

KIC 003945802

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})
003945802-01	OBS	3435.01	24.215624	133.470891	318.2	4.356	11.3	12.2	0.89	5659	1.86	29.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003945802-01	OBS	FP	0.02	0	0	1	0	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.

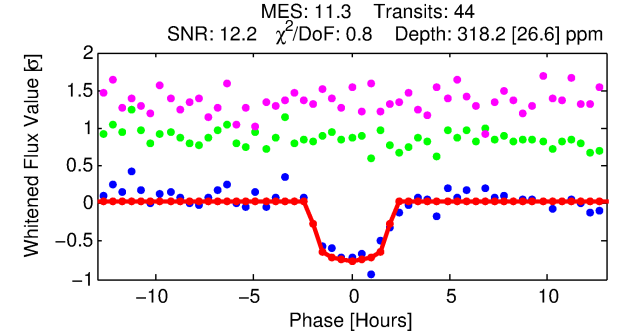
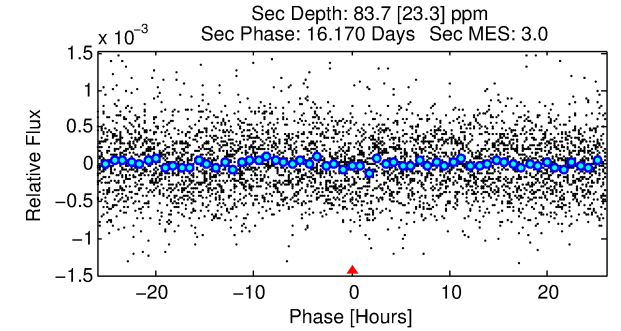
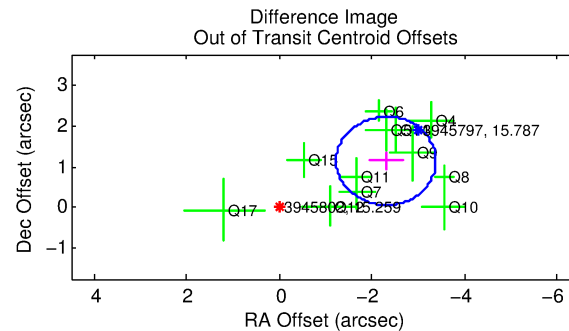
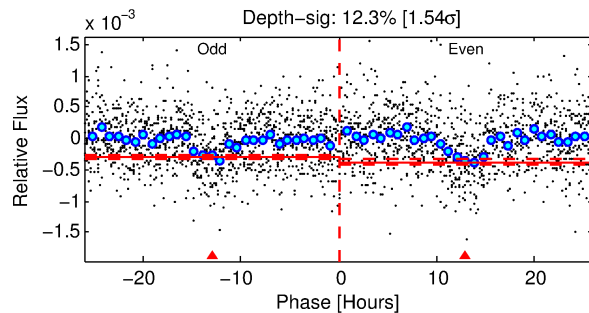
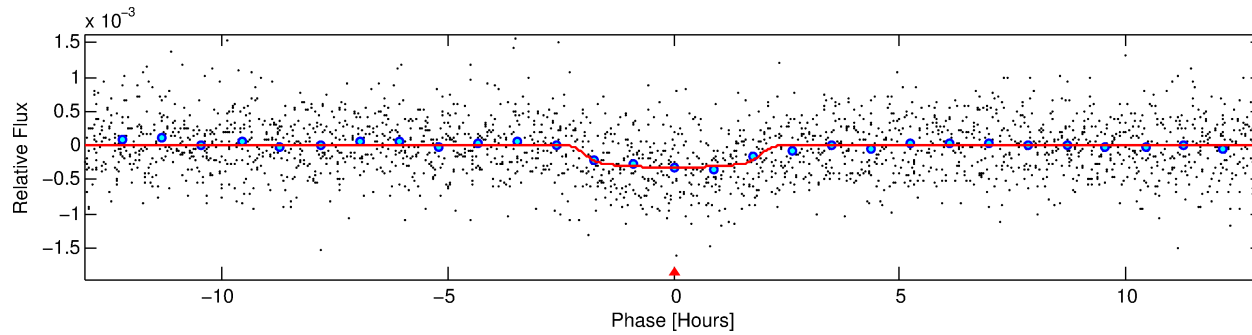
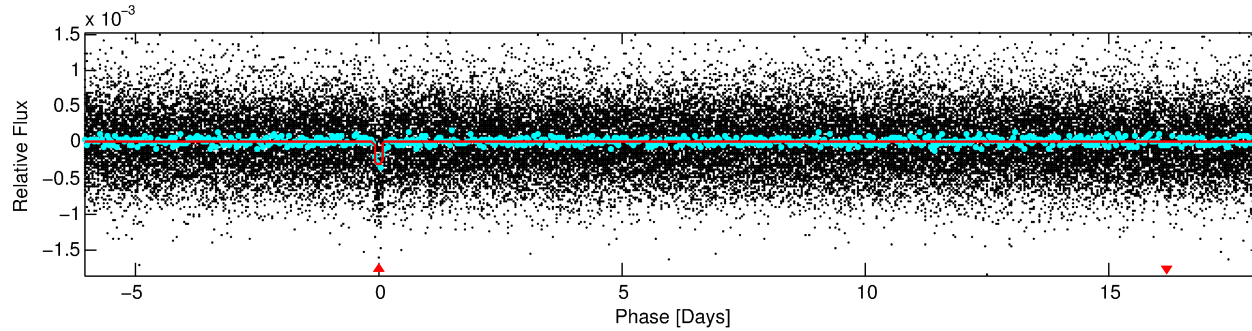
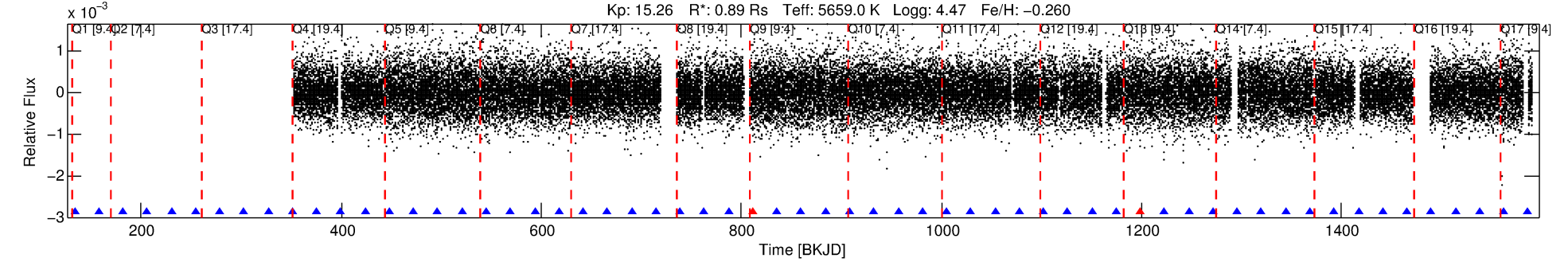
Ephemeris Match Information For 003945802-01

No Significant Match Found

DV One-Page Summary

KIC: 3945802 Candidate: 1 of 1 Period: 24.216 d
KOI: K03435.01 Corr: 0.948

Kp: 15.26 R*: 0.89 Rs Teff: 5659.0 K Logg: 4.47 Fe/H: -0.260



DV Fit Results:

Period = 24.21562 [0.00026] d
Epoch = 133.4709 [0.0097] BKJD
Rp/R* = 0.0193 [0.0057]
a/R* = 20.89 [28.60]
b = 0.89 [0.32]
Seff = 29.90 [10.22]
Teq = 596 [51] K
Rp = 1.86 [0.72] Re
a = 0.1551 [0.0331] AU
Ag = 319.19 [231.05] [1.38σ]
Teffp = 3897 [647] K [5.08σ]

