

KIC 005734702

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})
005734702-01	OBS	5196.01	392.472794	155.453507	332.8	8.733	7.1	7.0	2.70	6626	9.36	9.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734702-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_ALT

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

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

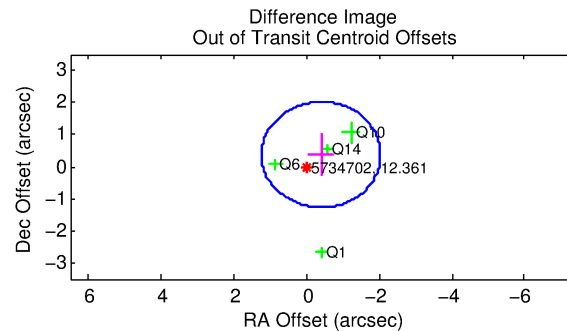
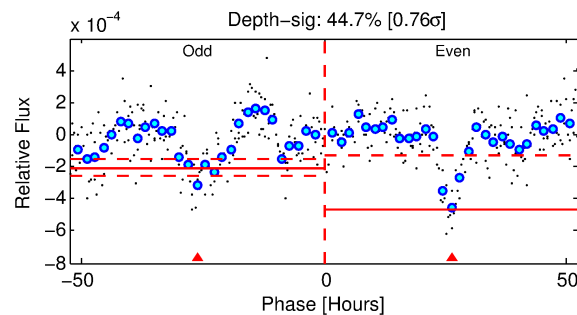
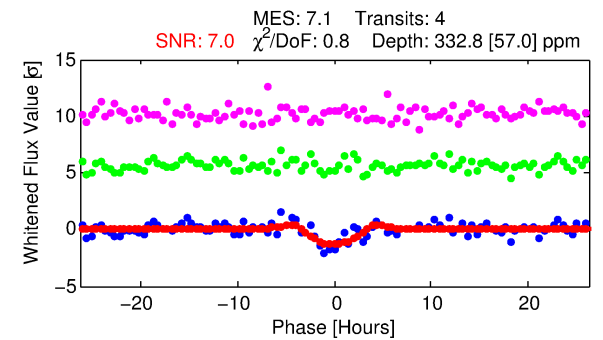
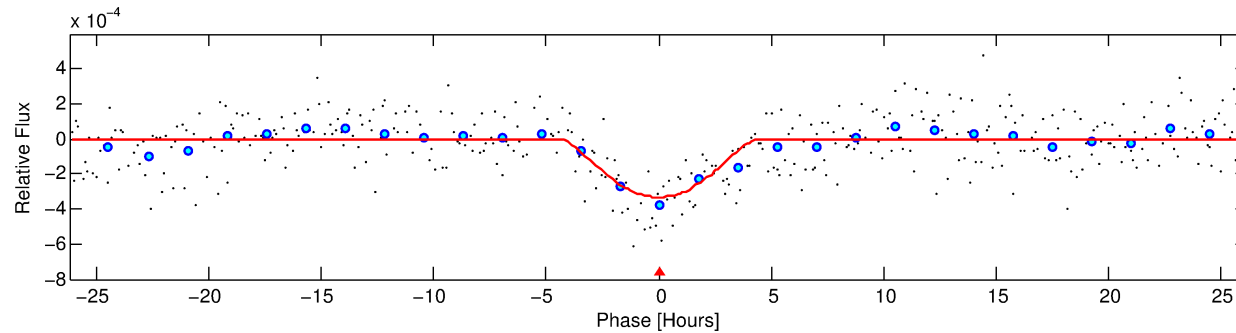
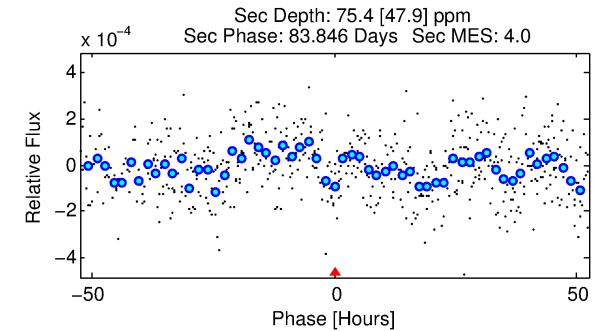
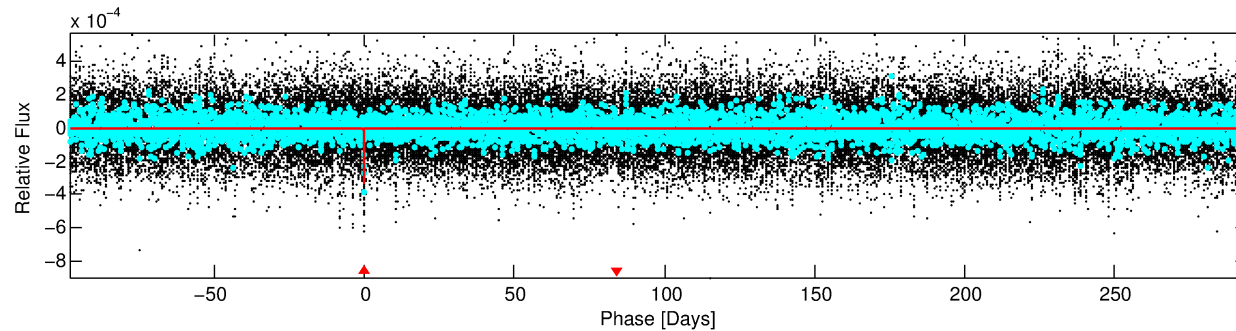
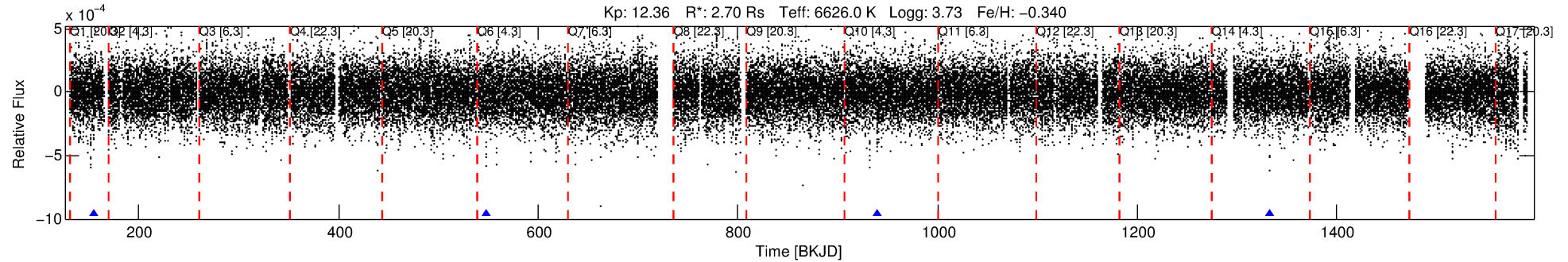
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734702-01

No Significant Match Found

DV One-Page Summary

KIC: 5734702 Candidate: 1 of 1 Period: 392.473 d
KOI: K05196.01 Corr: 0.951



DV Fit Results:

Period = 392.47279 [0.00947] d
Epoch = 155.4535 [0.0193] BKJD
Rp/R* = 0.0317 [0.0722]
a/R* = 88.56 [54.39]
b = 1.00 [0.11]
Seff = 9.05 [4.91]
Teq = 442 [60] K
Rp = 9.36 [21.54] Re
a = 1.1810 [0.3926] AU
Ag = 661.00 [3057.95] [0.22σ]
Teffp = 3468 [3985] K [0.76σ]

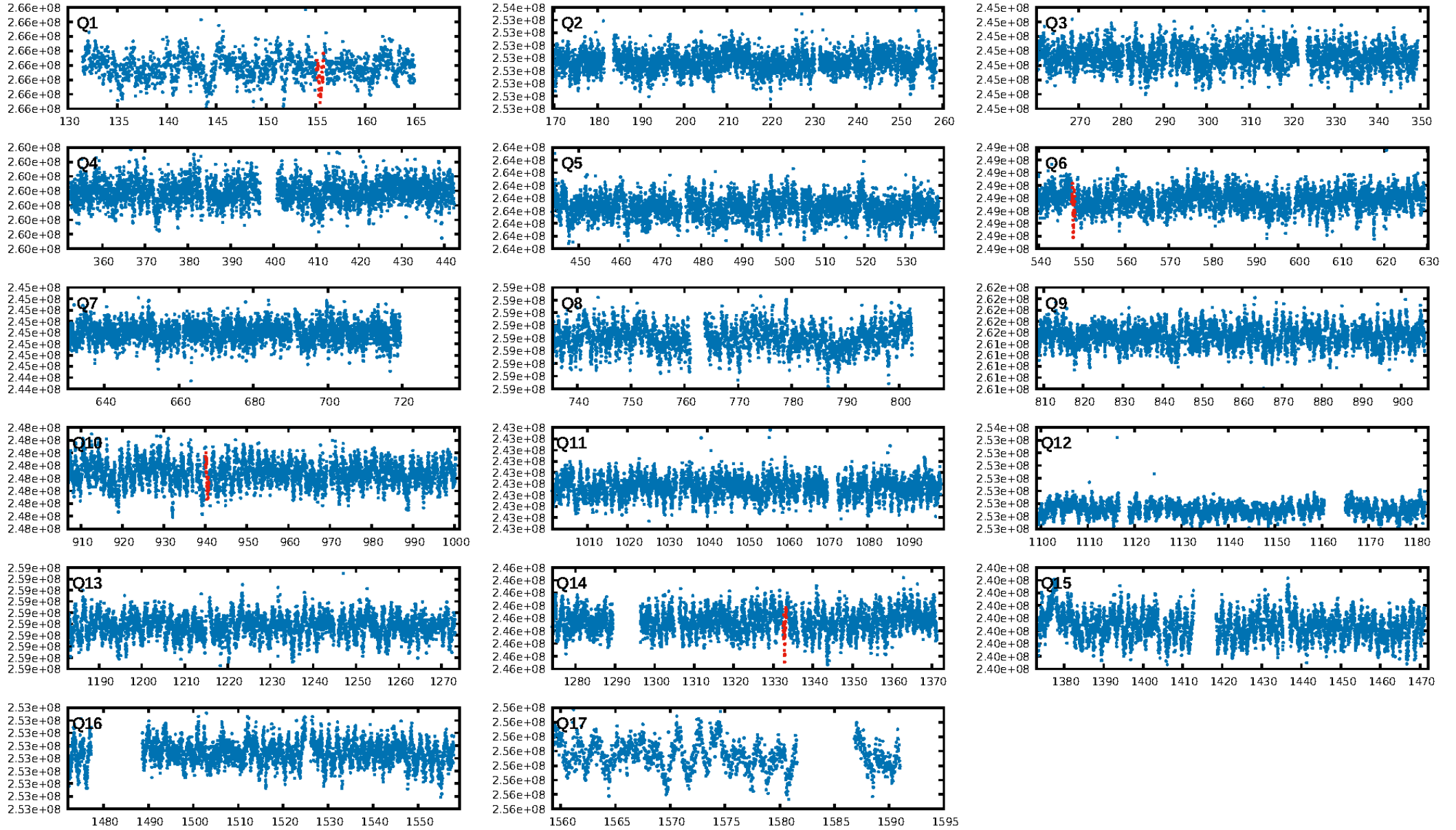
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 2.84e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.341
Centroid-sig: 5.7%
Centroid-so: 1.150 arcsec [1.20σ]
OotOffset-rm: 0.546 arcsec [1.00σ]
KicOffset-rm: 0.662 arcsec [0.78σ]
OotOffset-st: 3/0/0/1 [4]
KicOffset-st: 3/0/0/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

