

KIC 008546512

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})
008546512-01	OBS	No	362.525726	239.356971	193.4	17.901	7.4	6.9	0.93	5841	1.58	0.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008546512-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS

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

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

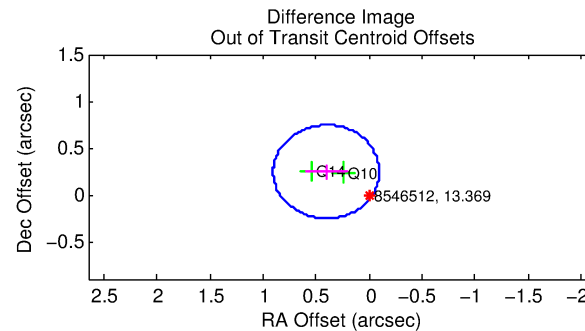
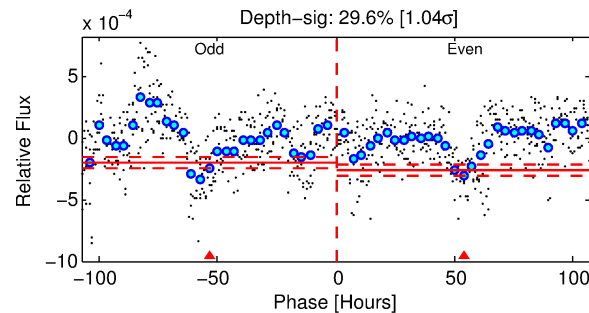
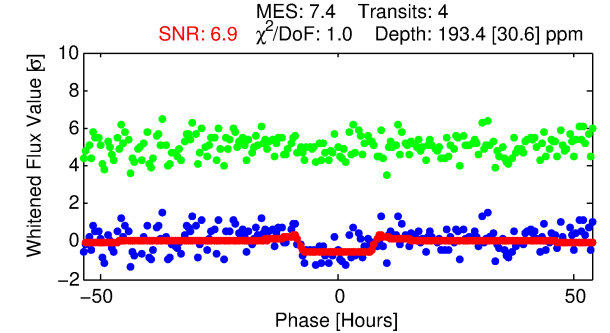
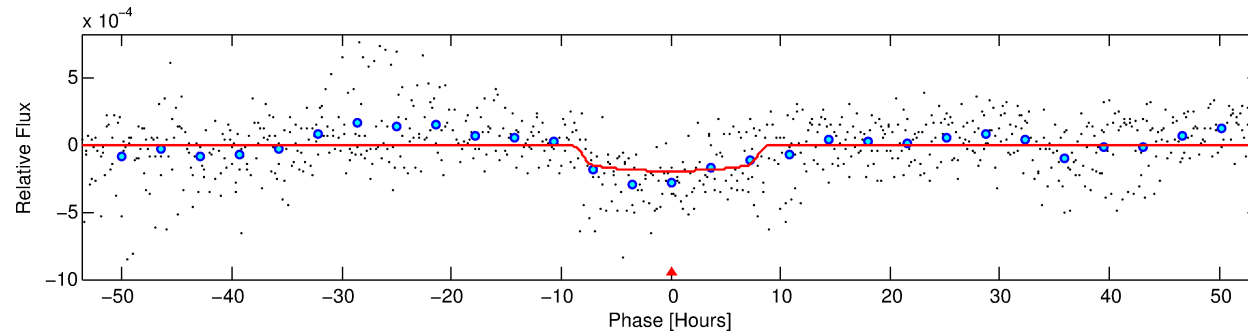
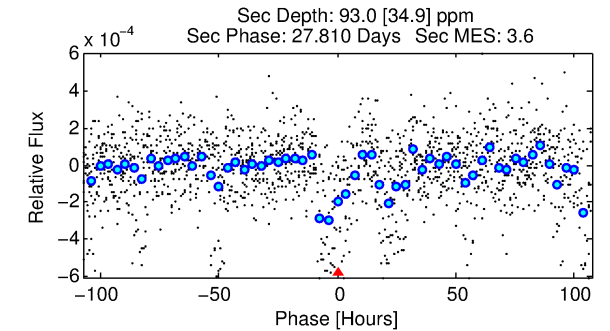
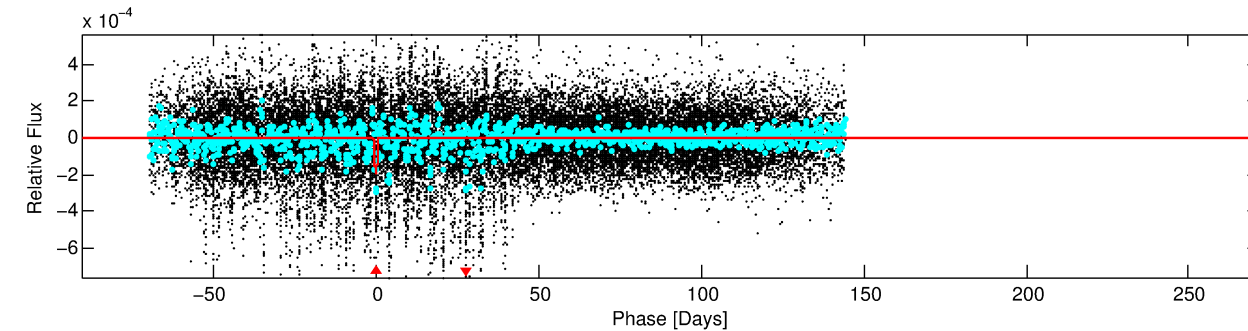
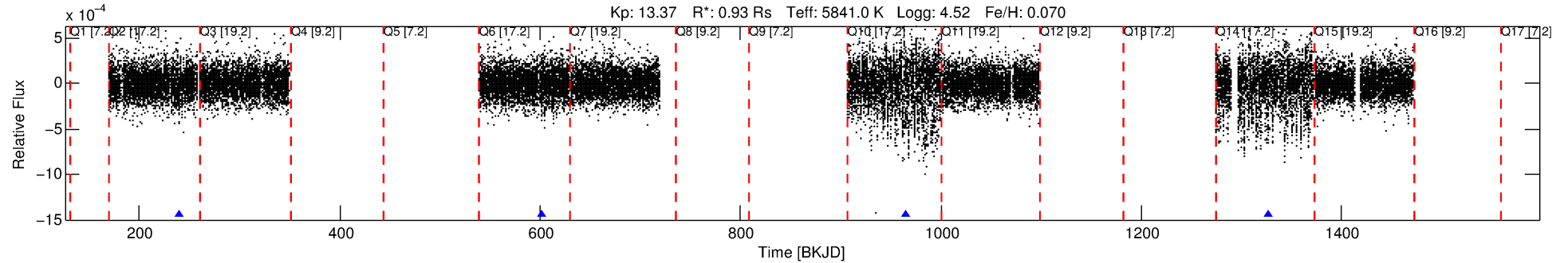
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008546512-01

No Significant Match Found

DV One-Page Summary

KIC: 8546512 Candidate: 1 of 1 Period: 362.526 d



DV Fit Results:

Period = 362.52573 [0.01535] d
Epoch = 239.3570 [0.0248] BKJD
Rp/R* = 0.0155 [0.0020]
a/R* = 65.40 [30.70]
b = 0.92 [0.08]
Seff = 0.89 [0.31]
Teff = 247 [21] K
Rp = 1.58 [0.44] Re
a = 1.0105 [0.2147] AU
Ag = 20998.15 [11649.80] [1.80σ]
Teffp = 4603 [550] K [7.91σ]

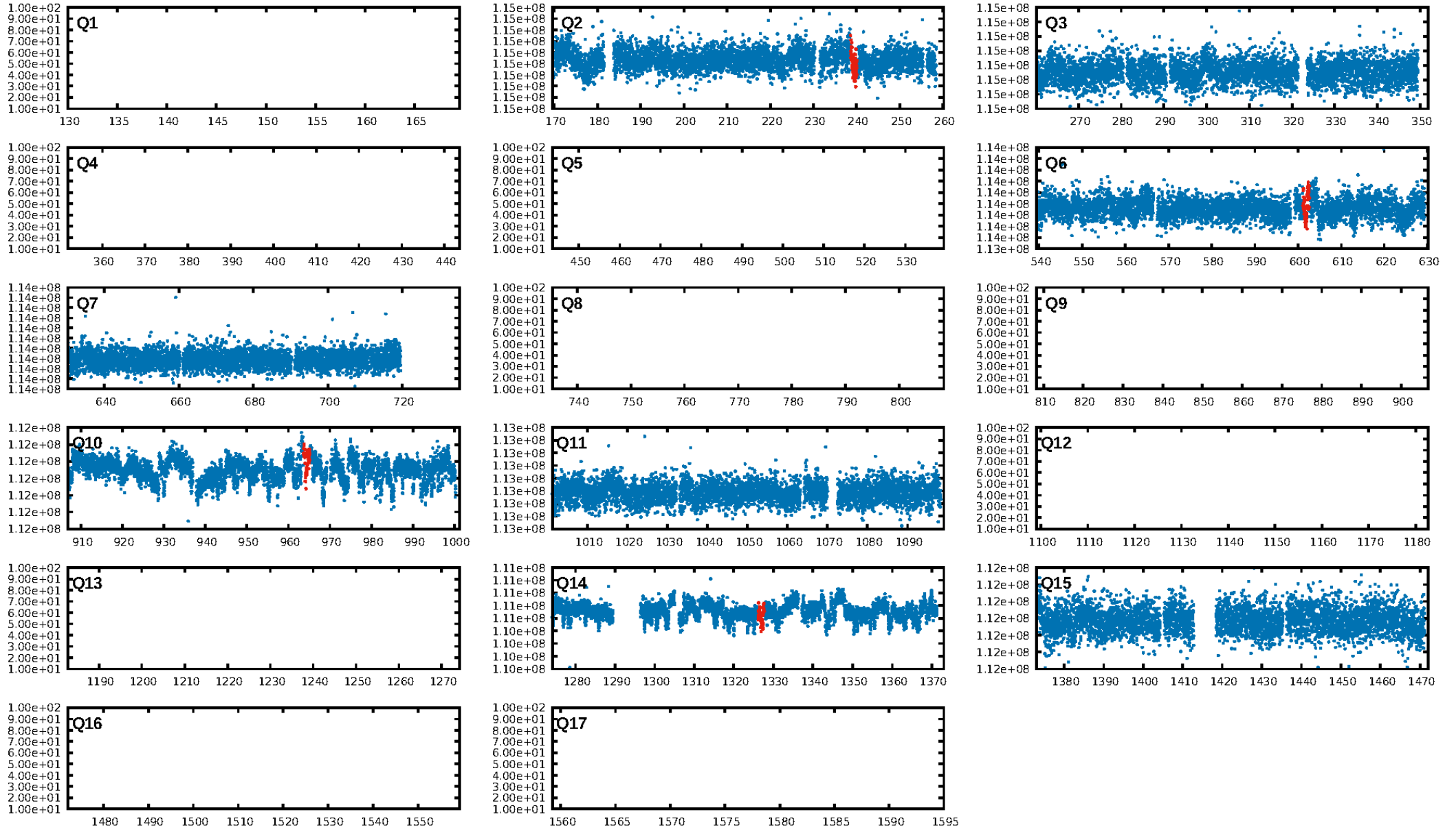
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.10e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.902
Centroid-sig: 6.4%
Centroid-so: 2.988 arcsec [1.22σ]
OotOffset-rm: 0.473 arcsec [2.84σ]
KicOffset-rm: 0.559 arcsec [5.51σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [4/4]