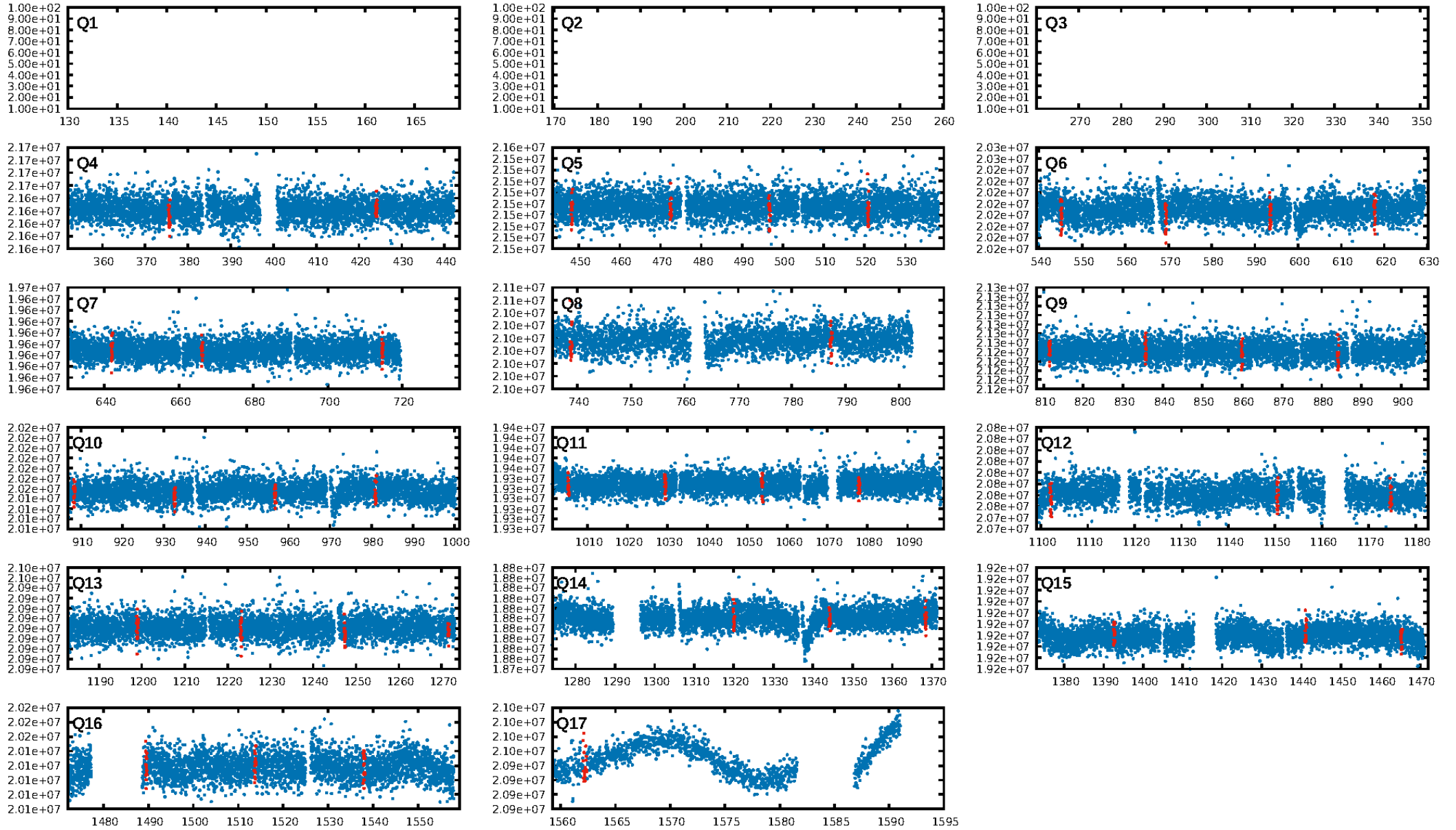
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.61e-29
RollingBand-fgt: 0.95 [41/43]
GhostDiagnostic-chr: 0.8661
Centroid-sig: 0.0%
Centroid-so: 2.555 arcsec [3.79σ]
OotOffset-rm: 2.572 arcsec [7.15σ]
KicOffset-rm: 3.526 arcsec [11.56σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [14/14]

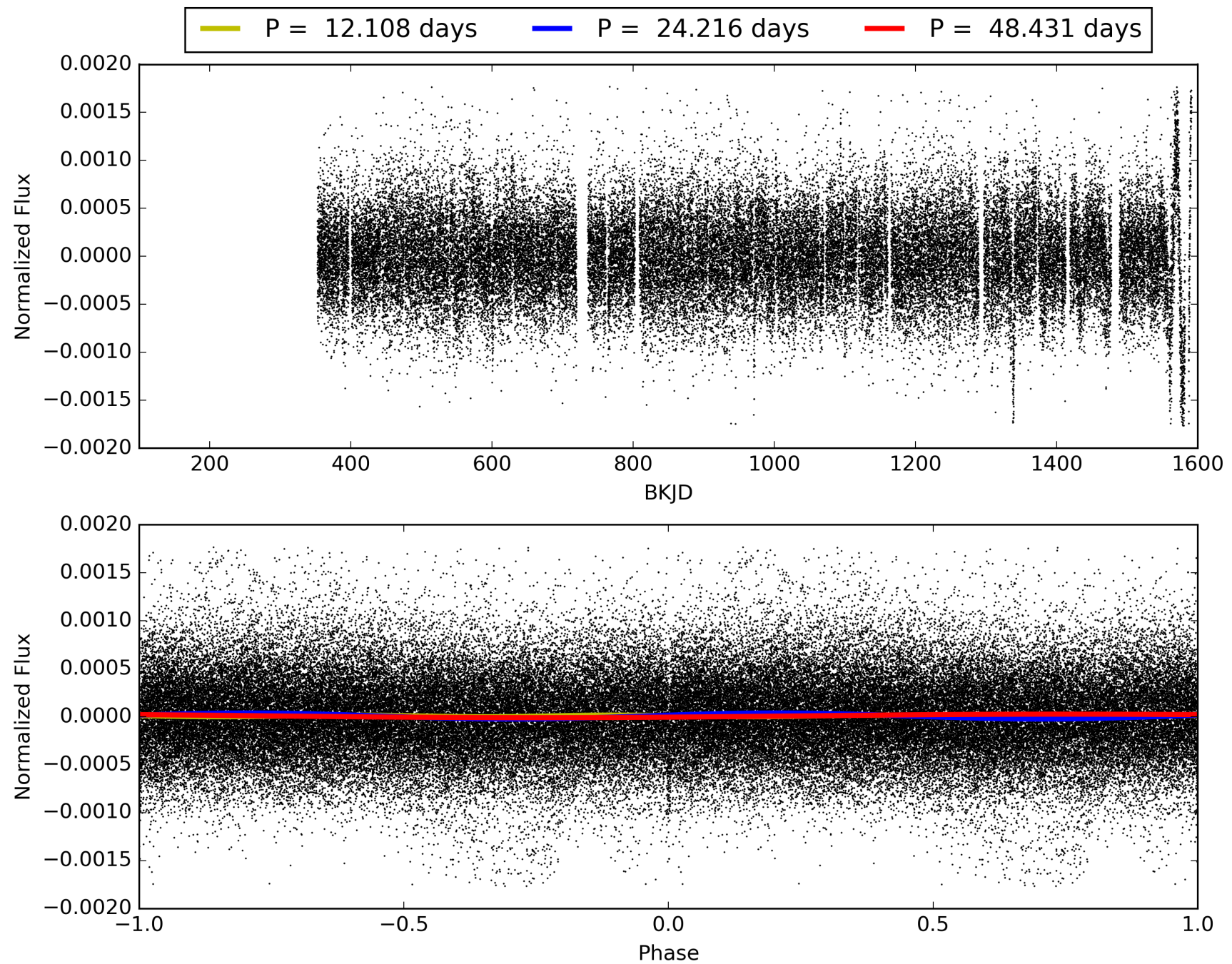
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:33:06 Z