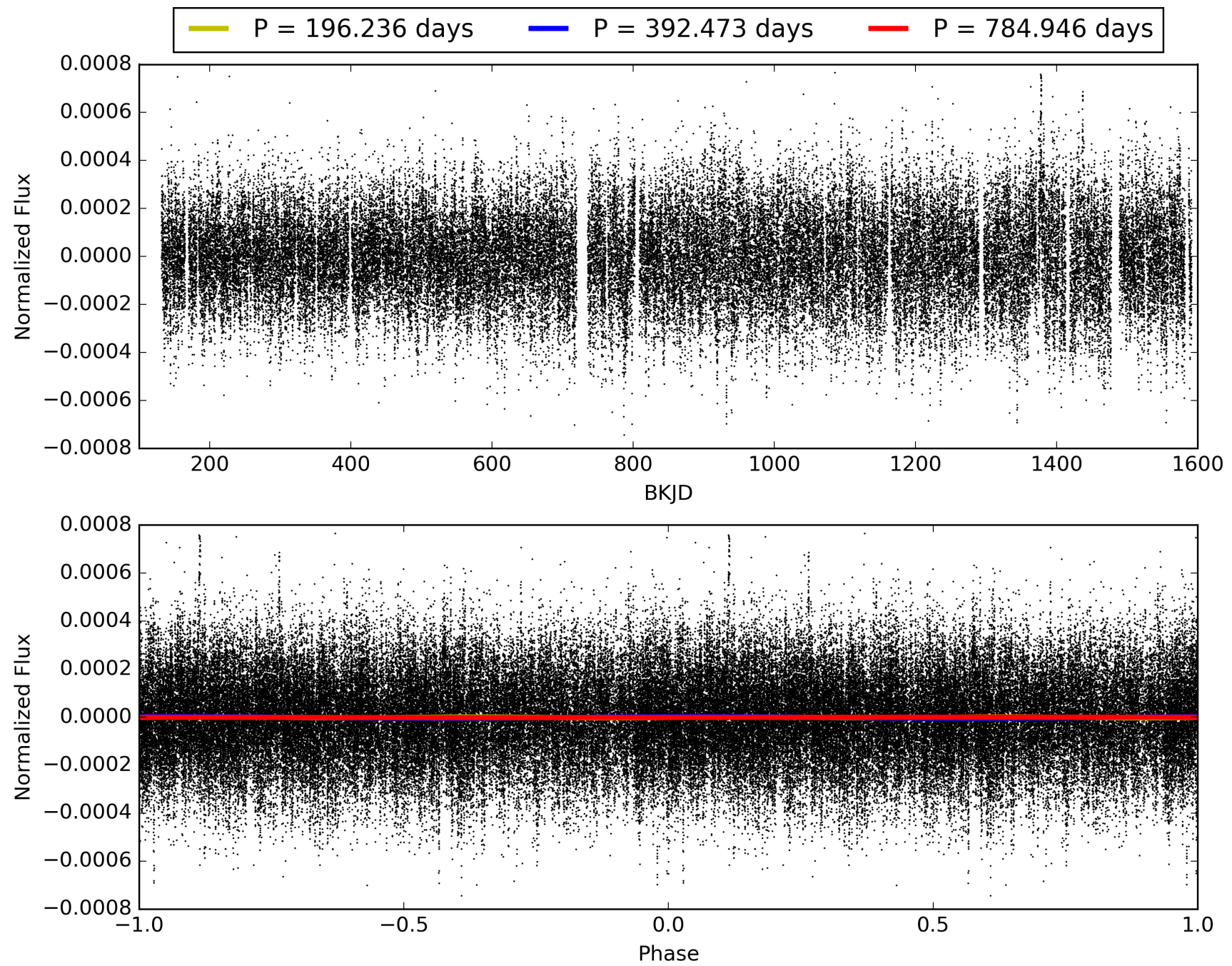
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:51:40 Z