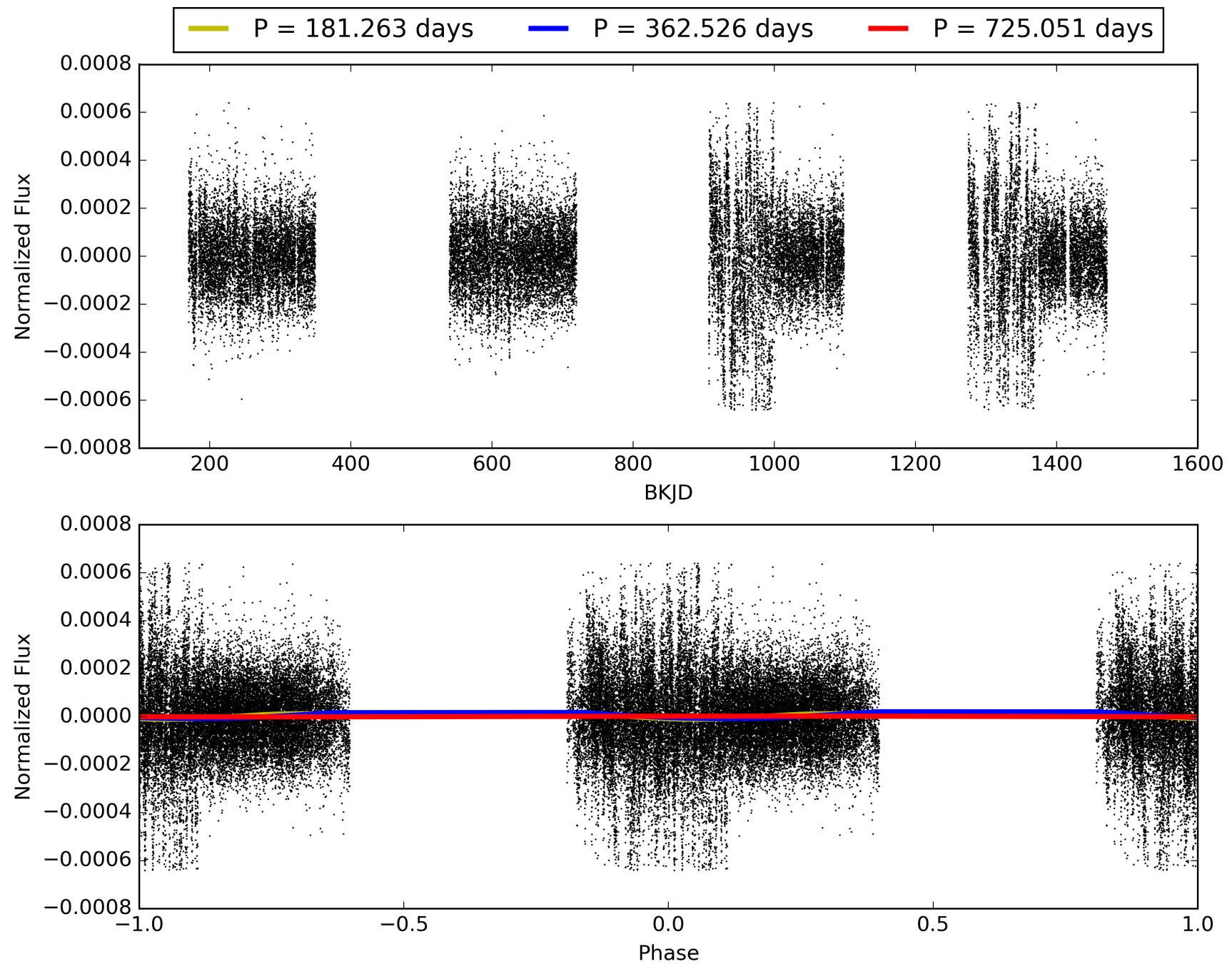
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:30:38 Z