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

TCE 003945802-01, PDC Light Curves

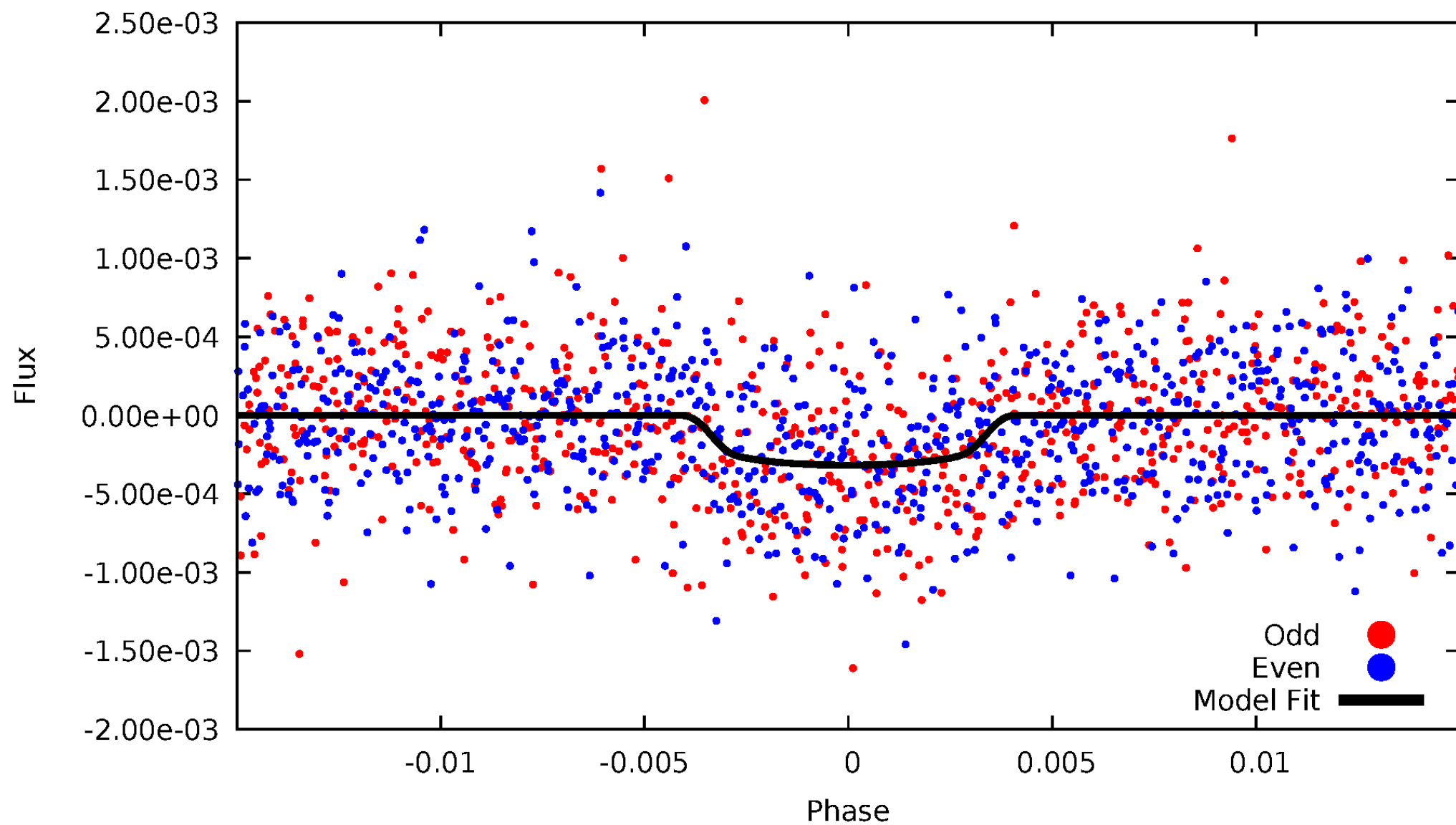


TCE 003945802-01



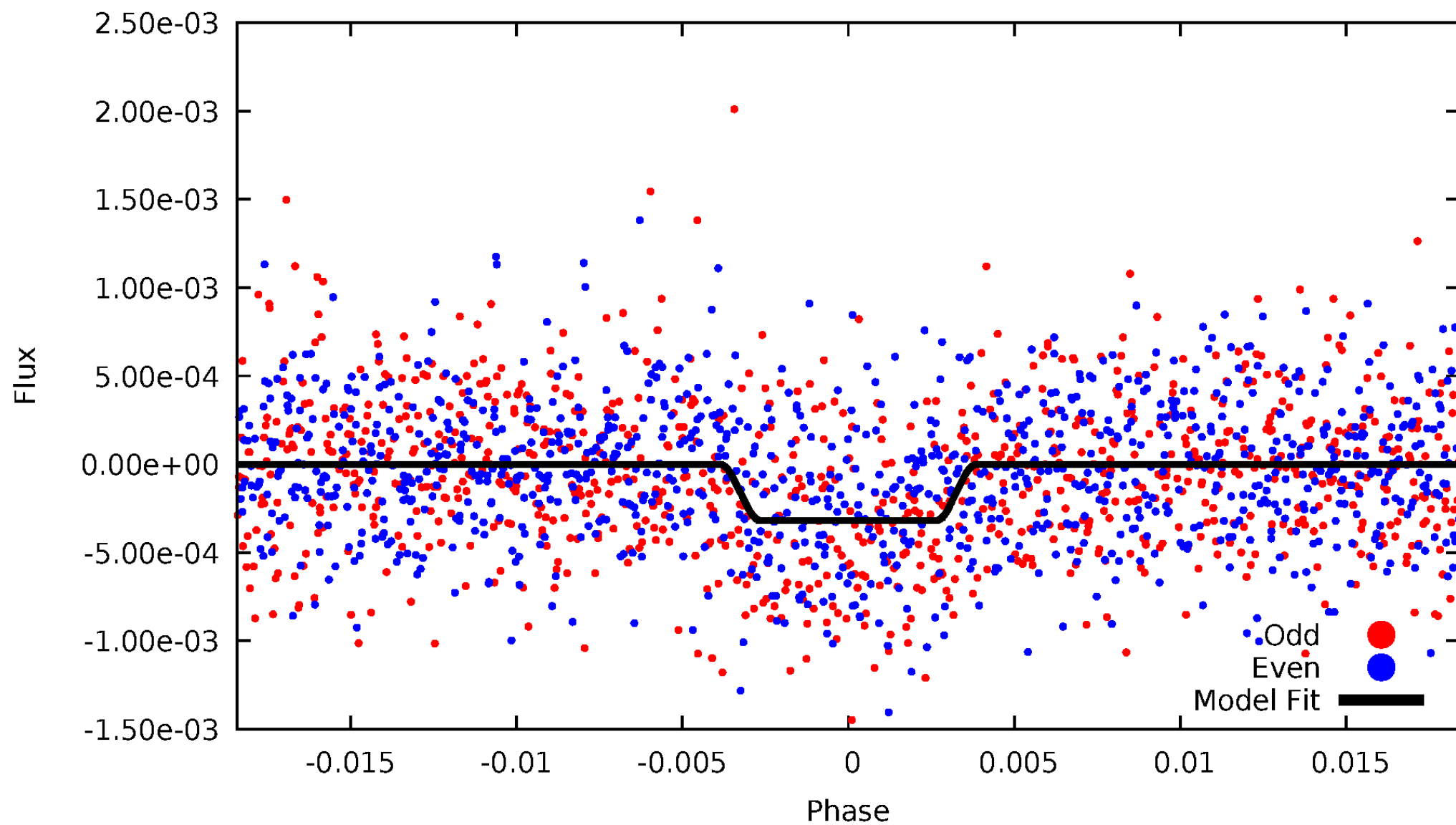
DV Odd/Even

TCE 003945802-01



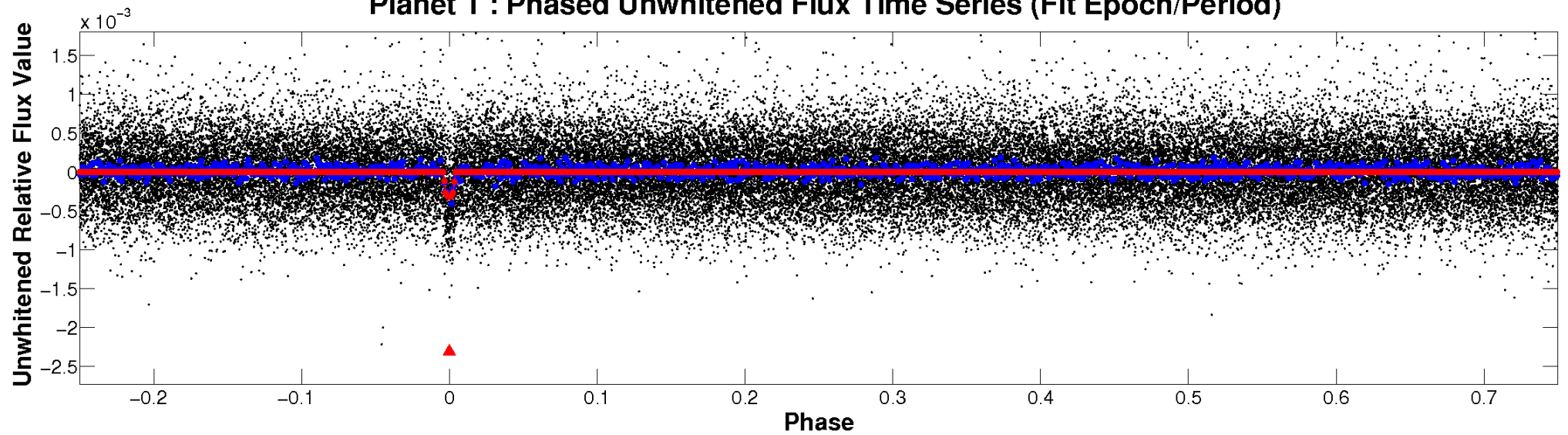
ALT Odd/Even

TCE 003945802-01

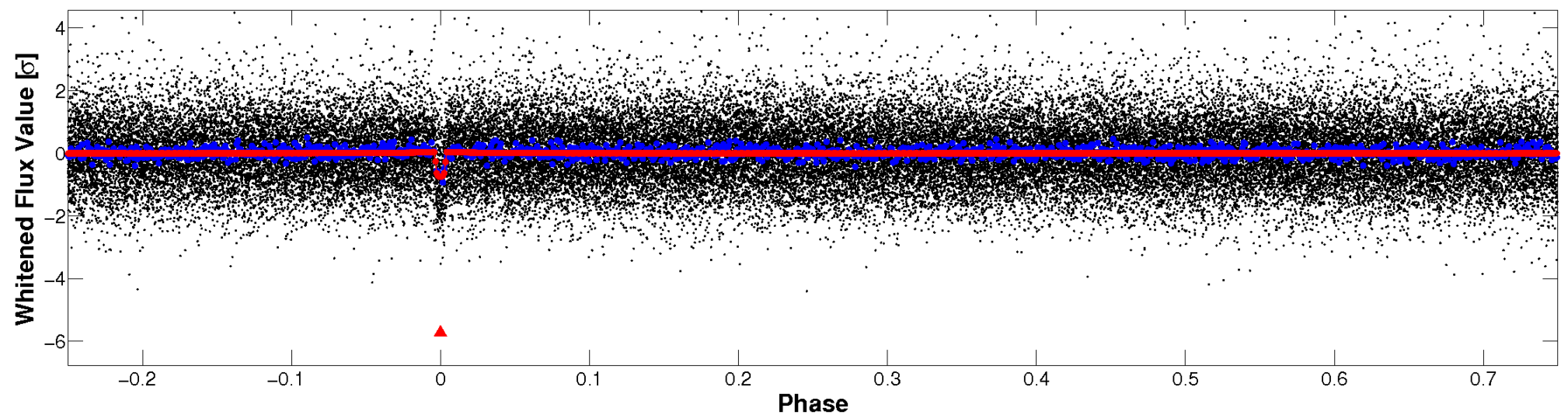


Non-Whitened Vs. Whitened Light Curve

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

