

KIC 001572948

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})
001572948-01	OBS	4924.01	3.003285	132.074276	323.7	2.160	12.4	12.5	1.77	6606	3.60	2639.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001572948-01	OBS	FP	0.00	0	0	1	0	CENT_FEW_DIFFS—HALO_GHOST

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.

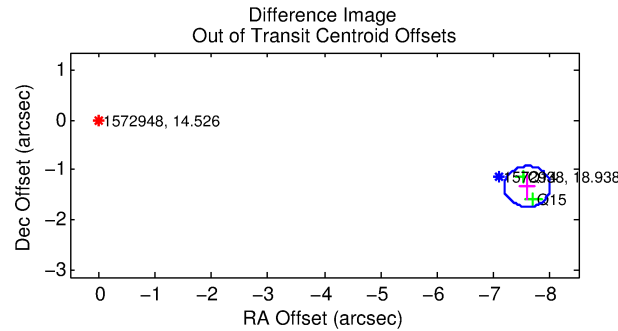
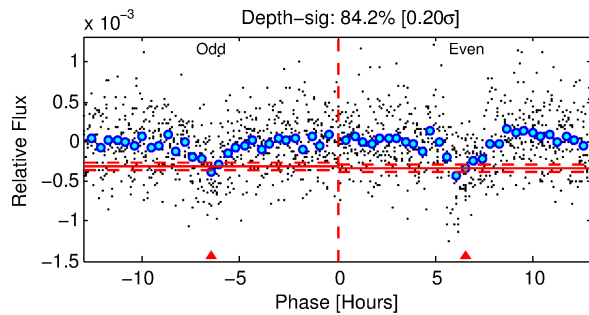
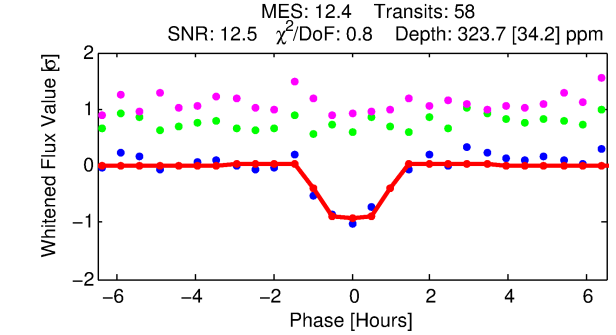
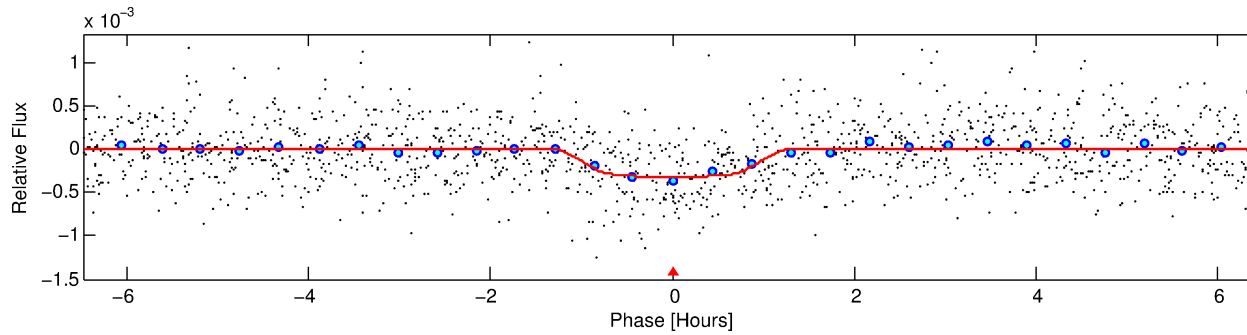
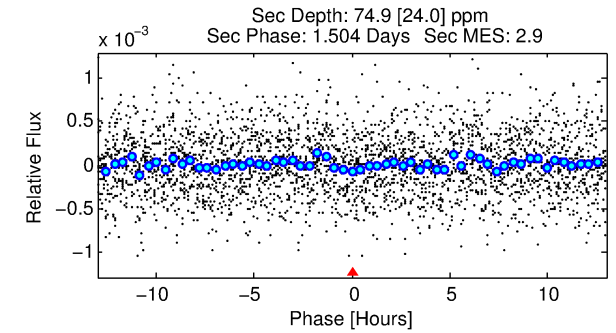
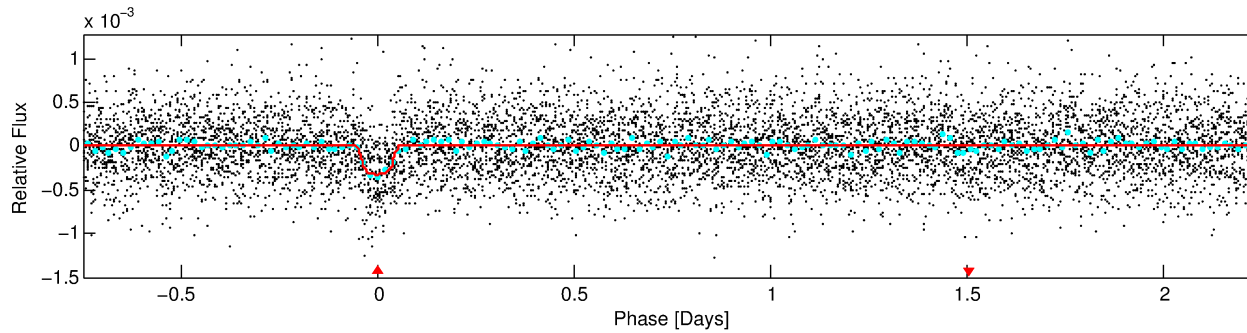
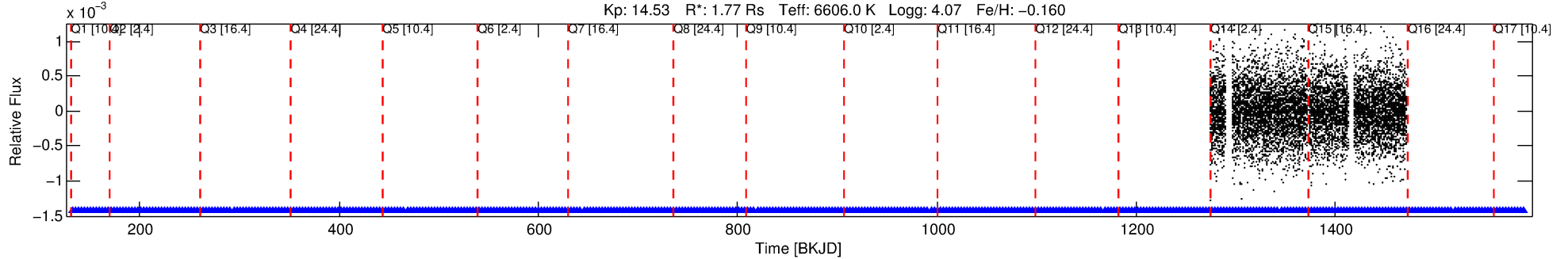
Ephemeris Match Information For 001572948-01

No Significant Match Found

DV One-Page Summary

KIC: 1572948 Candidate: 1 of 1 Period: 3.003 d
KOI: K04924.01 Corr: 0.919

Kp: 14.53 R*: 1.77 Rs Teff: 6606.0 K Logg: 4.07 Fe/H: -0.160



DV Fit Results:

Period = 3.00328 [0.00001] d
Epoch = 132.0743 [0.0028] BKJD
Rp/R* = 0.0187 [0.0110]
a/R* = 6.02 [19.66]
b = 0.85 [1.10]
Seff = 2639.42 [1260.56]
Teq = 1828 [218] K
Rp = 3.60 [2.43] Re
a = 0.0450 [0.0133] AU
Ag = 6.43 [8.36] [0.65σ]
Teffp = 4499 [1382] K [1.91σ]

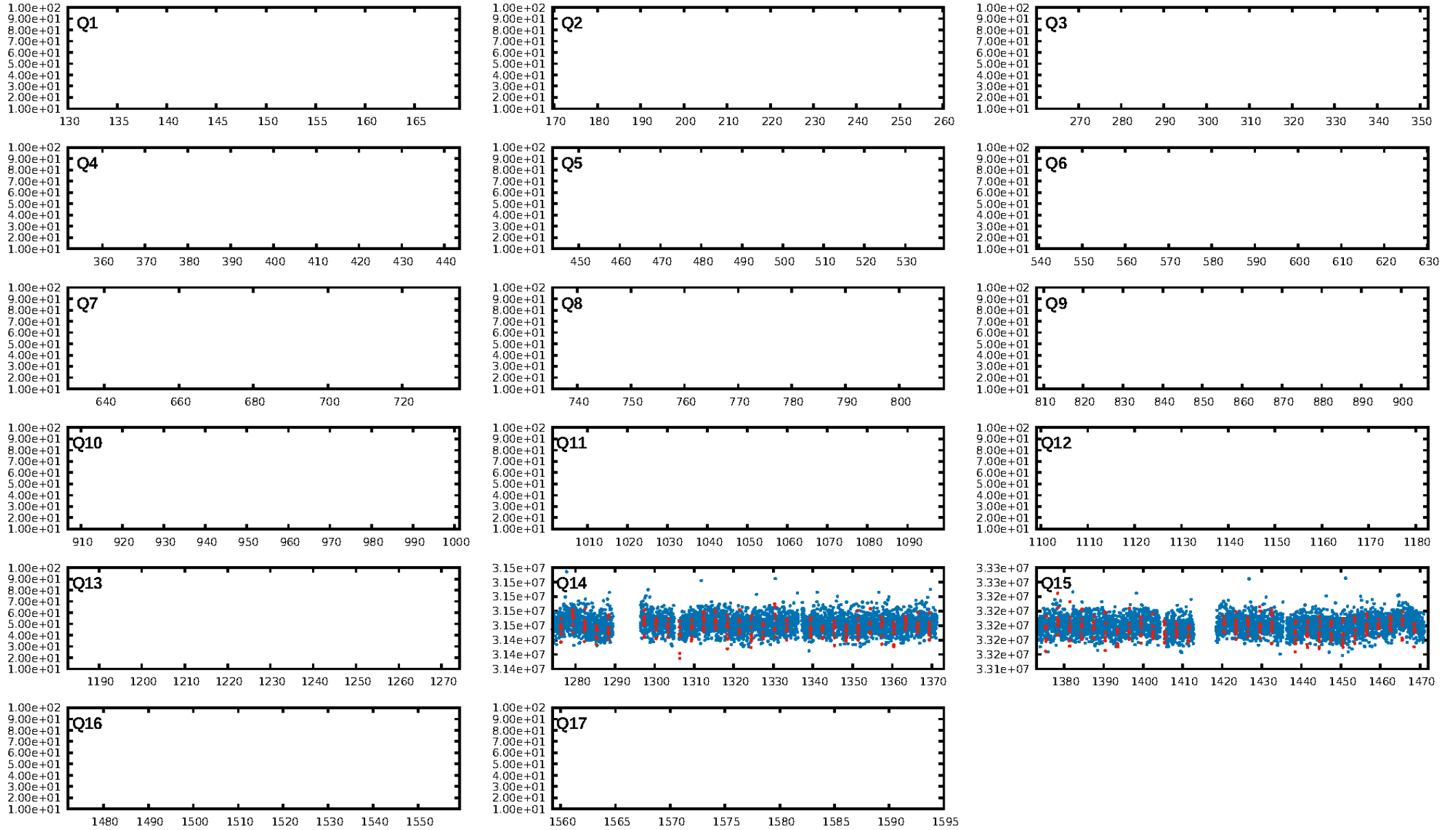
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.37e-35
RollingBand-fgt: 1.00 [58/58]
GhostDiagnostic-chr: -0.04975
Centroid-sig: 0.0%
Centroid-so: 14.193 arcsec [11.11σ]
OotOffset-rm: 7.708 arcsec [56.92σ]
KicOffset-rm: 7.840 arcsec [65.52σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

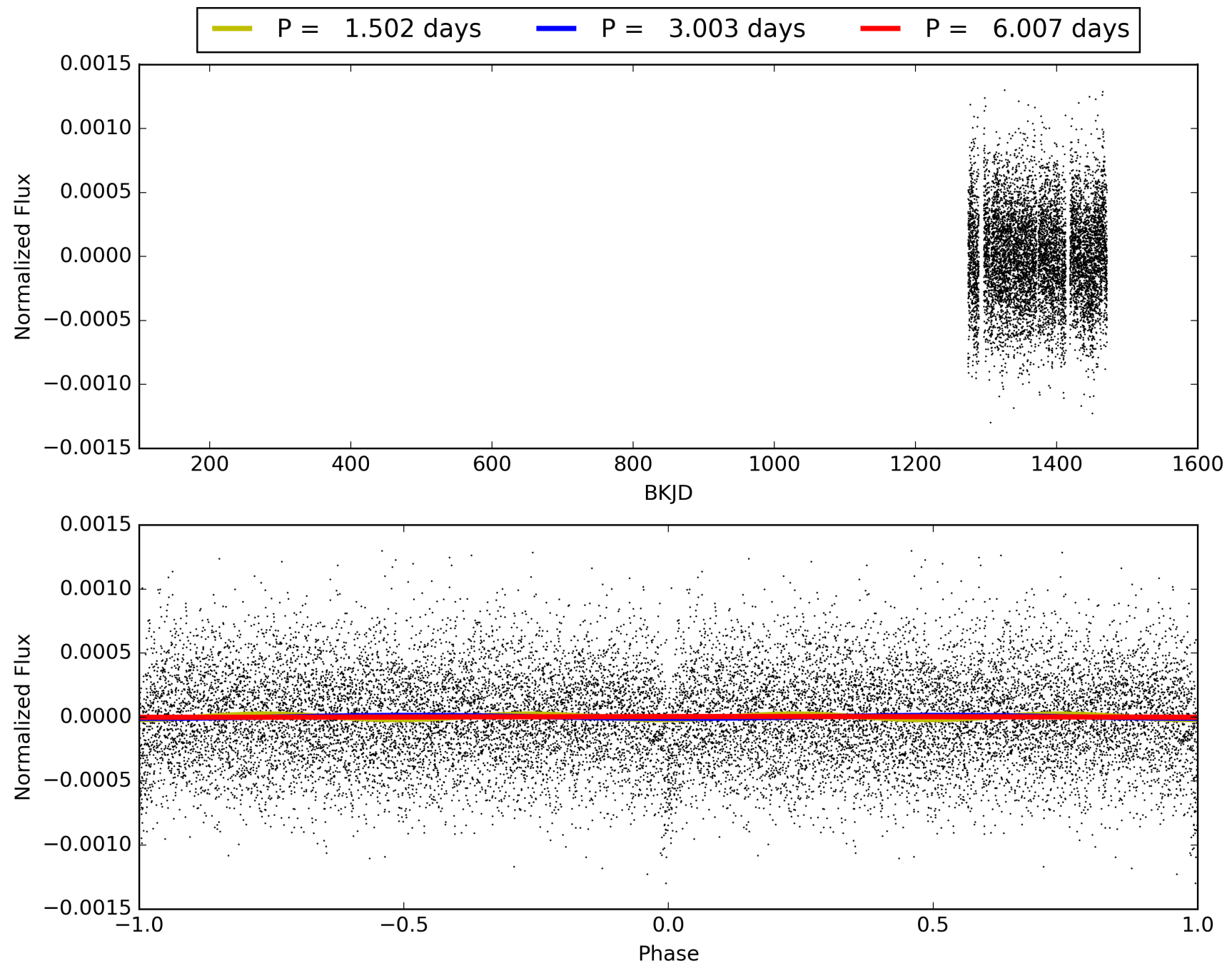
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:50:37 Z