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

TCE 008546512-01, PDC Light Curves

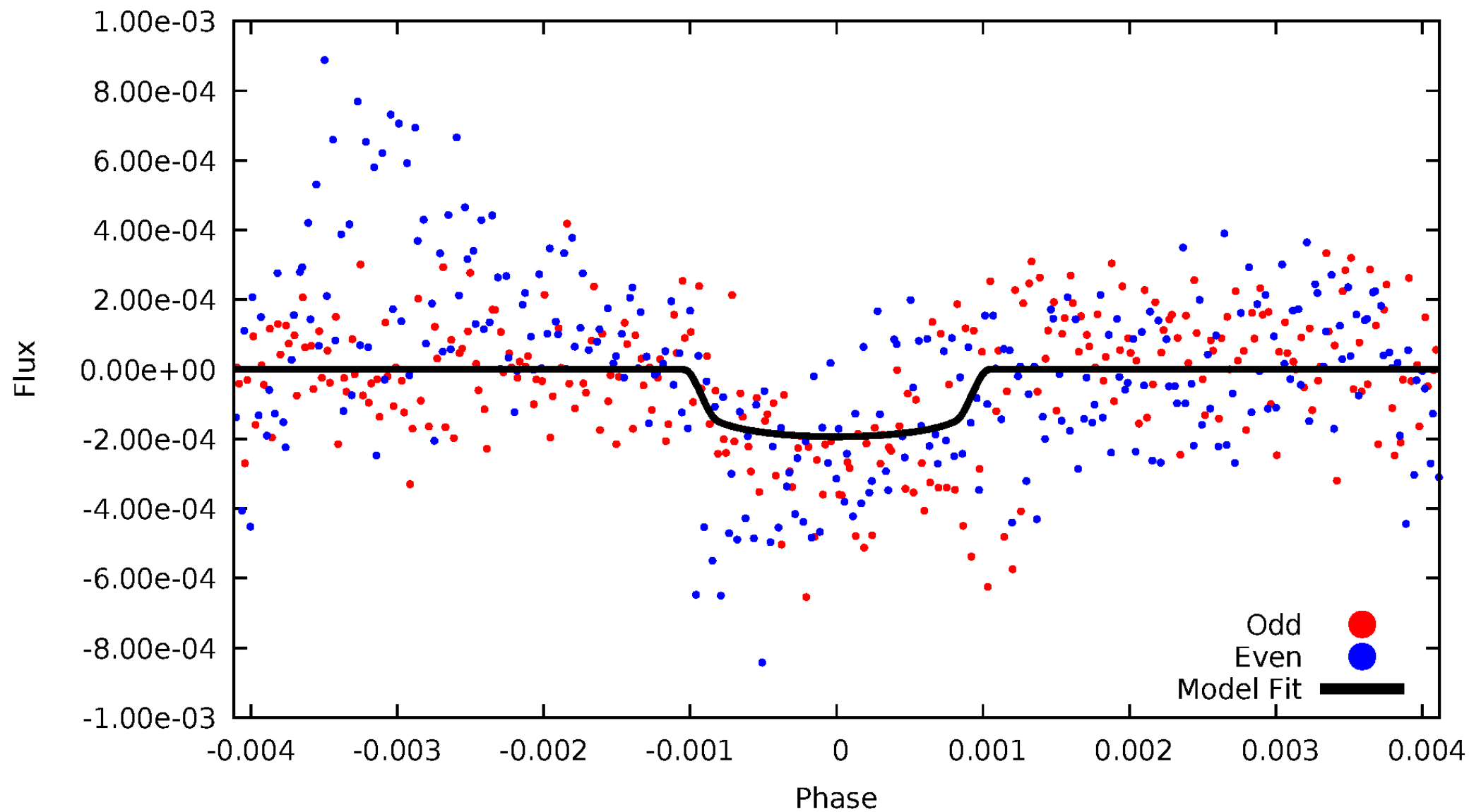


TCE 008546512-01



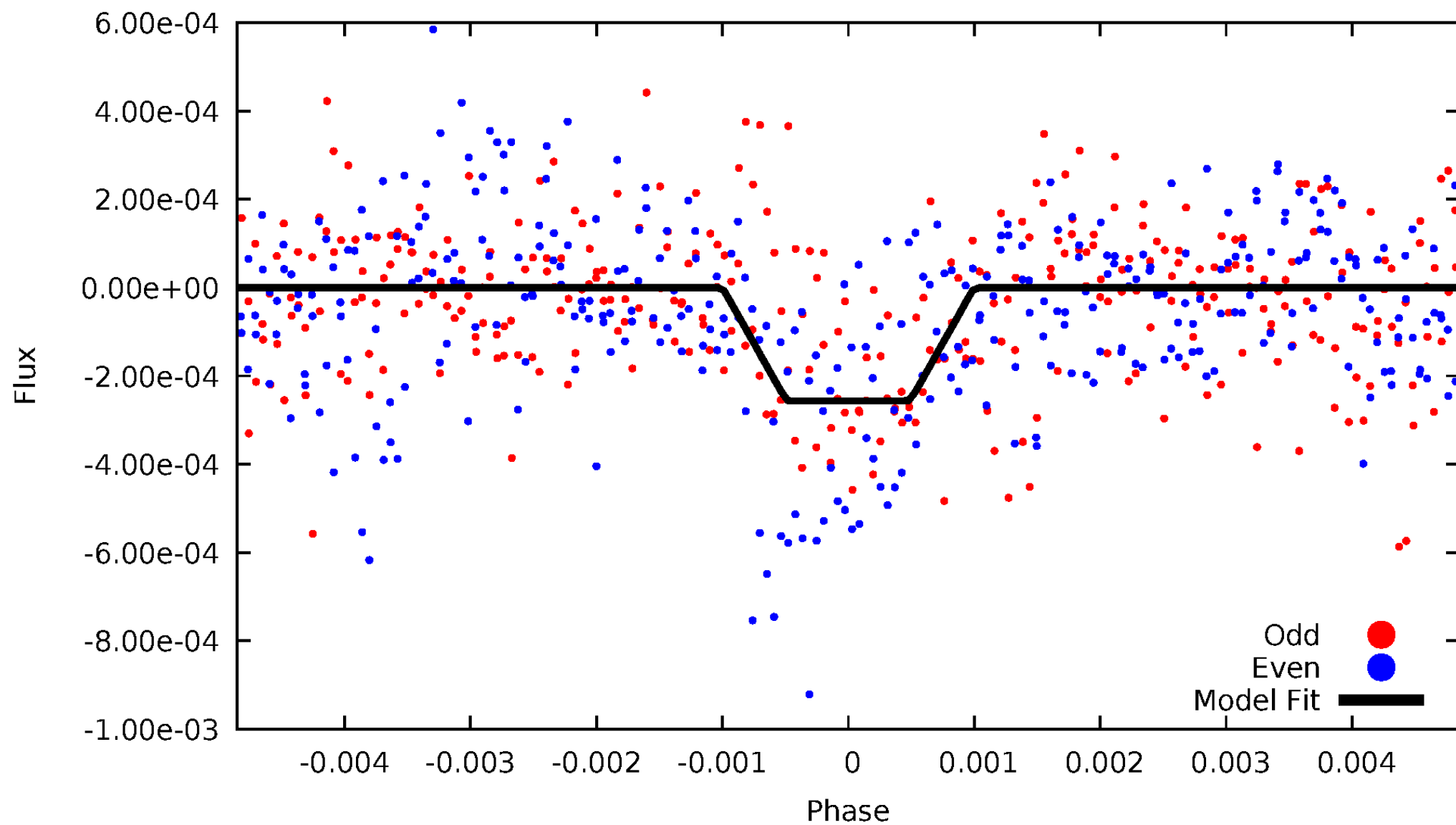
DV Odd/Even

TCE 008546512-01



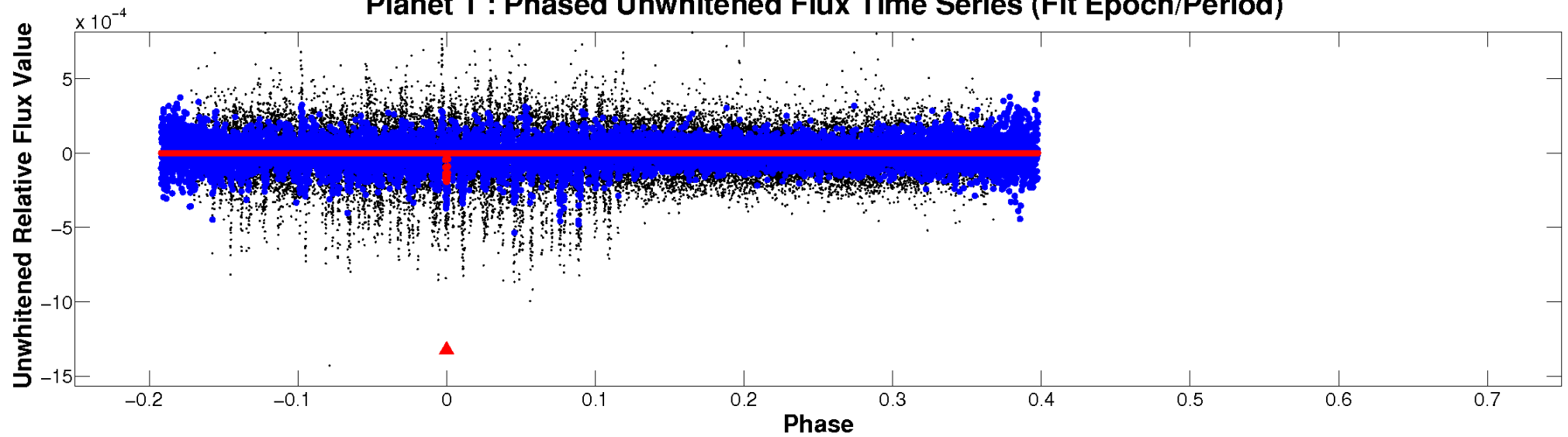
ALT Odd/Even

TCE 008546512-01

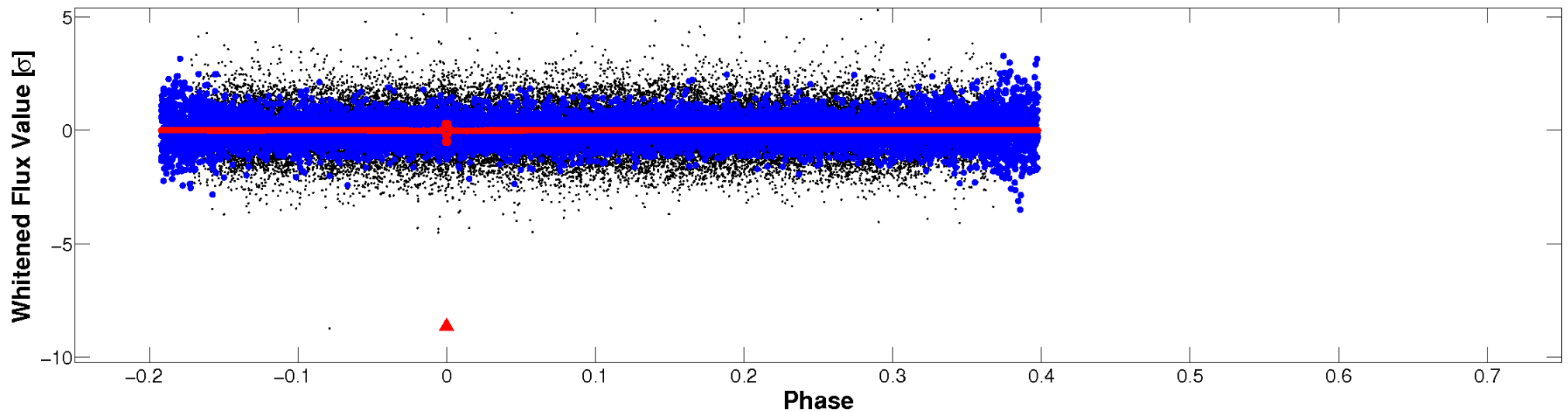


Non-Whitened Vs. Whitened Light Curve

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

