

KIC 010363115

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})
010363115-01	OBS	3908.01	59.362468	184.150754	223.3	14.205	27.8	32.0	1.47	5786	2.44	24.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010363115-01	OBS	PC	0.62	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.

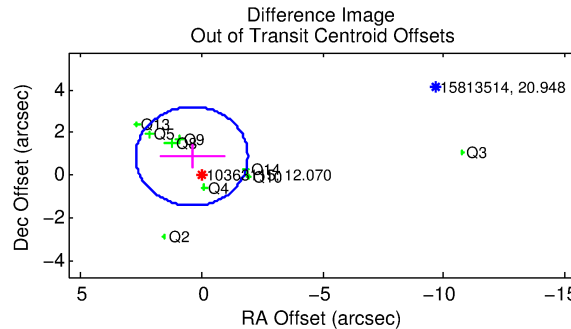
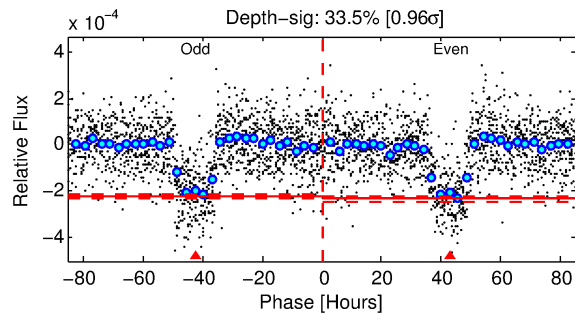
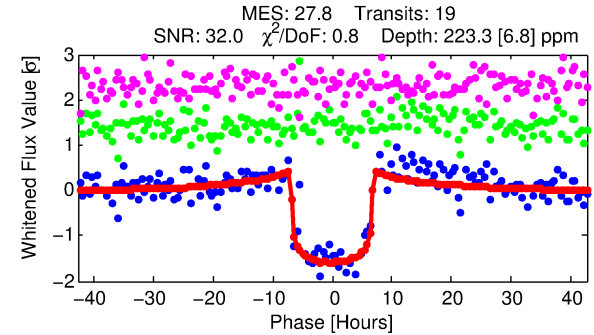
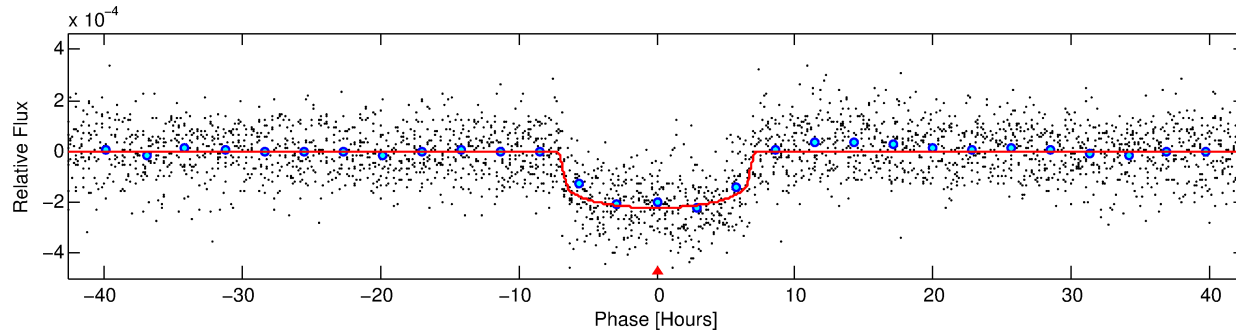
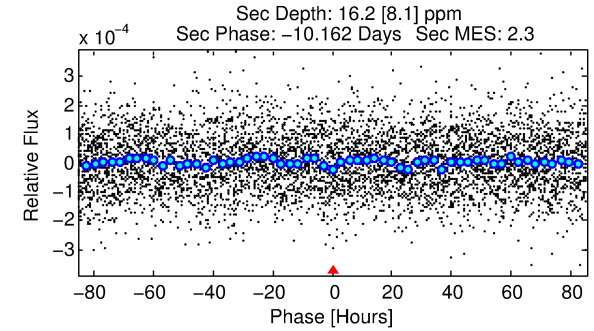
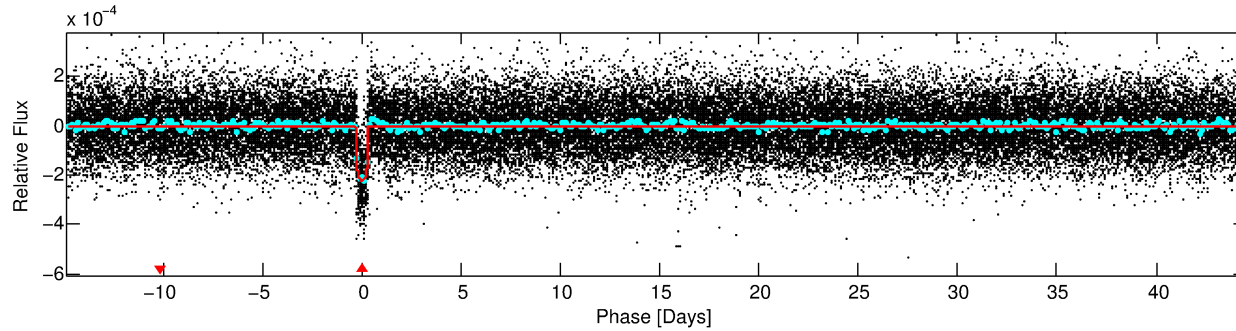
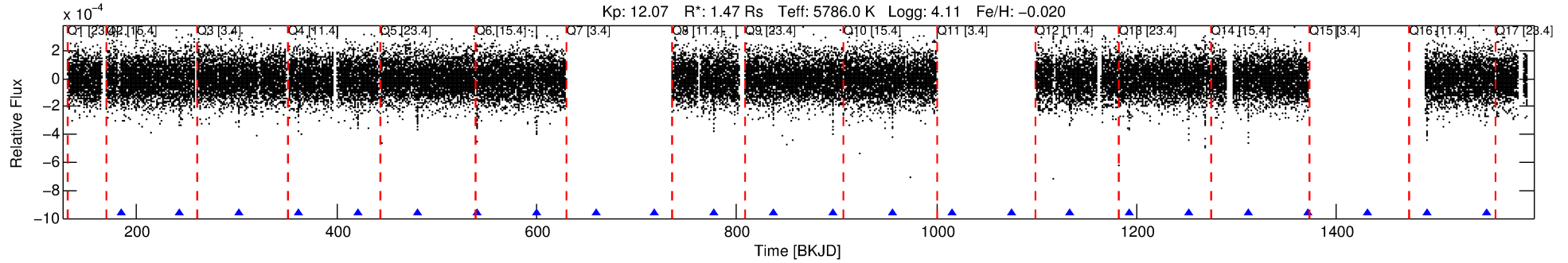
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010363115-01

No Significant Match Found

DV One-Page Summary

KIC: 10363115 Candidate: 1 of 1 Period: 59.362 d
KOI: K03908.01 Corr: 0.994



DV Fit Results:

Period = 59.36247 [0.00039] d
Epoch = 184.1508 [0.0051] BKJD
Rp/R* = 0.0152 [0.0010]
a/R* = 19.88 [5.98]
b = 0.80 [0.13]
Seff = 24.37 [8.11]
Teff = 567 [47] K
Rp = 2.44 [0.56] Re
a = 0.2986 [0.0612] AU
Ag = 133.56 [81.73] [1.62σ]
Teffp = 2978 [391] K [6.12σ]

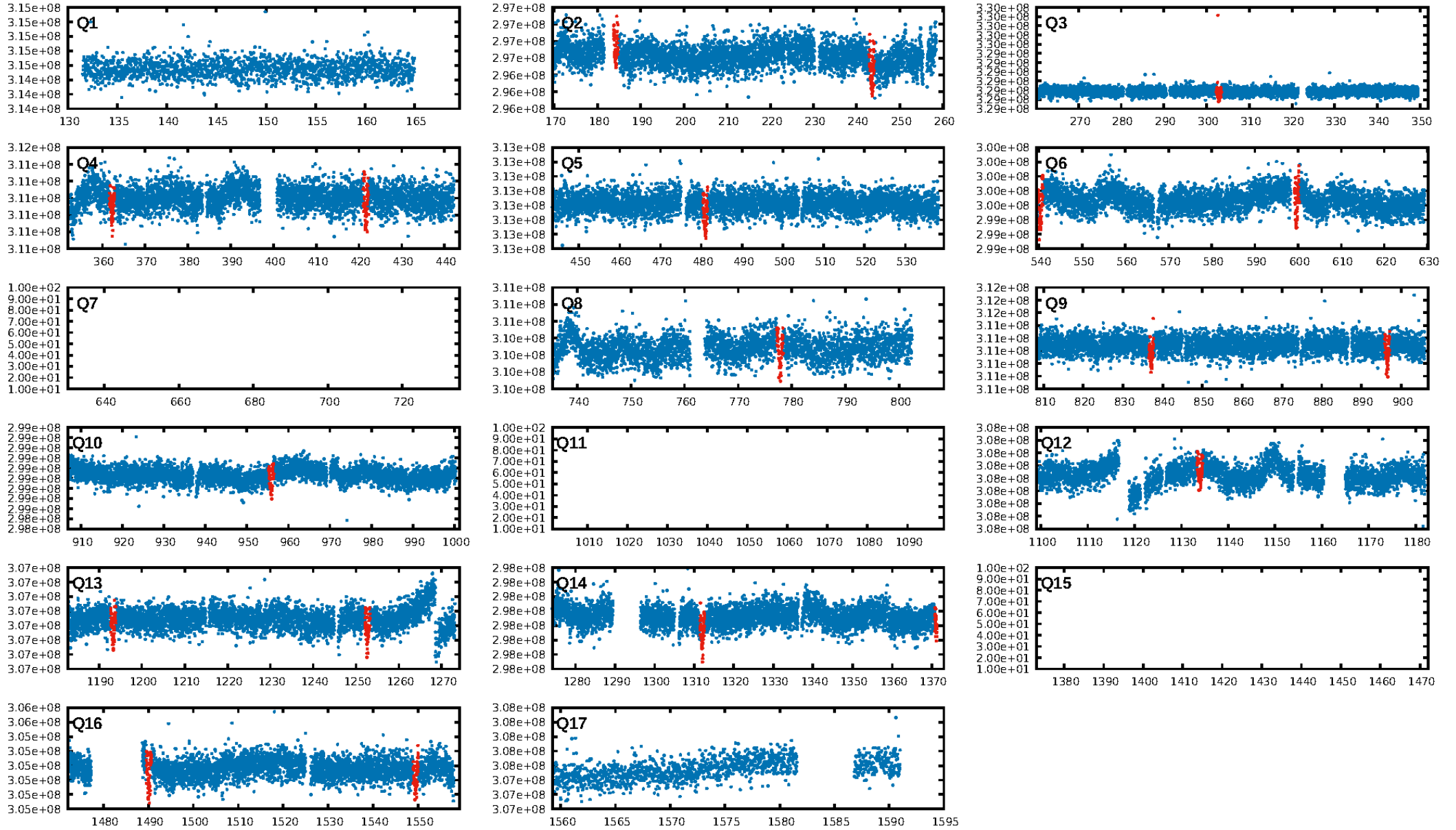
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.29e-168
RollingBand-fgt: 1.00 [19/19]
GhostDiagnostic-chr: 15.1
Centroid-sig: 58.1%
Centroid-so: 0.453 arcsec [1.23σ]
OotOffset-rm: 0.977 arcsec [1.27σ]
KicOffset-rm: 1.085 arcsec [1.91σ]
OotOffset-st: 3/1/2/3 [9]
KicOffset-st: 3/1/2/3 [9]
DiffImageQuality-fgm: 0.89 [8/9]
DiffImageOverlap-fno: 1.00 [9/9]