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

TCE 005734702-01, PDC Light Curves

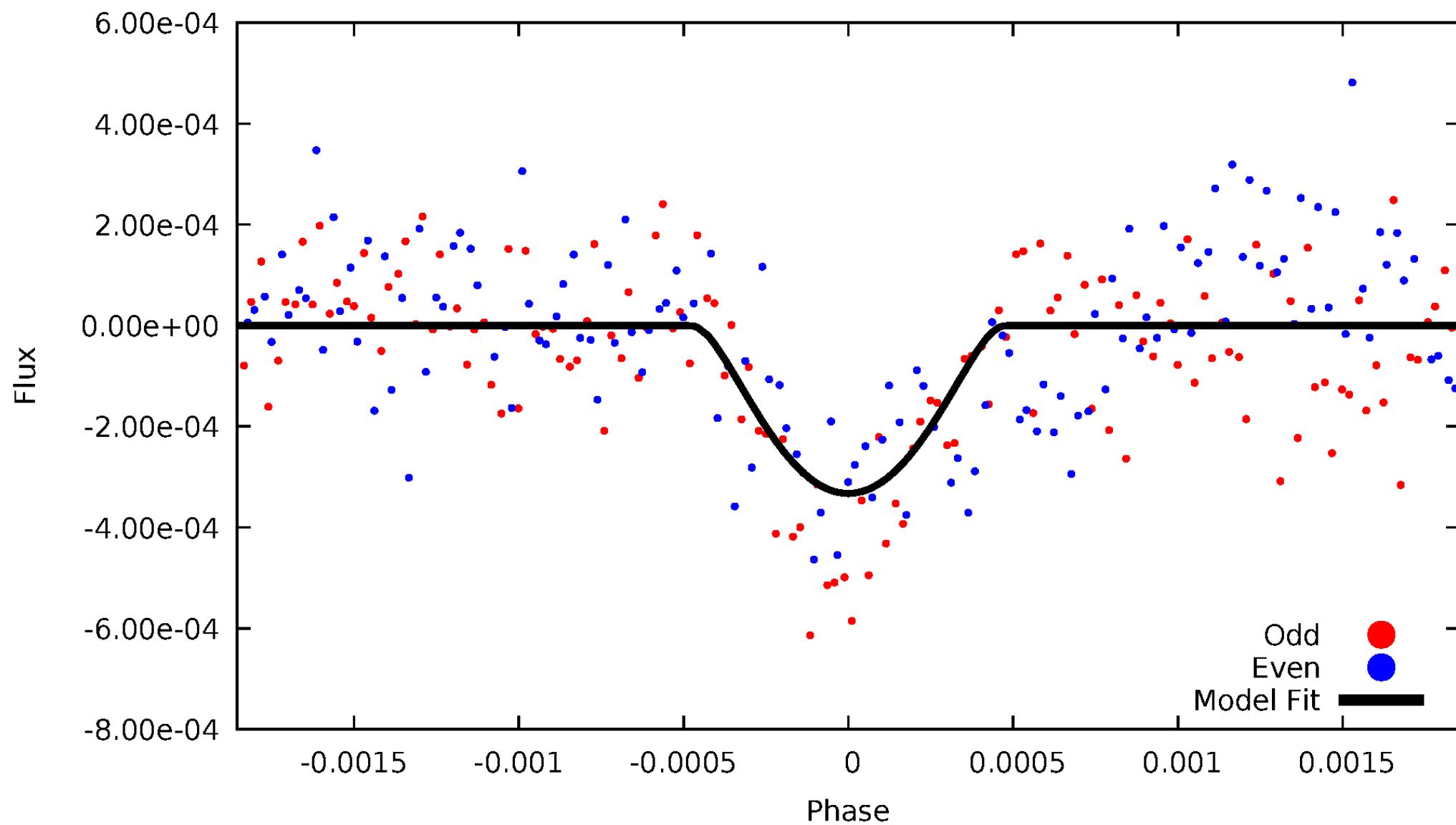


TCE 005734702-01



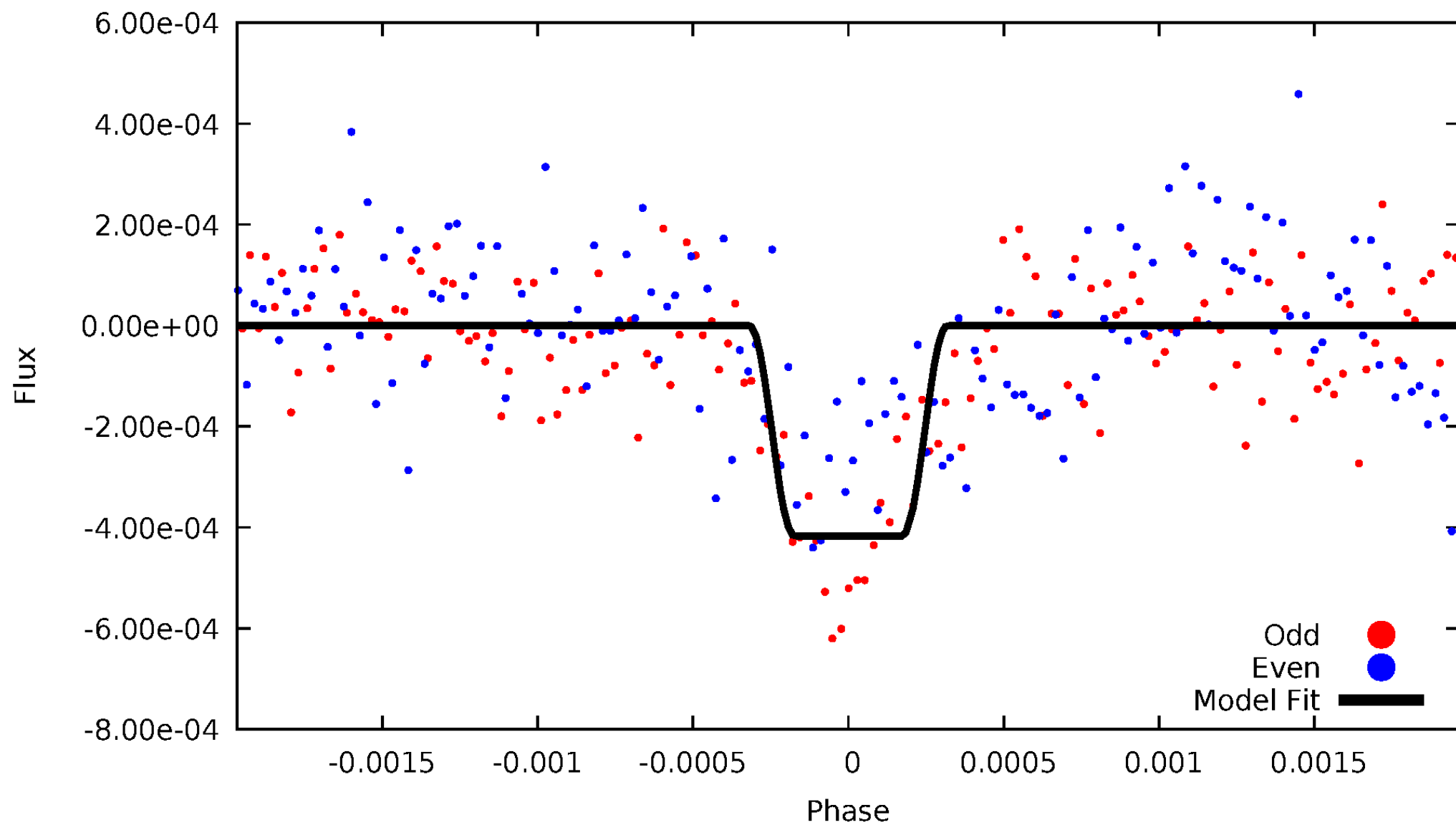
DV Odd/Even

TCE 005734702-01

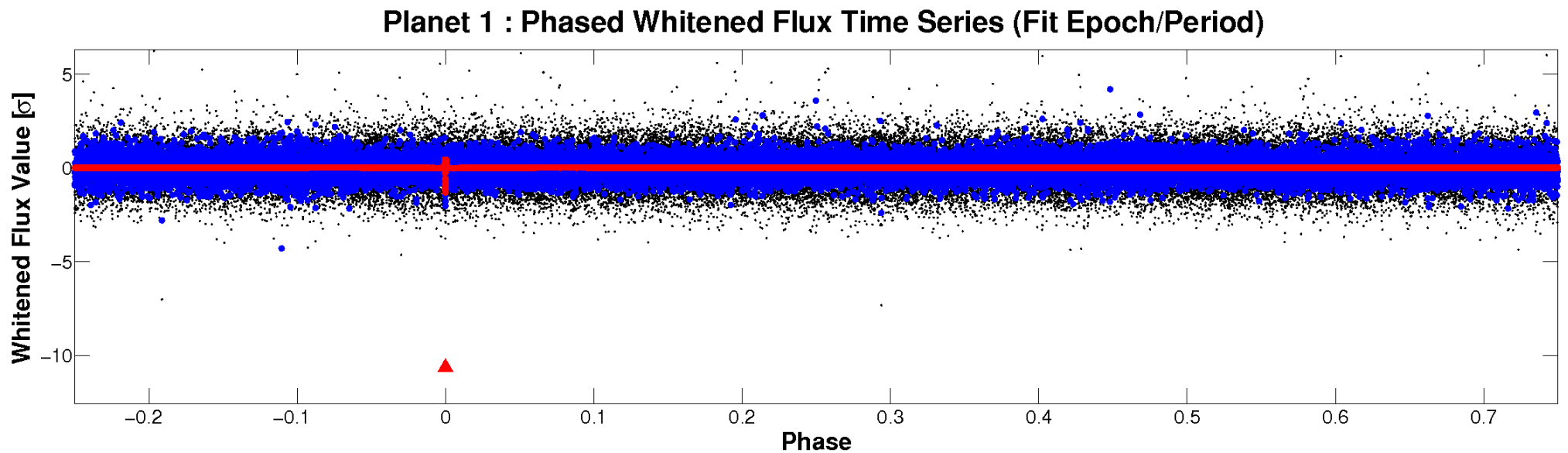
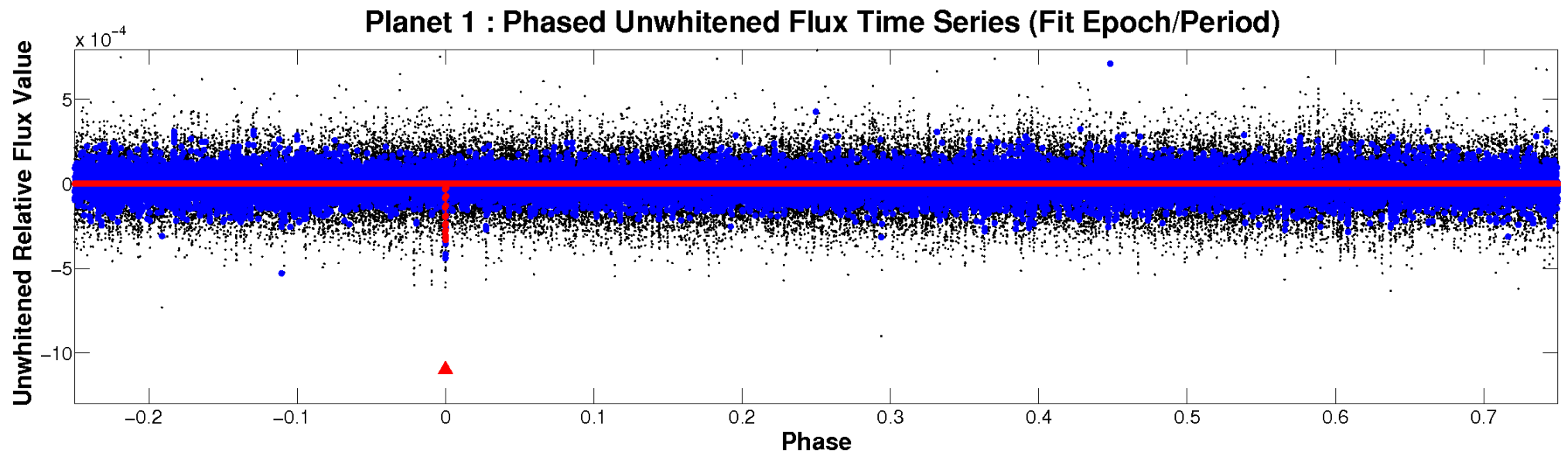