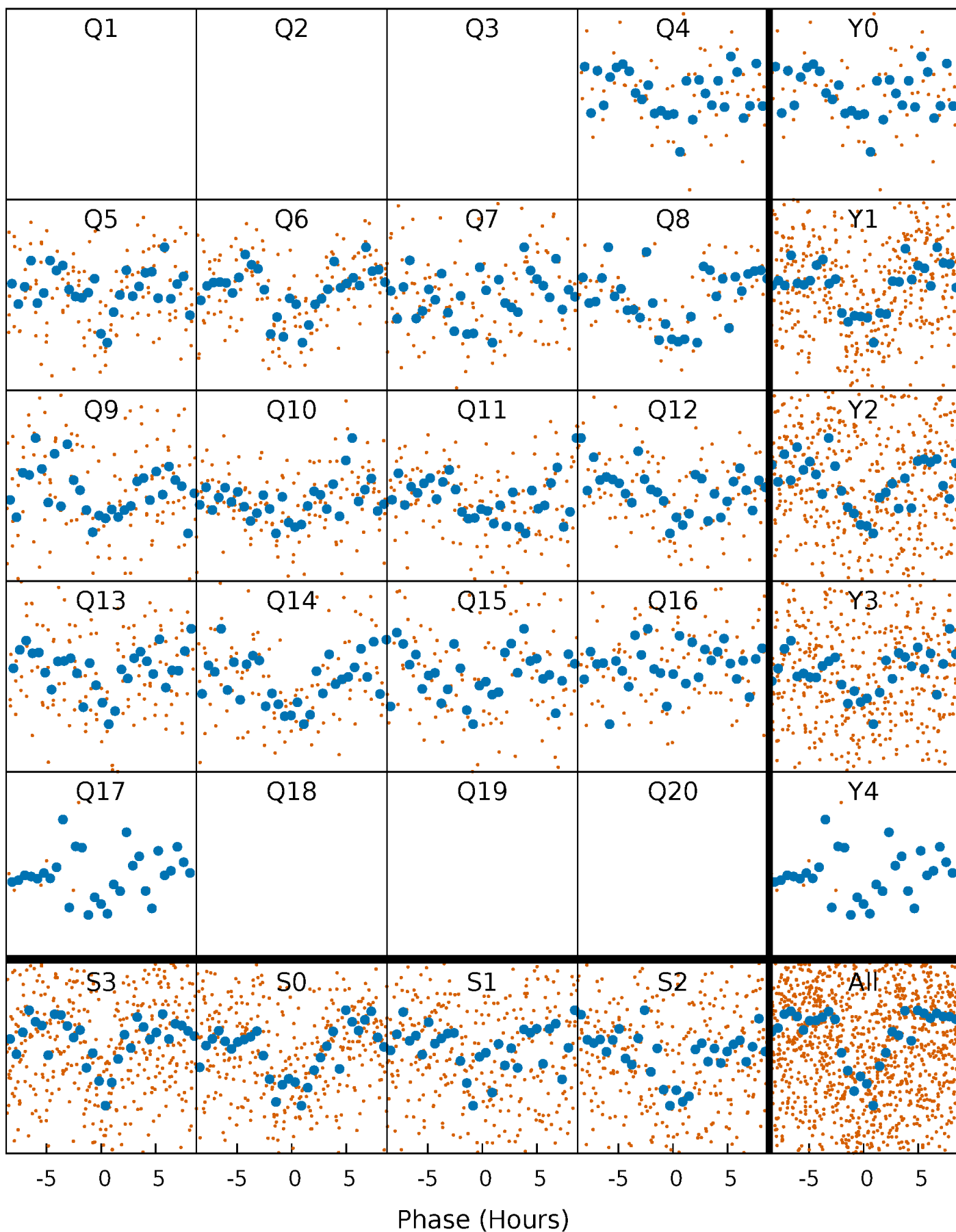


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



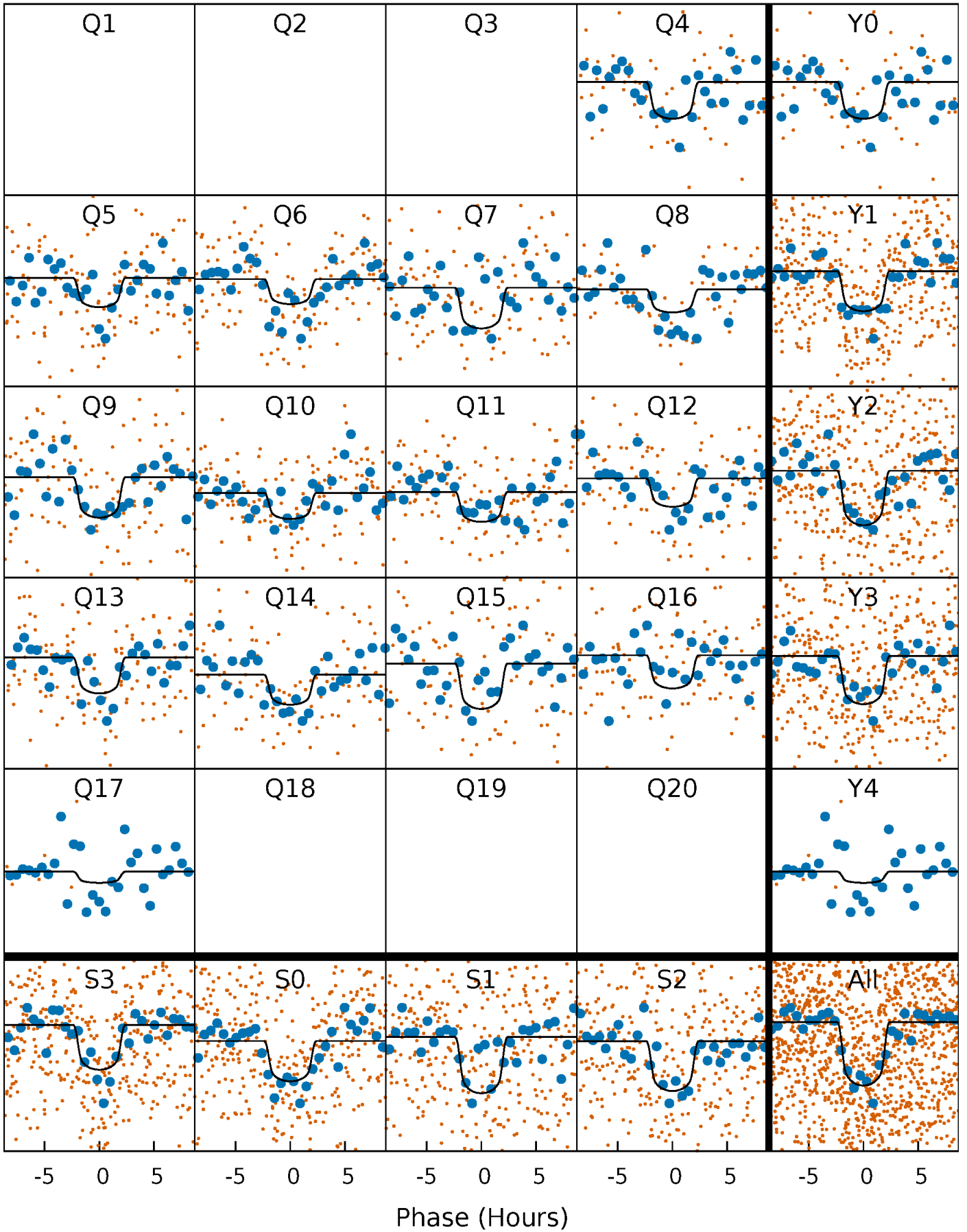
PDC Quarter-Phased Transit Curves

TCE 003945802-01 P= 24.215624 Days $T_0=133.470891$ (BKJD)



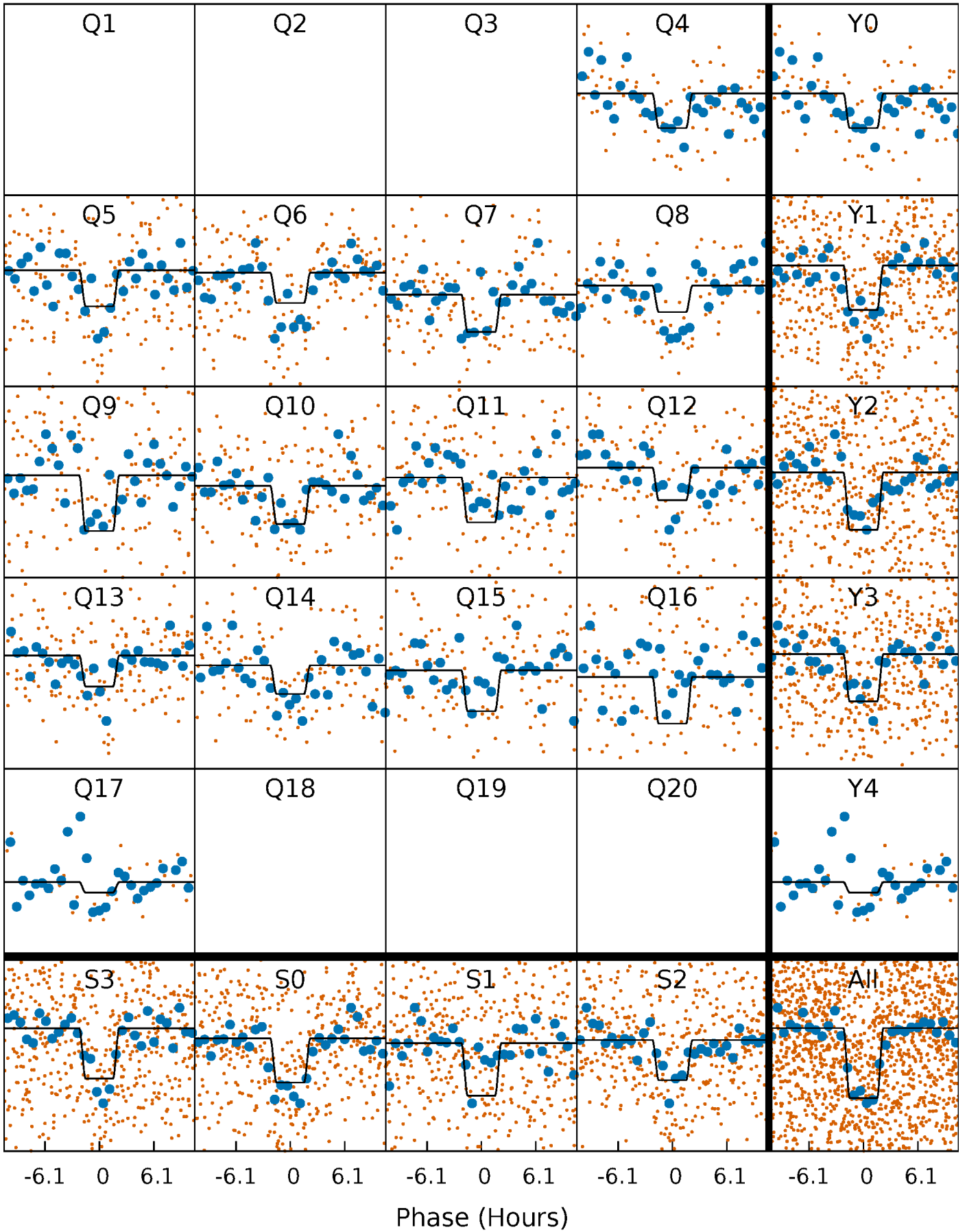
DV Quarter-Phased Transit Curves

TCE 003945802-01 P= 24.215624 Days $T_0=133.470891$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