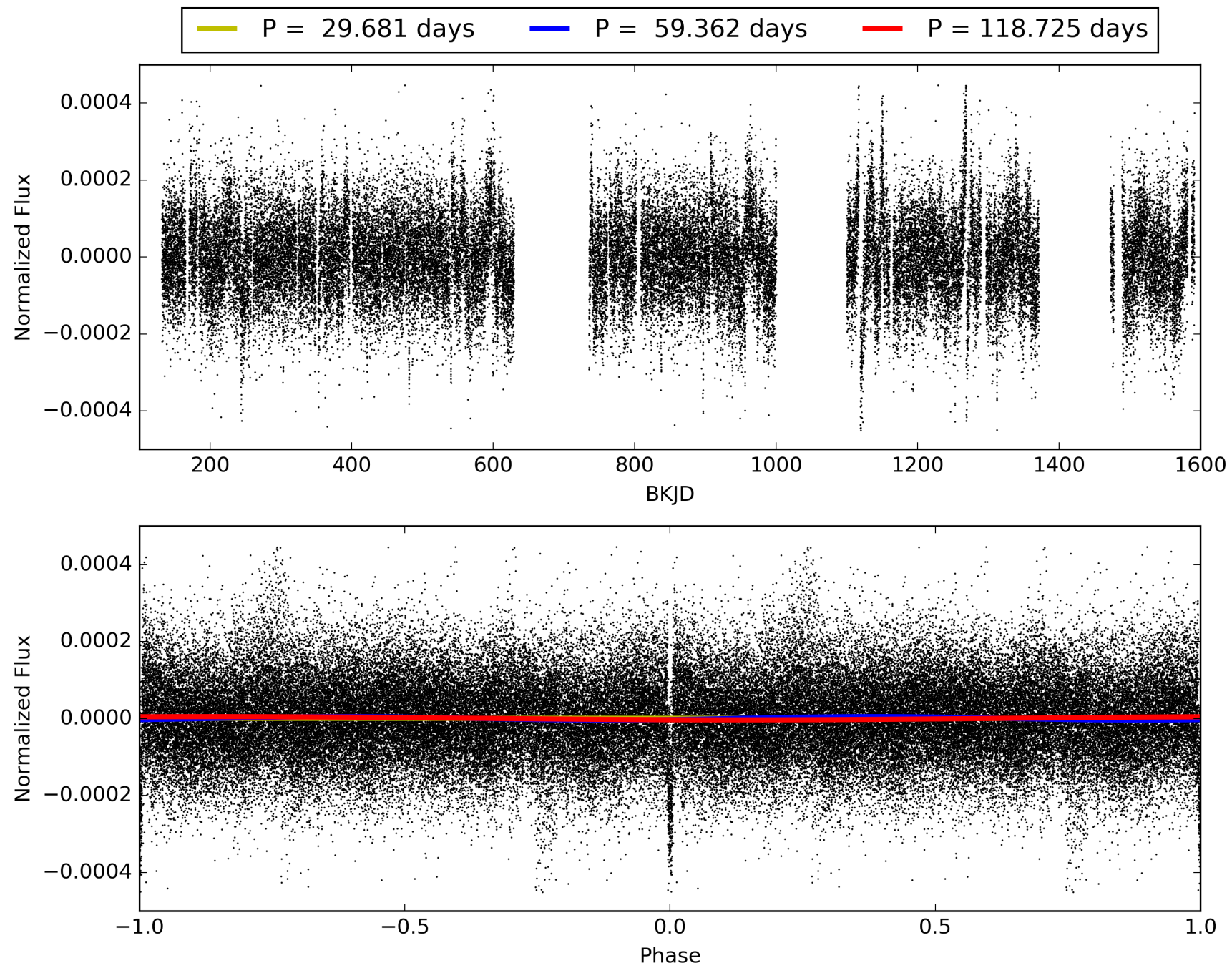
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:20:13 Z

