

KIC 007672940

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})
007672940-01	OBS	1463.01	532.134139	144.086020	22744.7	11.553	426.7	552.6	2.17	6340	33.75	3.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007672940-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

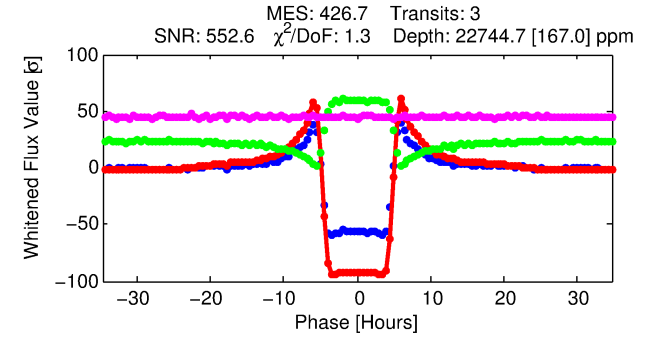
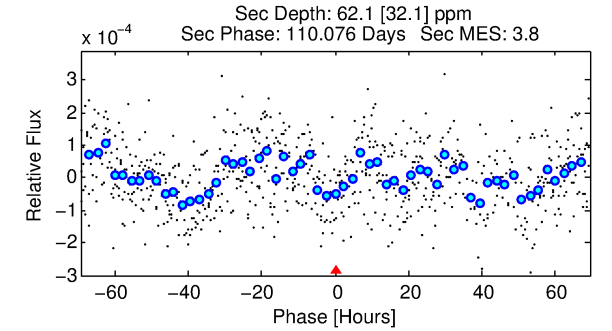
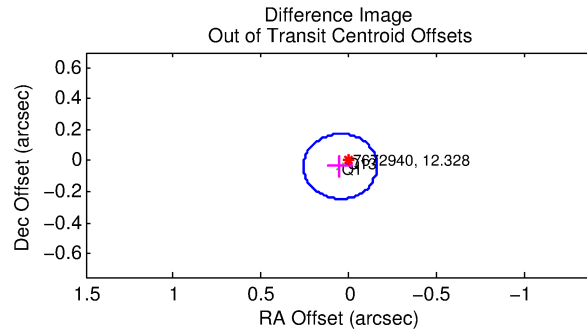
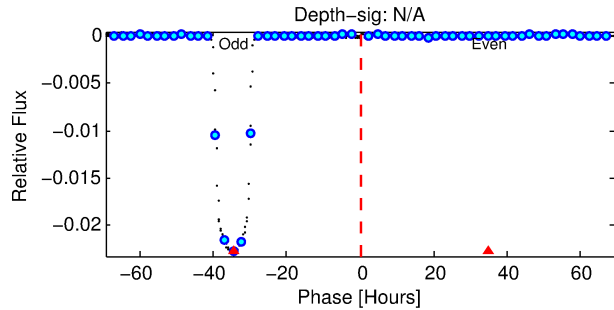
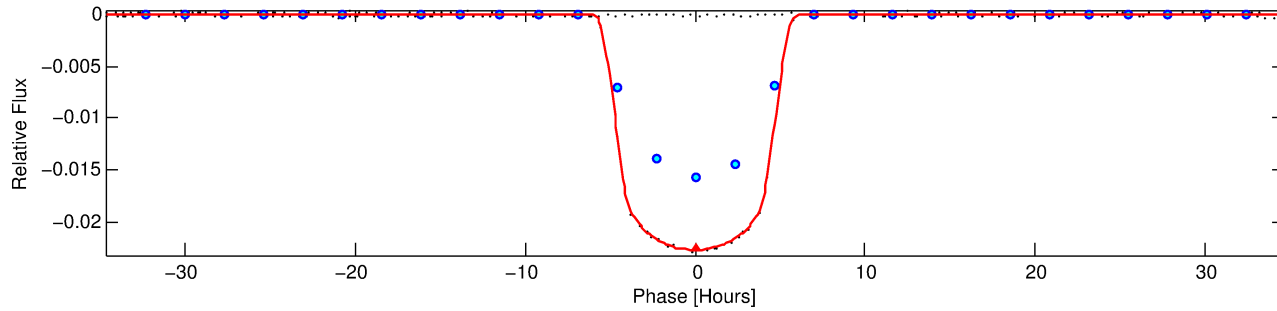
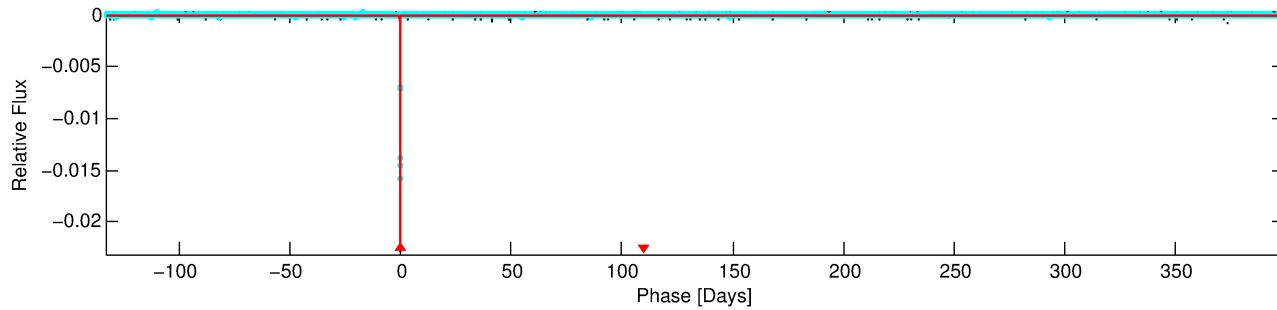
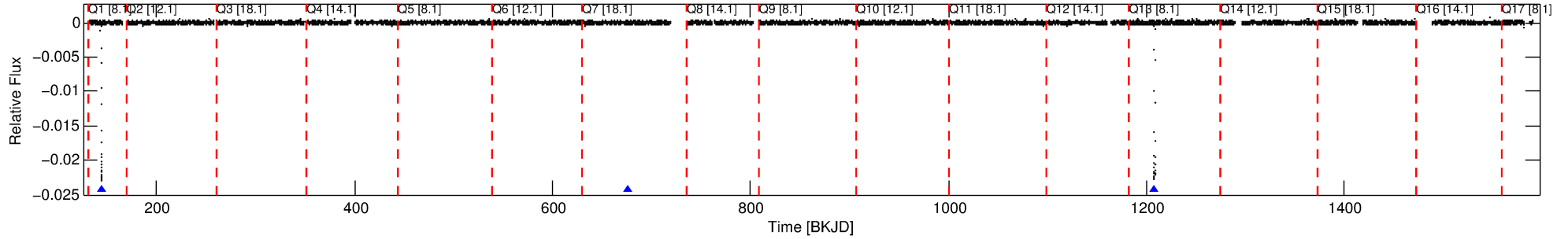
Ephemeris Match Information For 007672940-01

