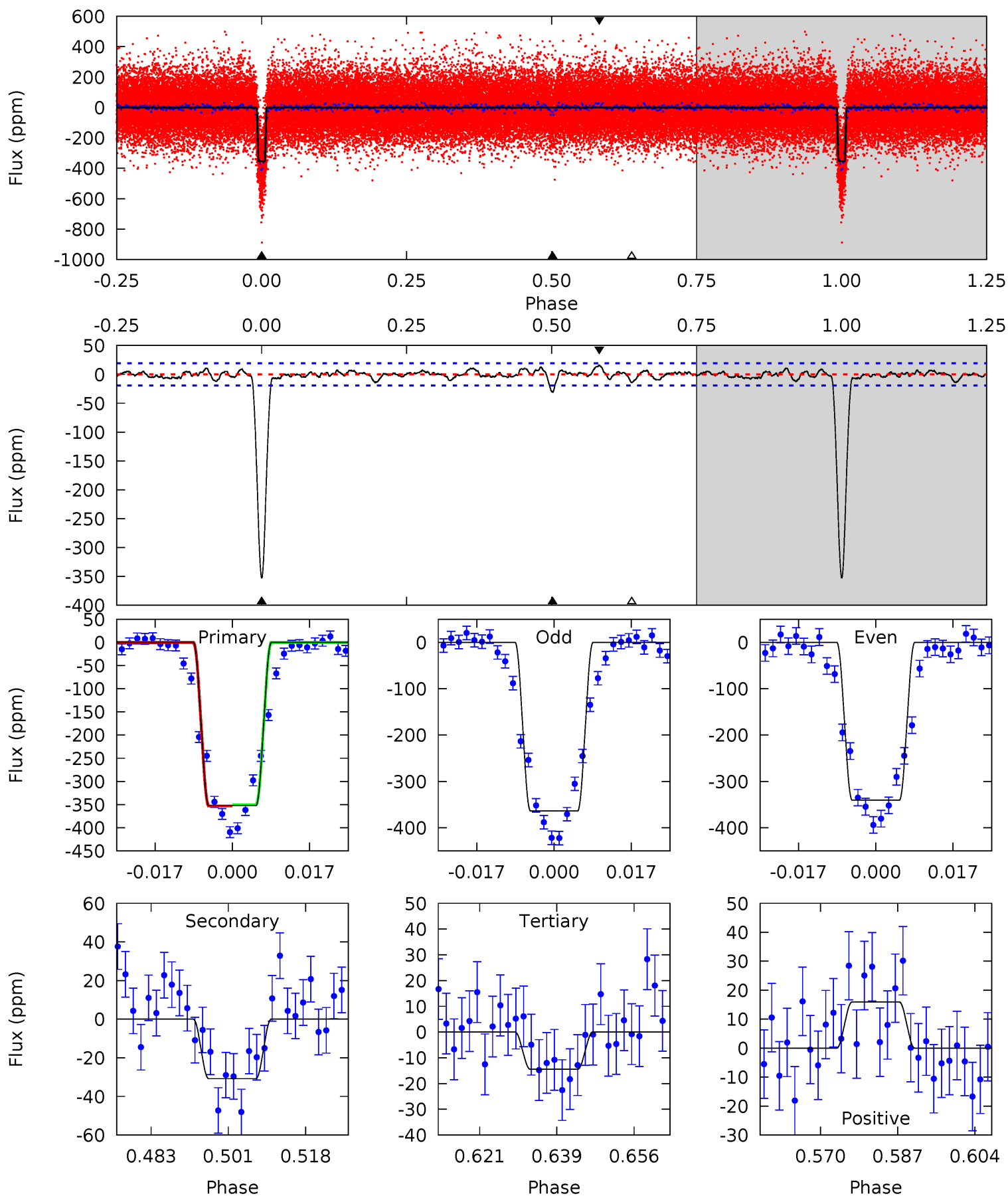
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.1	10.5	5.07	4.84	4.85	2.24	1.72	115.1	115.3	5.41	5.64	3.24	0.97	0.04	0.17



Alt Model-Shift Uniqueness Test

003247396-01, P = 8.811118 Days, E = 127.644310 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.5	