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

TCE 010363115-01, PDC Light Curves

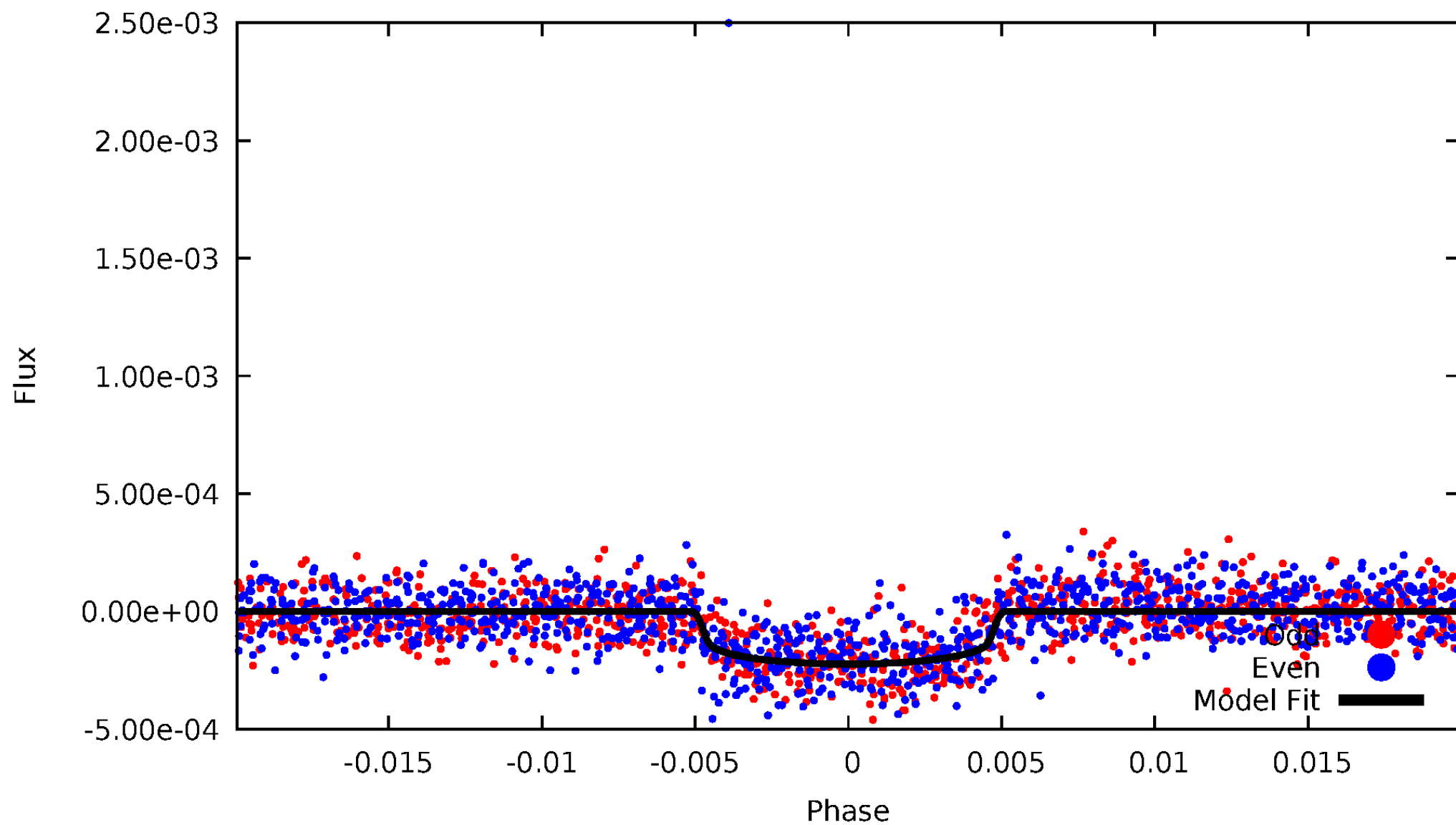


TCE 010363115-01



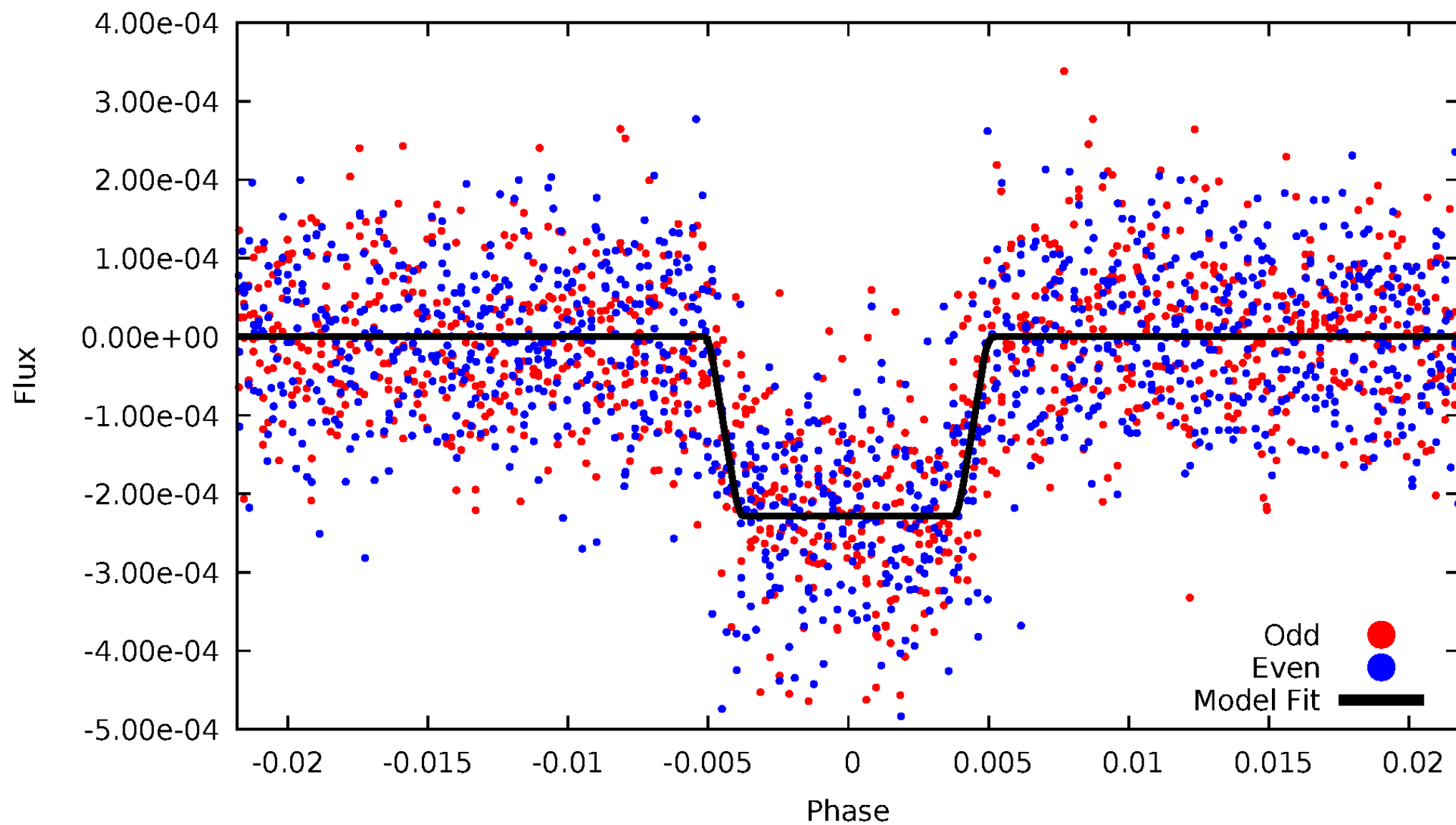
DV Odd/Even

TCE 010363115-01



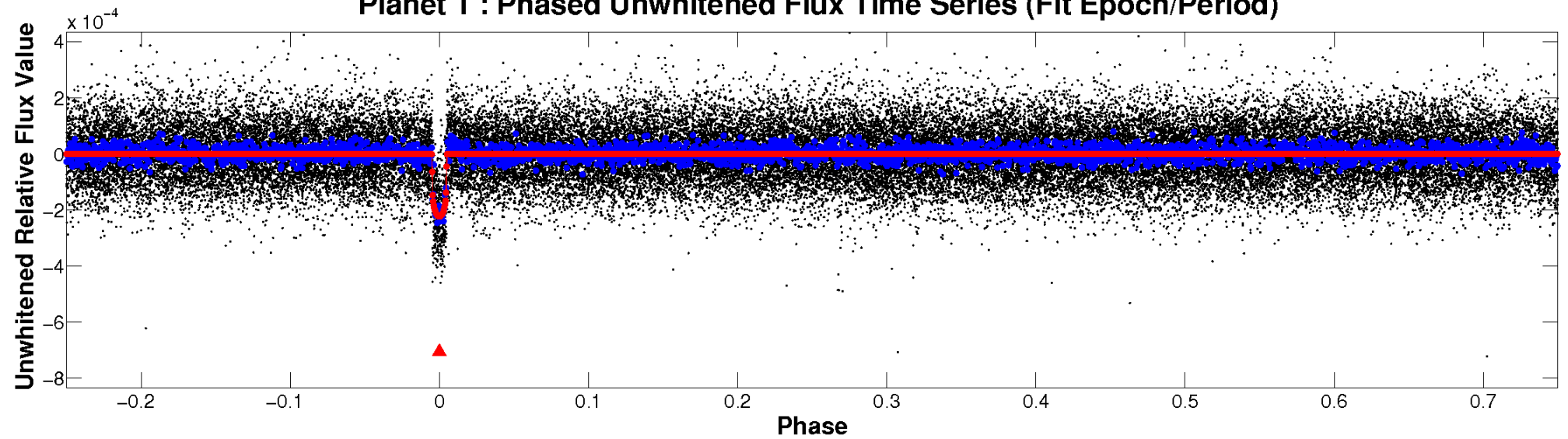
ALT Odd/Even

TCE 010363115-01

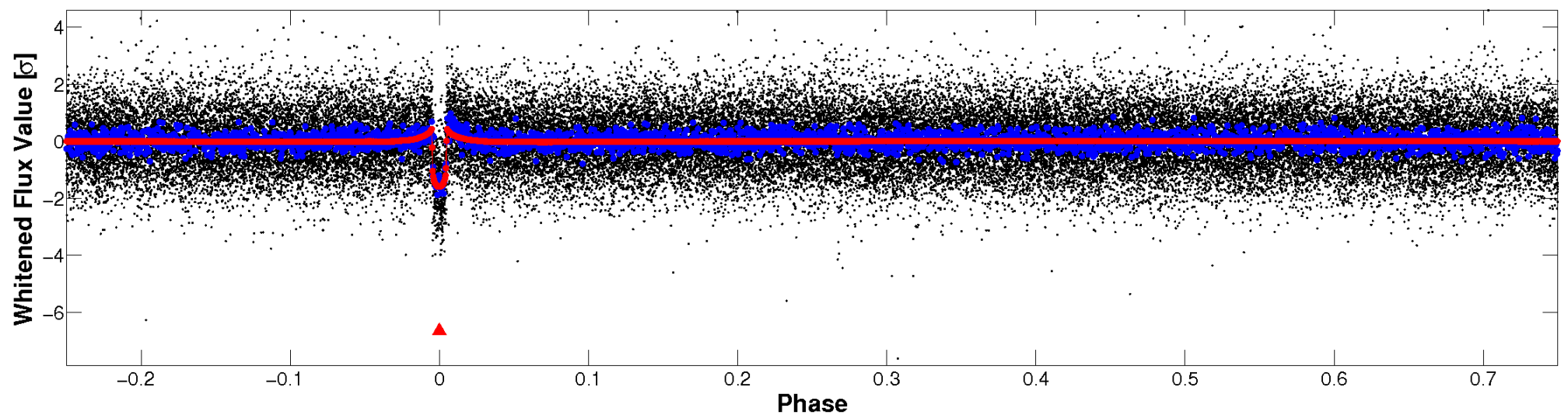


Non-Whitened Vs. Whitened Light Curve

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

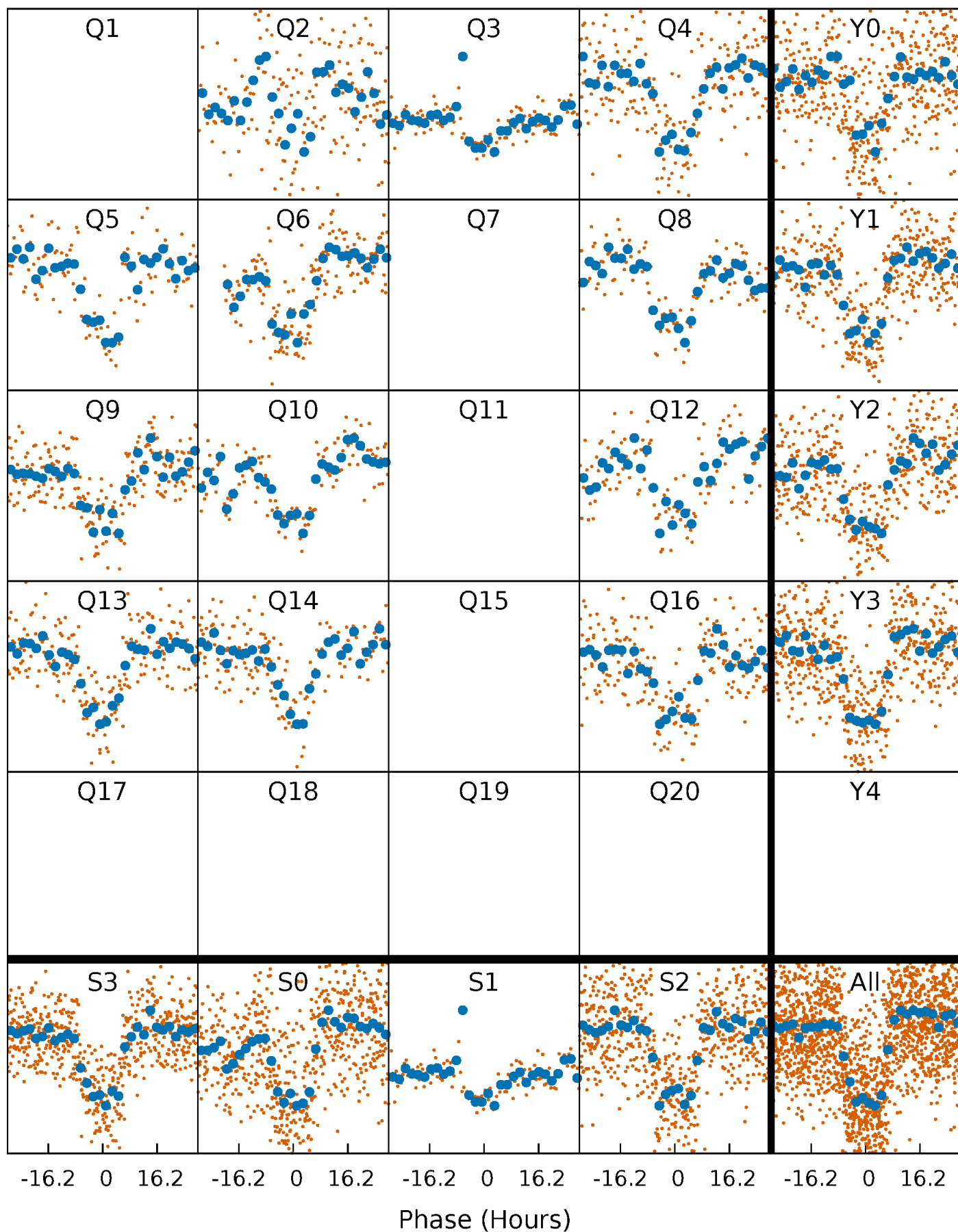