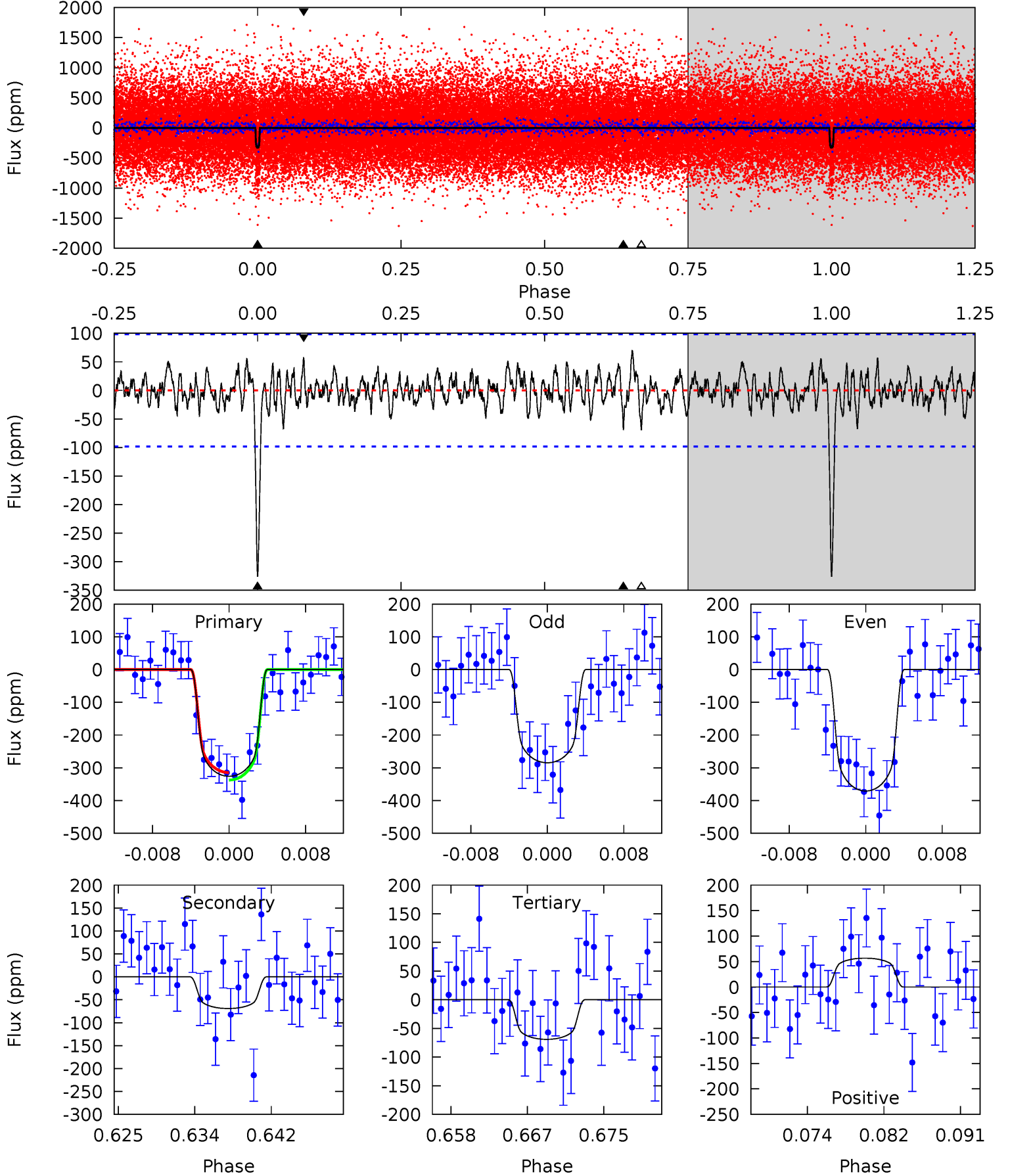
TCE 003945802-01 P= 24.215455 Days $T_0=133.478561$ (BKJD)



DV Model-Shift Uniqueness Test

003945802-01, $P = 24.215624$ Days, $E = 133.470891$ Days

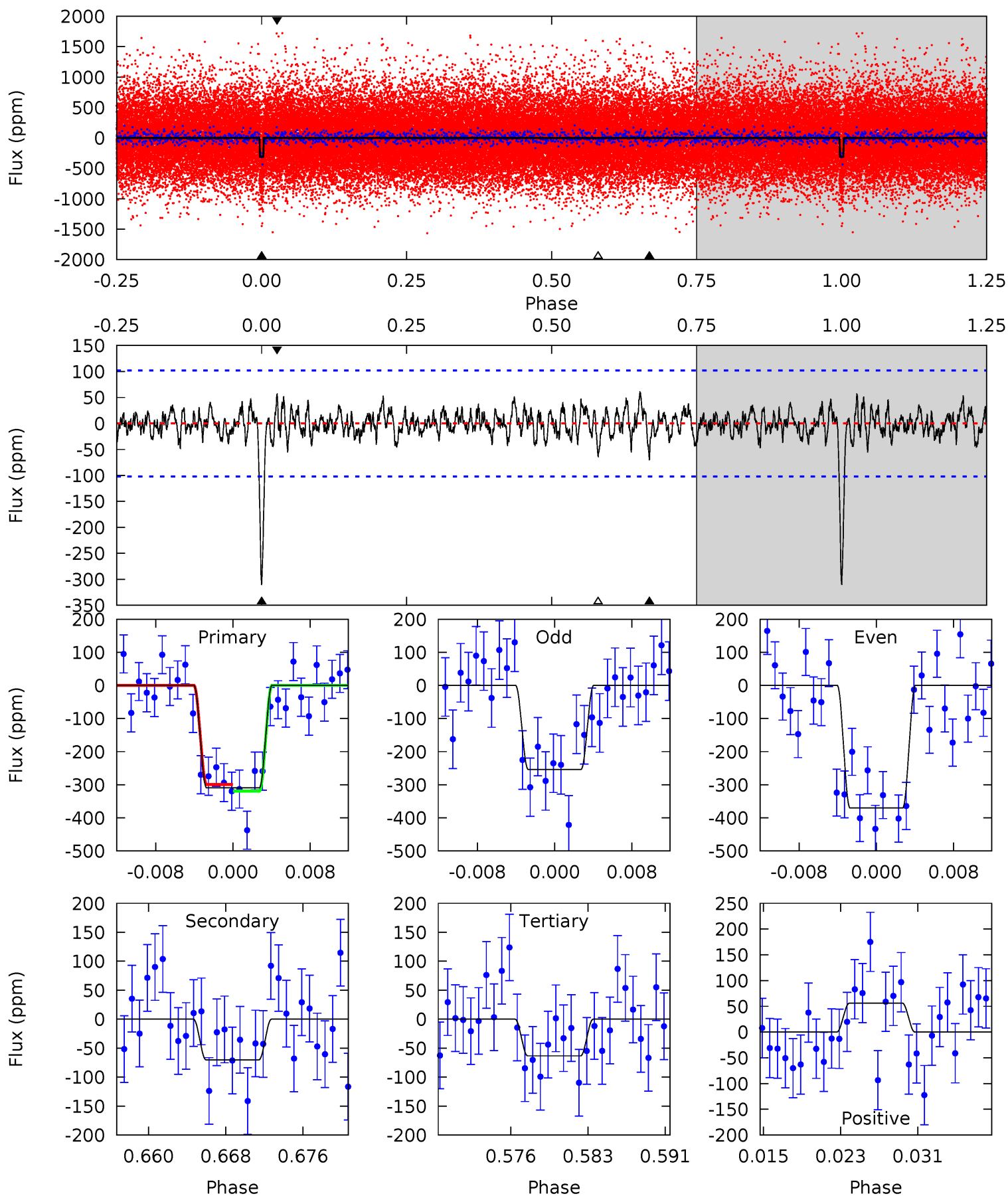
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	3.56	3.56	2.92	5.06	2.64	1.12	13.2	13.9	0.00	0.65	2.23	0.96	0.18	0.59



Alt Model-Shift Uniqueness Test

003945802-01, P = 24.215455 Days, E = 133.478561 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	3.49	3.15	2.80	5.08	2.67	0.99	12.2	12.6	0.33	0.69	2.90	0.95	0.16	0.49



Stellar Parameters For KIC 003945802

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5659^{+186}_{-186}	$4.473^{+0.094}_{-0.175}$	$-0.260^{+0.300}_{-0.300}$	$0.885^{+0.220}_{-0.119}$	$0.849^{+0.115}_{-0.080}$	$1.725^{+0.710}_{-0.823}$
	+3%/-3%	+2%/-4%	+115%/-115%	+25%/-13%	+14%/-9%	+41%/-48%
Source	KIC0	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 003945802-01 / KOI 3435.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-69 ± 19	$1.95^{+0.65}_{-0.61}$	842^{+54}_{-43}	3967^{+650}_{-365}	229^{+299}_{-101}
Alt.	-70 ± 20	$1.76^{+0.62}_{-0.58}$	844^{+56}_{-47}	4145^{+697}_{-470}	292^{+392}_{-145}