7.81	3.67	4.04	4.92	2.38	1.26	85.8	85.4	4.14	3.77	2.97	1.00	0.04	0.35



Stellar Parameters For KIC 003247396

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6200^{+125}_{-113}	$3.800^{+0.225}_{-0.075}$	$-0.120^{+0.150}_{-0.150}$	$2.404^{+0.339}_{-0.678}$	$1.333^{+0.163}_{-0.199}$	$0.135^{+0.167}_{-0.034}$
	+2%/-2%	+6%/-2%	+125%/-125%	+14%/-28%	+12%/-15%	+124%/-25%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 003247396-01 / KOI 0121.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-34 ± 3	$7.97^{+2.90}_{-2.89}$	1929^{+87}_{-127}	3183^{+499}_{-293}	$2.532^{+3.676}_{-1.149}$
Alt.	-31 ± 4	$5.01^{+2.77}_{-2.44}$	1929^{+93}_{-119}	3692^{+988}_{-530}	$5.816^{+16.093}_{-3.472}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

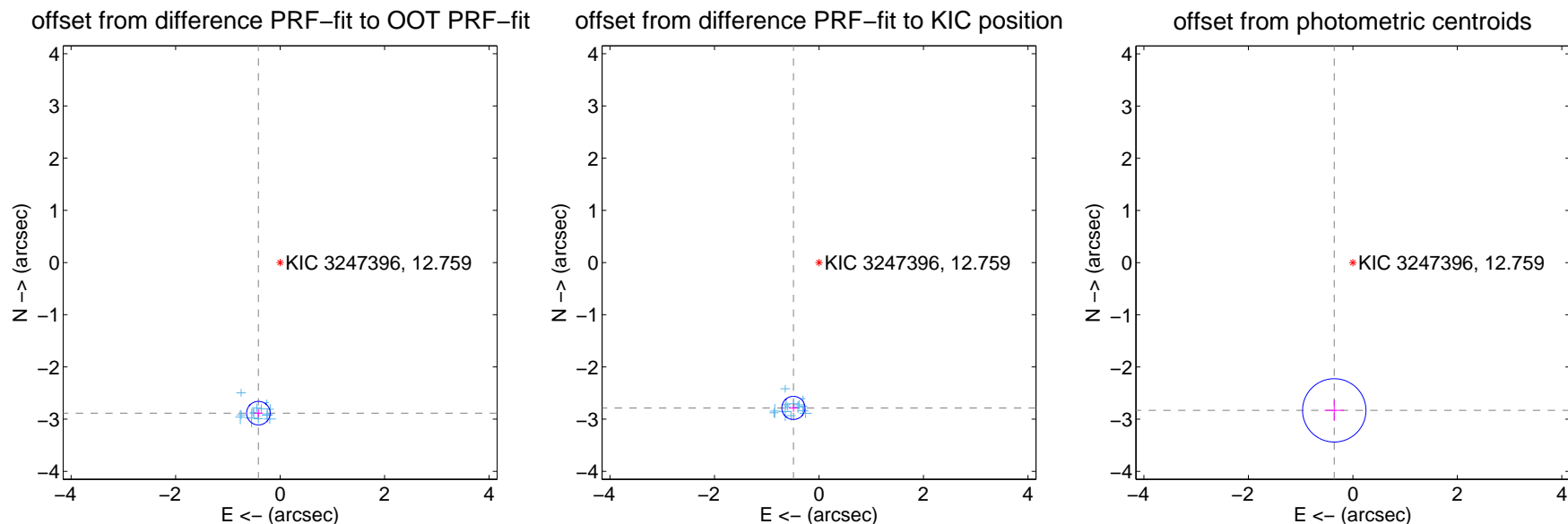
DV Centroid Data

Supplemental centroid analysis for 003247396-01. Kepler magnitude: 12.76. Transit SNR 64.80

