

KIC 009536692

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})
009536692-01	OBS	1948.01	26.635308	155.554412	1423.1	5.628	31.5	33.7	0.88	5215	5.85	19.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009536692-01	OBS	FP	0.00	0	1	1	0	DEEP_V_SHAPED—CENT_UNRESOLVED_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.

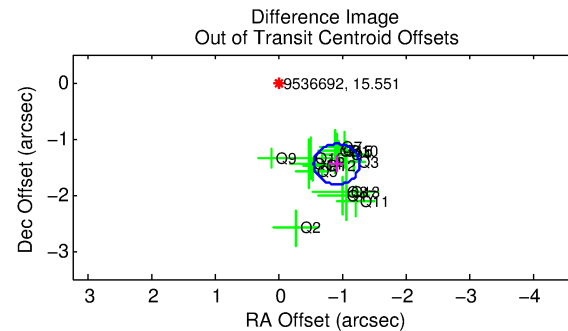
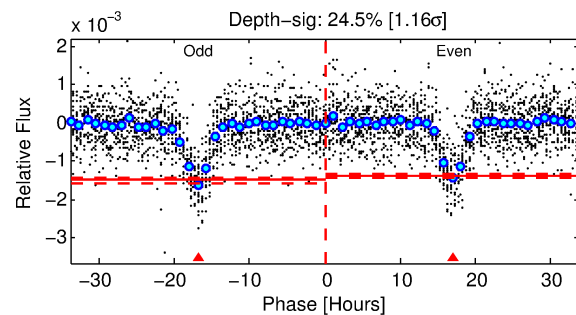
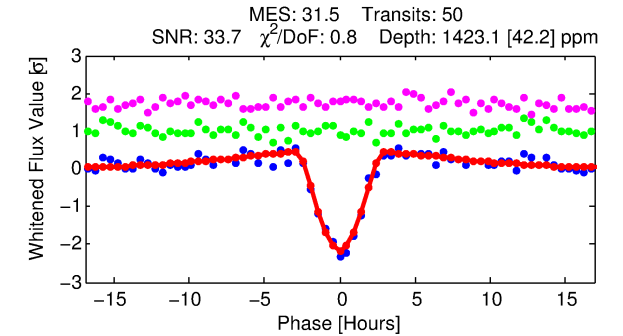
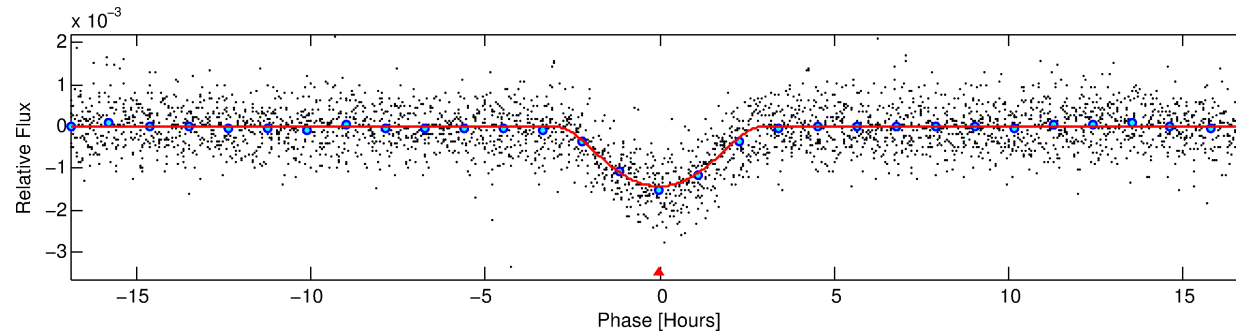
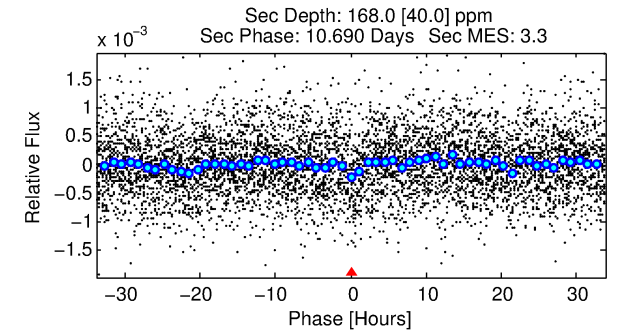
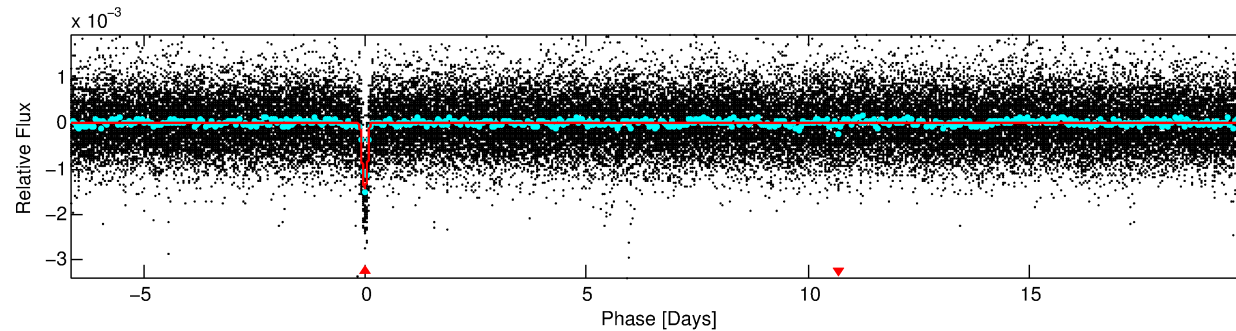
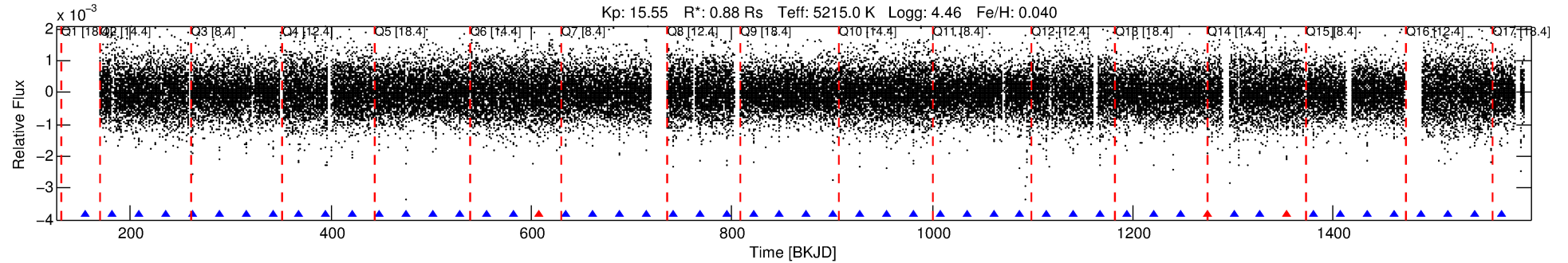
Ephemeris Match Information For 009536692-01

No Significant Match Found

DV One-Page Summary

KIC: 9536692 Candidate: 1 of 1 Period: 26.635 d
KOI: K01948.01 Corr: 0.986

Kp: 15.55 R*: 0.88 Rs Teff: 5215.0 K Logg: 4.46 Fe/H: 0.040



DV Fit Results:

Period = 26.63531 [0.00012] d
Epoch = 155.5544 [0.0037] BKJD
Rp/R* = 0.0608 [0.0397]
a/R* = 14.02 [2.50]
b = 0.99 [0.06]
Seff = 19.48 [5.48]
Teq = 536 [38] K
Rp = 5.85 [3.96] Re
a = 0.1627 [0.0264] AU
Ag = 71.42 [96.63] [0.73σ]
Teff = 2408 [803] K [2.33σ]

