

KIC 003545478

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})
003545478-01	OBS	0366.01	75.112247	132.601620	3762.1	4.981	235.9	251.4	3.35	6201	23.38	86.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003545478-01	OBS	PC	0.95	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.

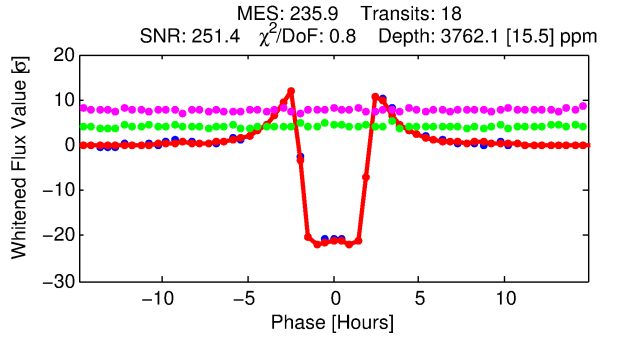
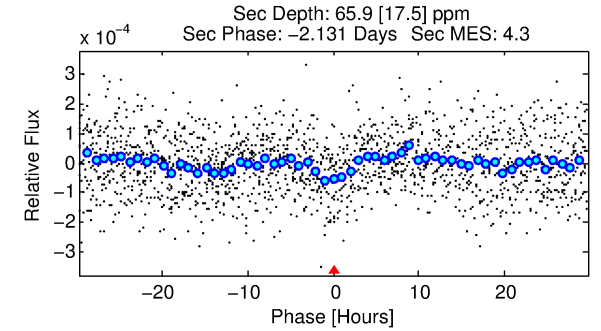
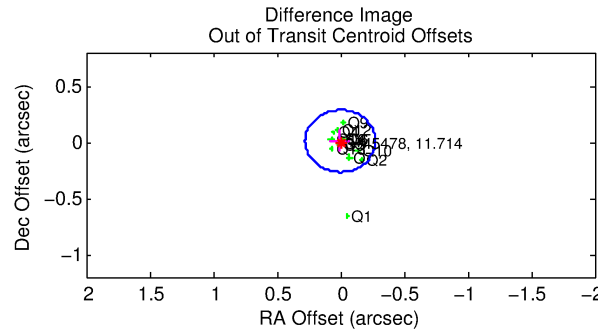
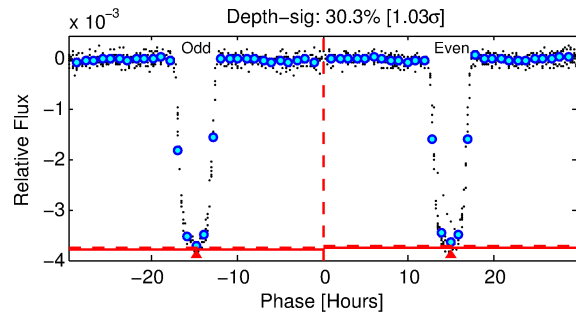
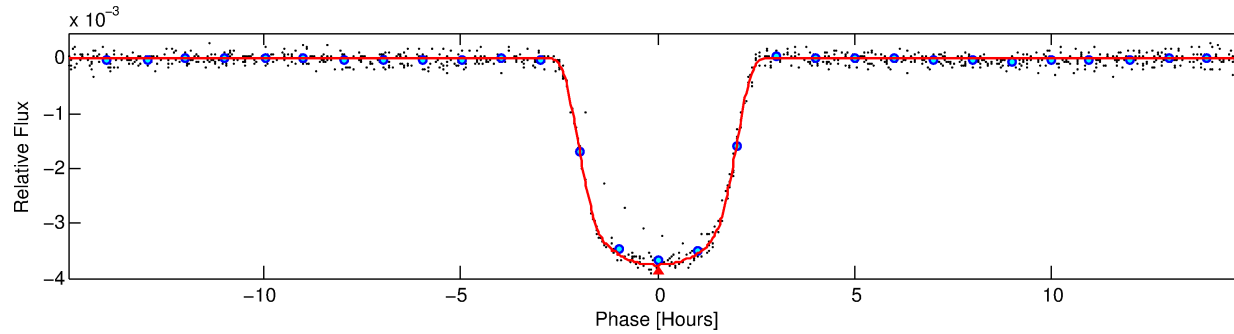
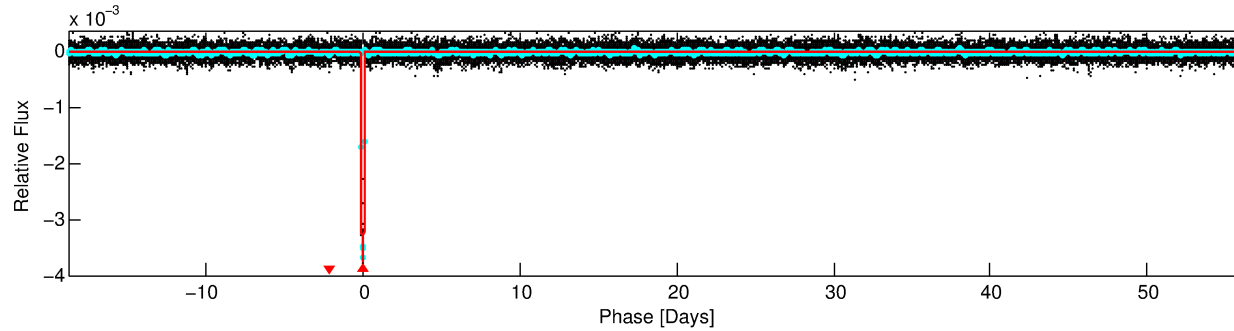
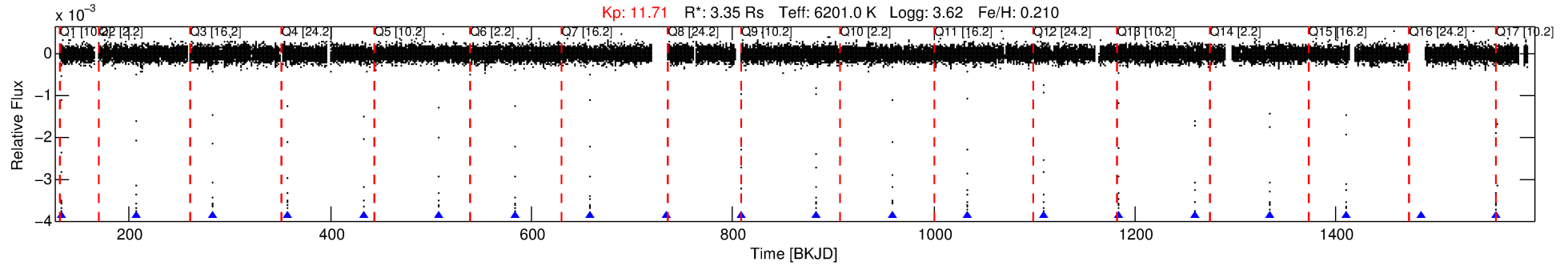
Ephemeris Match Information For 003545478-01

No Significant Match Found

DV One-Page Summary

KIC: 3545478 Candidate: 1 of 1 Period: 75.112 d

KOI: K00366.01 Corr: 0.995



DV Fit Results:

Period = 75.11225 [0.00002] d
Epoch = 132.6016 [0.0003] BKJD
 R_p/R^* = 0.0639 [0.0002]
 a/R^* = 73.98 [0.65]
 b = 0.85 [0.00]
 Seff = 86.33 [33.11]
 T_{eq} = 777 [75] K
 R_p = 23.38 [5.78] R_e
 a = 0.4155 [0.0976] AU
 A_g = 11.46 [5.24] [2.00 σ]
 T_{eff} = 2211 [154] K [8.36 σ]

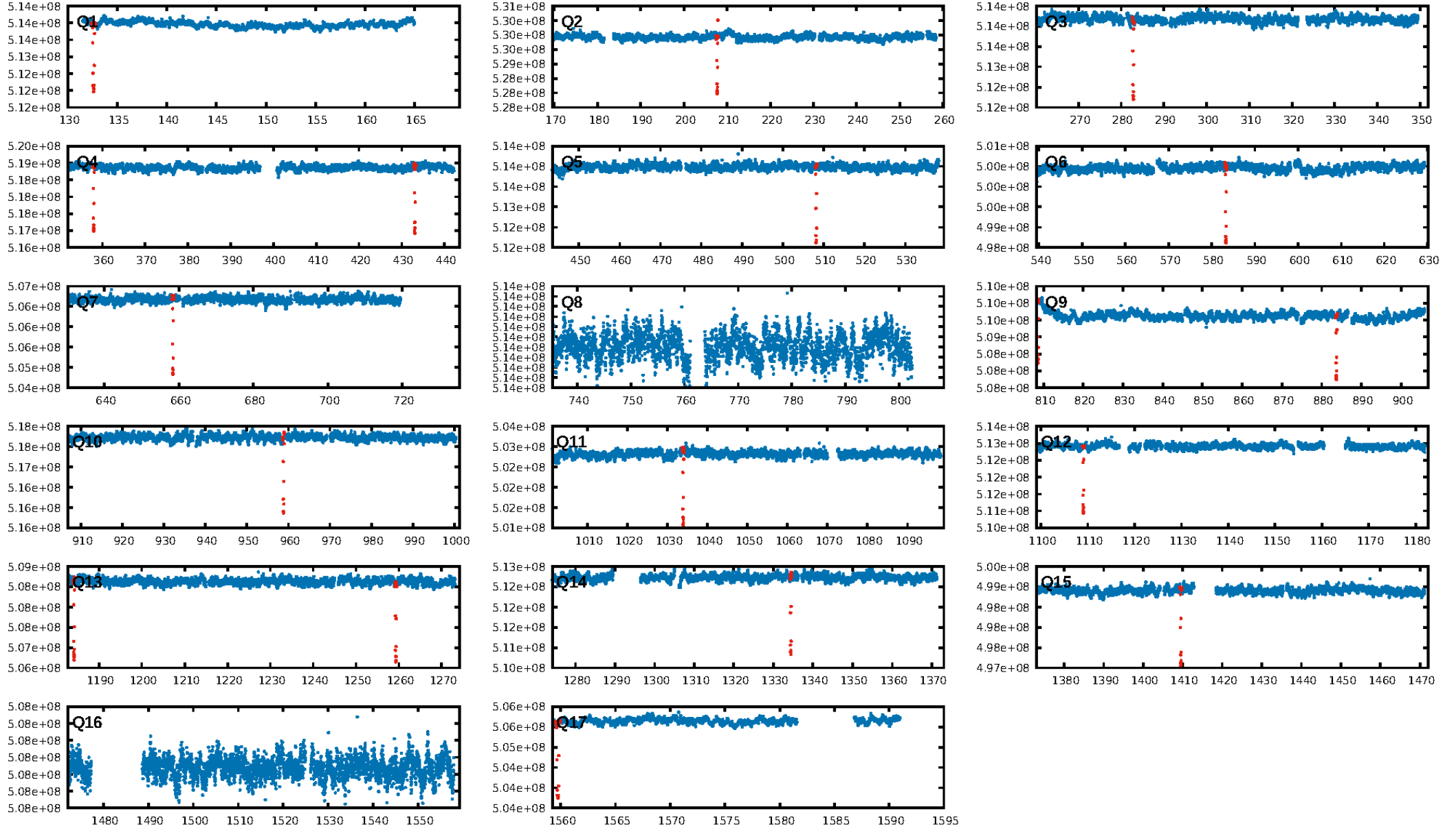
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 3.358
Centroid-sig: 23.0%
Centroid-so: 0.164 arcsec [7.52 σ]
OotOffset-rm: 0.010 arcsec [0.11 σ]
KicOffset-rm: 0.066 arcsec [0.92 σ]
OotOffset-st: 4/2/2/4 [12]
KicOffset-st: 4/2/2/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

