

KIC 011442472

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})
011442472-01	OBS	No	398.167460	222.189314	279.8	29.730	7.1	8.5	0.95	6049	1.84	0.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011442472-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

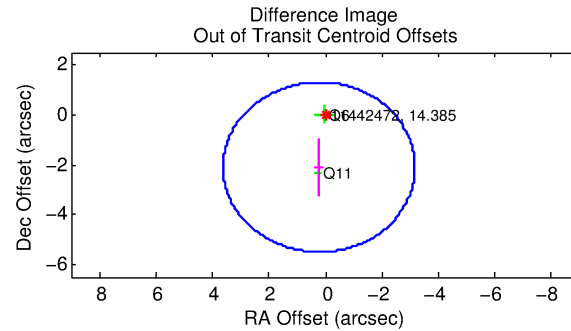
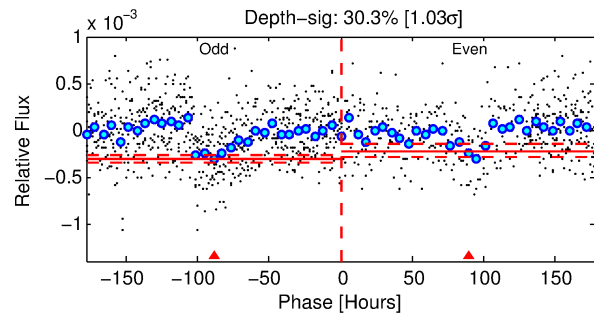
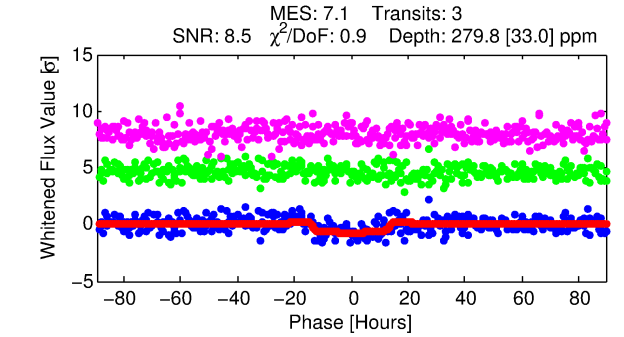
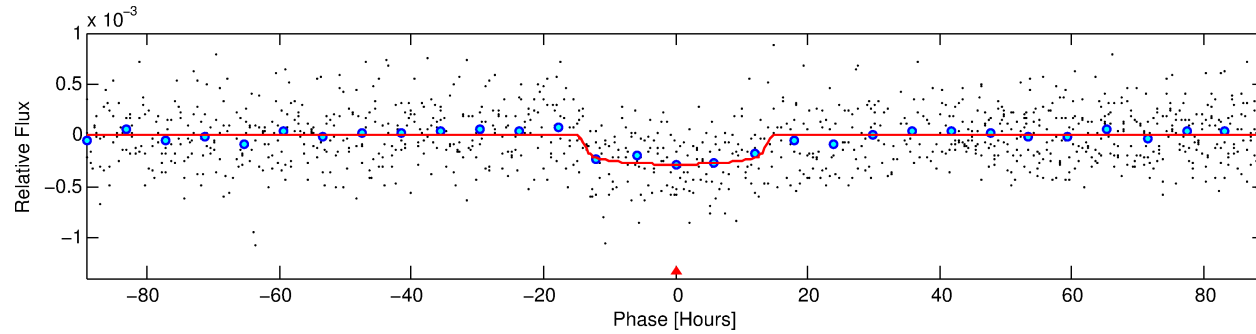
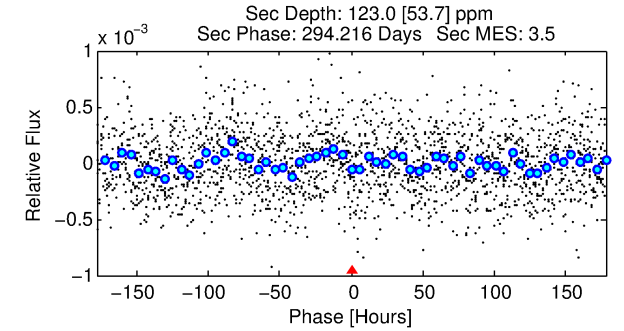
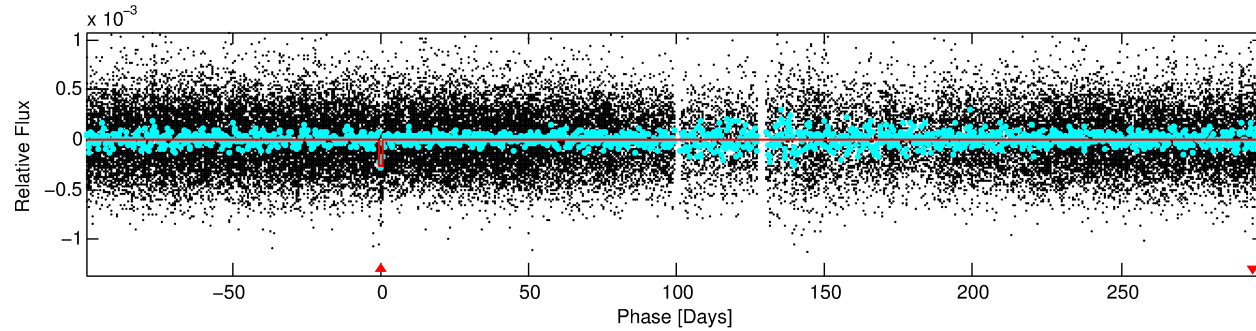
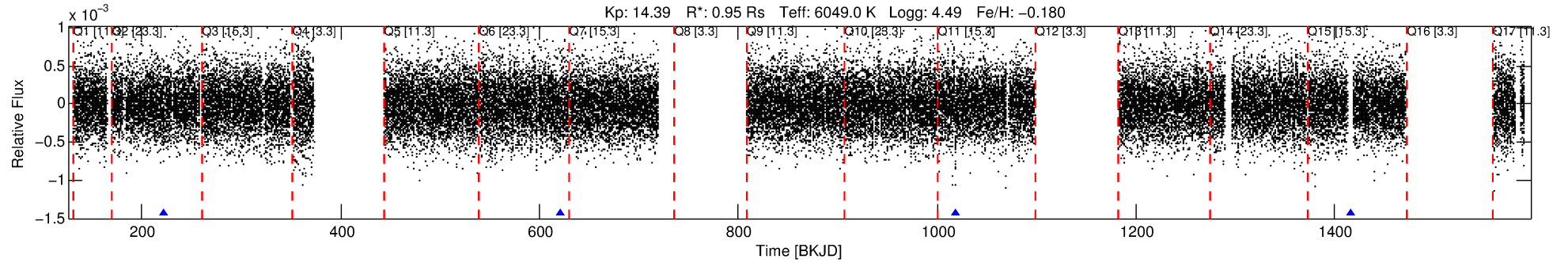
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011442472-01

No Significant Match Found

DV One-Page Summary

KIC: 11442472 Candidate: 1 of 1 Period: 398.167 d



DV Fit Results:

Period = 398.16746 [0.02943] d
Epoch = 222.1893 [0.0376] BKJD
Rp/R* = 0.0178 [0.0024]
a/R* = 51.48 [30.81]
b = 0.88 [0.15]
Seff = 0.95 [0.39]
Teff = 252 [26] K
Rp = 1.84 [0.64] Re
a = 1.0649 [0.2883] AU
Ag = 22628.16 [14626.44] [1.55 σ]
Teffp = 4772 [627] K [7.20 σ]