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

TCE 001572948-01, PDC Light Curves

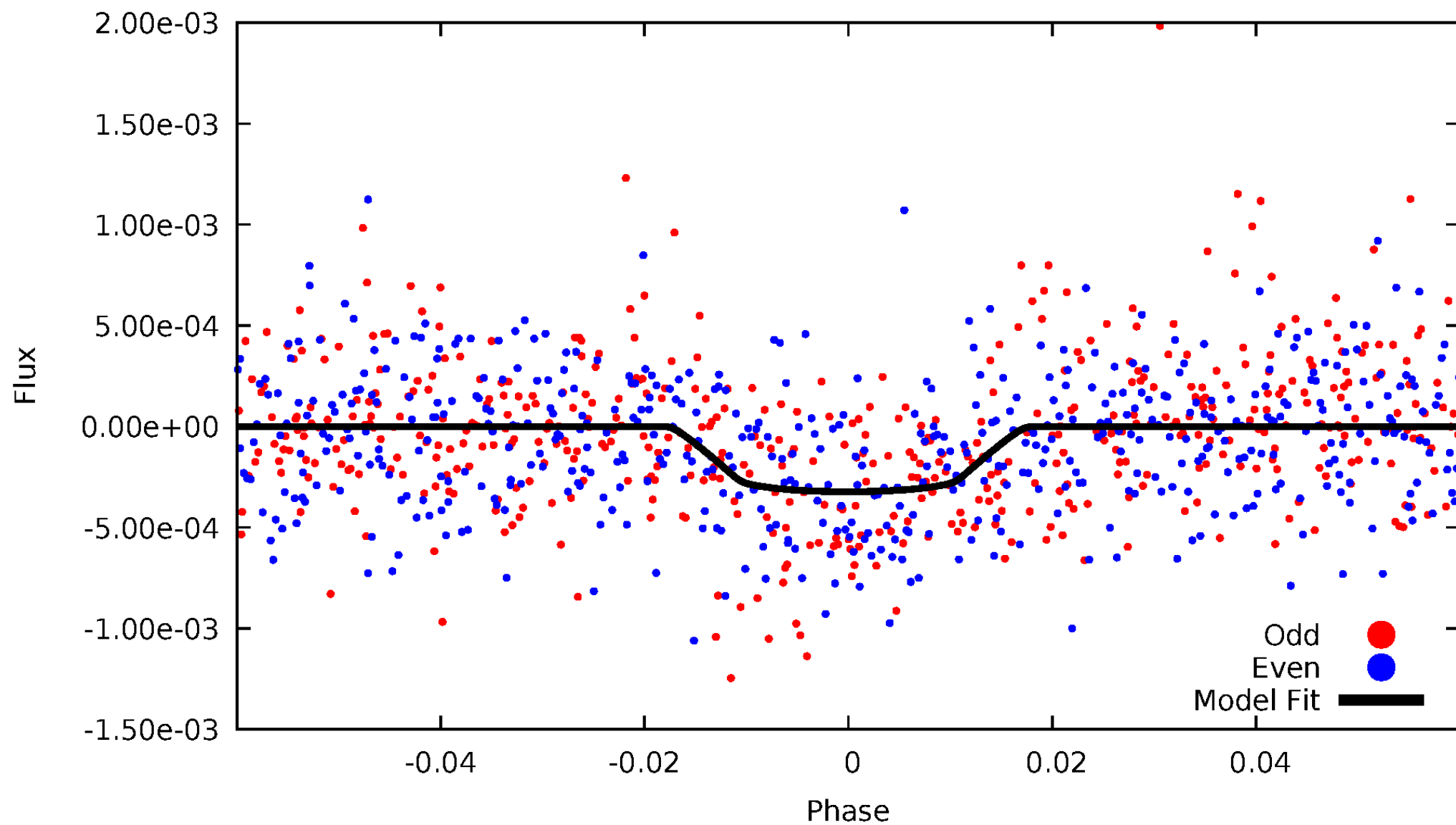


TCE 001572948-01



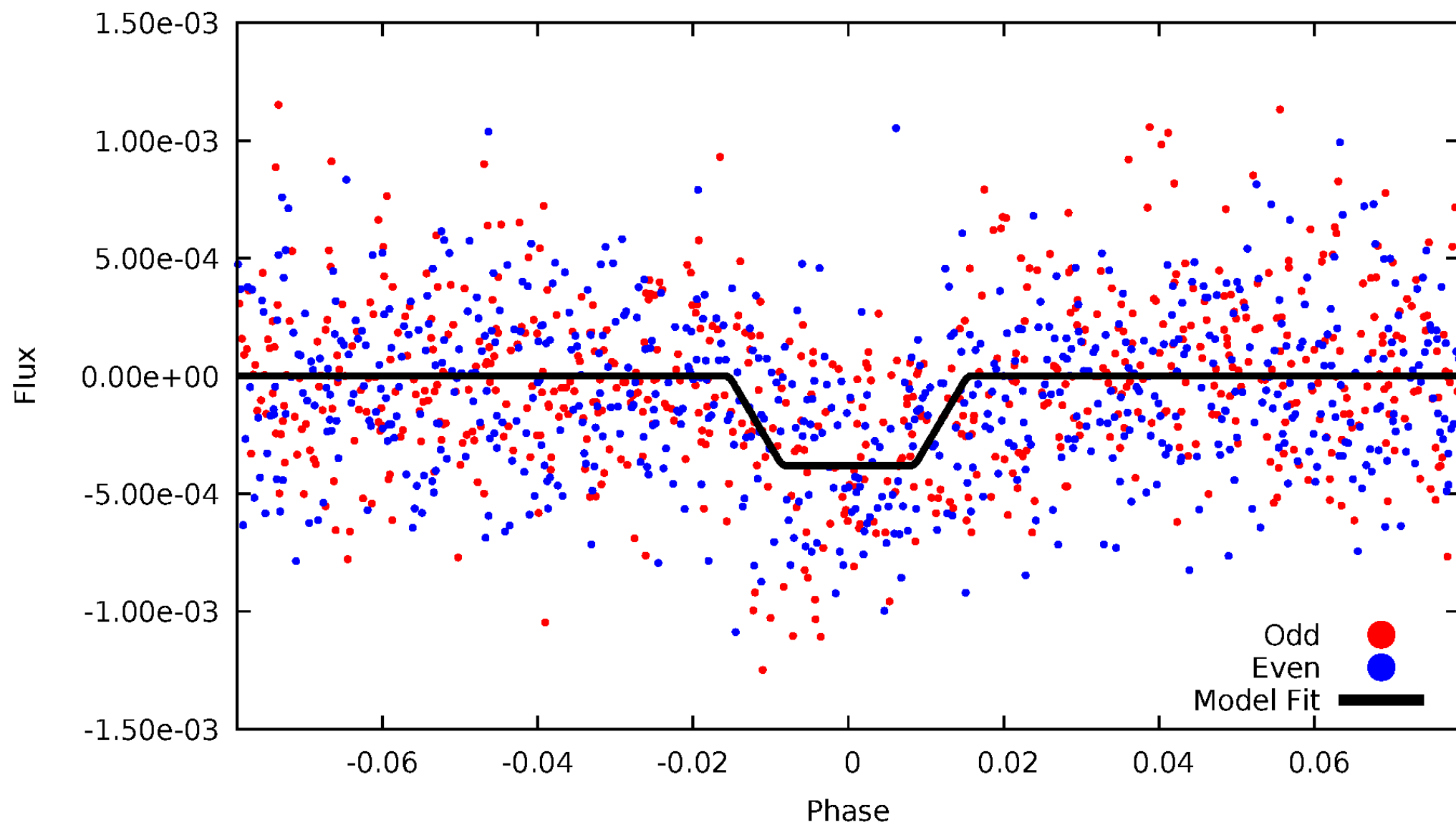
DV Odd/Even

TCE 001572948-01