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



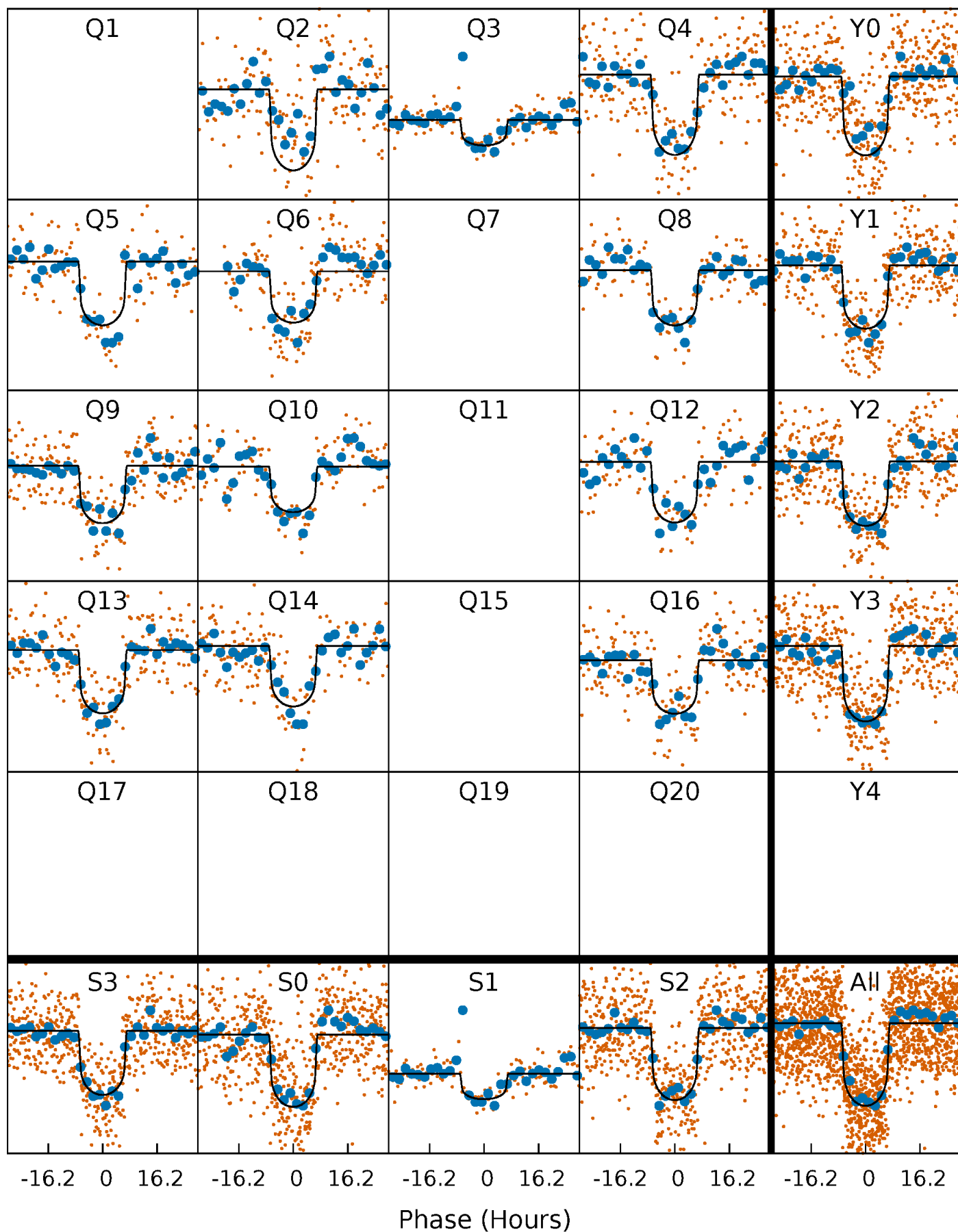
PDC Quarter-Phased Transit Curves

TCE 010363115-01 P= 59.362468 Days $T_0=184.150754$ (BKJD)



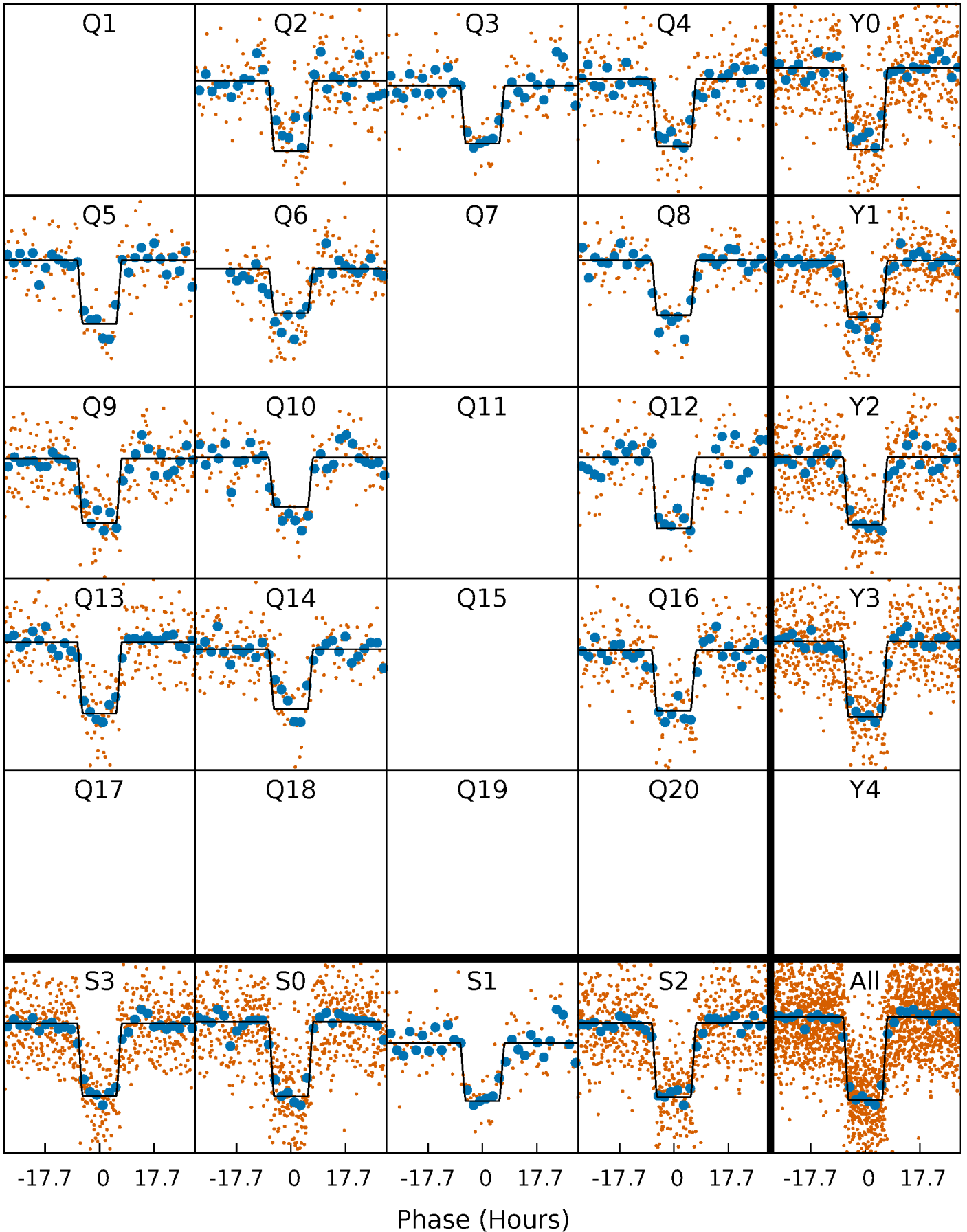
DV Quarter-Phased Transit Curves

TCE 010363115-01 P= 59.362468 Days $T_0=184.150754$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

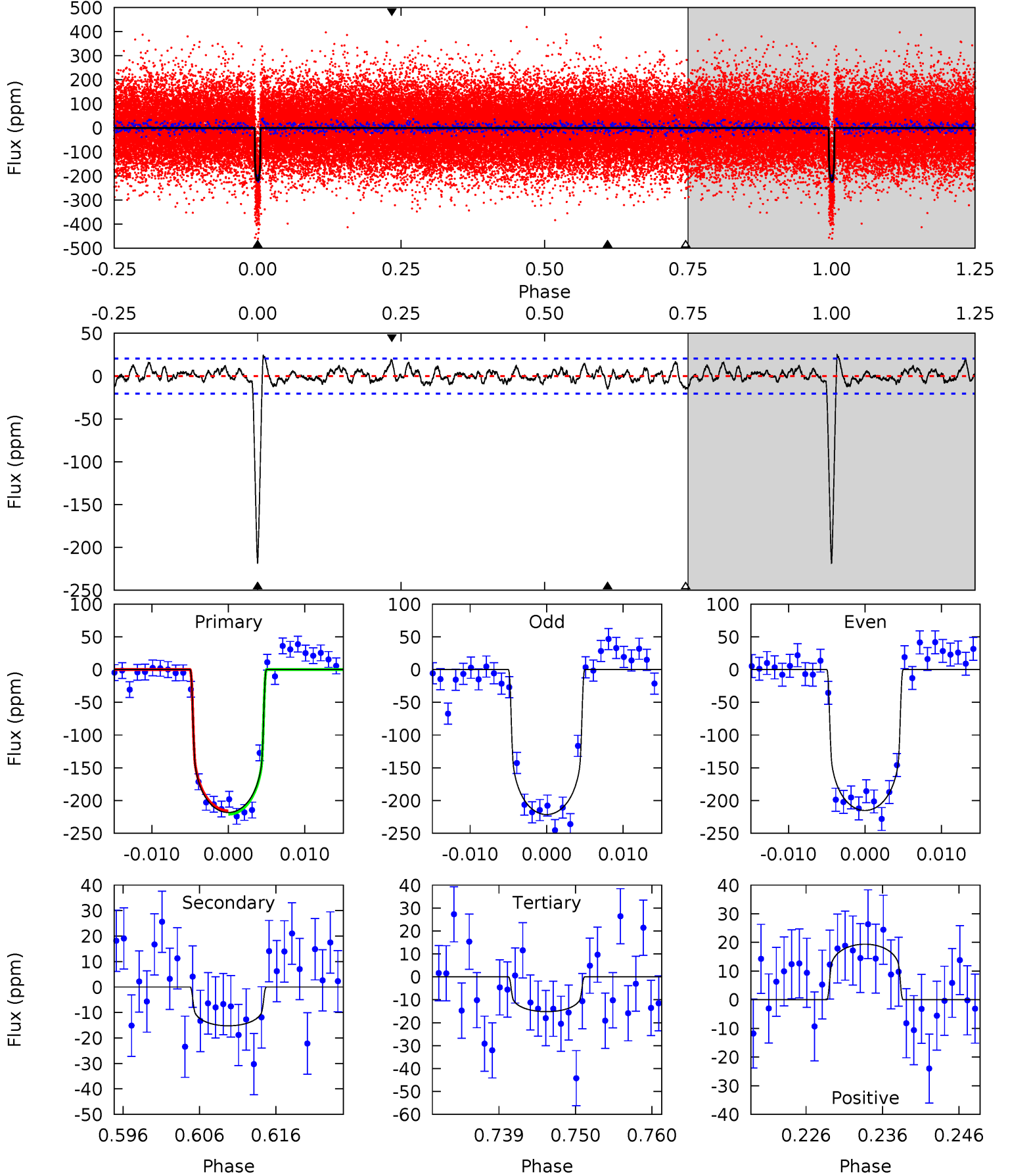
TCE 010363115-01 P= 59.361288 Days $T_0=184.162129$ (BKJD)