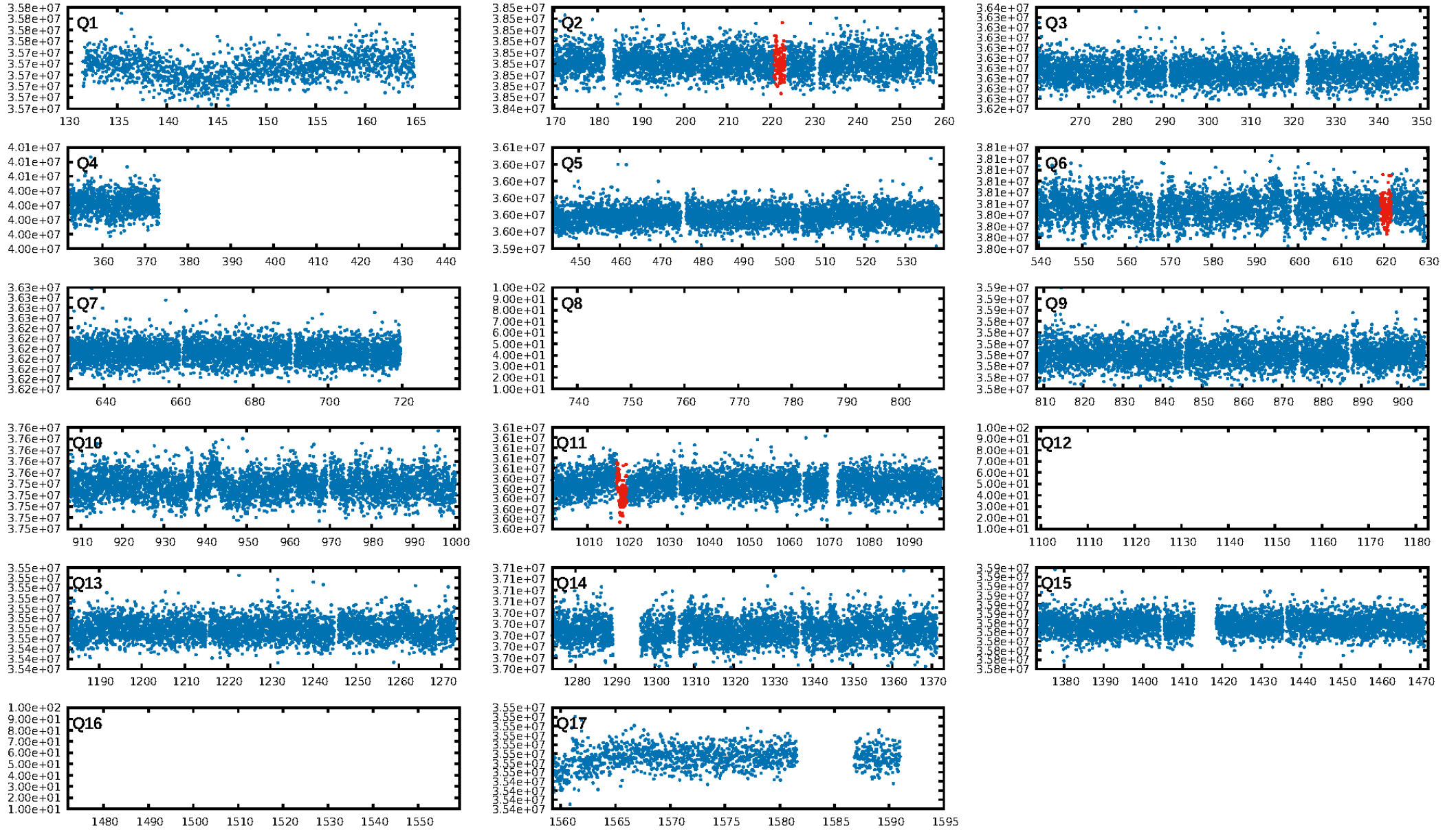
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.37e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -6.62
Centroid-sig: 0.0%
Centroid-so: 7.061 arcsec [3.44 σ]
OotOffset-rm: 2.115 arcsec [1.87 σ]
KicOffset-rm: 2.479 arcsec [2.89 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

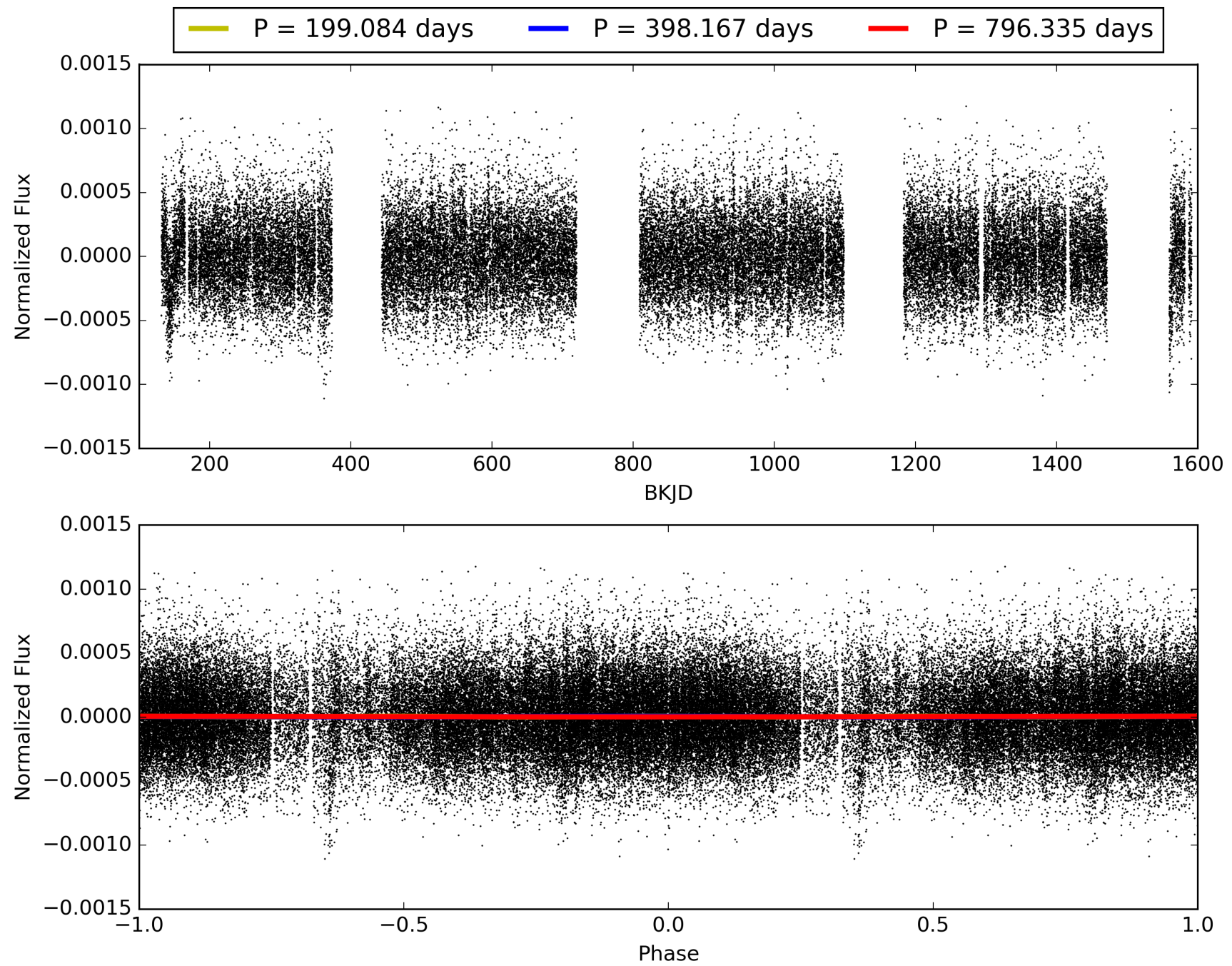
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:10:41 Z