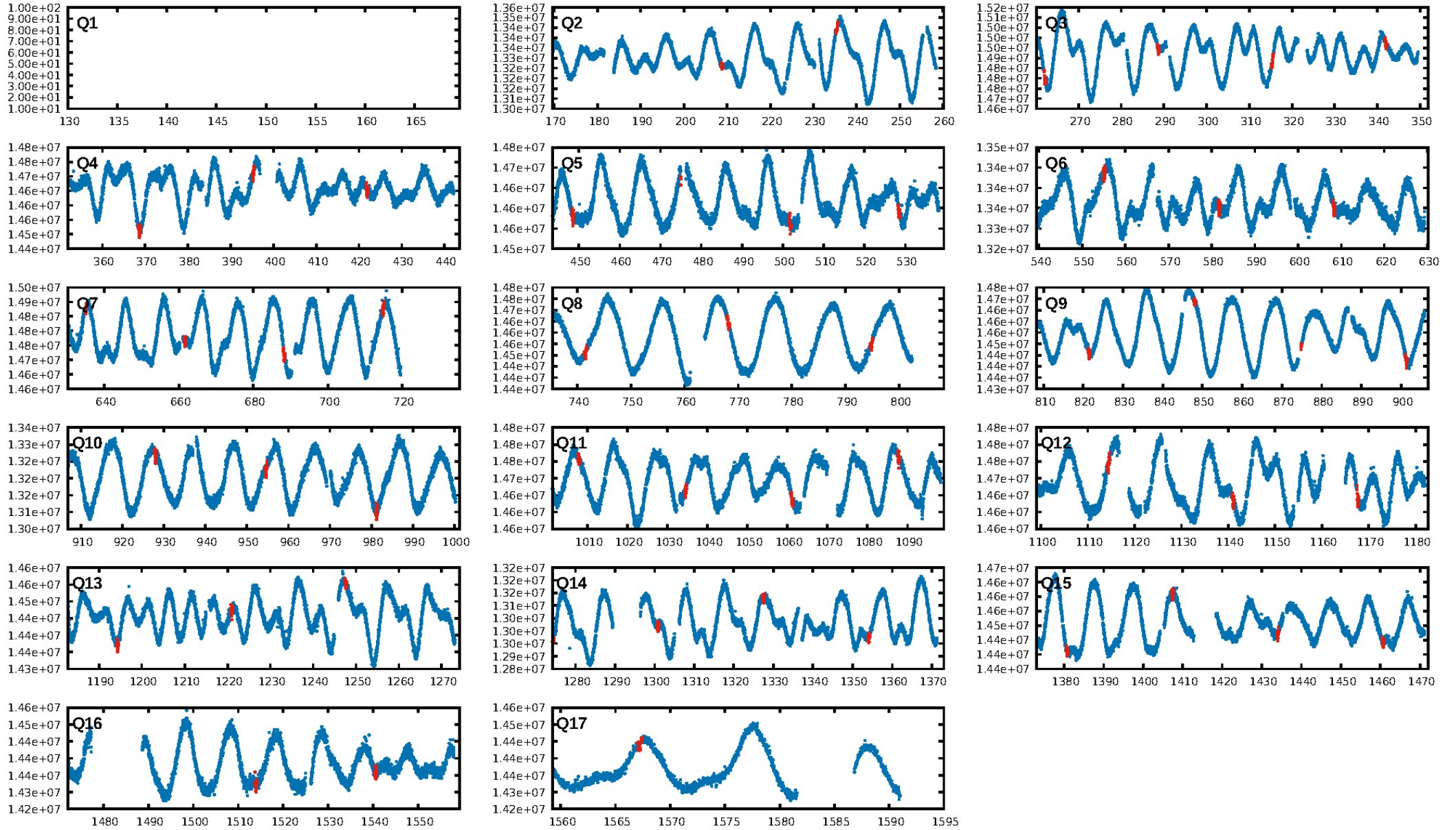
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.4%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 9.38e-189
RollingBand-fgt: 0.94 [46/49]
GhostDiagnostic-chr: 1.737
Centroid-sig: 0.0%
Centroid-so: 1.473 arcsec [4.22σ]
OotOffset-rm: 1.713 arcsec [14.32σ]
KicOffset-rm: 1.804 arcsec [14.96σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

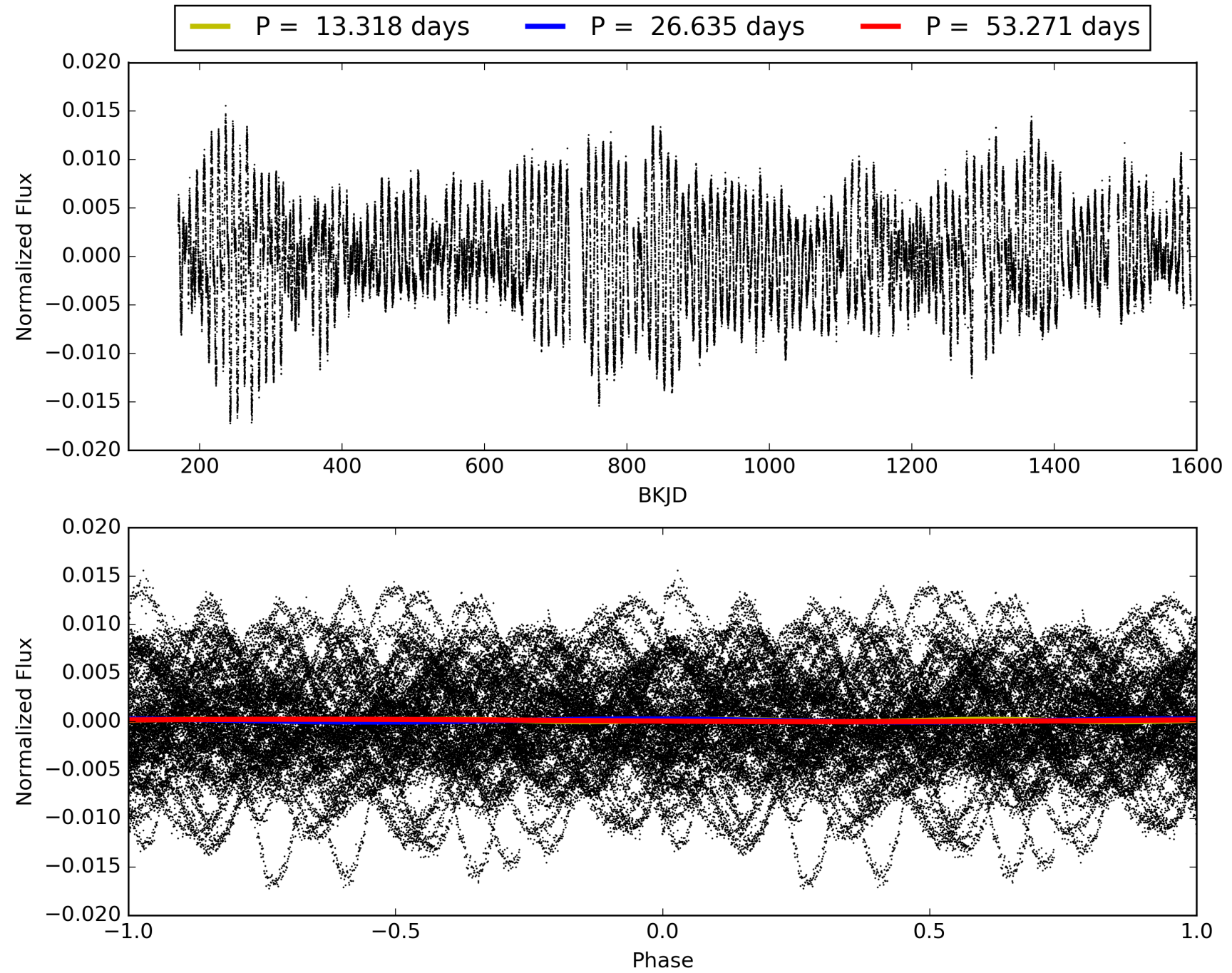
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:43:37 Z