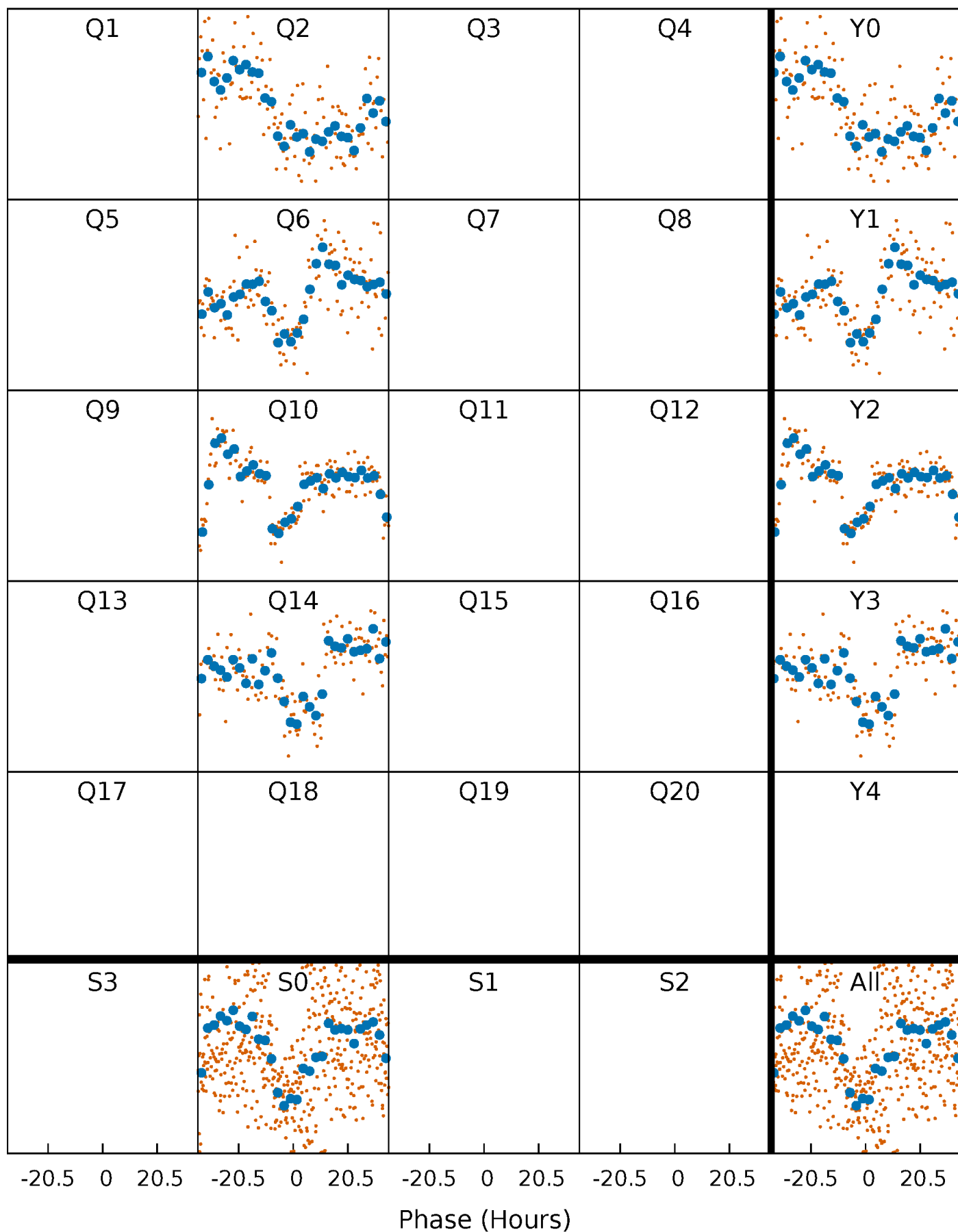


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



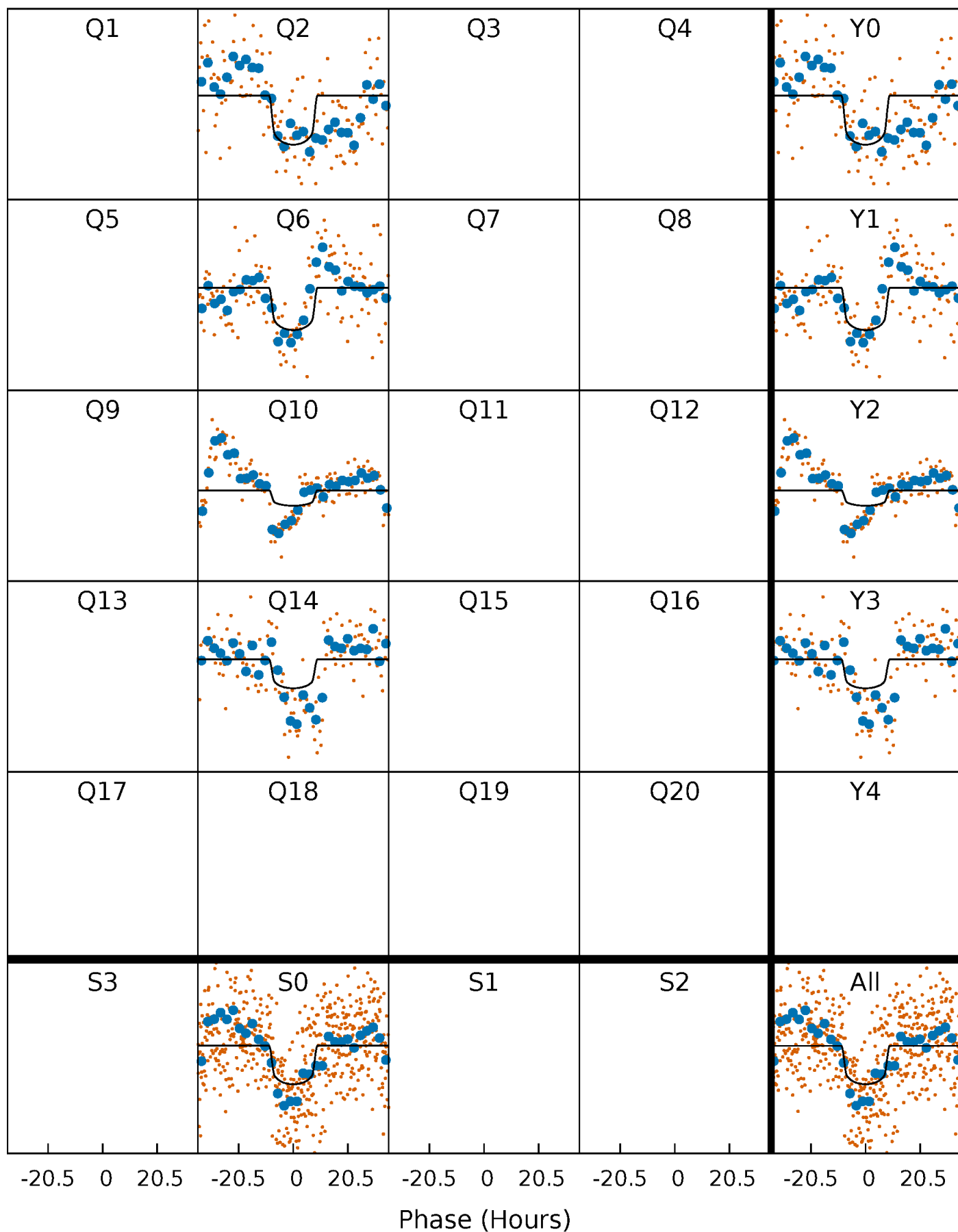
PDC Quarter-Phased Transit Curves

TCE 008546512-01 P=362.525726 Days $T_0=239.356971$ (BKJD)



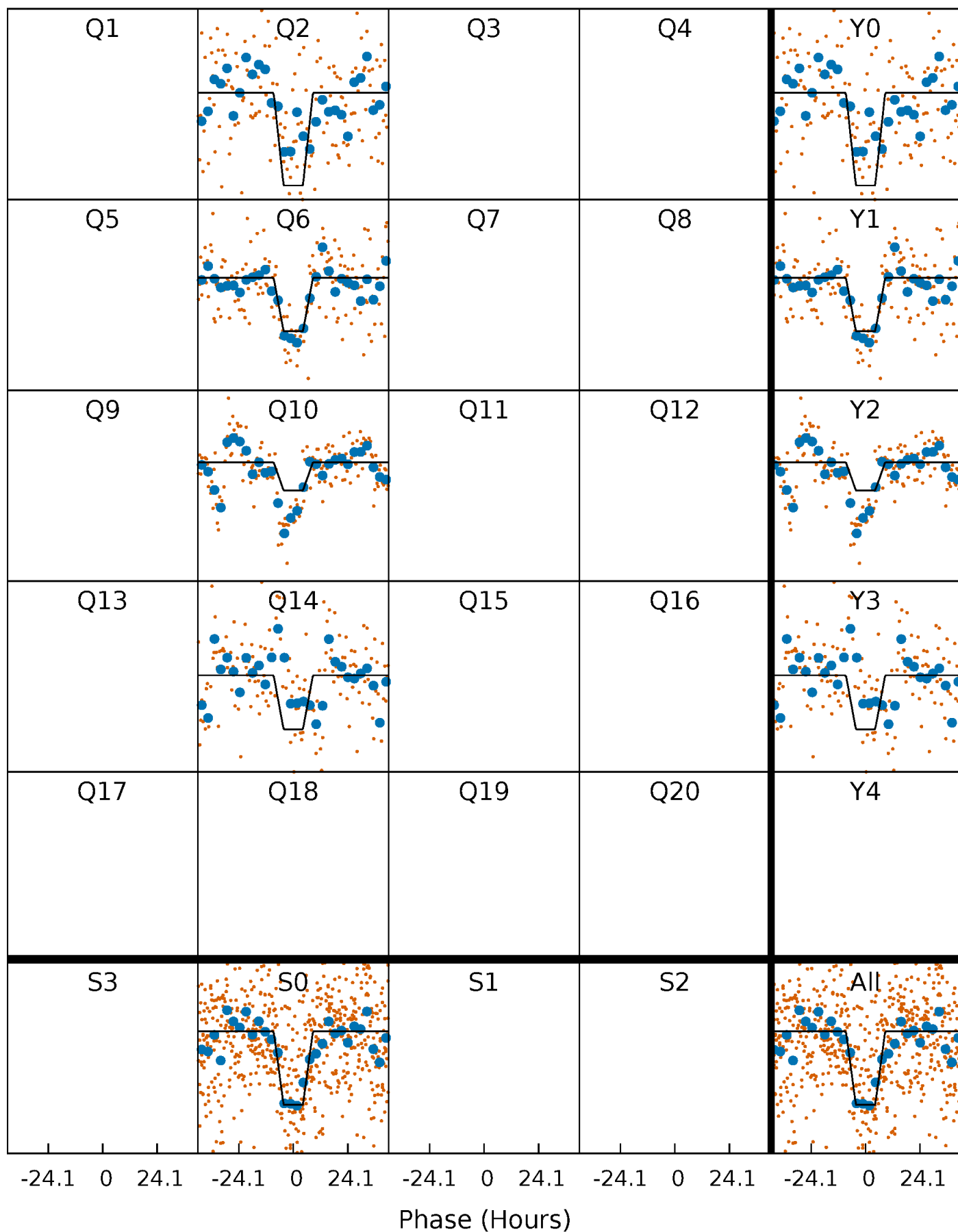
DV Quarter-Phased Transit Curves

TCE 008546512-01 P=362.525726 Days $T_0=239.356971$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