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

TCE 011442472-01, PDC Light Curves

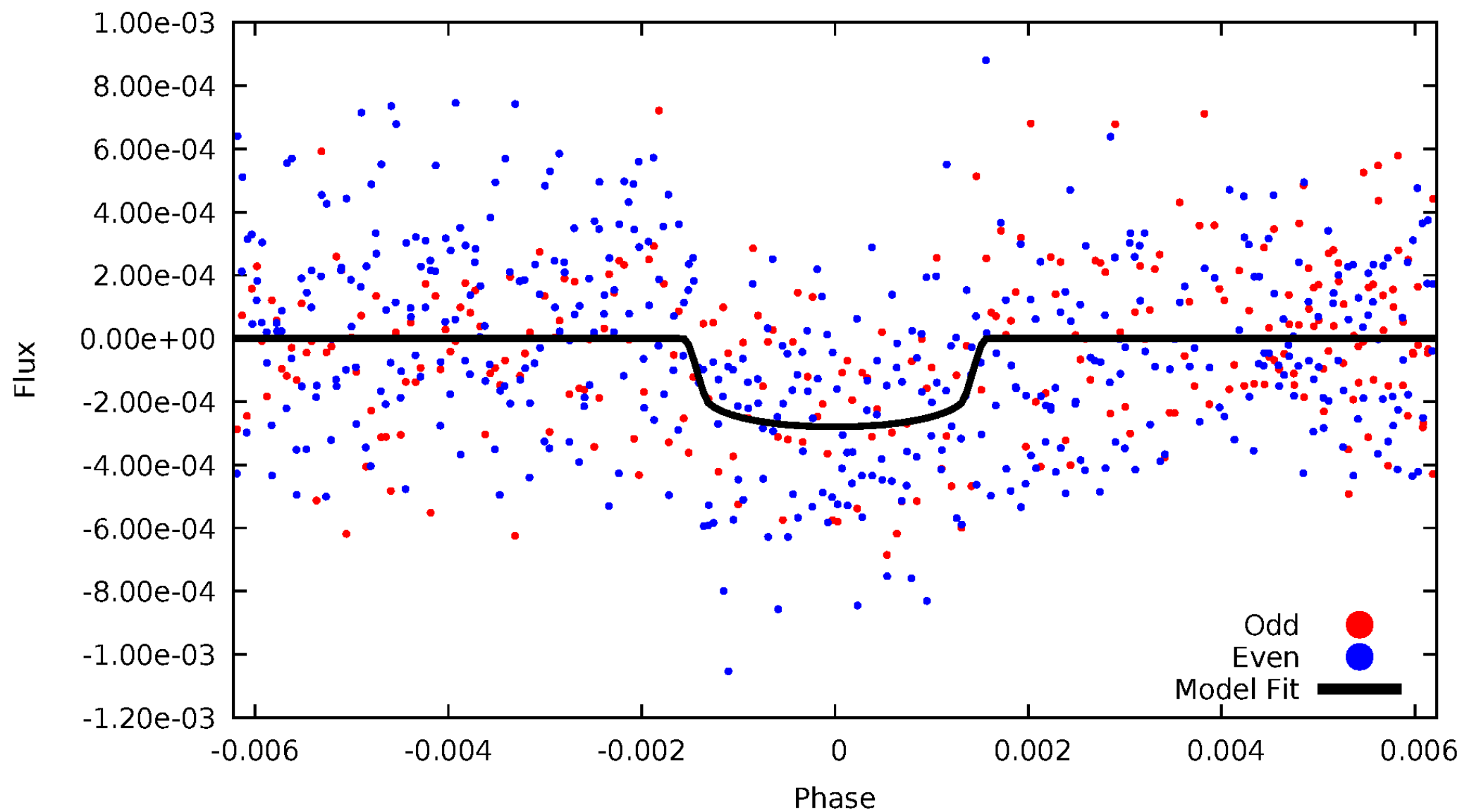


TCE 011442472-01



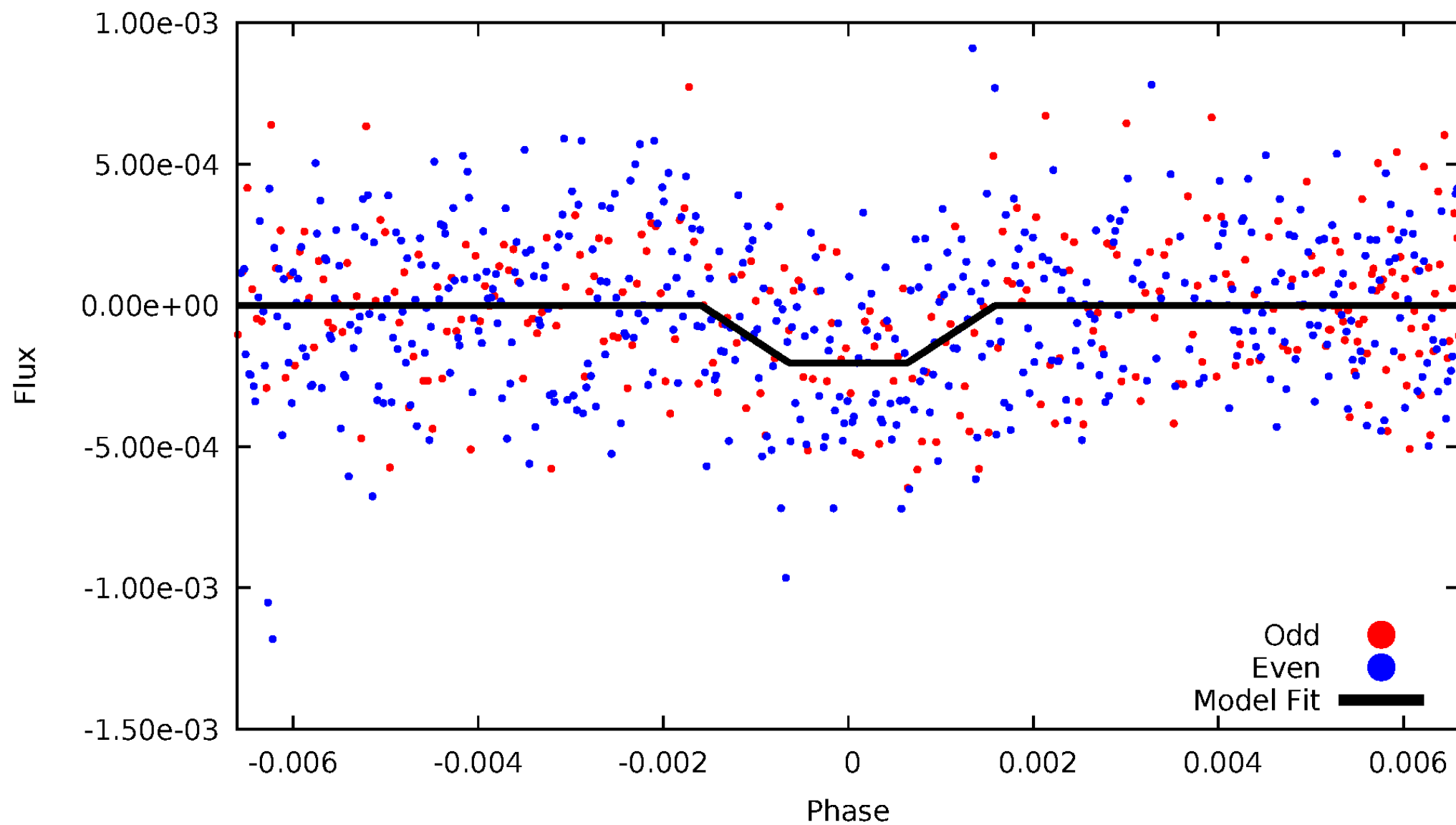
DV Odd/Even

TCE 011442472-01



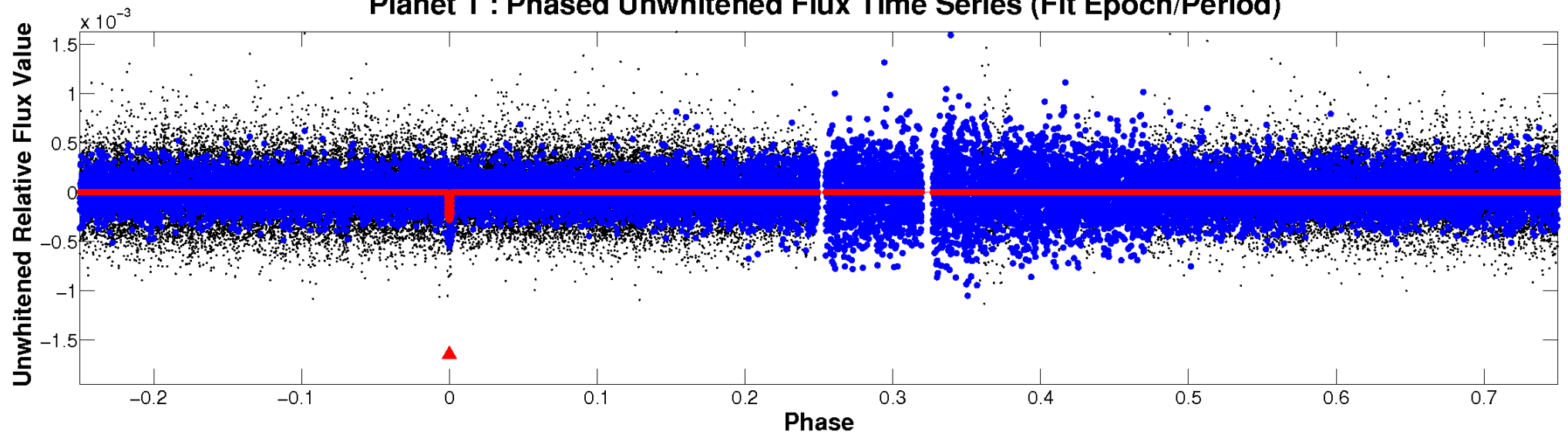
ALT Odd/Even