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

TCE 009536692-01, PDC Light Curves

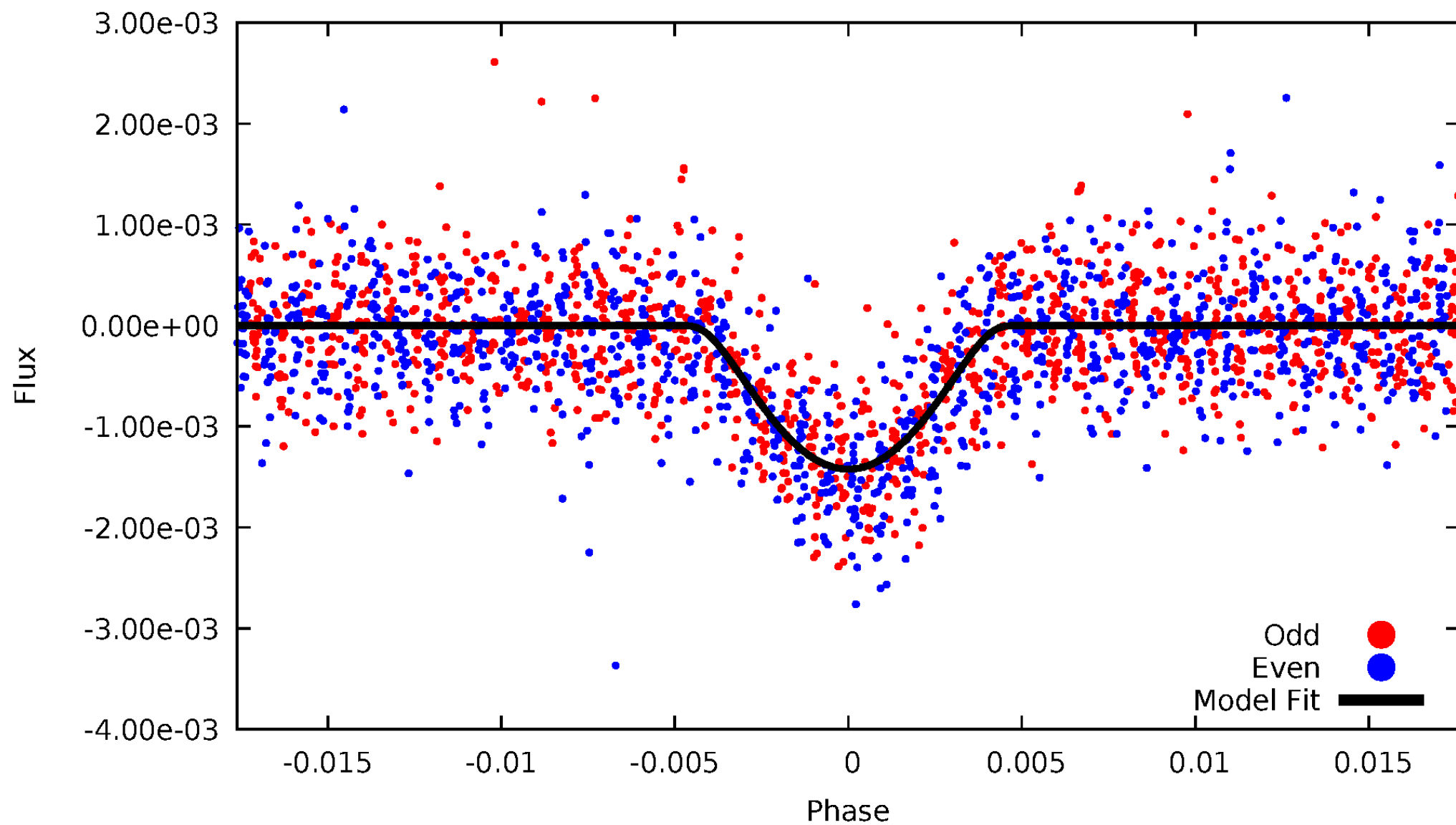


TCE 009536692-01



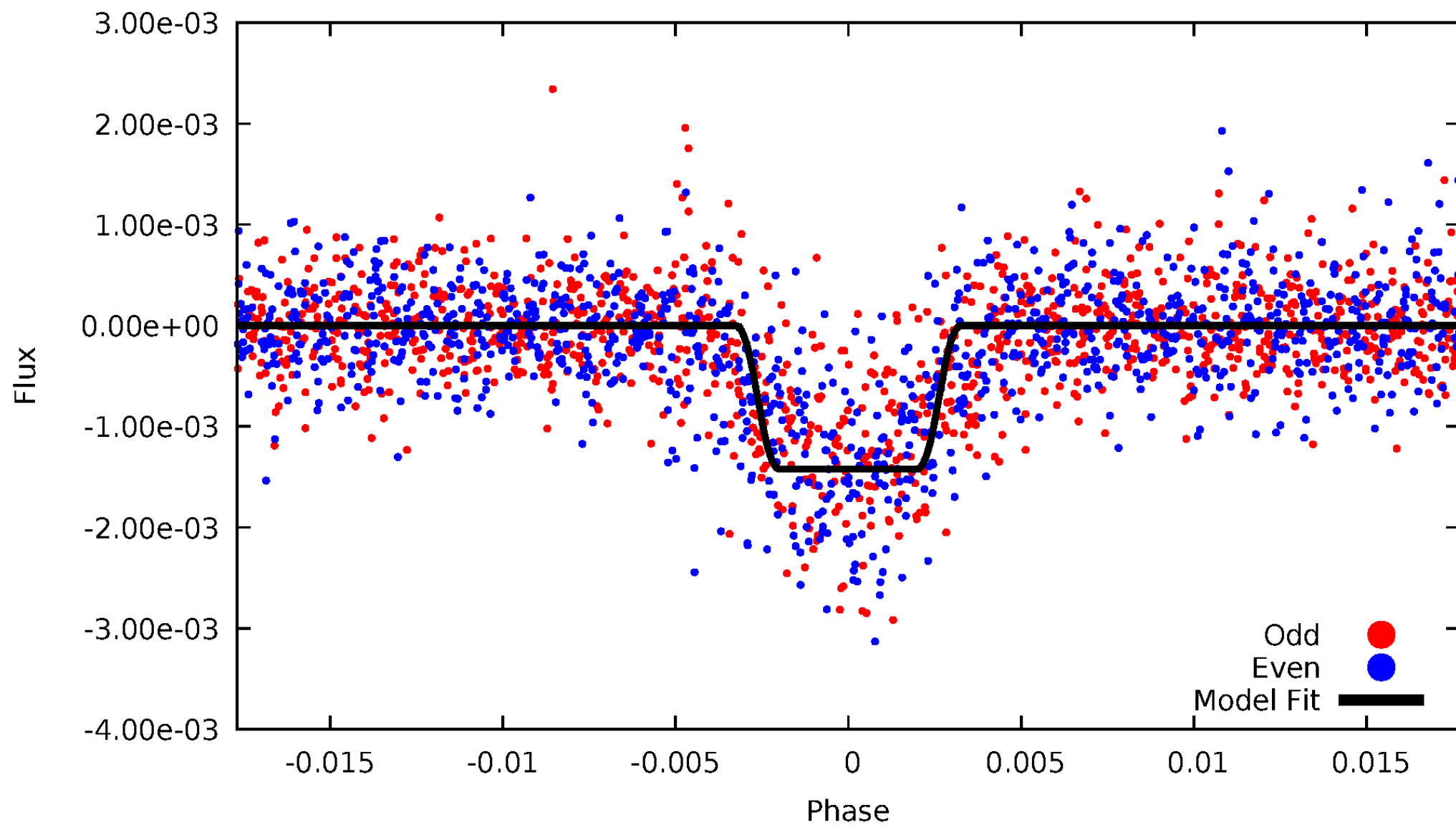
DV Odd/Even

TCE 009536692-01



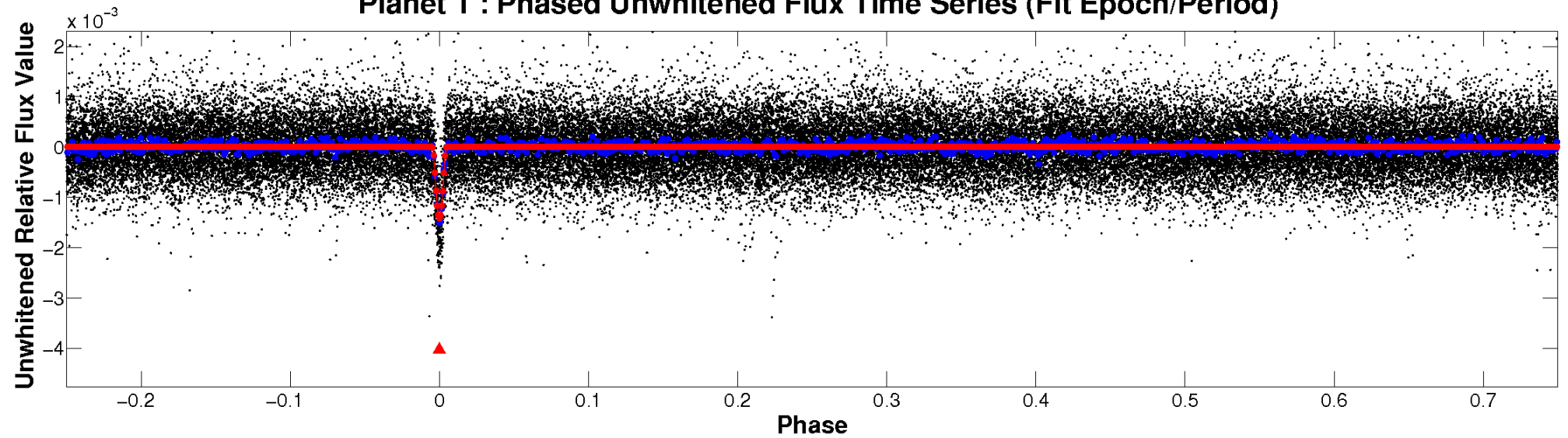
ALT Odd/Even

TCE 009536692-01

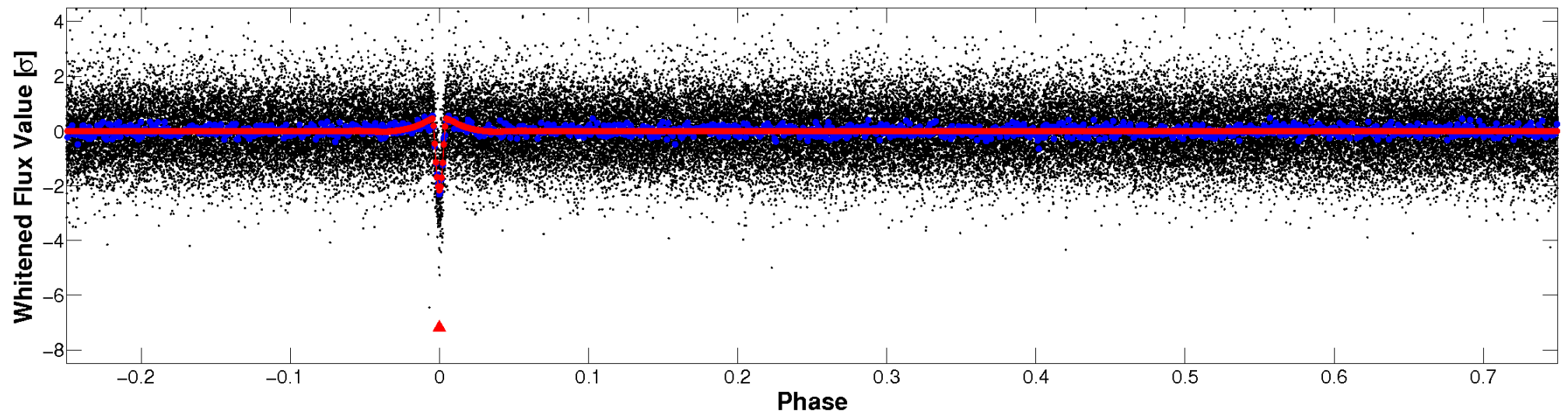


Non-Whitened Vs. Whitened Light Curve

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