No Significant Match Found

DV One-Page Summary

KIC: 7672940 Candidate: 1 of 1 Period: 532.134 d
KOI: K01463.01 Corr: 0.817

Kp: 12.33 R*: 2.17 Rs Teff: 6340.0 K Logg: 3.83 Fe/H: -0.460



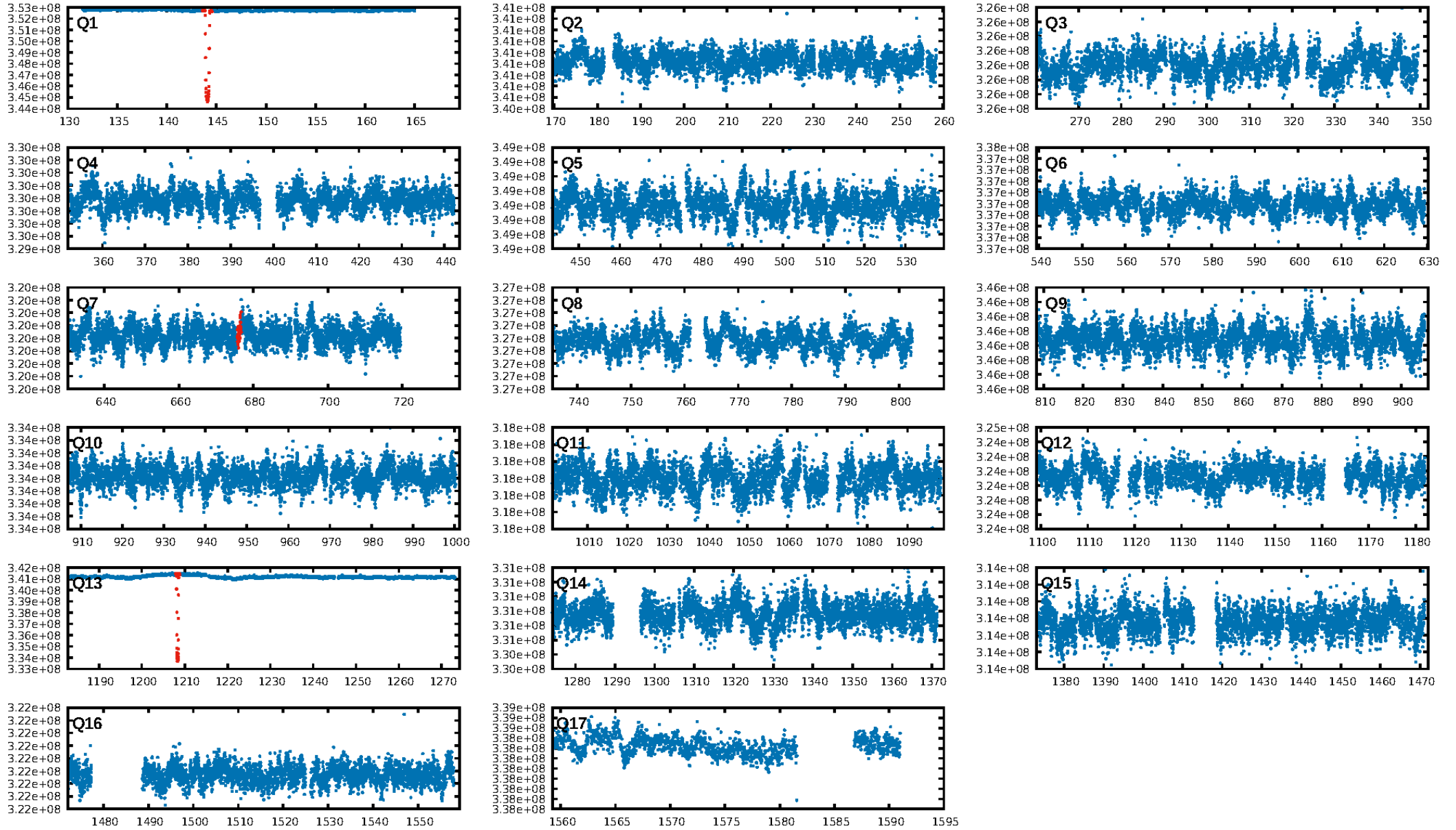
DV Fit Results:

Period = 532.13414 [0.00064] d
Epoch = 144.0860 [0.0007] BKJD
Rp/R* = 0.1423 [0.0007]
a/R* = 366.56 [5.07]
b = 0.47 [0.02]
Seff = 3.72 [3.19]
Teq = 354 [76] K
Rp = 33.75 [15.87] Re
a = 1.3555 [0.6814] AU
Ag = 55.08 [54.65] [0.99σ]
Teffp = 1492 [200] K [5.31σ]

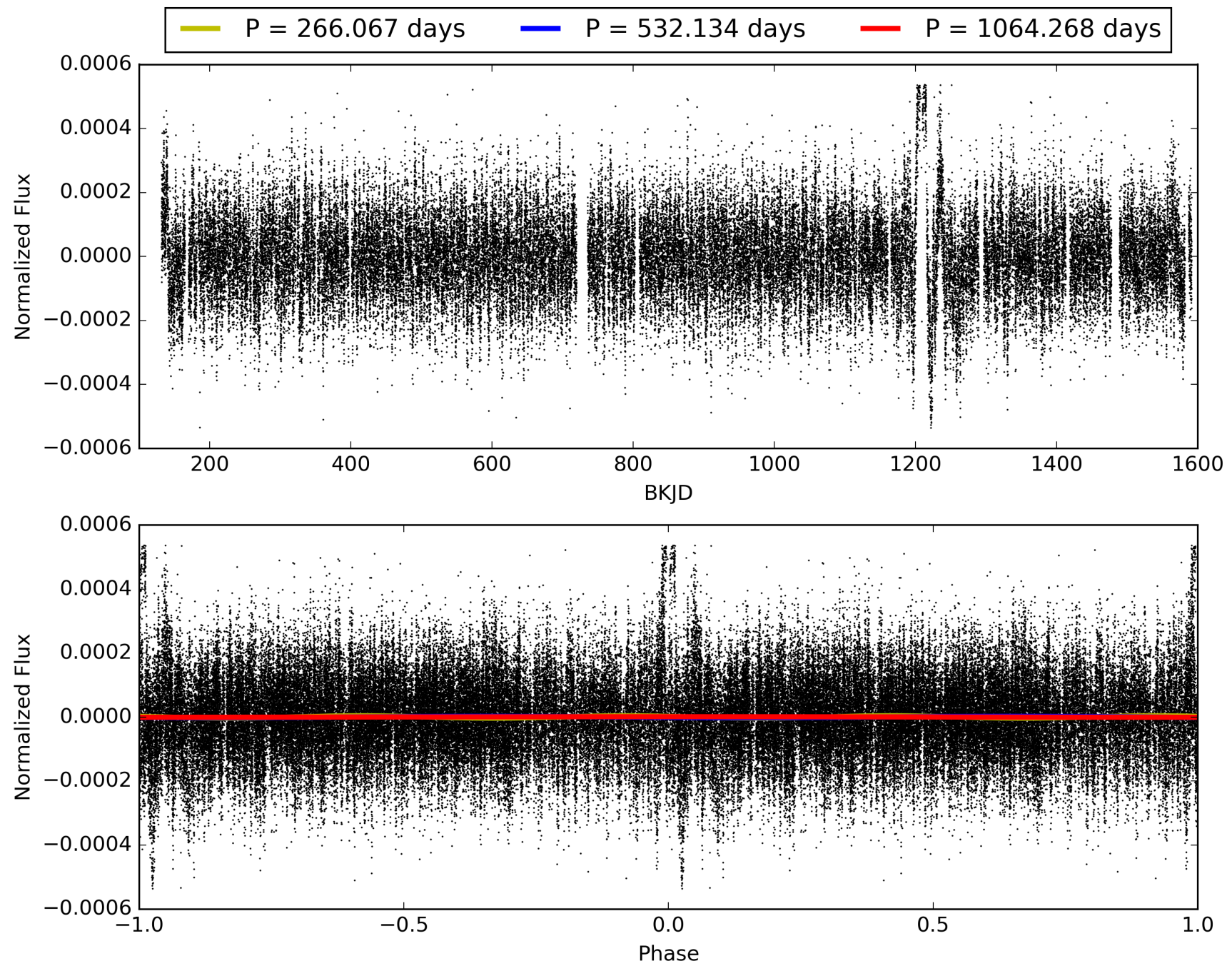
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.6%
ModelChiSquareGof-sig: 63.5%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1196
Centroid-sig: 28.1%
Centroid-so: 0.106 arcsec [15.82σ]
OotOffset-rm: 0.062 arcsec [0.89σ]
KicOffset-rm: 0.109 arcsec [1.20σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007672940-01, PDC Light Curves