TCE 011442472-01

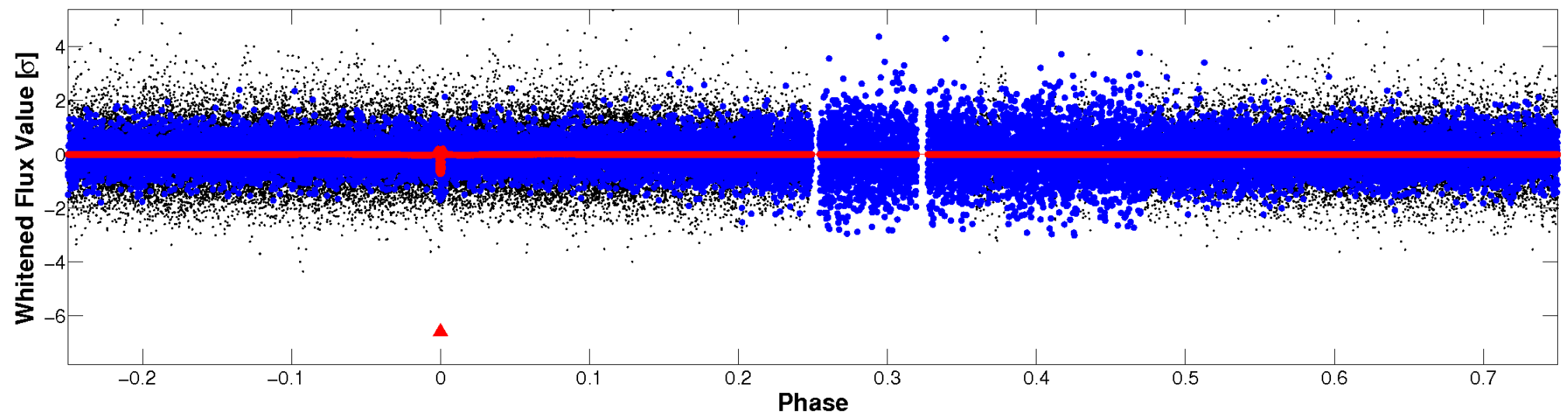


Non-Whitened Vs. Whitened Light Curve

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

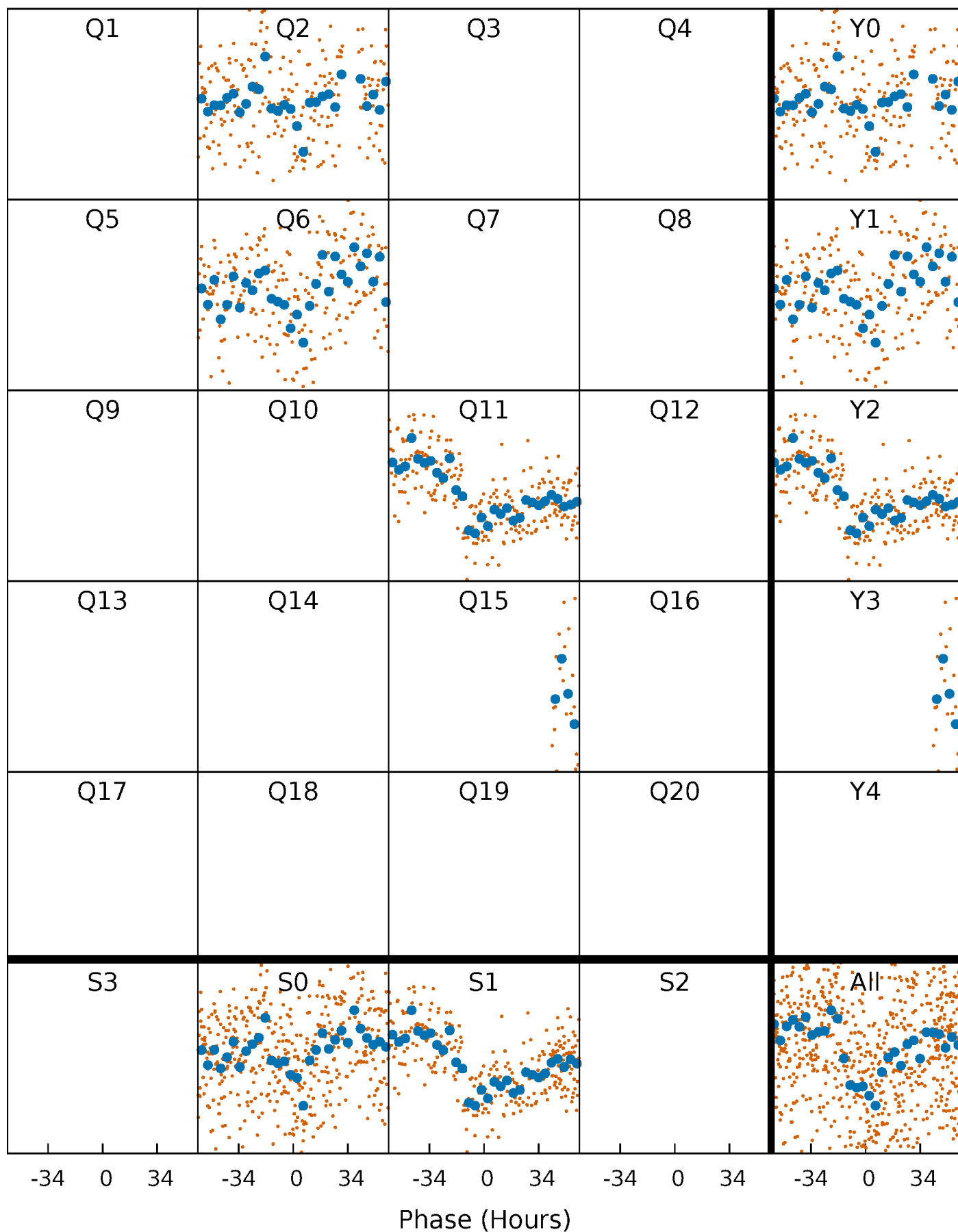


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



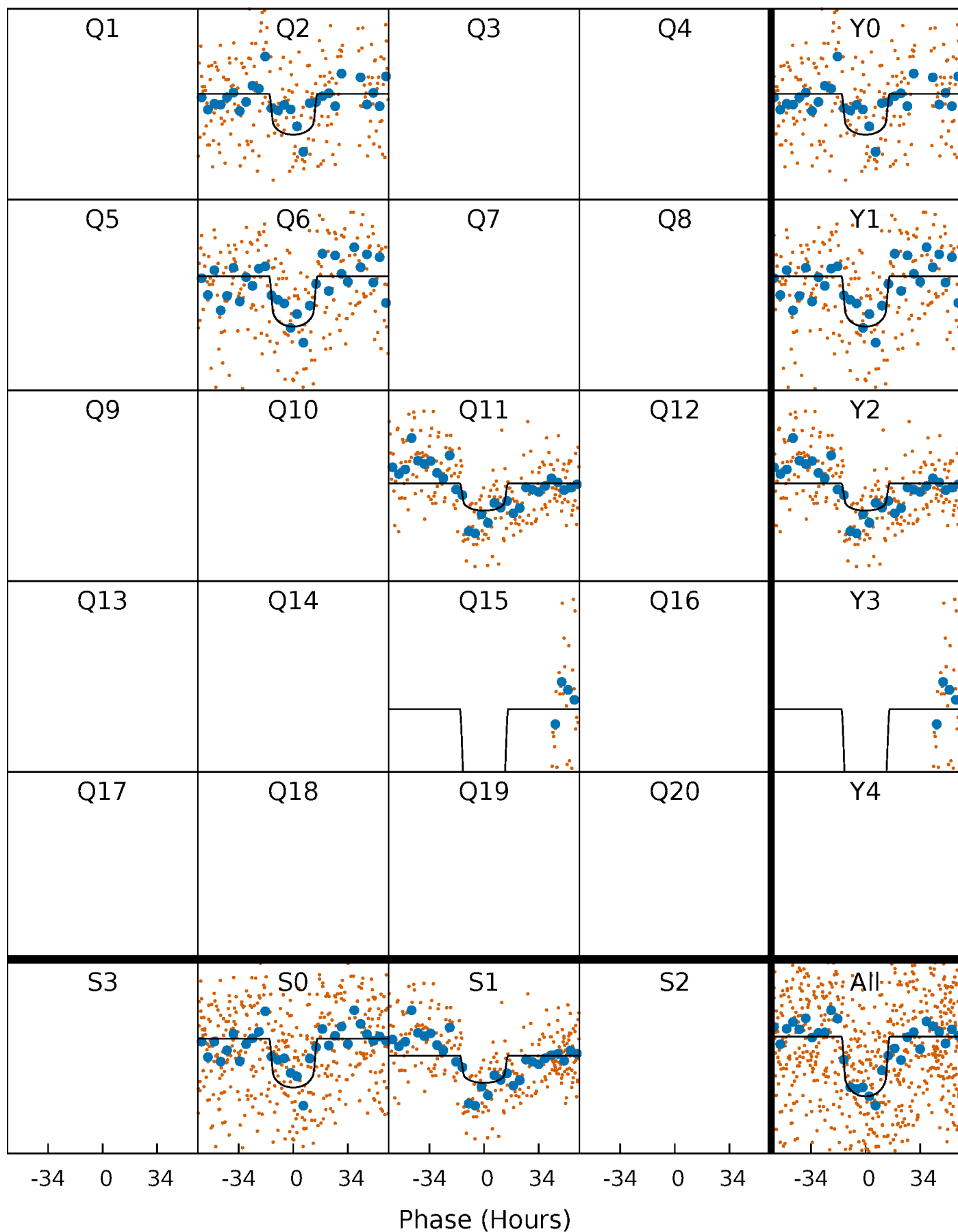