DV Model-Shift Uniqueness Test

010363115-01, P = 59.362468 Days, E = 124.788286 Days

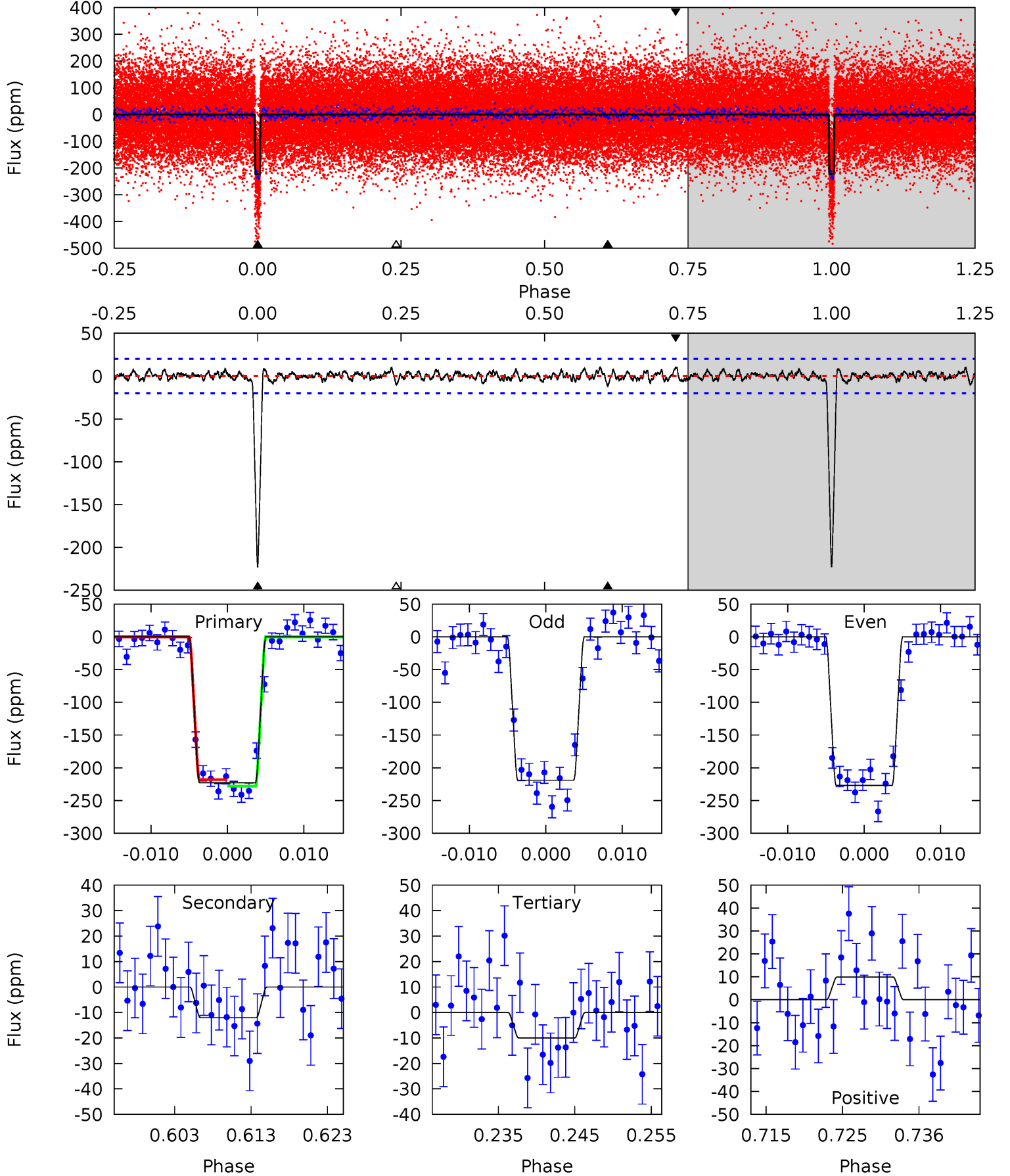
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.6	3.74	3.73	4.76	5.02	2.57	1.46	49.8	48.8	0.01	-1.02	0.77	0.94	0.10	0.64



Alt Model-Shift Uniqueness Test

010363115-01, $P = 59.361288$ Days, $E = 124.800841$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.8	3.00	2.51	2.49	5.02	2.57	0.89	53.3	53.4	0.50	0.52	0.98	1.01	0.05	1.27



Stellar Parameters For KIC 010363115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5786^{+115}_{-104}	$4.106^{+0.188}_{-0.101}$	$-0.020^{+0.150}_{-0.150}$	$1.471^{+0.233}_{-0.321}$	$1.006^{+0.098}_{-0.080}$	$0.446^{+0.431}_{-0.135}$
	+2%/-2%	+5%/-2%	+750%/-750%	+16%/-22%	+10%/-8%	+97%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 010363115-01 / KOI 3908.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 4	$2.42^{+0.29}_{-0.32}$	787^{+37}_{-47}	3428^{+179}_{-162}	129^{+58}_{-41}
Alt.	-12 ± 4	$2.41^{+0.28}_{-0.34}$	787^{+40}_{-45}	3323^{+184}_{-207}	104^{+56}_{-39}

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

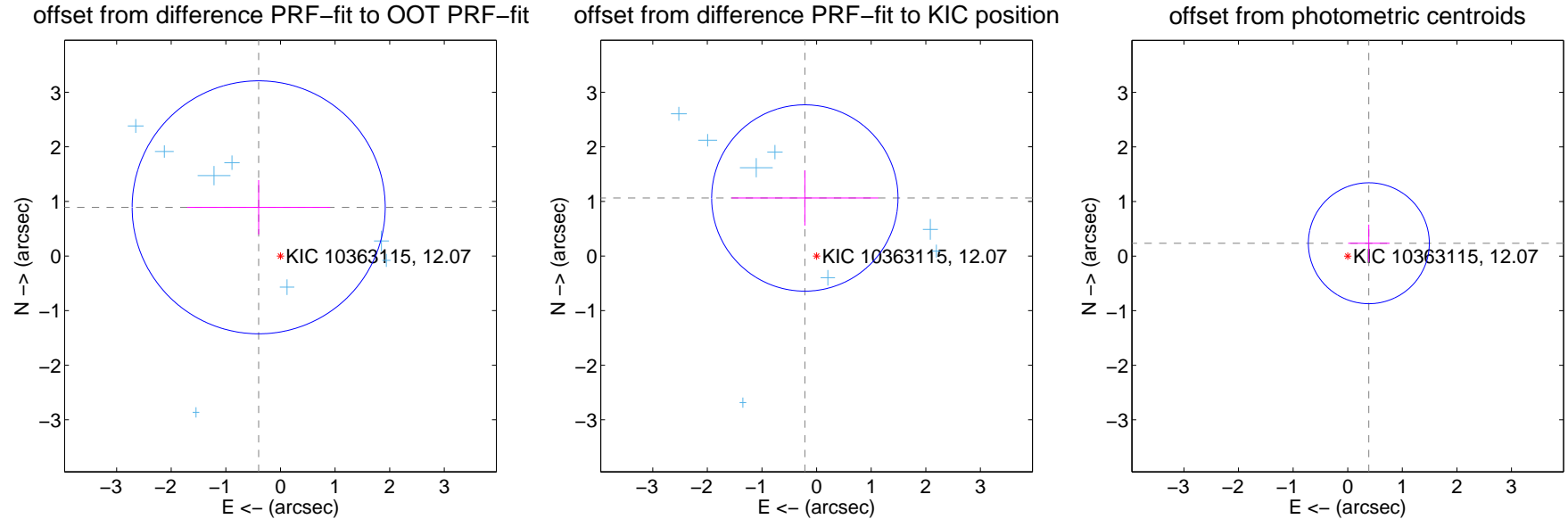
DV Centroid Data

Supplemental centroid analysis for 010363115-01. Kepler magnitude: 12.07. Transit SNR 32.00

