

KIC 011954016

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})
011954016-01	OBS	No	514.226972	192.722685	966.8	10.780	7.9	7.1	0.92	5792	3.60	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011954016-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

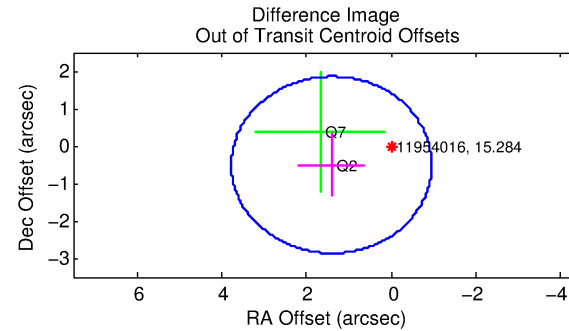
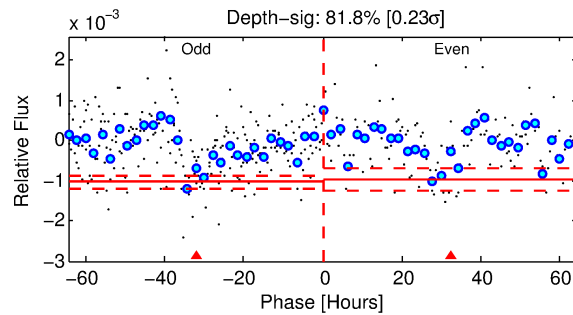
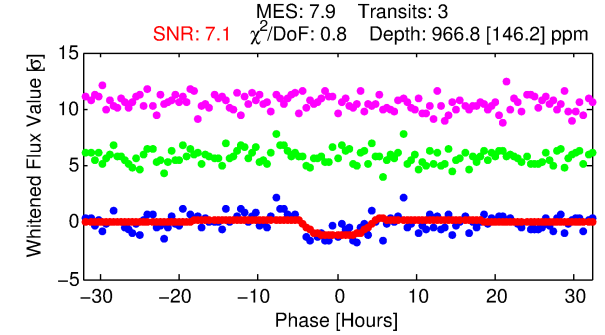
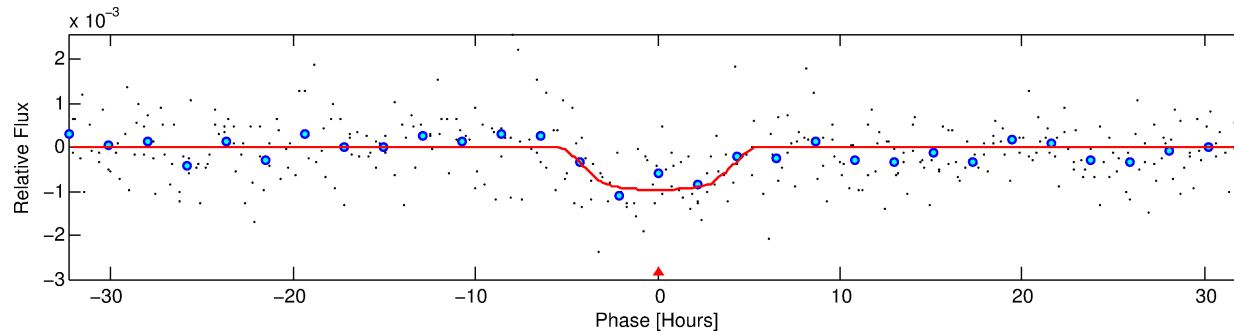
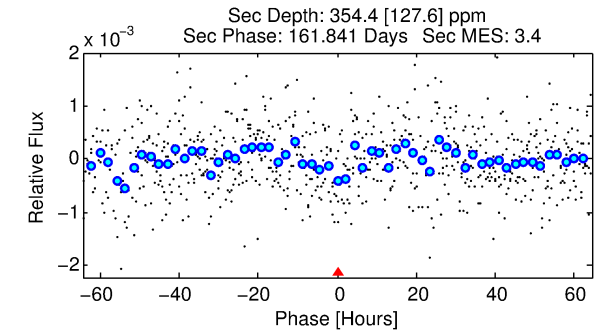
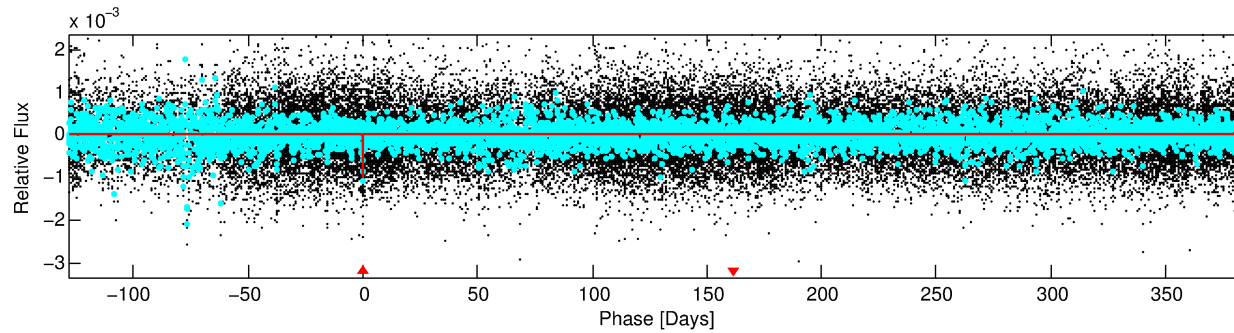
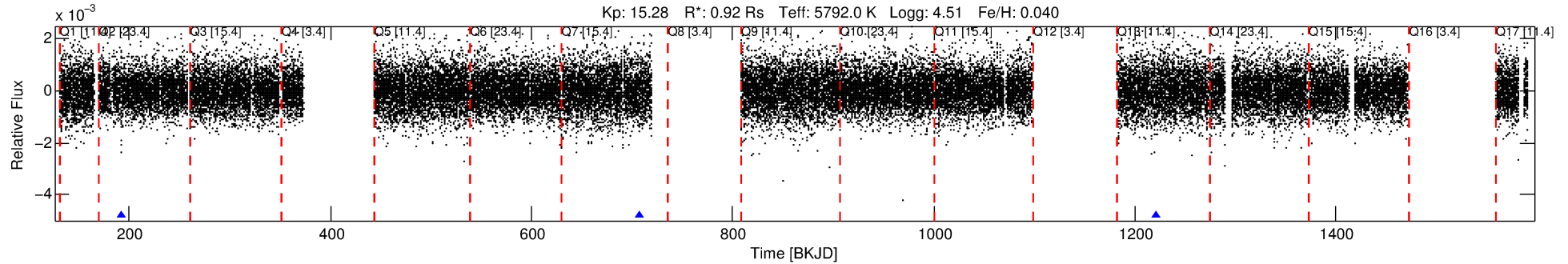
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011954016-01