PDC Quarter-Phased Transit Curves

TCE 011442472-01 $P=398.167460$ Days $T_0=222.189314$ (BKJD)



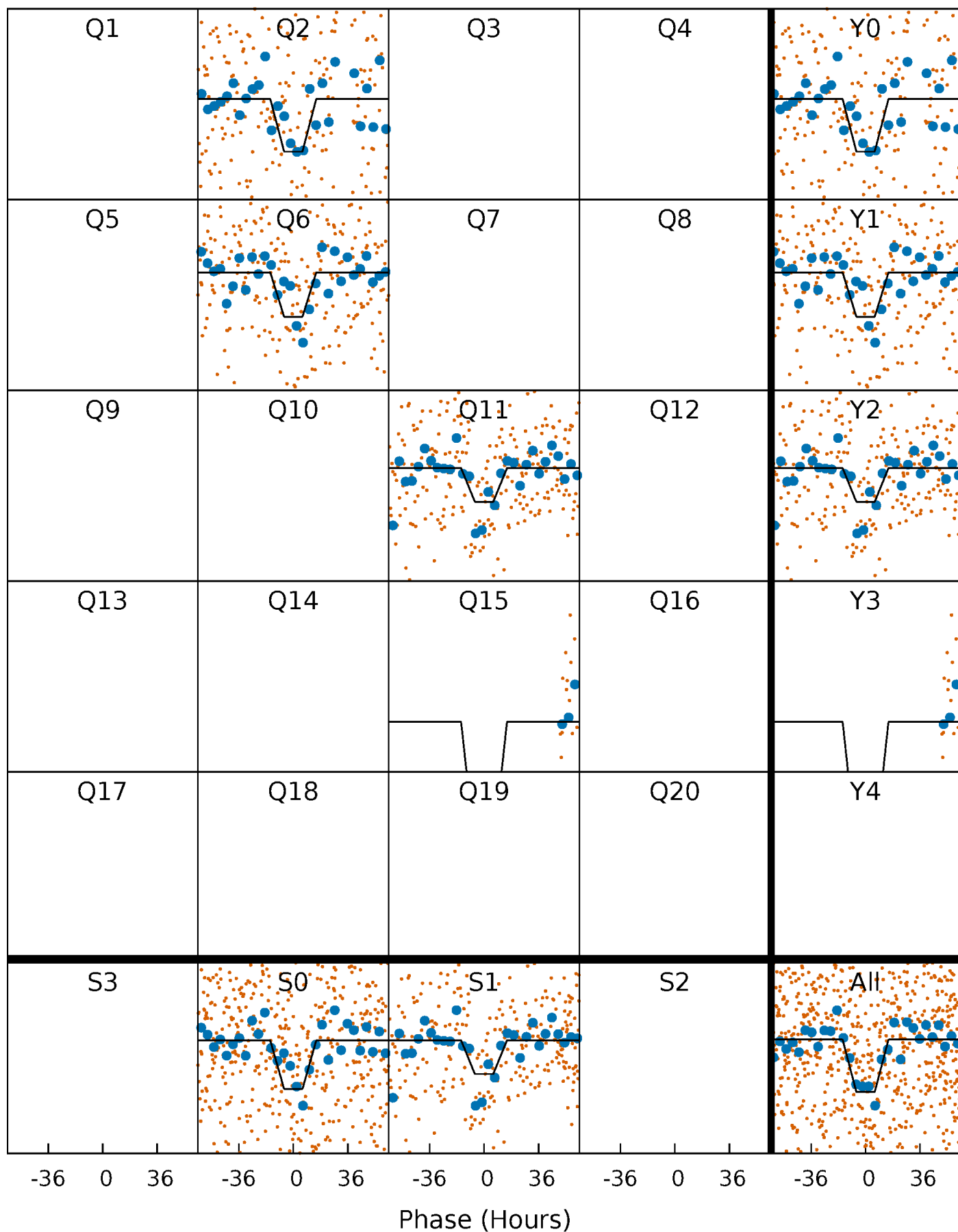
DV Quarter-Phased Transit Curves

TCE 011442472-01 P=398.167460 Days $T_0=222.189314$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

