

KIC 008367644

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})
008367644-01	OBS	1879.01	22.085499	135.234789	3126.8	2.321	42.8	43.9	0.56	3828	3.65	3.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008367644-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

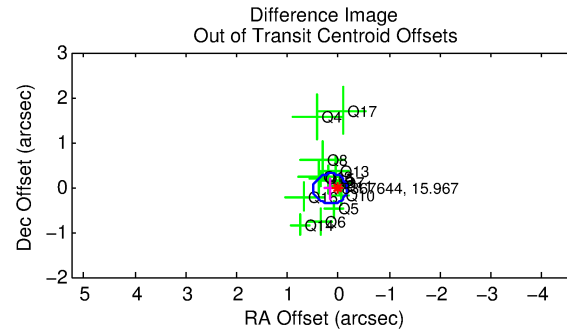
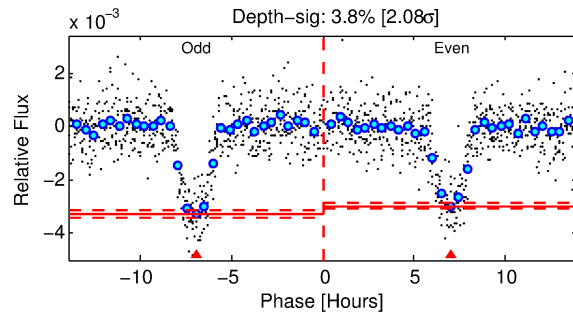
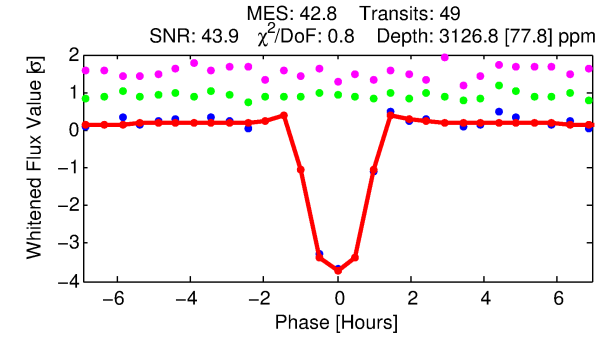
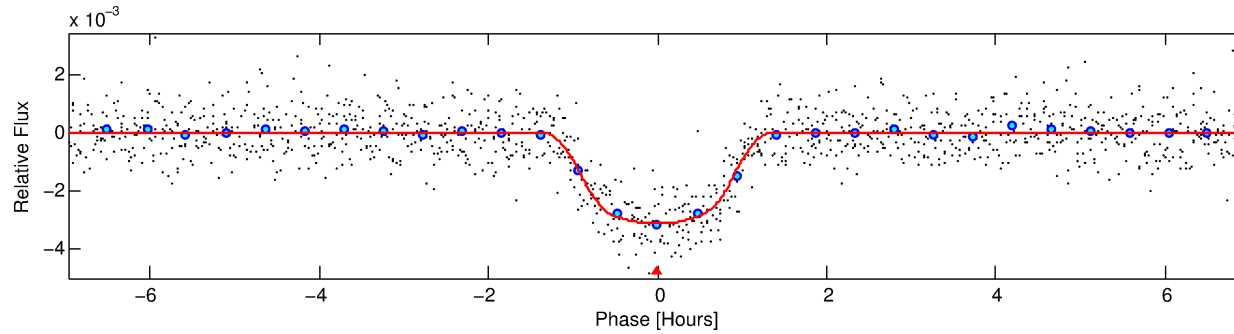
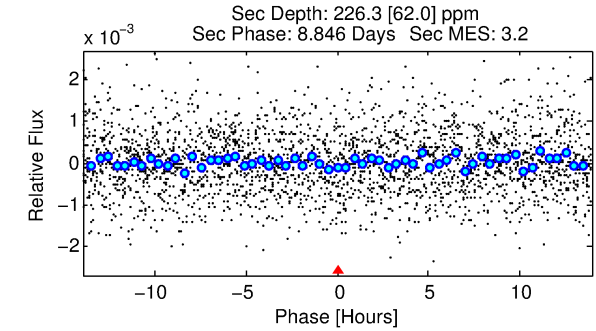
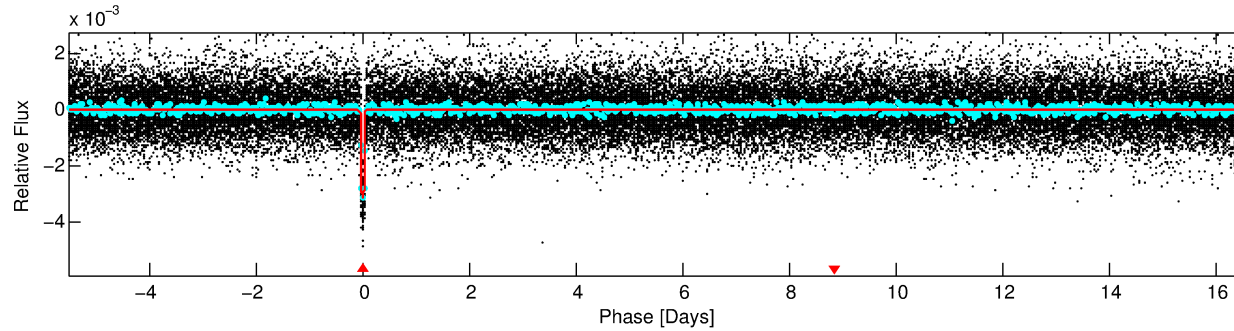
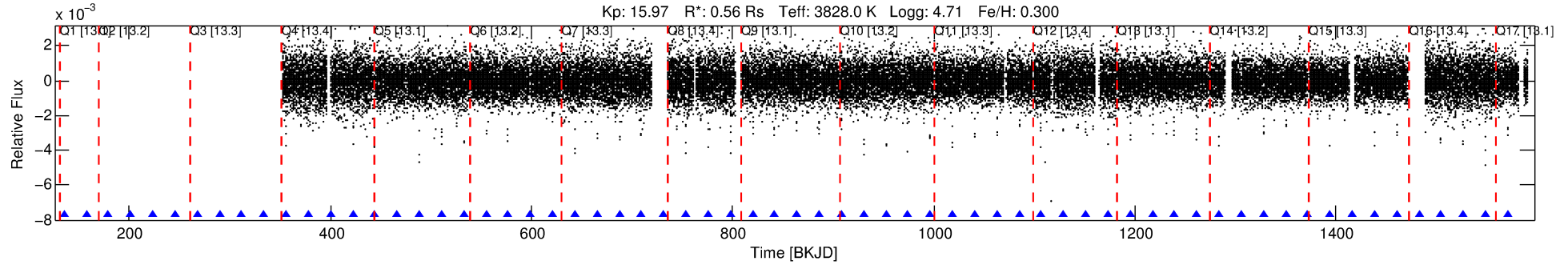
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008367644-01

No Significant Match Found

DV One-Page Summary

KIC: 8367644 Candidate: 1 of 1 Period: 22.085 d
KOI: K01879.01 Corr: 0.965



DV Fit Results:

Period = 22.08550 [0.00004] d
Epoch = 135.2348 [0.0017] BKJD
Rp/R* = 0.0592 [0.0036]
a/R* = 46.76 [9.39]
b = 0.84 [0.07]
Seff = 3.64 [0.39]
Teq = 352 [9] K
Rp = 3.65 [0.29] Re
a = 0.1300 [0.0055] AU
Ag = 157.60 [48.23] [3.25σ]
Teffp = 1929 [151] K [10.44σ]

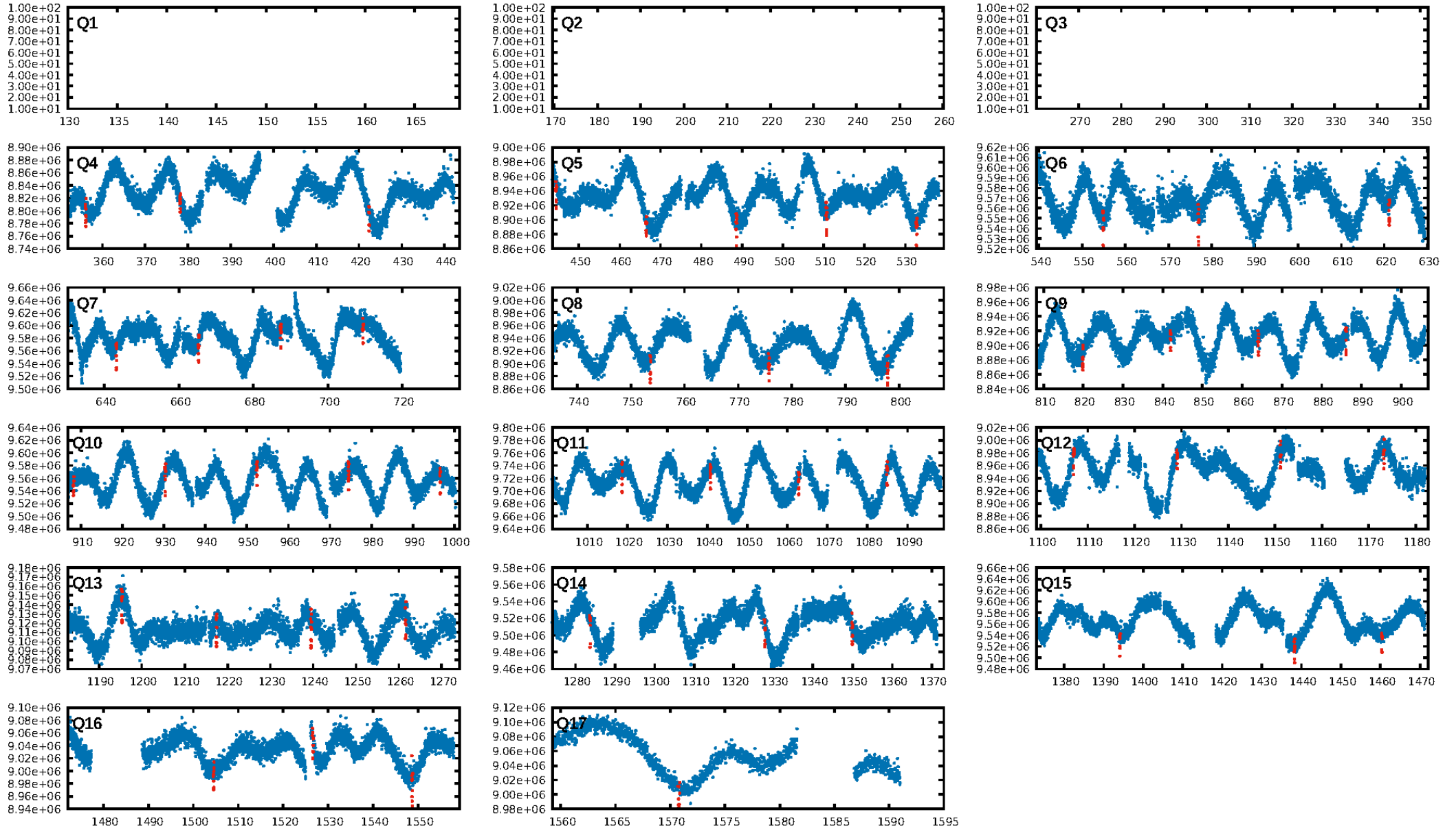
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [48/48]
GhostDiagnostic-chr: 3.545
Centroid-sig: 0.0%
Centroid-so: 0.640 arcsec [2.60σ]
OotOffset-rm: 0.164 arcsec [1.48σ]
KicOffset-rm: 0.192 arcsec [1.79σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