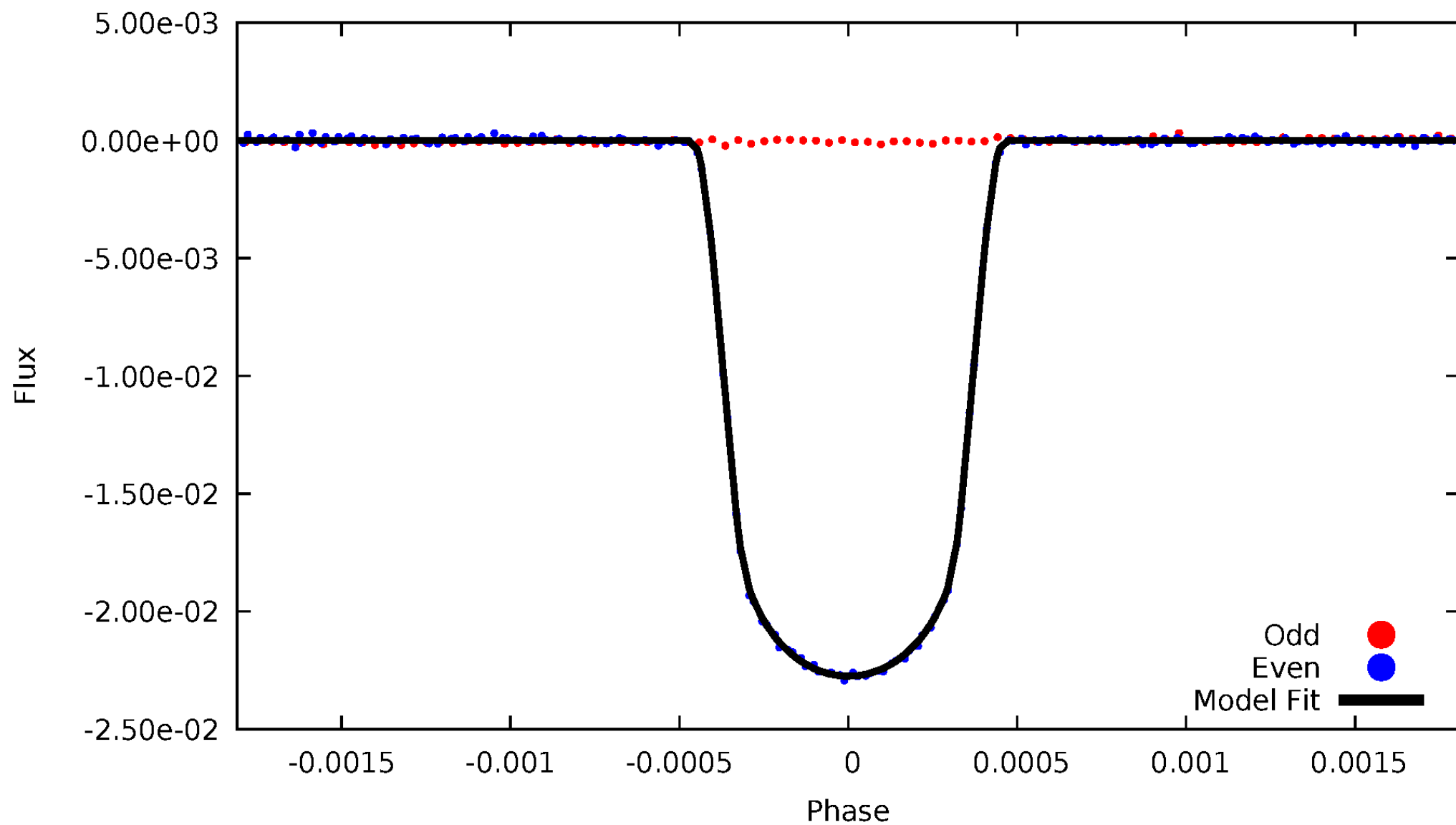


TCE 007672940-01



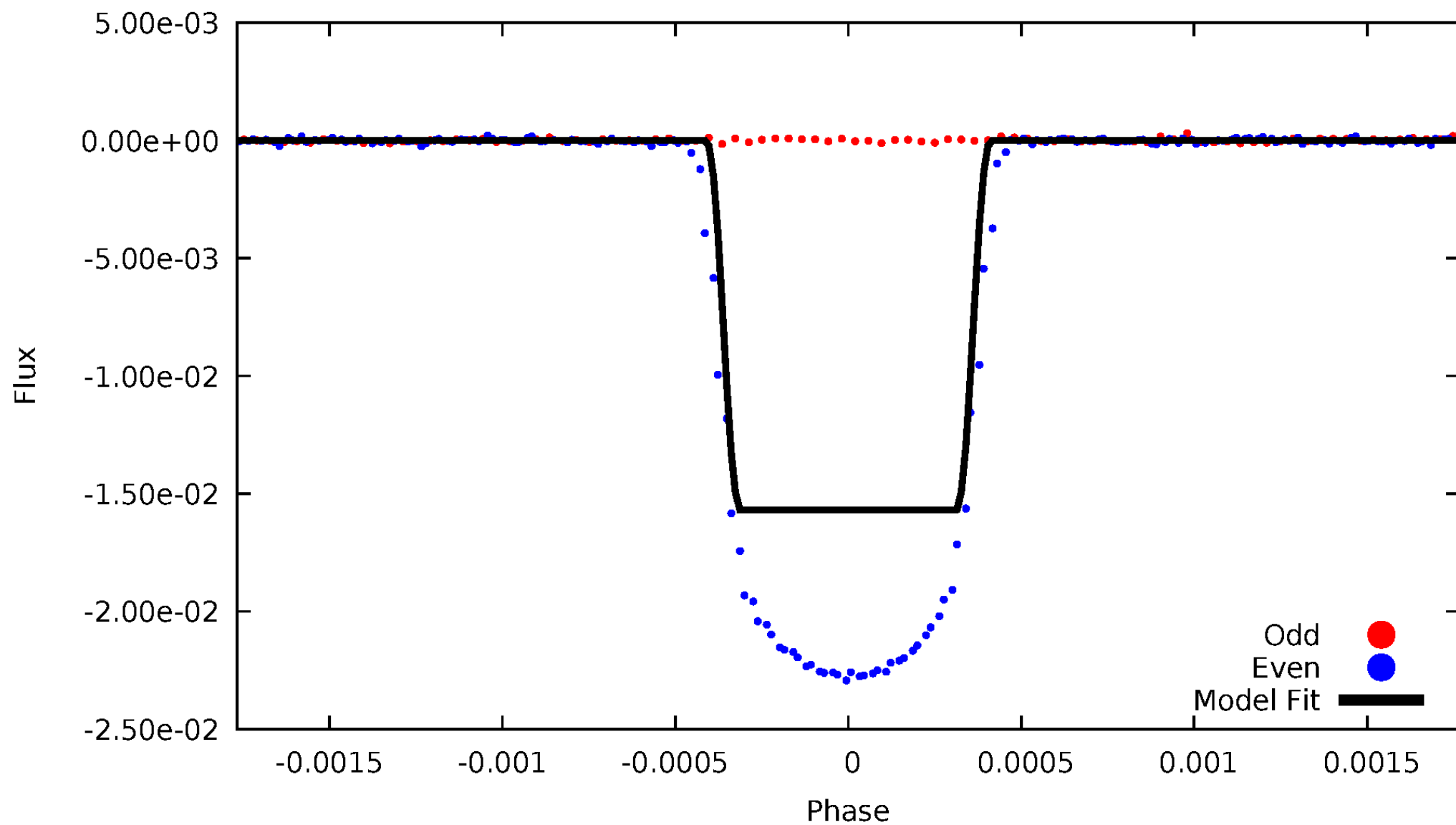
DV Odd/Even

TCE 007672940-01



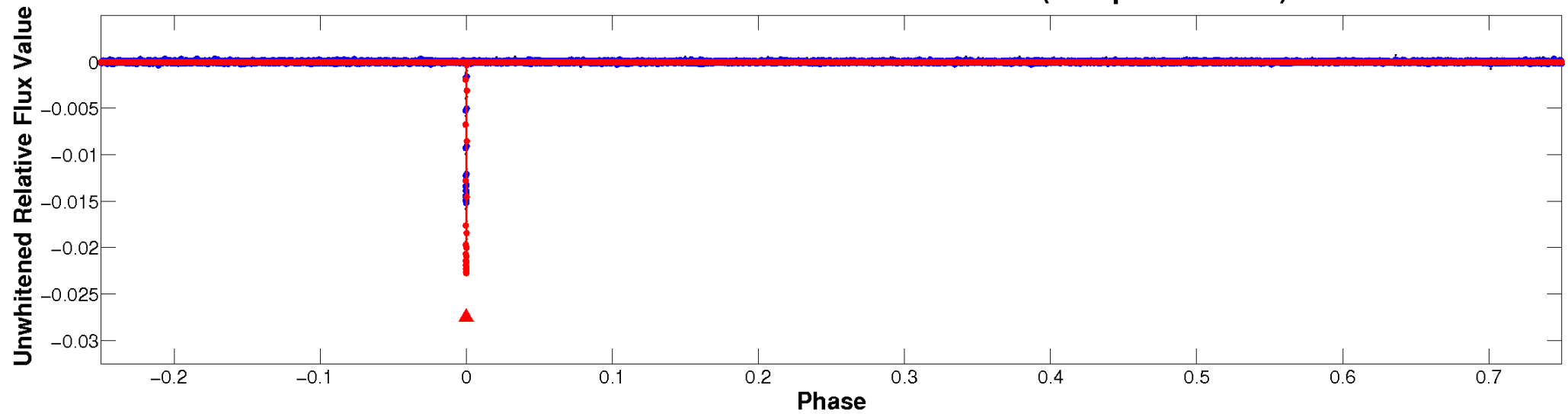
ALT Odd/Even

TCE 007672940-01

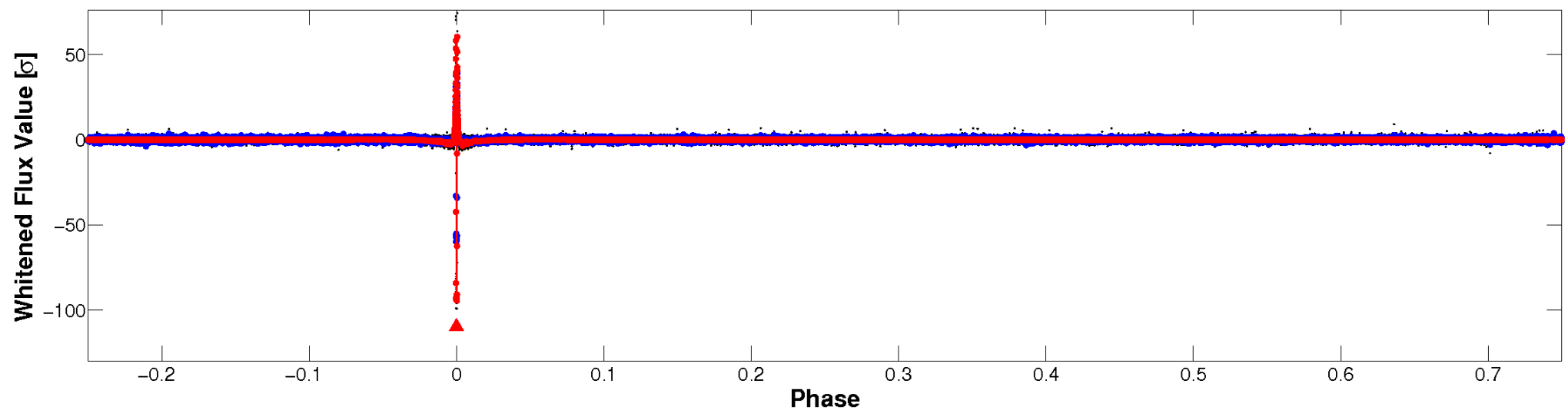