ALT Odd/Even

TCE 005734702-01

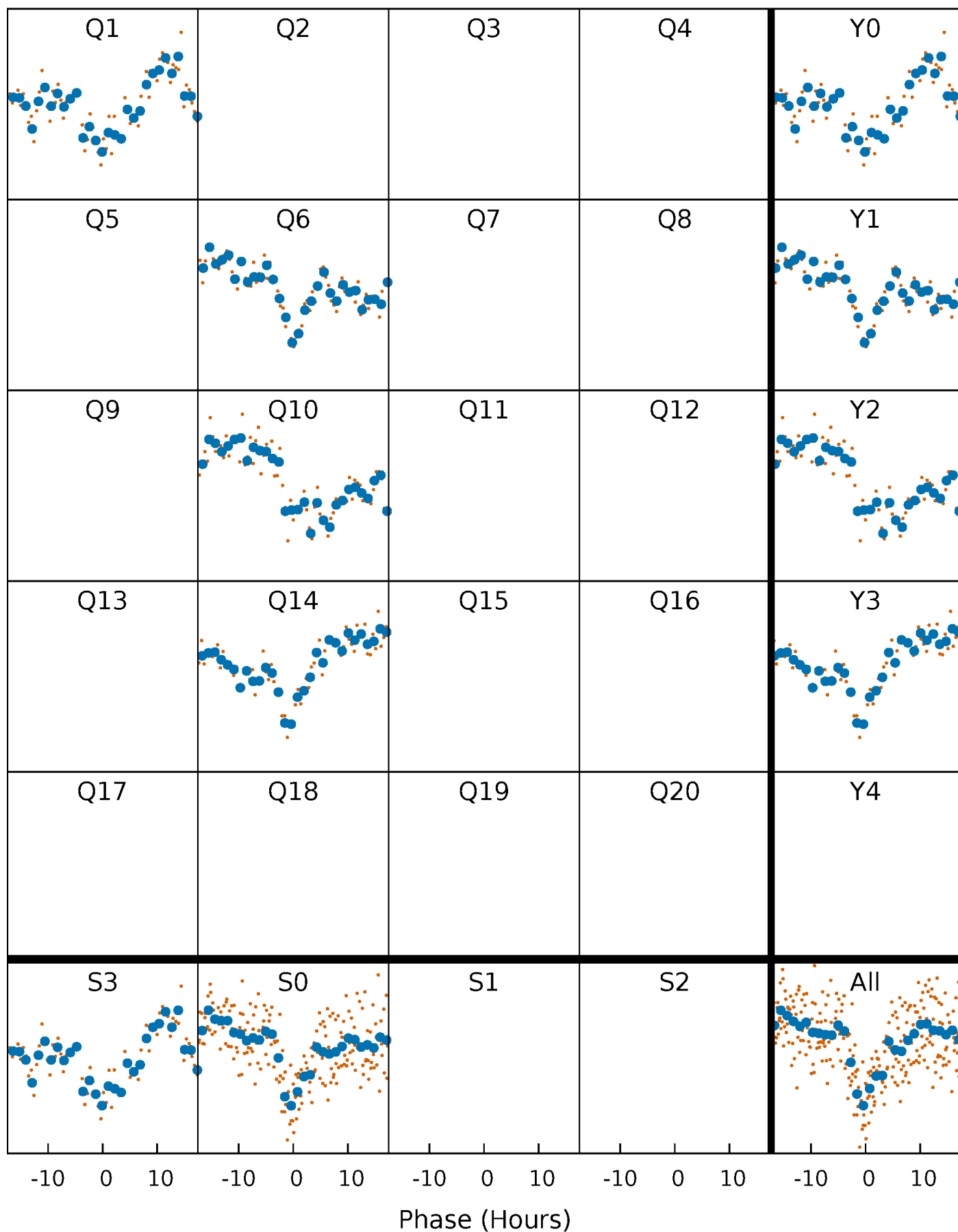


Non-Whitened Vs. Whitened Light Curve



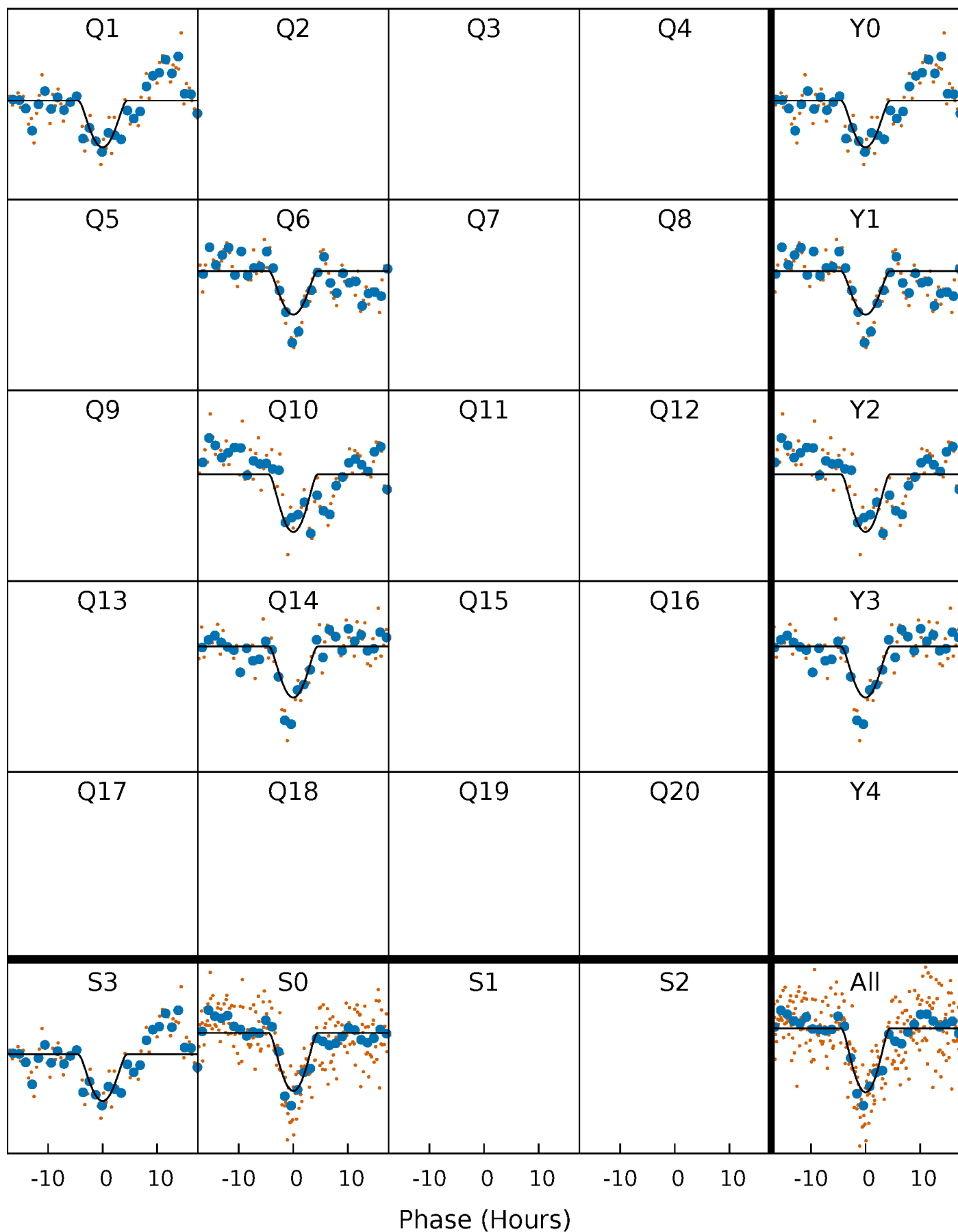
PDC Quarter-Phased Transit Curves

TCE 005734702-01 $P=392.472794$ Days $T_0=155.453507$ (BKJD)



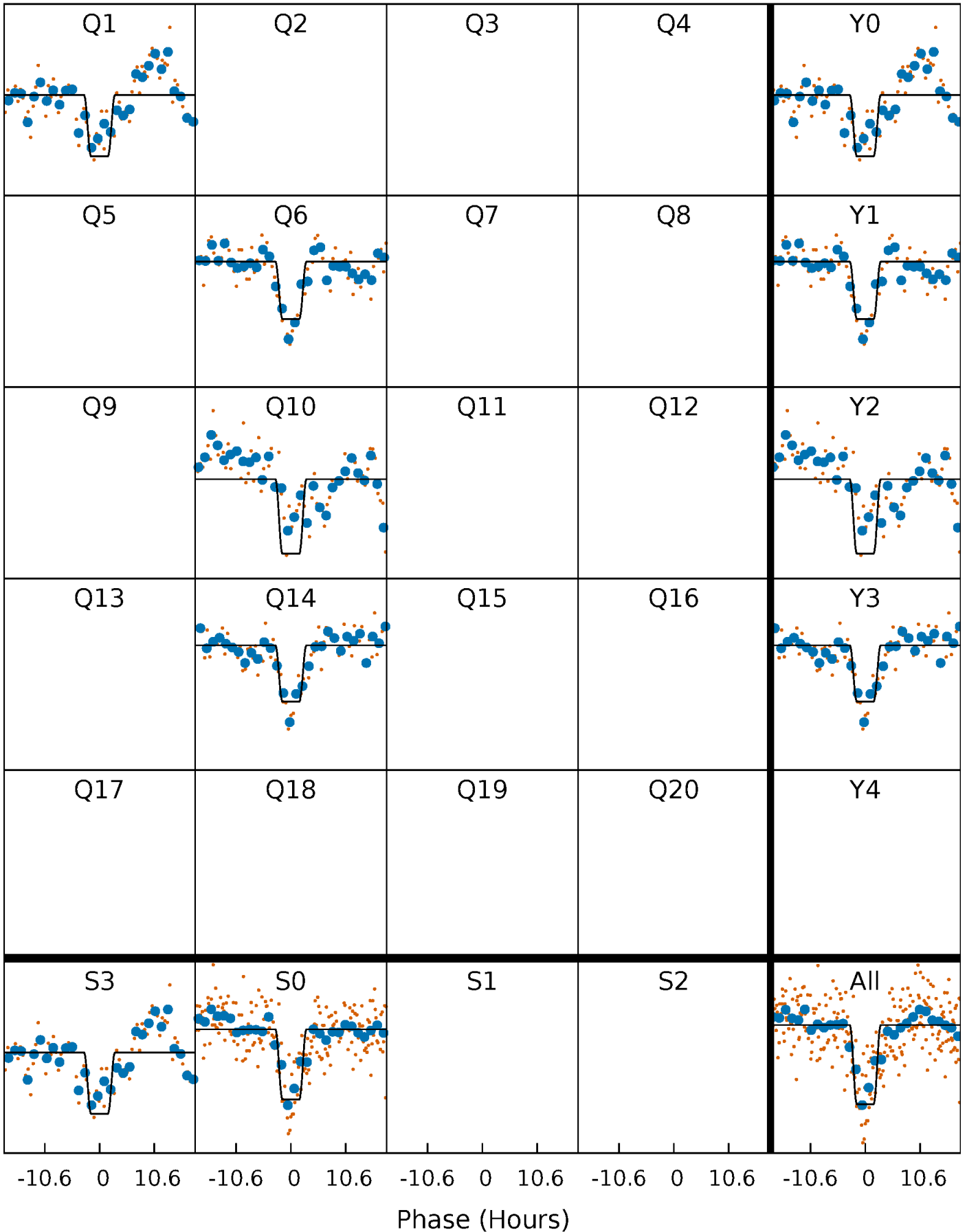
DV Quarter-Phased Transit Curves

TCE 005734702-01 P=392.472794 Days $T_0=155.453507$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