No Significant Match Found

DV One-Page Summary

KIC: 11954016 Candidate: 1 of 1 Period: 514.227 d



DV Fit Results:

Period = 514.22697 [0.01723] d
Epoch = 192.7227 [0.0207] BKJD
Rp/R* = 0.0357 [0.0042]
a/R* = 157.88 [51.50]
b = 0.94 [0.04]
Seff = 0.54 [0.21]
Teq = 218 [22] K
Rp = 3.60 [1.20] Re
a = 1.2626 [0.3257] AU
Ag = 24016.00 [13651.90] [1.76σ]
Teffp = 4205 [476] K [8.36σ]

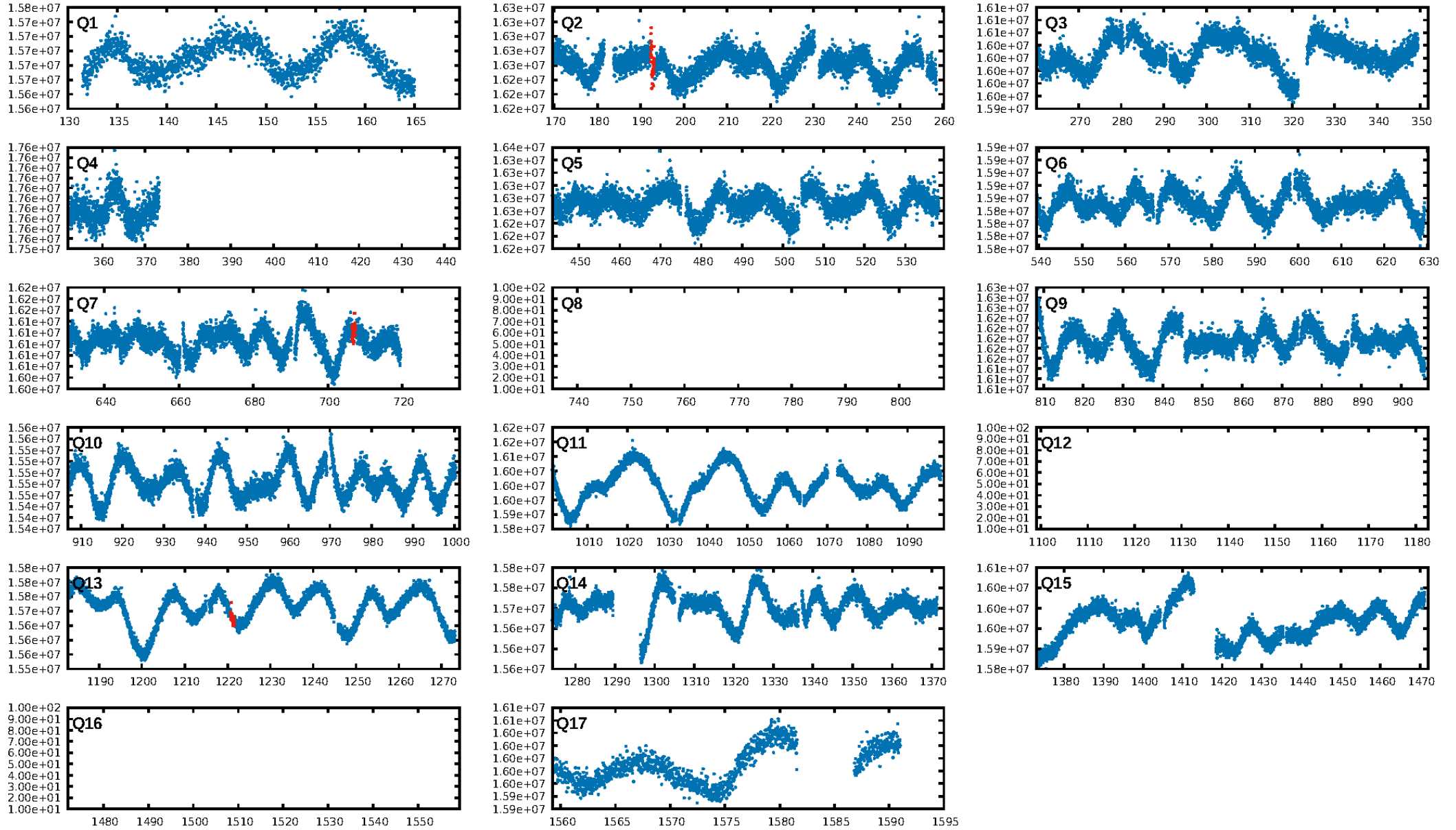
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 5.53e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -7.928
Centroid-sig: 22.0%
Centroid-so: 1.680 arcsec [1.05σ]
OotOffset-rm: 1.494 arcsec [1.90σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 1.436 arcsec [1.82σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