Non-Whitened Vs. Whitened Light Curve

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

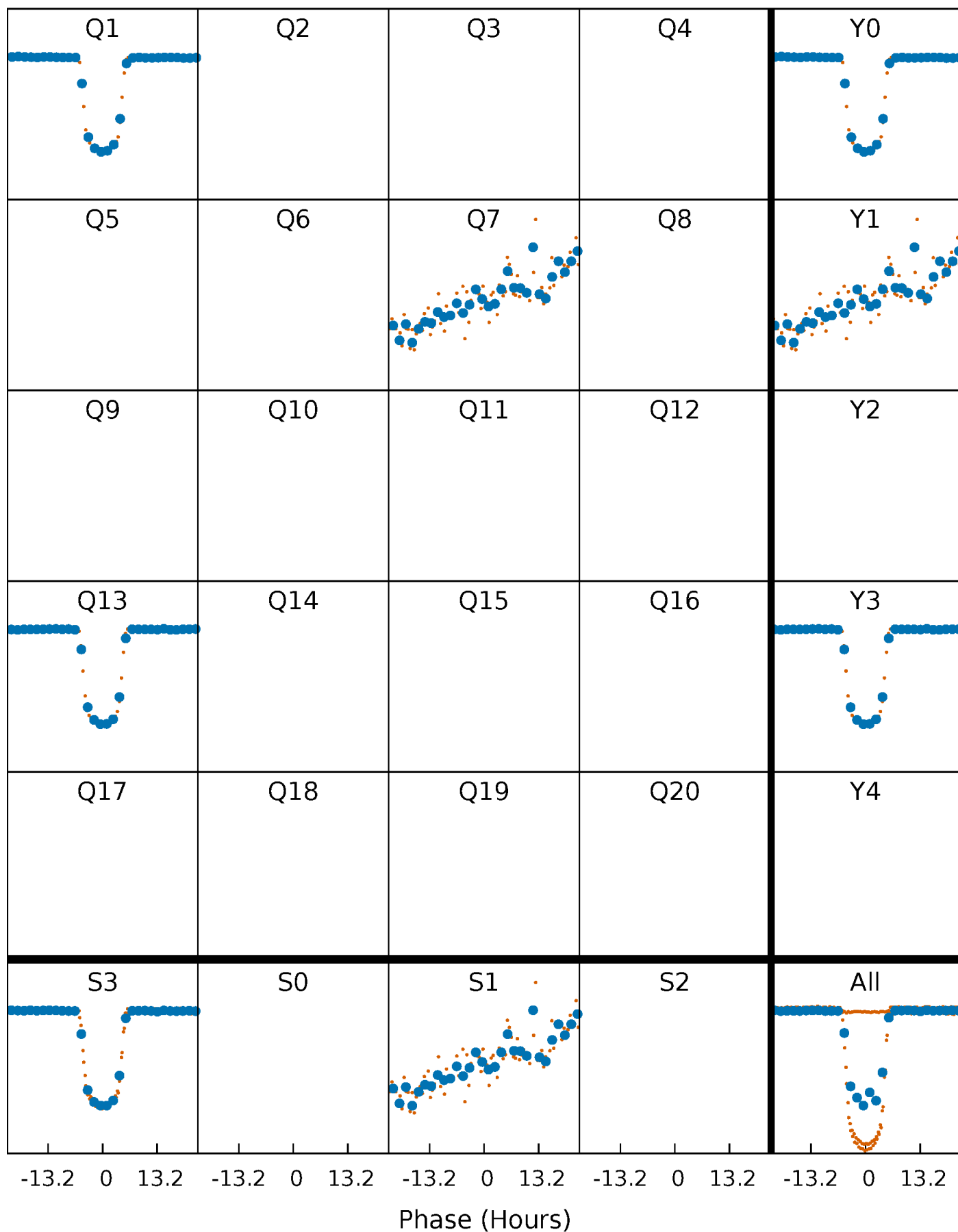


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



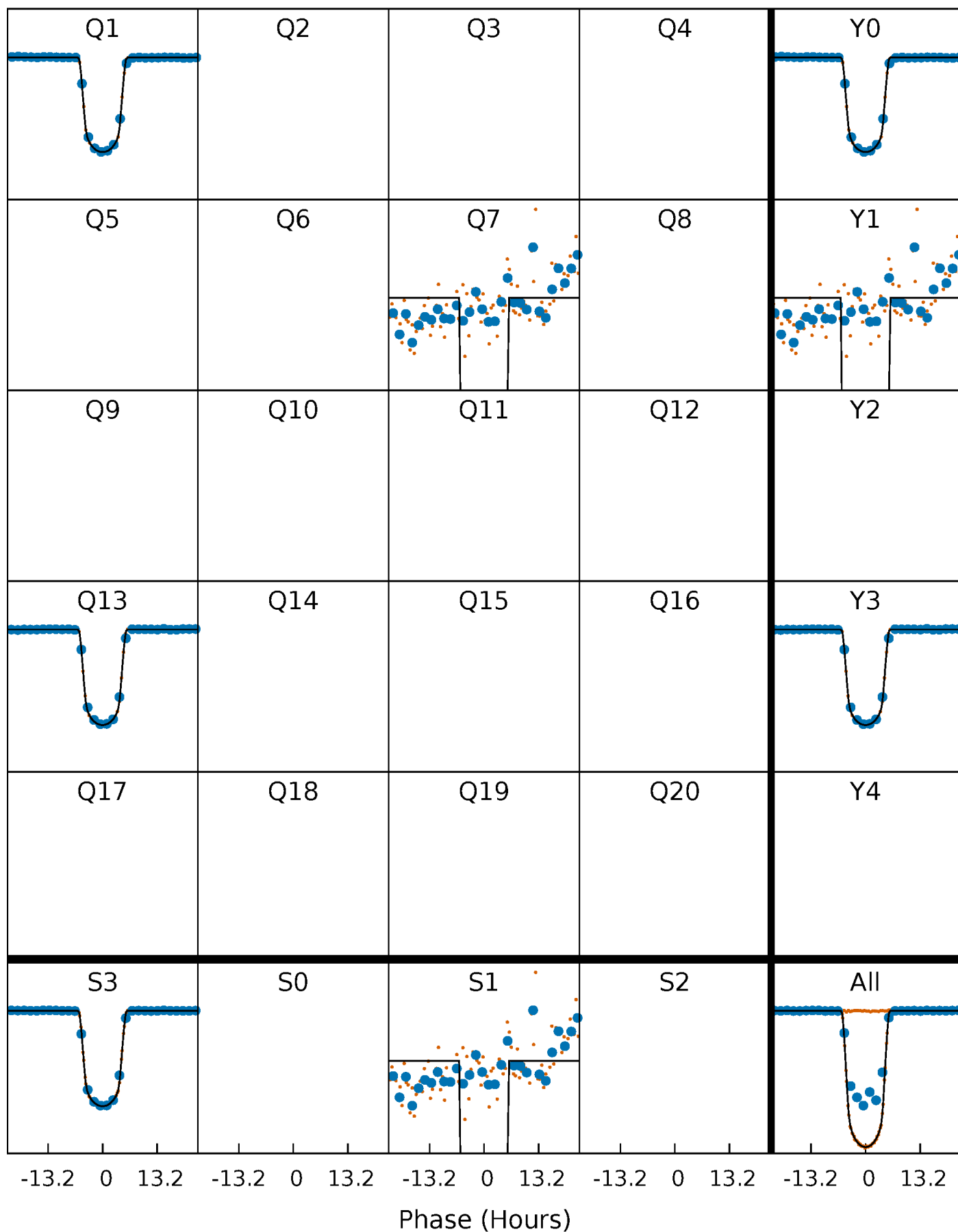
PDC Quarter-Phased Transit Curves