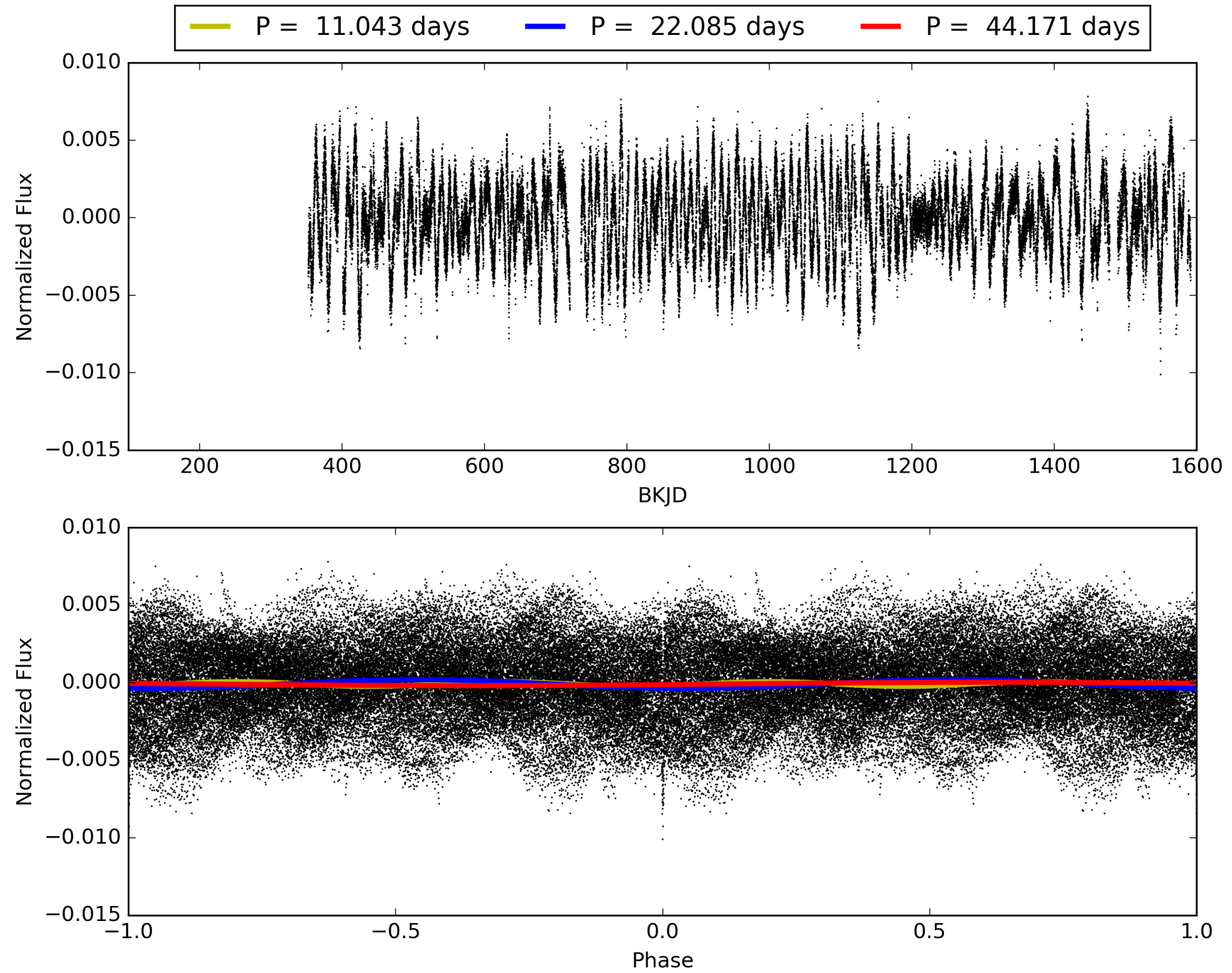
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:05:40 Z