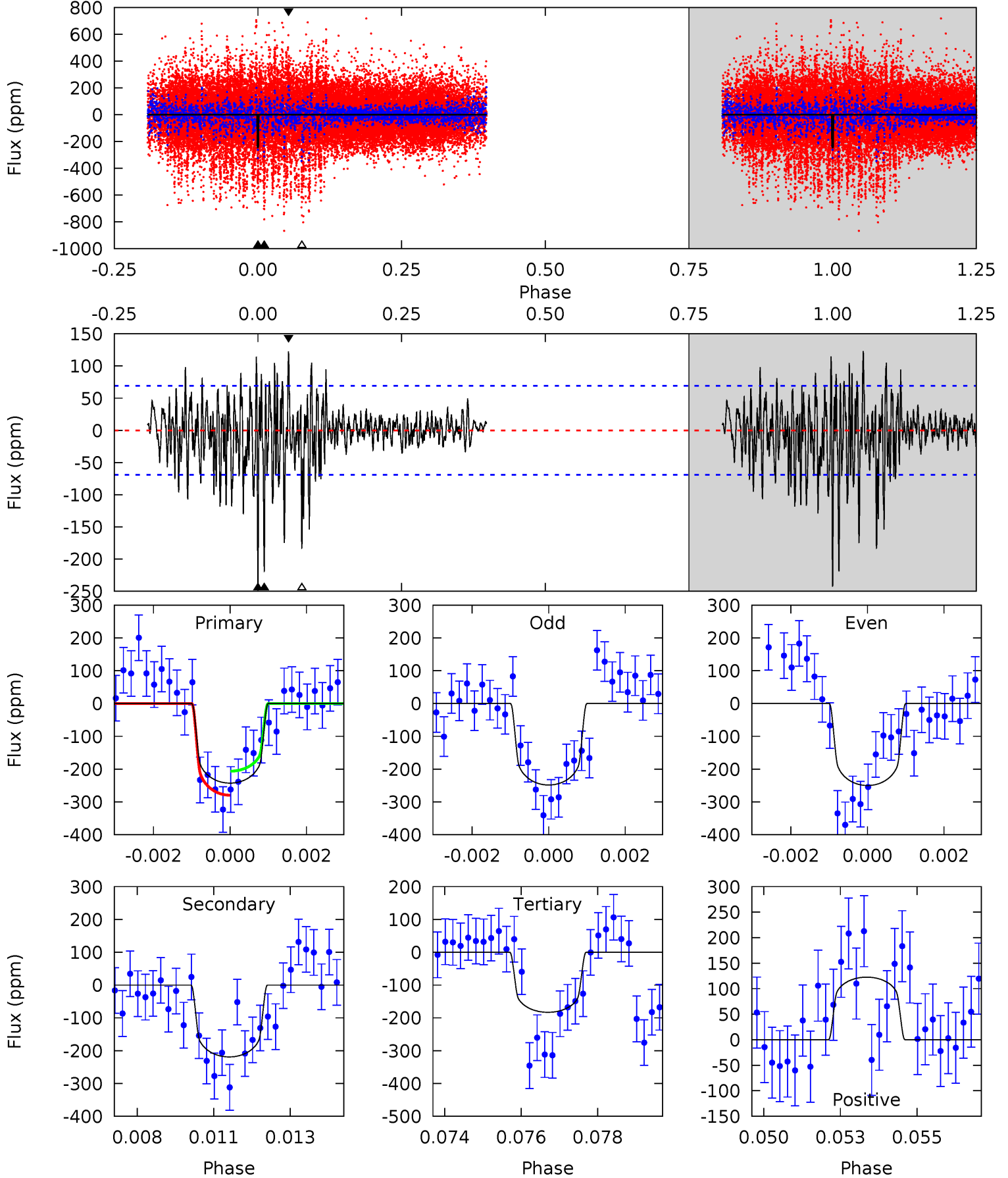
TCE 008546512-01 P=362.511788 Days $T_0=239.312213$ (BKJD)



DV Model-Shift Uniqueness Test

008546512-01, P = 362.525726 Days, E = 239.356971 Days

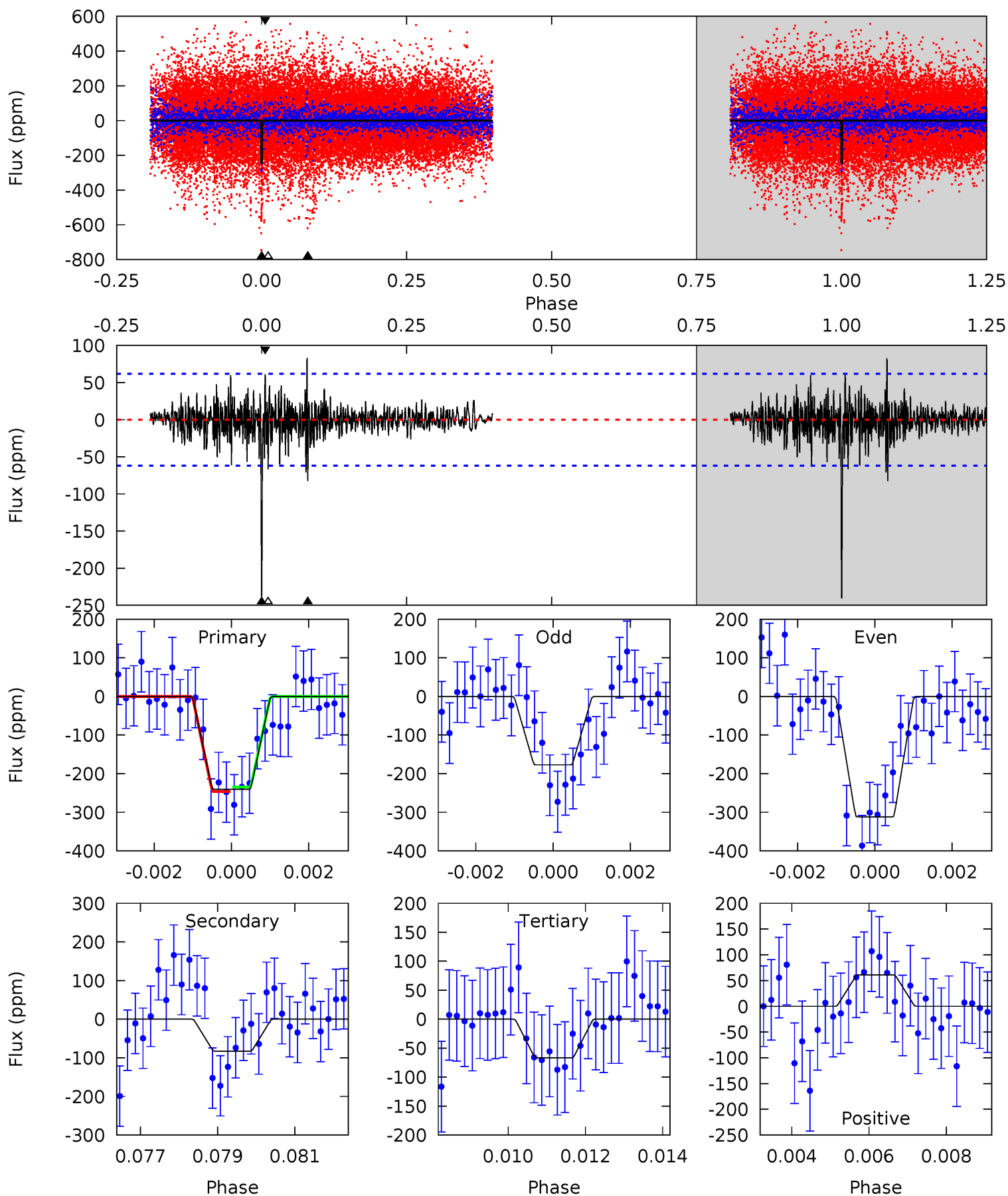
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	16.8	14.1	9.42	5.32	3.08	2.98	4.59	9.23	2.77	7.41	0.06	1.00	0.34	2.74



Alt Model-Shift Uniqueness Test

008546512-01, P = 362.511788 Days, E = 239.312213 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	7.11	5.73	5.24	5.33	3.09	1.33	14.9	15.4	1.38	1.87	5.83	1.13	0.26	0.48



Stellar Parameters For KIC 008546512

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5841^{+175}_{-210}	$4.520^{+0.044}_{-0.176}$	$0.070^{+0.200}_{-0.350}$	$0.931^{+0.229}_{-0.098}$	$1.047^{+0.101}_{-0.151}$	$1.828^{+0.415}_{-0.835}$
	+3%/-4%	+1%/-4%	+286%/-500%	+25%/-11%	+10%/-14%	+23%/-46%
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 008546512-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-219±13	$1.61^{+0.32}_{-0.24}$	352^{+25}_{-17}	5712^{+443}_{-385}	45859^{+16697}_{-13905}
Alt.	-83±12	$1.68^{+0.31}_{-0.25}$	354^{+22}_{-17}	4580^{+318}_{-273}	16072^{+6327}_{-5035}