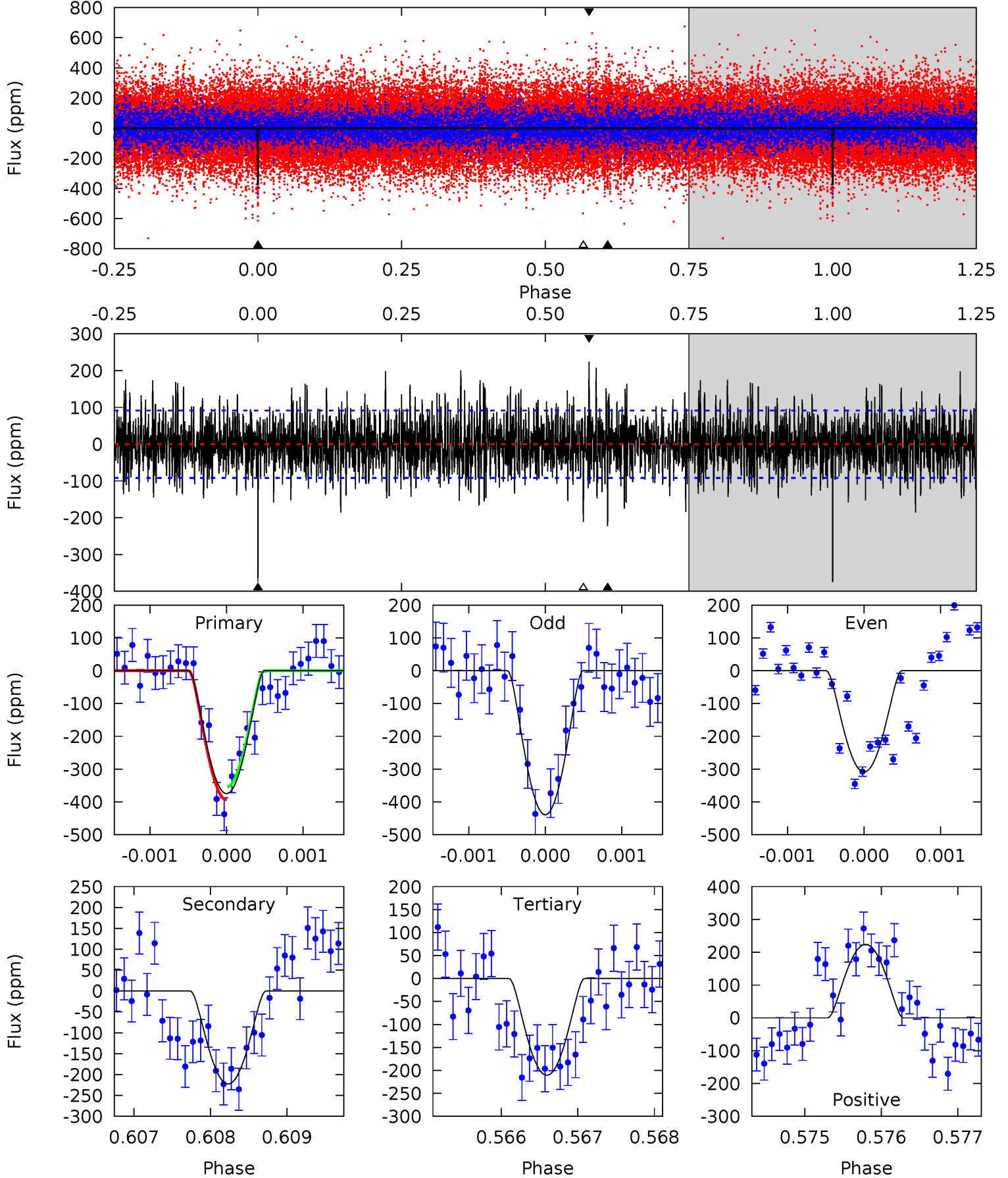
TCE 005734702-01 $P=392.453764$ Days $T_0=155.485416$ (BKJD)



DV Model-Shift Uniqueness Test

005734702-01, P = 392.472794 Days, E = 155.453507 Days

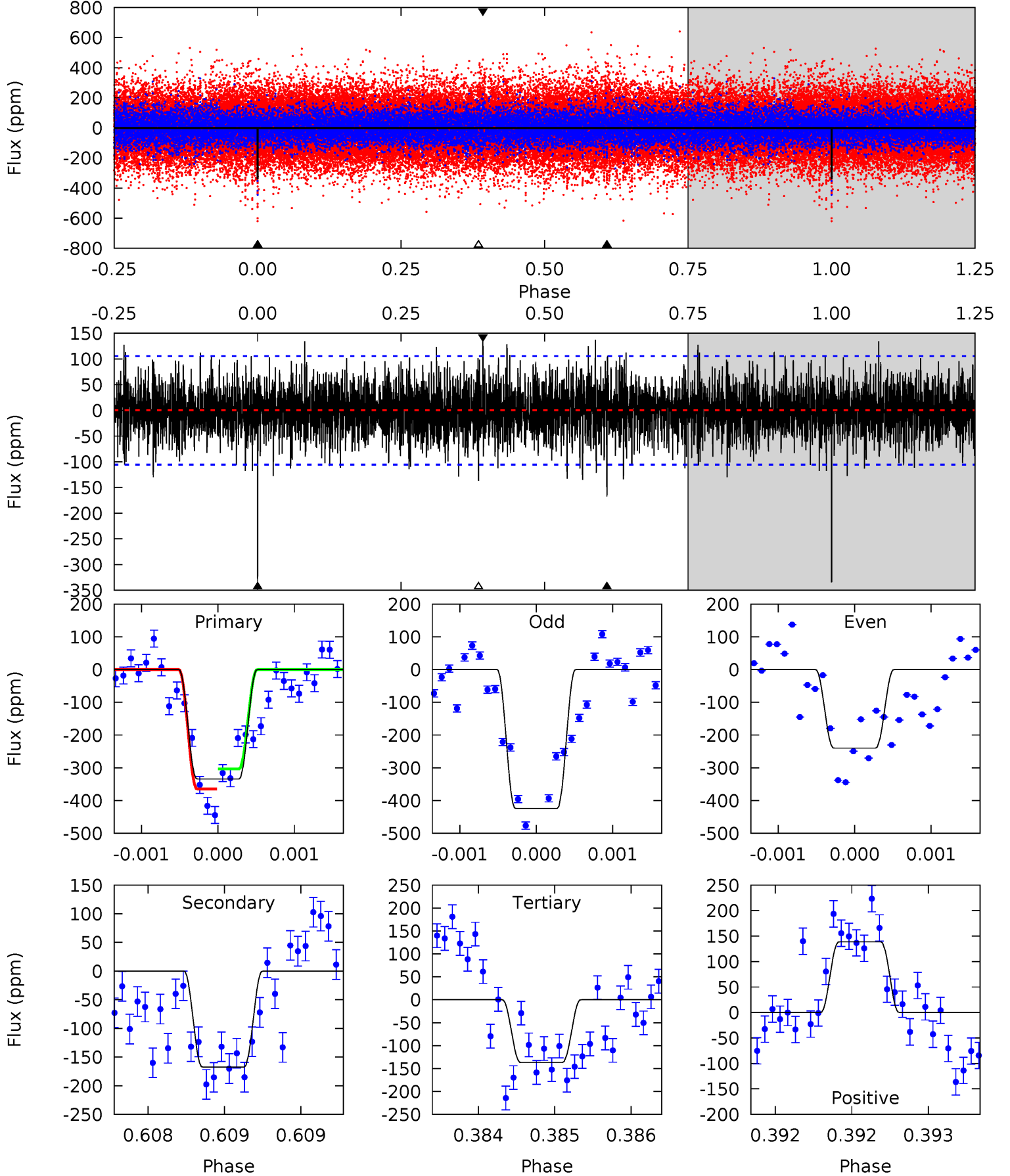
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	13.3	12.6	13.4	5.46	3.30	3.42	9.78	8.99	0.71	-0.08	3.89	0.95	0.37	1.17



Alt Model-Shift Uniqueness Test

005734702-01, P = 392.453764 Days, E = 155.485416 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	8.76	7.16	7.26	5.53	3.42	2.08	10.4	10.2	1.60	1.50	4.88	0.92	0.29	1.60



Stellar Parameters For KIC 005734702

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6626^{+160}_{-180}	$3.728^{+0.312}_{-0.078}$	$-0.340^{+0.350}_{-0.250}$	$2.704^{+0.431}_{-0.935}$	$1.426^{+0.238}_{-0.264}$	$0.102^{+0.232}_{-0.031}$
	+2%/-3%	+8%/-2%	+103%/-74%	+16%/-35%	+17%/-19%	+228%/-31%
Source	PHO1	FLK73	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 005734702-01 / KOI 5196.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-223 ± 17	$17.03^{+16.79}_{-11.84}$	602^{+36}_{-57}	3637^{+2154}_{-658}	594^{+5677}_{-448}
Alt.	-167 ± 19	$15.80^{+17.93}_{-11.26}$	604^{+35}_{-48}	3633^{+2197}_{-740}	527^{+5698}_{-407}