There are 8 quarters with good PRF difference image offsets

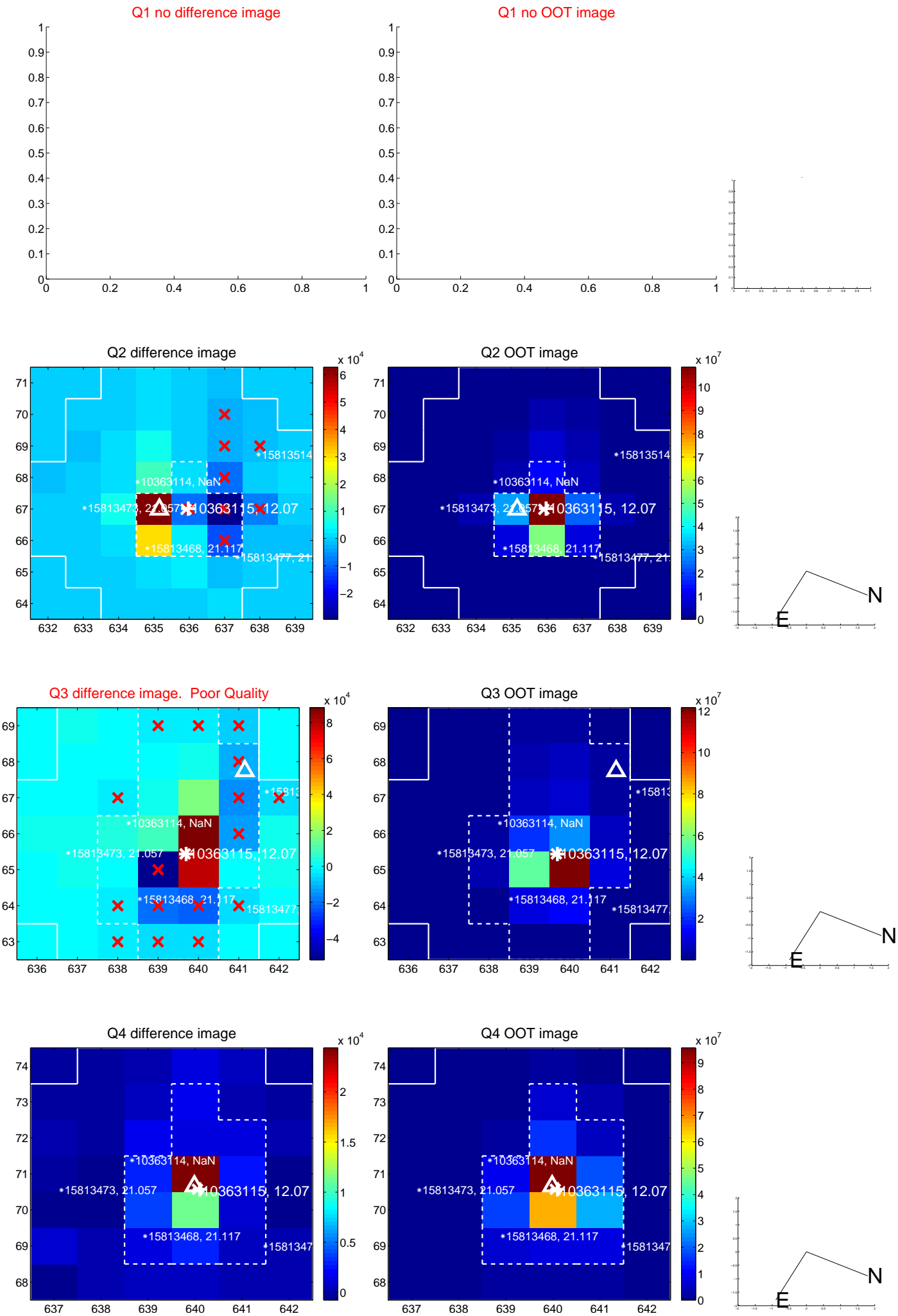
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.977 ± 0.772	1.27	0.399 ± 1.310	0.892 ± 0.498
PRF-fit source offset from KIC position	1.085 ± 0.569	1.91	0.215 ± 1.344	1.063 ± 0.506
photometric centroid source offset	0.45 ± 0.37	1.23	-0.39 ± 0.38	0.24 ± 0.34

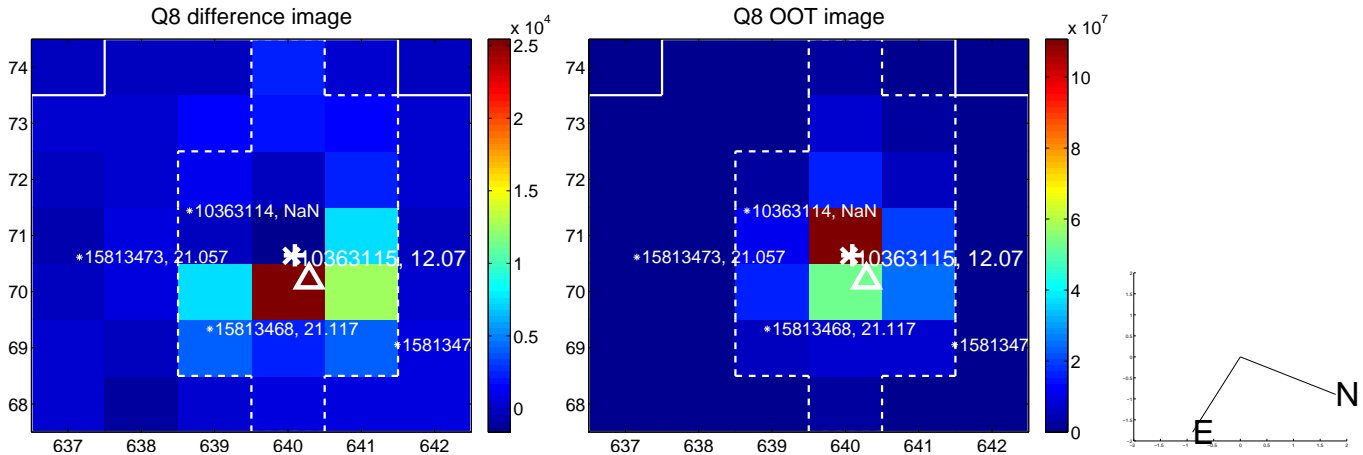
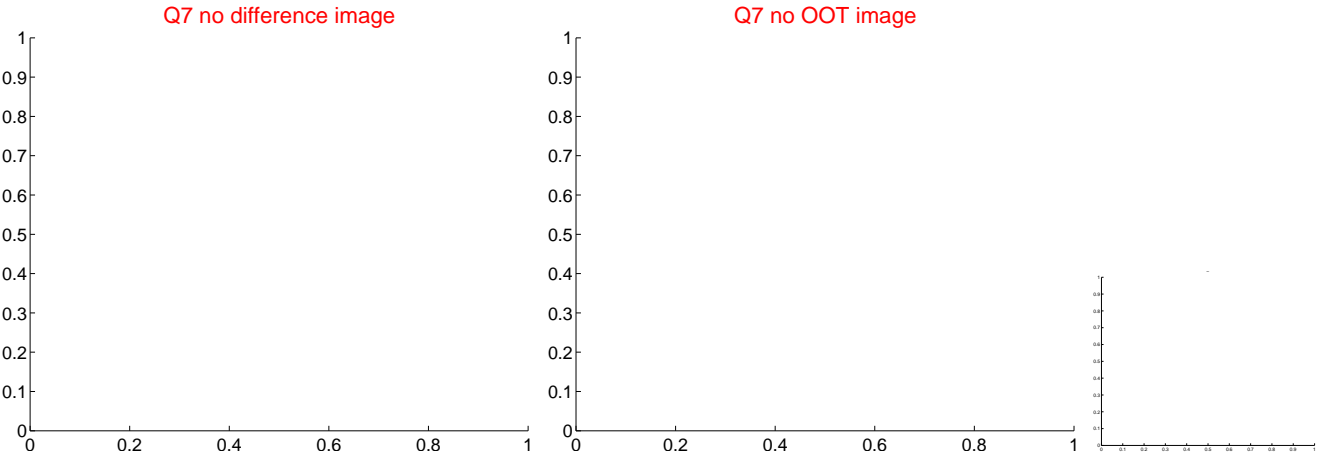
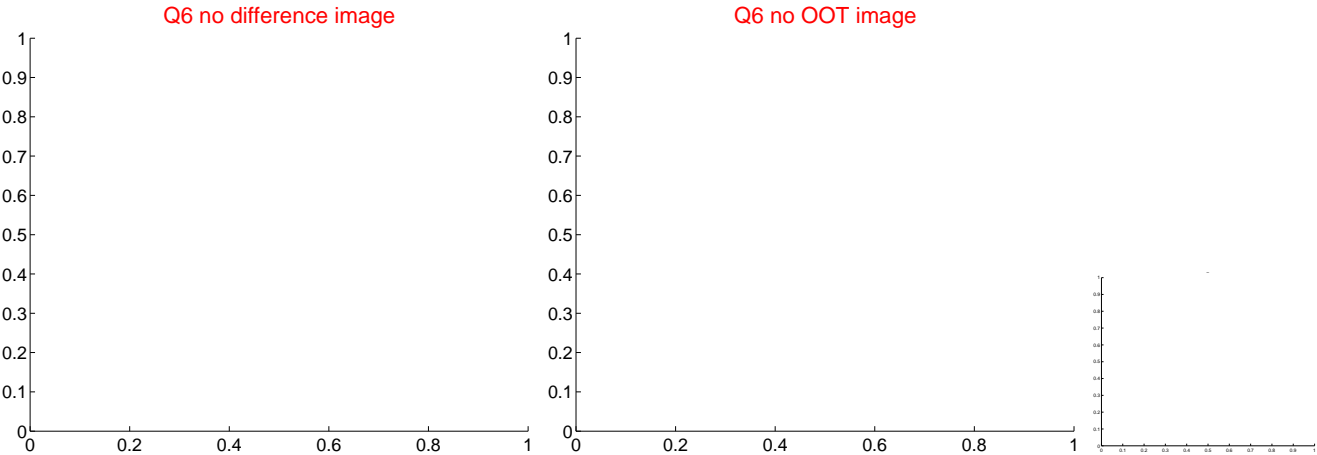
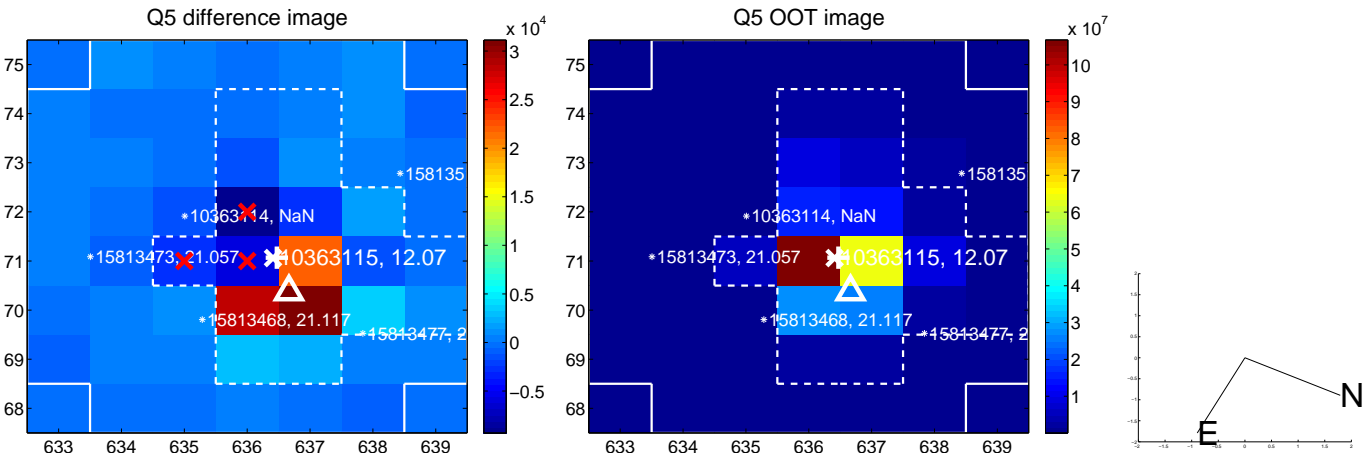