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 $A_{obs} \gg 1.0$

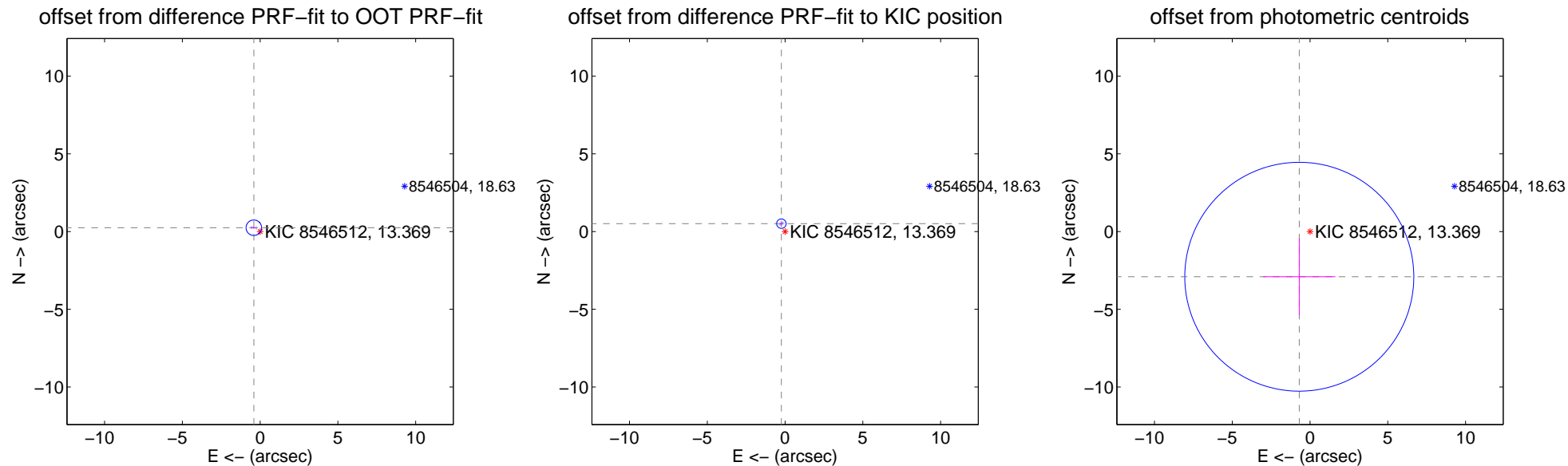
DV Centroid Data

Supplemental centroid analysis for 008546512-01. Kepler magnitude: 13.37. Transit SNR 6.90

There are 2 quarters with good PRF difference image offsets

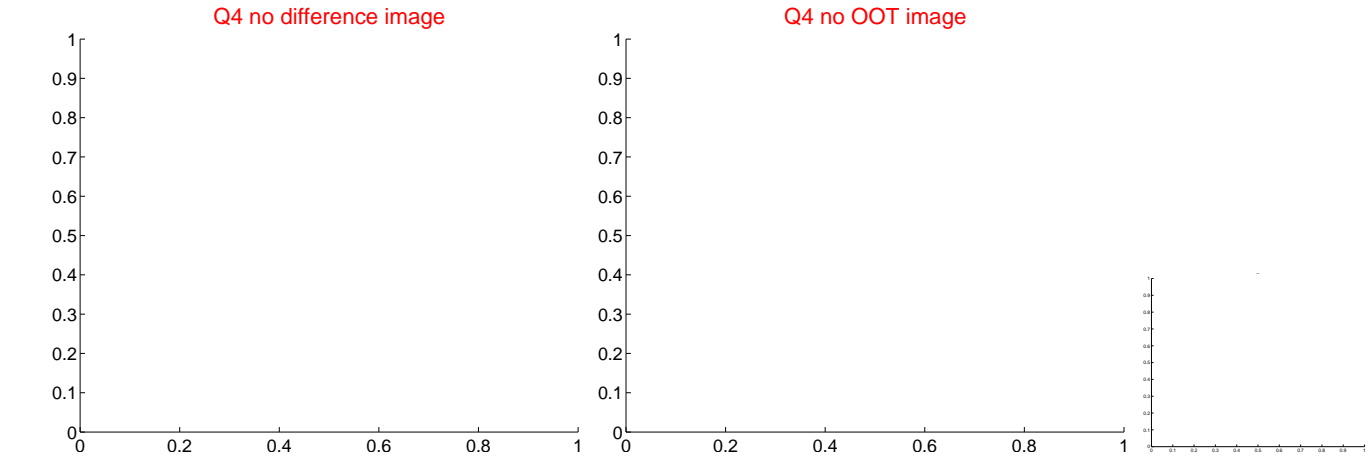
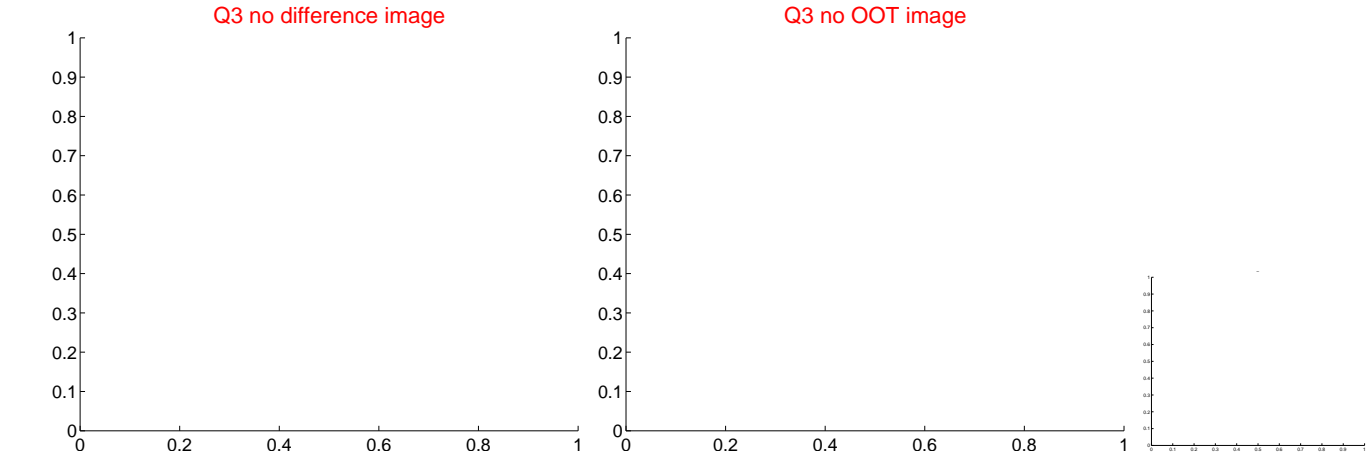
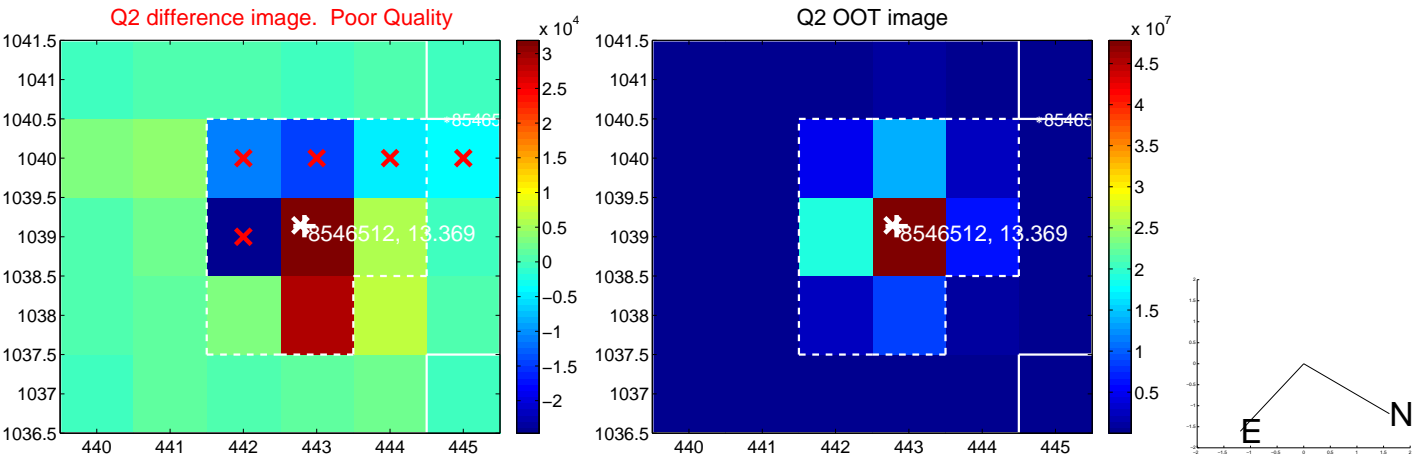
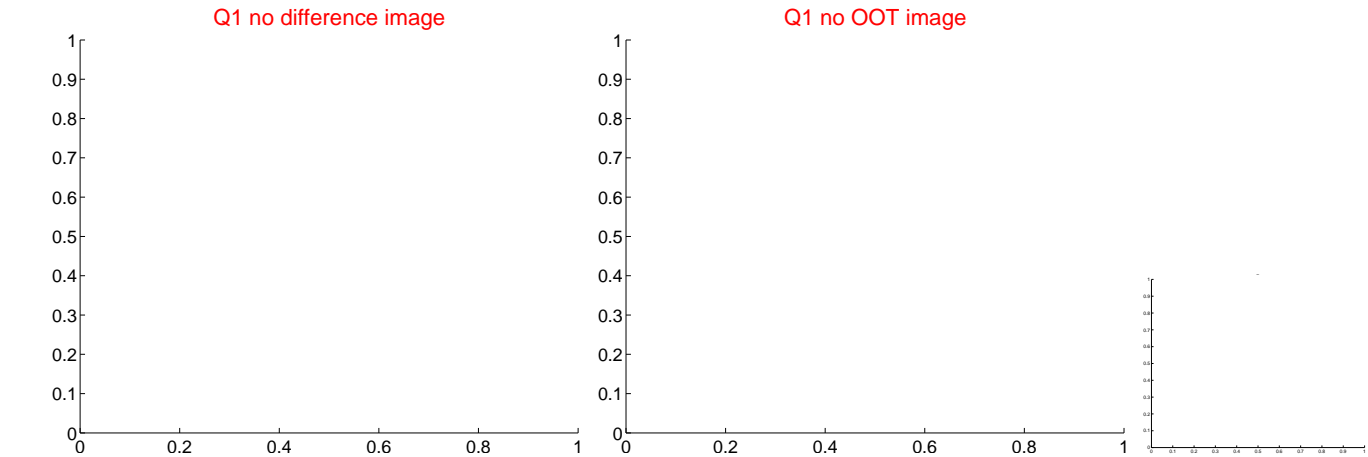
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.473 ± 0.167	2.84	0.405 ± 0.190	0.246 ± 0.067
PRF-fit source offset from KIC position	0.559 ± 0.101	5.51	0.237 ± 0.101	0.506 ± 0.101
photometric centroid source offset	2.99 ± 2.45	1.22	0.69 ± 2.32	-2.91 ± 2.46