TCE 007672940-01 P=532.134139 Days $T_0=144.086020$ (BKJD)



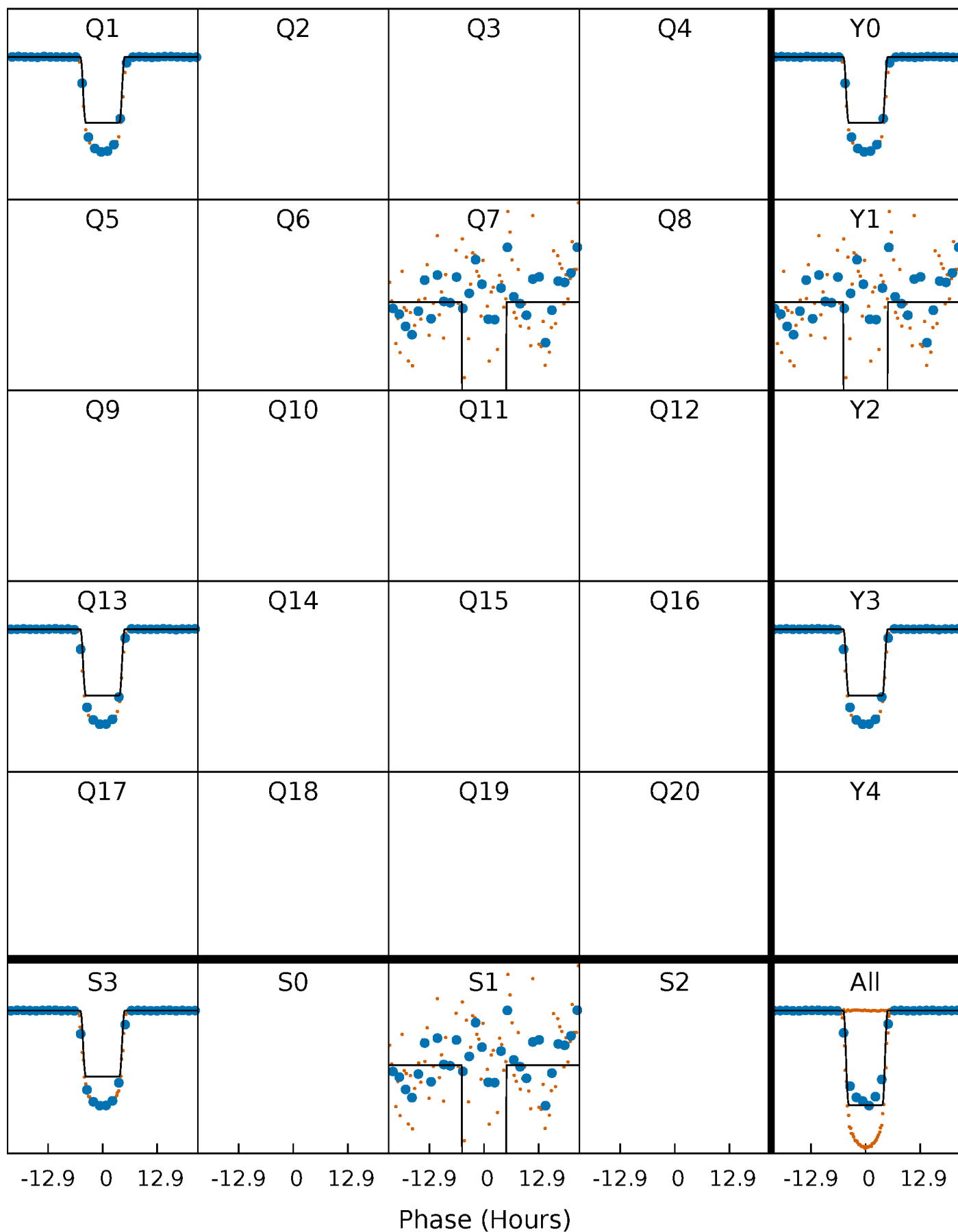
DV Quarter-Phased Transit Curves

TCE 007672940-01 P=532.134139 Days $T_0=144.086020$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