There are 14 quarters with good PRF difference image offsets

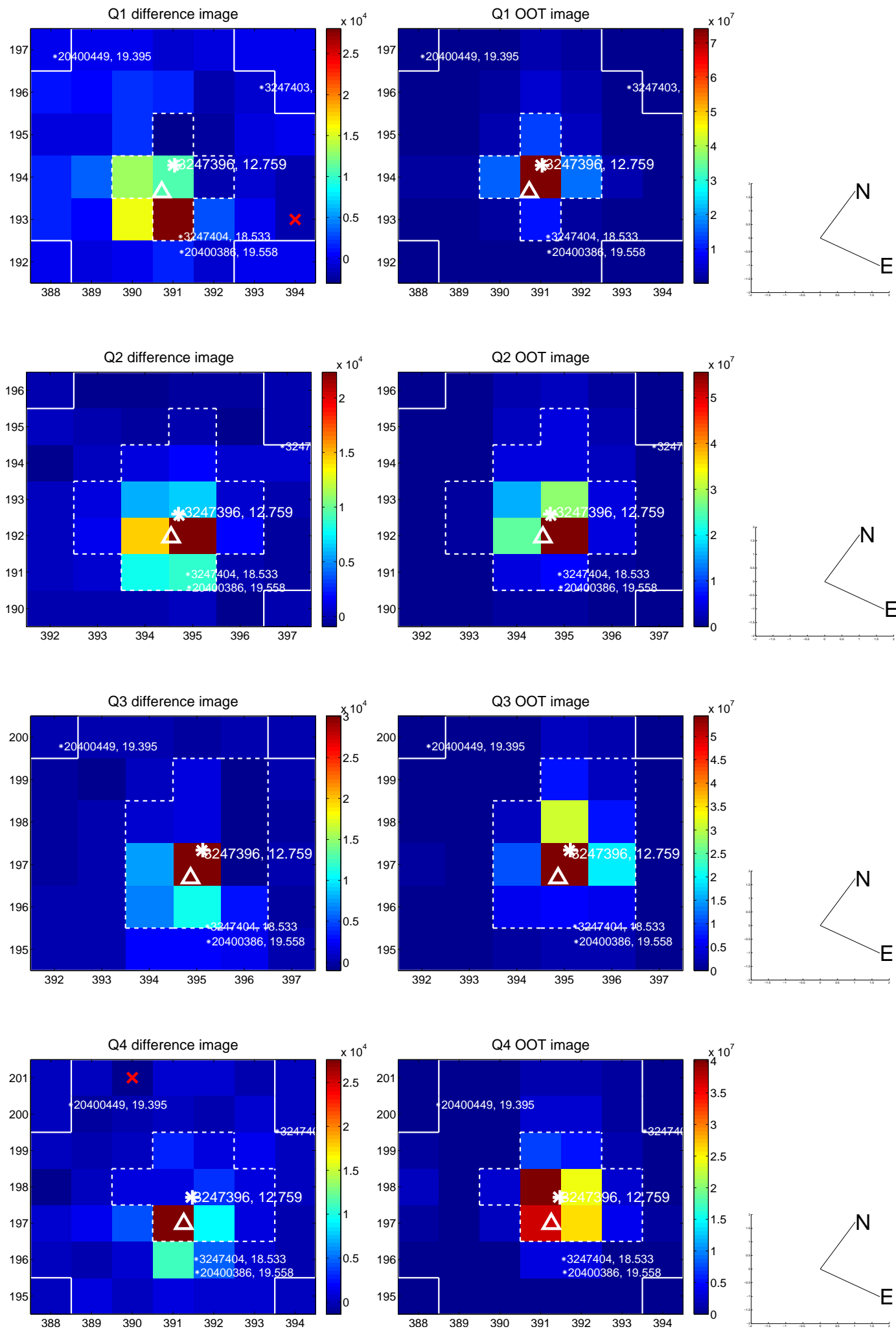
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.914 ± 0.075	38.77	0.415 ± 0.084	-2.884 ± 0.075
PRF-fit source offset from KIC position	2.827 ± 0.074	38.31	0.489 ± 0.085	-2.784 ± 0.073