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 $A_{obs} \gg 1.0$

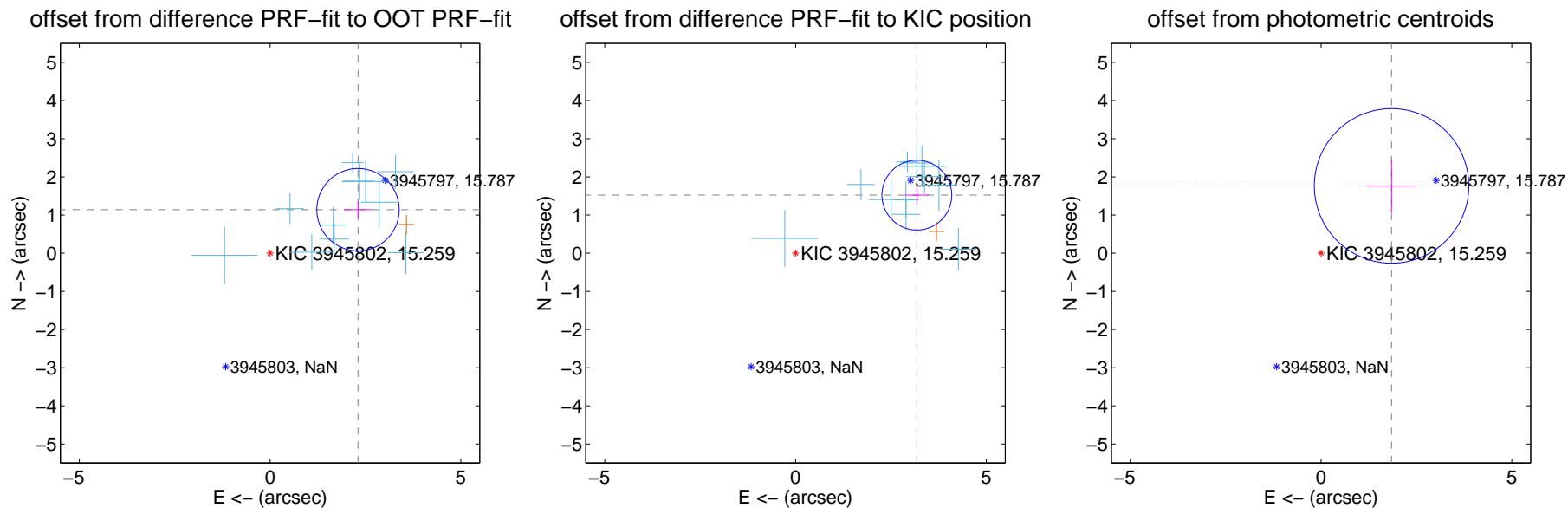
DV Centroid Data

Supplemental centroid analysis for 003945802-01. Kepler magnitude: 15.26. Transit SNR 12.20

There are 11 quarters with good PRF difference image offsets

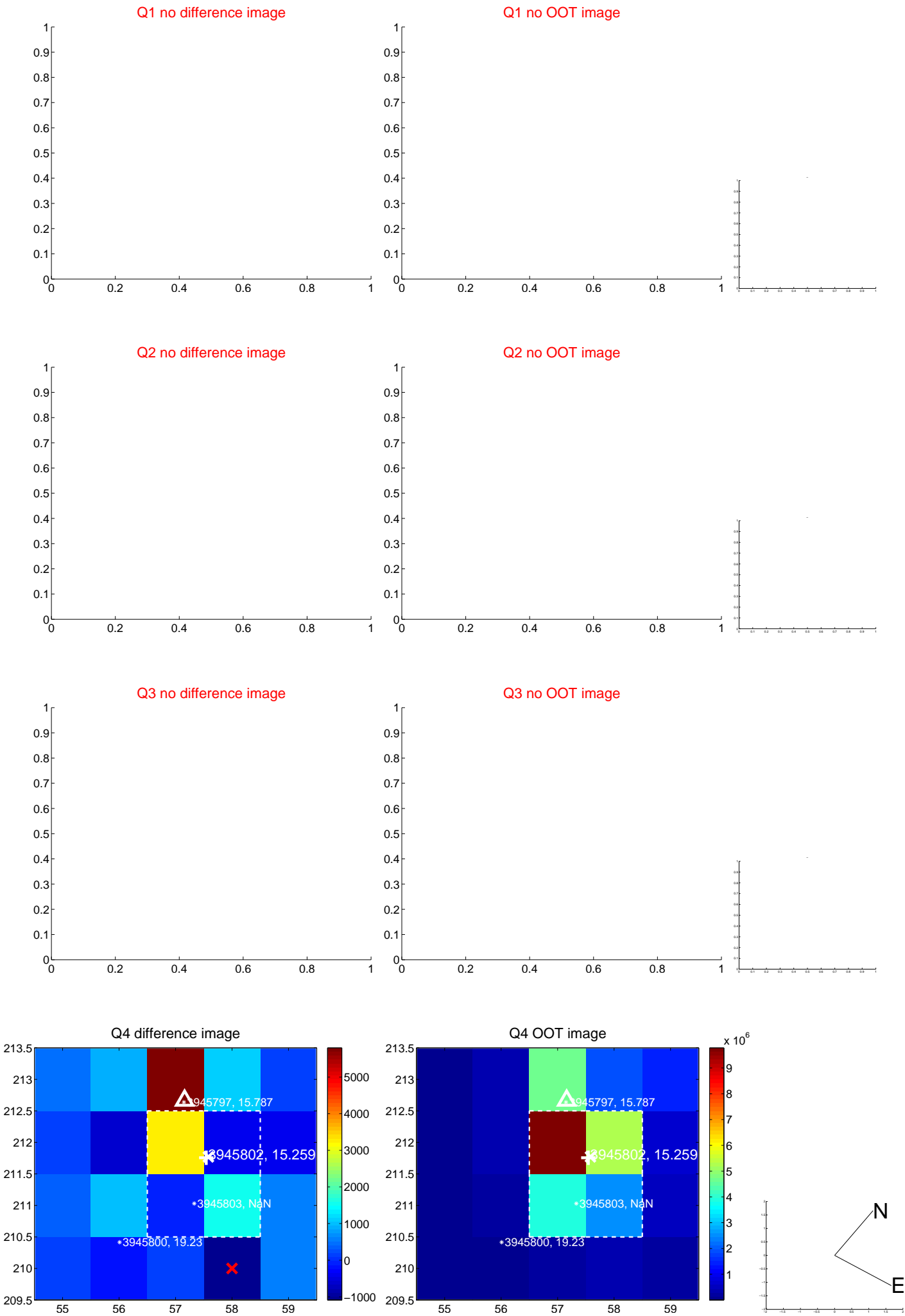
The direct PRF centroid is offset from the target star catalog position by about 1.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.572 ± 0.360	7.15	-2.306 ± 0.370	1.141 ± 0.224
PRF-fit source offset from KIC position	3.526 ± 0.305	11.56	-3.180 ± 0.307	1.522 ± 0.231
photometric centroid source offset	2.56 ± 0.68	3.79	-1.85 ± 0.66	1.76 ± 0.69

