

KIC 009369366

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})
009369366-01	OBS	2905.01	36.005185	144.355163	90.0	4.010	10.5	10.9	2.84	7048	3.11	260.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009369366-01	OBS	FP	0.00	0	0	1	0	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.

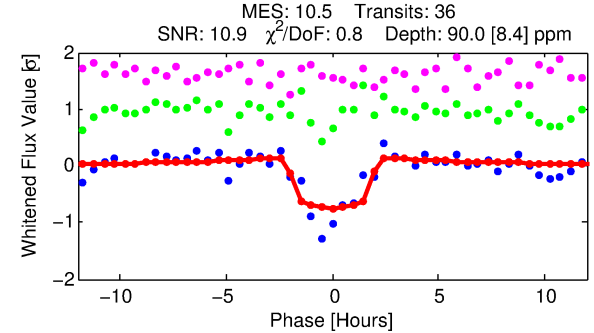
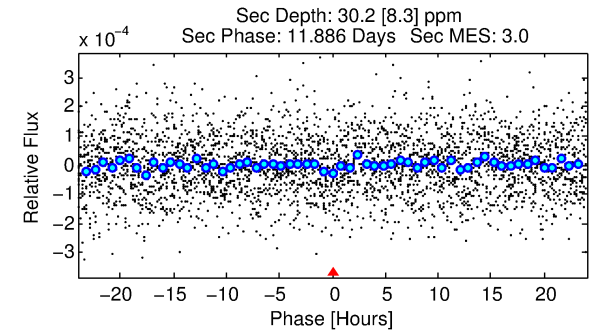
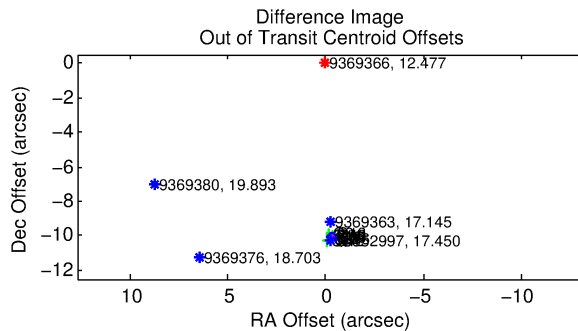
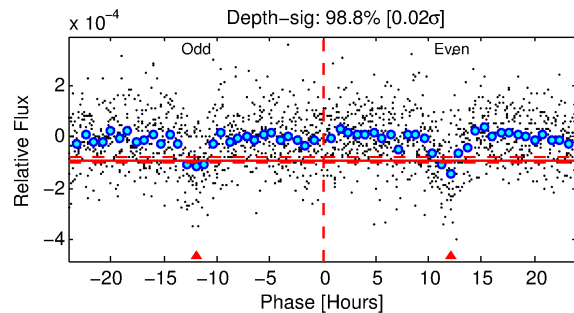
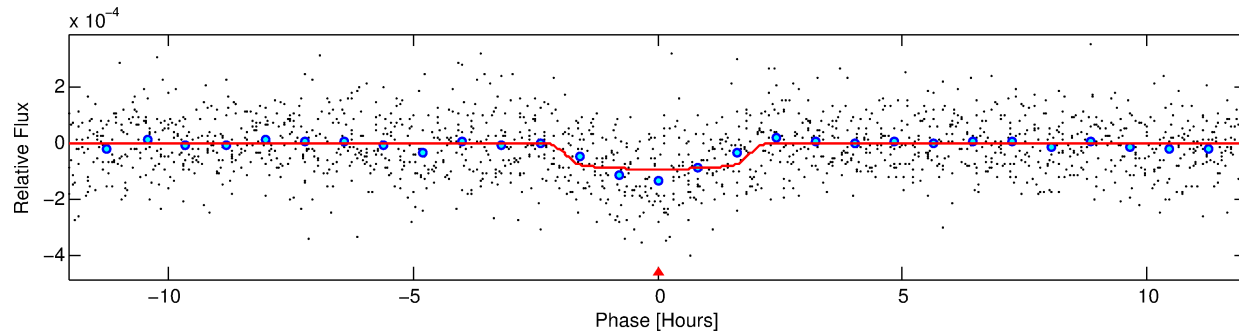
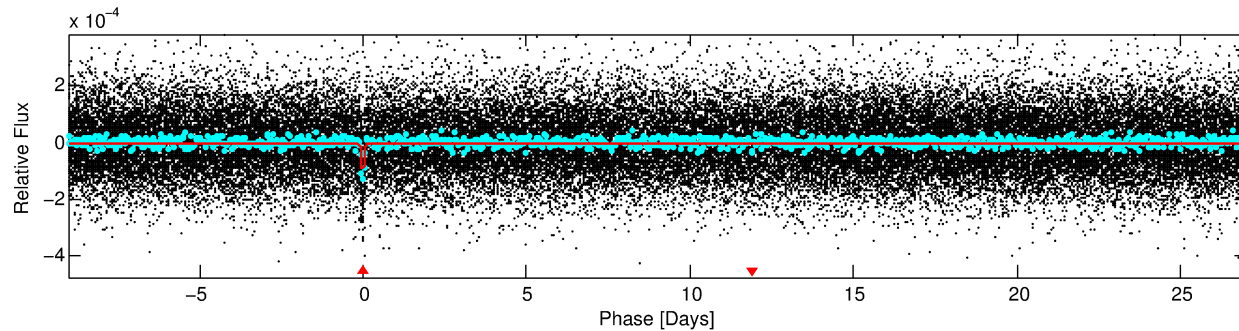
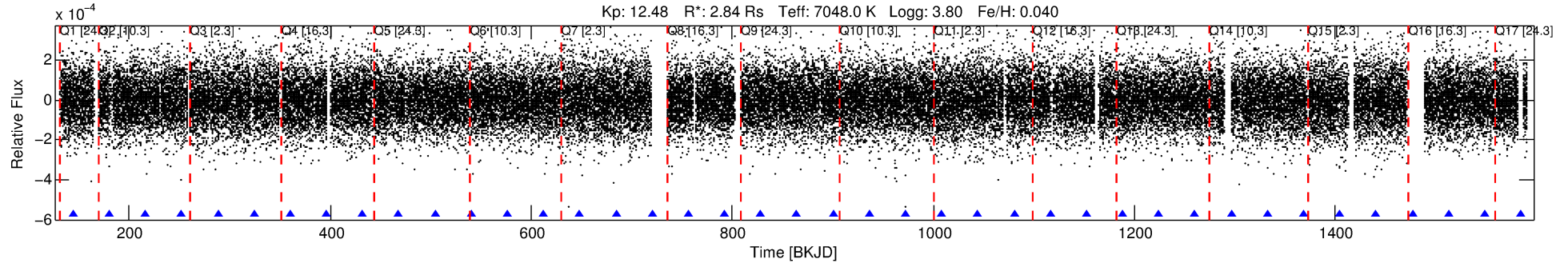
Ephemeris Match Information For 009369366-01

No Significant Match Found

DV One-Page Summary

KIC: 9369366 Candidate: 1 of 1 Period: 36.005 d
KOI: K02905.01 Corr: 0.918

Kp: 12.48 R*: 2.84 Rs Teff: 7048.0 K Logg: 3.80 Fe/H: 0.040



DV Fit Results:

Period = 36.00519 [0.00031] d
Epoch = 144.3552 [0.0068] BKJD
Rp/R* = 0.0100 [0.0034]
a/R* = 32.35 [67.13]
b = 0.89 [0.47]
Seff = 260.22 [121.41]
Teq = 1024 [119] K
Rp = 3.11 [1.48] Re
a = 0.2616 [0.0767] AU
Ag = 117.27 [100.78] [1.15σ]
Teffp = 5211 [975] K [4.26σ]