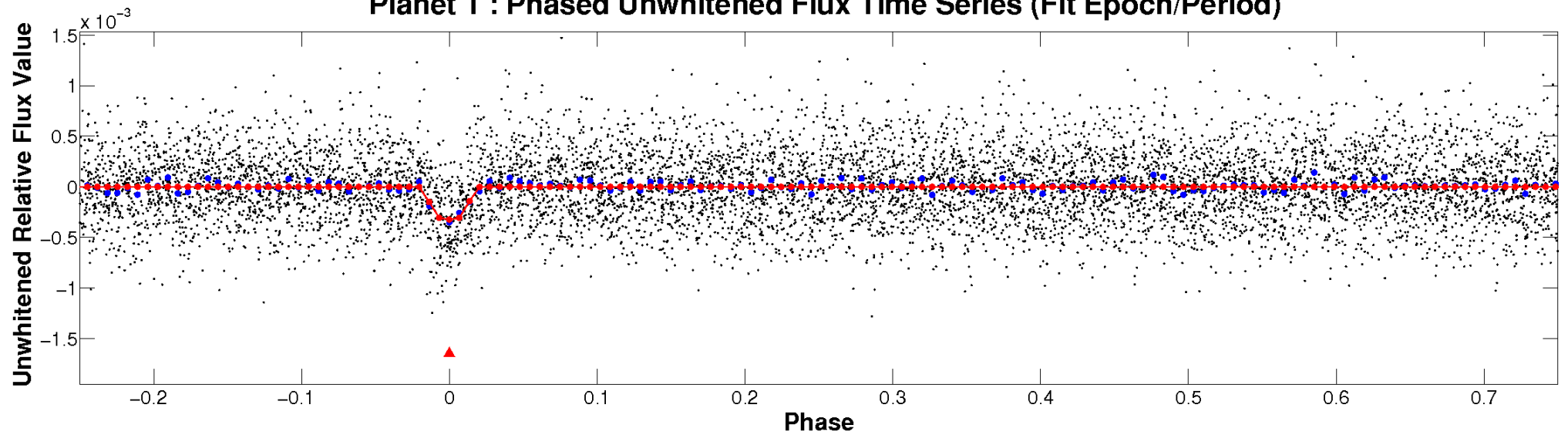
ALT Odd/Even

TCE 001572948-01

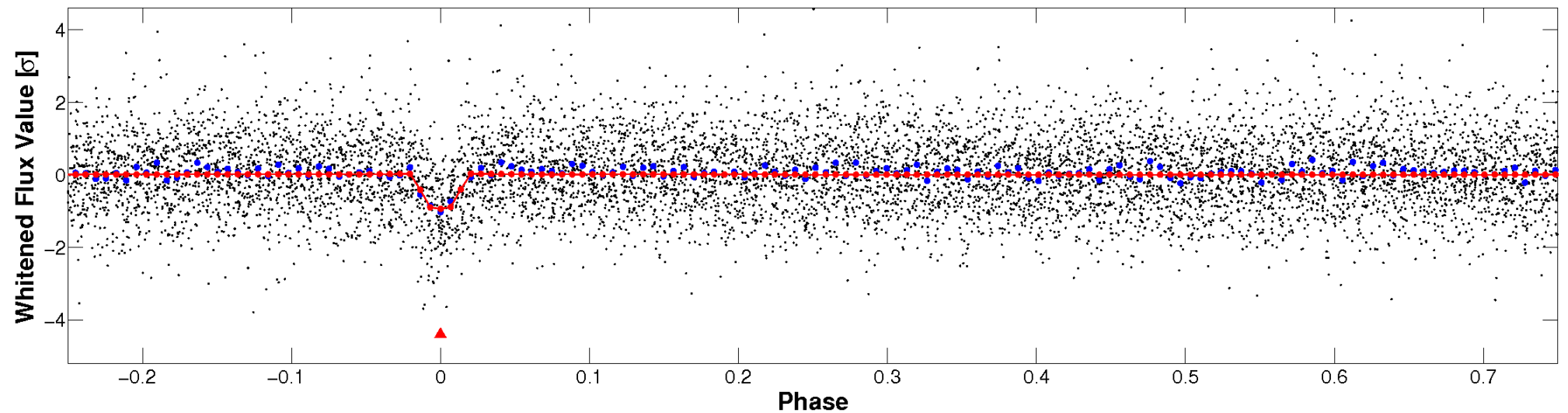


Non-Whitened Vs. Whitened Light Curve

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