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

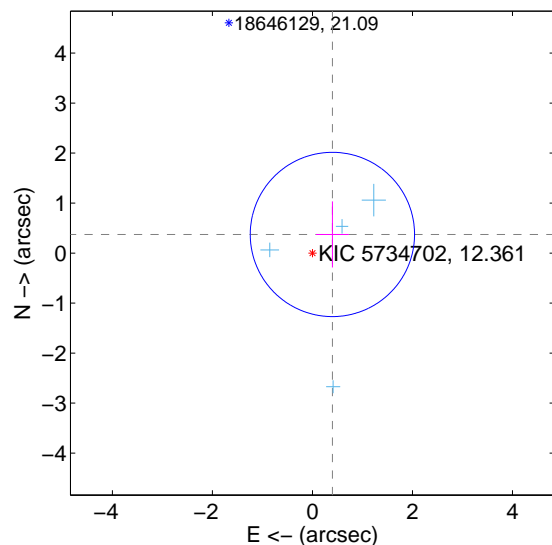
Supplemental centroid analysis for 005734702-01. Kepler magnitude: 12.36. Transit SNR 6.98

There are 4 quarters with good PRF difference image offsets

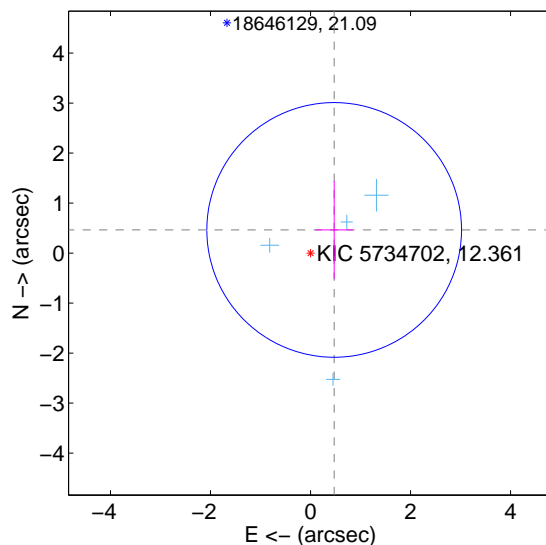
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.546 ± 0.548	1.00	-0.399 ± 0.329	0.373 ± 0.660
PRF-fit source offset from KIC position	0.662 ± 0.849	0.78	-0.473 ± 0.375	0.463 ± 0.980
photometric centroid source offset	1.15 ± 0.96	1.20	-0.84 ± 1.07	-0.78 ± 0.82

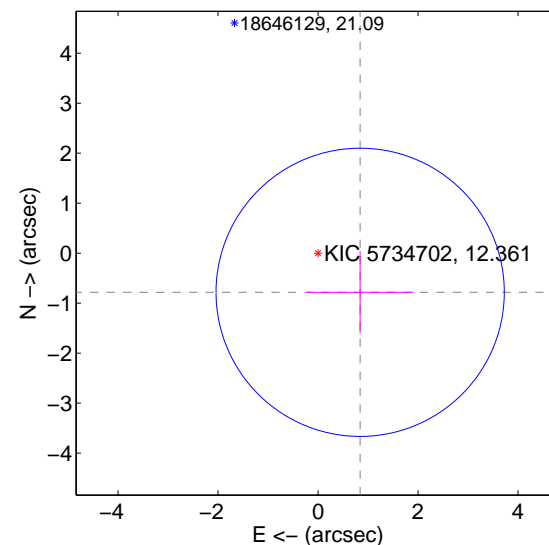
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

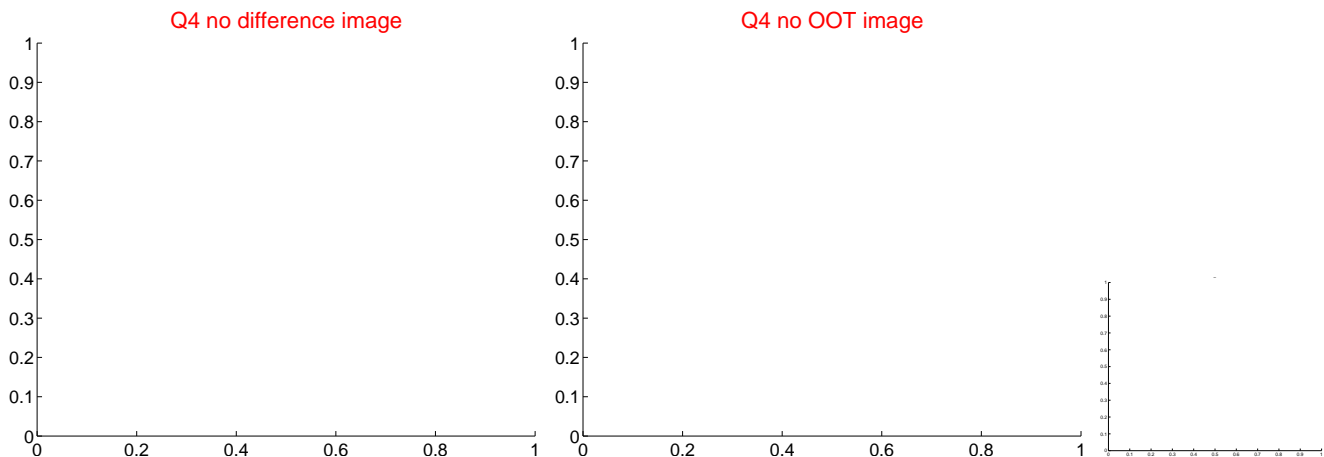
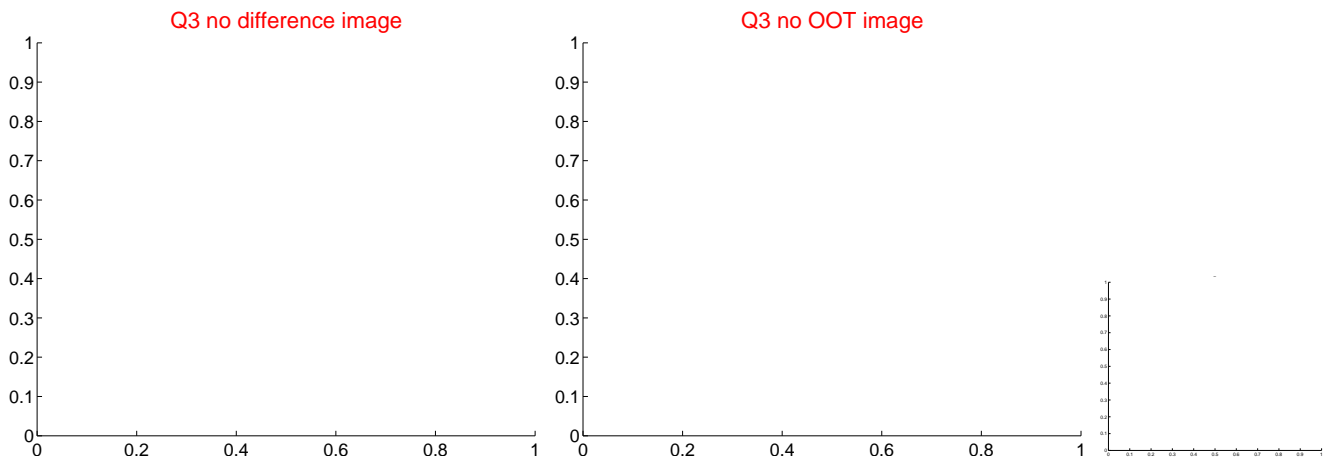
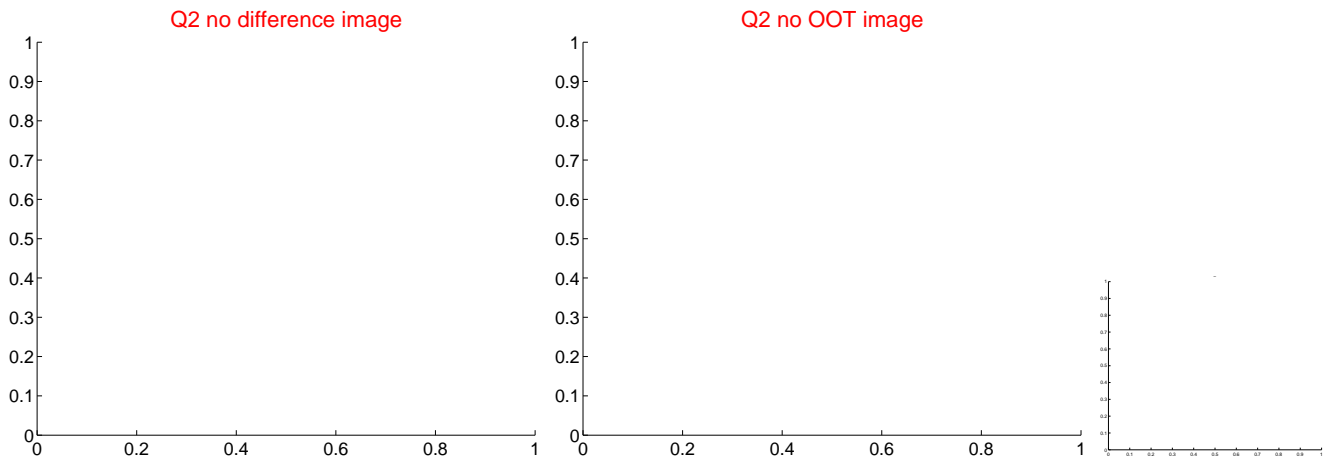
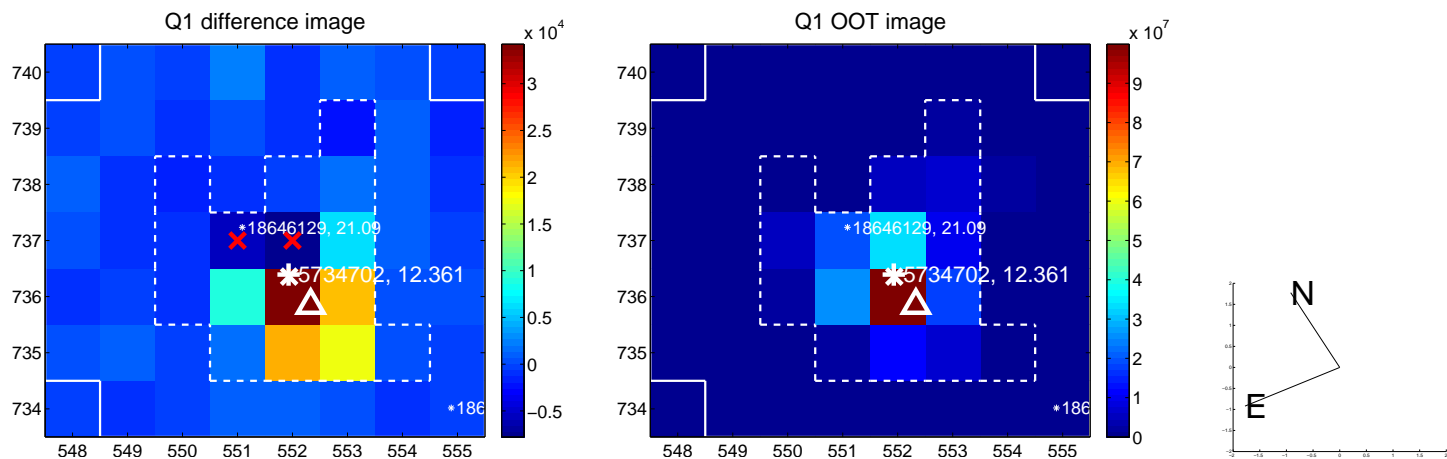