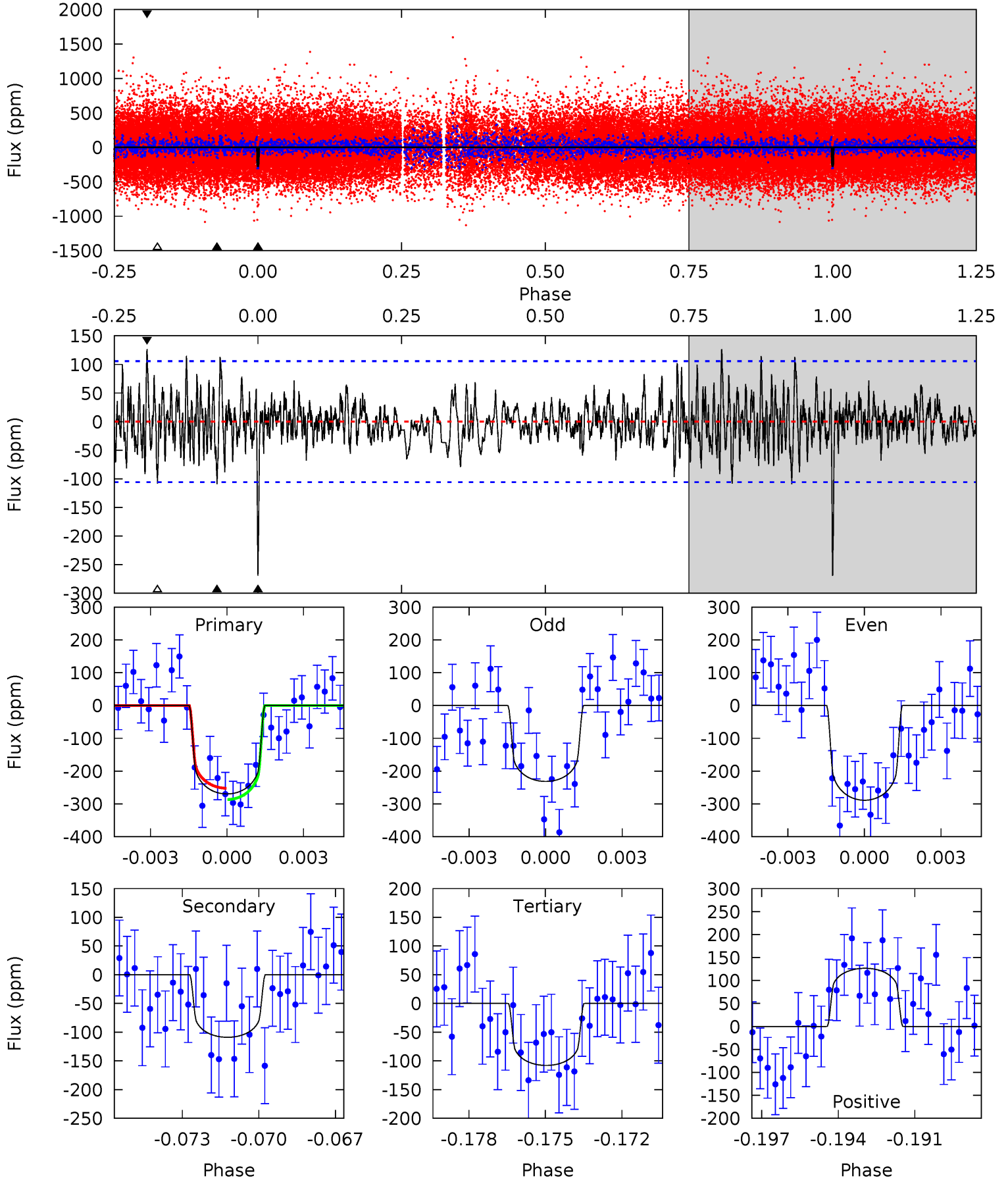
TCE 011442472-01 P=398.038938 Days $T_0=222.276473$ (BKJD)



DV Model-Shift Uniqueness Test

011442472-01, P = 398.167460 Days, E = 222.189314 Days

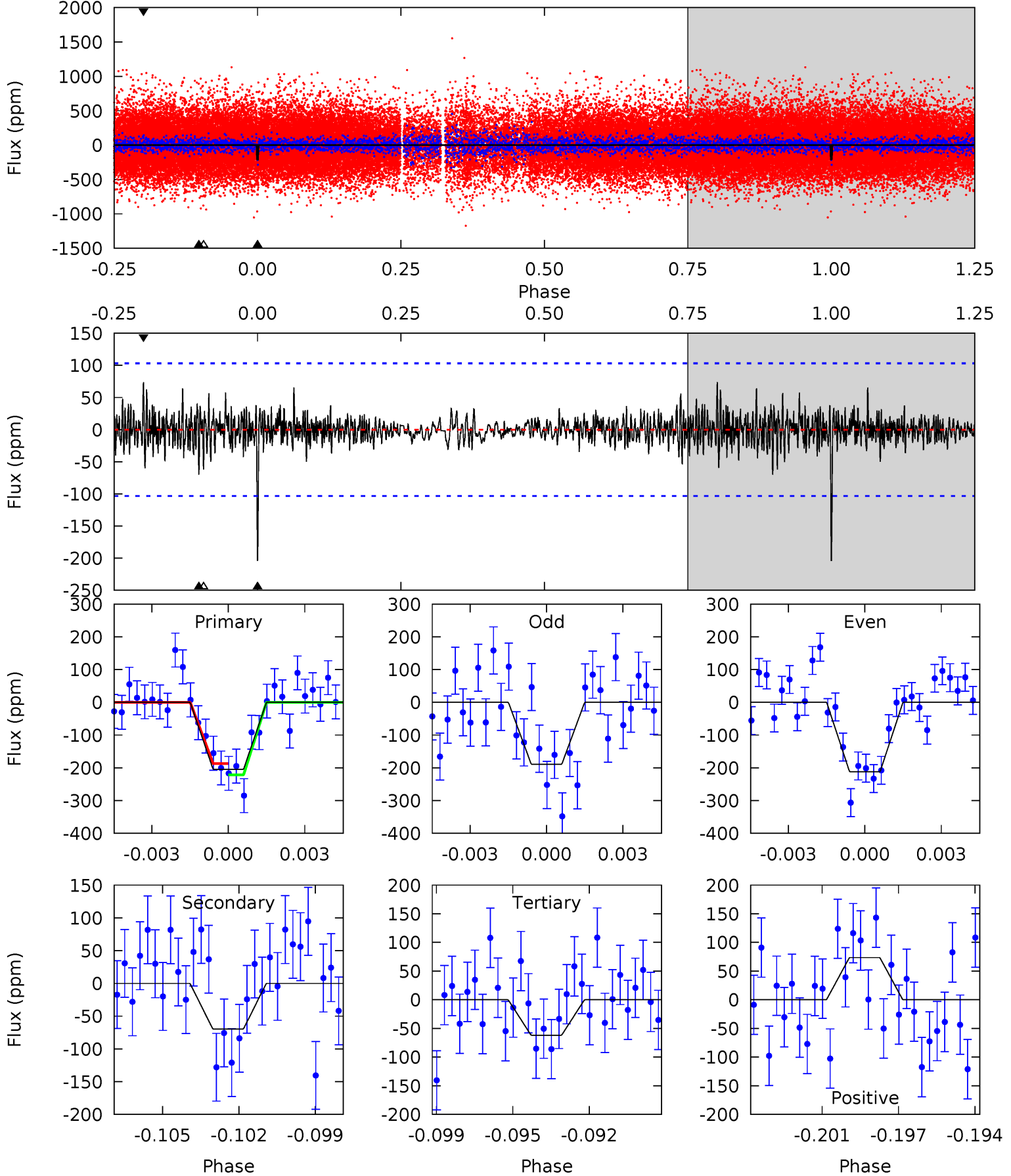
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	5.40	5.35	6.27	5.24	2.95	1.59	8.02	7.09	0.05	-0.87	1.34	1.17	0.32	0.85



Alt Model-Shift Uniqueness Test

011442472-01, $P = 398.038938$ Days, $E = 222.276473$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	3.55	3.15	3.74	5.24	2.95	0.85	7.25	6.66	0.40	-0.19	0.55	1.08	0.26	0.87



Stellar Parameters For KIC 011442472

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6049^{+163}_{-181}	$4.492^{+0.054}_{-0.216}$	$-0.180^{+0.300}_{-0.300}$	$0.947^{+0.304}_{-0.101}$	$1.015^{+0.140}_{-0.140}$	$1.684^{+0.378}_{-0.896}$
	+3%/-3%	+1%/-5%	+167%/-167%	+32%/-11%	+14%/-14%	+22%/-53%
Source	PHO1	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 011442472-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109 ± 20	$1.92^{+0.40}_{-0.31}$	360^{+29}_{-17}	4761^{+379}_{-301}	17868^{+8879}_{-6147}
Alt.	-70 ± 20	$1.54^{+0.38}_{-0.31}$	360^{+28}_{-17}	4745^{+496}_{-379}	17559^{+10626}_{-7060}

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

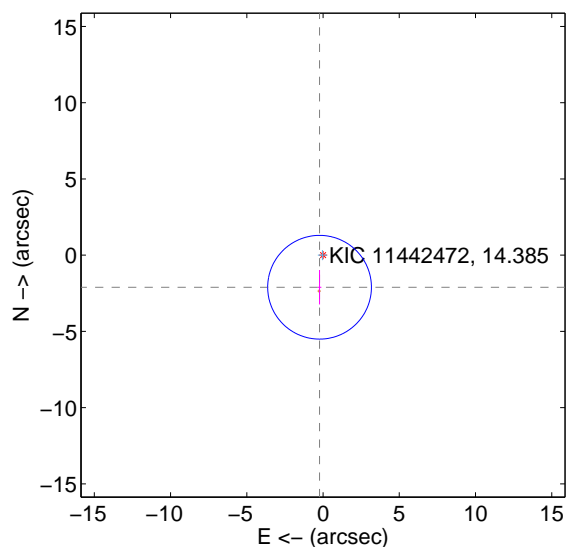
Supplemental centroid analysis for 011442472-01. Kepler magnitude: 14.38. Transit SNR 8.46