photometric centroid source offset	2.85 ± 0.20	14.11	0.36 ± 0.19	-2.83 ± 0.20

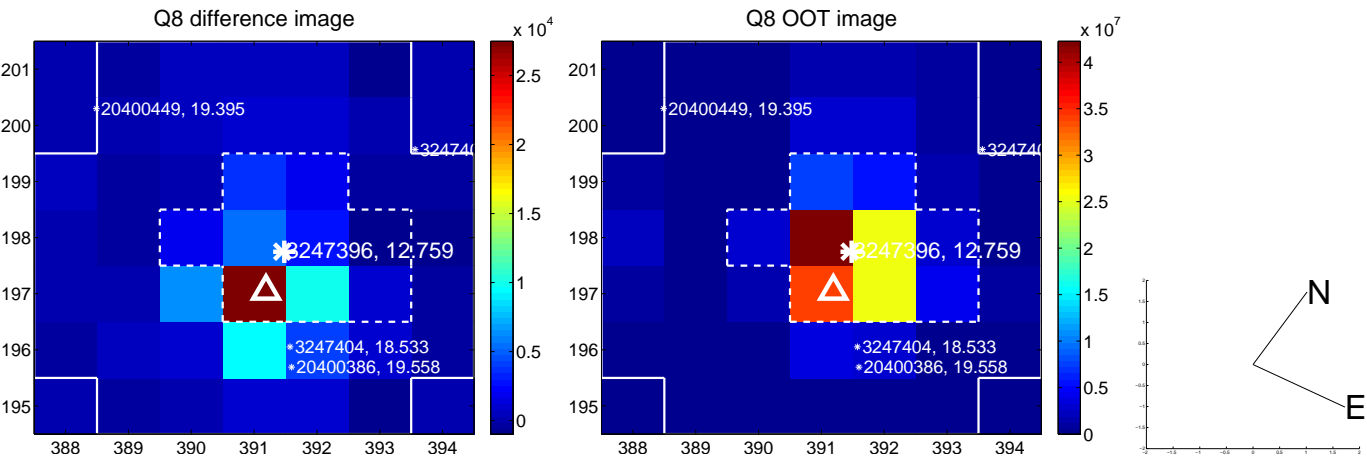
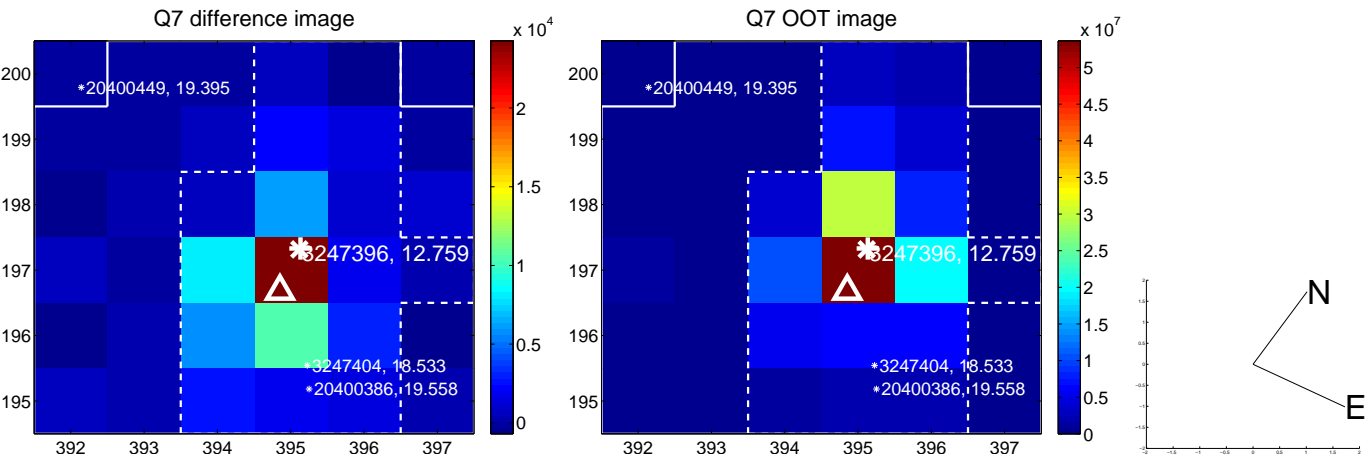
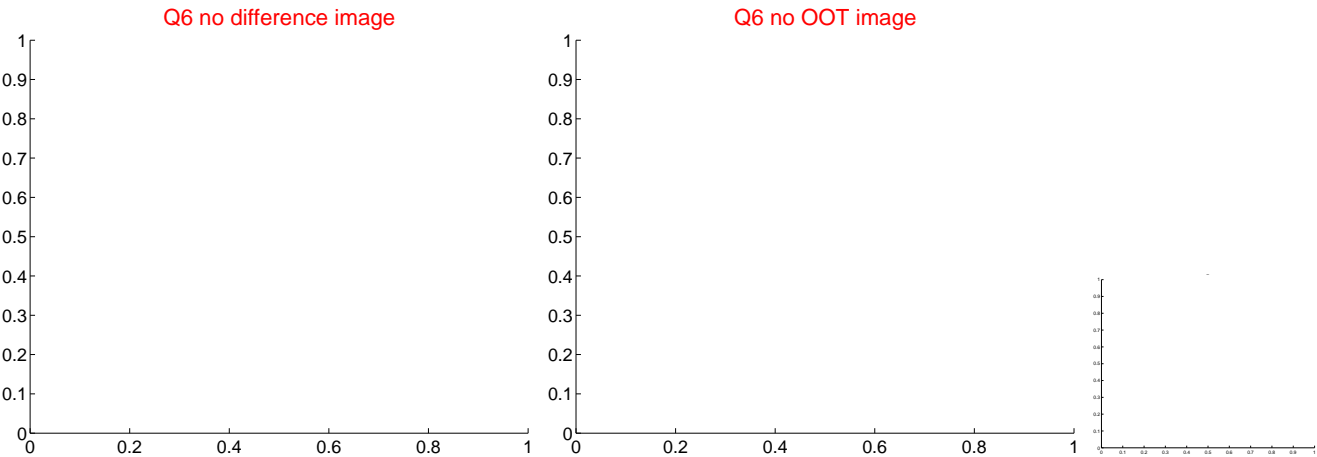
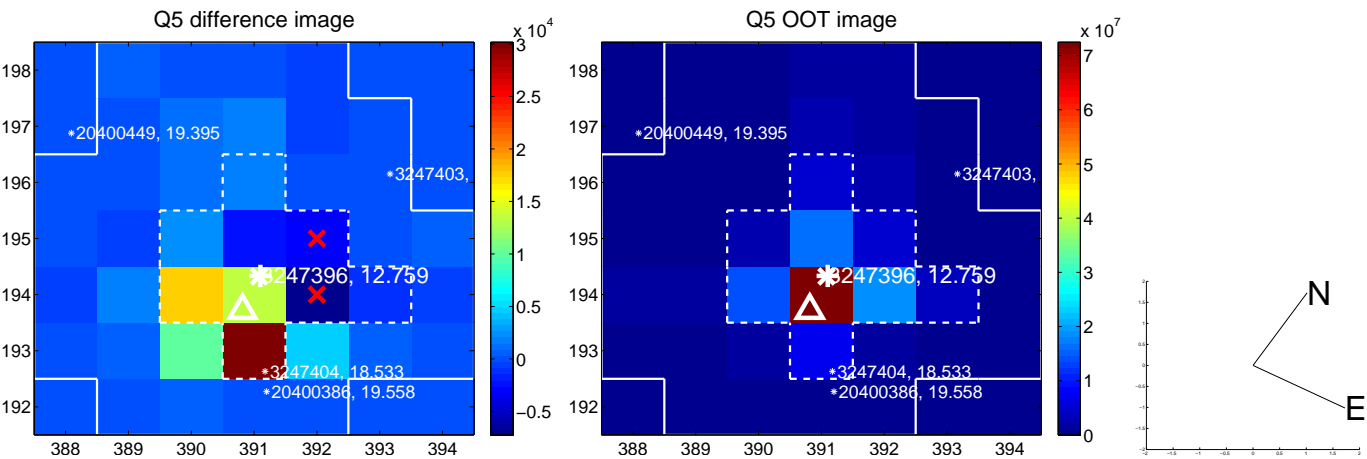