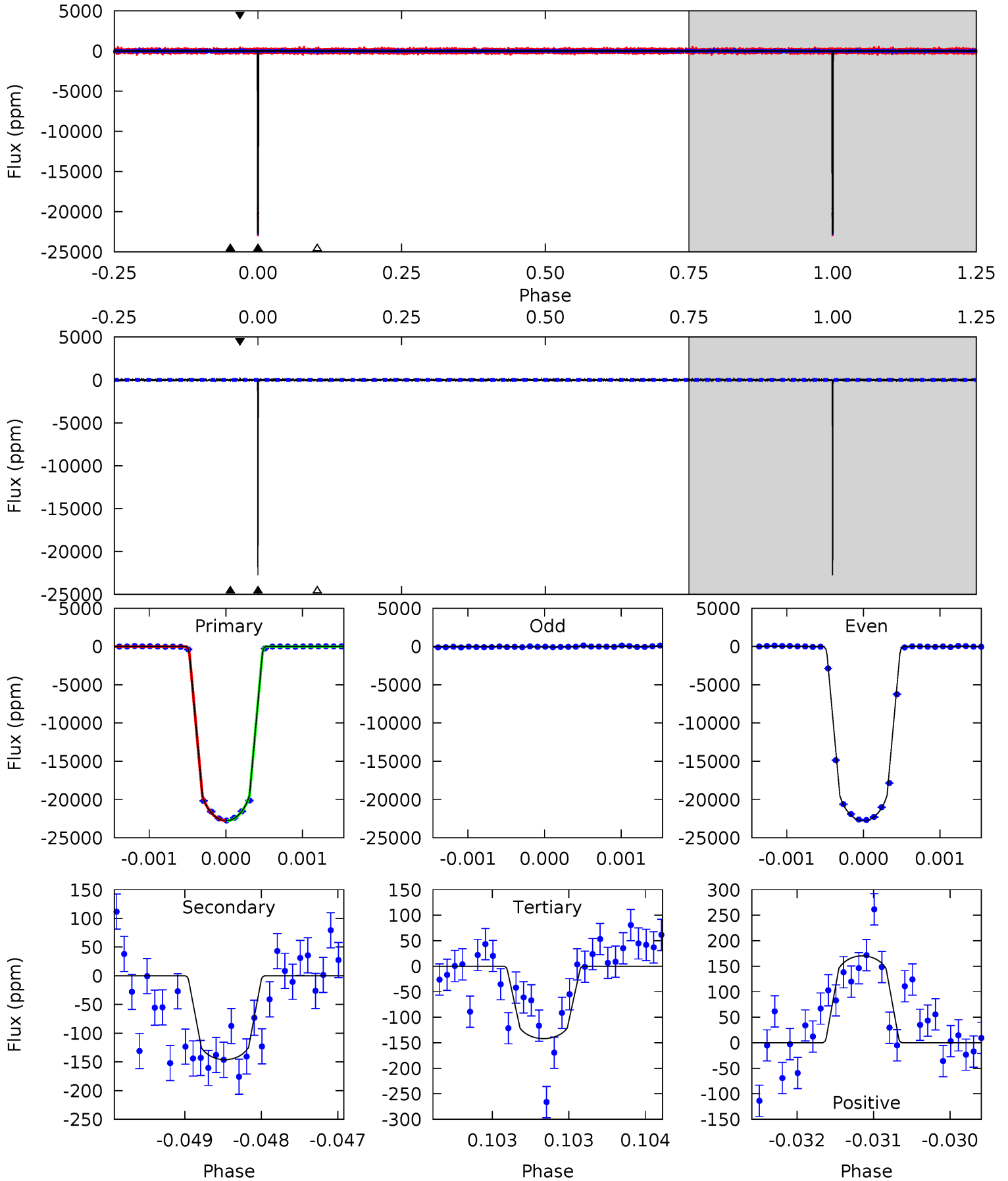
TCE 007672940-01 P=532.137581 Days $T_0=144.082680$ (BKJD)



DV Model-Shift Uniqueness Test

007672940-01, P = 532.134139 Days, E = 144.086020 Days

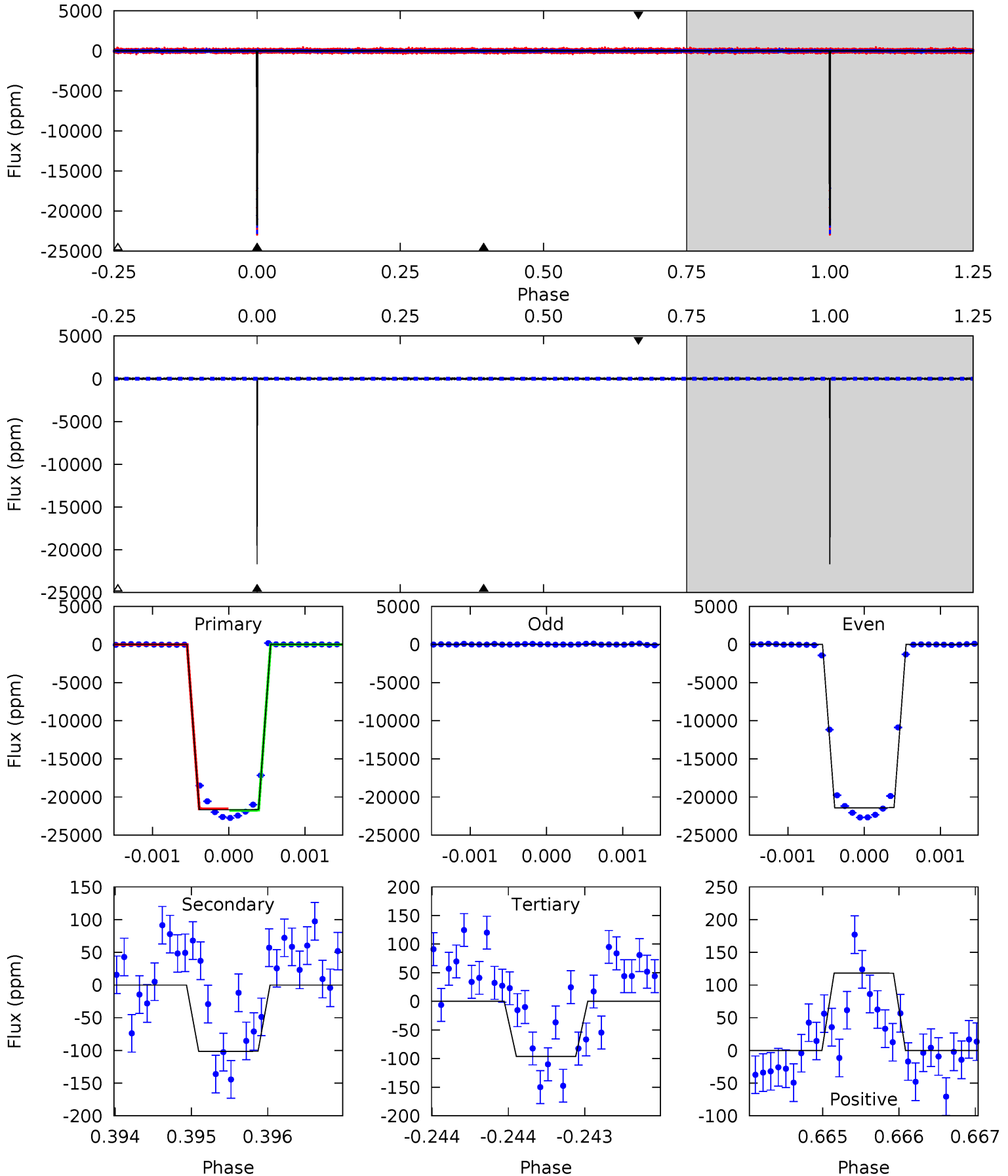
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1295	8.31	8.07	9.69	5.47	3.32	2.28	1286	1285	0.24	-1.38	889.5	0.67	0.01	1.11