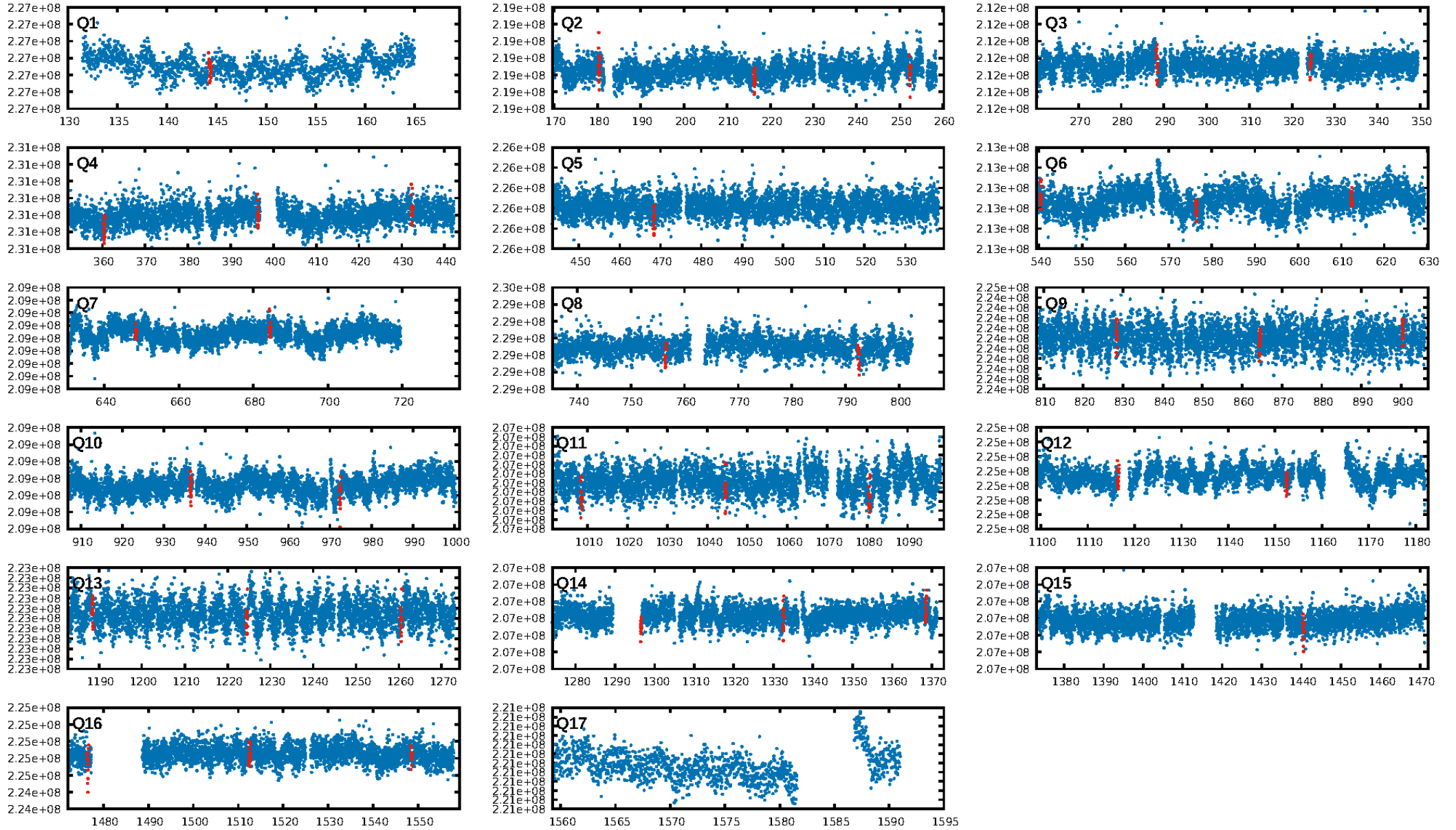
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.18e-26
RollingBand-fgt: 1.00 [35/35]
GhostDiagnostic-chr: -0.3388
Centroid-sig: 0.0%
Centroid-so: 45.596 arcsec [40.88σ]
OotOffset-rm: 10.082 arcsec [131.71σ]
KicOffset-rm: 10.149 arcsec [134.08σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [16/16]

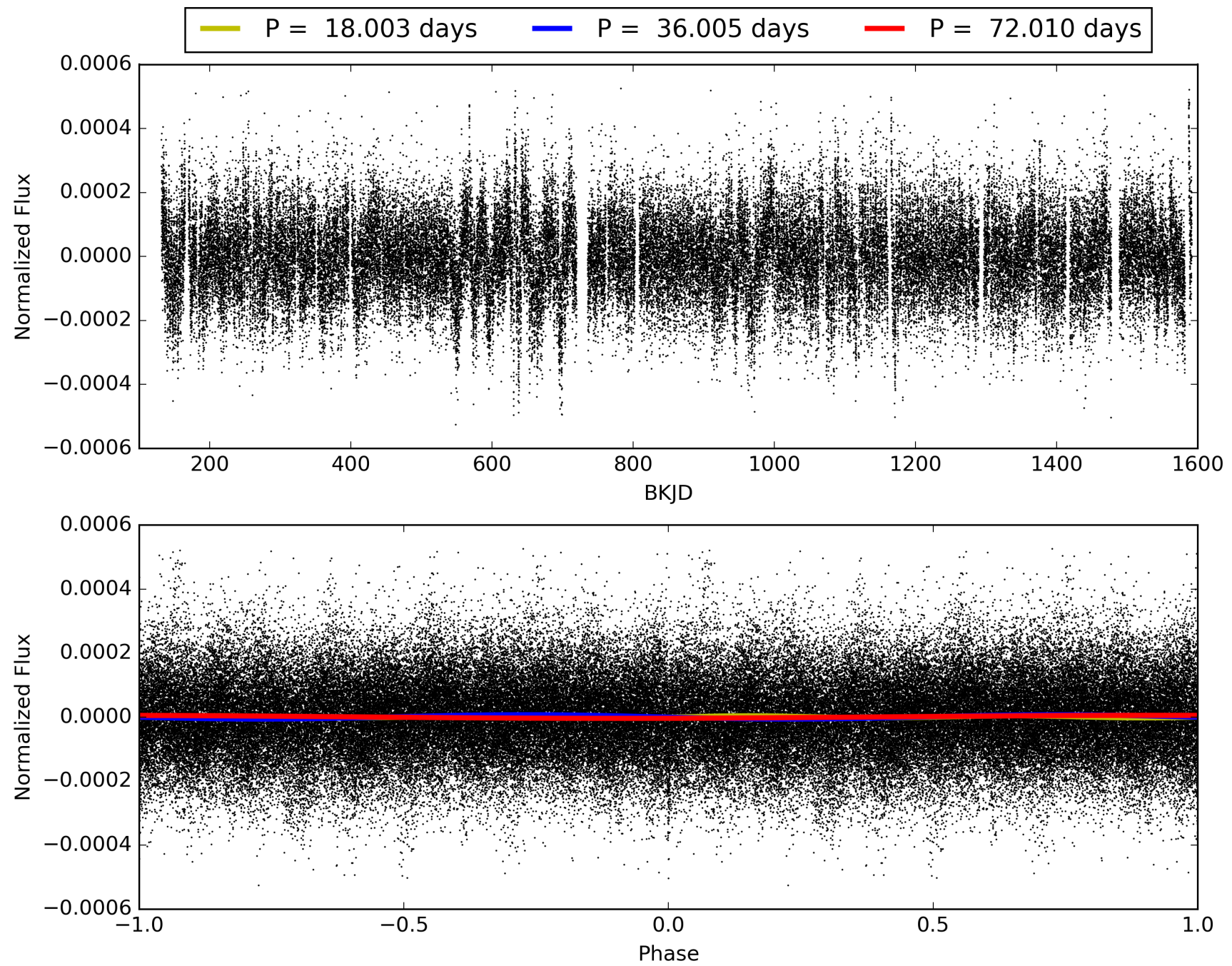
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:57:13 Z