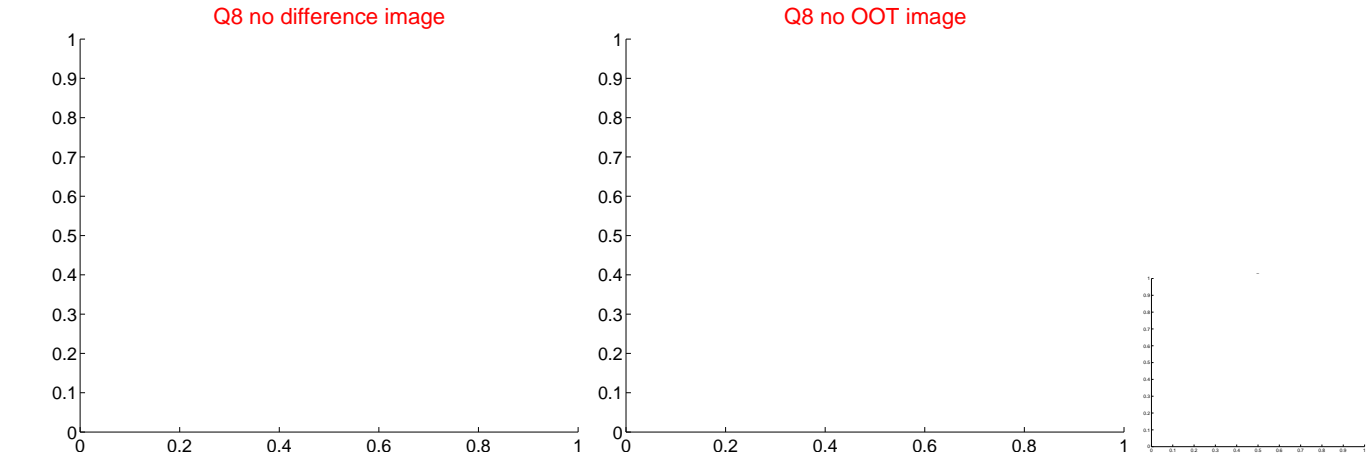
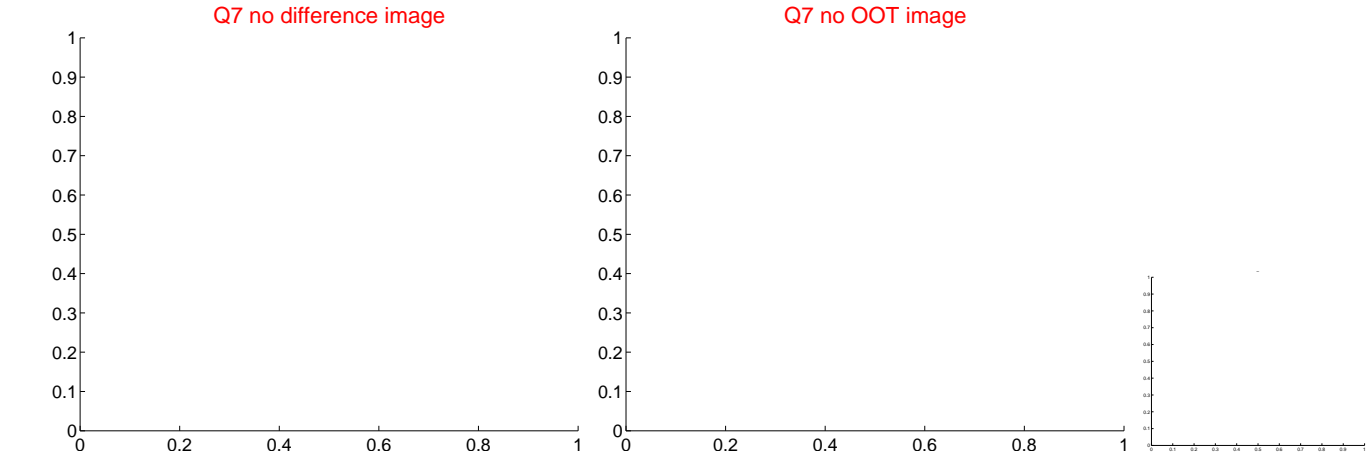
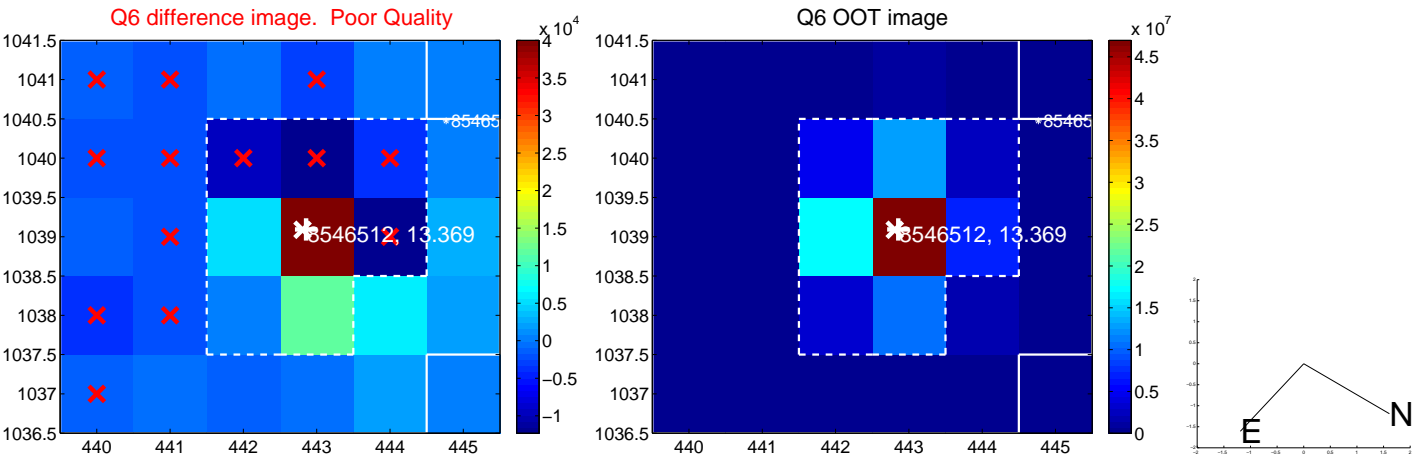
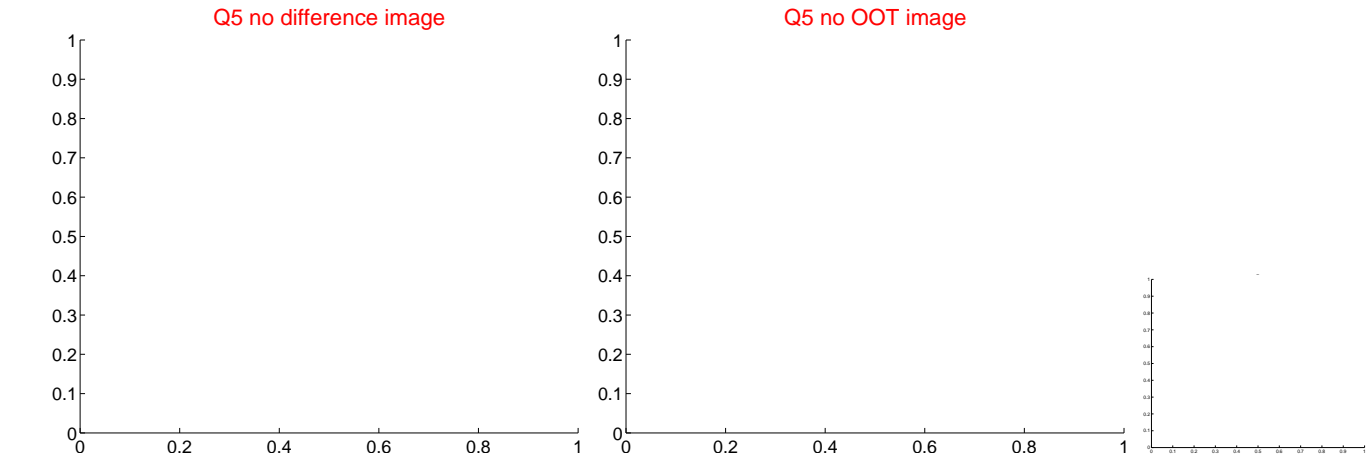


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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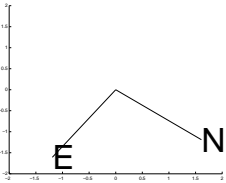
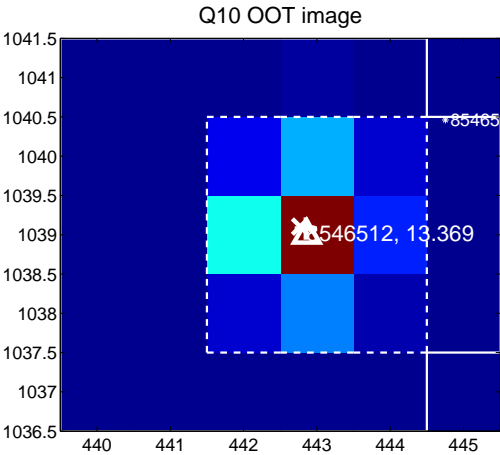
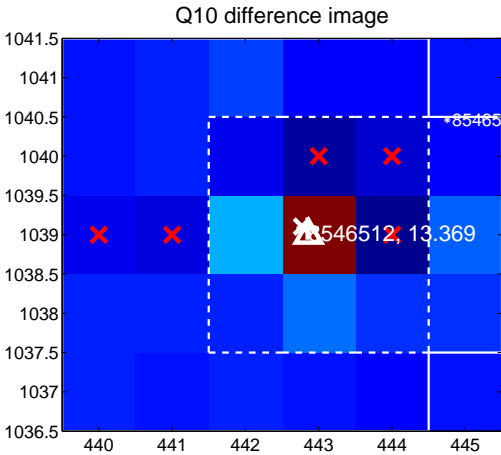