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

TCE 008367644-01, PDC Light Curves

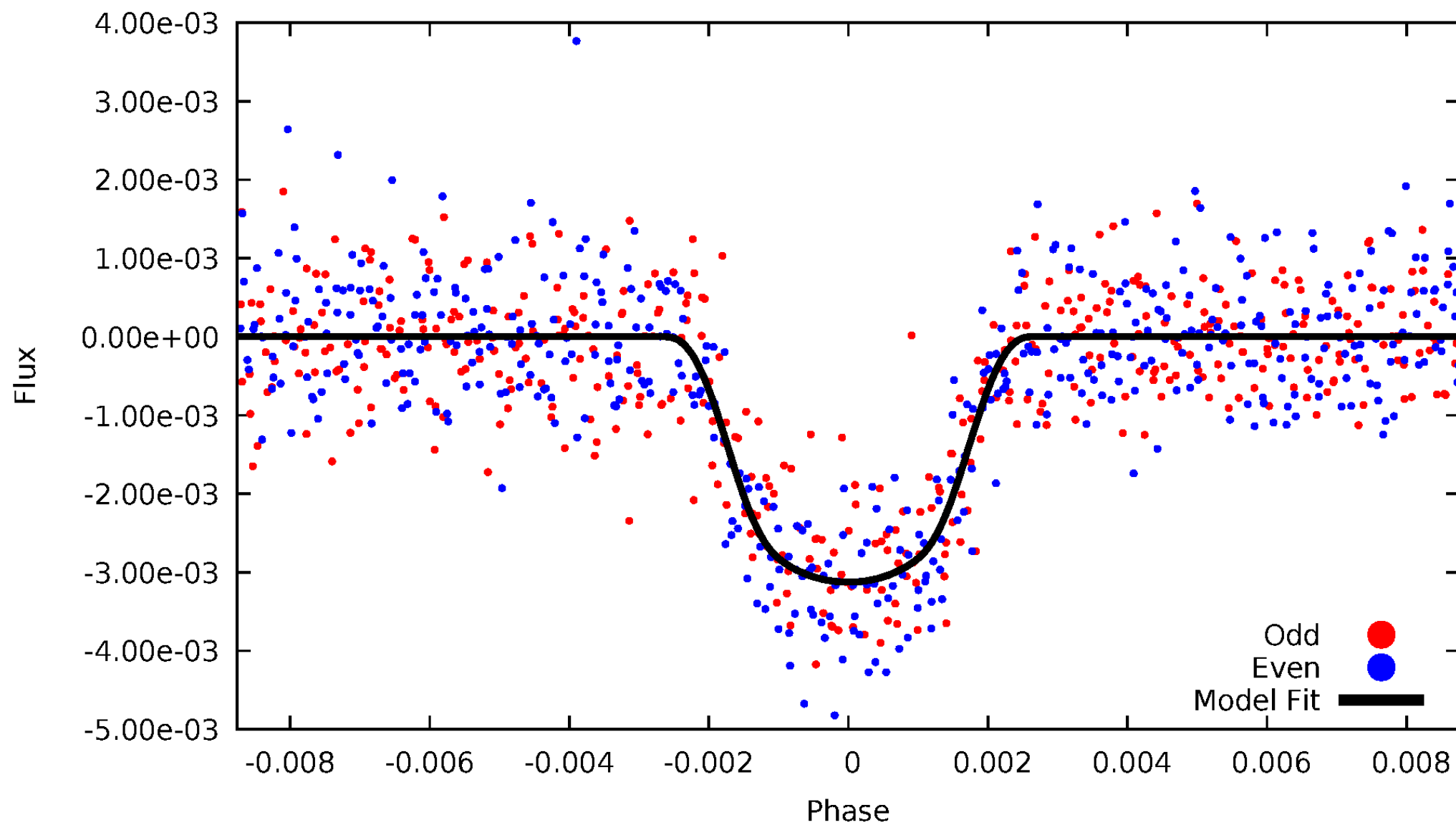


TCE 008367644-01



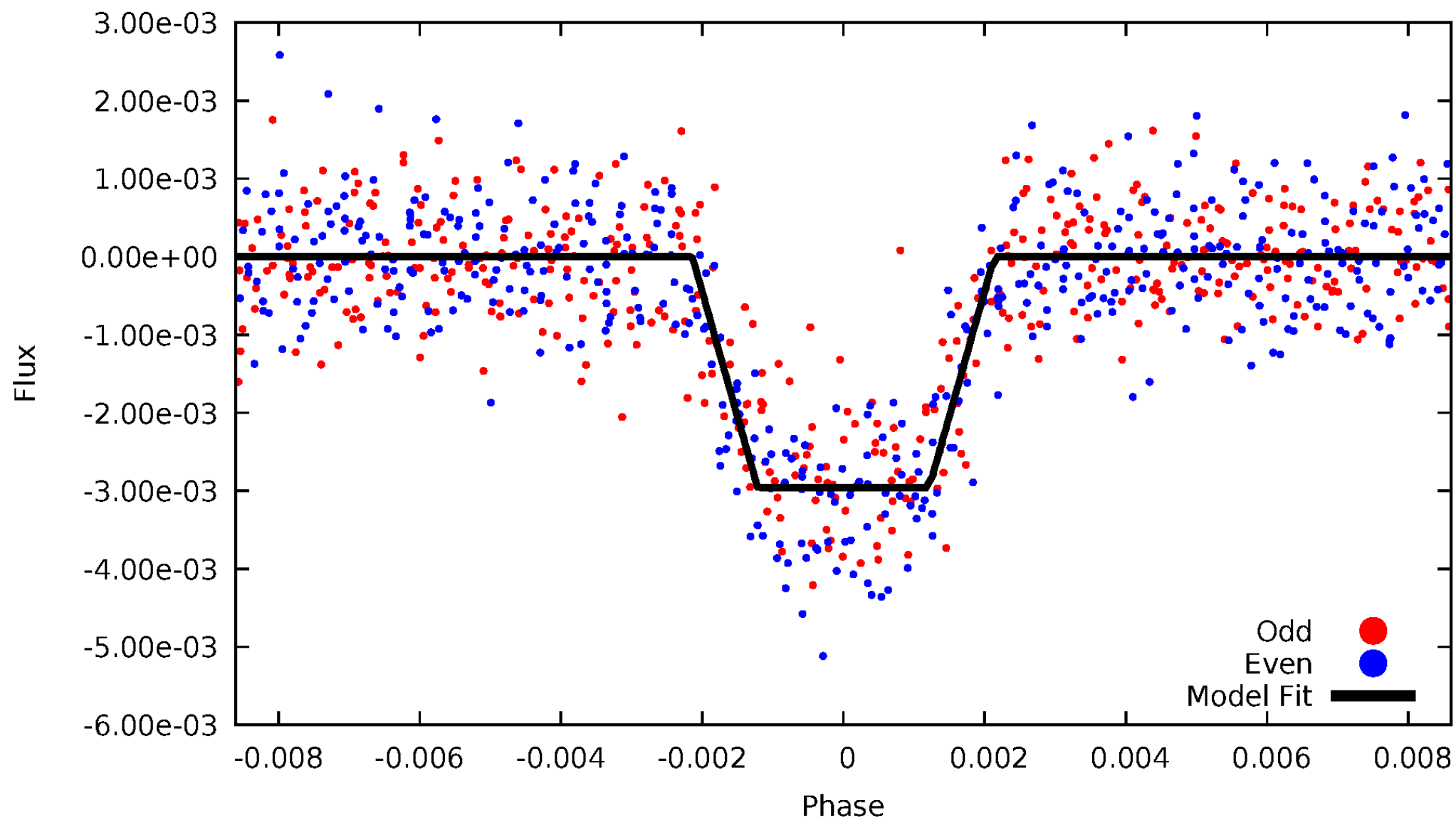
DV Odd/Even

TCE 008367644-01



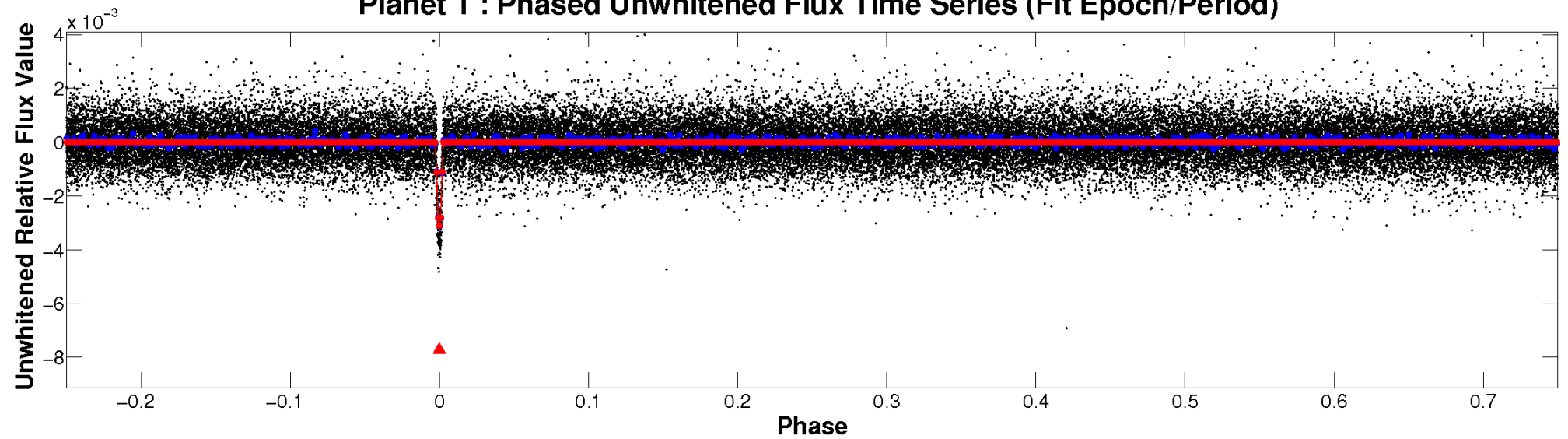
ALT Odd/Even

TCE 008367644-01

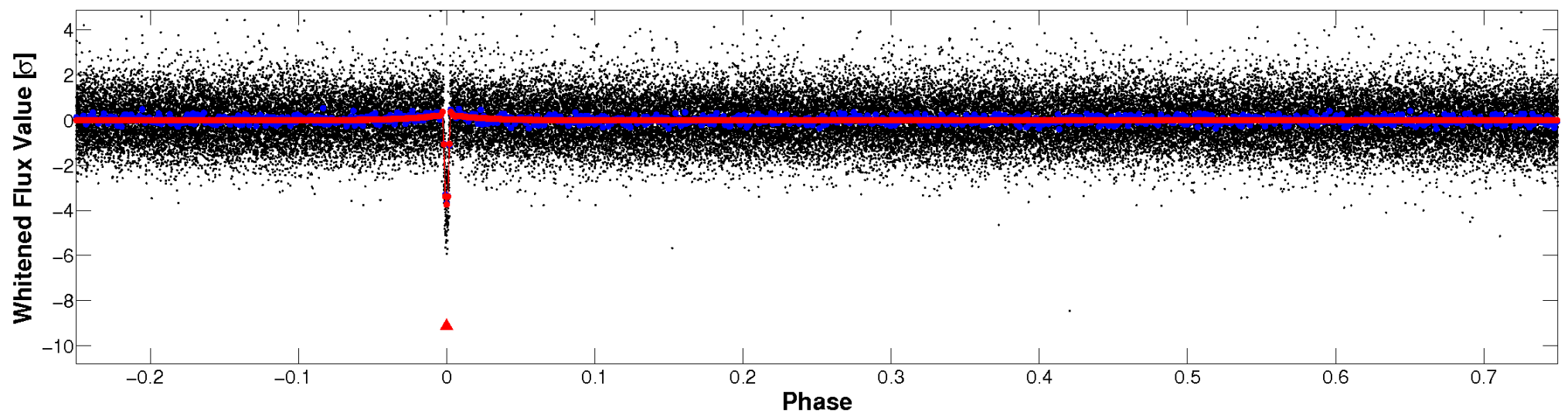


Non-Whitened Vs. Whitened Light Curve

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