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

TCE 009369366-01, PDC Light Curves

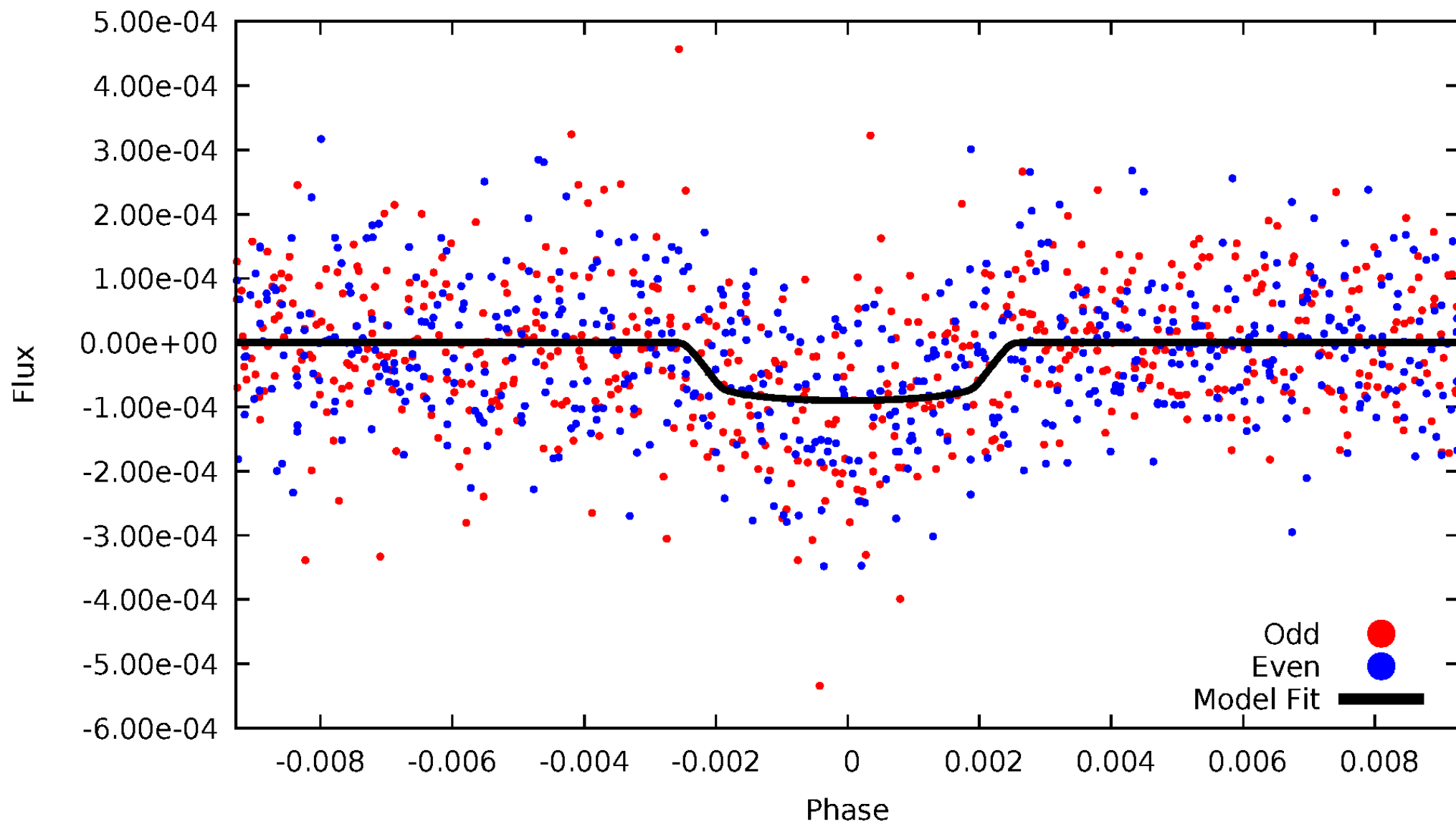


TCE 009369366-01



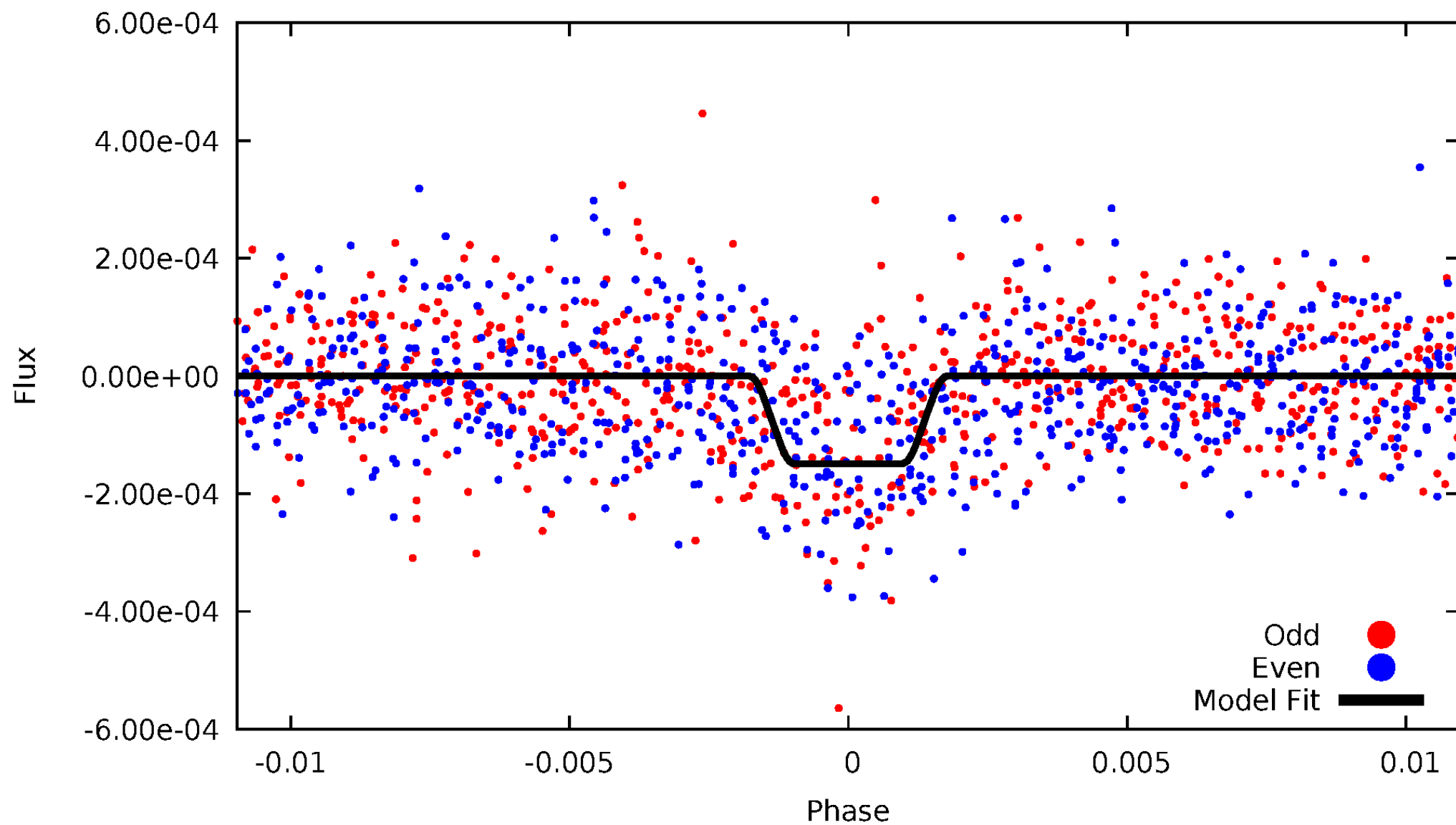
DV Odd/Even

TCE 009369366-01



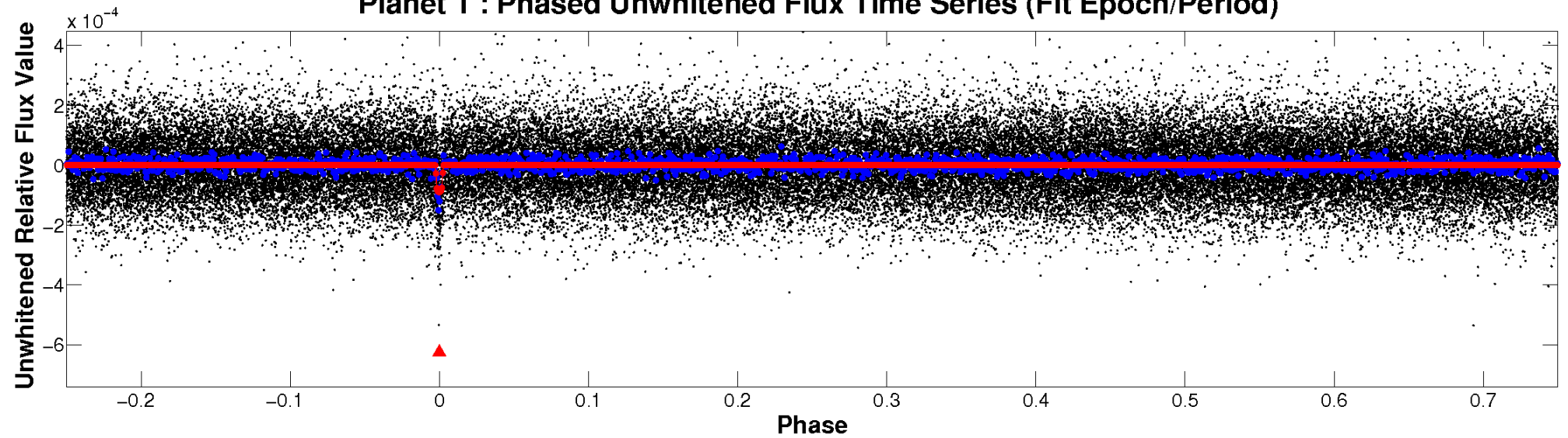
ALT Odd/Even

TCE 009369366-01