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

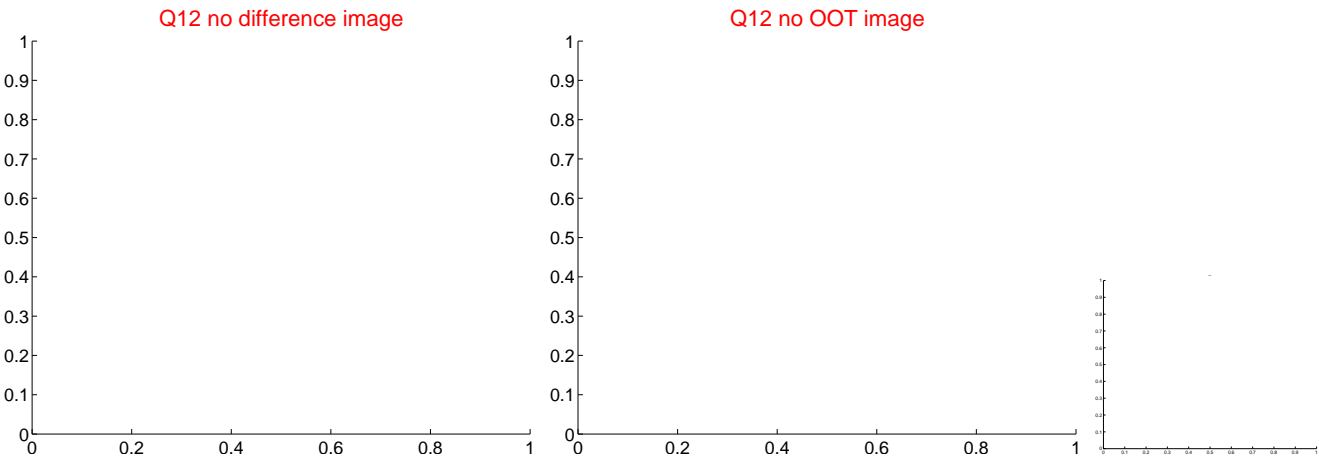
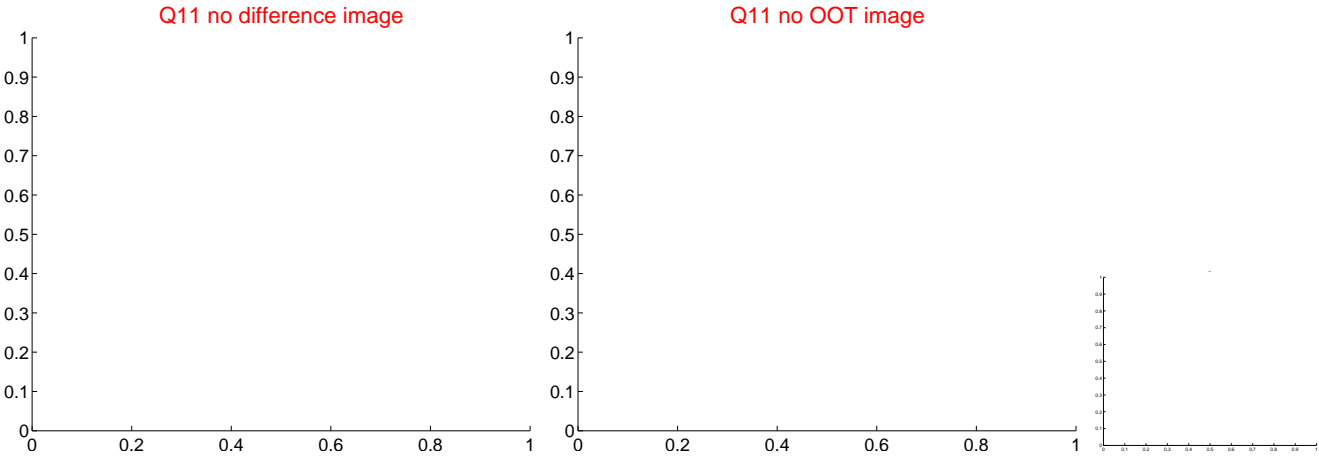
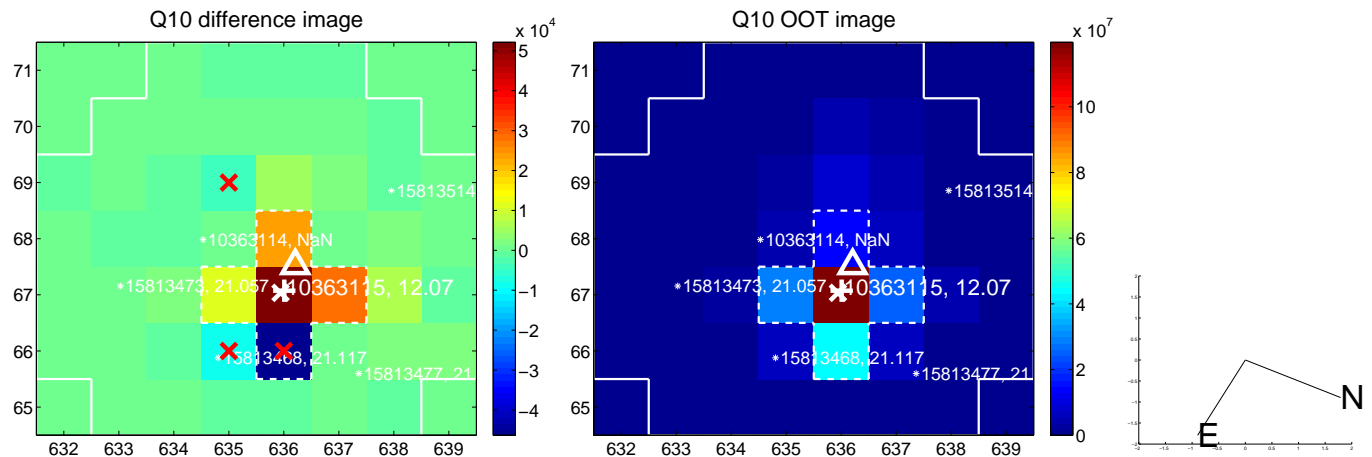
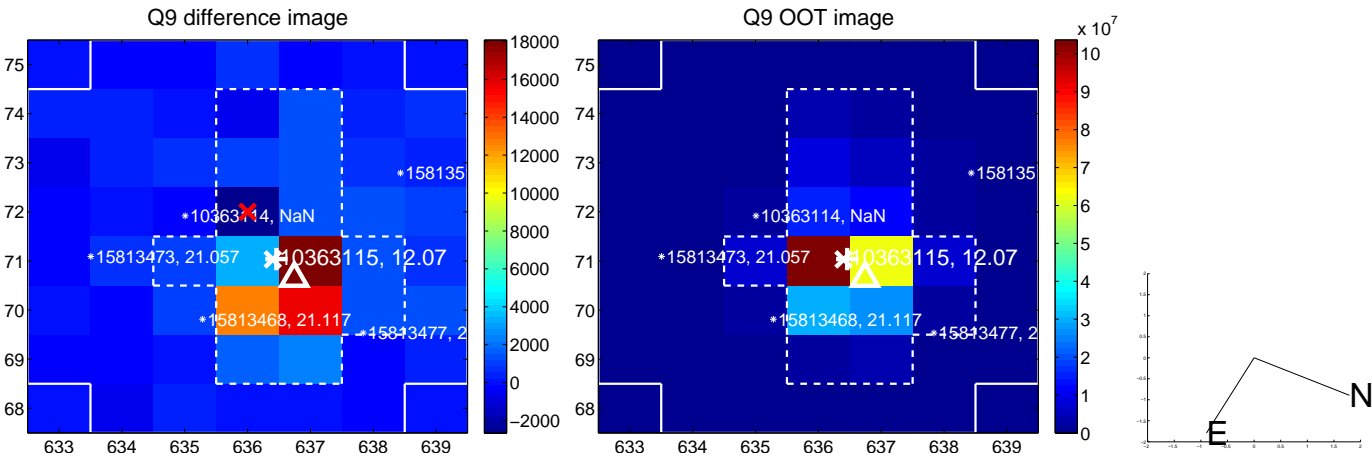
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