Alt Model-Shift Uniqueness Test

007672940-01, P = 532.137581 Days, E = 144.082680 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1196	5.59	5.31	6.52	5.49	3.35	1.46	1190	1189	0.28	-0.93	875.1	0.67	0.01	5.74



Stellar Parameters For KIC 007672940

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6340^{+204}_{-227}	$3.833^{+0.512}_{-0.128}$	$-0.460^{+0.300}_{-0.300}$	$2.173^{+0.472}_{-1.022}$	$1.174^{+0.172}_{-0.236}$	$0.161^{+0.923}_{-0.063}$
	+3%/-4%	+13%/-3%	+65%/-65%	+22%/-47%	+15%/-20%	+573%/-39%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007672940-01 / KOI 1463.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-146 ± 18	$32.66^{+4.84}_{-8.08}$	483^{+39}_{-57}	2649^{+59}_{-65}	139^{+99}_{-34}
Alt.	-101 ± 18	$28.44^{+4.38}_{-7.20}$	481^{+41}_{-62}	2609^{+73}_{-75}	128^{+95}_{-37}

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 $A_{obs} \gg 1.0$

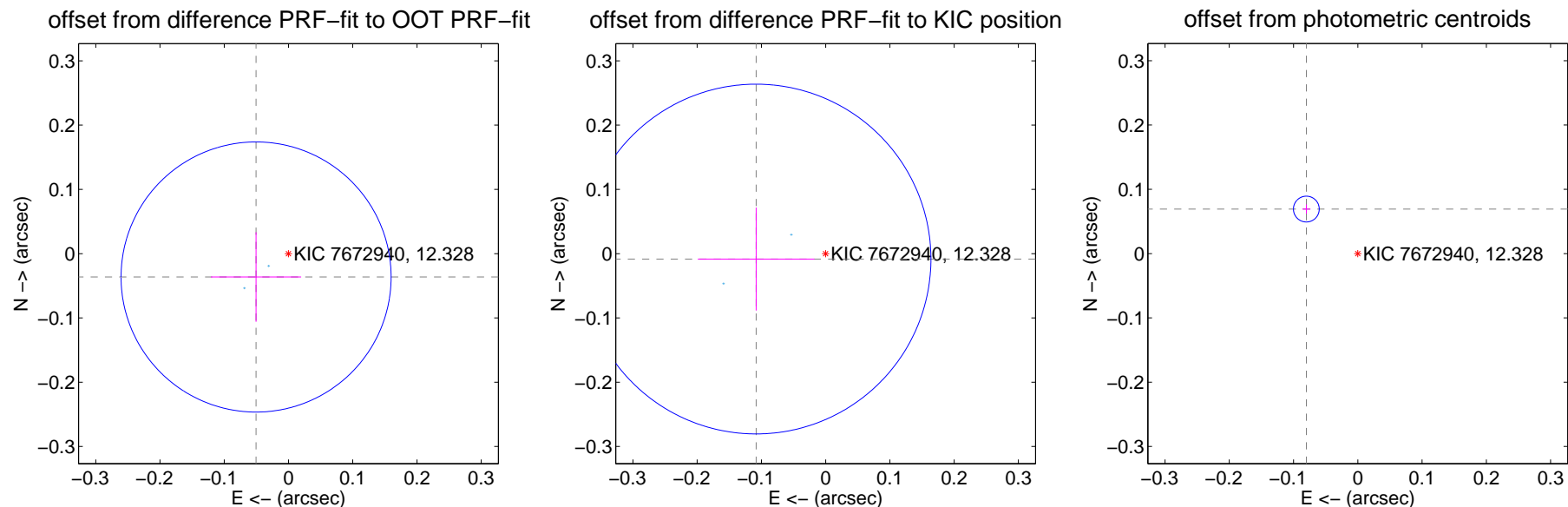
DV Centroid Data

Supplemental centroid analysis for 007672940-01. Kepler magnitude: 12.33. Transit SNR 552.62

There are 2 quarters with good PRF difference image offsets

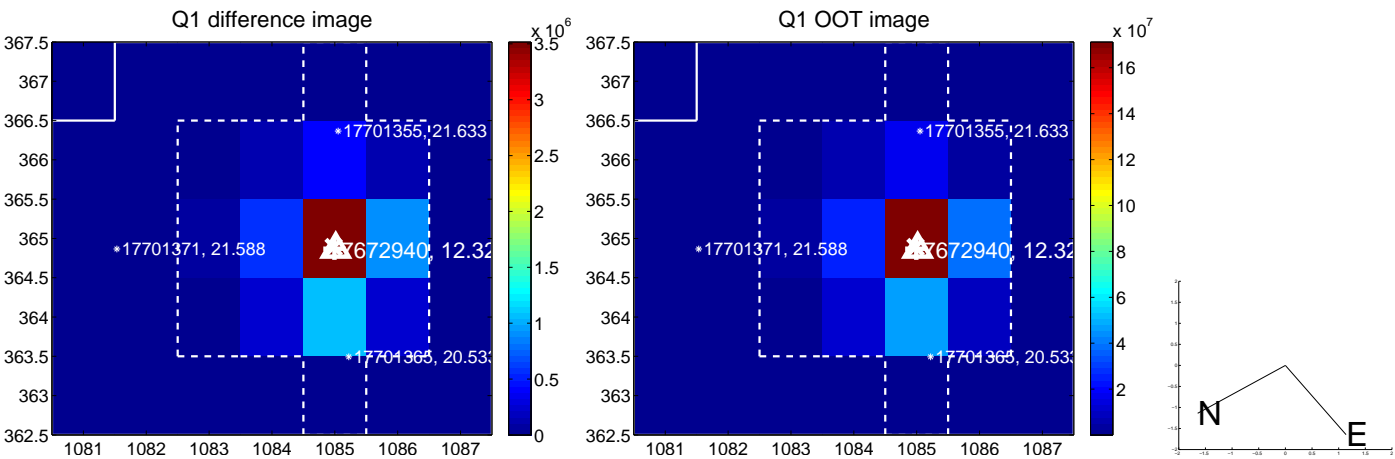
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.062 ± 0.070	0.89	0.050 ± 0.070	-0.036 ± 0.070
PRF-fit source offset from KIC position	0.109 ± 0.091	1.20	0.108 ± 0.091	-0.008 ± 0.080
photometric centroid source offset	0.11 ± 0.01	15.82	0.08 ± 0.01	0.07 ± 0.01



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.