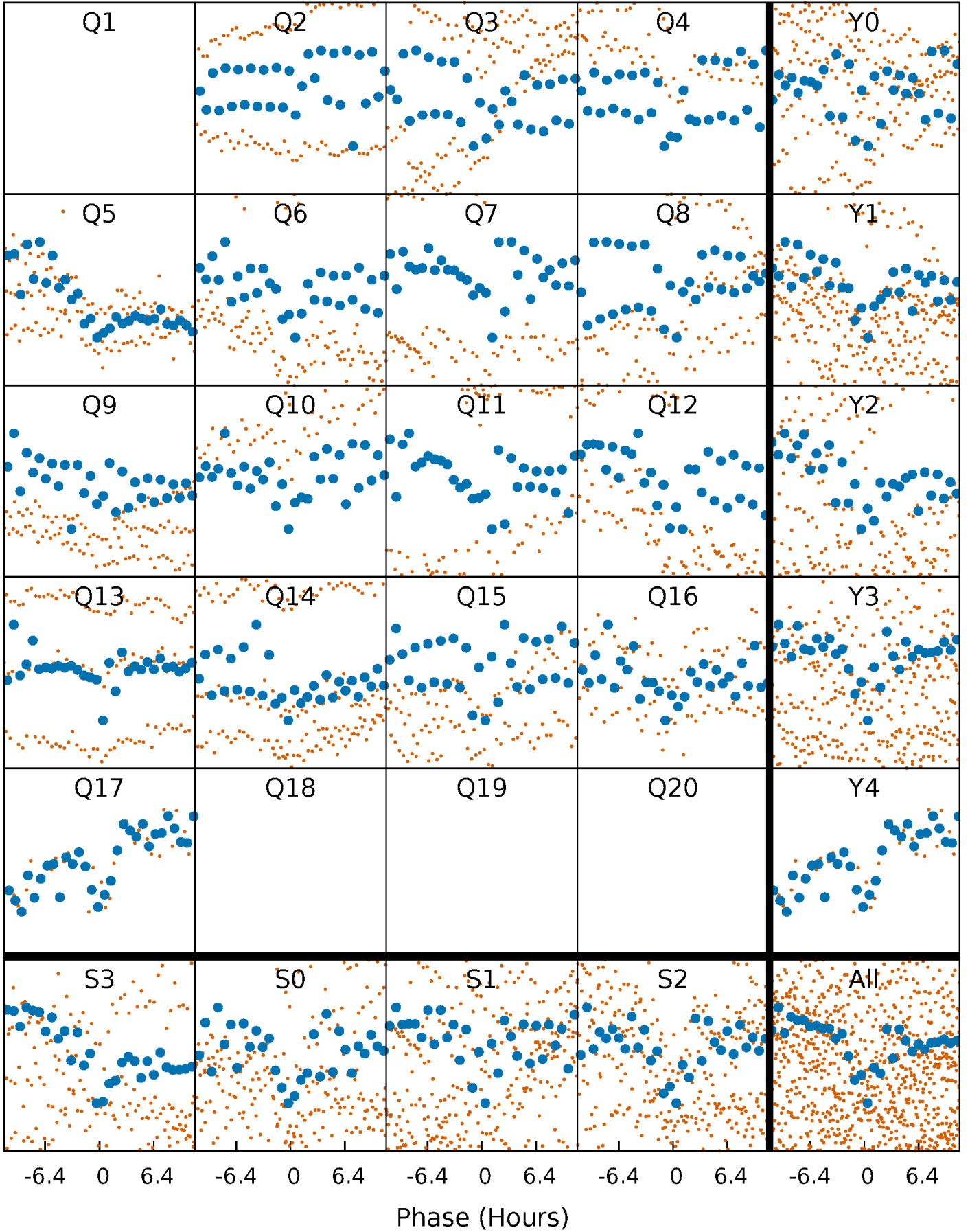


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



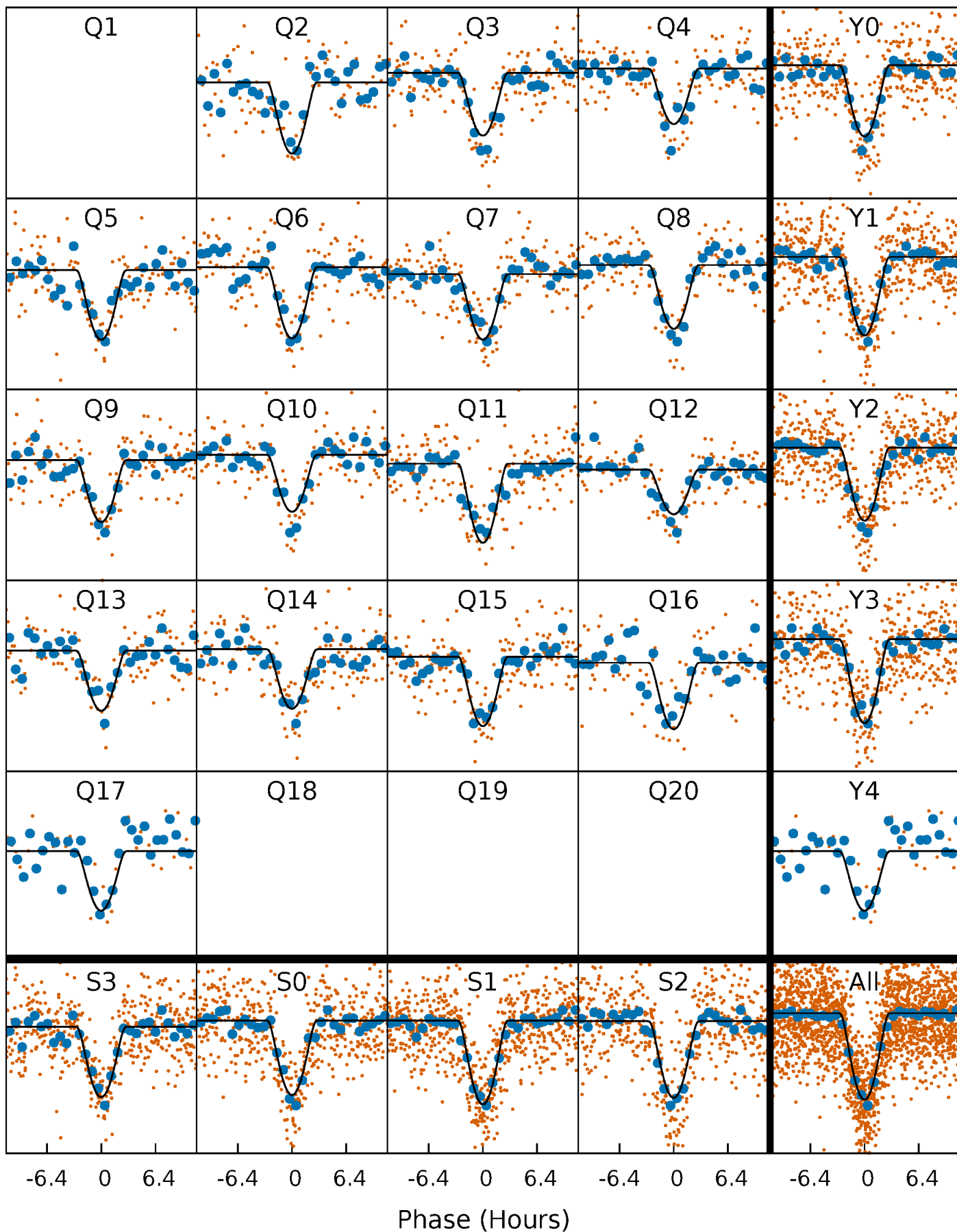
PDC Quarter-Phased Transit Curves

TCE 009536692-01 P= 26.635308 Days $T_0=155.554412$ (BKJD)



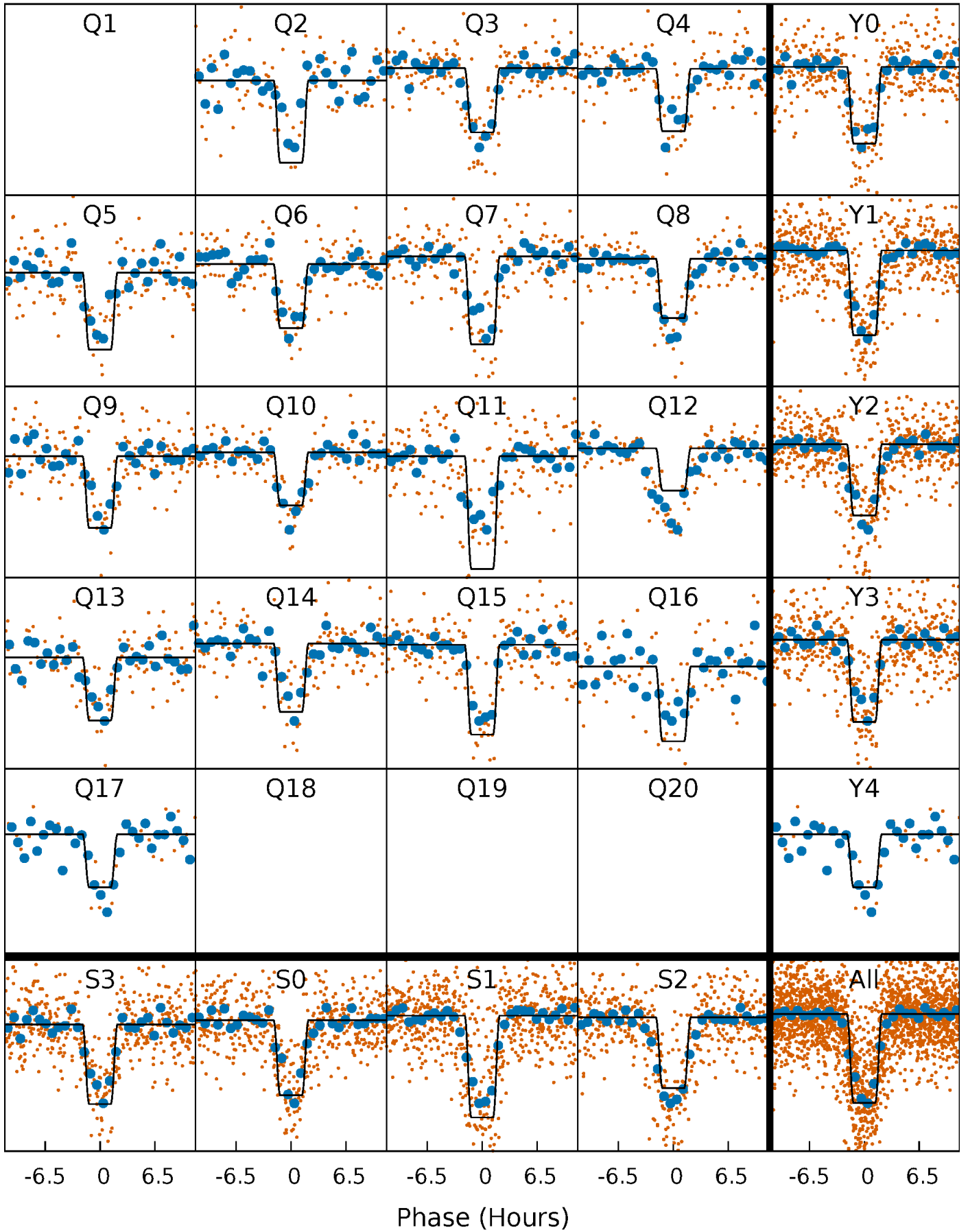
DV Quarter-Phased Transit Curves

TCE 009536692-01 P= 26.635308 Days $T_0=155.554412$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