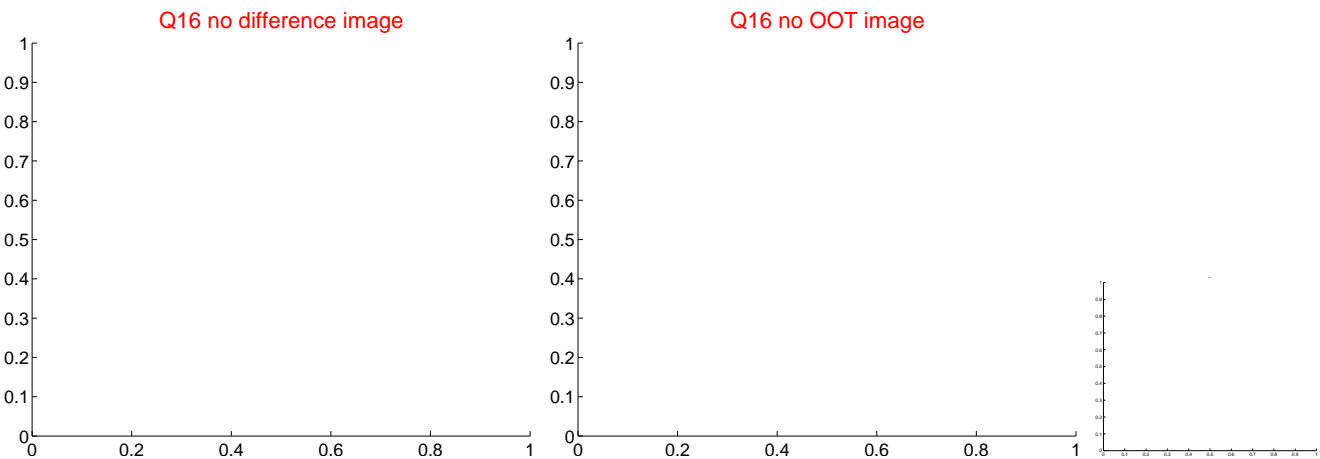
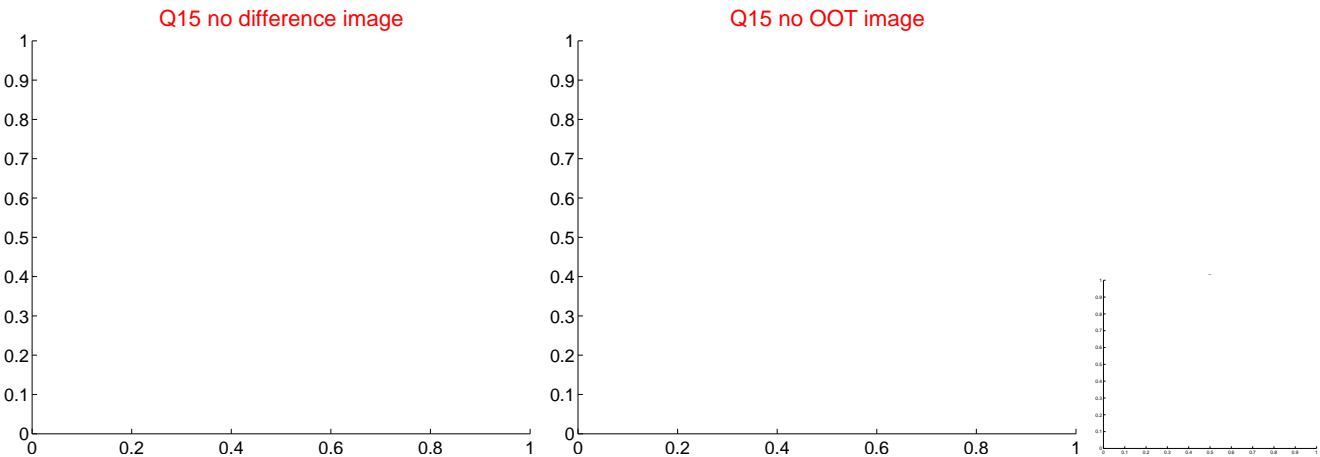
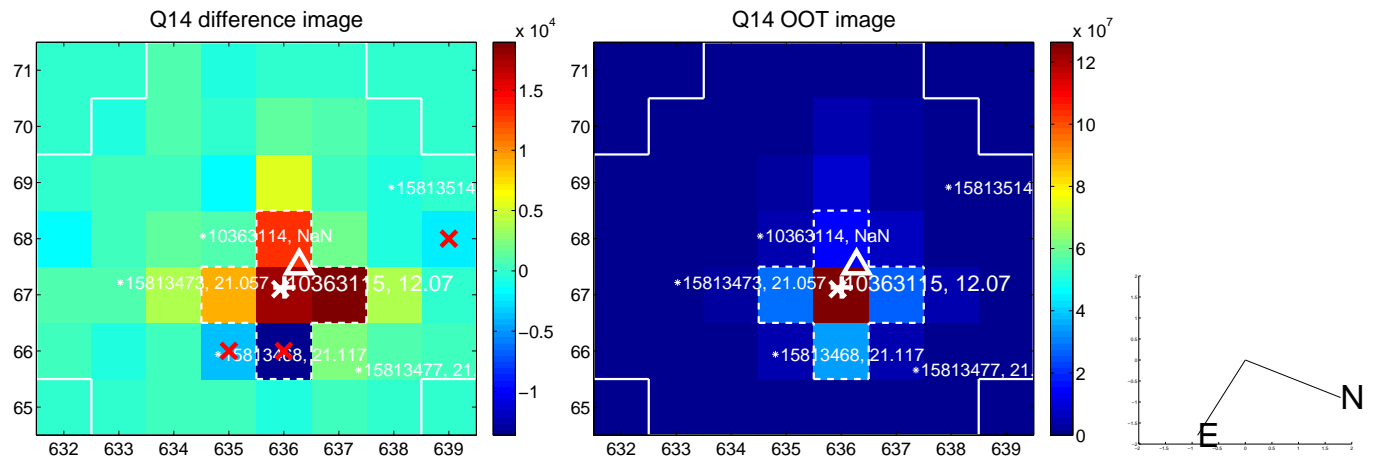
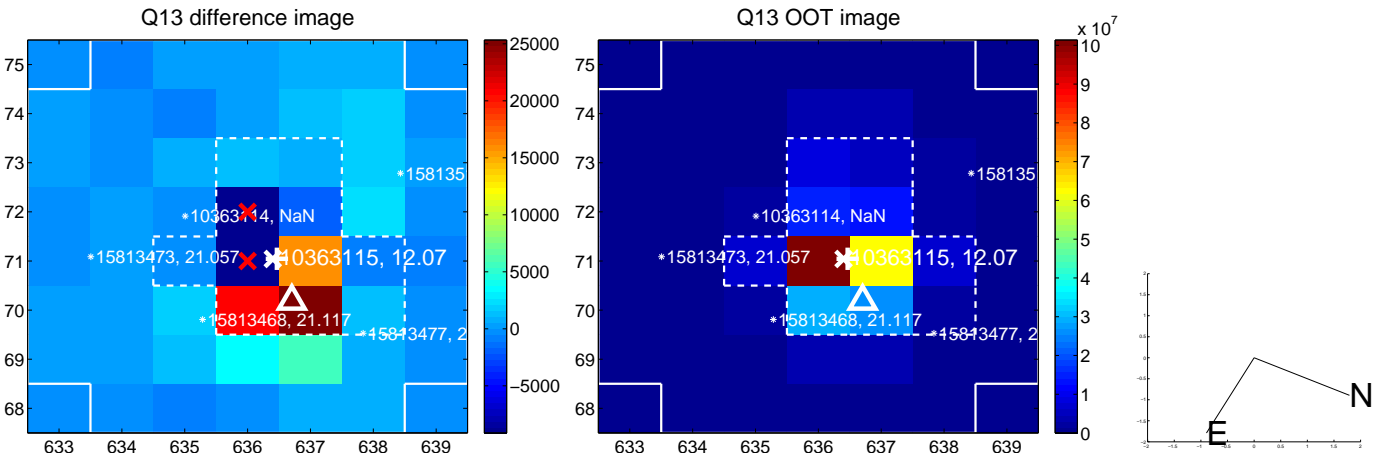
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



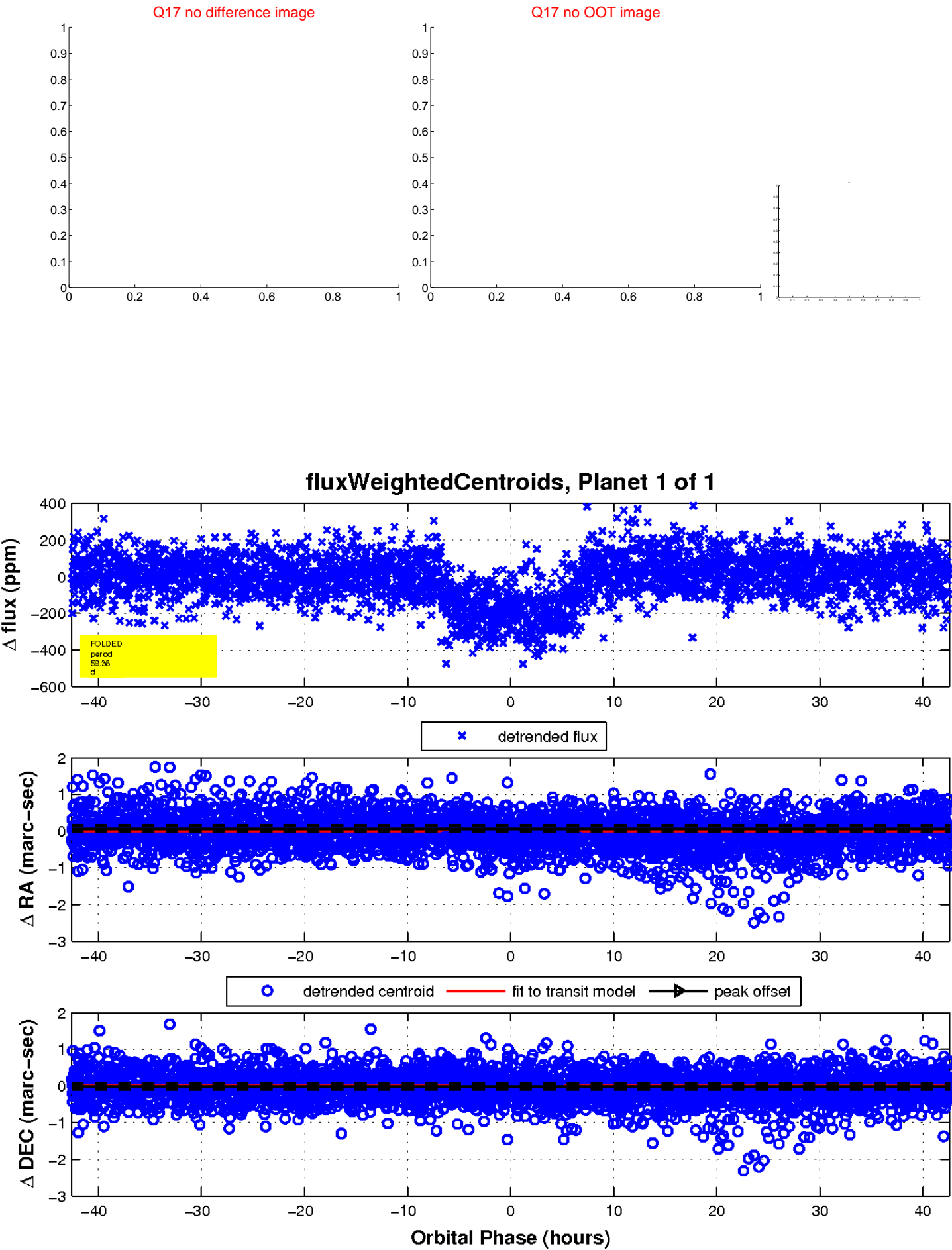
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