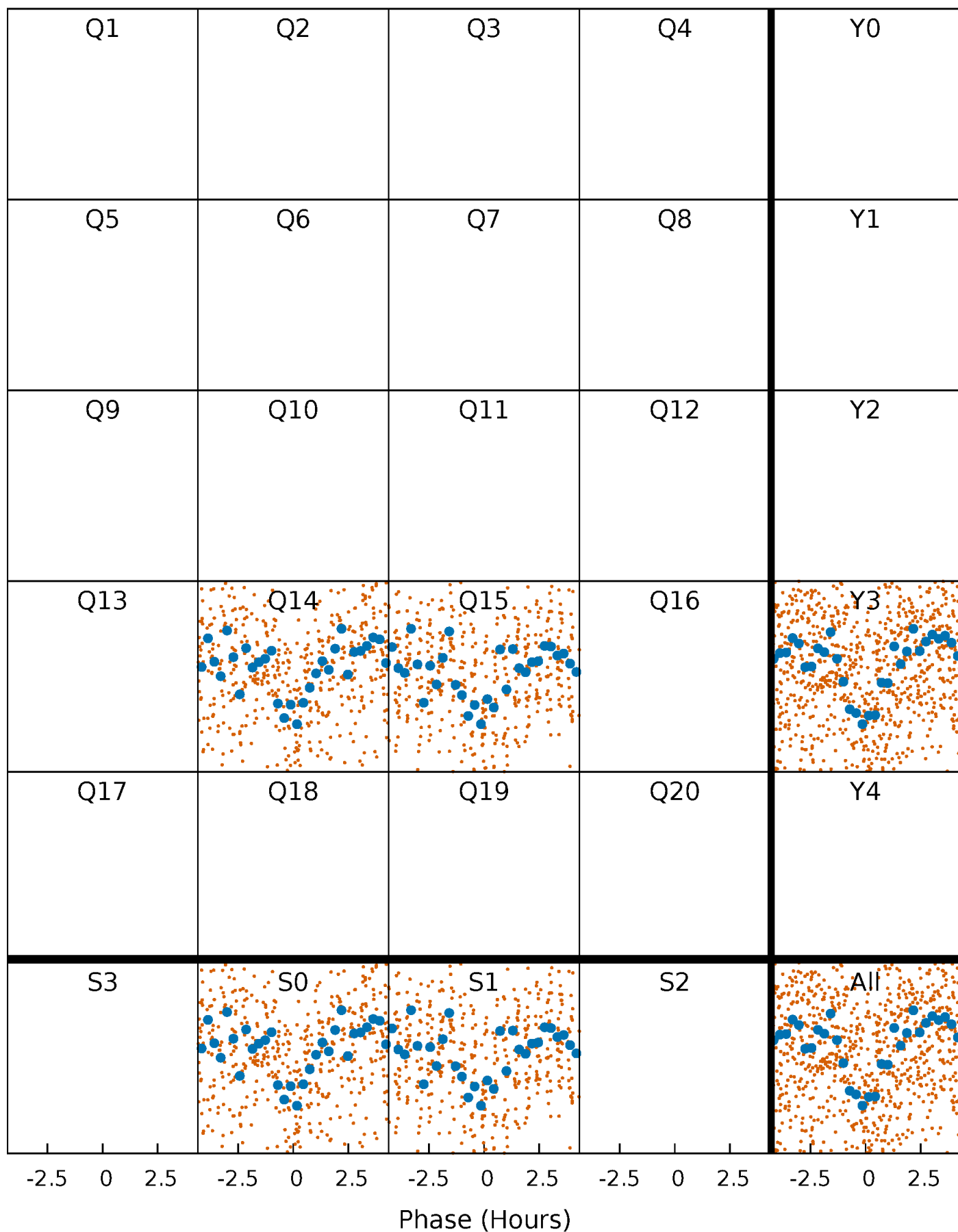


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



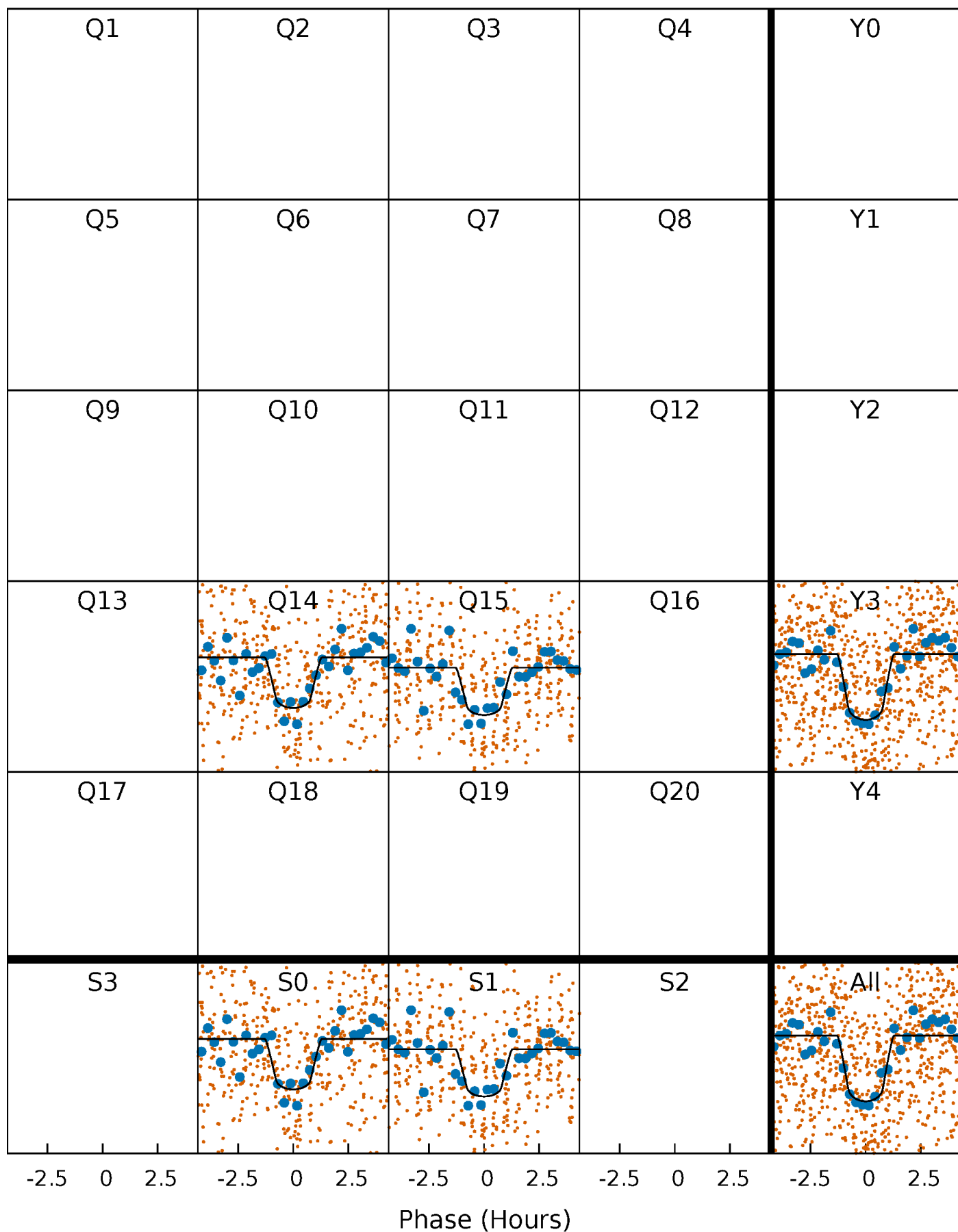
PDC Quarter-Phased Transit Curves

TCE 001572948-01 P= 3.003285 Days $T_0=132.074276$ (BKJD)