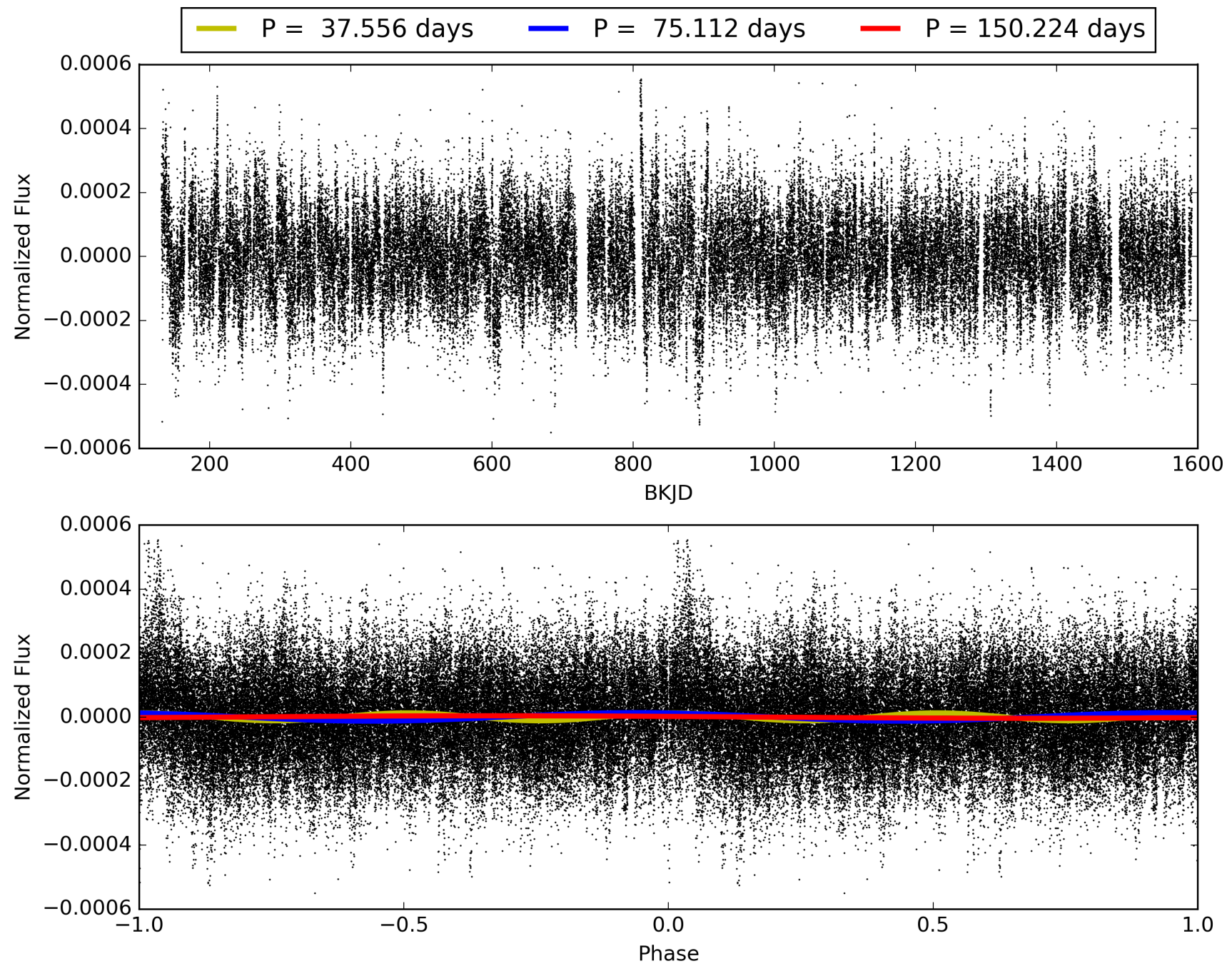
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:07:00 Z