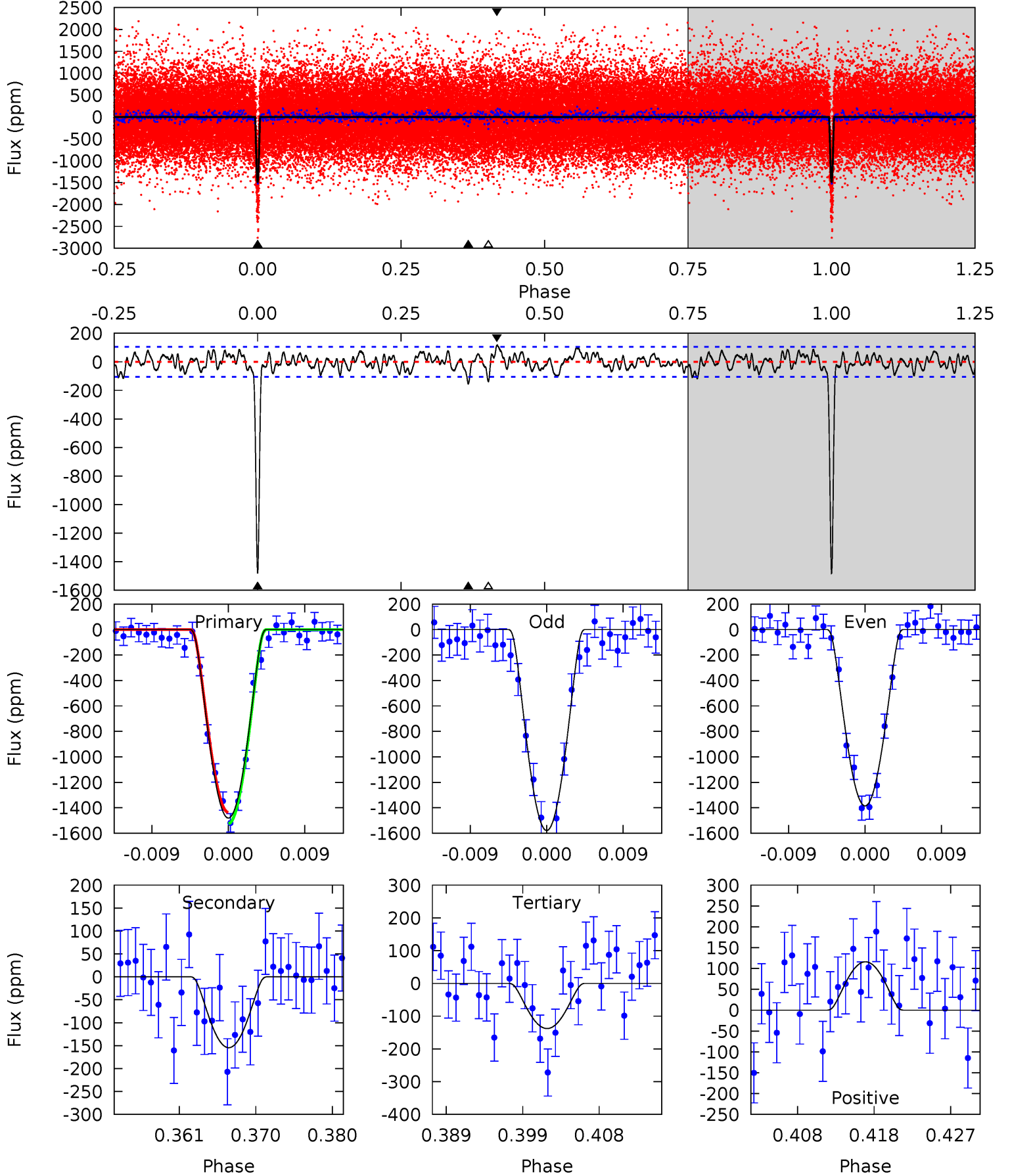
TCE 009536692-01 P= 26.634954 Days $T_0=155.564846$ (BKJD)



DV Model-Shift Uniqueness Test

009536692-01, $P = 26.635308$ Days, $E = 155.554412$ Days

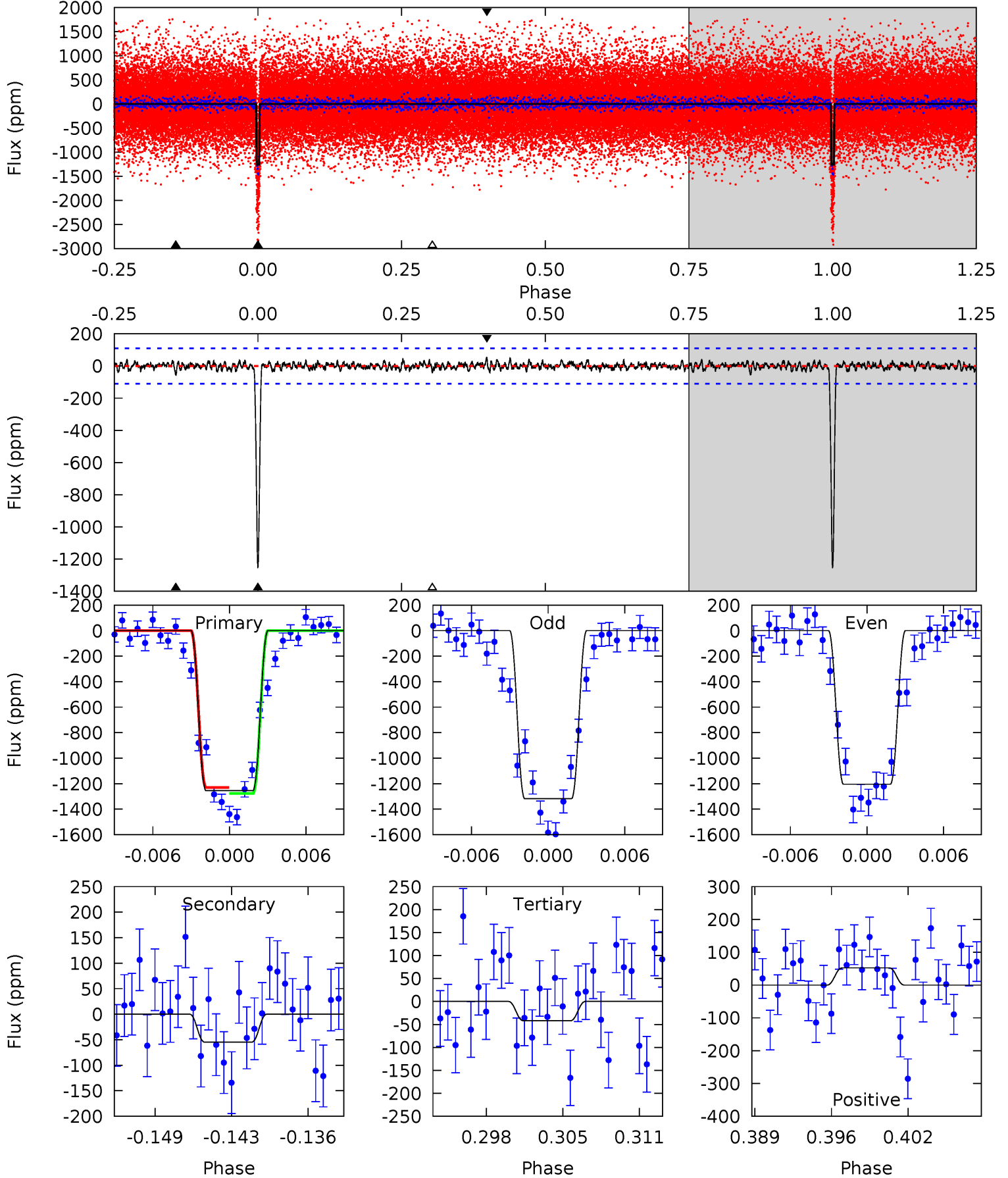
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.0	7.41	6.61	5.57	5.04	2.59	2.08	64.4	65.4	0.80	1.85	4.65	0.99	0.07	2.14



Alt Model-Shift Uniqueness Test

009536692-01, P = 26.634954 Days, E = 155.564846 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.2	2.55	1.95	2.43	5.11	2.72	0.68	56.2	55.8	0.60	0.12	2.64	1.01	0.04	1.10



Stellar Parameters For KIC 009536692

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5215^{+155}_{-155}	$4.455^{+0.108}_{-0.148}$	$0.040^{+0.300}_{-0.250}$	$0.882^{+0.153}_{-0.114}$	$0.808^{+0.104}_{-0.056}$	$1.659^{+0.728}_{-0.657}$
	+3%/-3%	+2%/-3%	+750%/-625%	+17%/-13%	+13%/-7%	+44%/-40%
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 009536692-01 / KOI 1948.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-155 ± 21	$6.24^{+3.84}_{-3.35}$	754^{+40}_{-37}	2965^{+802}_{-363}	59^{+213}_{-37}
Alt.	-55 ± 22	$4.51^{+3.48}_{-2.88}$	751^{+43}_{-36}	2771^{+1013}_{-397}	36^{+254}_{-25}

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

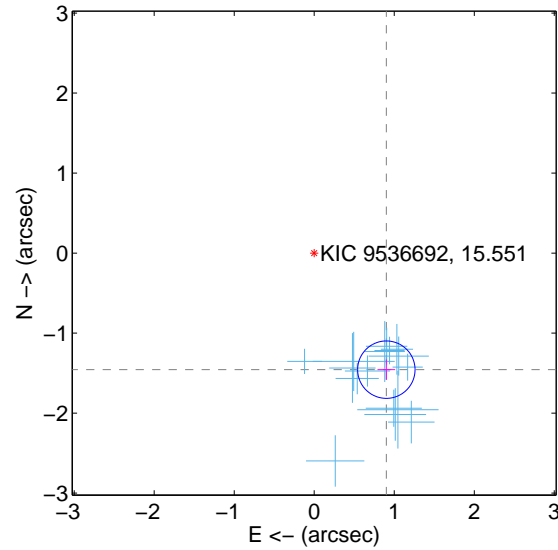
Supplemental centroid analysis for 009536692-01. Kepler magnitude: 15.55. Transit SNR 33.69