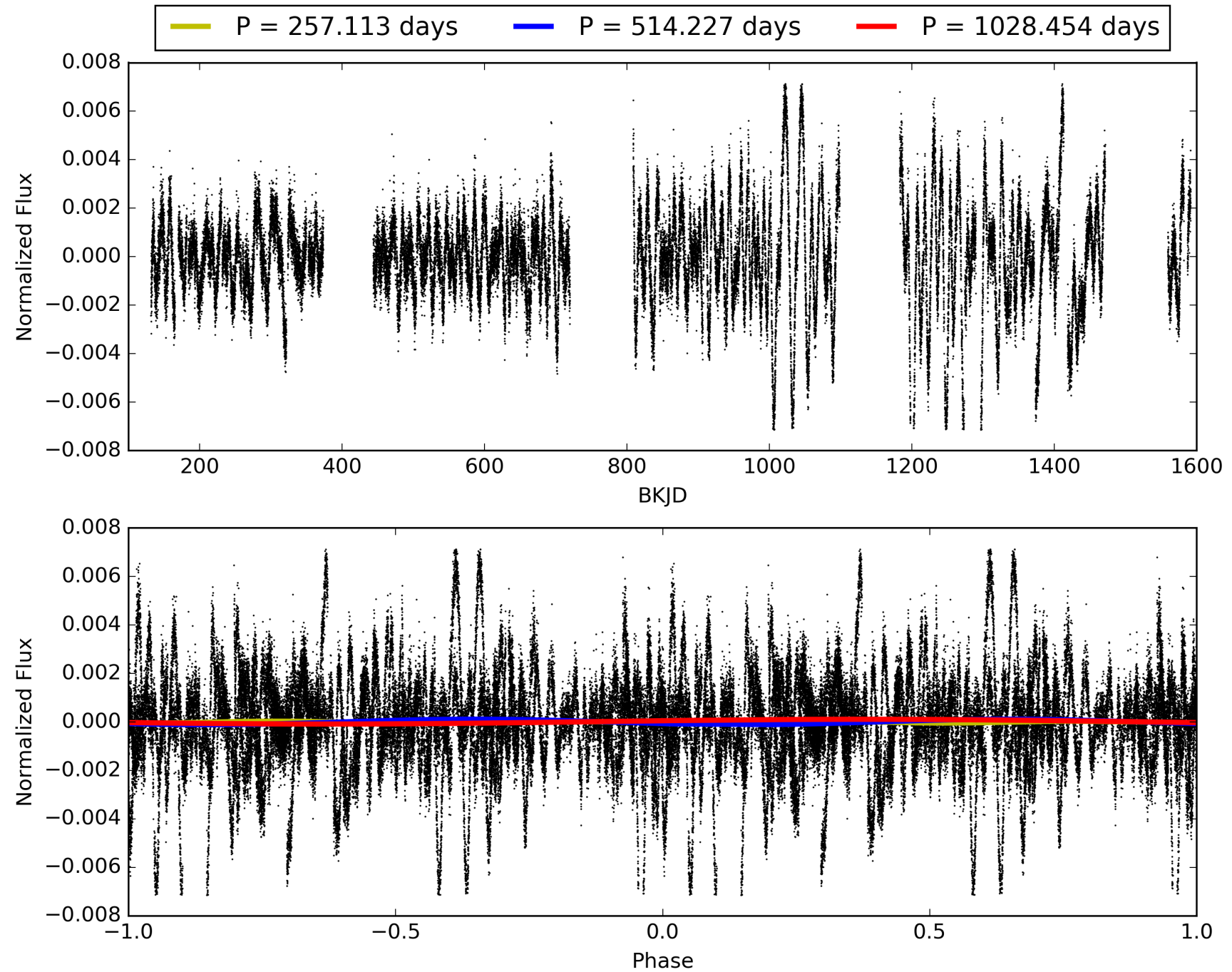
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:52:03 Z