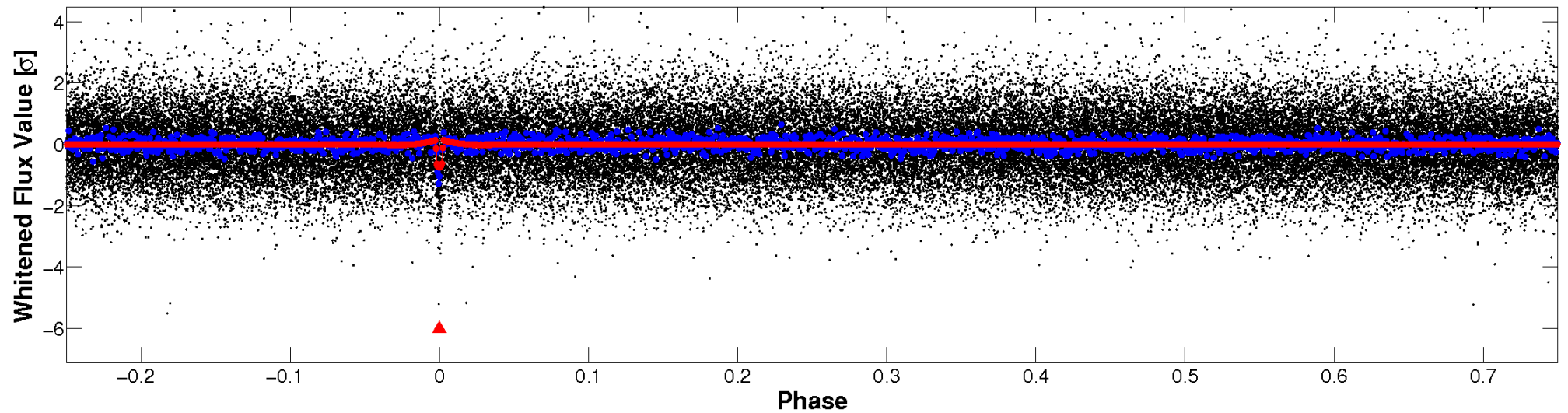


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

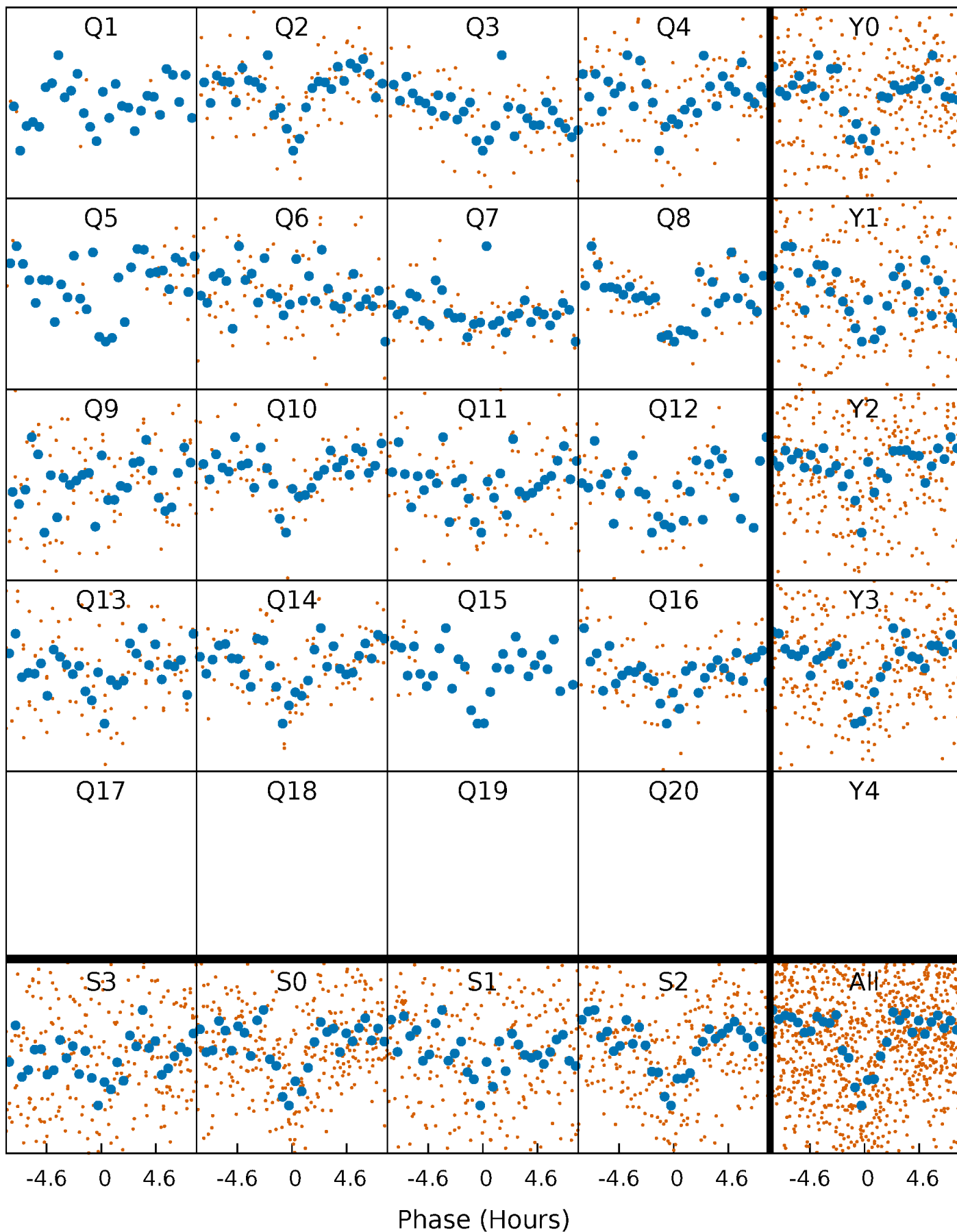


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



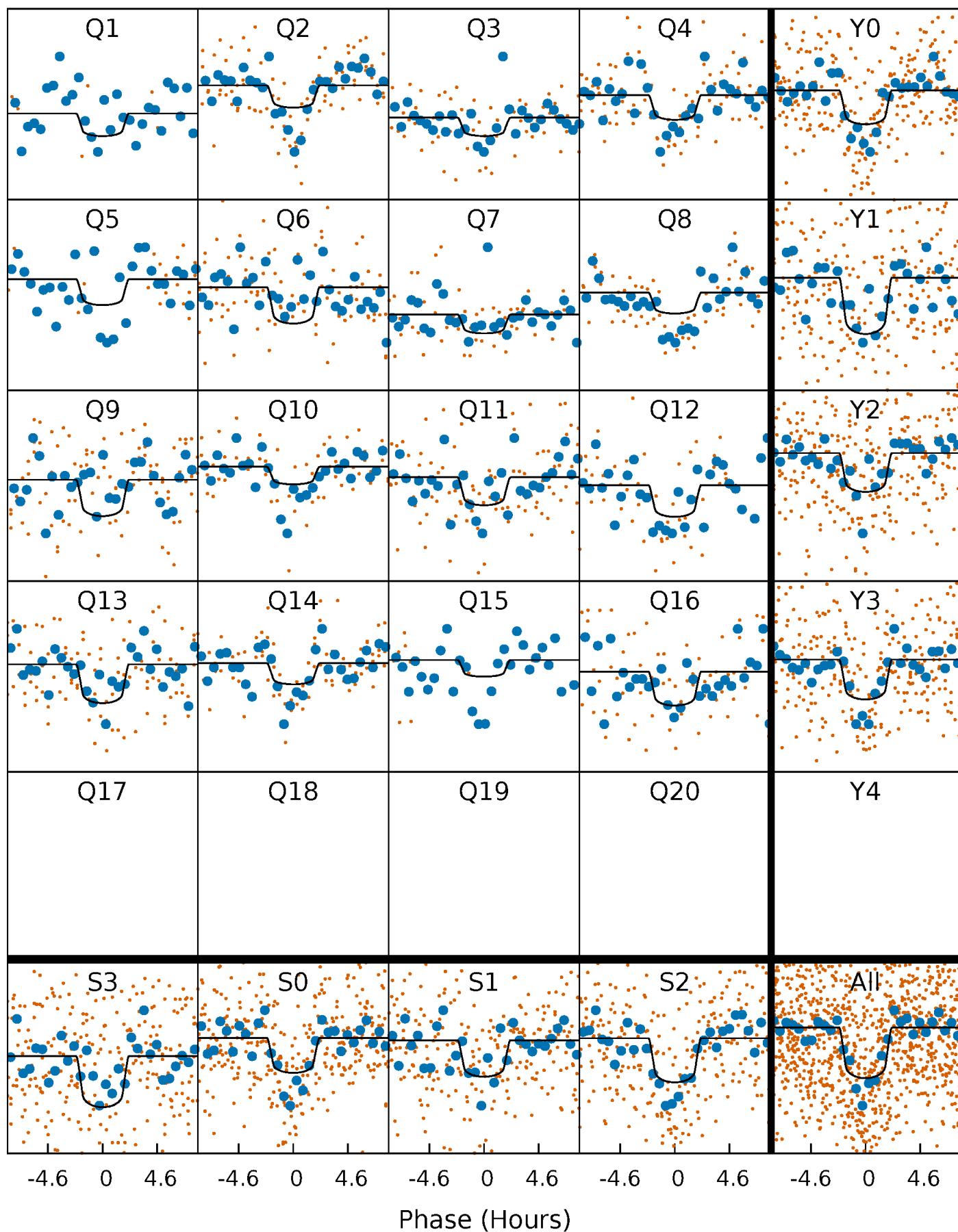
PDC Quarter-Phased Transit Curves

TCE 009369366-01 P= 36.005185 Days $T_0=144.355163$ (BKJD)