There are 16 quarters with good PRF difference image offsets

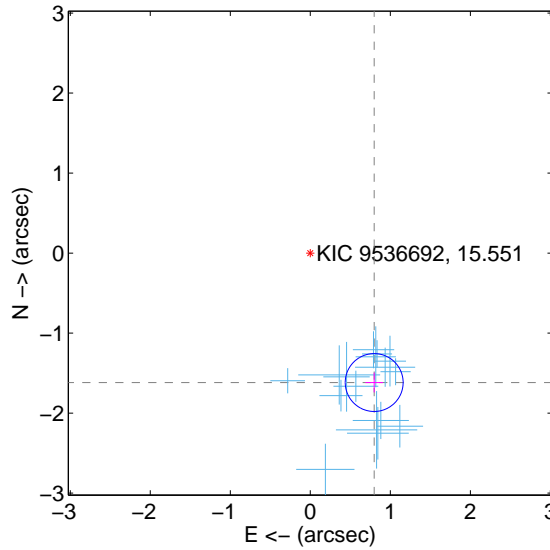
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.713 ± 0.120	14.32	-0.901 ± 0.110	-1.457 ± 0.127
PRF-fit source offset from KIC position	1.804 ± 0.121	14.96	-0.798 ± 0.111	-1.618 ± 0.124
photometric centroid source offset	1.47 ± 0.35	4.22	-1.01 ± 0.36	-1.07 ± 0.34

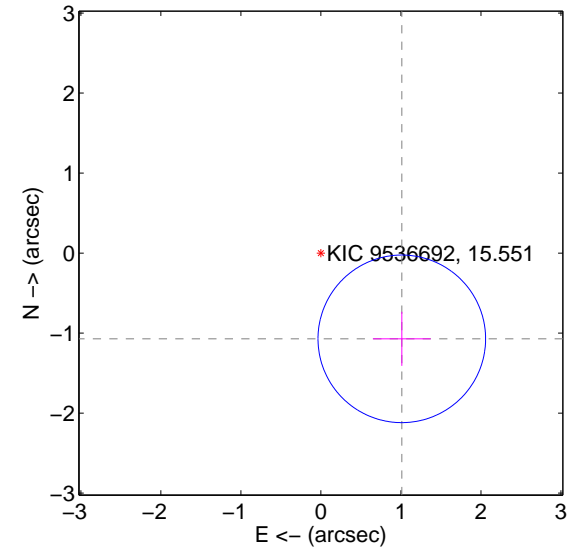
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