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

TCE 011954016-01, PDC Light Curves

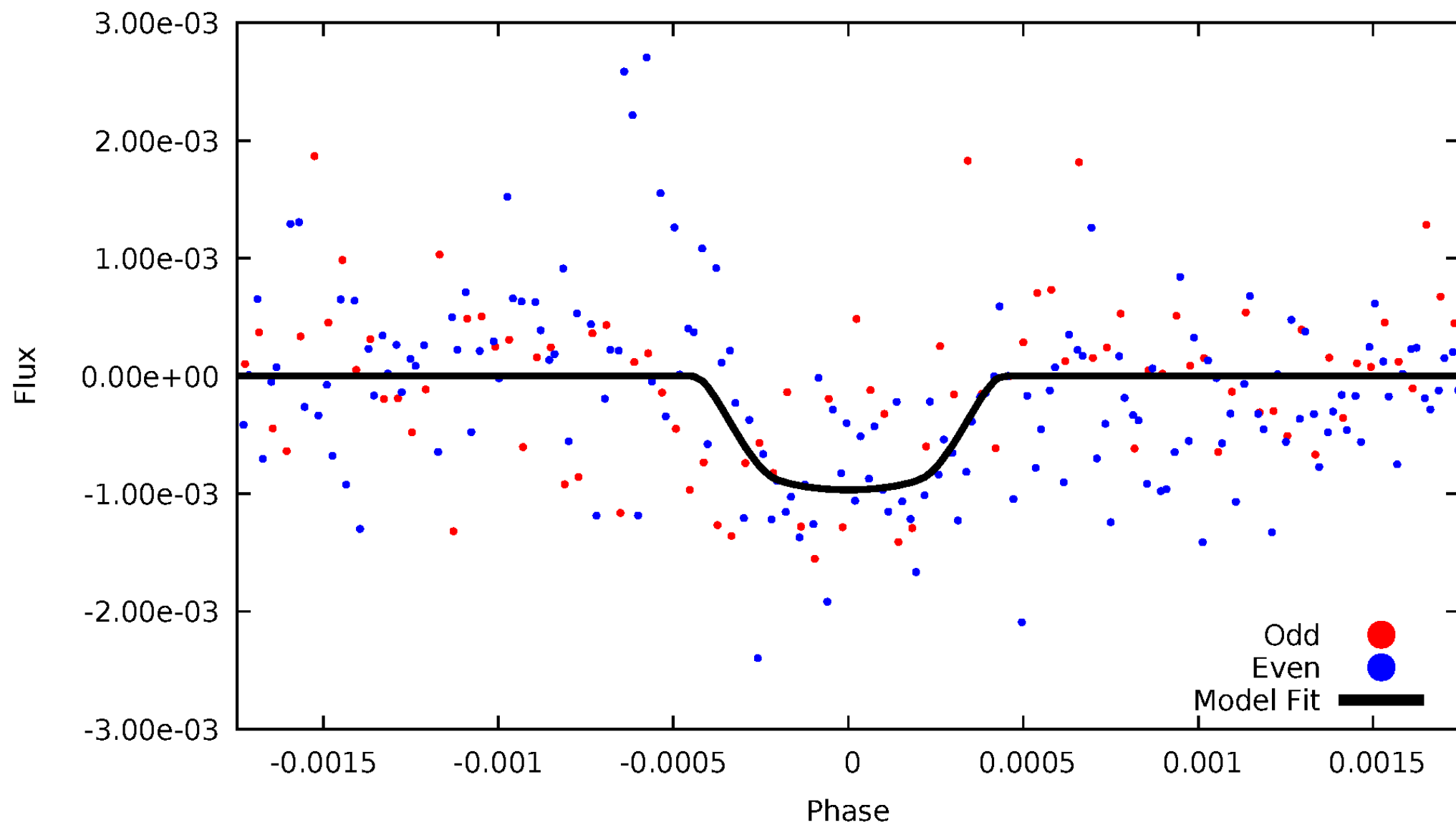


TCE 011954016-01