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

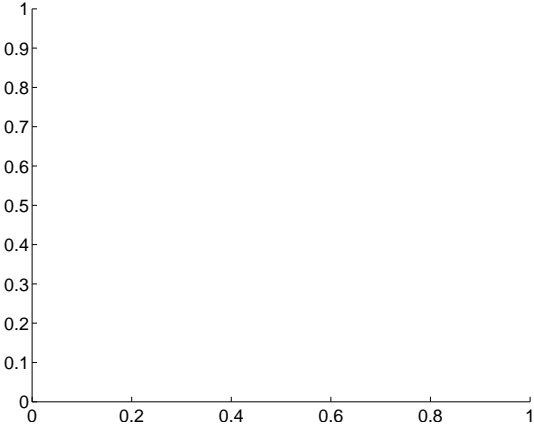
Q9 no difference image



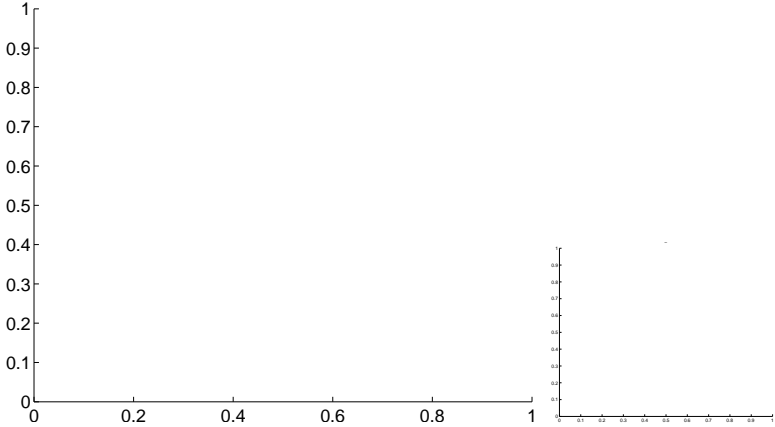
Q9 no OOT image



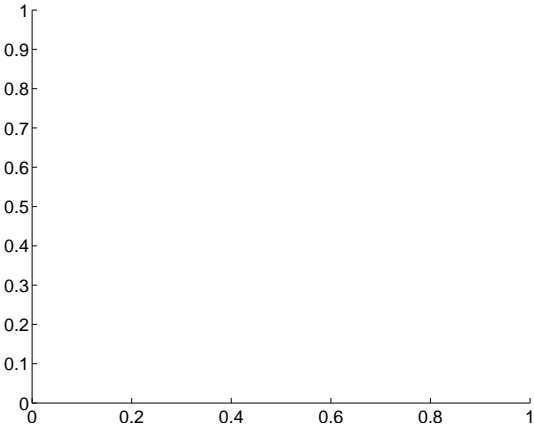
Q11 no difference image



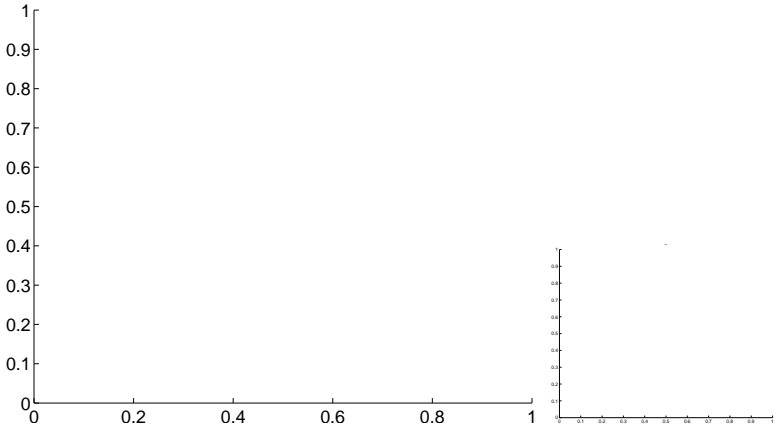
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

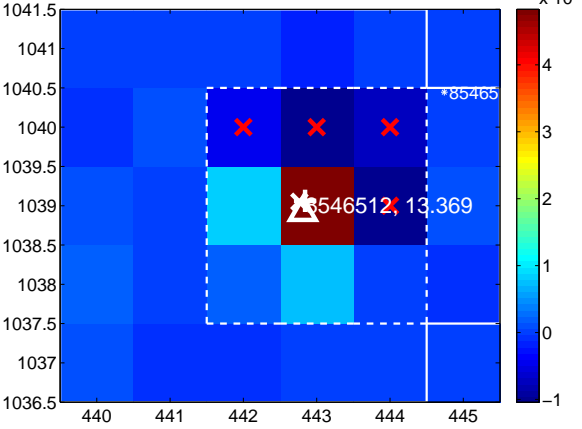
Q13 no difference image



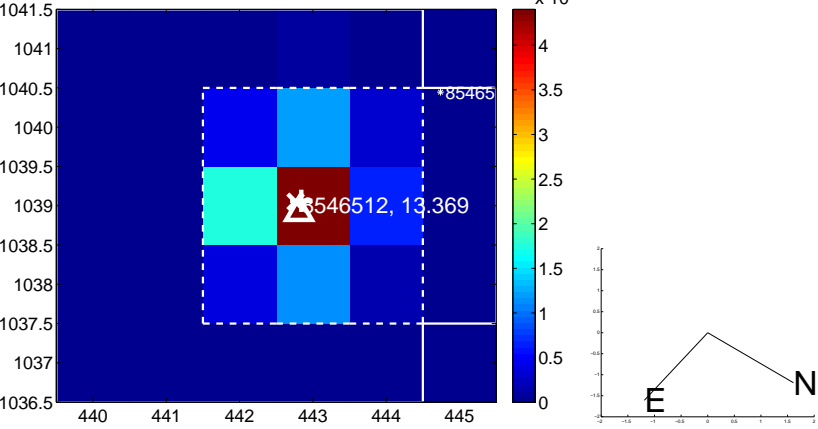
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



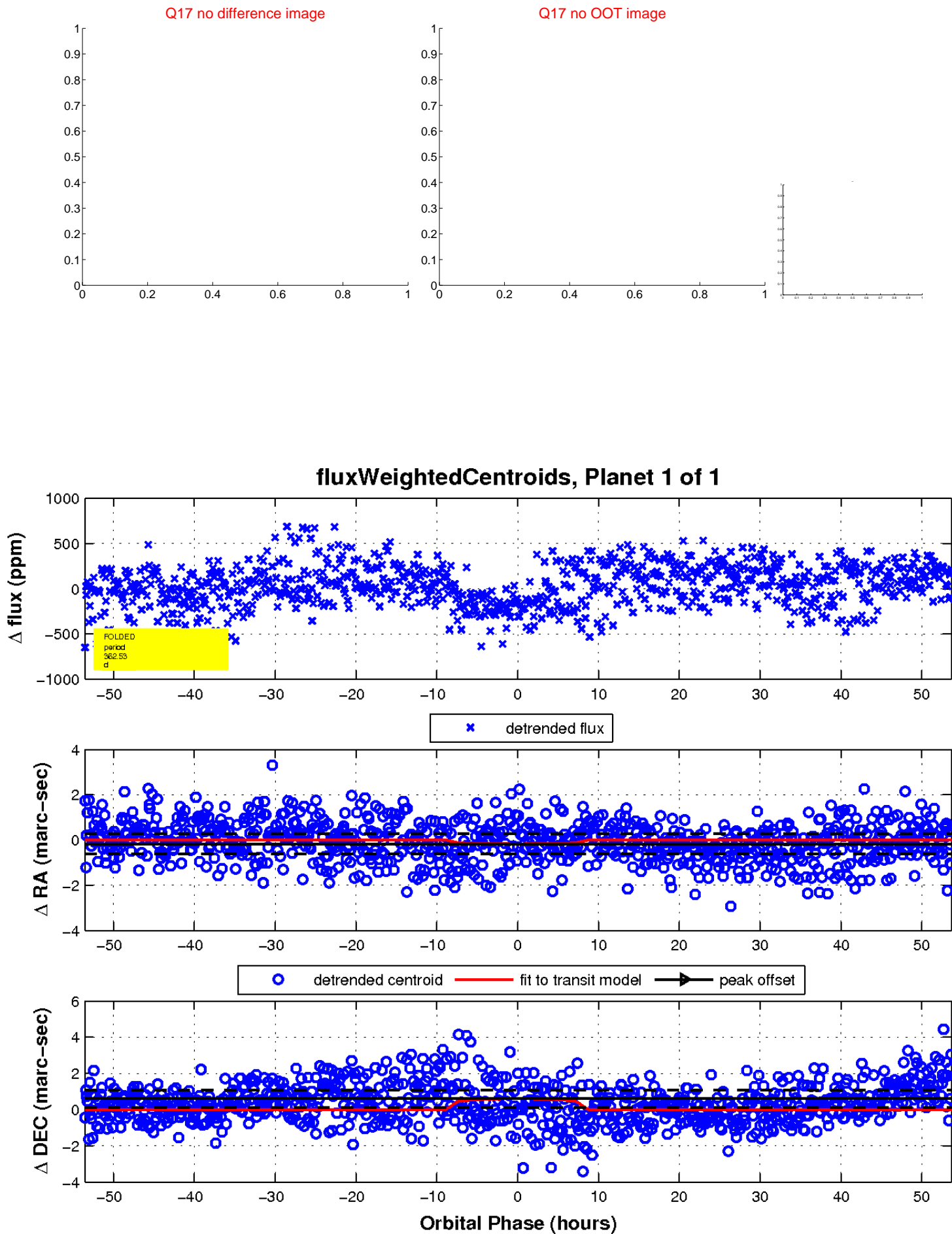
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