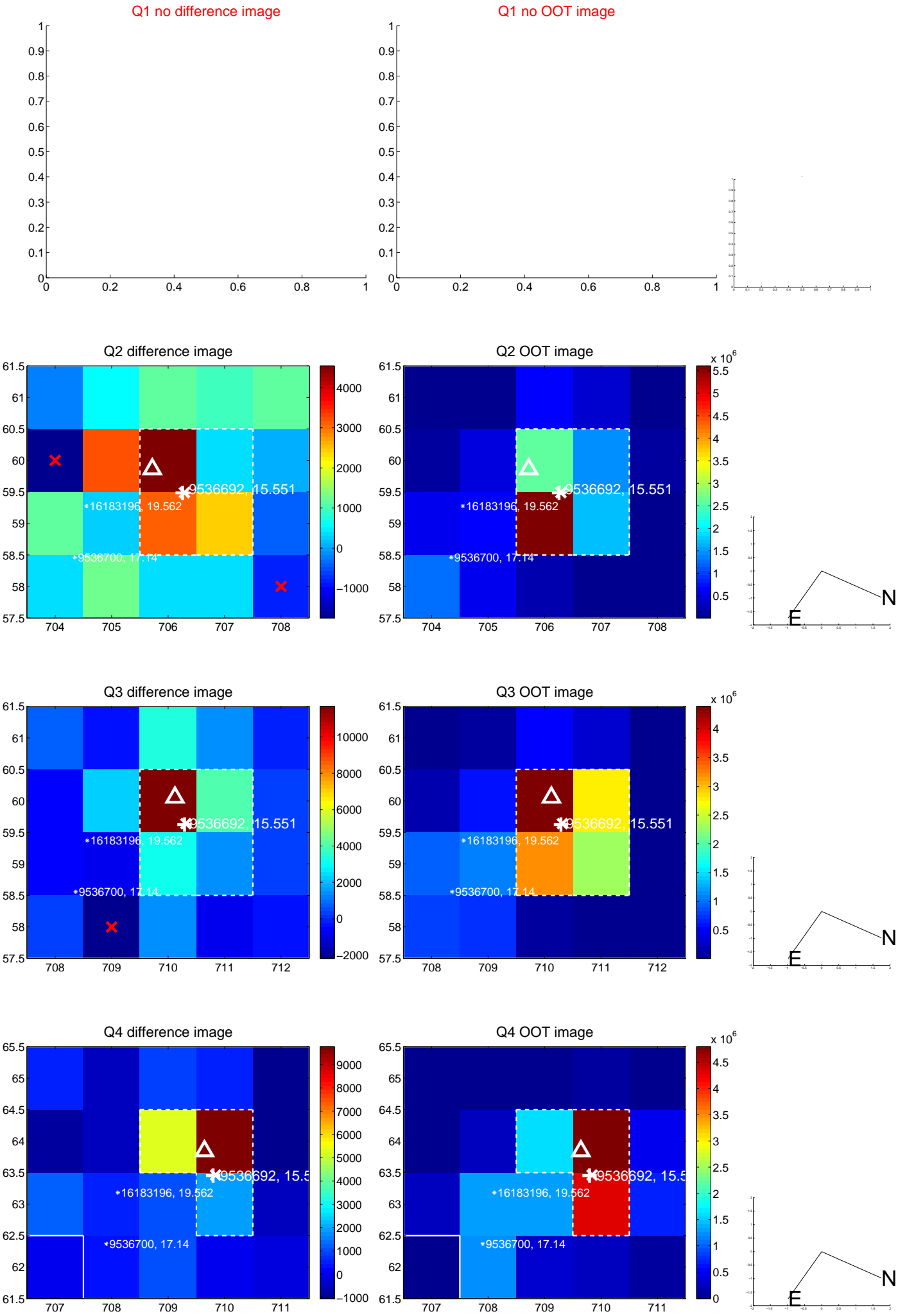


offset from photometric centroids

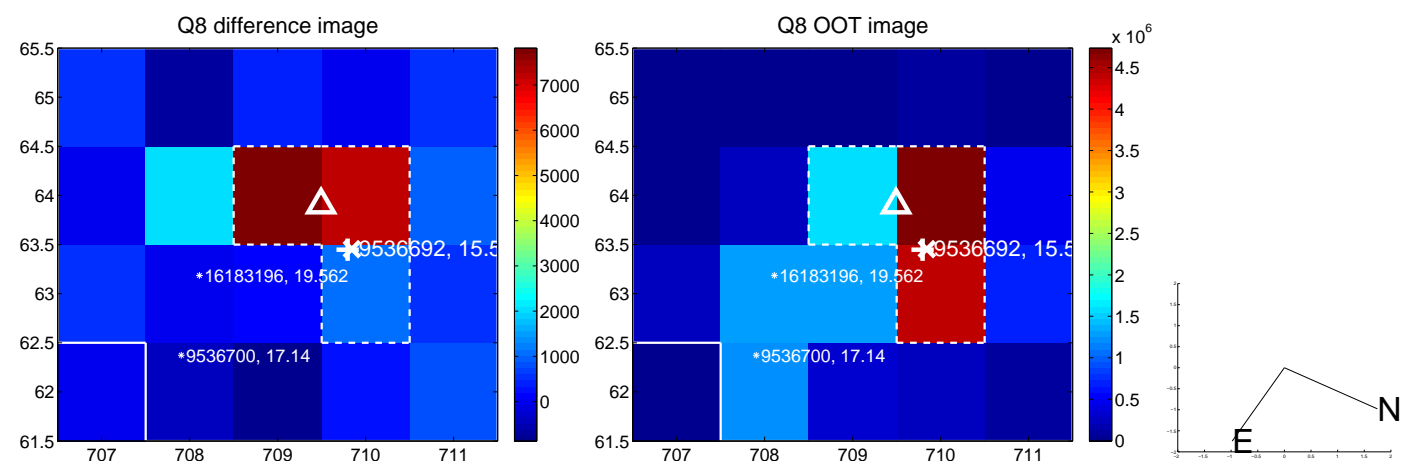
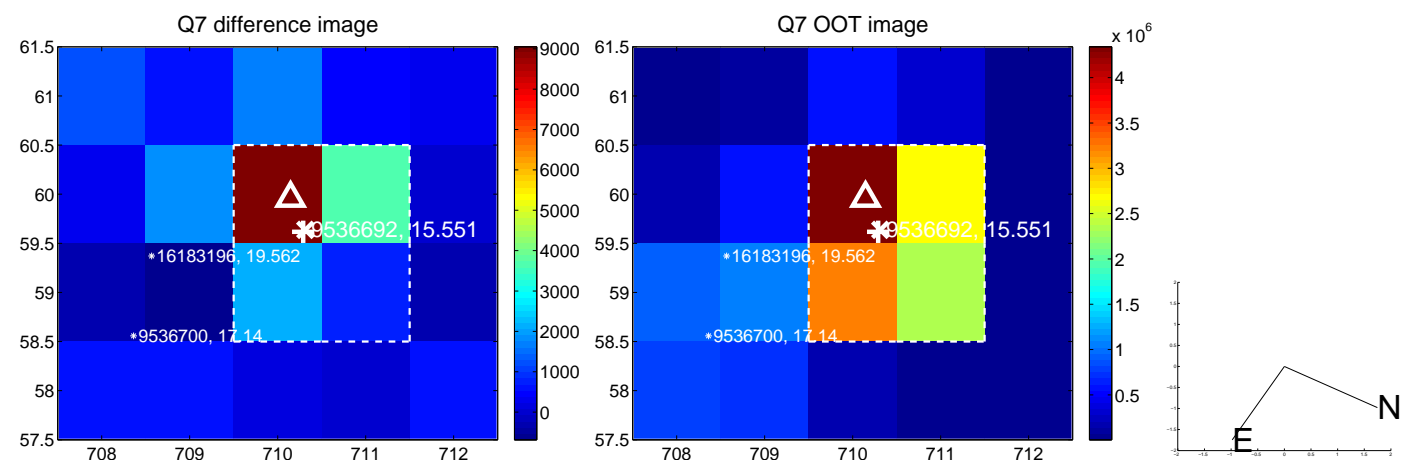
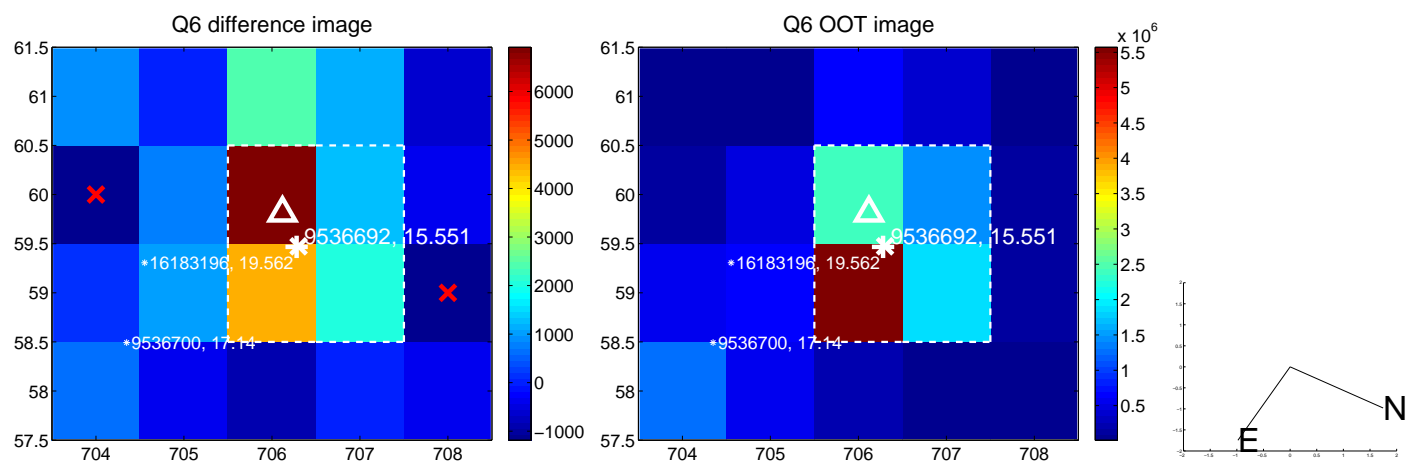
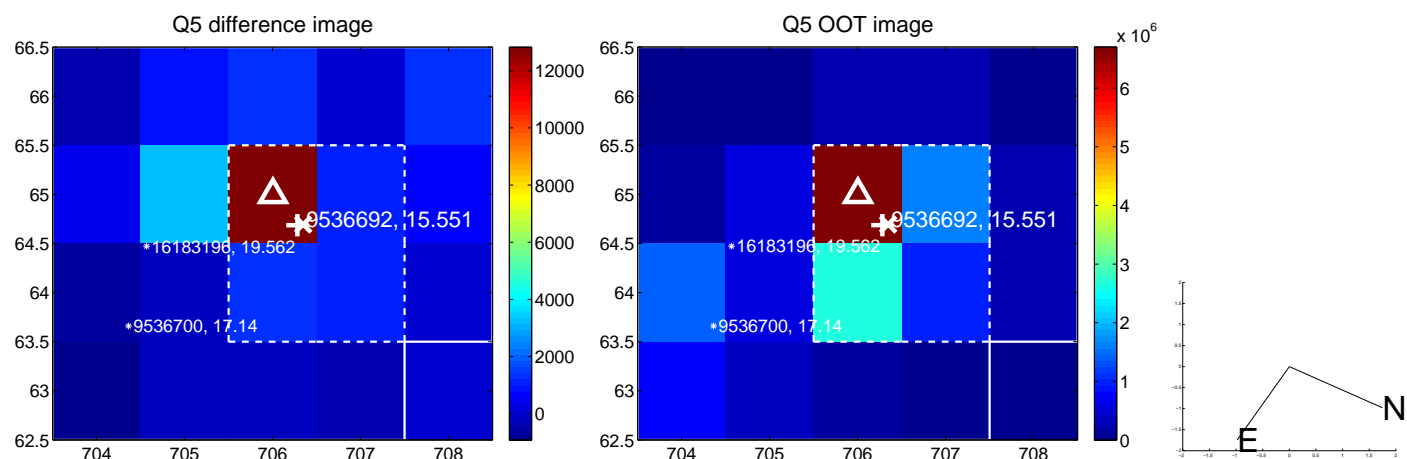


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

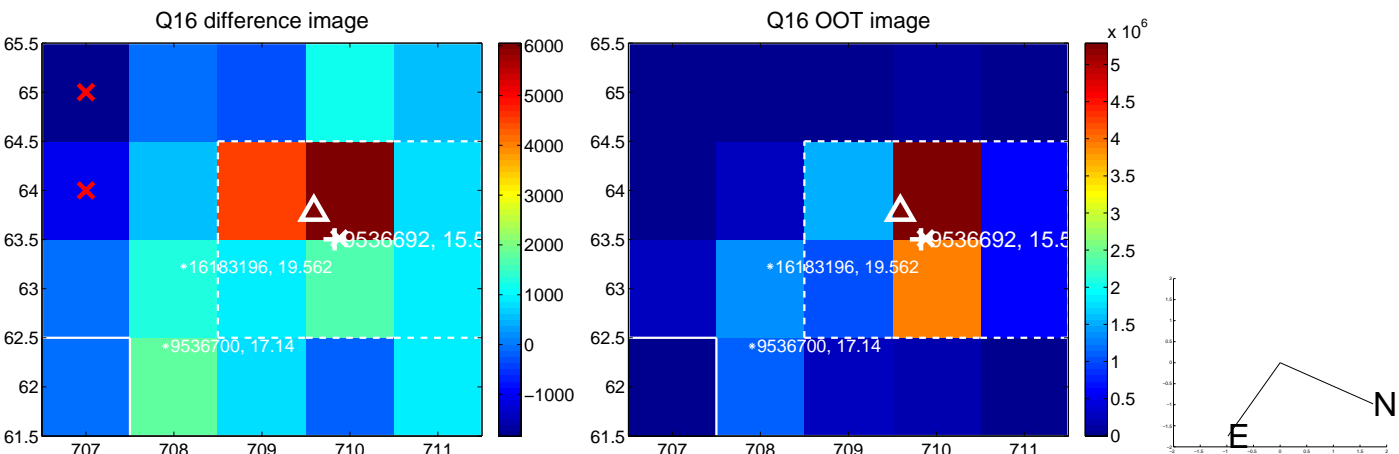
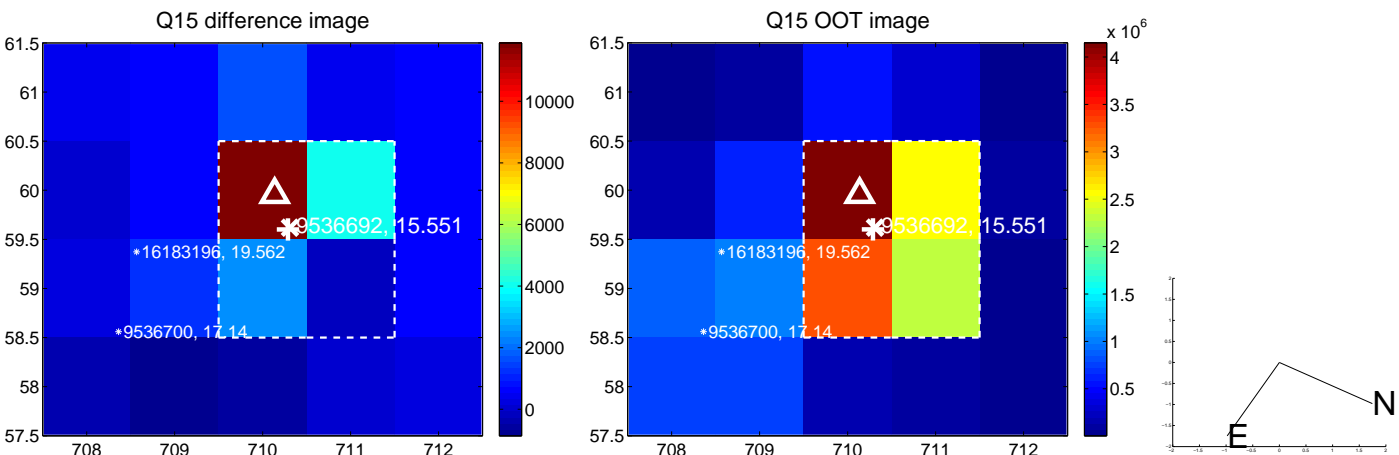
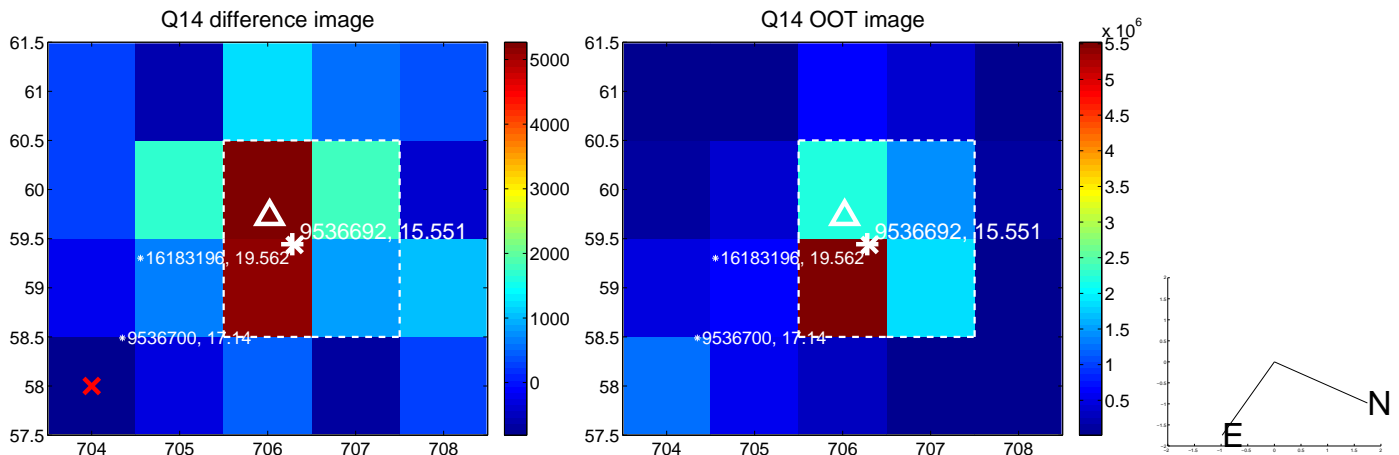
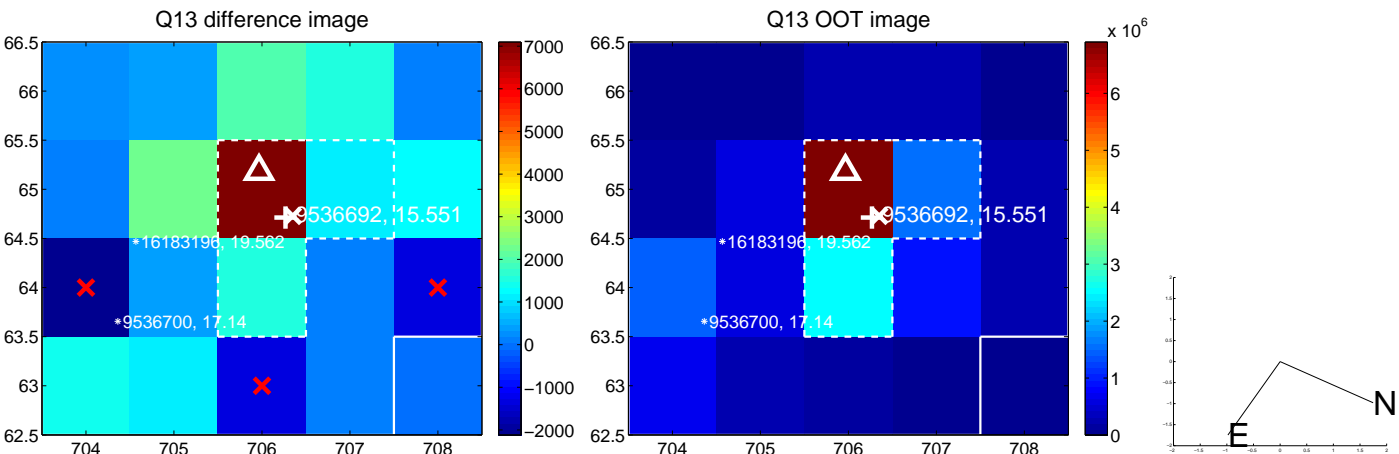
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