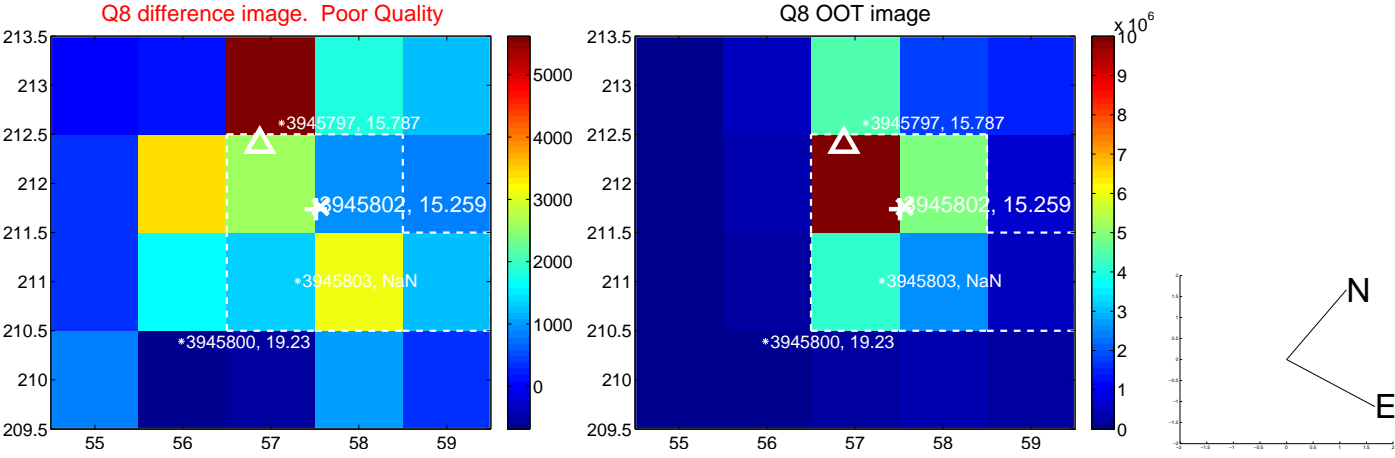
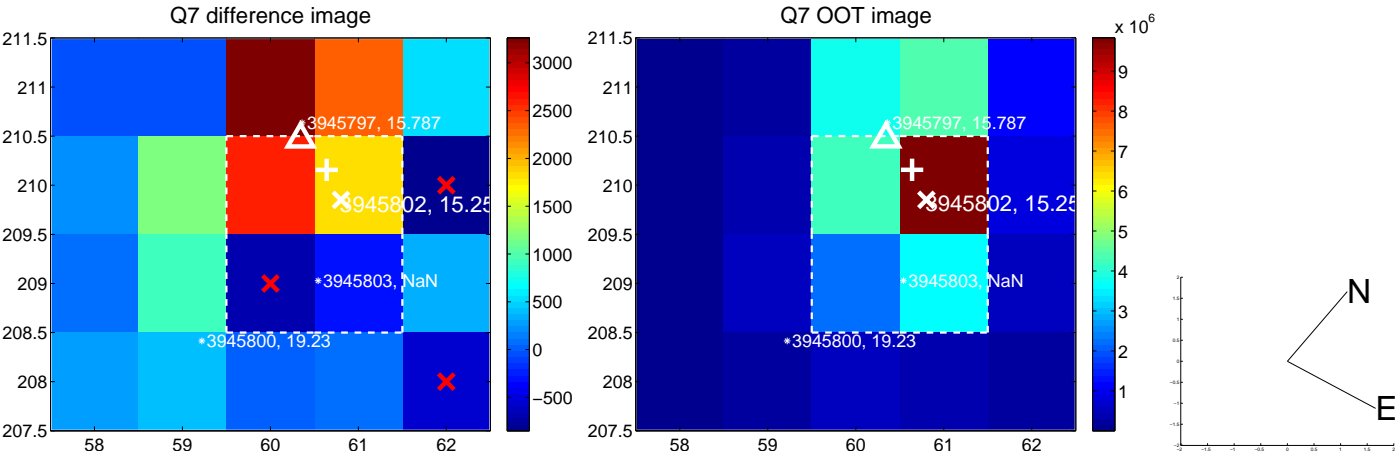
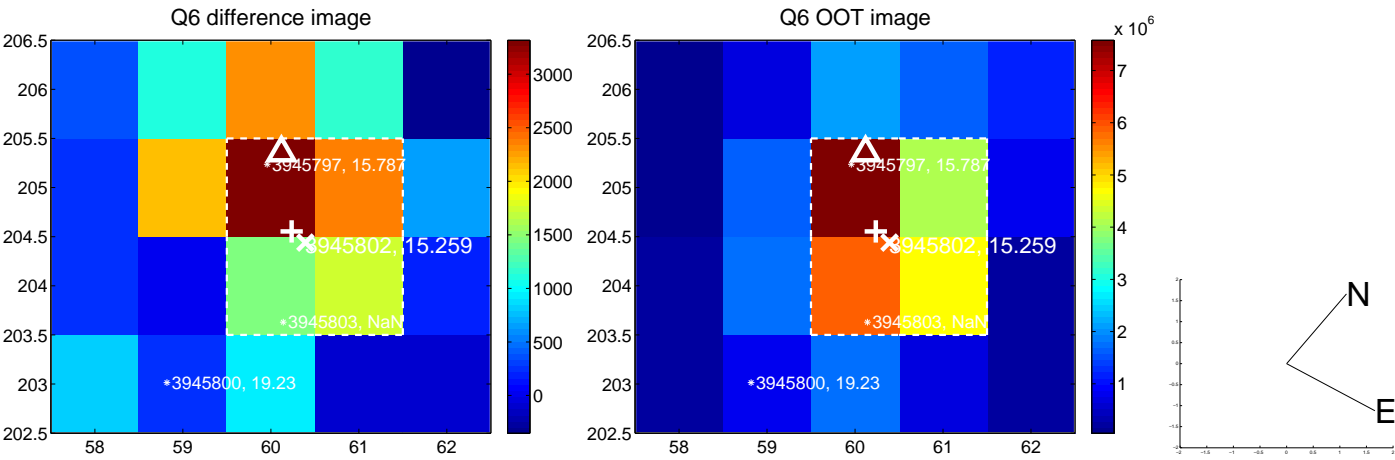
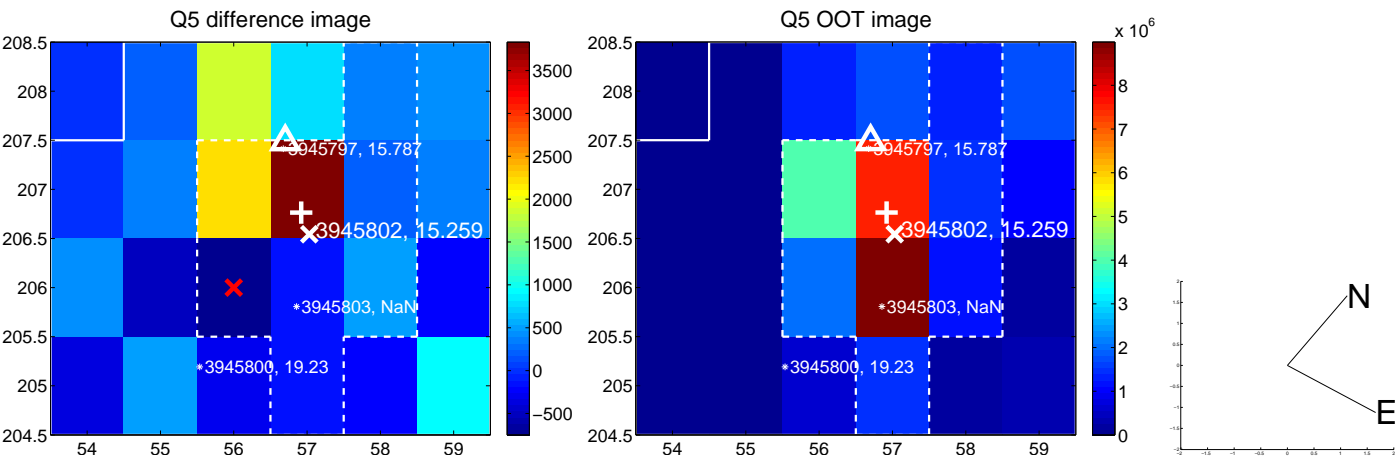


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

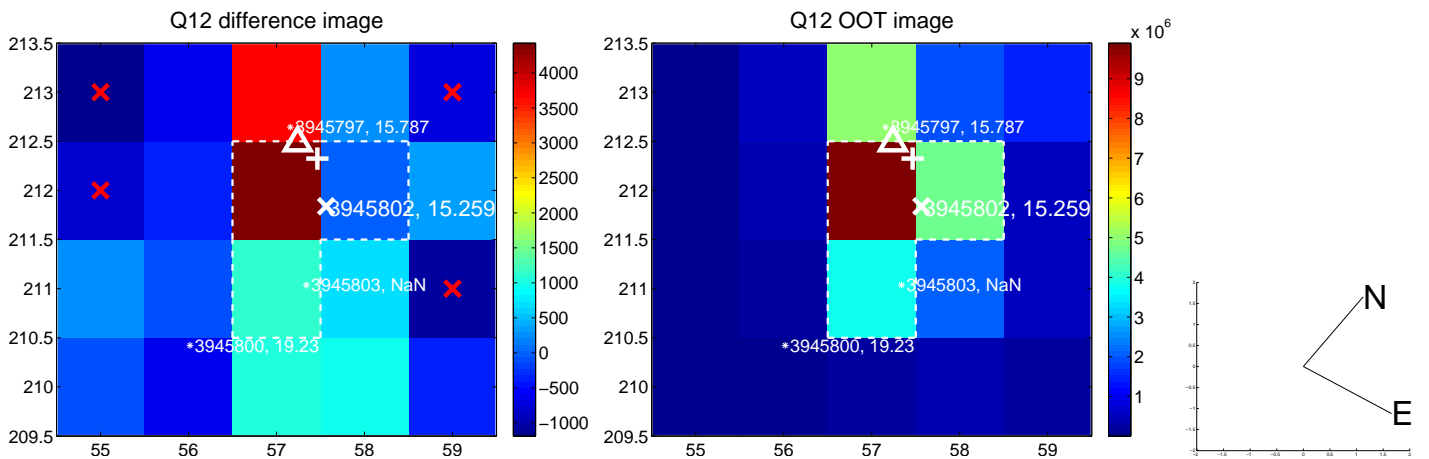
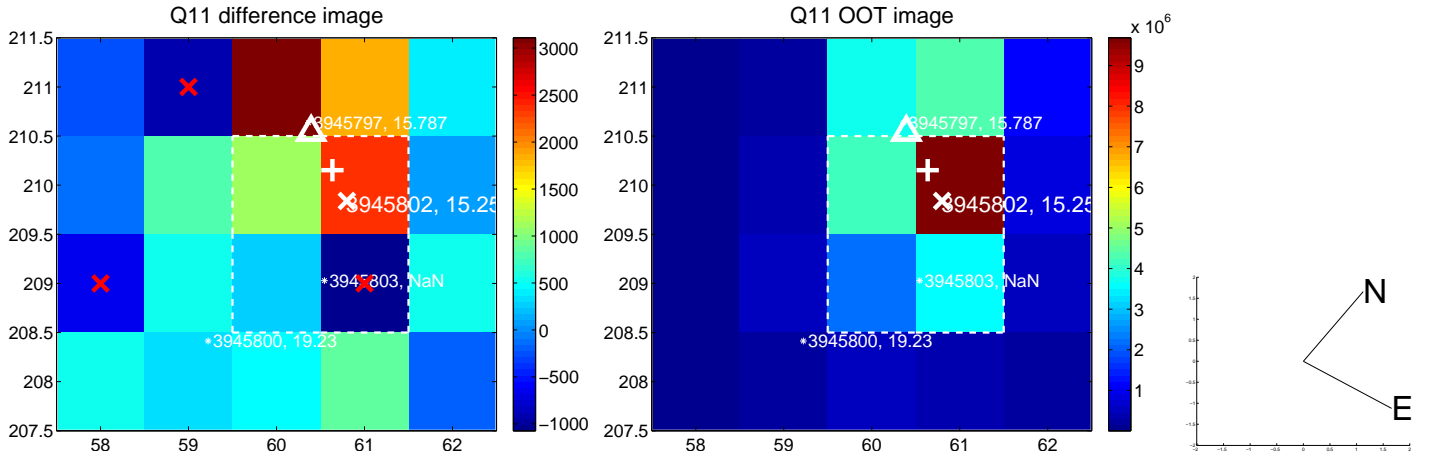
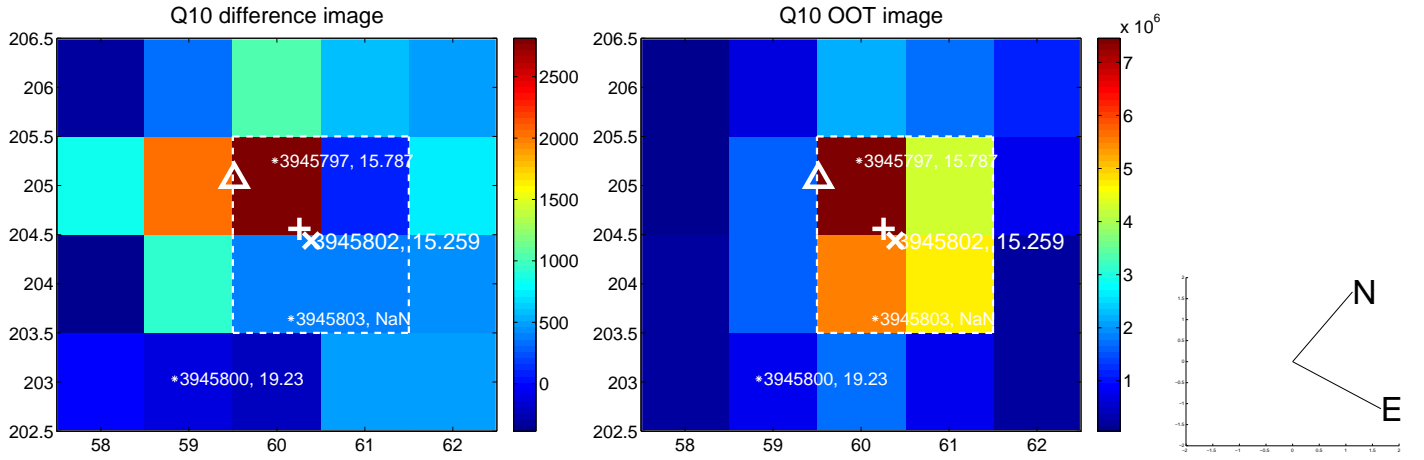
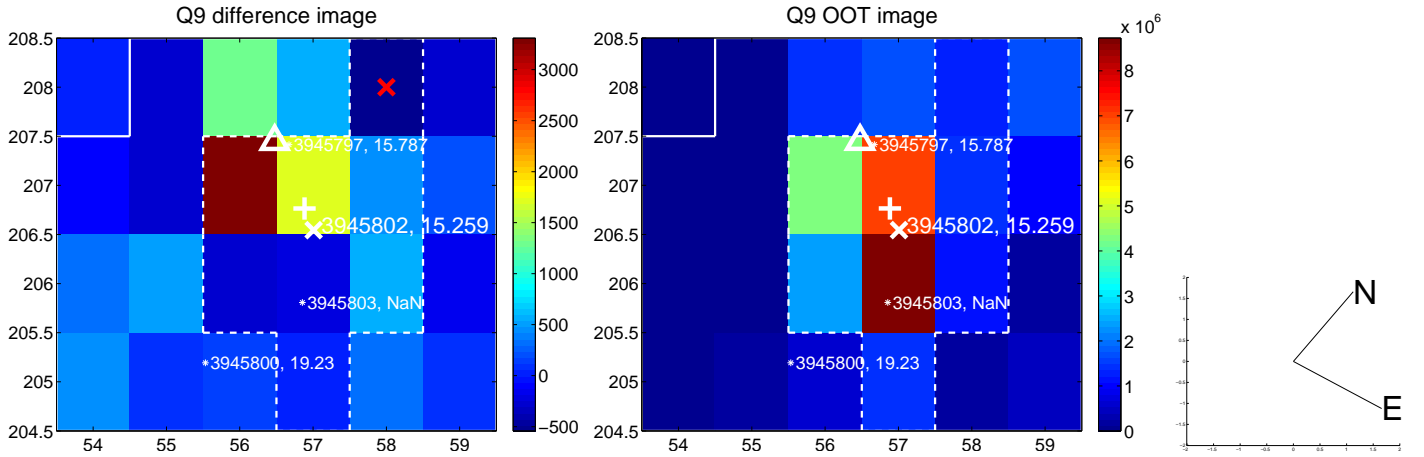
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