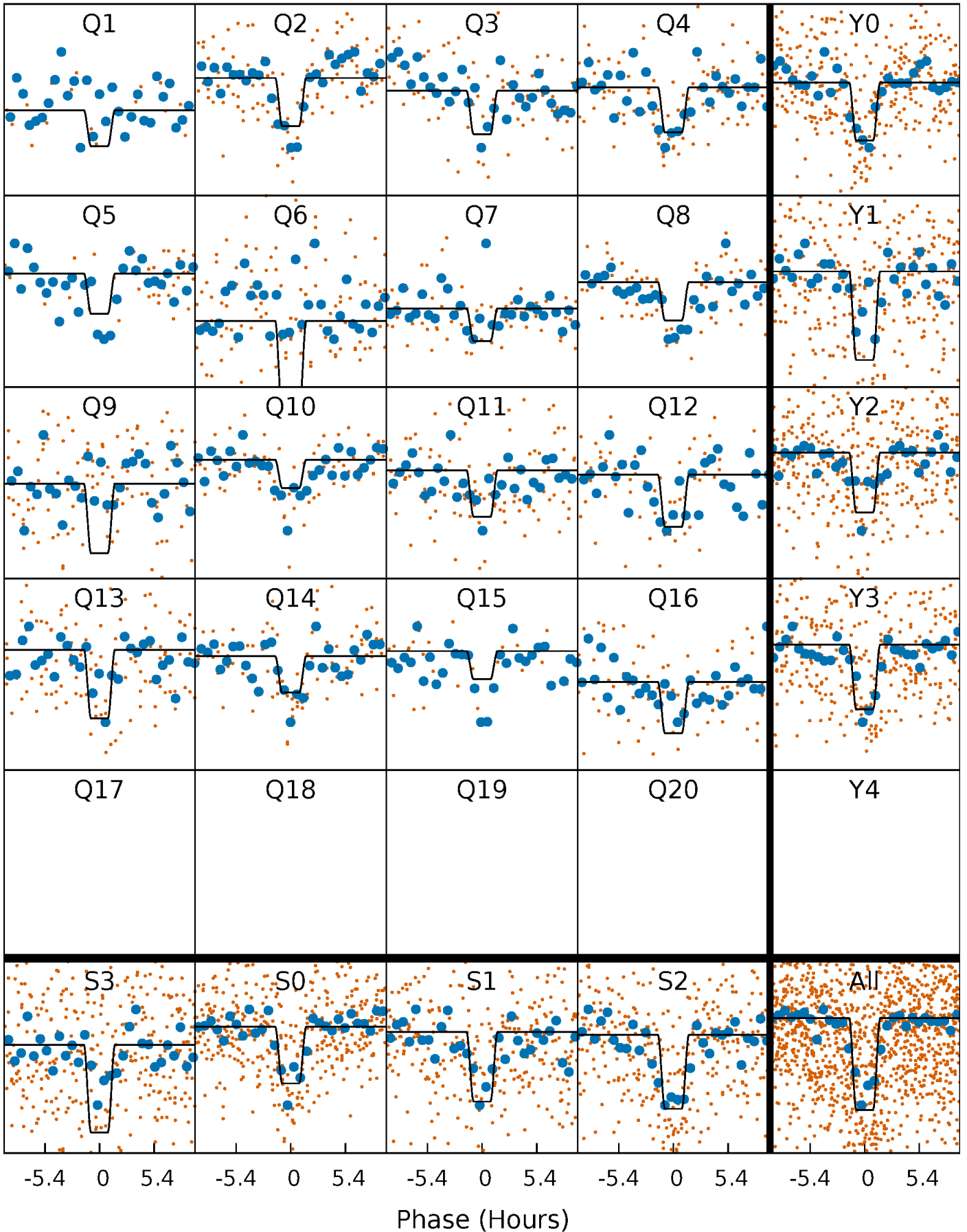
DV Quarter-Phased Transit Curves

TCE 009369366-01 P= 36.005185 Days $T_0=144.355163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

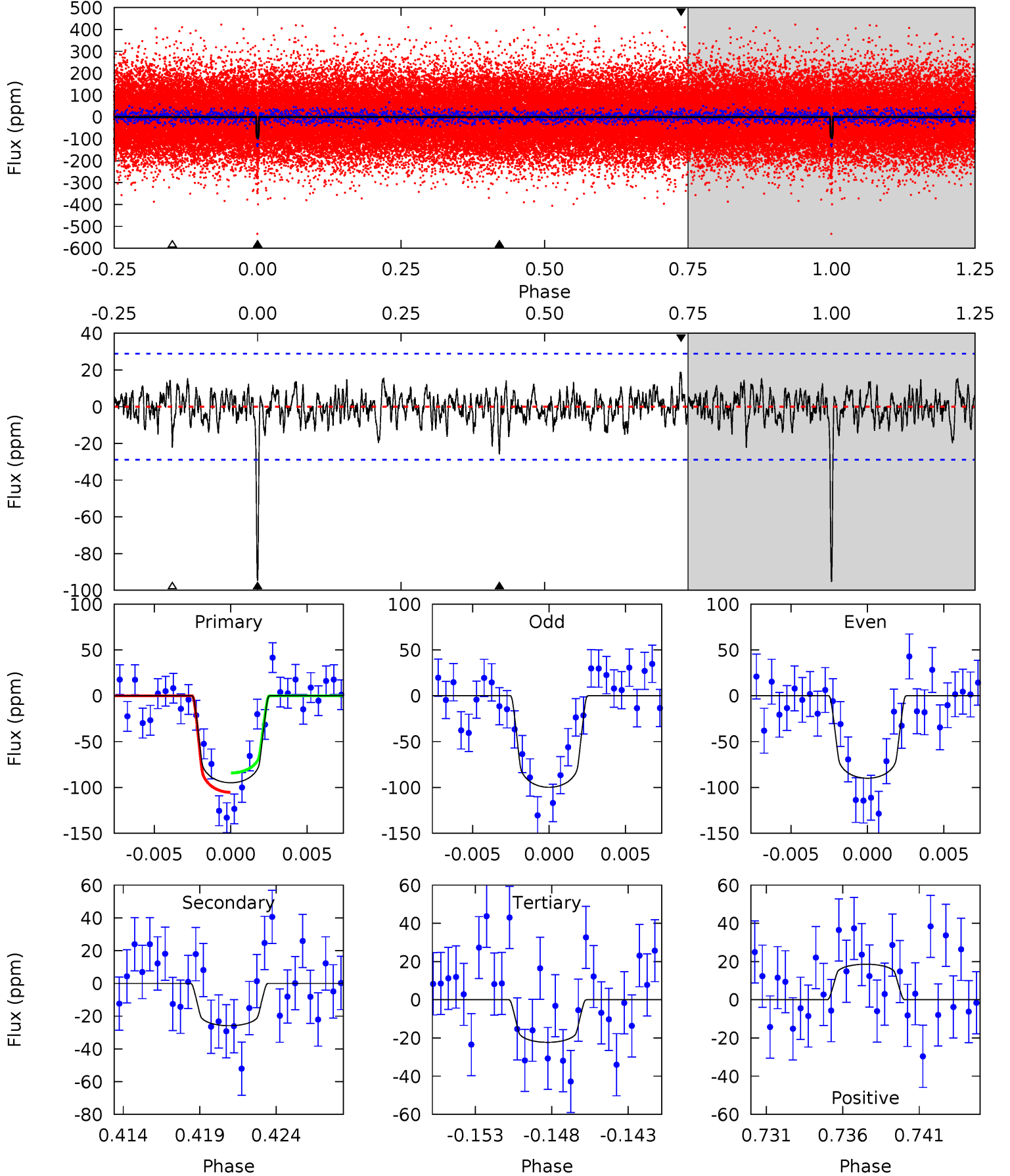
TCE 009369366-01 P= 36.004687 Days $T_0=144.357555$ (BKJD)