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

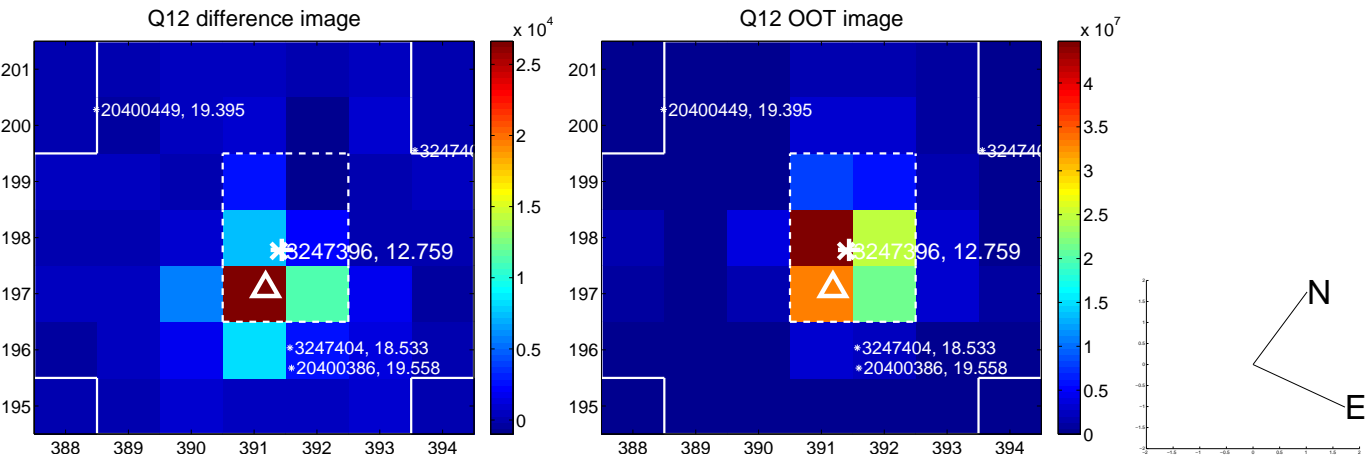
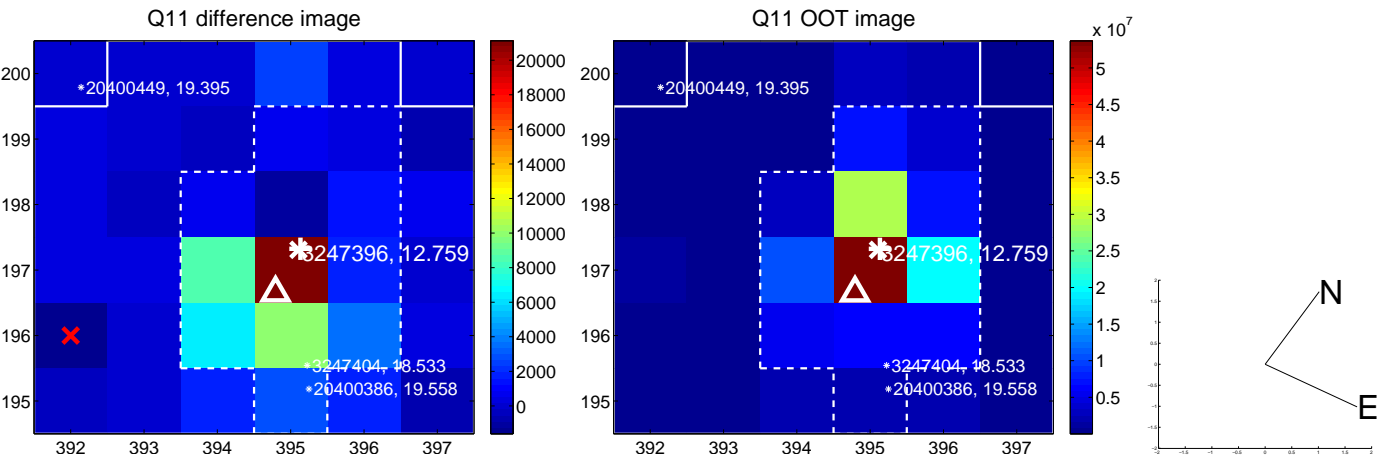
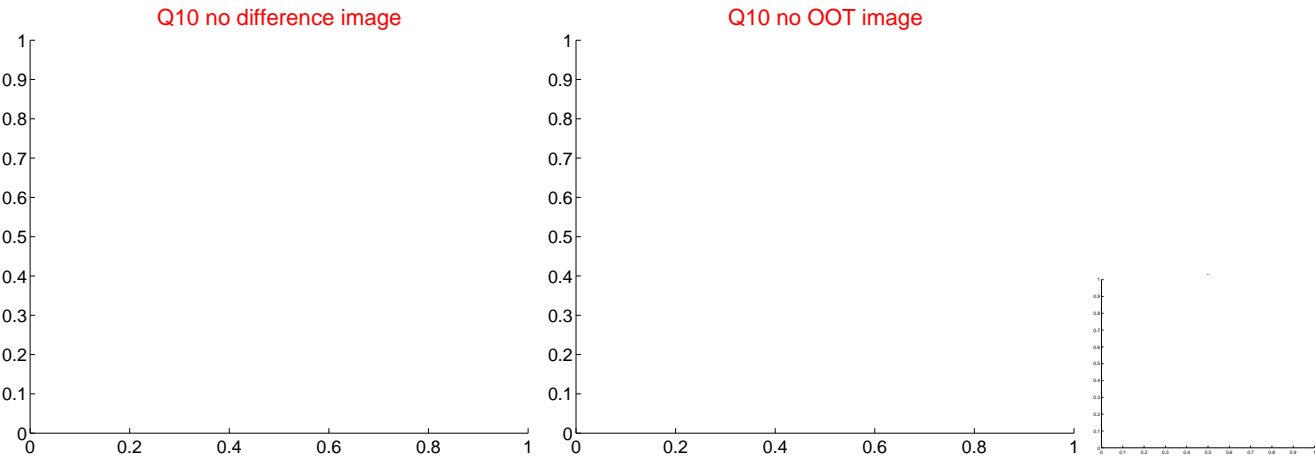
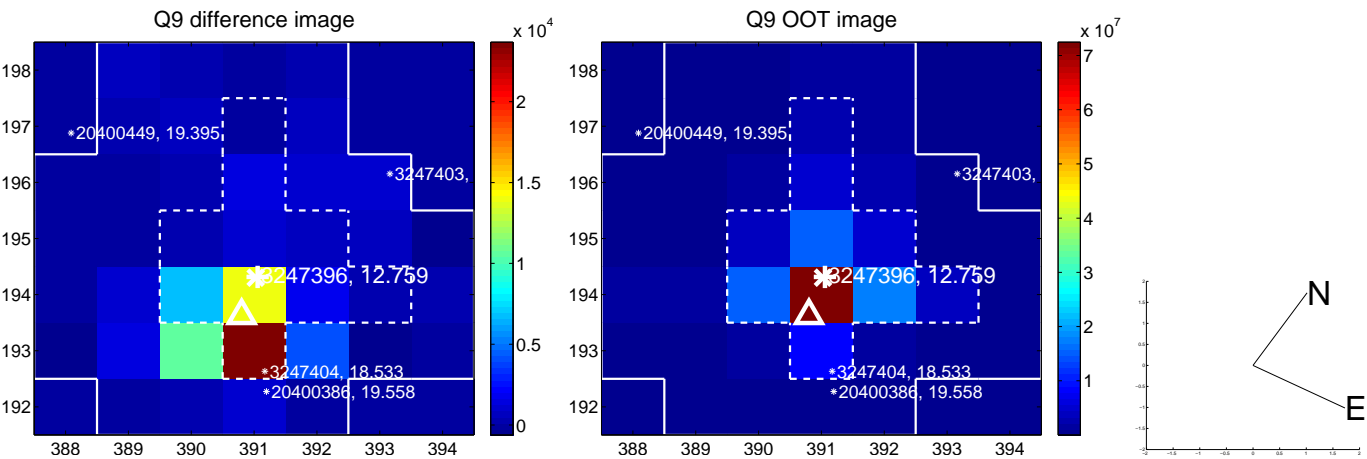
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



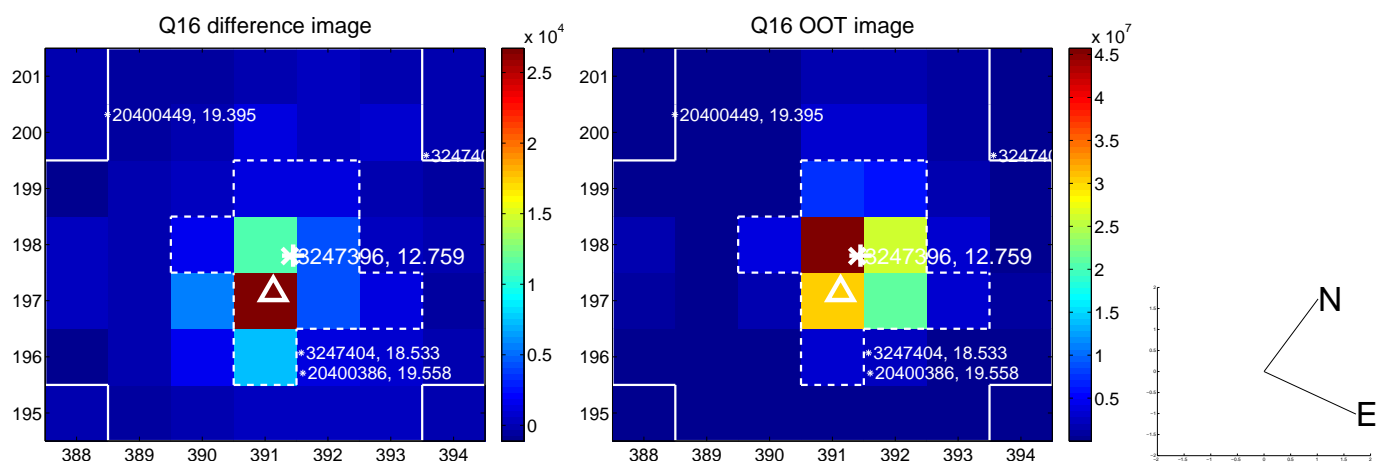