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

TCE 003545478-01, PDC Light Curves

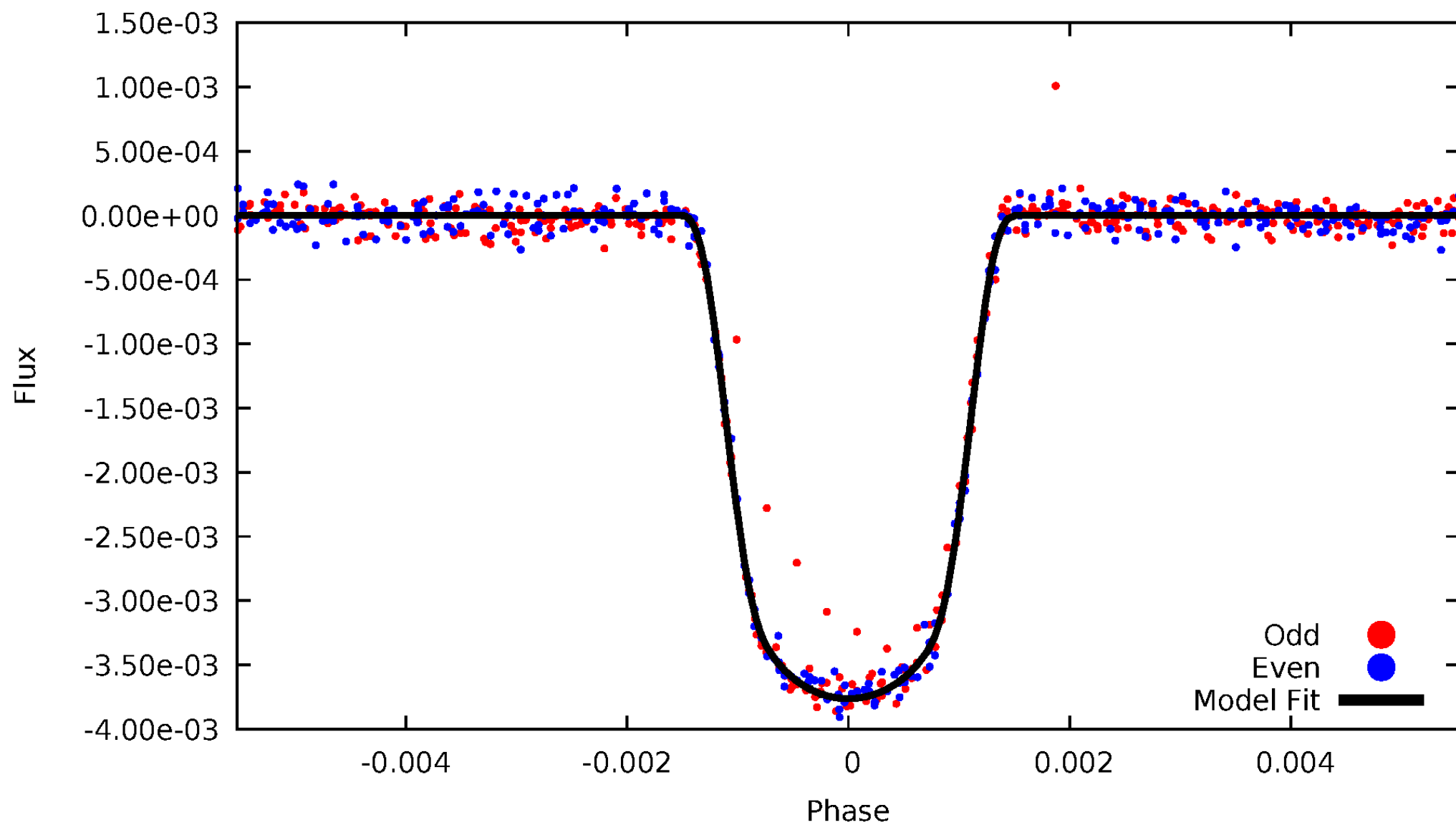


TCE 003545478-01



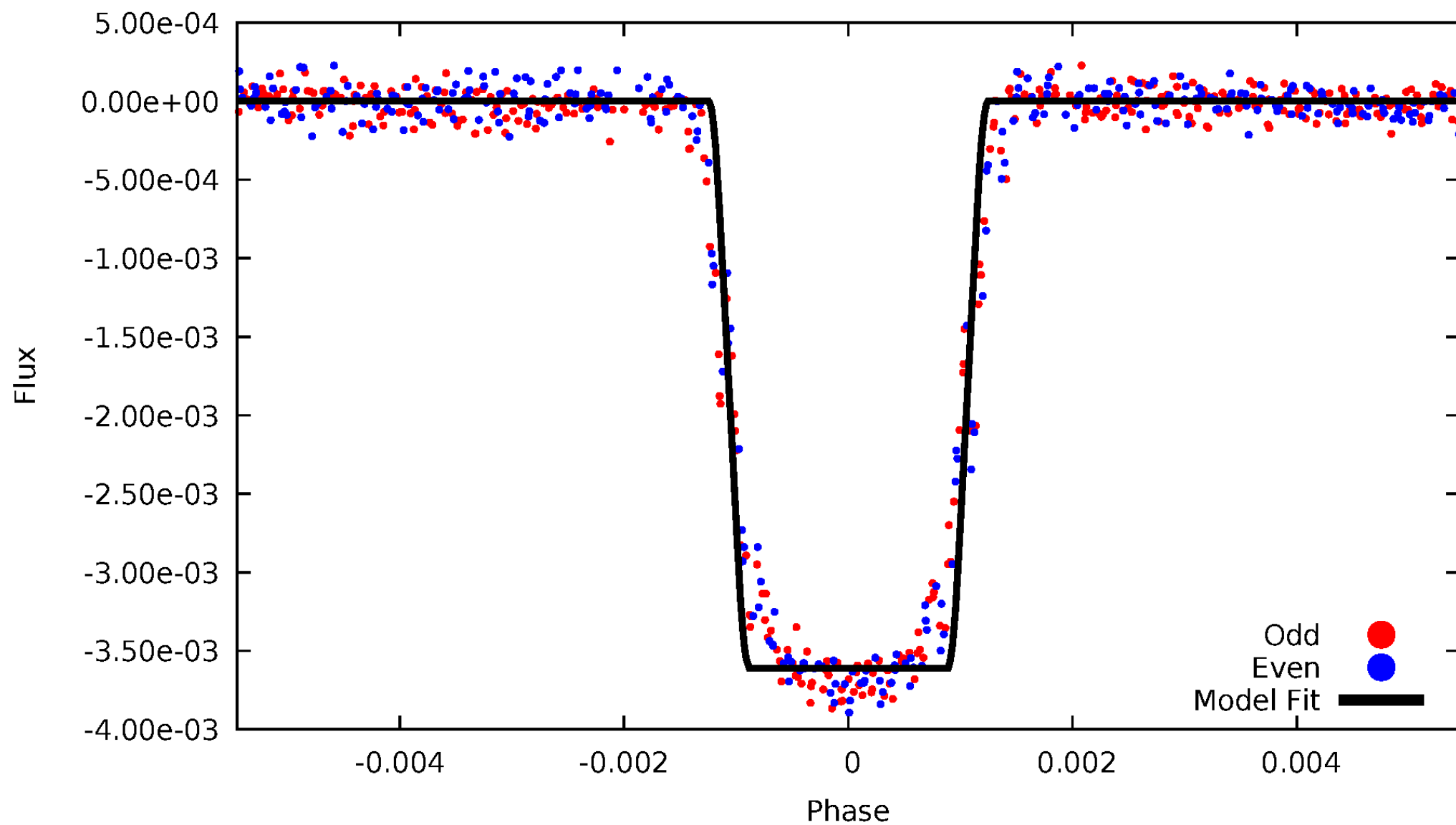
DV Odd/Even

TCE 003545478-01



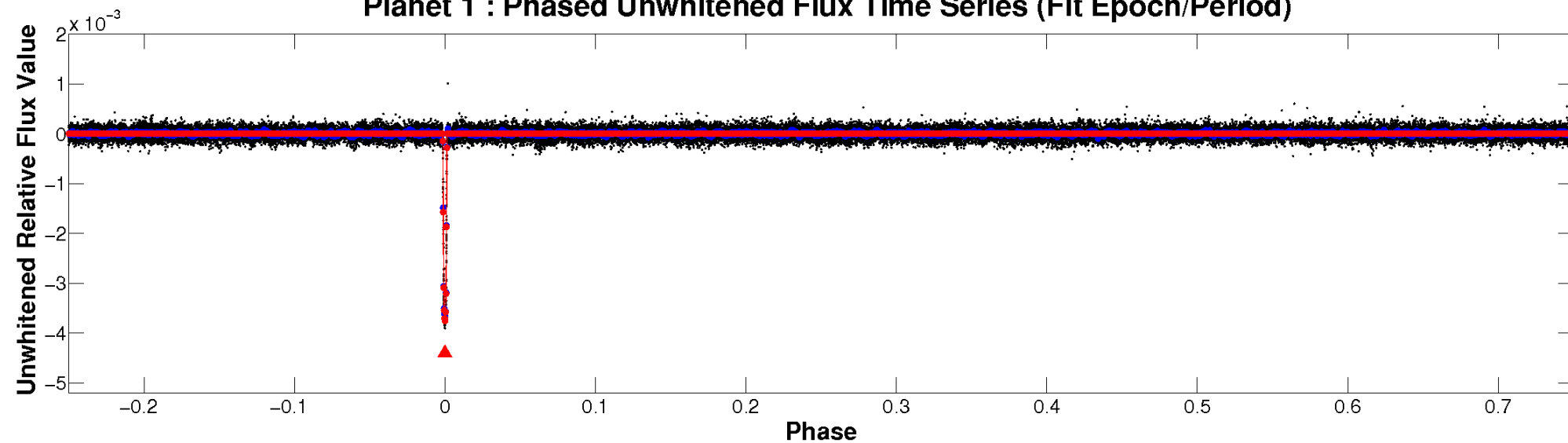
ALT Odd/Even

TCE 003545478-01

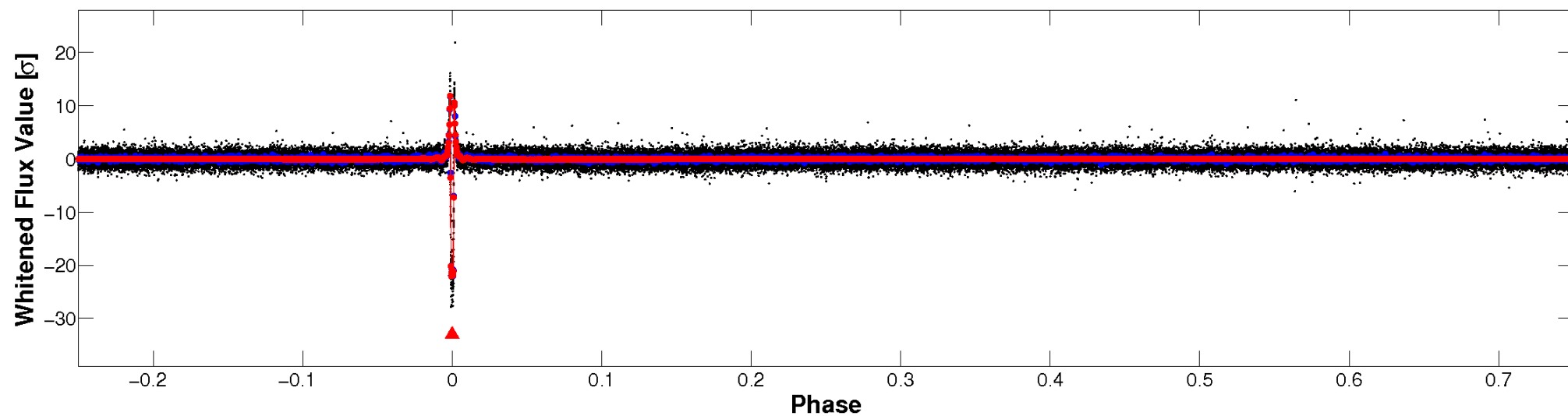


Non-Whitened Vs. Whitened Light Curve

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

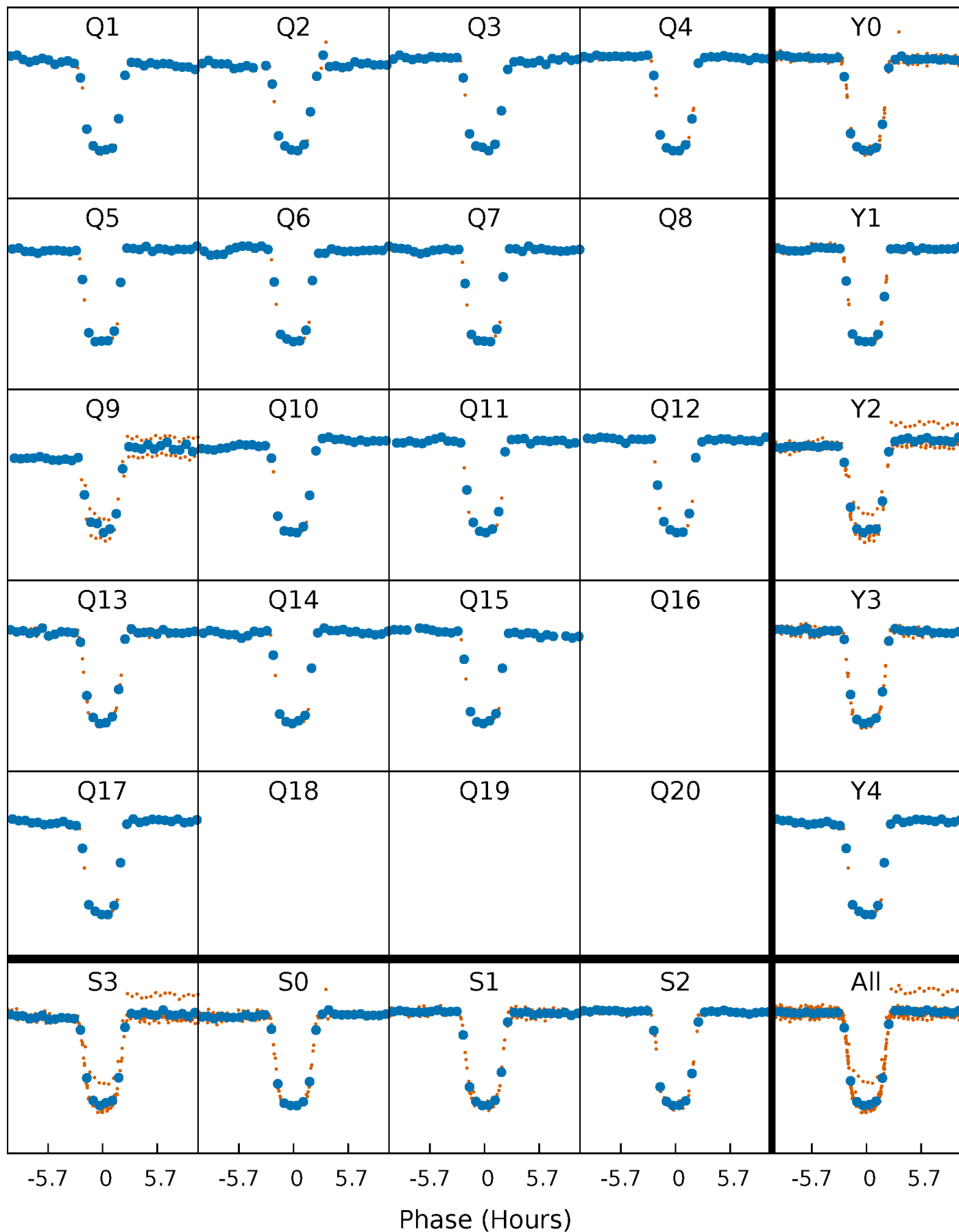