There are 1 quarters with good PRF difference image offsets

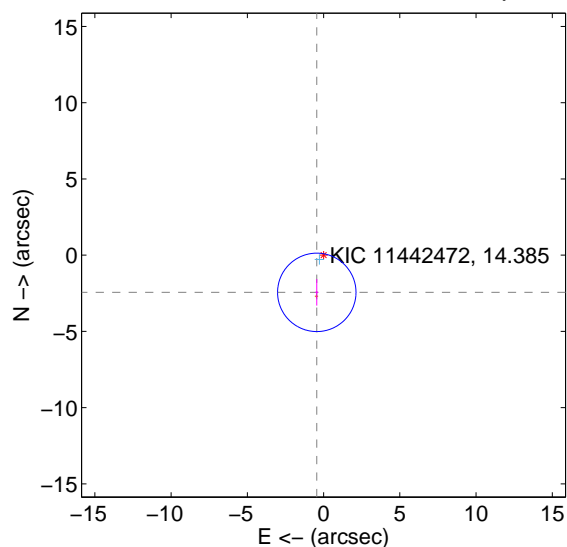
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.115 ± 1.134	1.87	0.228 ± 0.122	-2.103 ± 1.129
PRF-fit source offset from KIC position	2.479 ± 0.857	2.89	0.446 ± 0.095	-2.439 ± 0.871
photometric centroid source offset	7.06 ± 2.05	3.44	-6.12 ± 1.98	3.53 ± 2.25

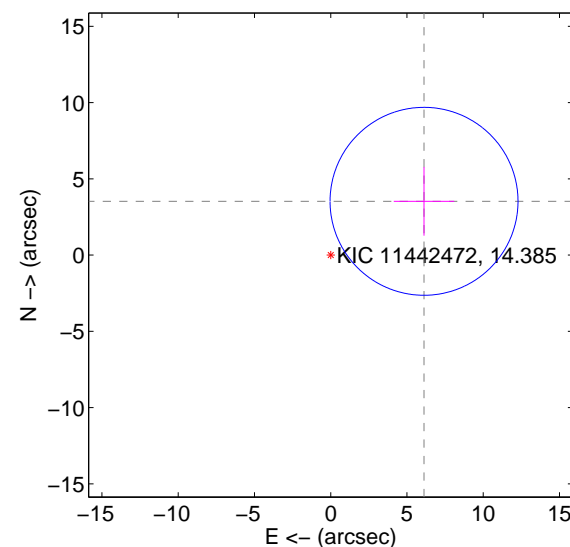
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

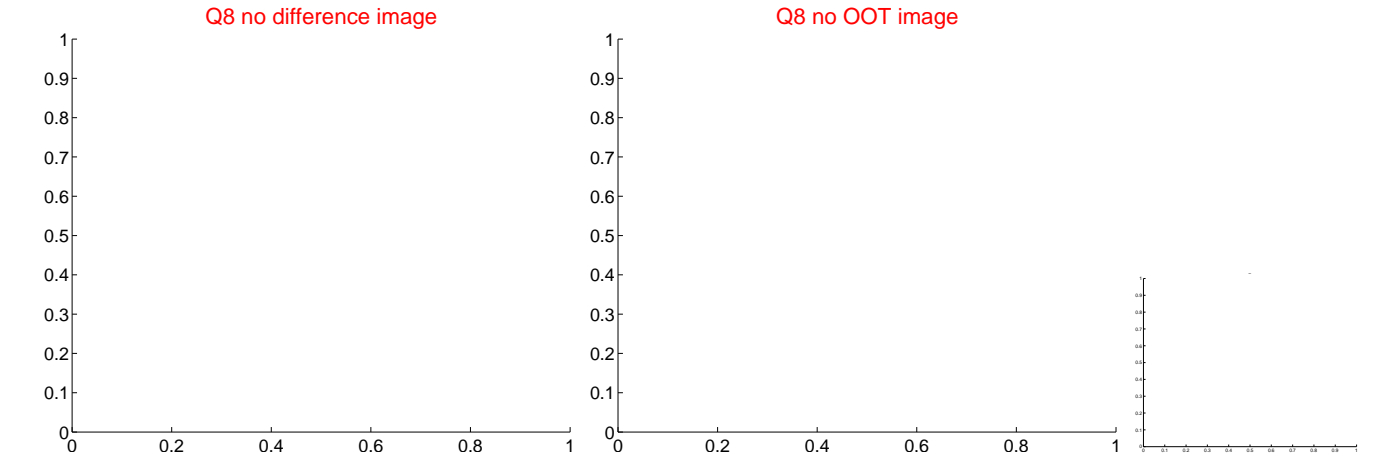
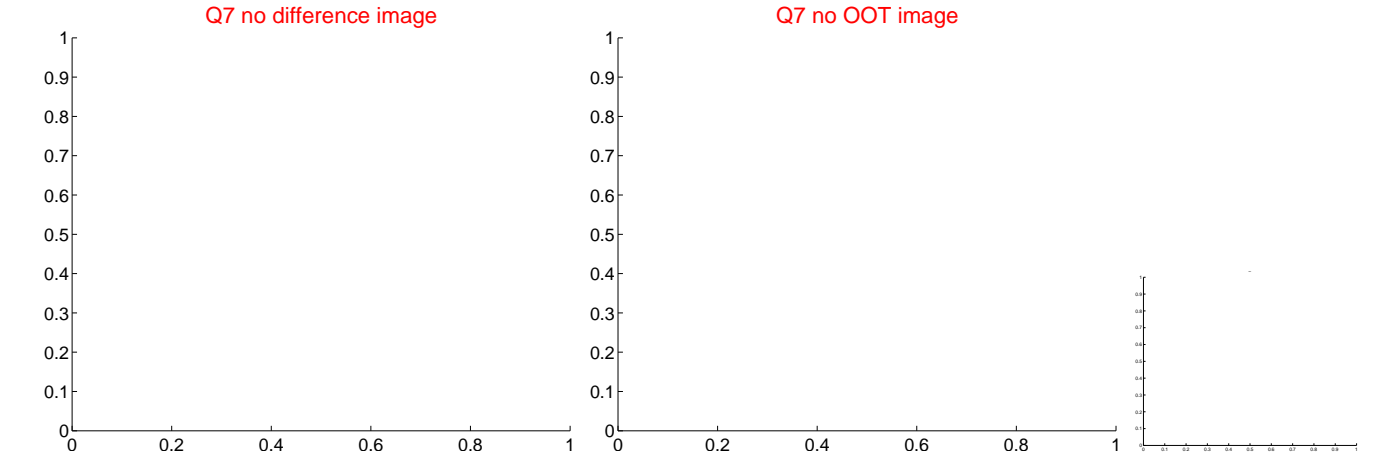
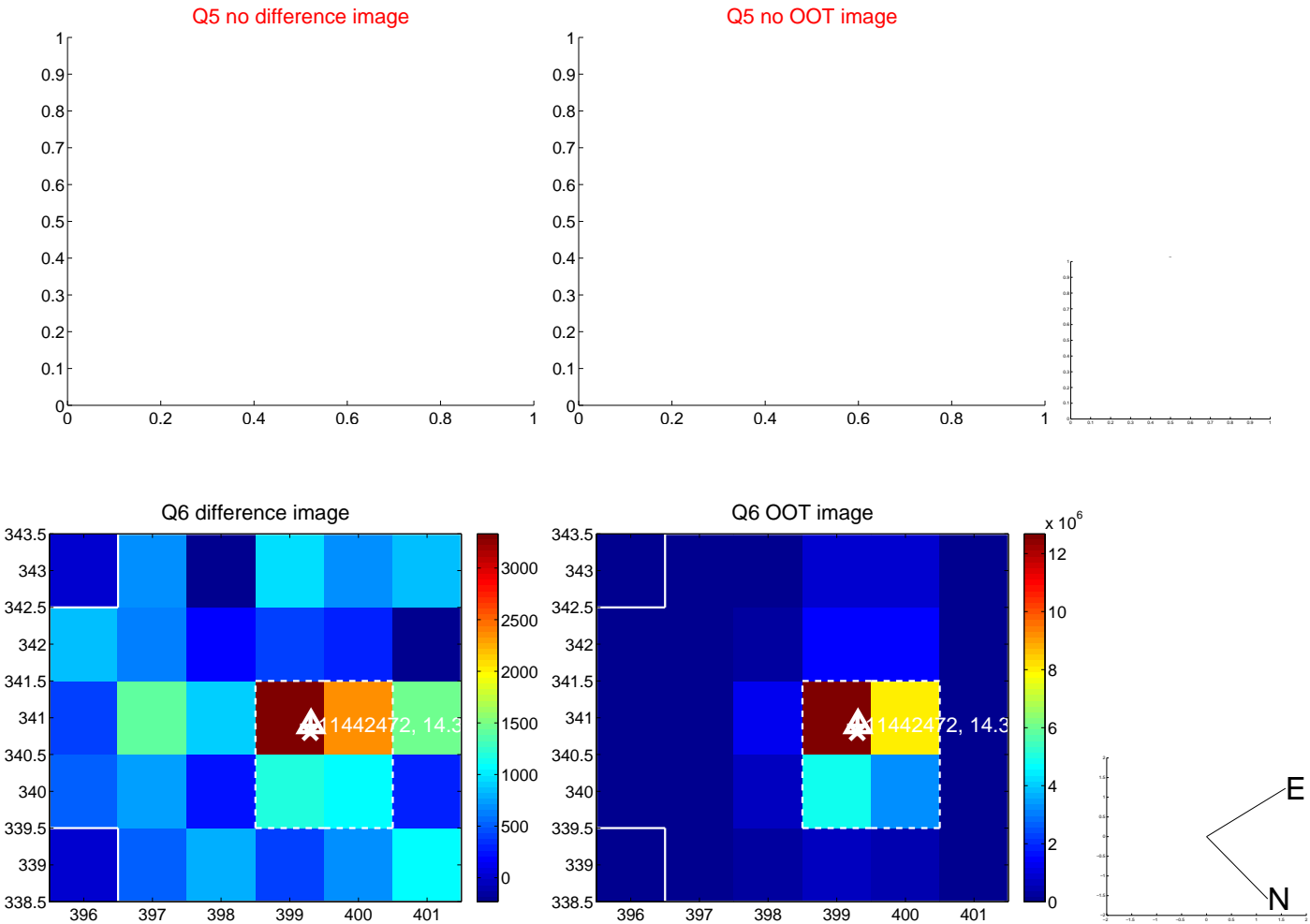