DV Model-Shift Uniqueness Test

009369366-01, P = 36.005185 Days, E = 108.349978 Days

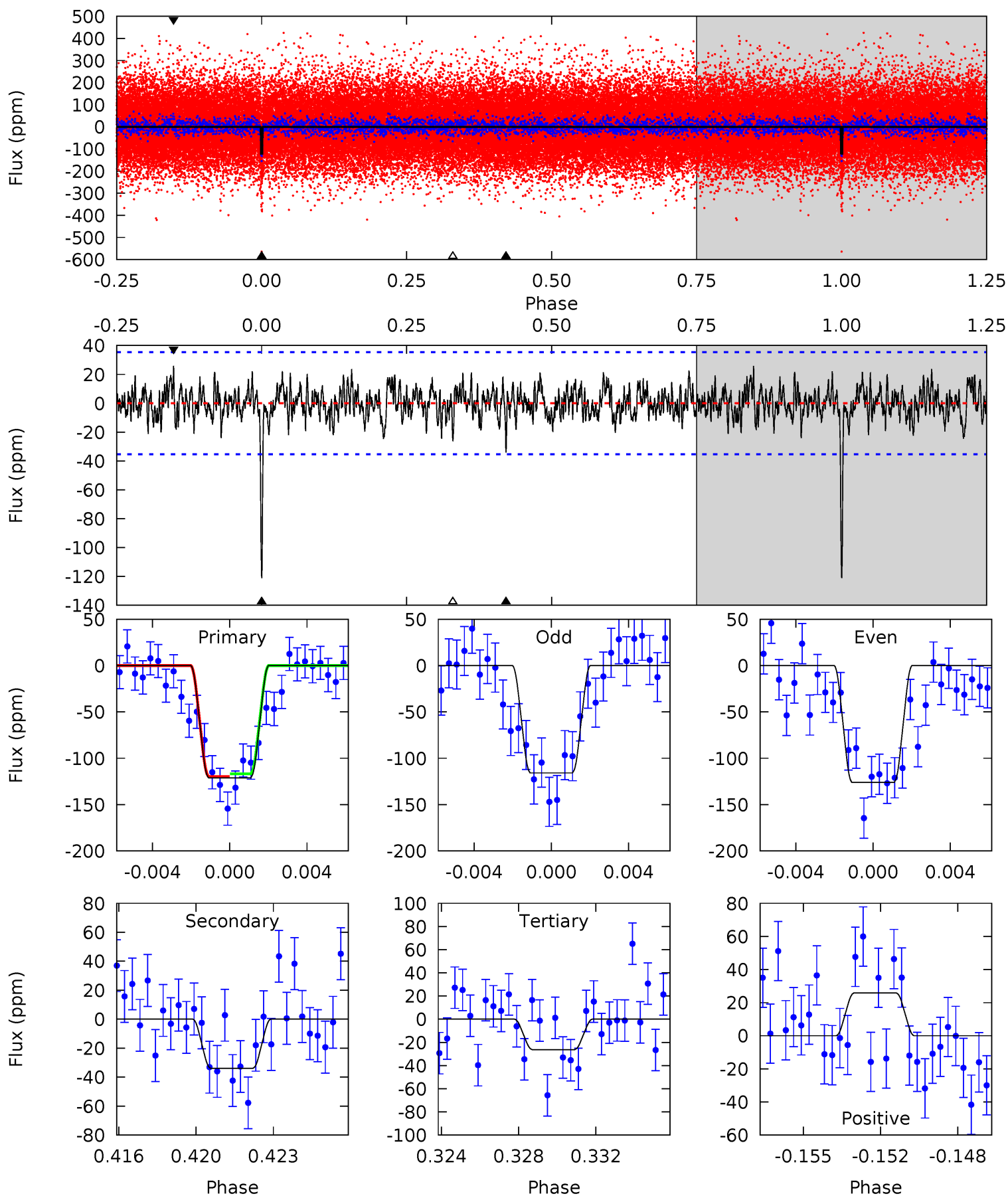
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	4.61	3.97	3.31	5.15	2.80	1.12	13.0	13.6	0.63	1.30	0.88	1.18	0.16	1.88



Alt Model-Shift Uniqueness Test

009369366-01, $P = 36.004687$ Days, $E = 108.352868$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	5.01	3.88	3.82	5.22	2.92	1.26	14.0	14.1	1.13	1.19	0.76	1.00	0.18	0.21



Stellar Parameters For KIC 009369366

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7048^{+172}_{-246}	$3.797^{+0.252}_{-0.108}$	$0.040^{+0.250}_{-0.300}$	$2.838^{+0.469}_{-0.938}$	$1.840^{+0.178}_{-0.330}$	$0.113^{+0.181}_{-0.038}$
	+2%/-3%	+7%/-3%	+625%/-750%	+17%/-33%	+10%/-18%	+159%/-34%
Source	PHO1	FLK73	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 009369366-01 / KOI 2905.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 6	$2.97^{+1.16}_{-1.09}$	1410^{+86}_{-106}	4998^{+1099}_{-606}	104^{+159}_{-51}
Alt.	-34 ± 7	$3.55^{+1.24}_{-1.07}$	1415^{+84}_{-119}	4914^{+819}_{-513}	99^{+111}_{-46}

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 $A_{\text{obs}} \gg 1.0$

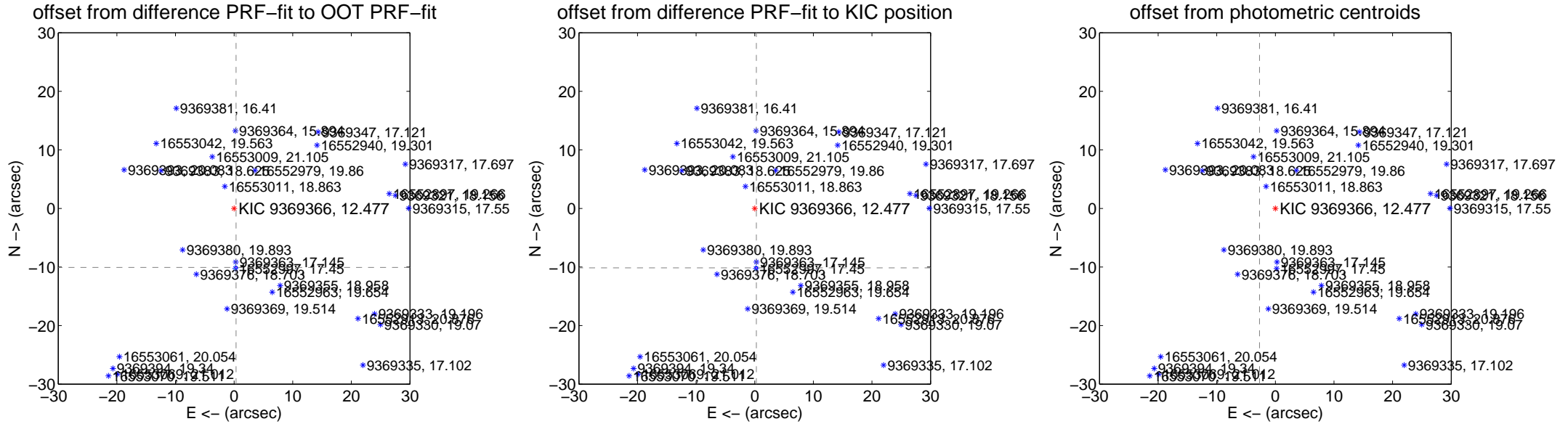
DV Centroid Data

Supplemental centroid analysis for 009369366-01. Kepler magnitude: 12.48. Transit SNR 10.95