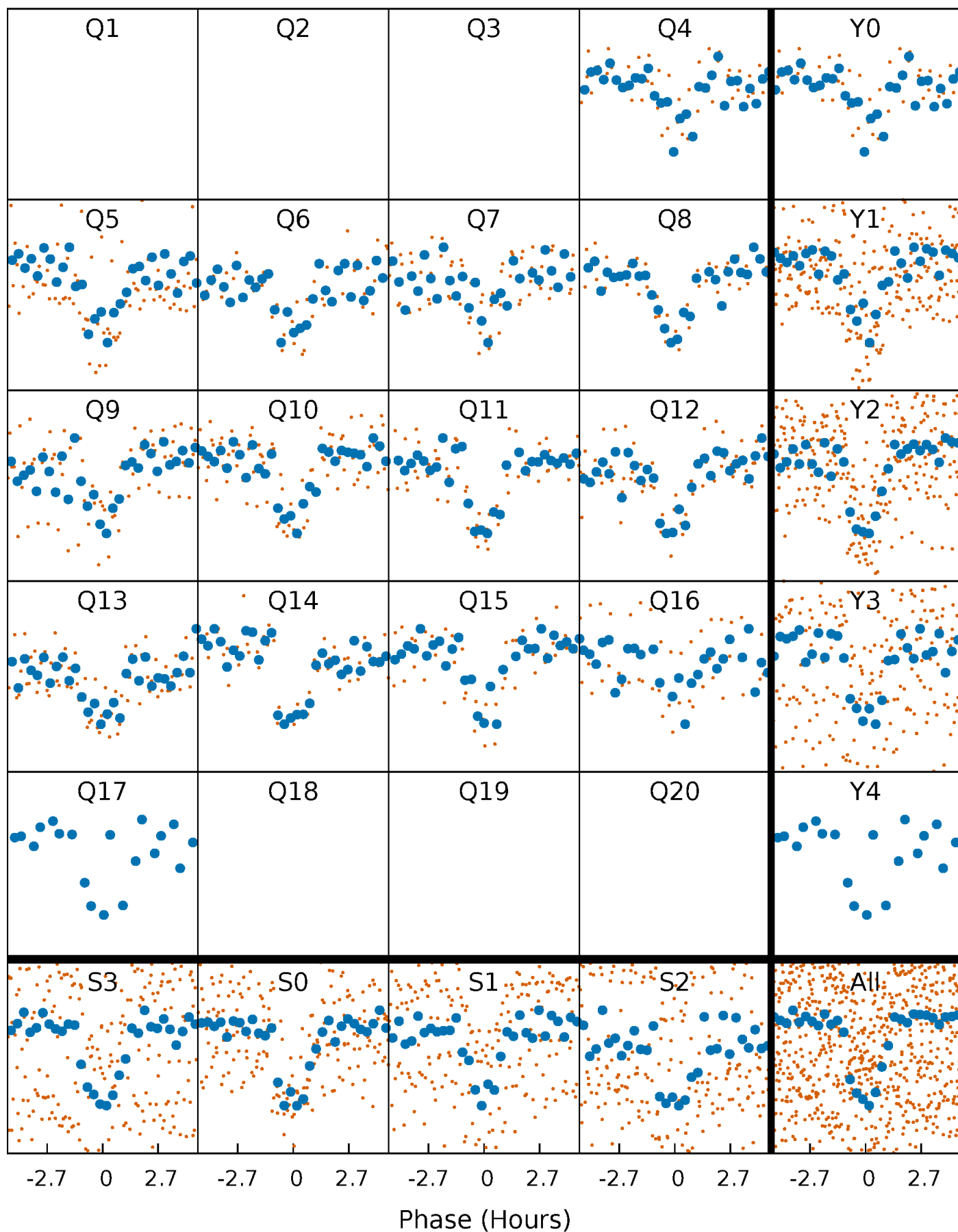


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



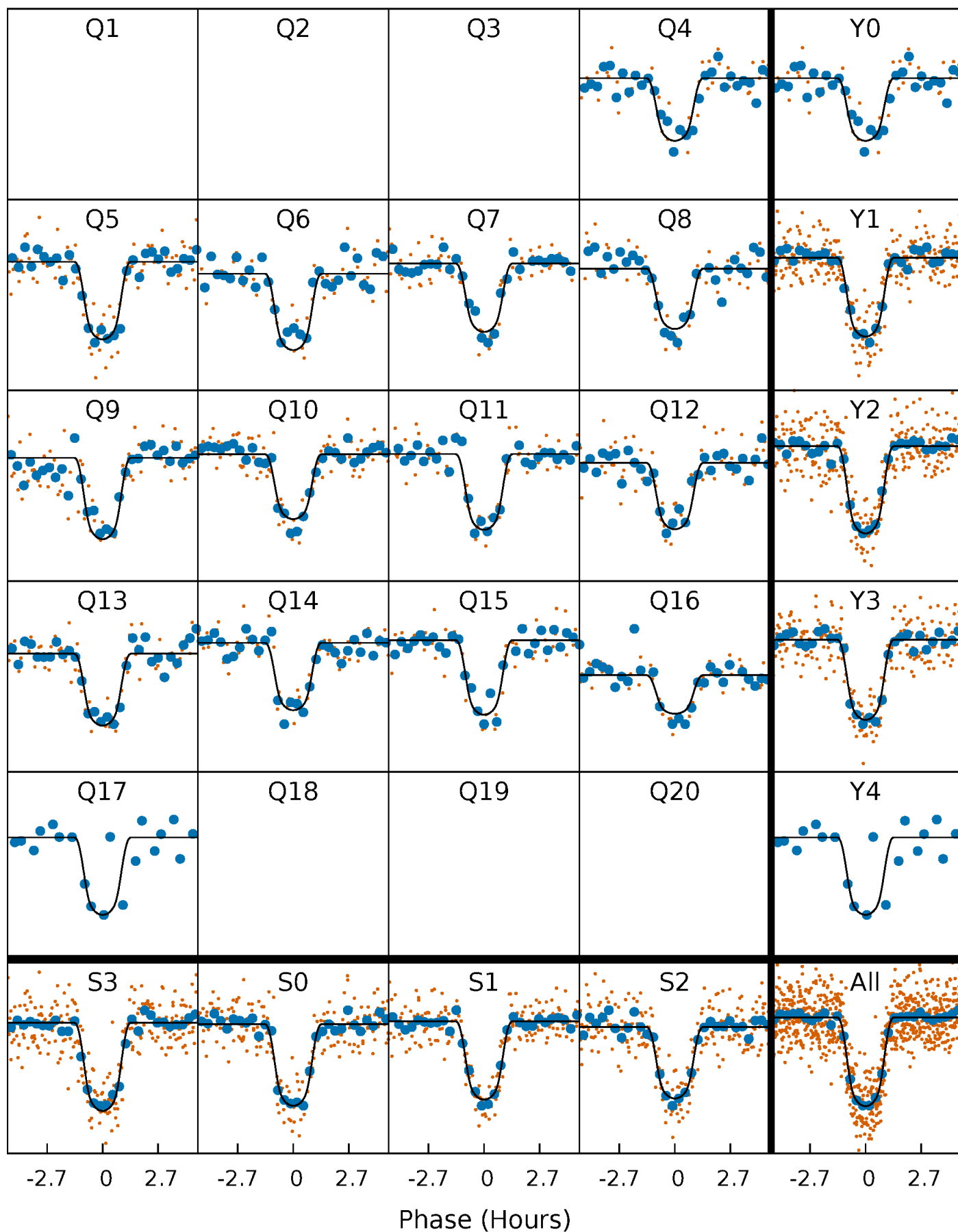
PDC Quarter-Phased Transit Curves

TCE 008367644-01 P= 22.085499 Days $T_0=135.234789$ (BKJD)



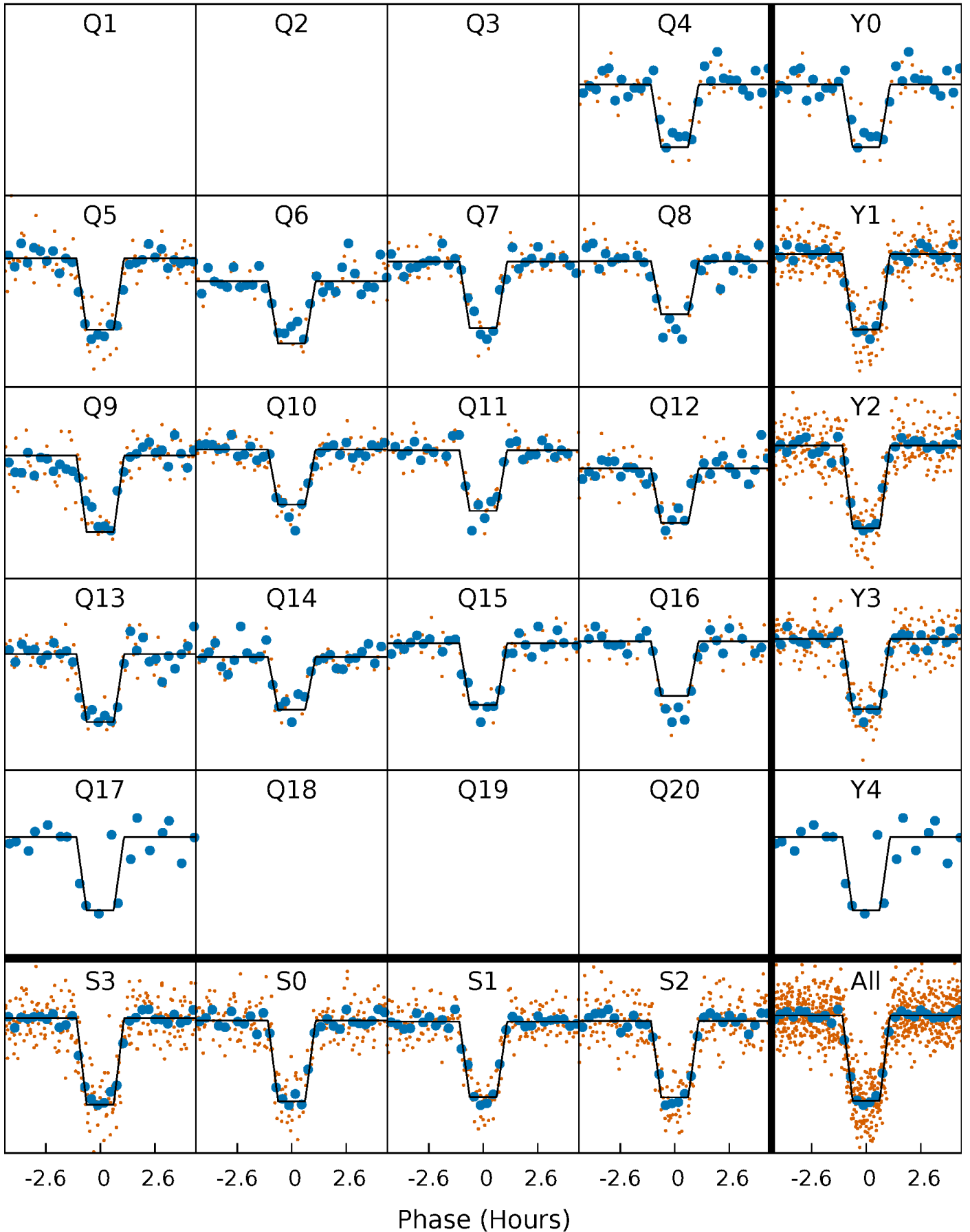
DV Quarter-Phased Transit Curves

TCE 008367644-01 P= 22.085499 Days $T_0=135.234789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