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q9 no difference image



Q9 no OOT image



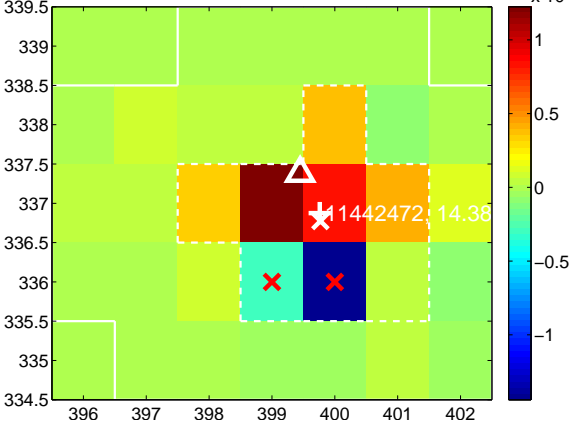
Q10 no difference image



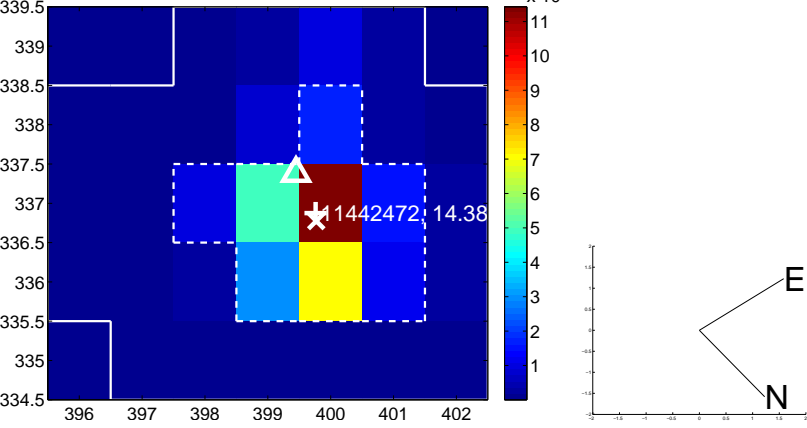
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



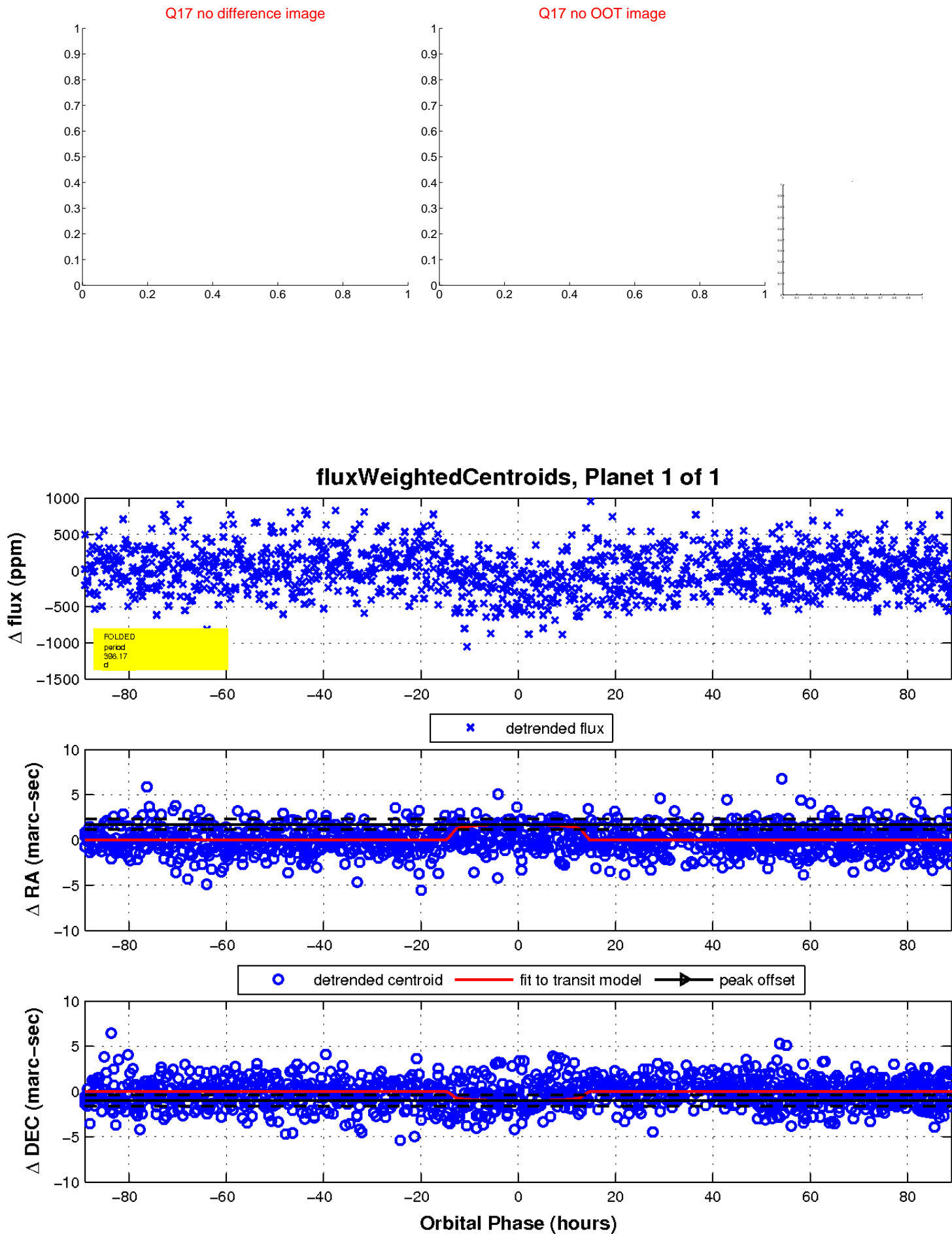
Q12 no OOT image



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



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



UKIRT Image

Declination