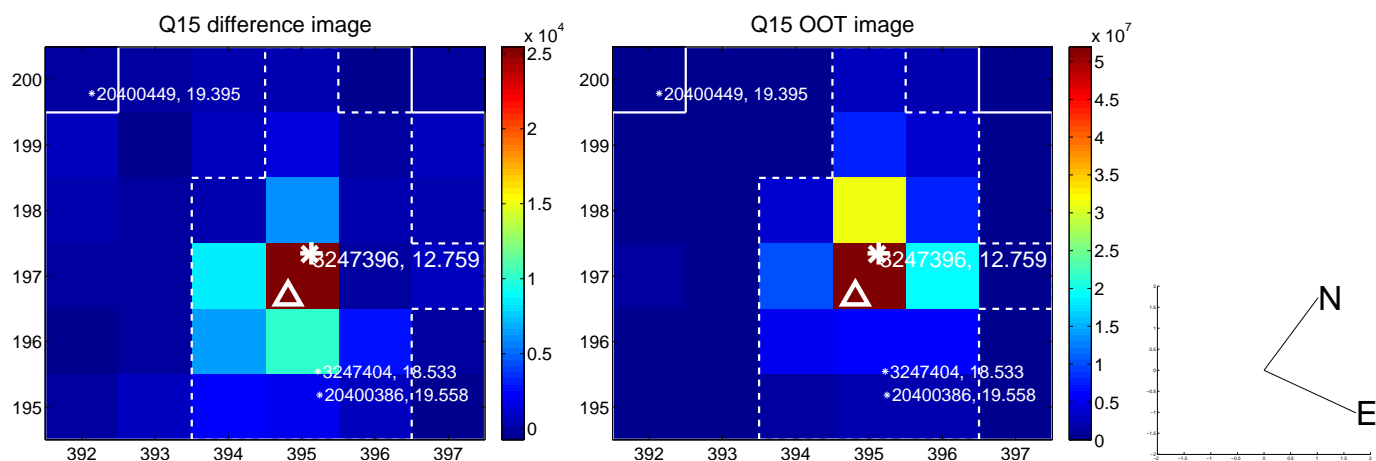
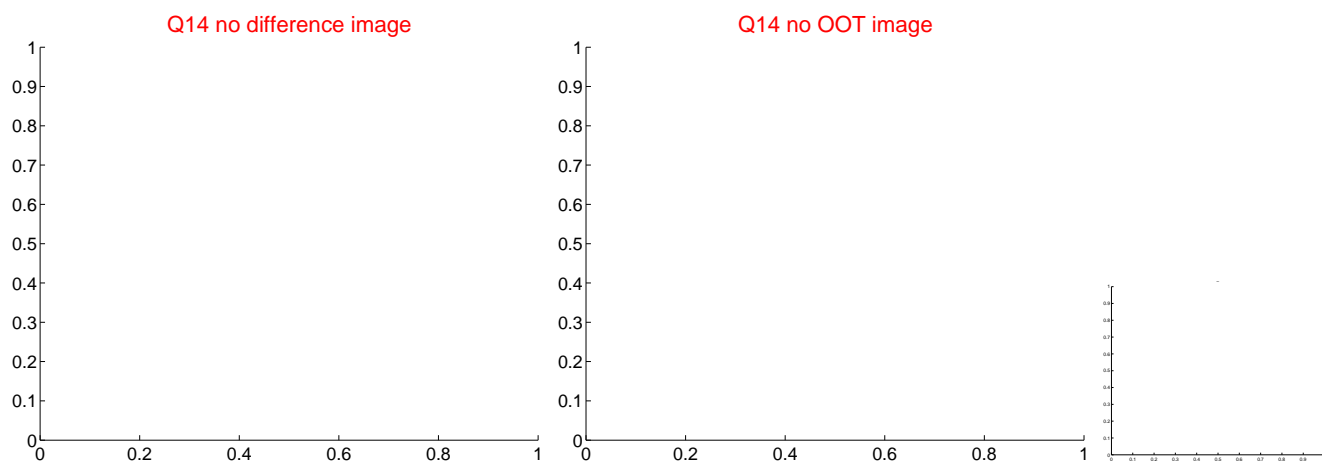
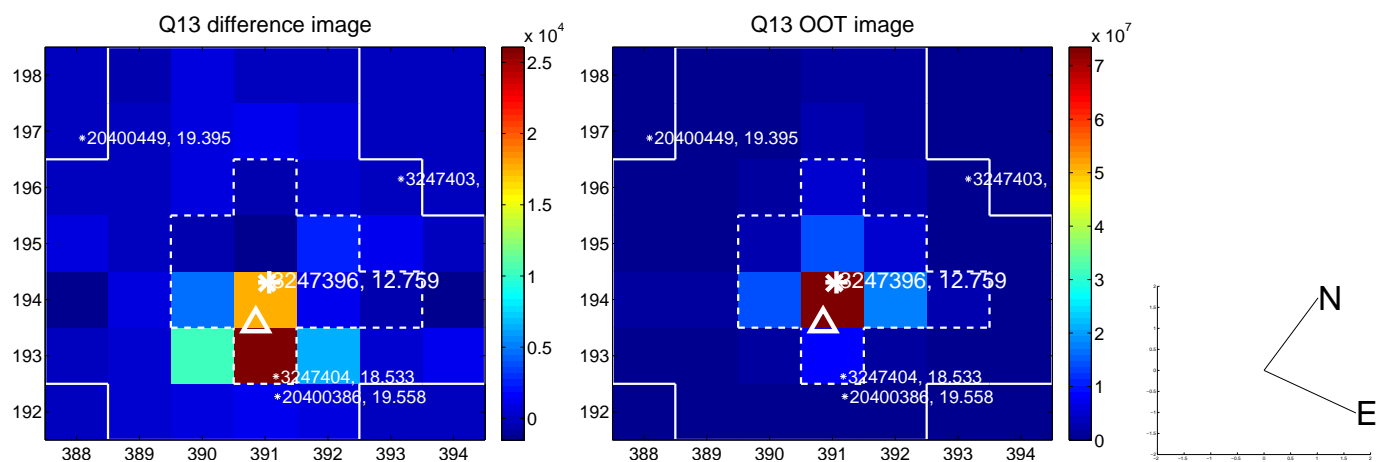
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



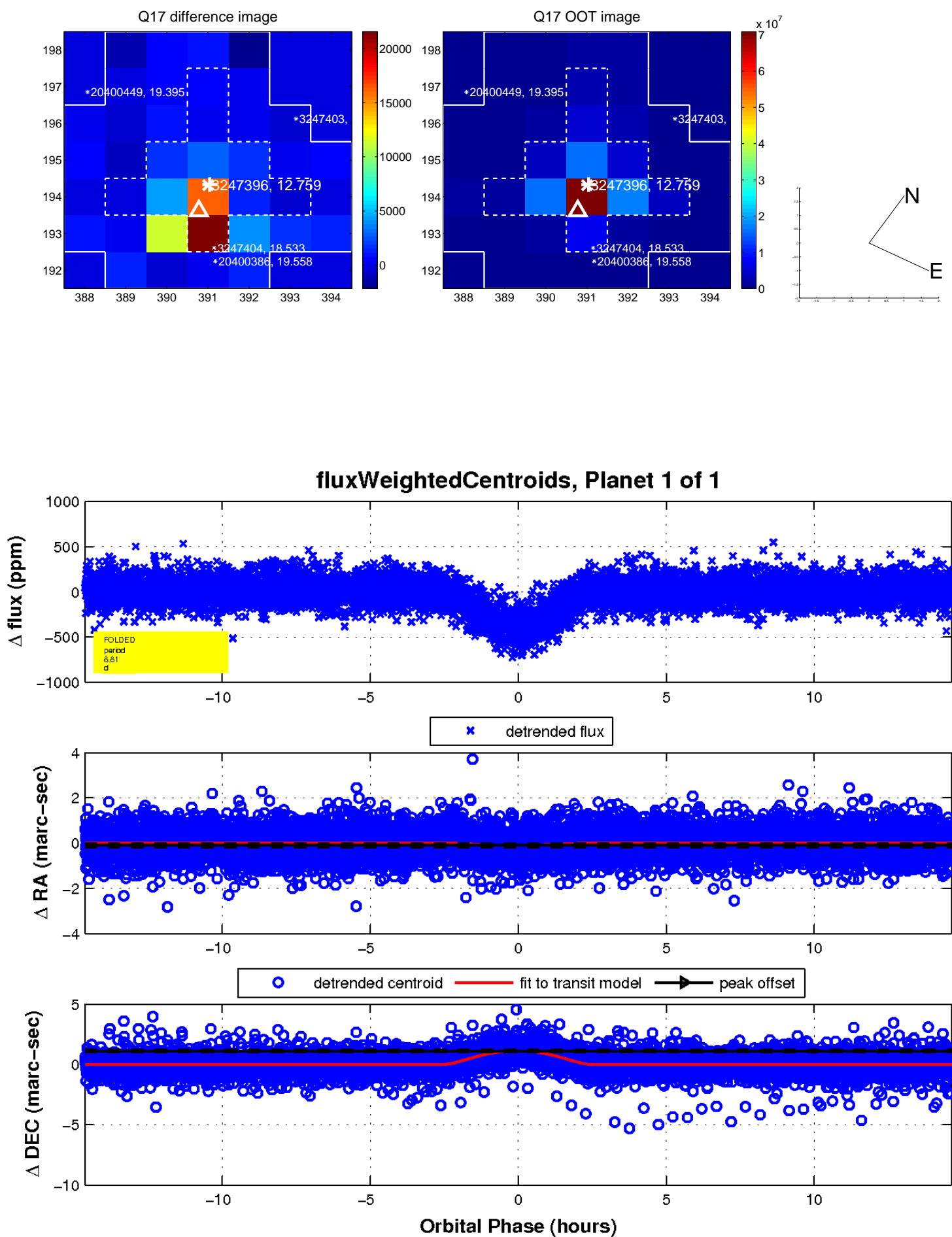
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UKIRT Image

Declination