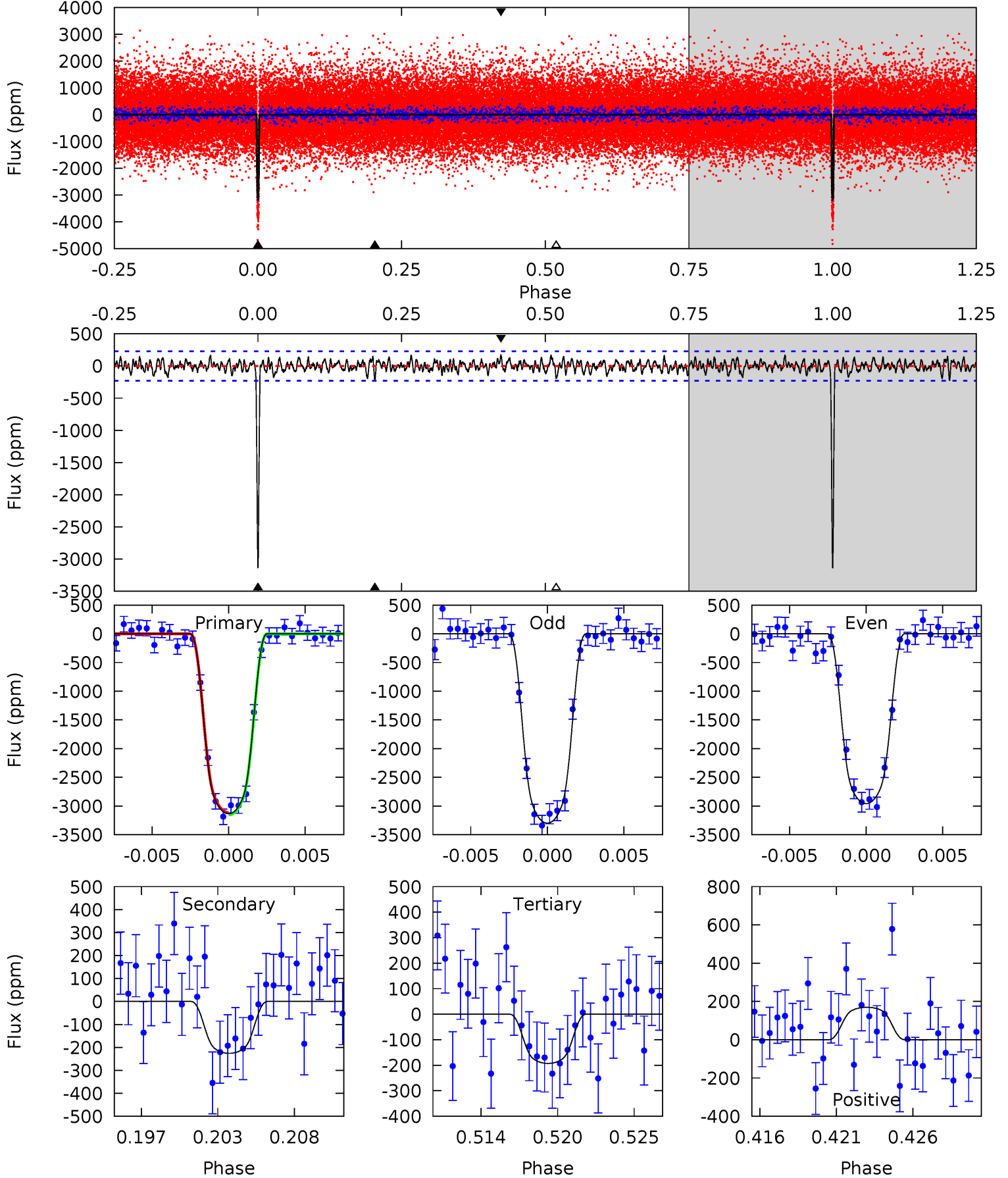
TCE 008367644-01 P= 22.085565 Days $T_0=135.232539$ (BKJD)



DV Model-Shift Uniqueness Test

008367644-01, $P = 22.085499$ Days, $E = 135.234789$ Days

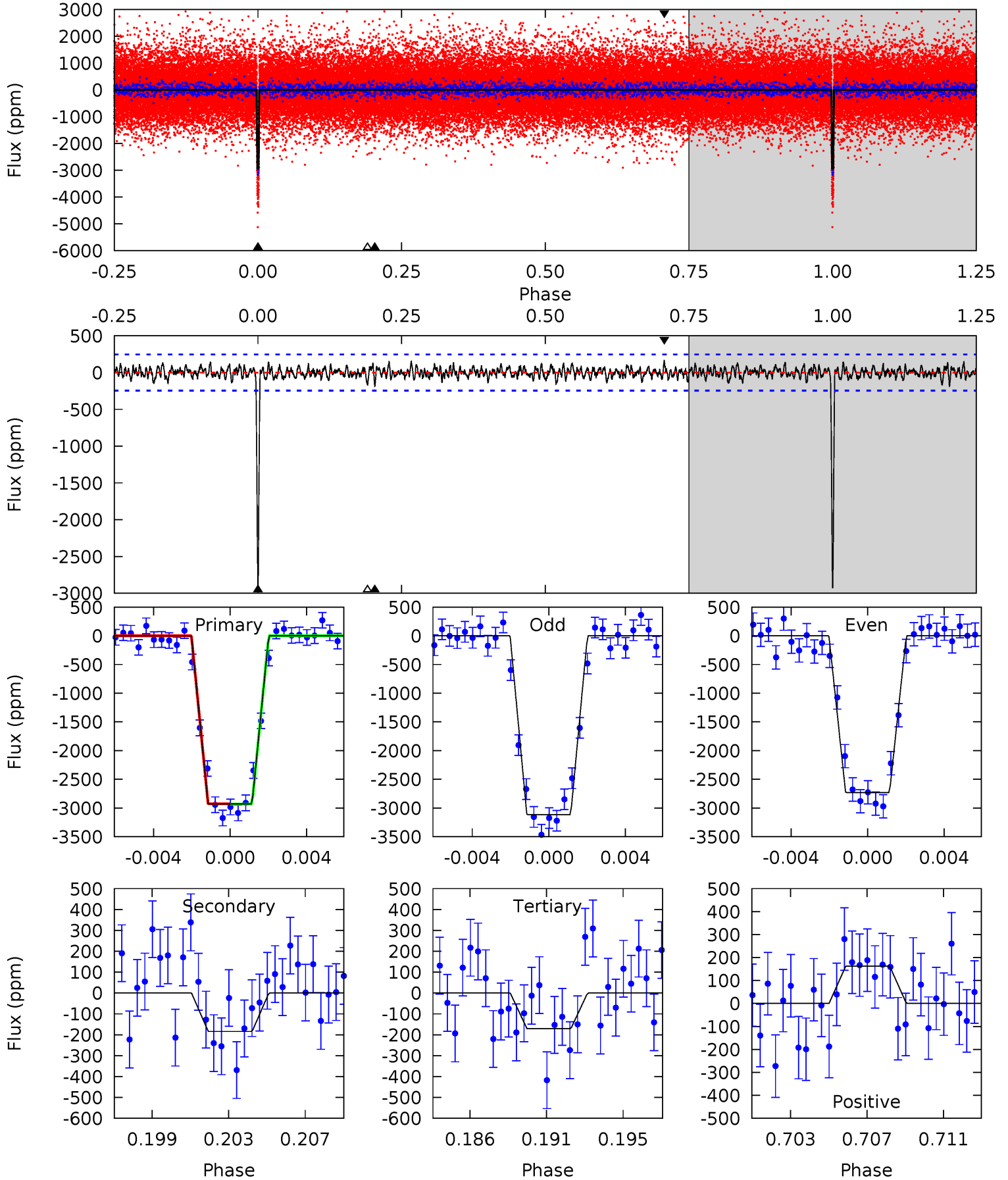
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
70.6	5.08	4.34	3.82	5.15	2.79	1.42	66.2	66.8	0.74	1.27	3.85	1.02	0.05	0.45



Alt Model-Shift Uniqueness Test

008367644-01, P = 22.085565 Days, E = 135.232539 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.7	3.88	3.60	3.43	5.19	2.86	1.13	58.1	58.3	0.28	0.45	4.04	1.02	0.05	0.04



Stellar Parameters For KIC 008367644

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3828^{+76}_{-84}	$4.712^{+0.022}_{-0.032}$	$0.300^{+0.150}_{-0.150}$	$0.565^{+0.029}_{-0.029}$	$0.600^{+0.025}_{-0.037}$	$4.686^{+0.501}_{-0.559}$
	+2%/-2%	+0%/-1%	+50%/-50%	+5%/-5%	+4%/-6%	+11%/-12%
Source	SPE70	SPE60	SPE70	DSEP		

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

Secondary Eclipse Parameters for KIC 008367644-01 / KOI 1879.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-226 ± 44	$3.68^{+0.26}_{-0.26}$	493^{+12}_{-12}	2570^{+77}_{-90}	156^{+40}_{-35}
Alt.	-184 ± 47	$3.37^{+0.25}_{-0.26}$	494^{+11}_{-12}	2562^{+98}_{-105}	151^{+50}_{-41}