Q5 no difference image



Q5 no OOT image



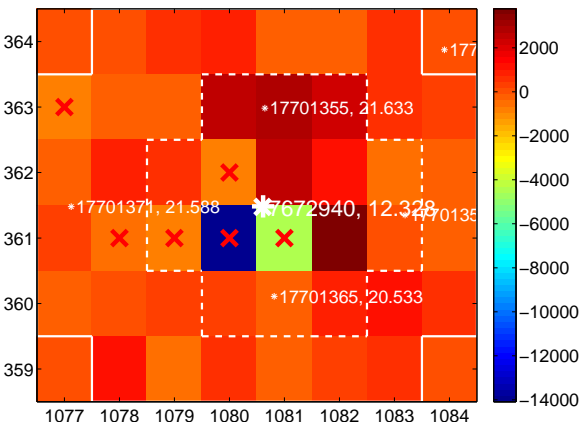
Q6 no difference image



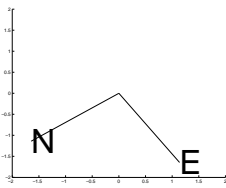
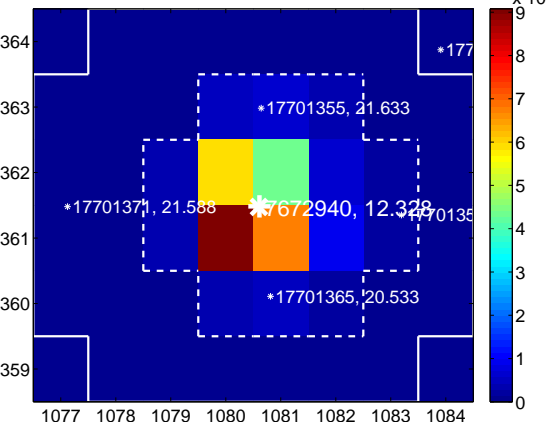
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



Q8 no difference image



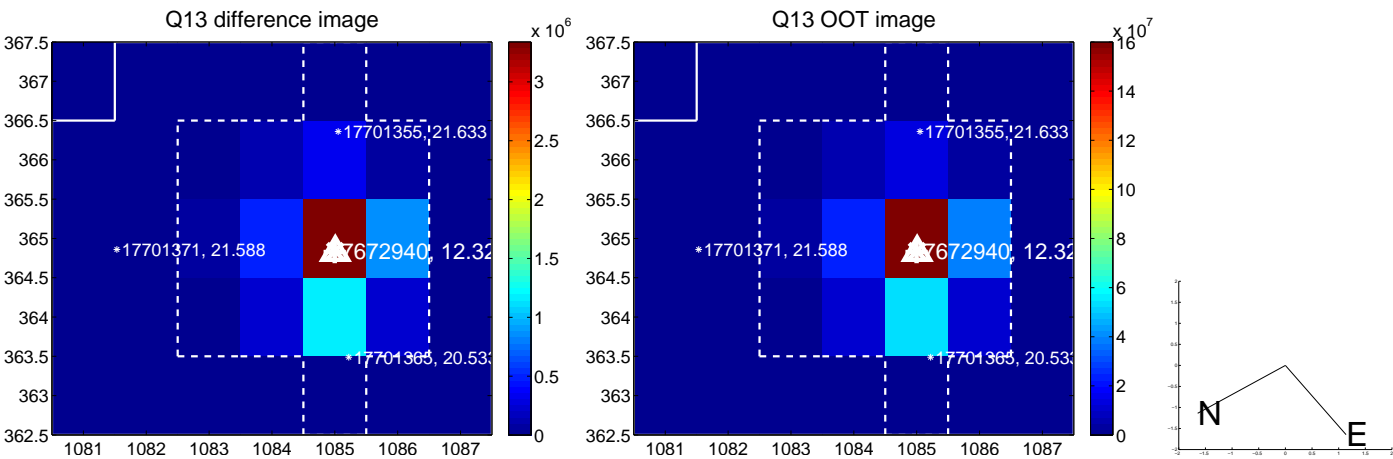
Q8 no OOT image



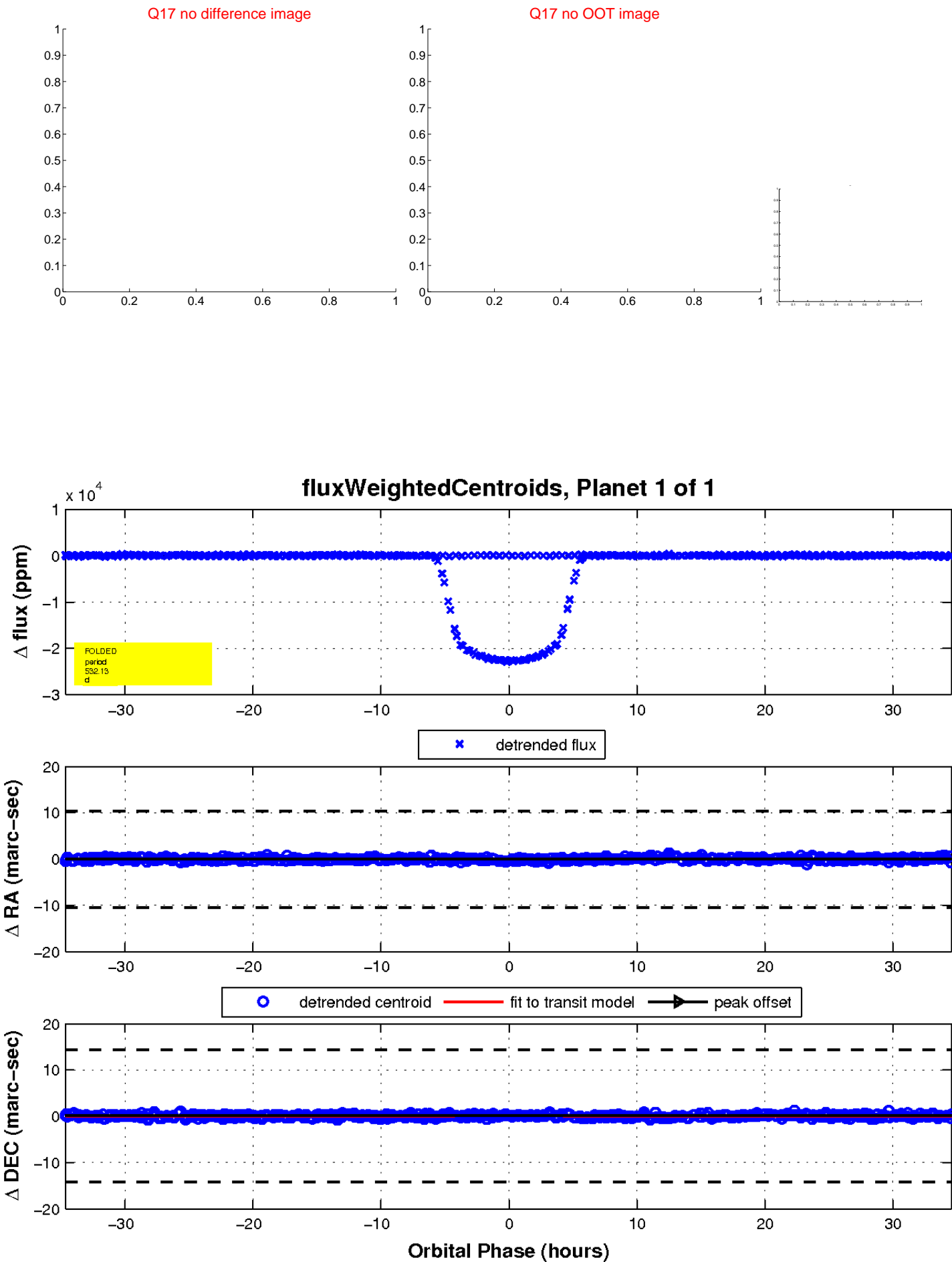
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