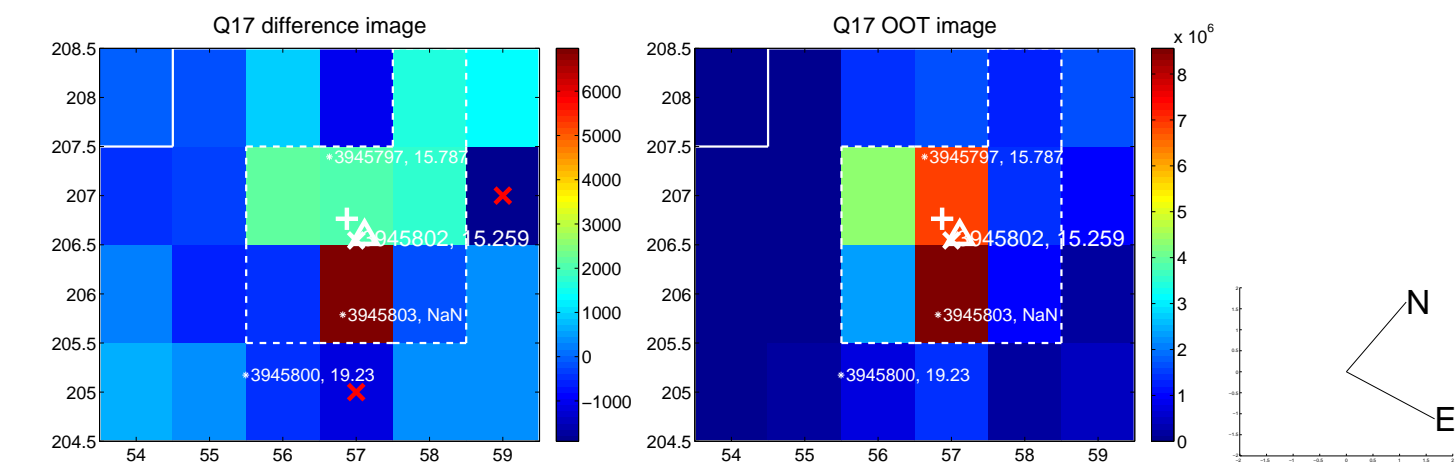
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



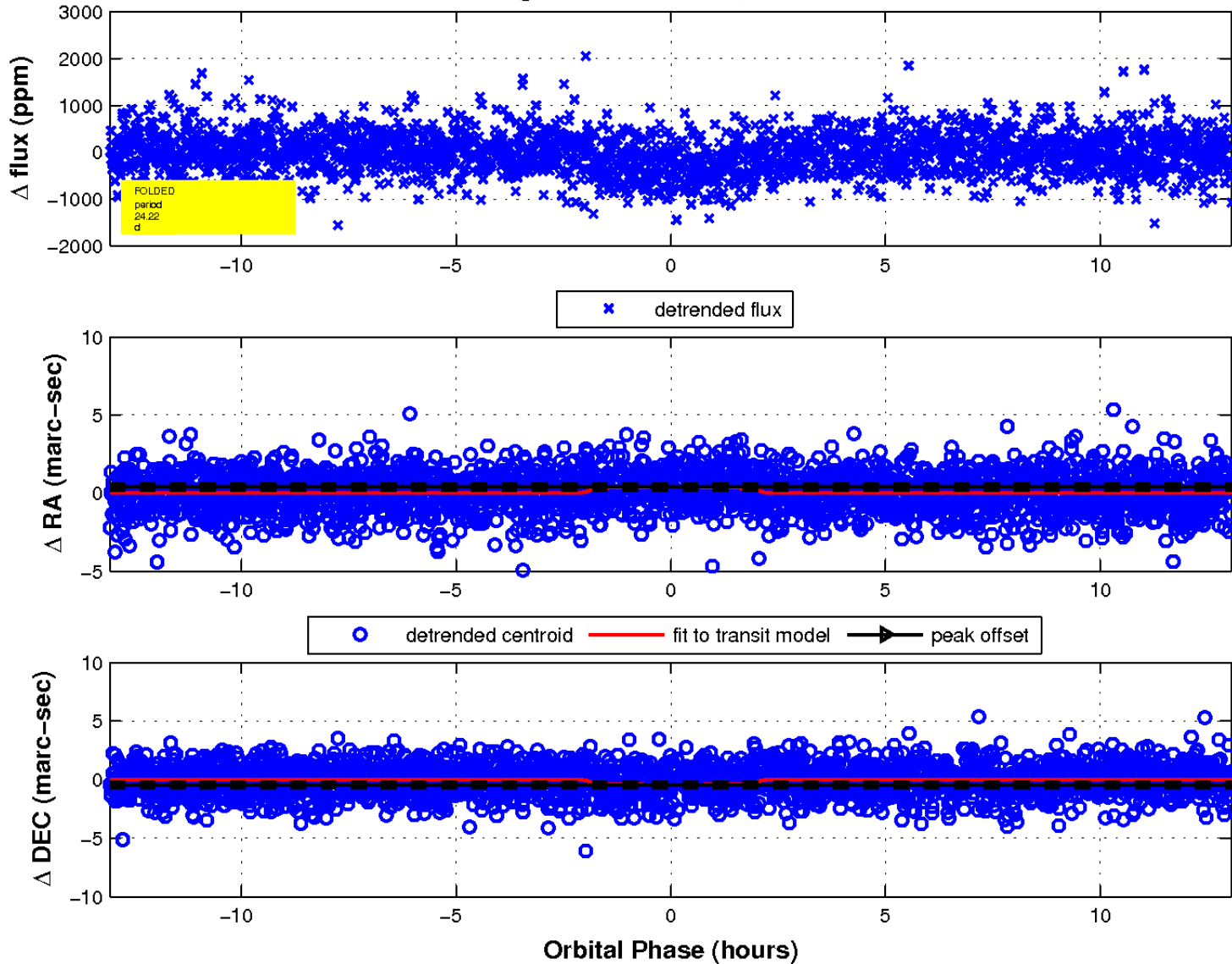
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