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

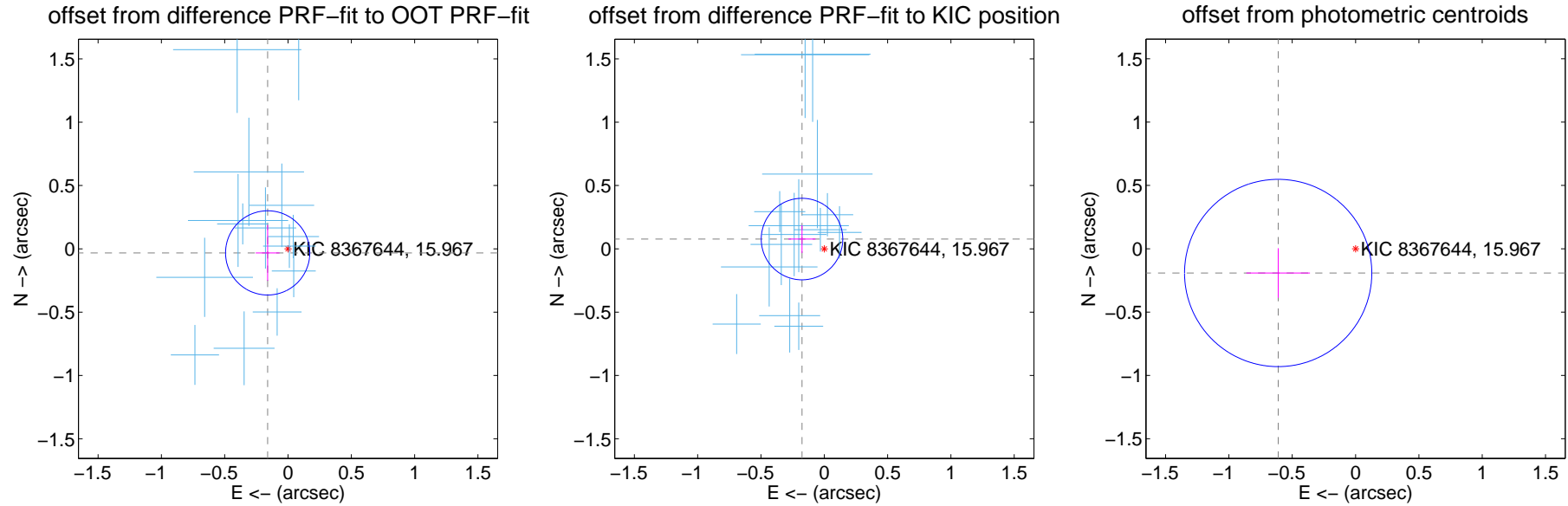
DV Centroid Data

Supplemental centroid analysis for 008367644-01. Kepler magnitude: 15.97. Transit SNR 43.86

There are 14 quarters with good PRF difference image offsets

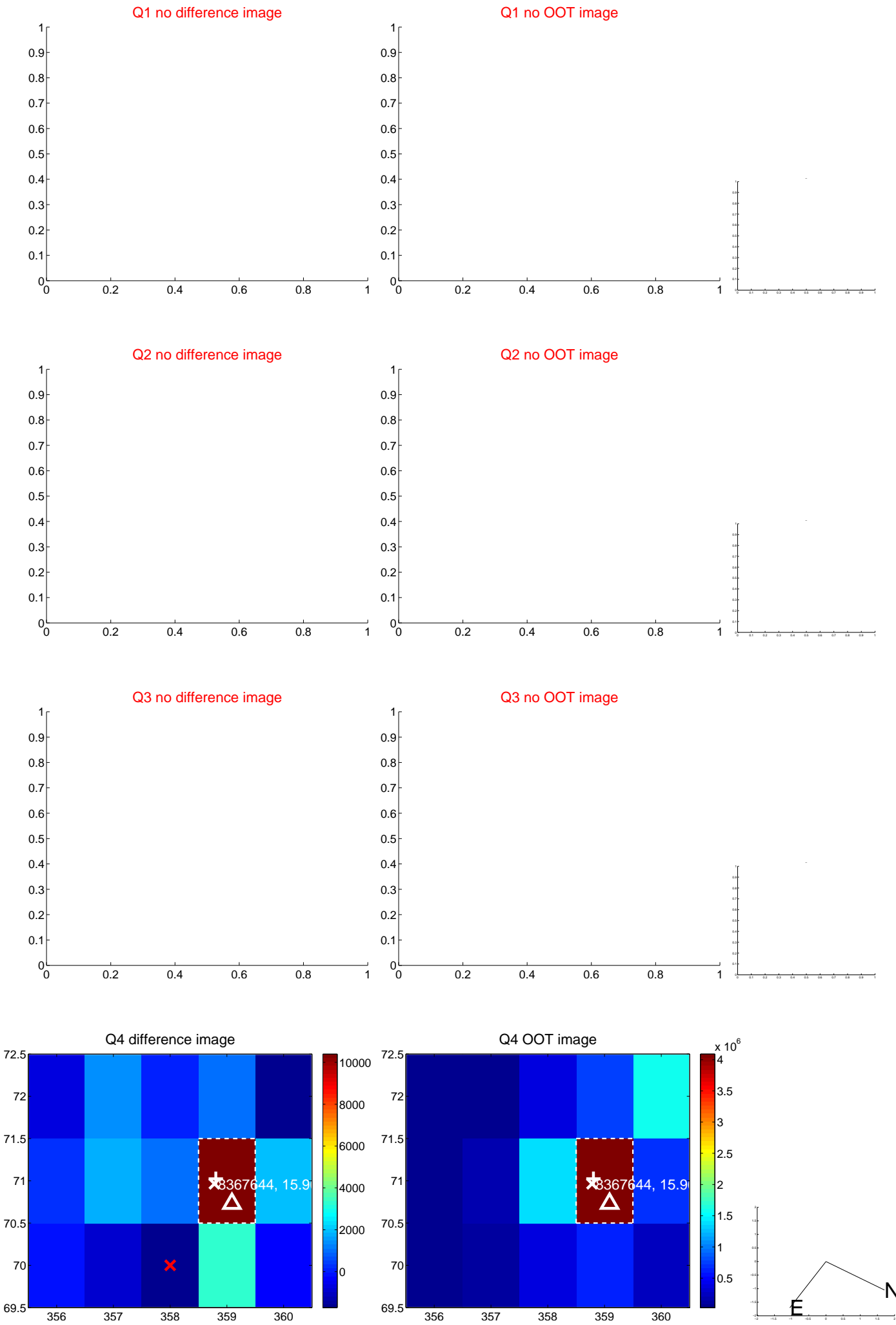
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.164 ± 0.111	1.48	0.161 ± 0.094	-0.032 ± 0.220
PRF-fit source offset from KIC position	0.192 ± 0.107	1.79	0.176 ± 0.107	0.077 ± 0.109
photometric centroid source offset	0.64 ± 0.25	2.60	0.61 ± 0.25	-0.19 ± 0.20