There are 14 quarters with good PRF difference image offsets

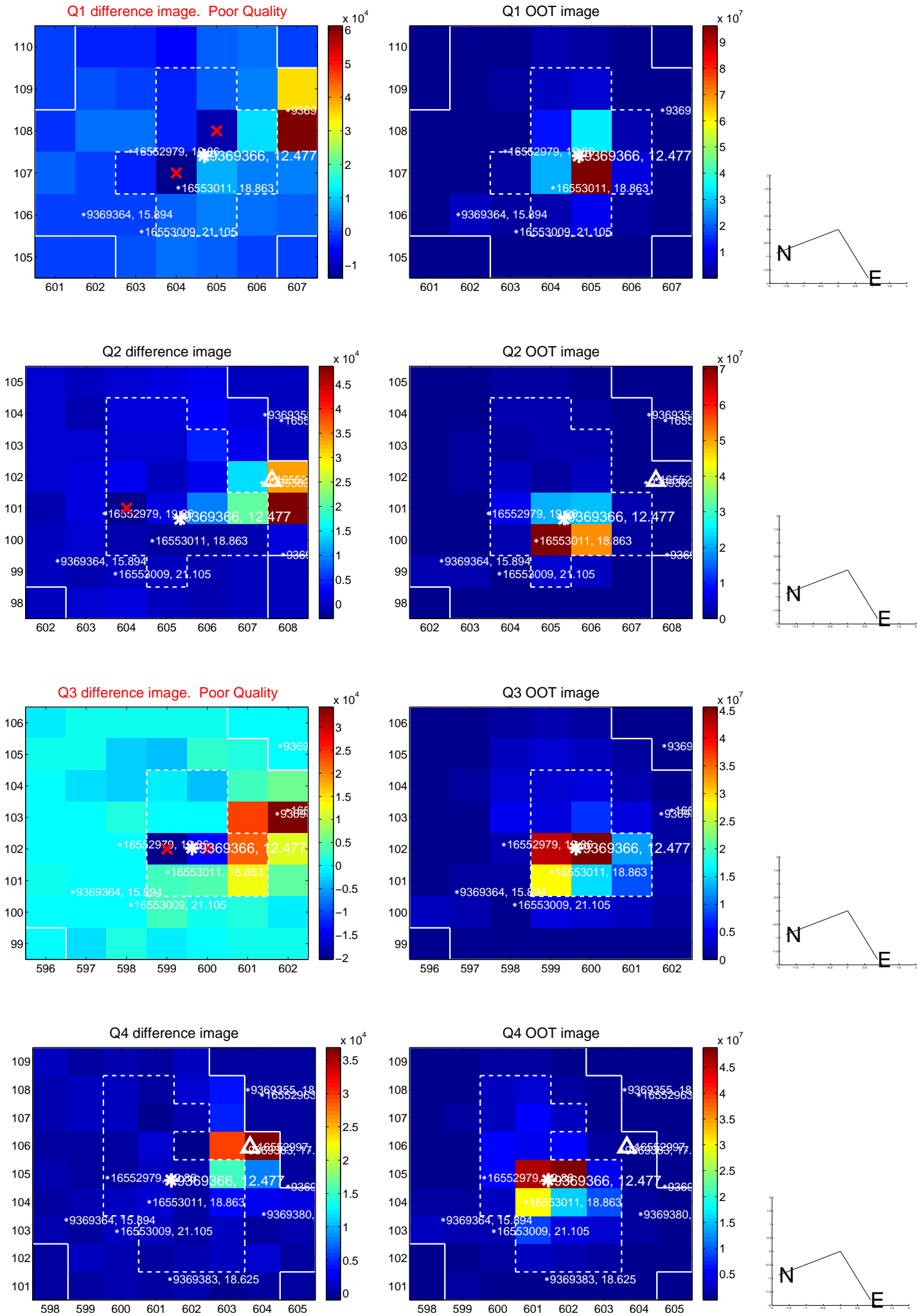
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.082 \pm 0.077	131.71	-0.332 \pm 0.074	-10.076 \pm 0.077
PRF-fit source offset from KIC position	10.149 \pm 0.076	134.08	-0.271 \pm 0.074	-10.145 \pm 0.076
photometric centroid source offset	45.60 \pm 1.12	40.88	2.71 \pm 1.37	-45.52 \pm 1.11

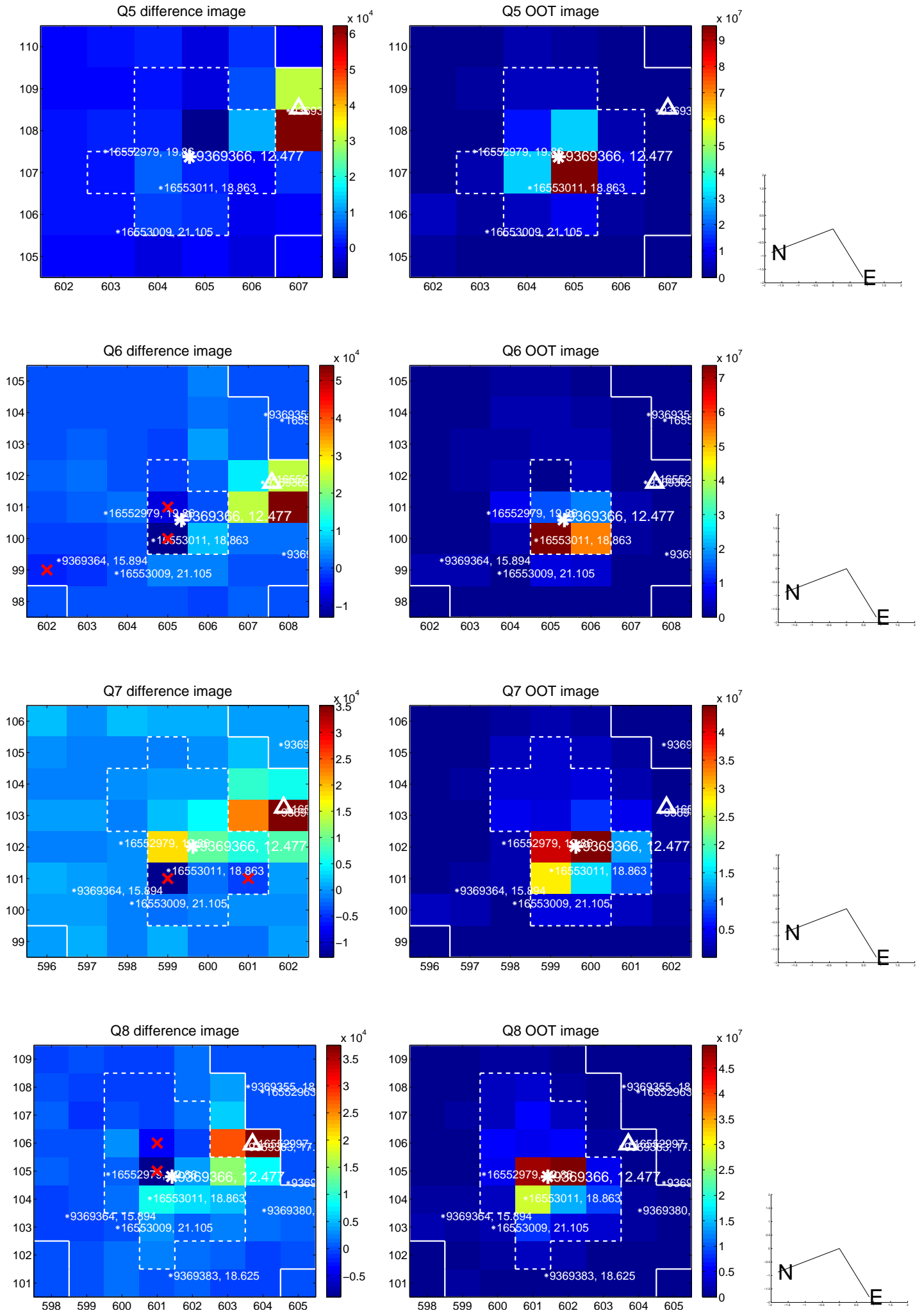


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

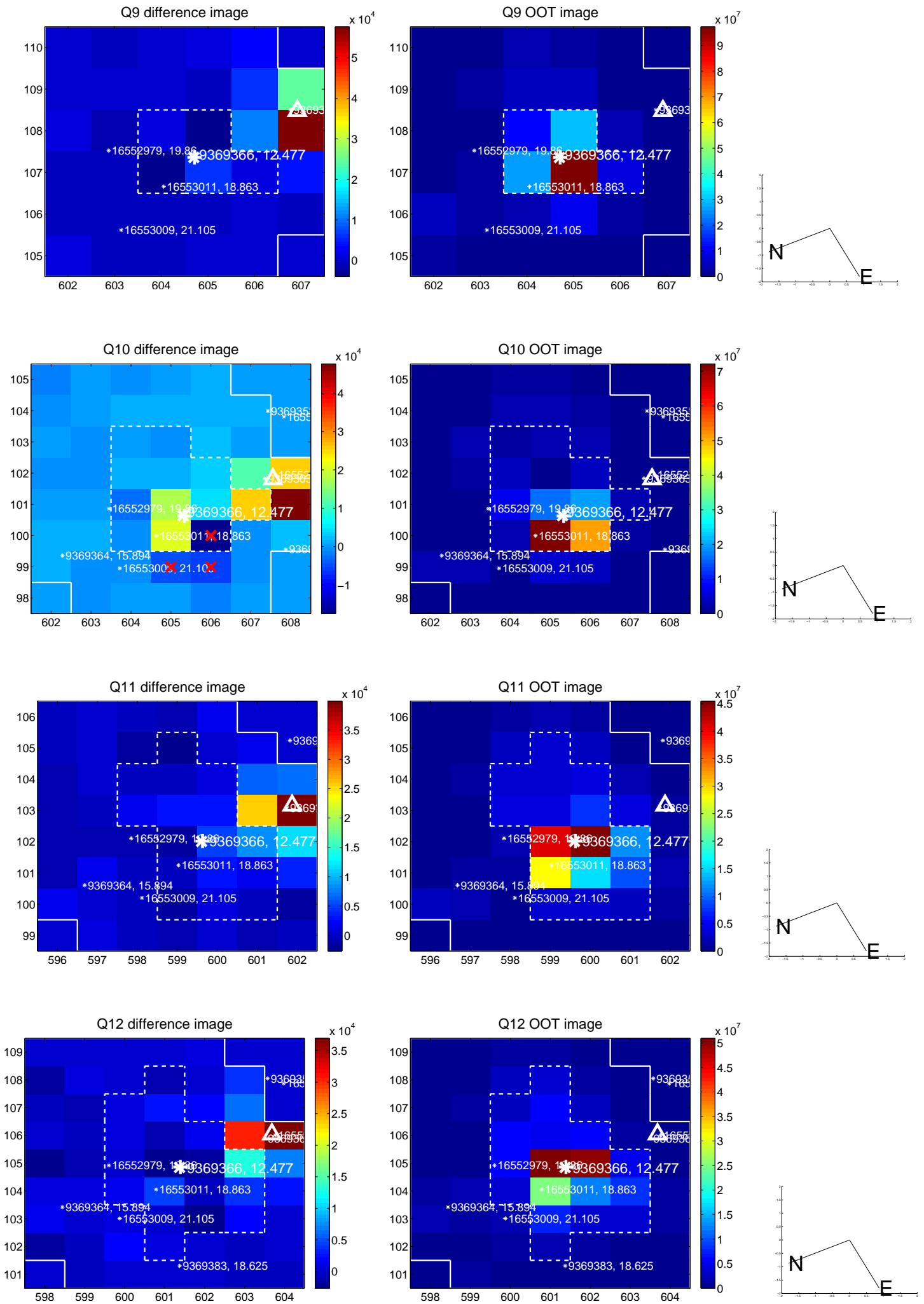
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