offset from photometric centroids



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.



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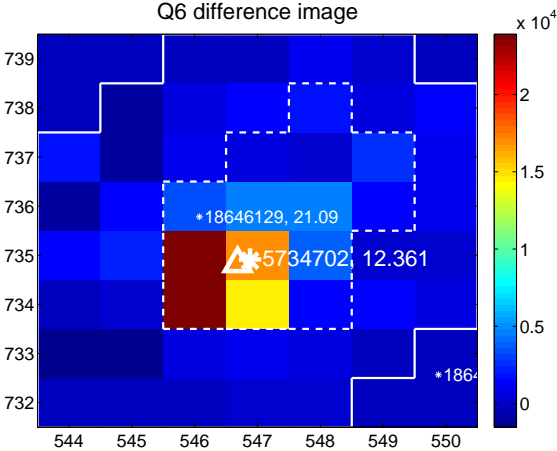
Q5 no difference image



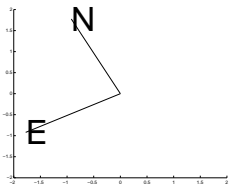
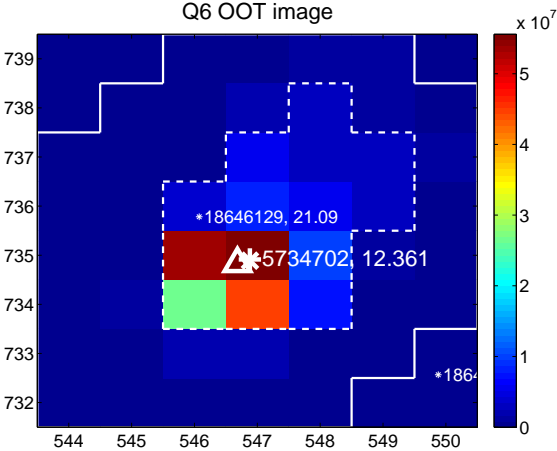
Q5 no OOT image



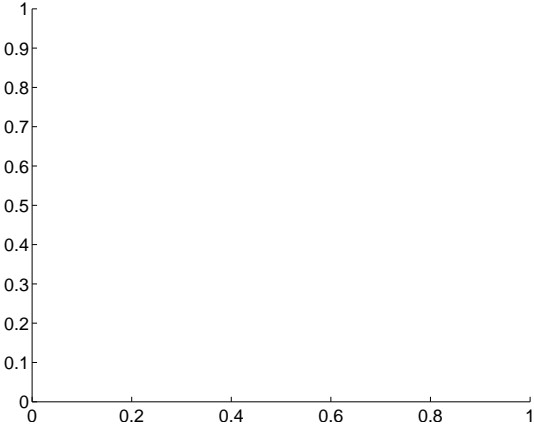
Q6 difference image



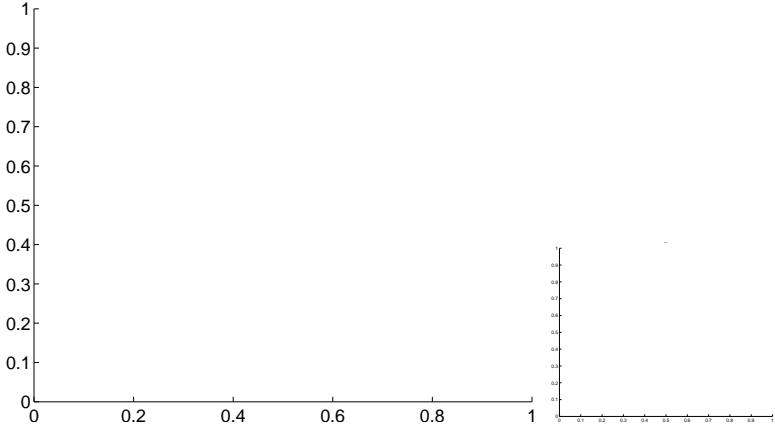
Q6 OOT image



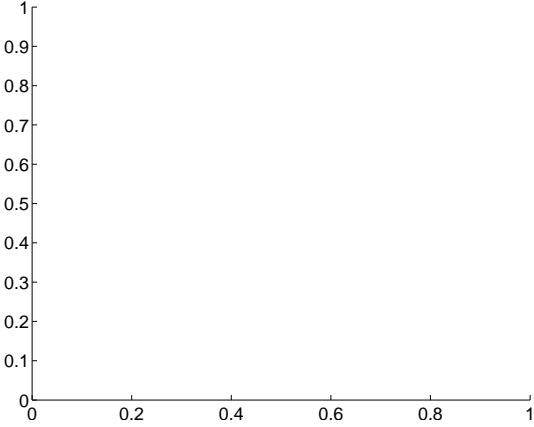
Q7 no difference image



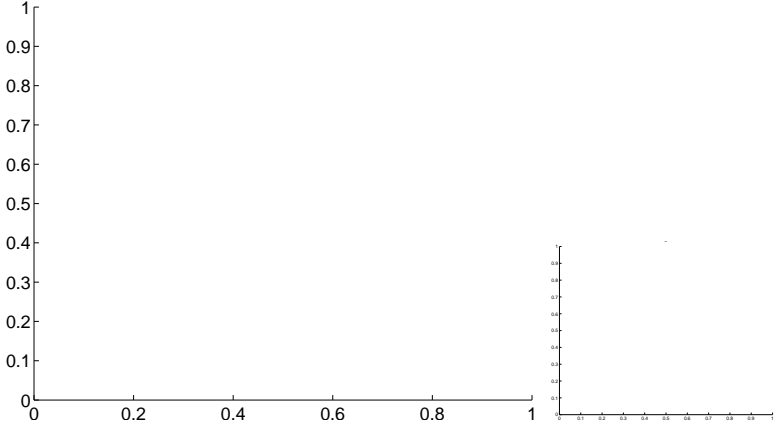
Q7 no OOT image



Q8 no difference image



Q8 no OOT image

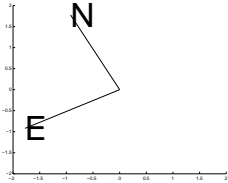
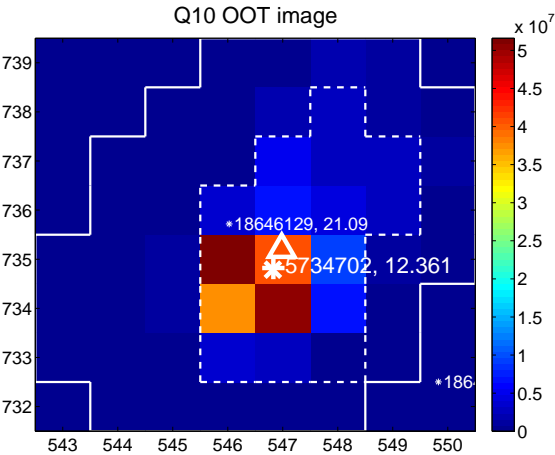
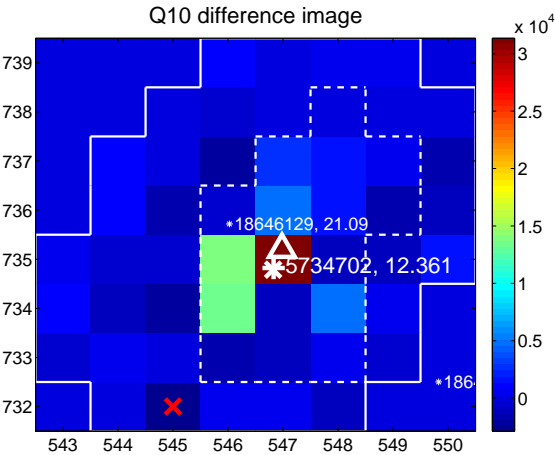