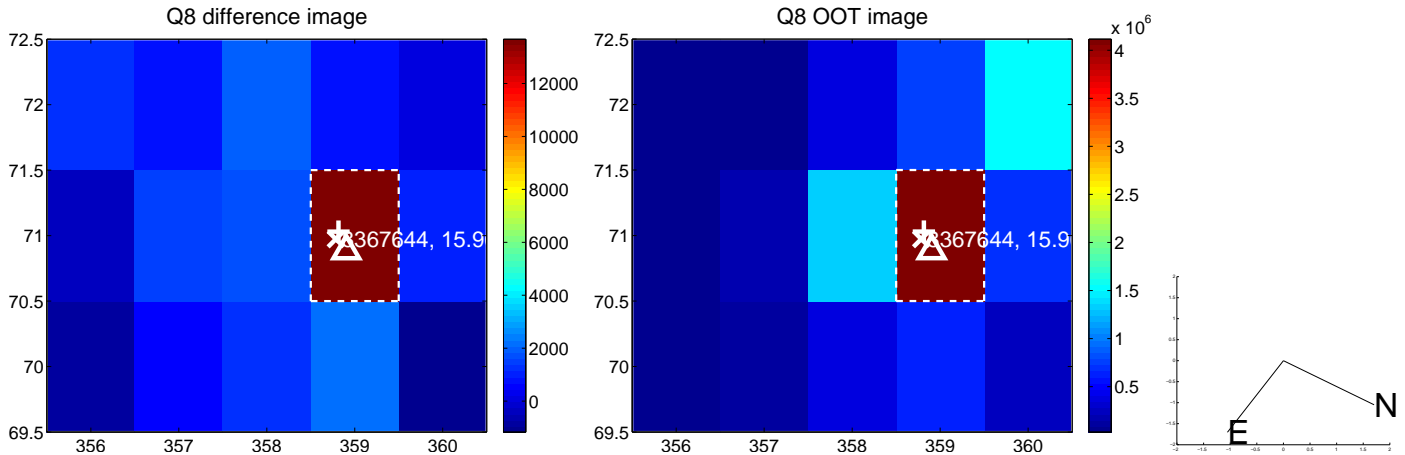
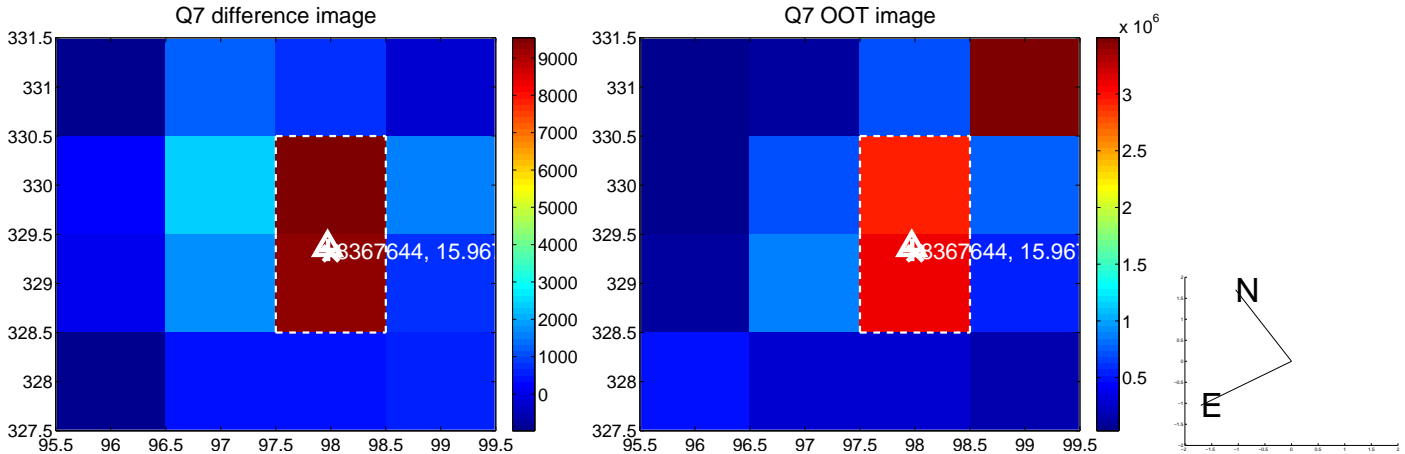
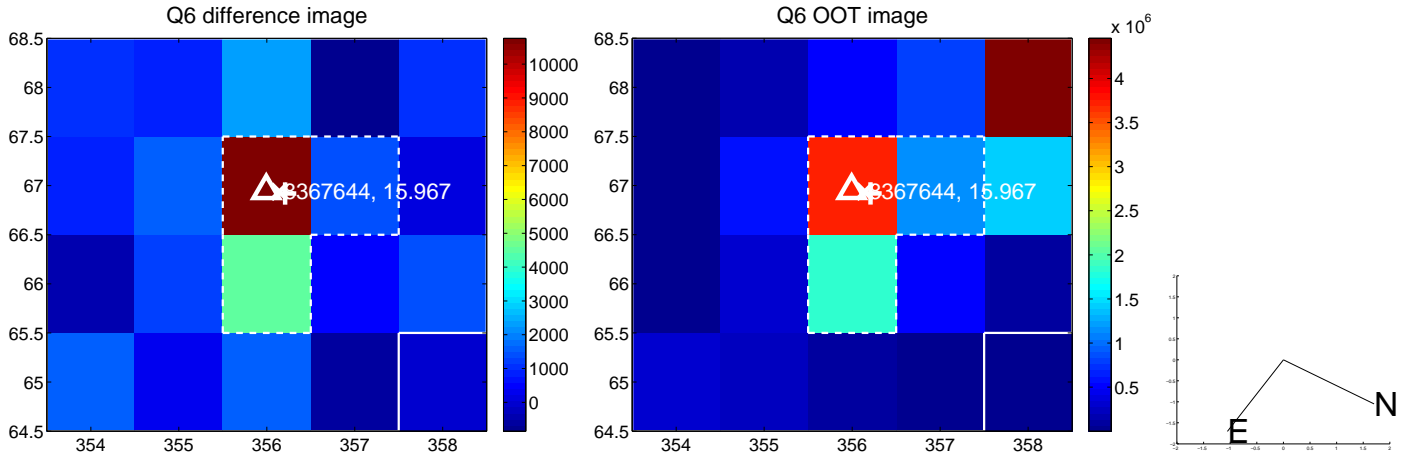
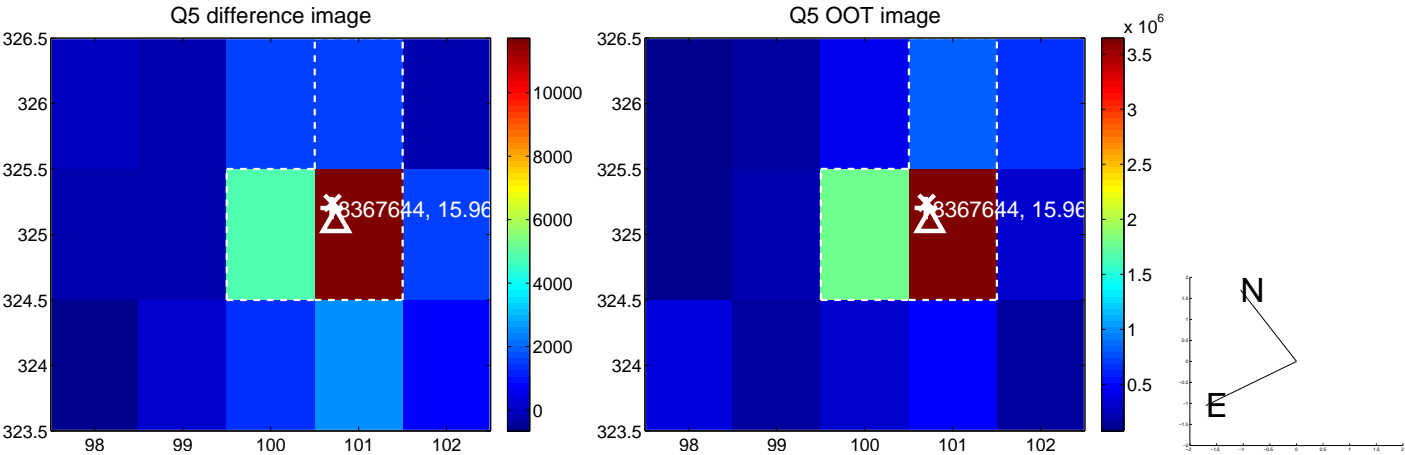


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

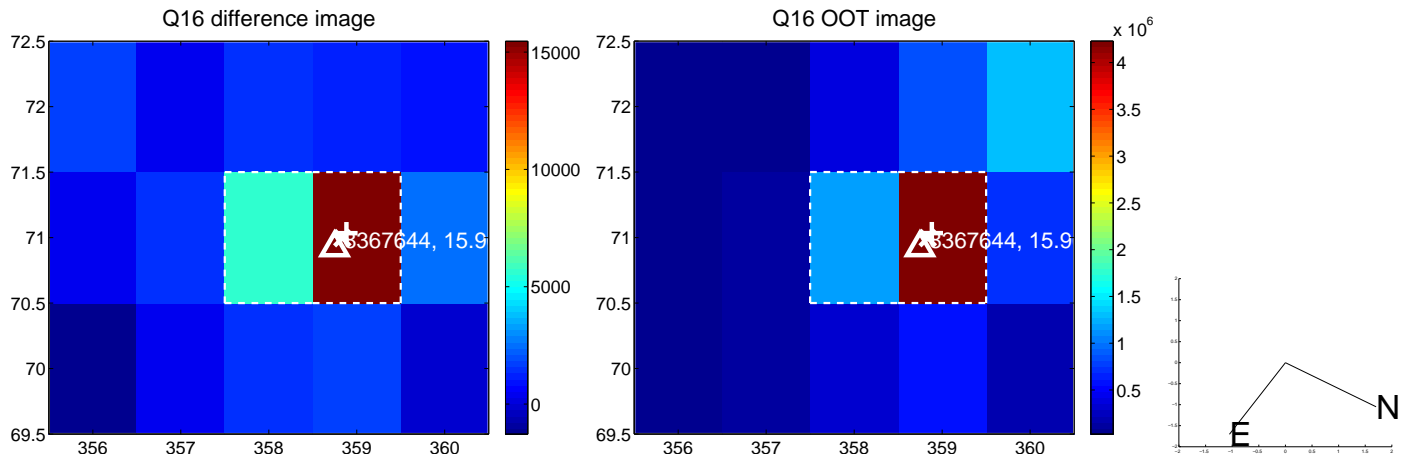
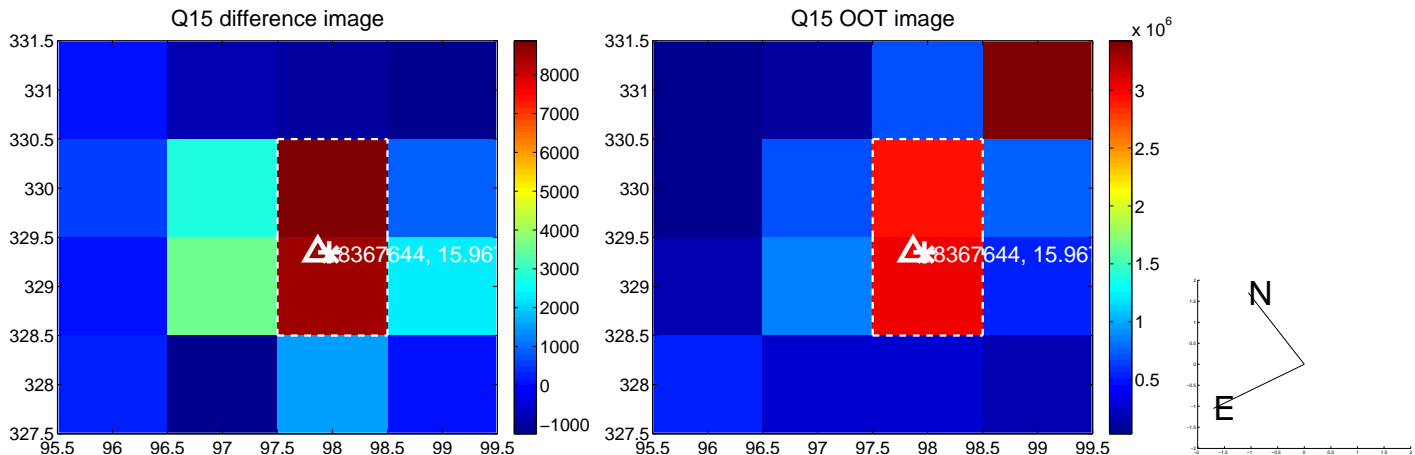
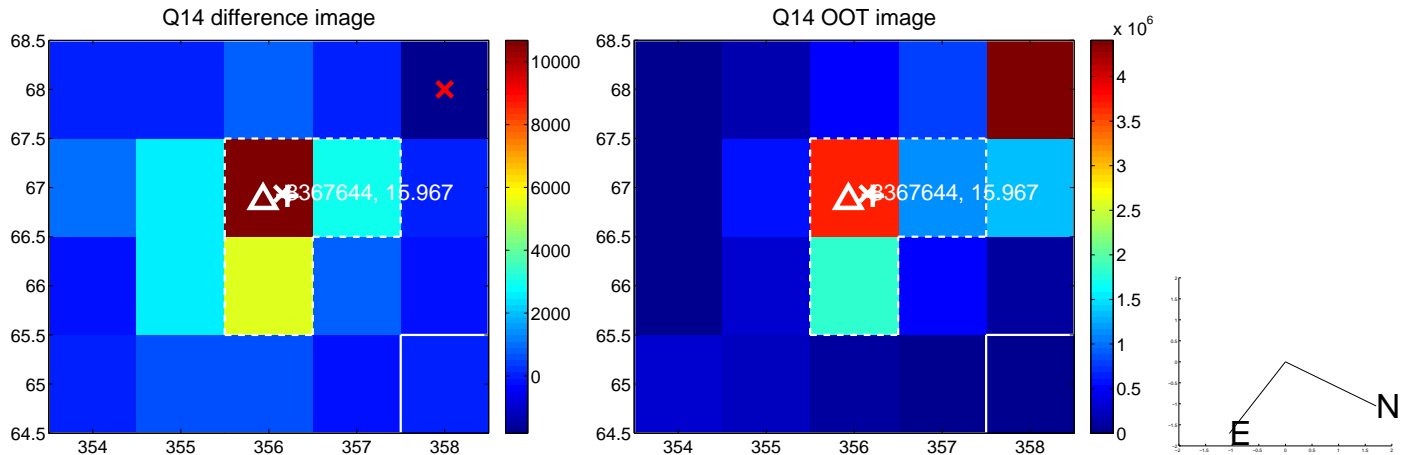
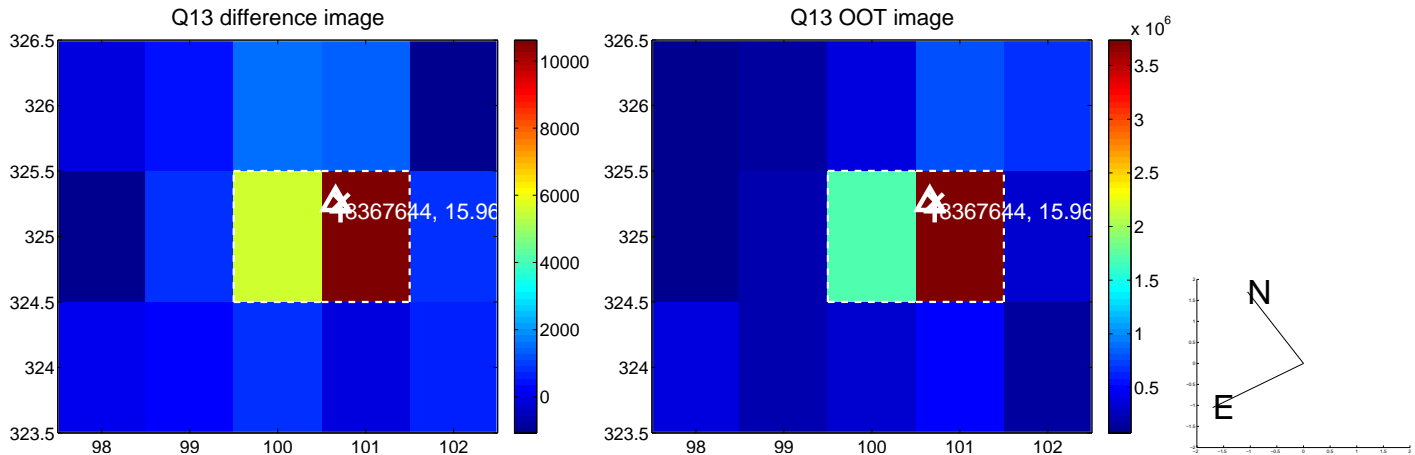
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