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



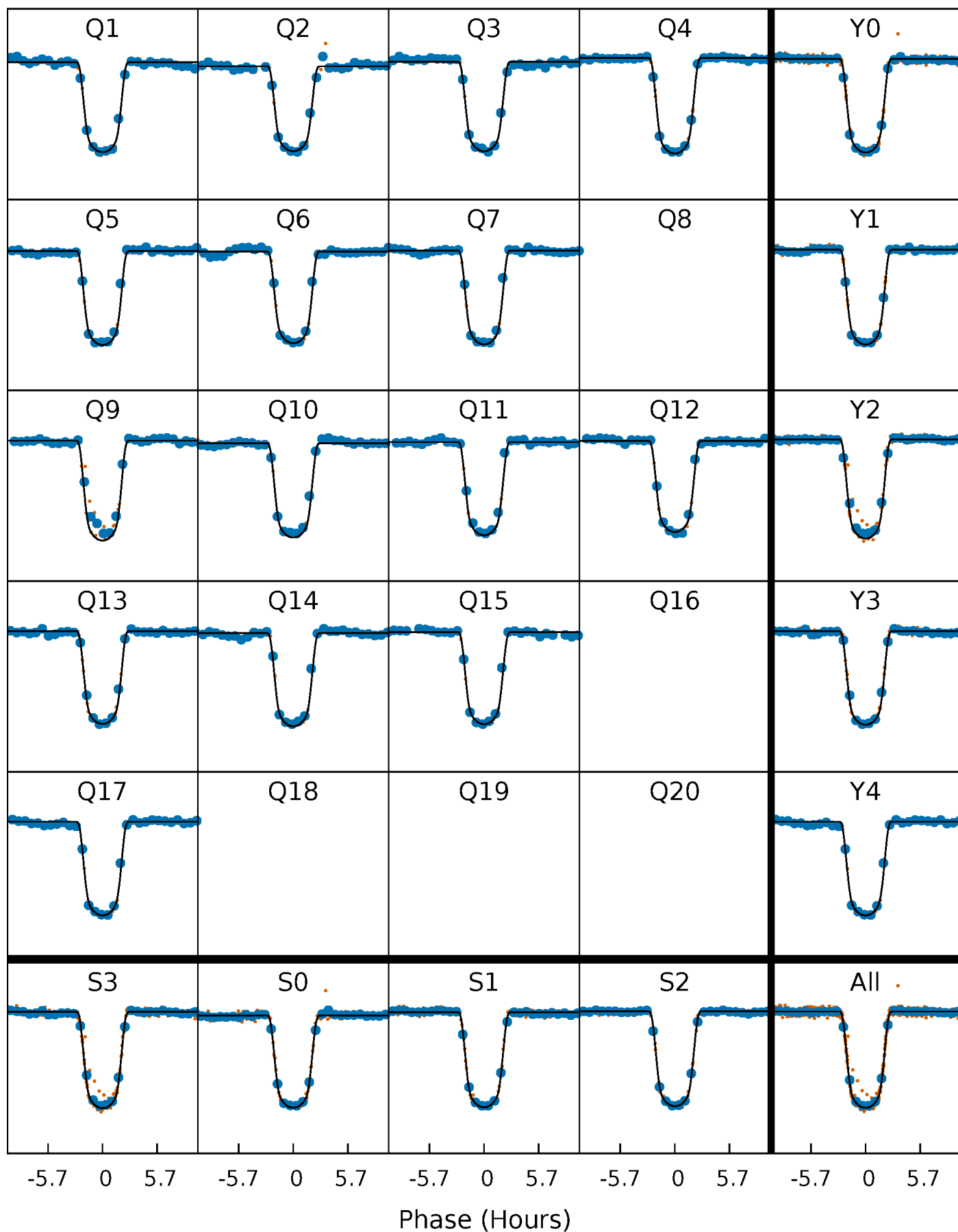
PDC Quarter-Phased Transit Curves

TCE 003545478-01 P= 75.112247 Days $T_0=132.601620$ (BKJD)



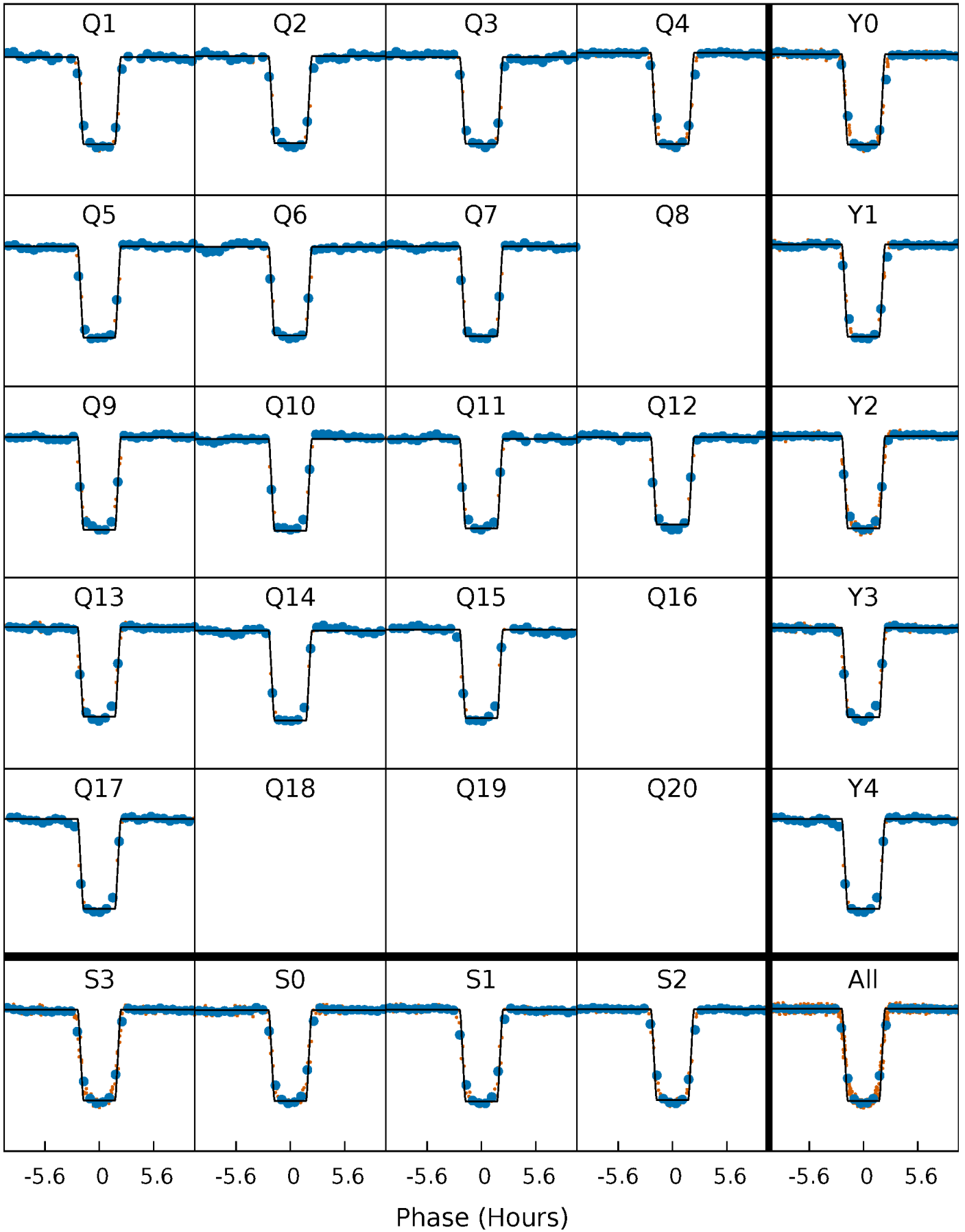
DV Quarter-Phased Transit Curves

TCE 003545478-01 P= 75.112247 Days $T_0=132.601620$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

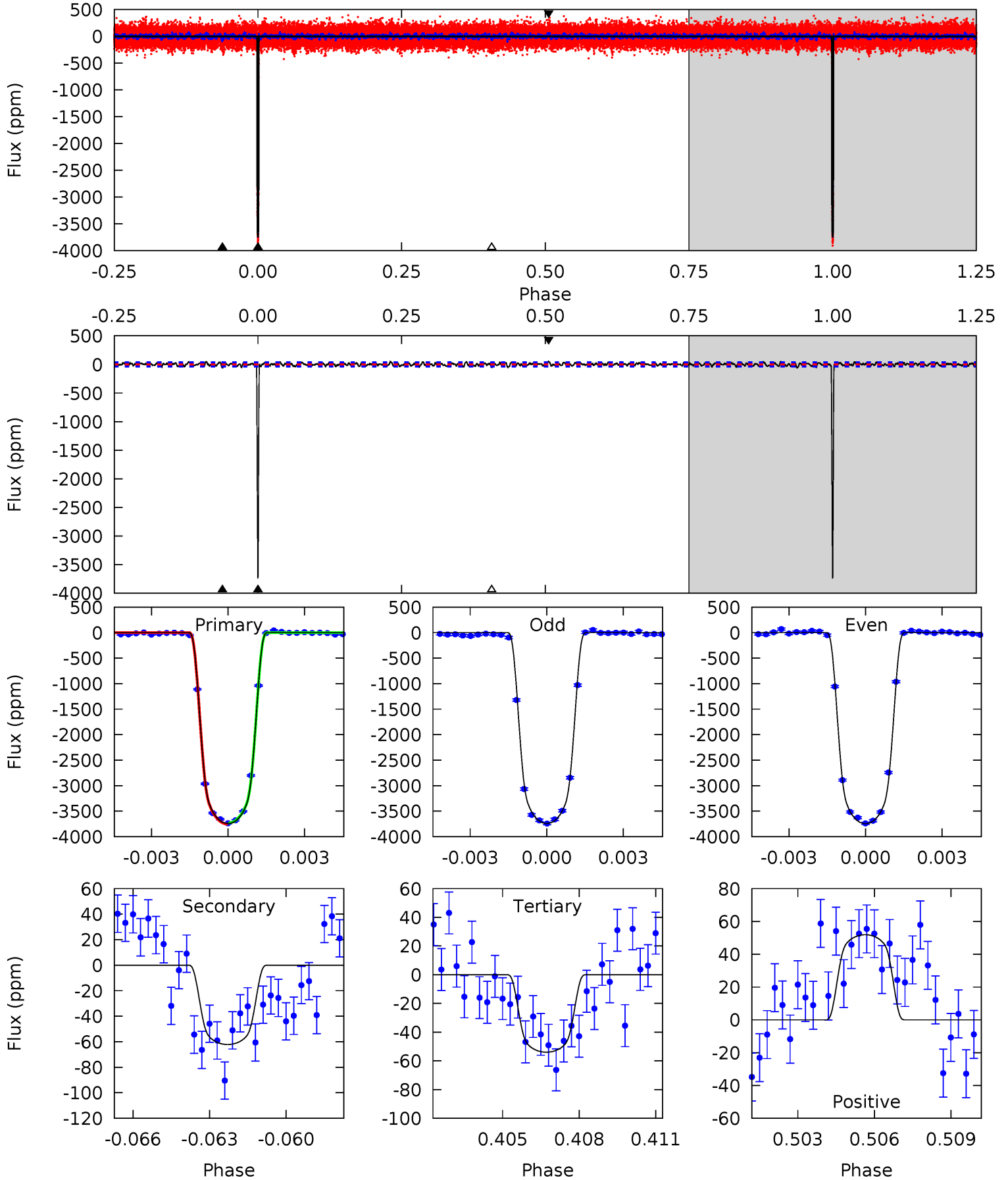
TCE 003545478-01 P= 75.112952 Days $T_0=132.595090$ (BKJD)