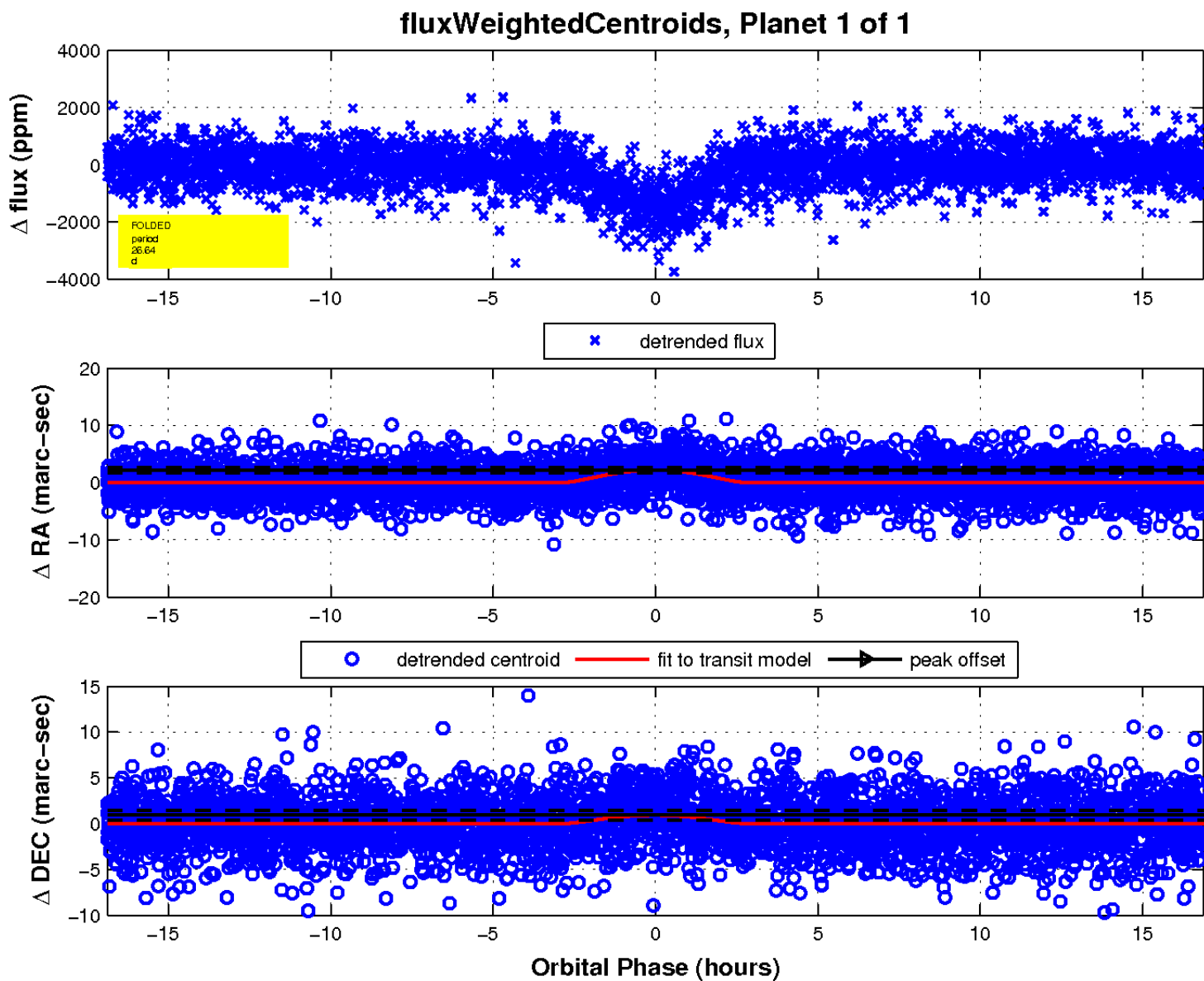
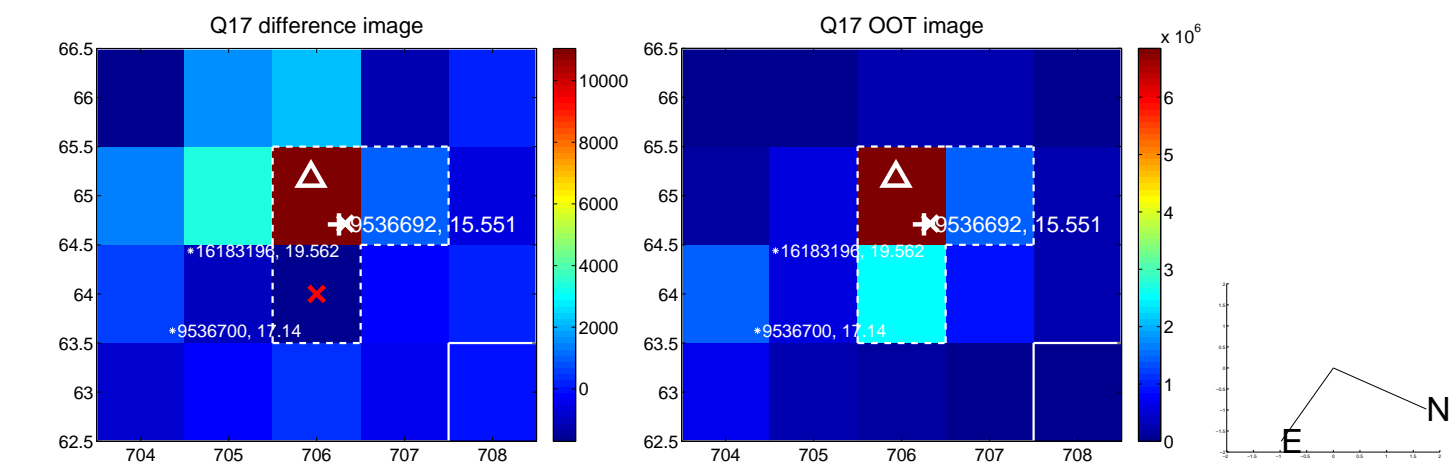
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