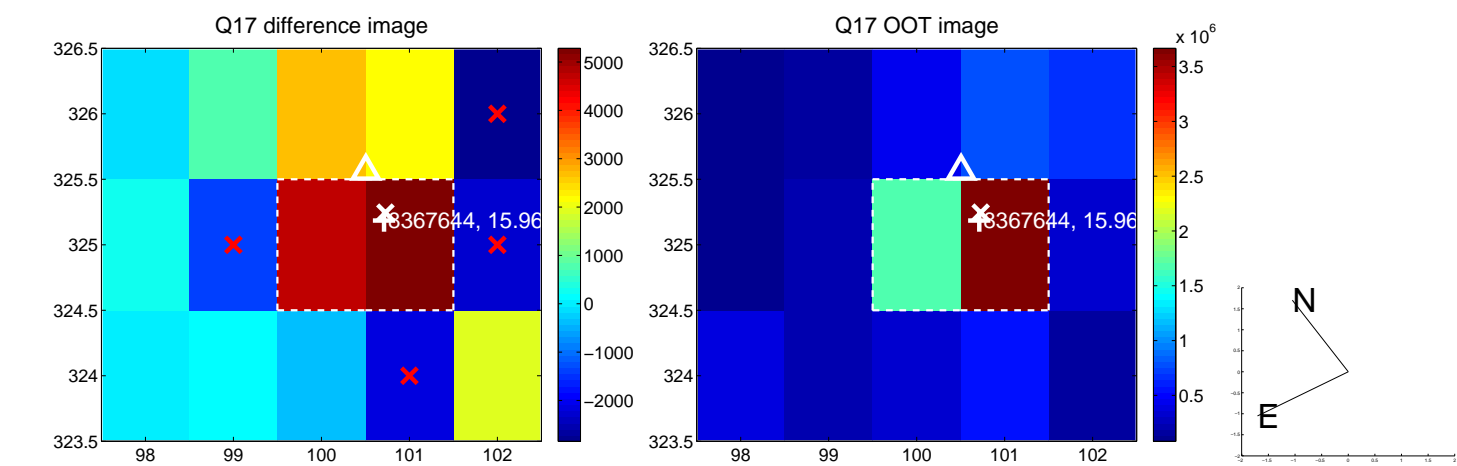
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



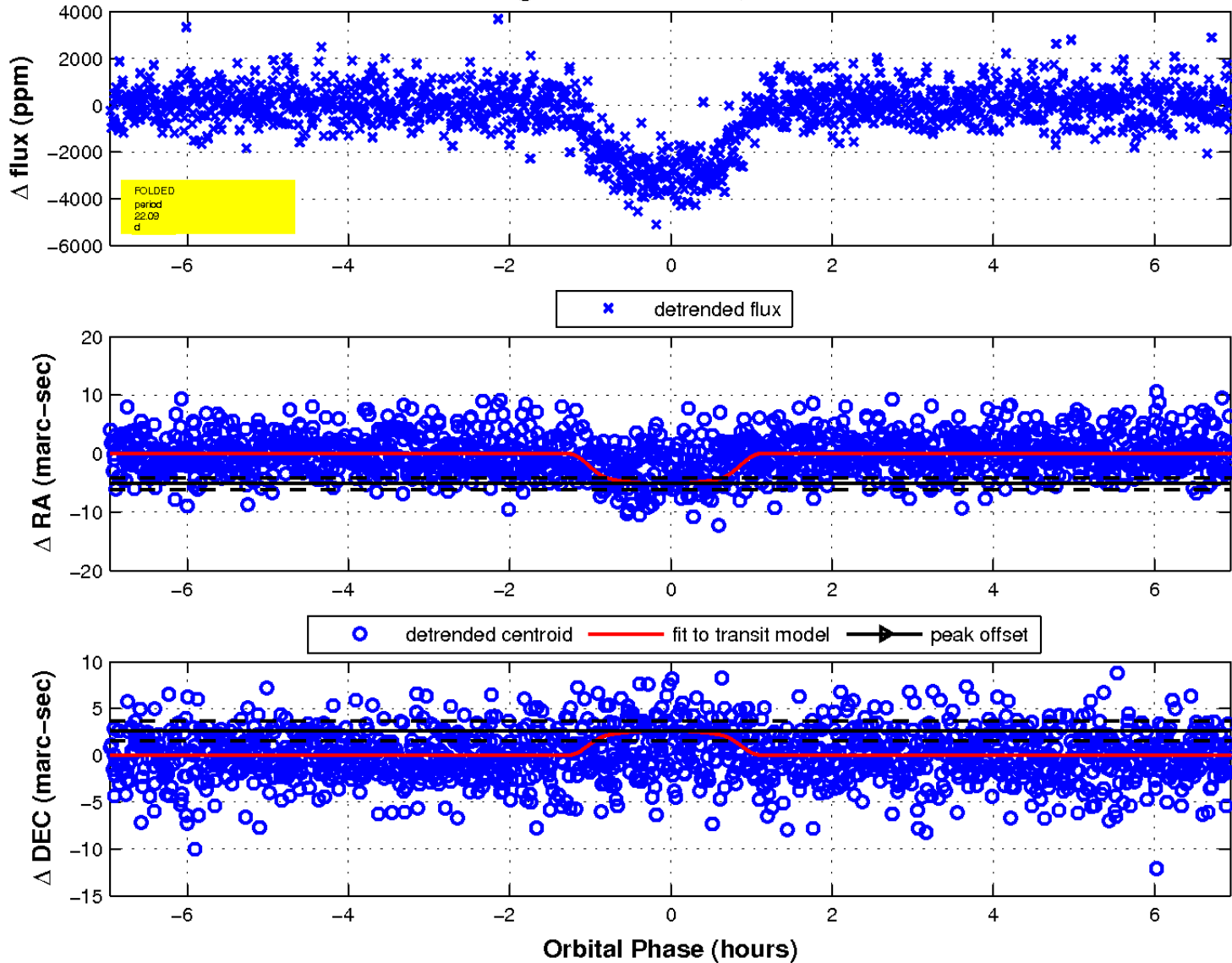
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