DV Model-Shift Uniqueness Test

003545478-01, P = 75.112247 Days, E = 57.489373 Days

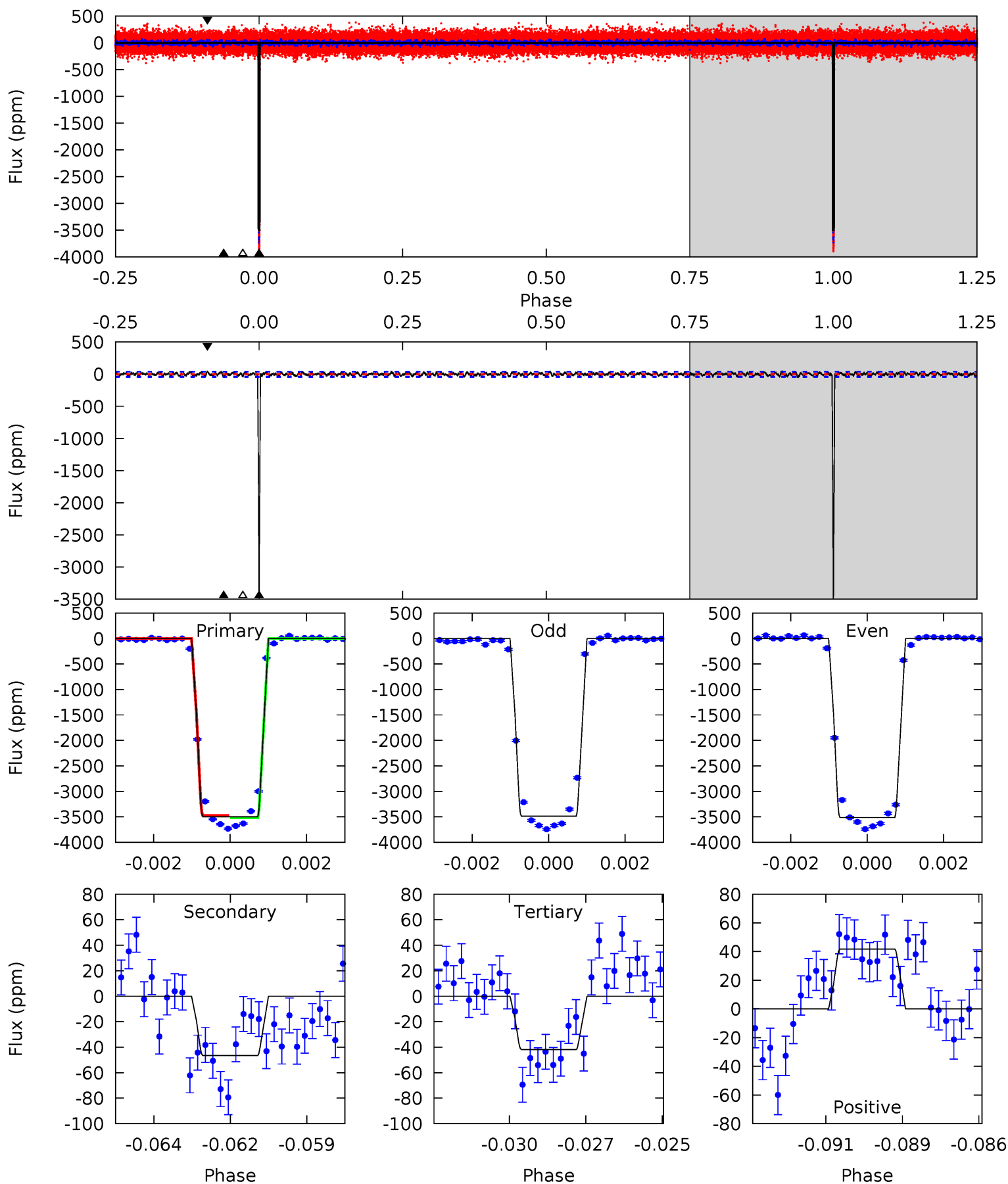
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
549.4	9.13	7.92	7.61	5.25	2.97	2.53	541.4	541.8	1.21	1.51	0.34	0.99	0.01	1.57



Alt Model-Shift Uniqueness Test

003545478-01, P = 75.112952 Days, E = 57.482138 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
454.4	6.04	5.44	5.42	5.29	3.03	1.78	449.0	449.0	0.60	0.62	1.72	1.00	0.01	2.86



Stellar Parameters For KIC 003545478

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6201^{+138}_{-100}	$3.616^{+0.218}_{-0.073}$	$0.210^{+0.150}_{-0.100}$	$3.354^{+0.355}_{-0.829}$	$1.694^{+0.151}_{-0.185}$	$0.063^{+0.077}_{-0.014}$
	+2%/-2%	+6%/-2%	+71%/-48%	+11%/-25%	+9%/-11%	+122%/-22%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 003545478-01 / KOI 0366.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-62 ± 7	$23.26^{+1.50}_{-3.26}$	1076^{+44}_{-69}	2883^{+54}_{-55}	11^{+3}_{-2}
Alt.	-47 ± 8	$21.83^{+1.68}_{-2.96}$	1079^{+44}_{-74}	2817^{+69}_{-74}	$9.530^{+3.160}_{-2.051}$

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

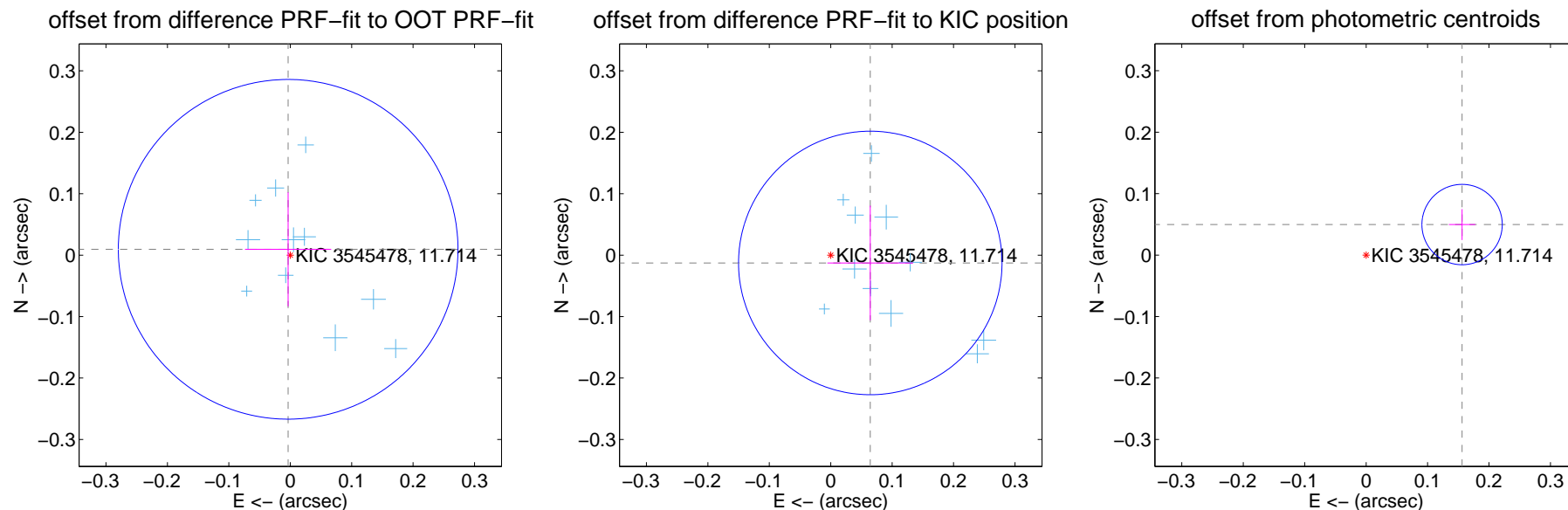
DV Centroid Data

Supplemental centroid analysis for 003545478-01. **Kepler magnitude: 11.71.** Transit SNR 251.43