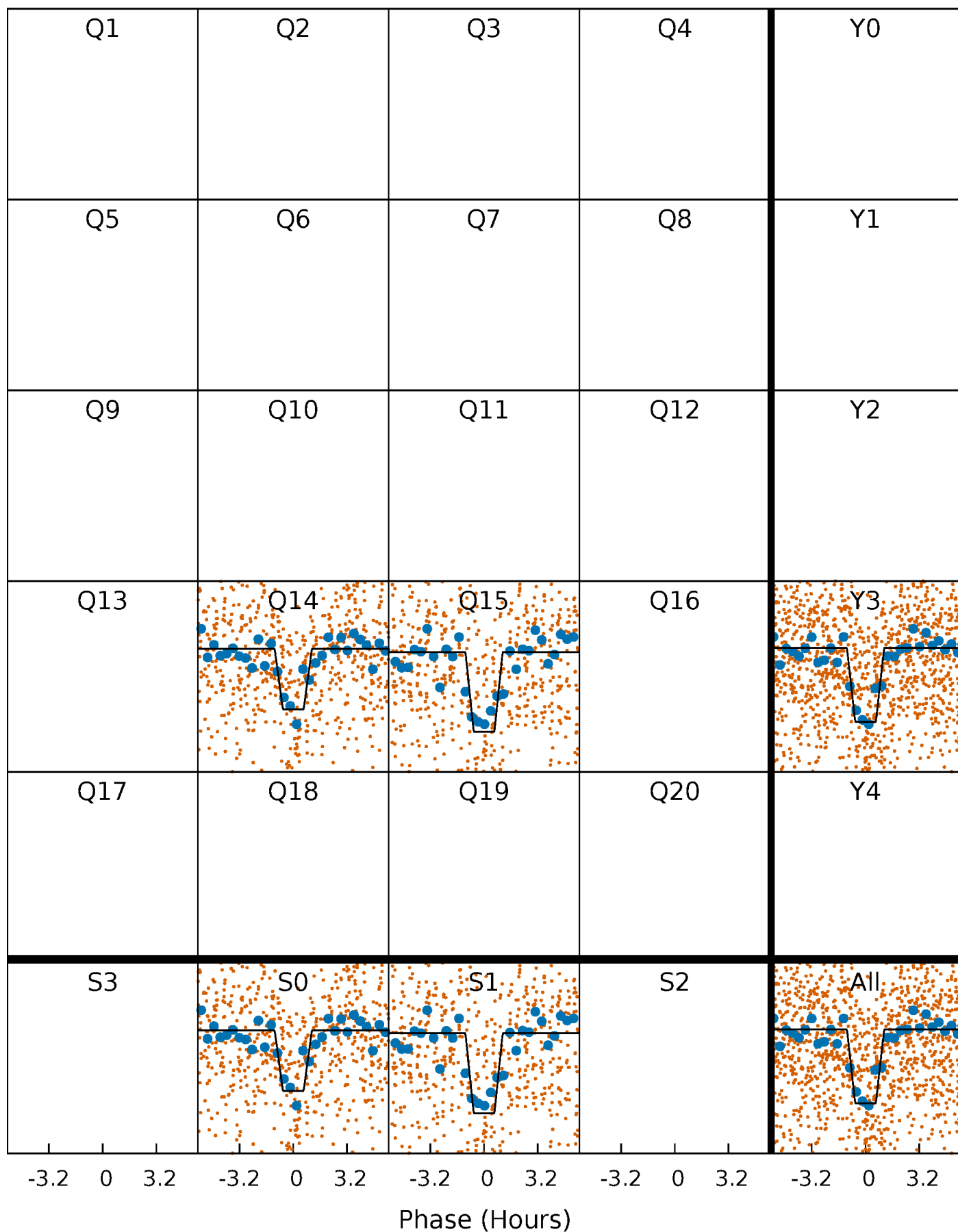
DV Quarter-Phased Transit Curves

TCE 001572948-01 P= 3.003285 Days $T_0=132.074276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

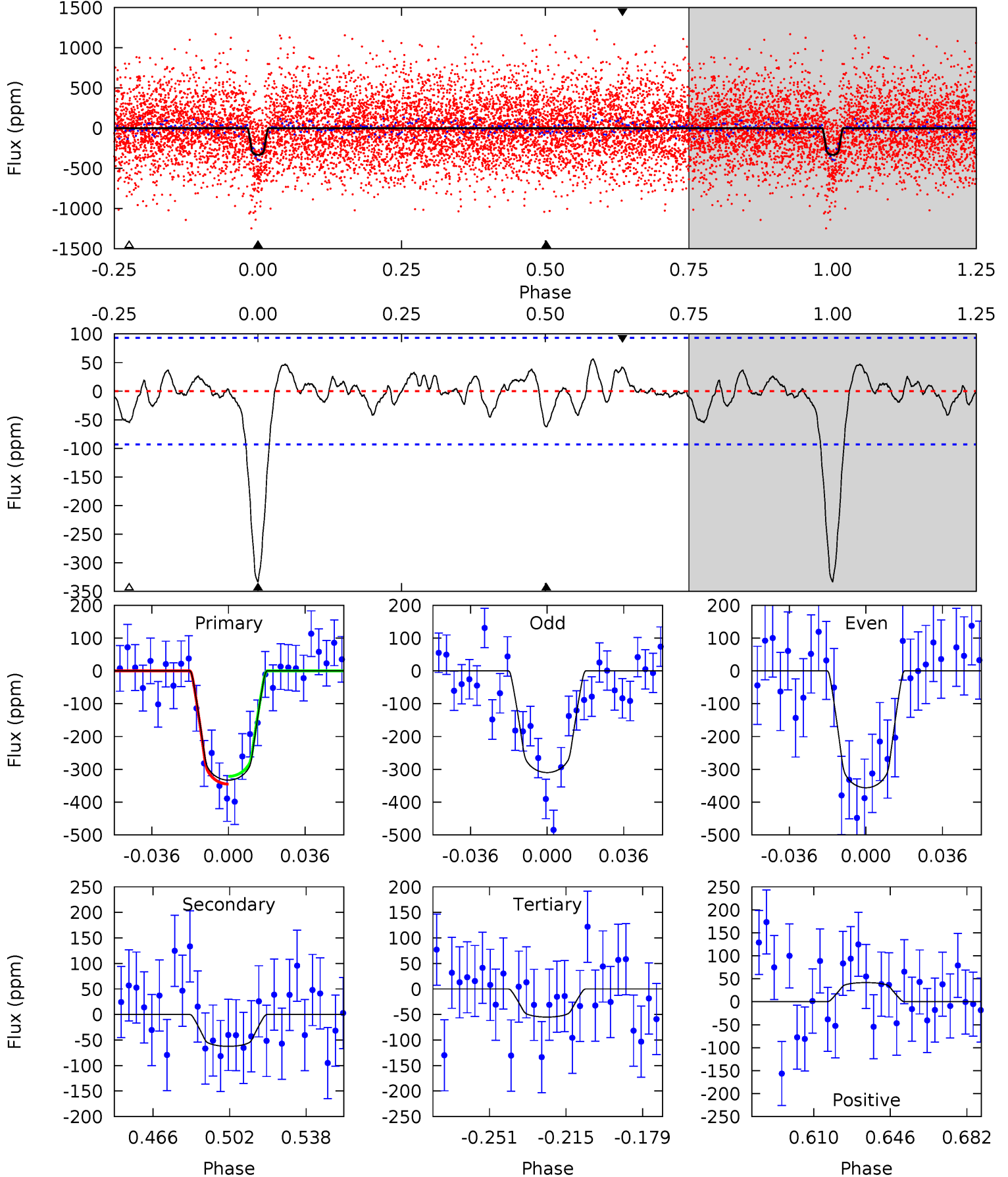
TCE 001572948-01 P= 3.003265 Days $T_0=132.080664$ (BKJD)