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

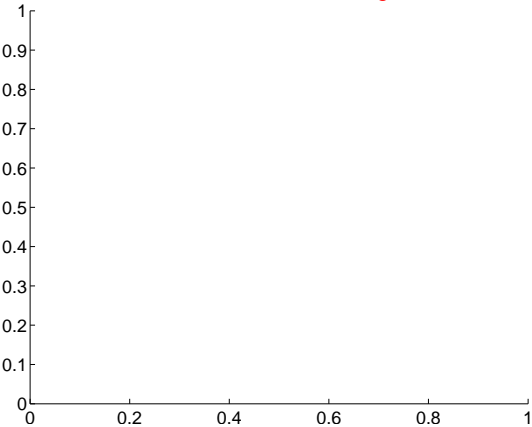
Q9 no difference image



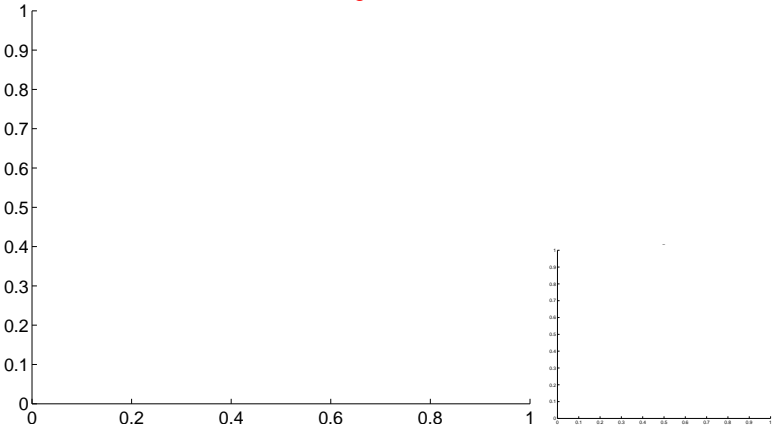
Q9 no OOT image



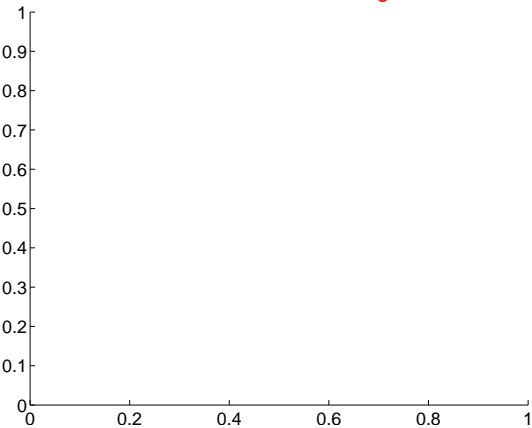
Q11 no difference image



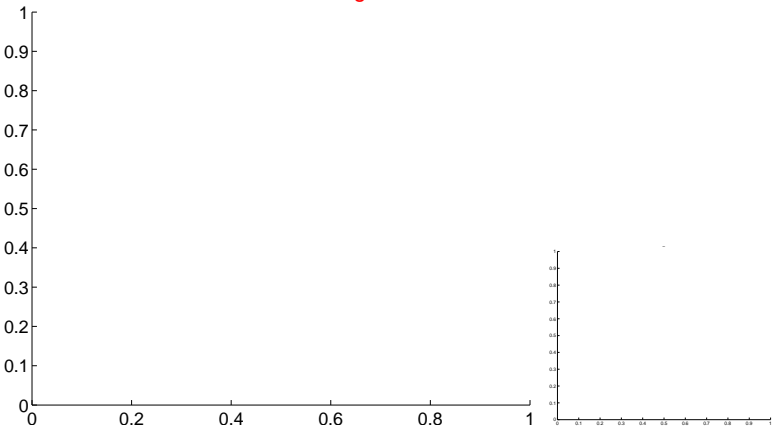
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

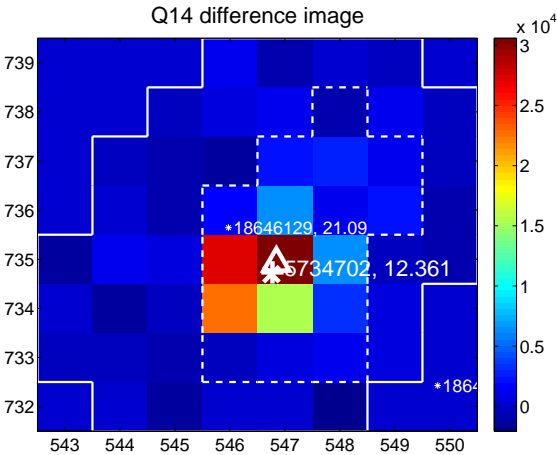
Q13 no difference image



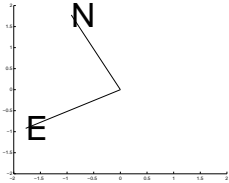
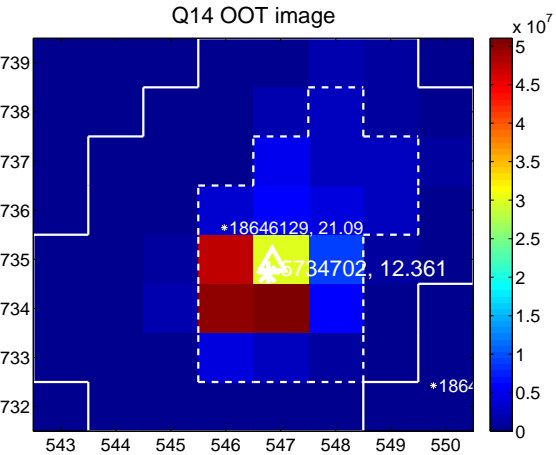
Q13 no OOT image



Q14 difference image



Q14 OOT image



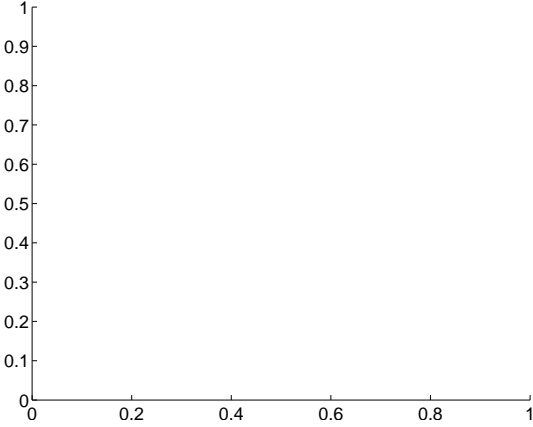
Q15 no difference image



Q15 no OOT image



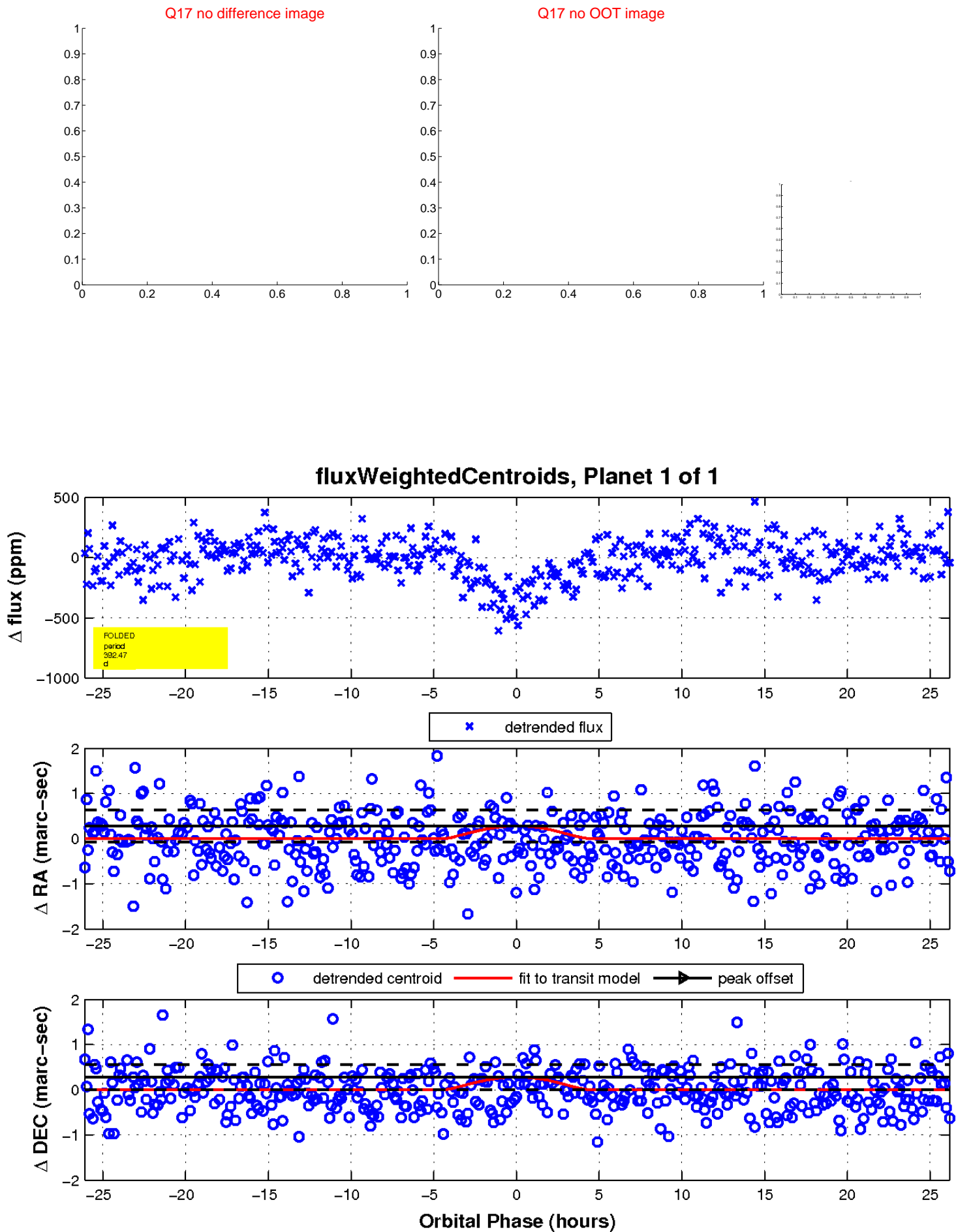
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