There are 12 quarters with good PRF difference image offsets

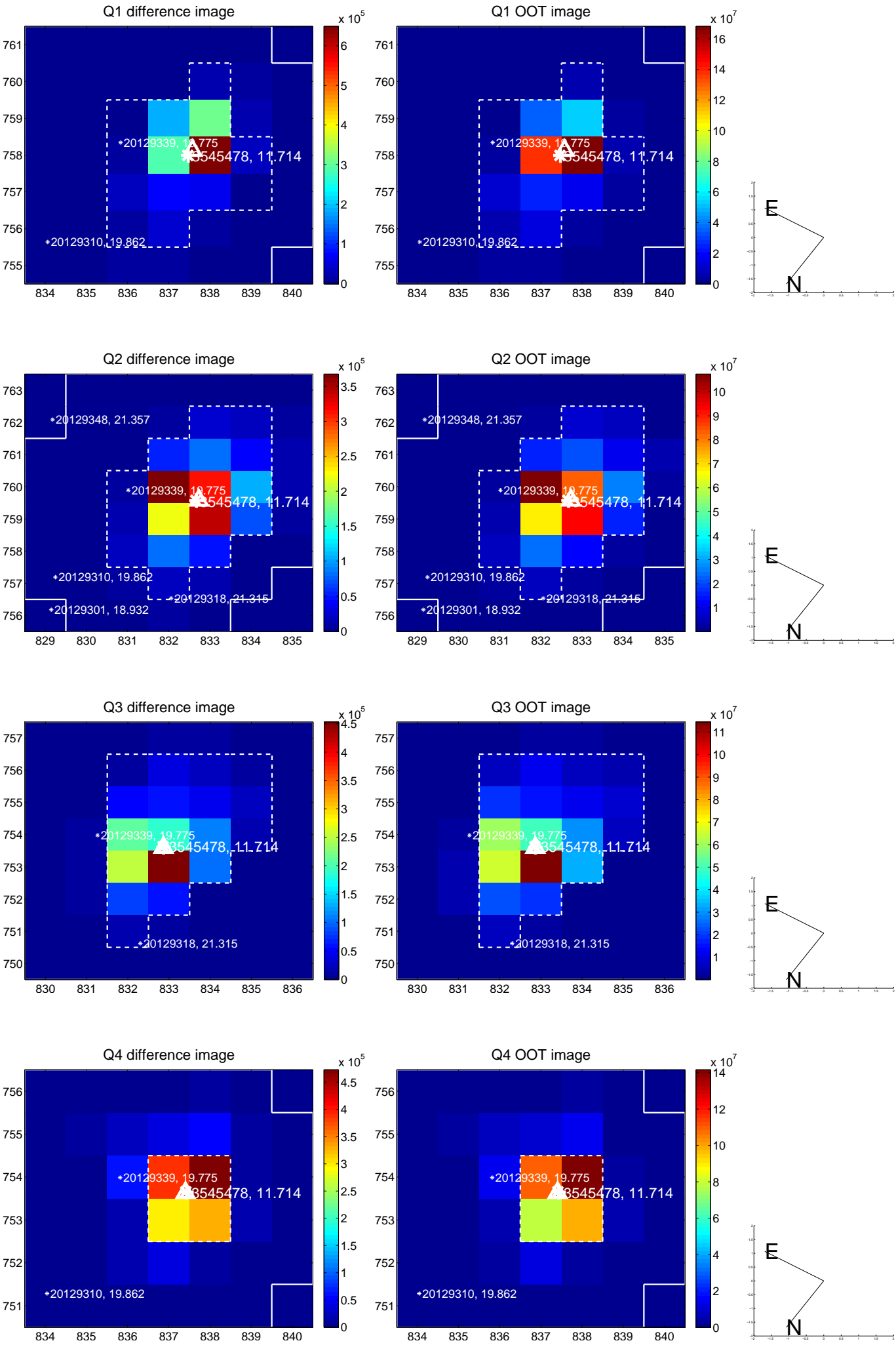
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.092	0.11	0.003 ± 0.070	0.010 ± 0.093
PRF-fit source offset from KIC position	0.066 ± 0.071	0.92	-0.064 ± 0.070	-0.013 ± 0.093
photometric centroid source offset	0.16 ± 0.02	7.52	-0.16 ± 0.02	0.05 ± 0.03

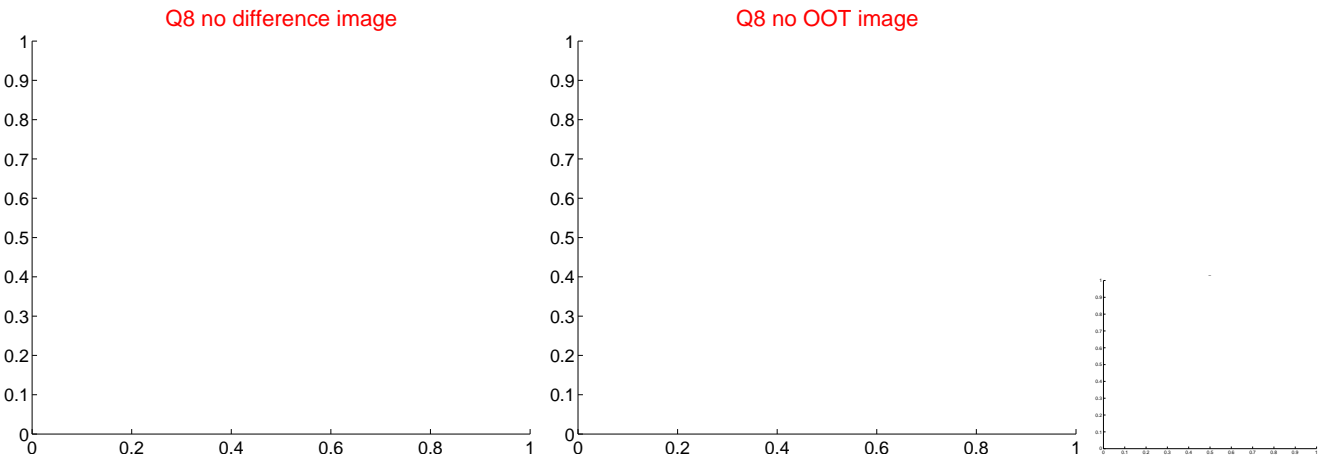
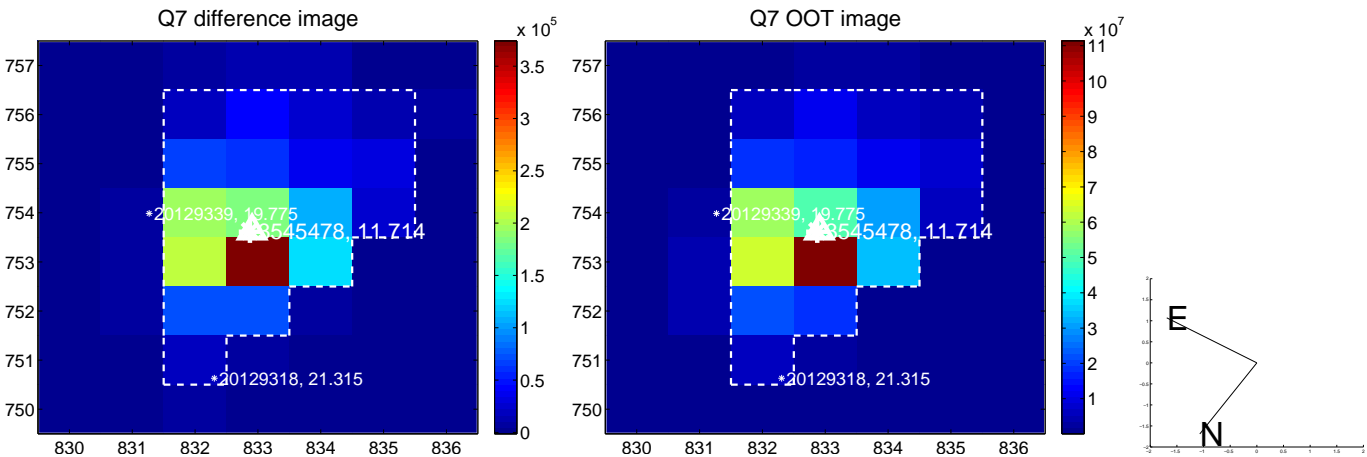
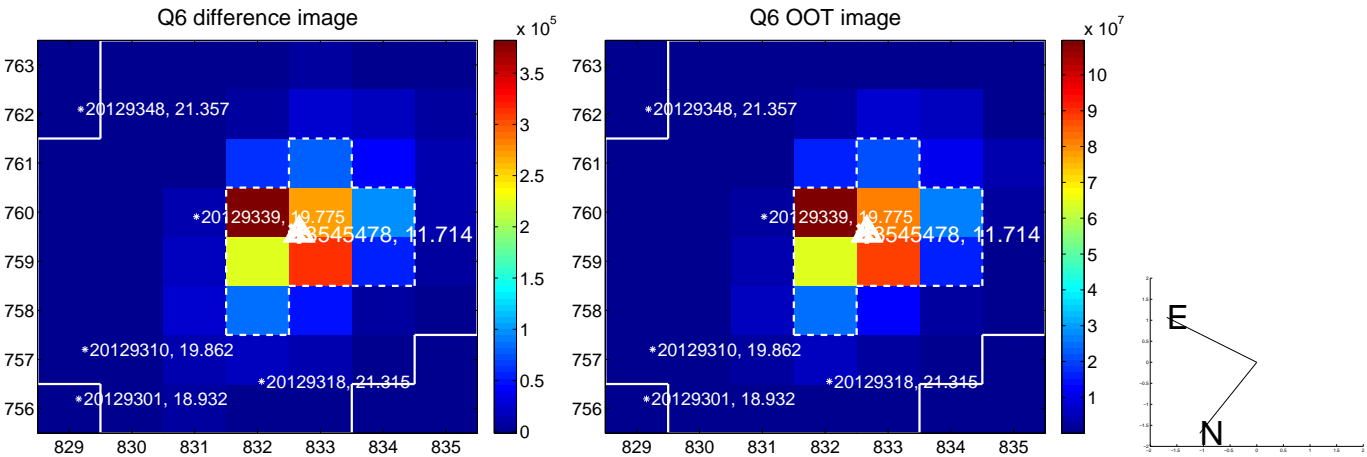
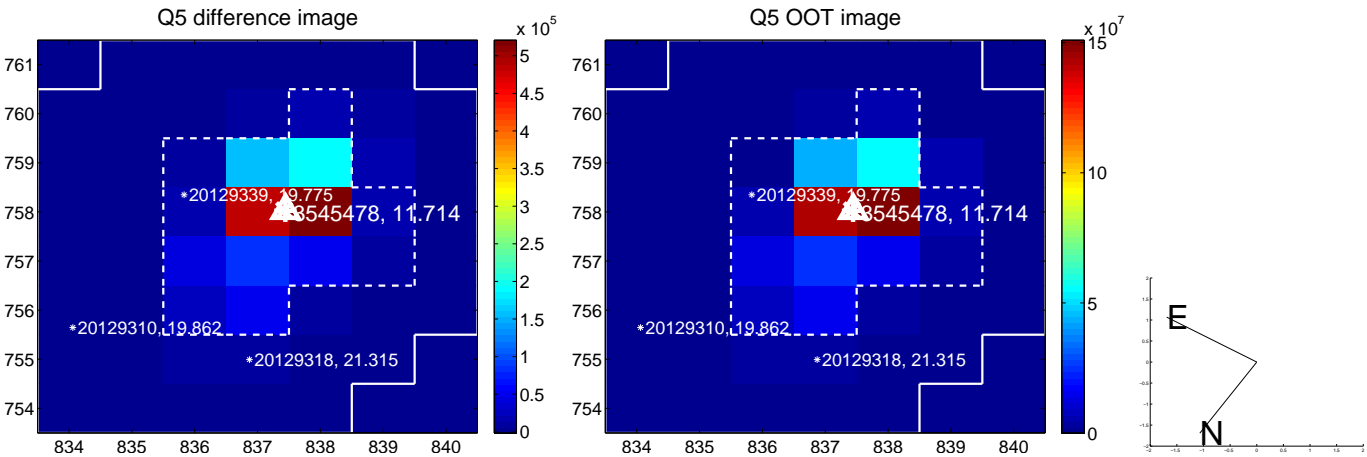