DV Model-Shift Uniqueness Test

001572948-01, P = 3.003285 Days, E = 132.074276 Days

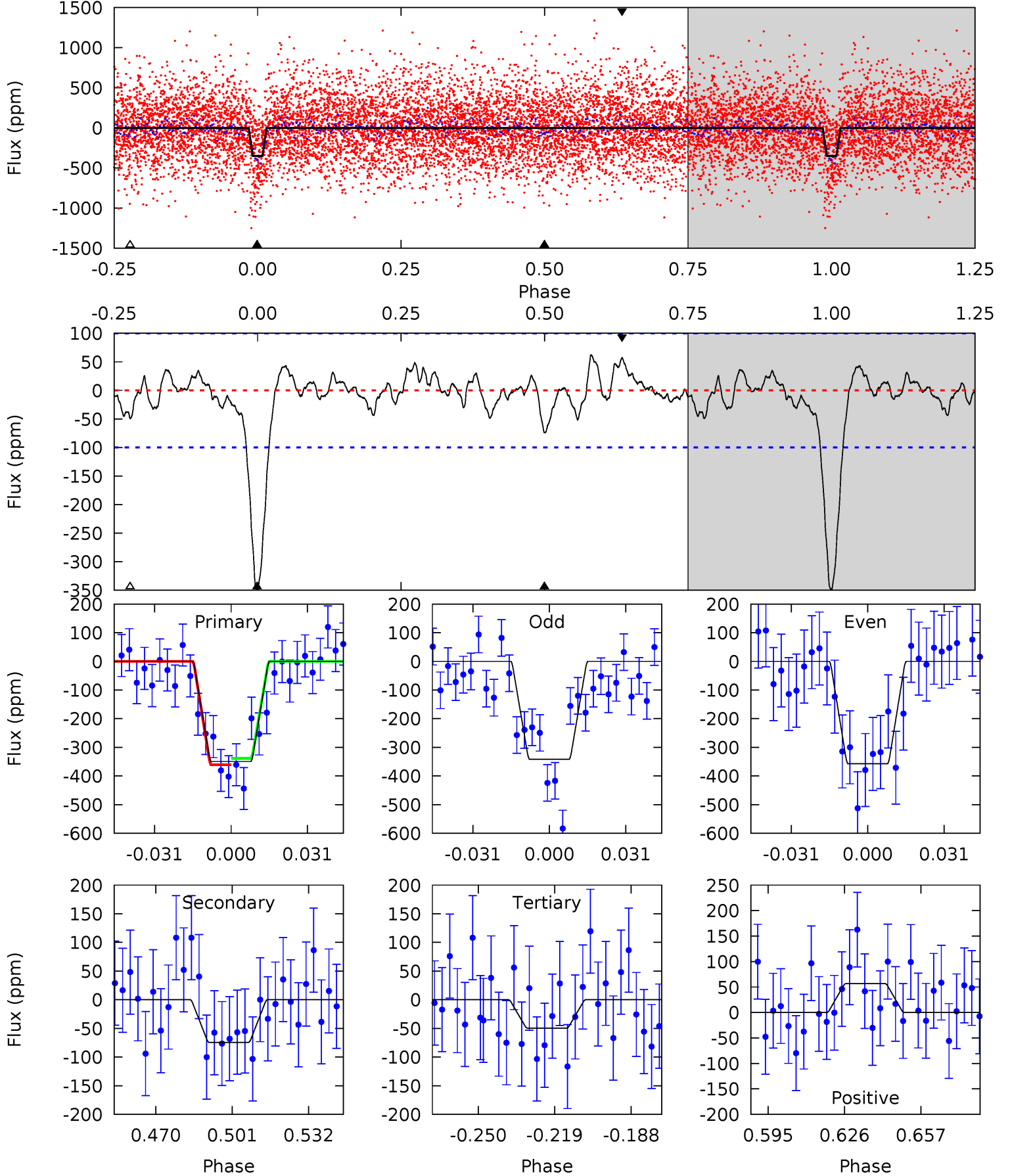
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	3.20	2.83	2.14	4.78	2.10	1.05	14.3	15.0	0.38	1.07	1.20	1.03	0.14	0.60



Alt Model-Shift Uniqueness Test

001572948-01, P = 3.003265 Days, E = 132.080664 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	3.57	2.37	2.72	4.80	2.15	1.09	14.5	14.1	1.20	0.85	0.37	0.96	0.15	0.54



Stellar Parameters For KIC 001572948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6606^{+181}_{-250}	$4.071^{+0.258}_{-0.172}$	$-0.160^{+0.250}_{-0.300}$	$1.768^{+0.530}_{-0.583}$	$1.349^{+0.182}_{-0.296}$	$0.344^{+0.568}_{-0.165}$
	+3%/-4%	+6%/-4%	+156%/-188%	+30%/-33%	+13%/-22%	+165%/-48%
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 001572948-01 / KOI 4924.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-62 ± 19	$3.58^{+2.08}_{-1.79}$	2529^{+192}_{-208}	4310^{+1600}_{-667}	$5.027^{+17.854}_{-3.069}$
Alt.	-74 ± 21	$3.80^{+2.33}_{-1.91}$	2538^{+205}_{-228}	4405^{+1626}_{-720}	$5.600^{+18.865}_{-3.583}$

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

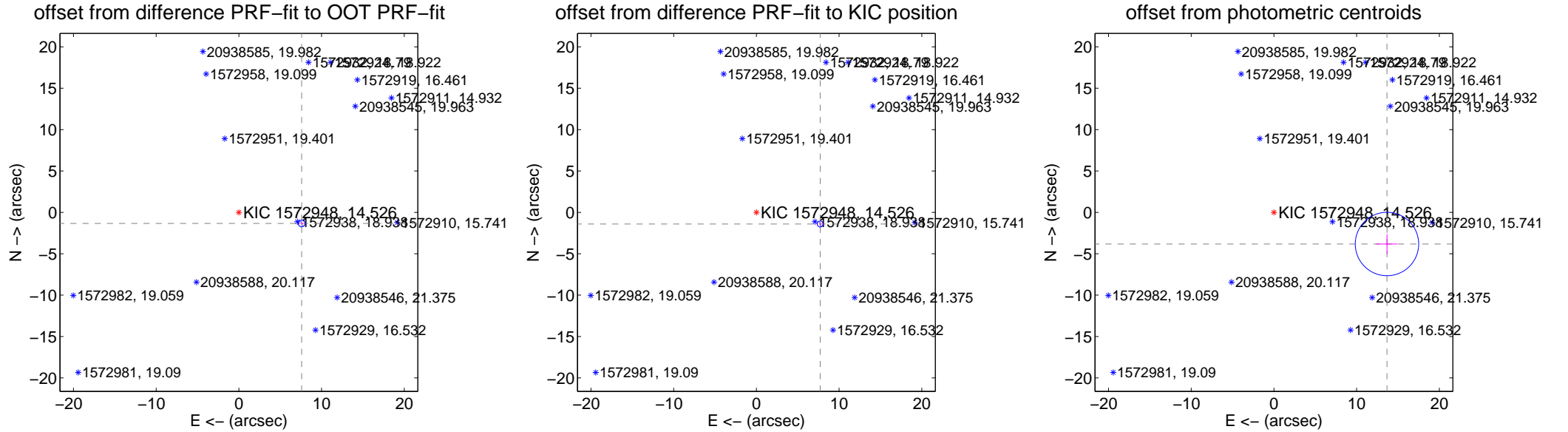
DV Centroid Data

Supplemental centroid analysis for 001572948-01. Kepler magnitude: 14.53. Transit SNR 12.52

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.708 ± 0.135	56.92	-7.591 ± 0.129	-1.337 ± 0.265
PRF-fit source offset from KIC position	7.840 ± 0.120	65.52	-7.713 ± 0.113	-1.407 ± 0.252
photometric centroid source offset	14.19 ± 1.28	11.11	-13.67 ± 1.28	-3.82 ± 1.19



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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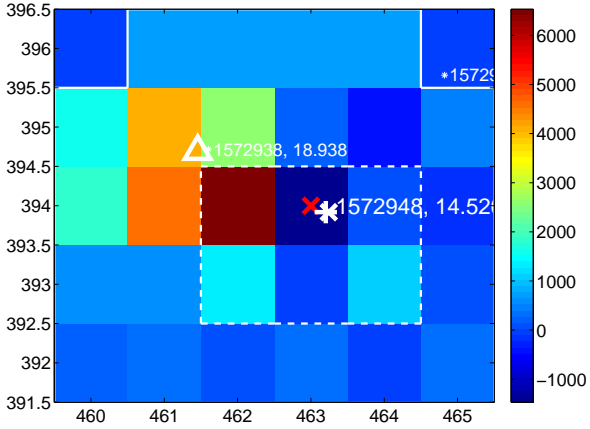
Q13 no difference image