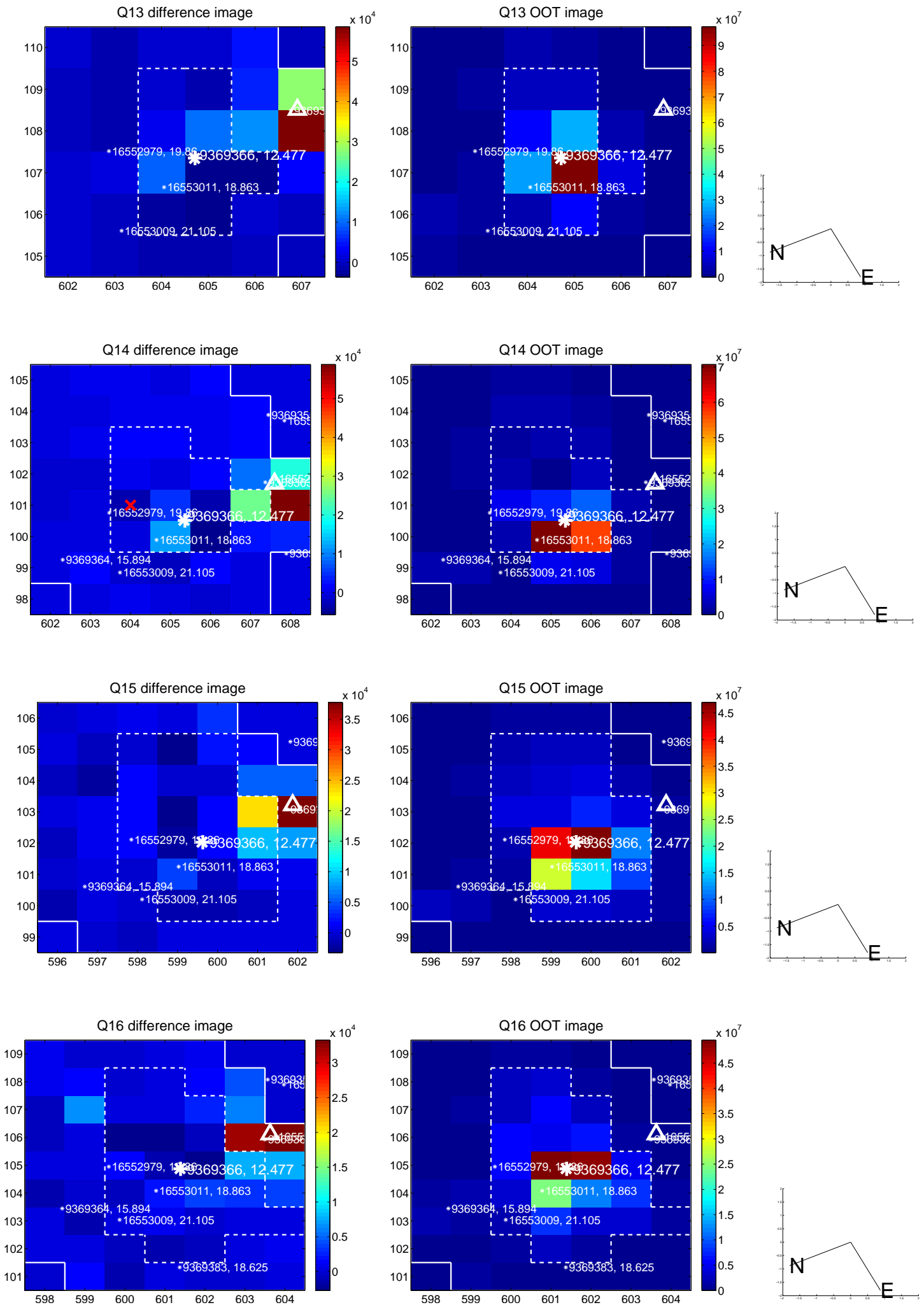
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



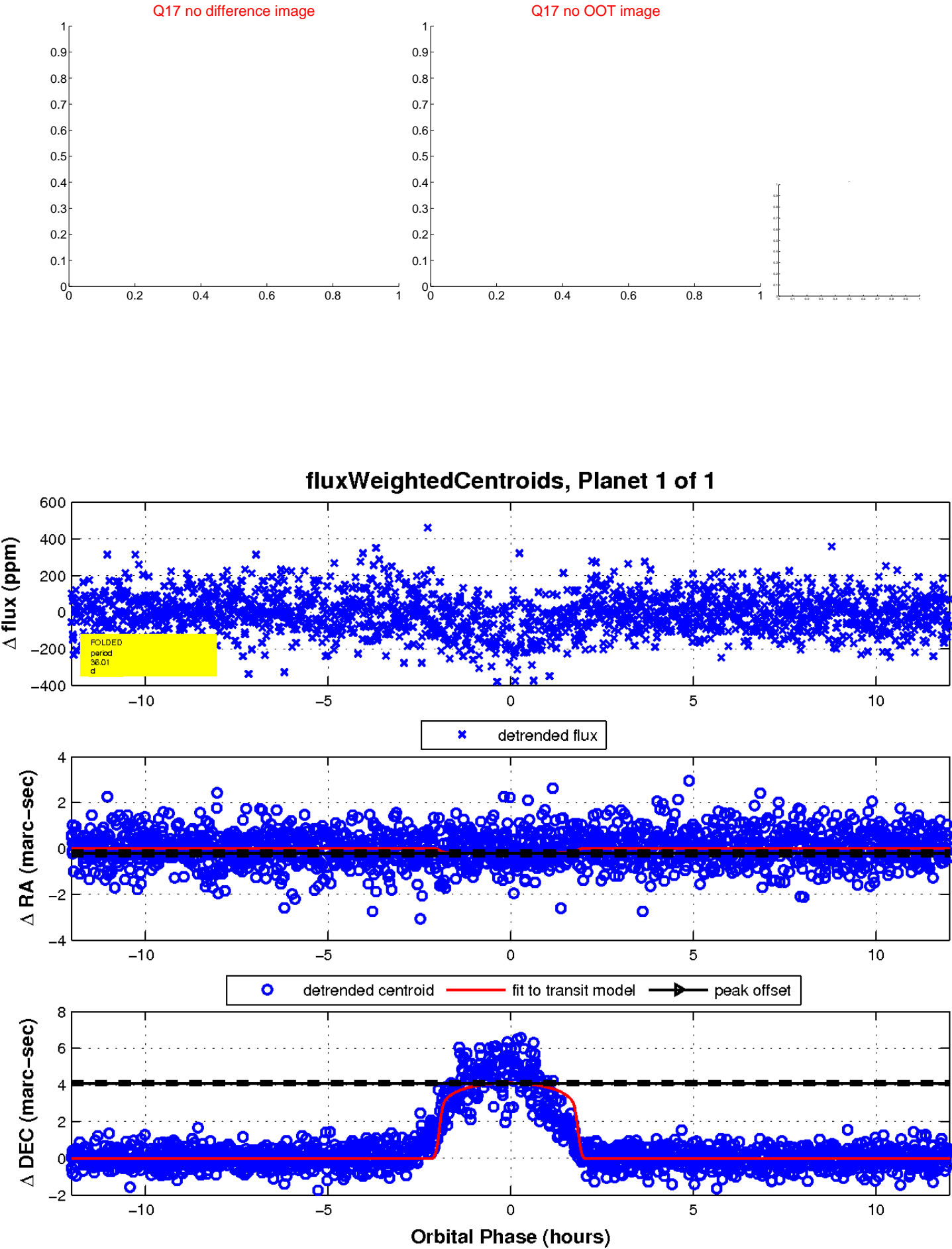
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