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

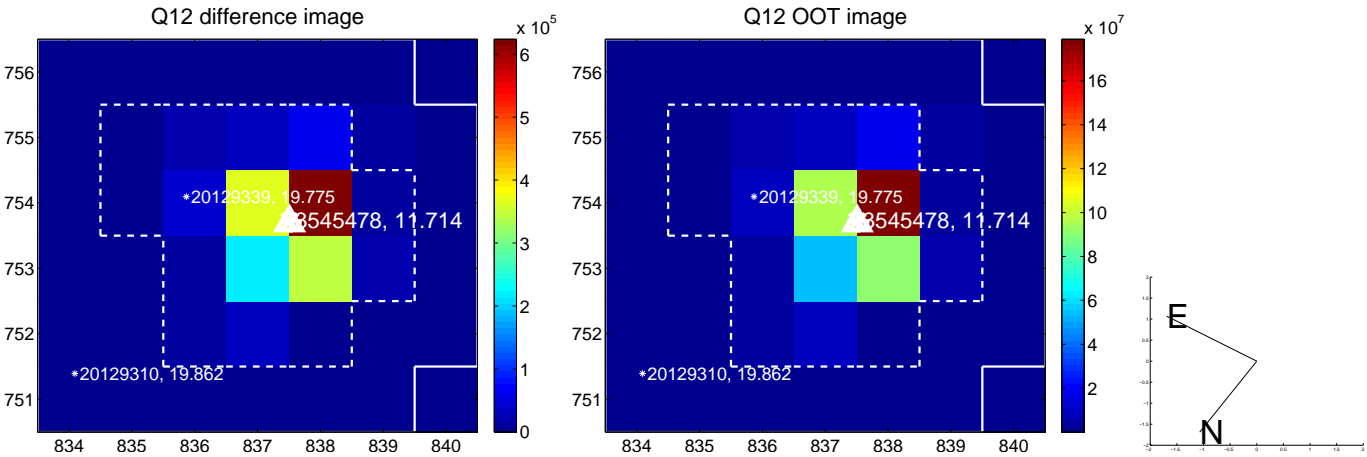
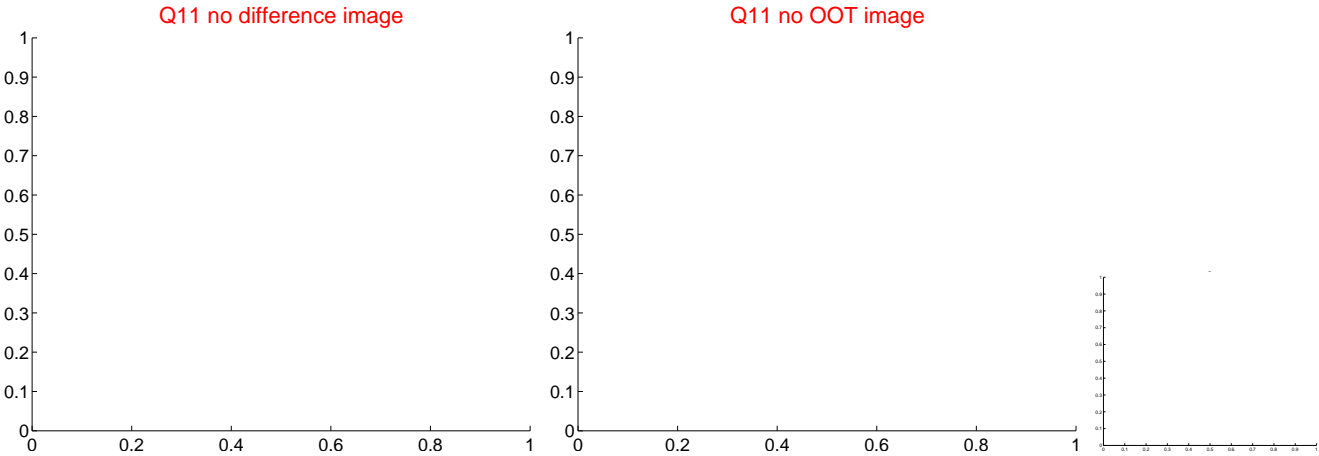
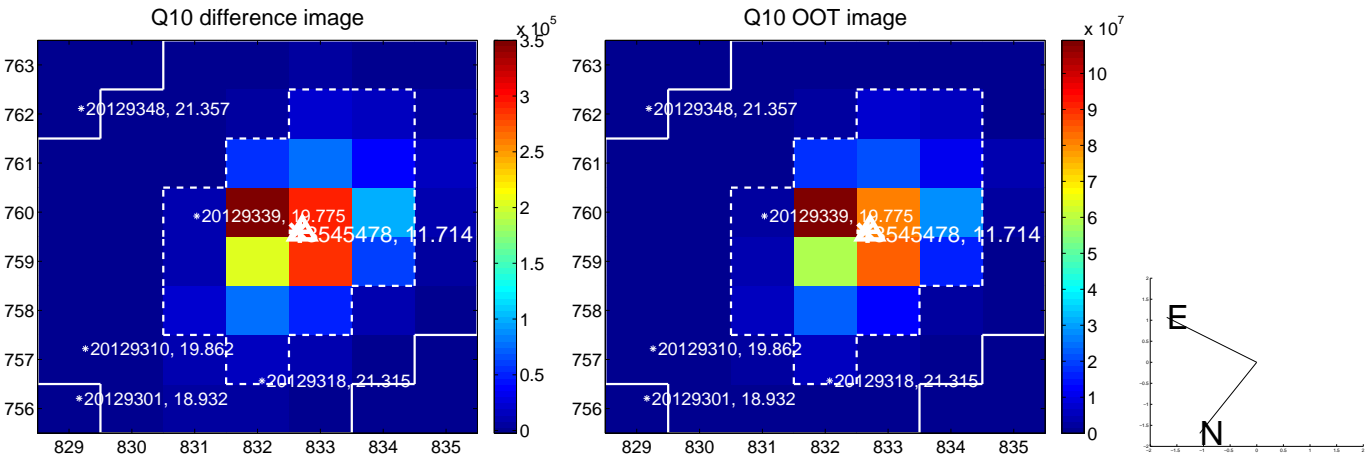
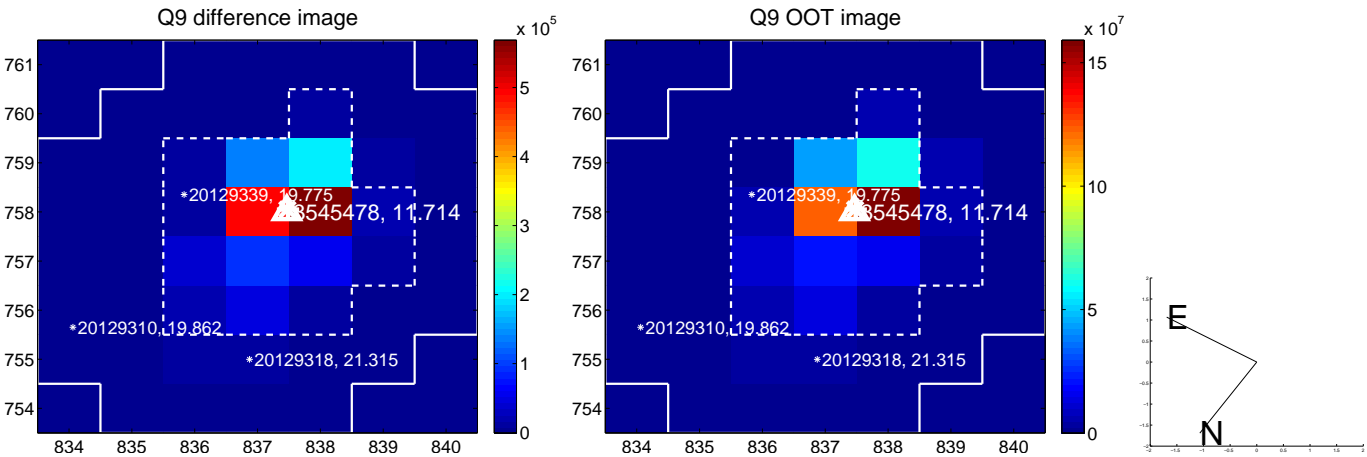
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