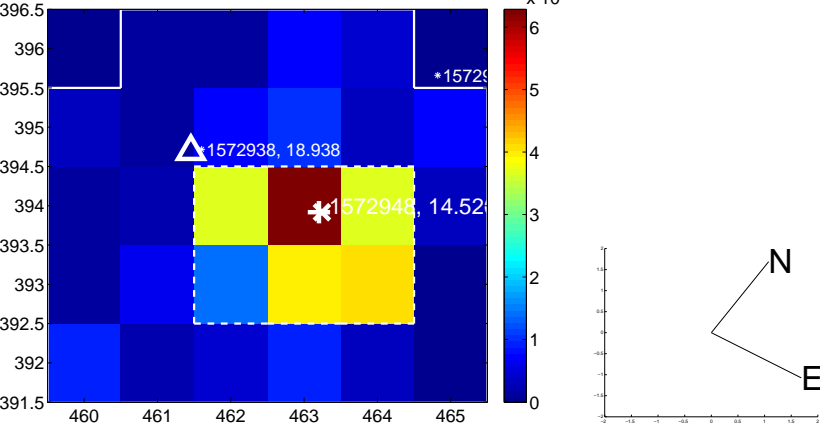
Q13 no OOT image



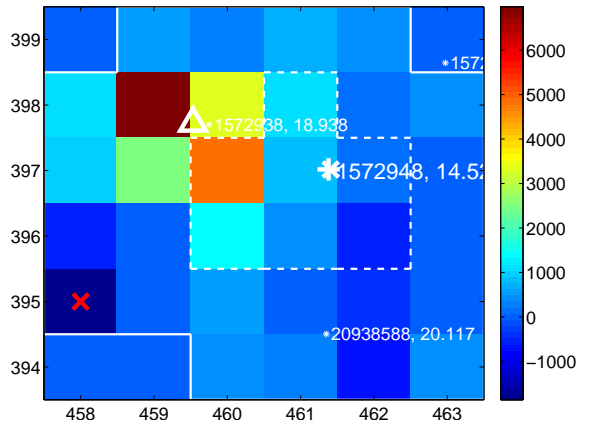
Q14 difference image



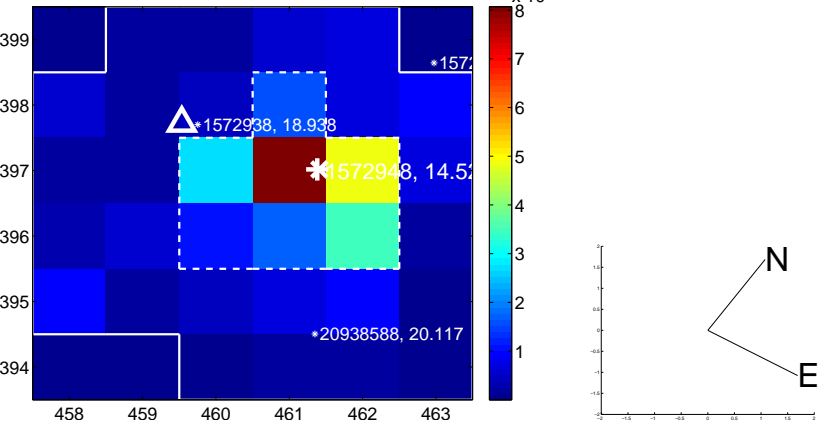
Q14 OOT image



Q15 difference image



Q15 OOT image



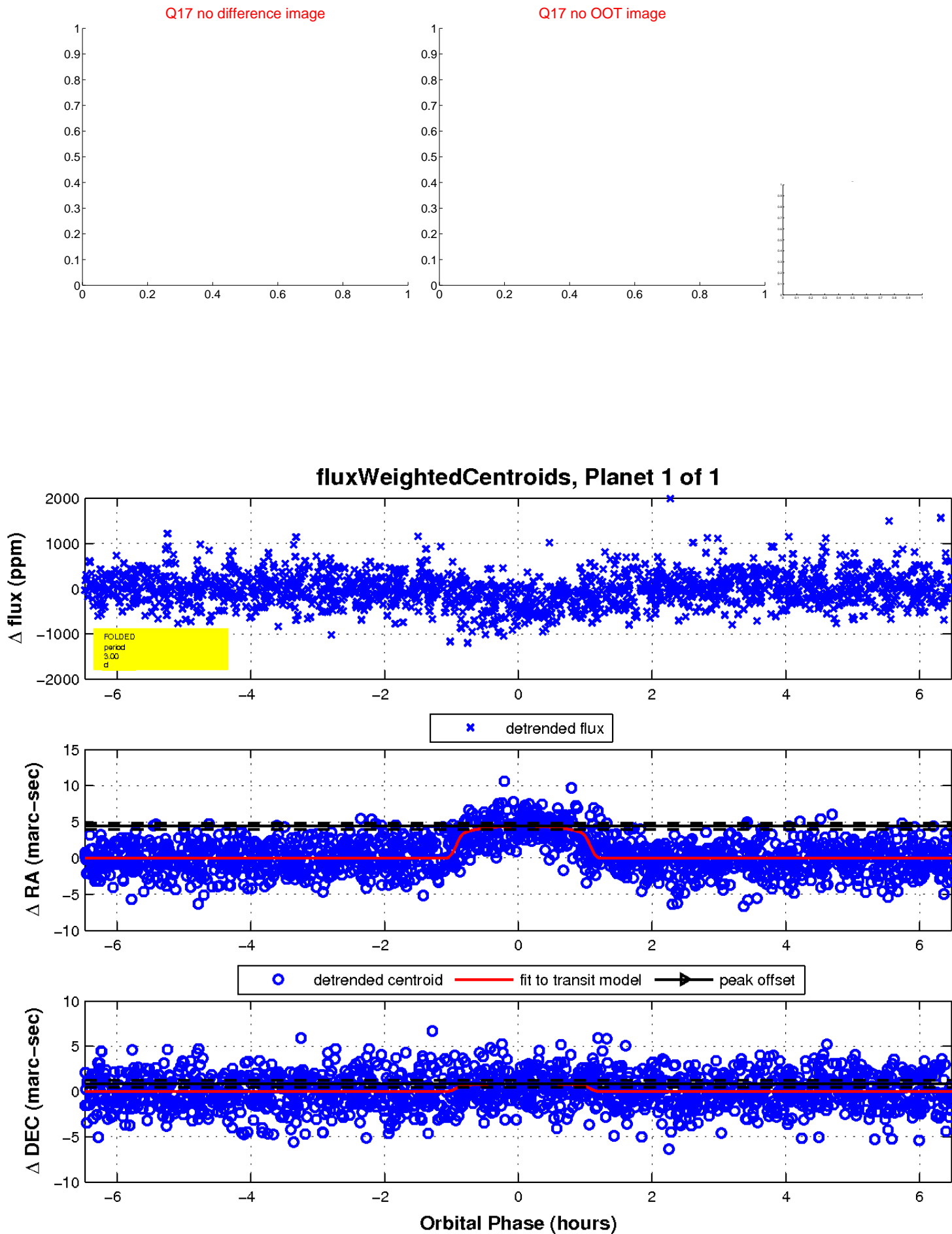
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