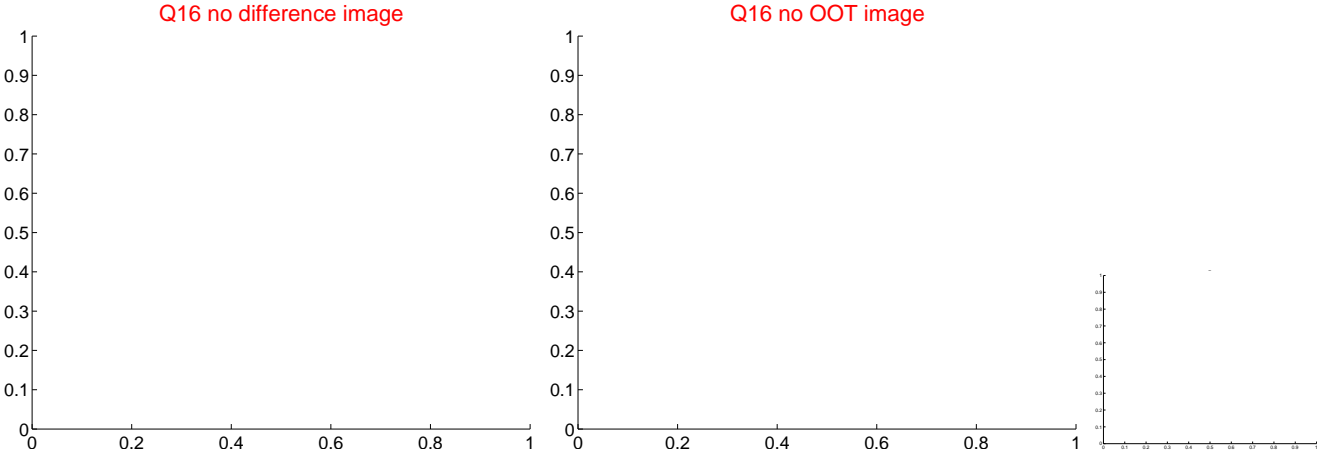
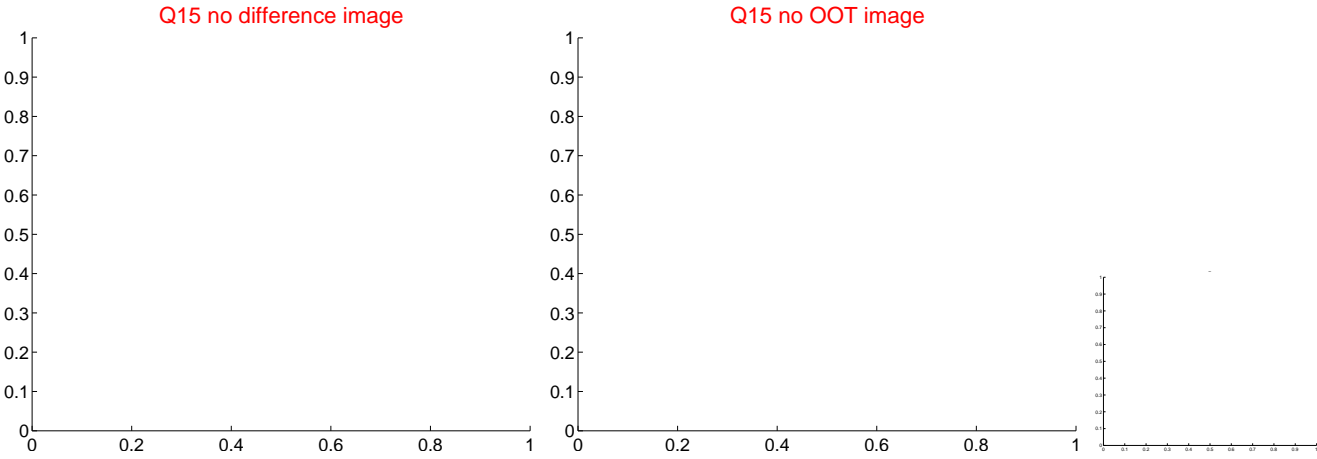
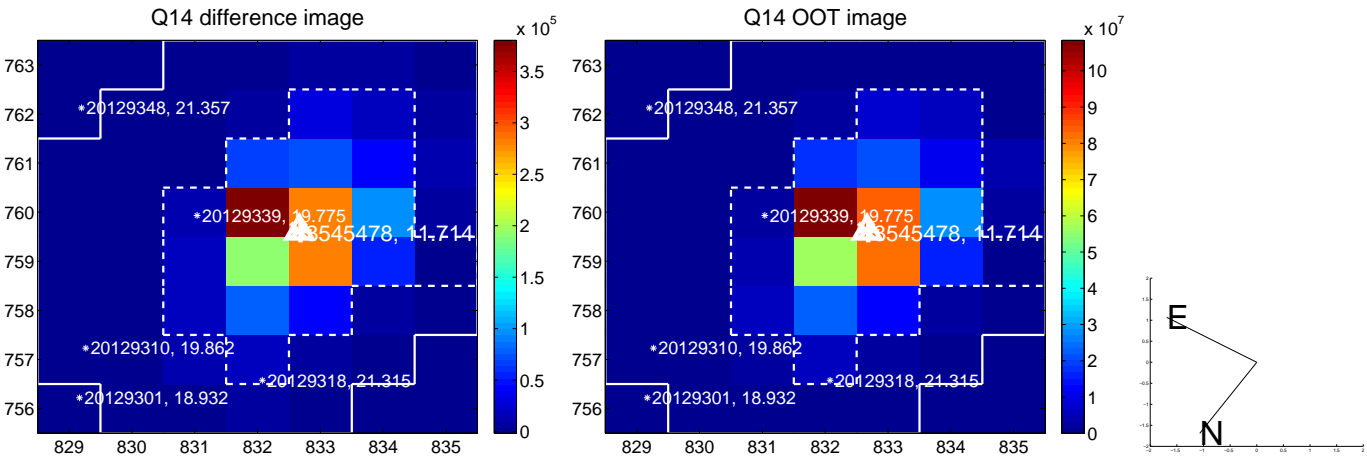
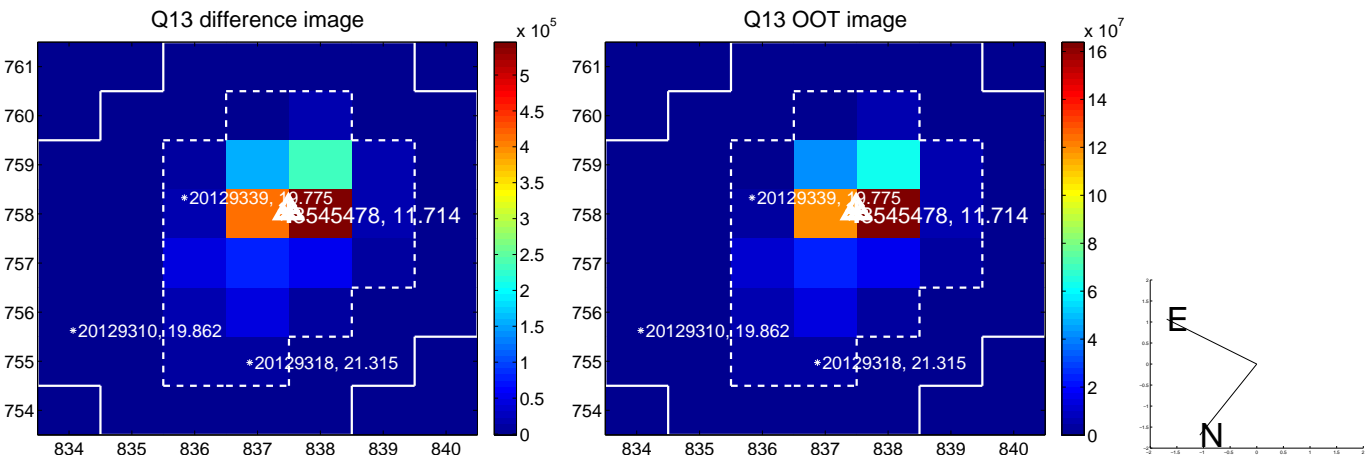
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



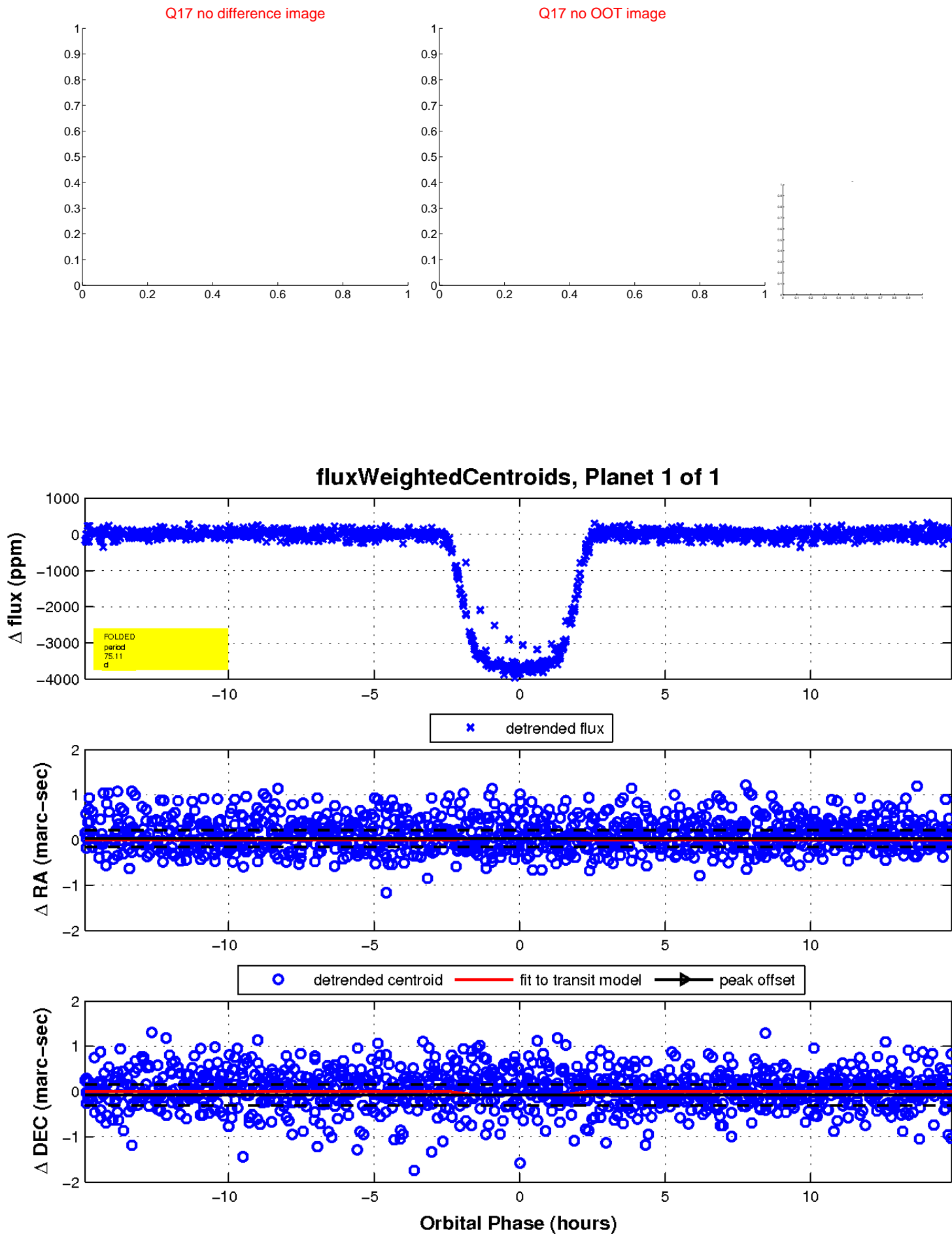
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