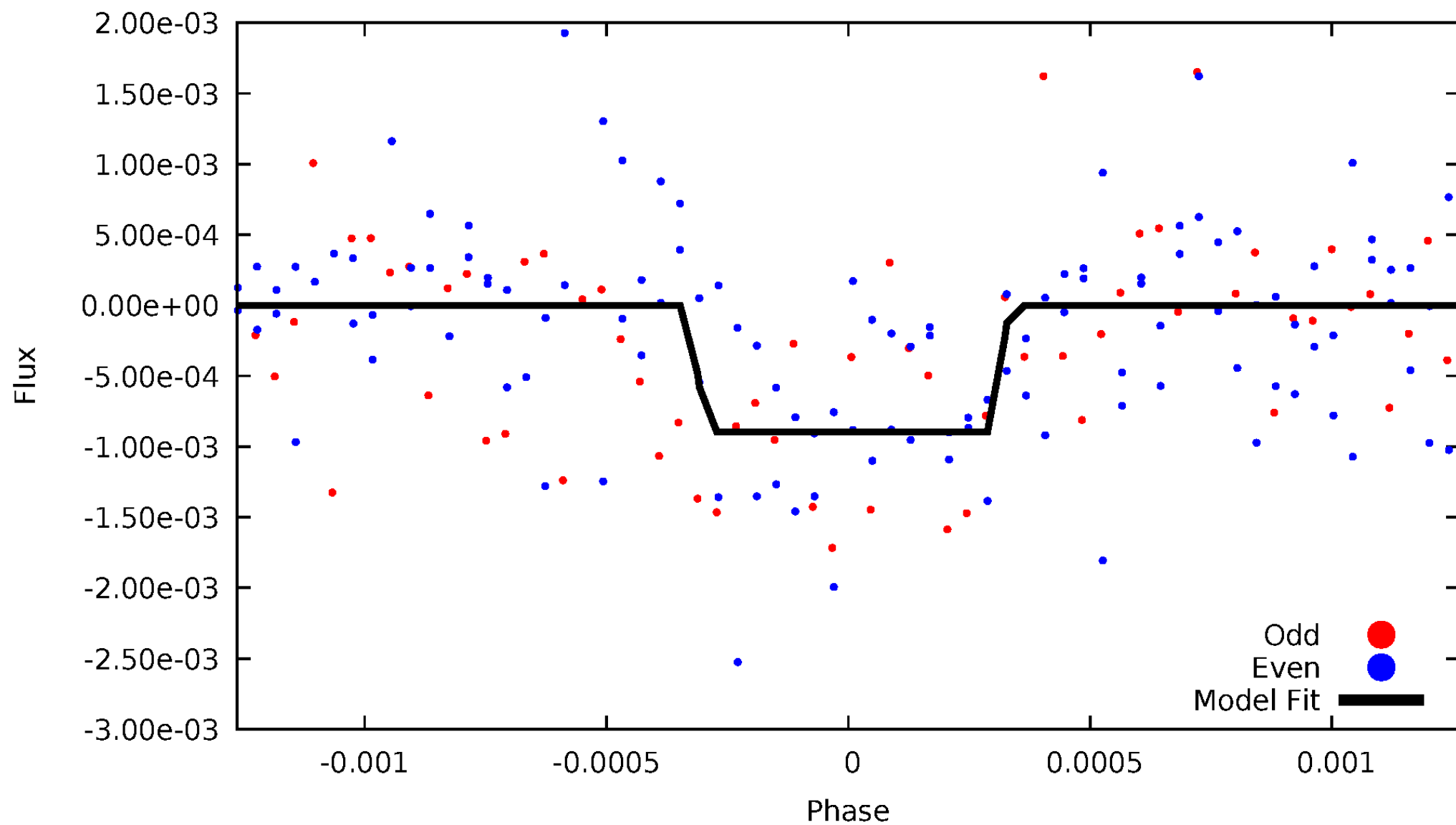
DV Odd/Even

TCE 011954016-01



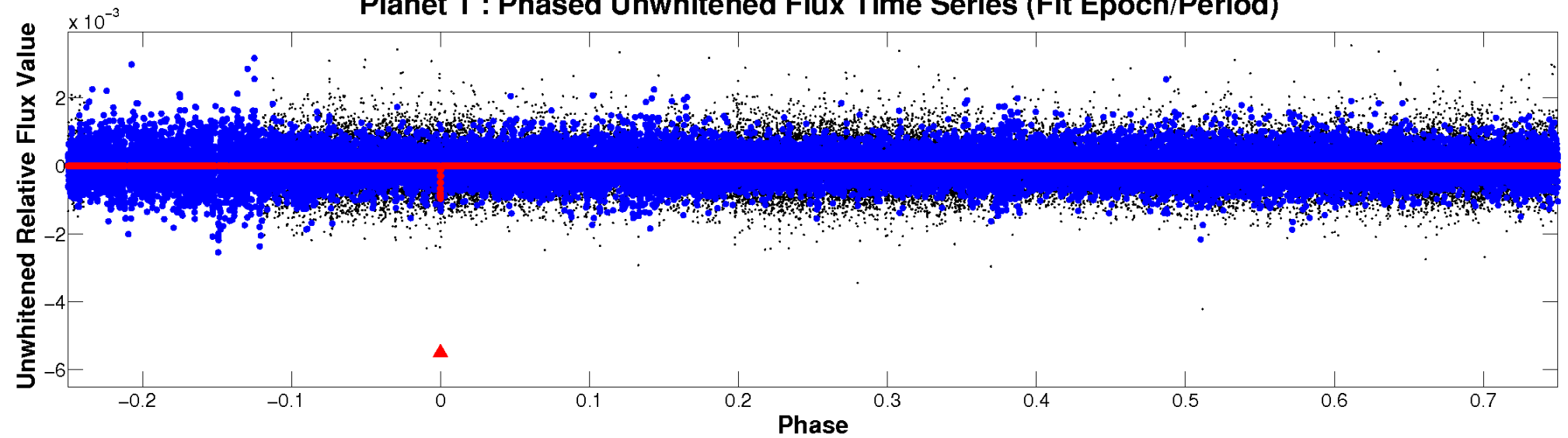
ALT Odd/Even

TCE 011954016-01

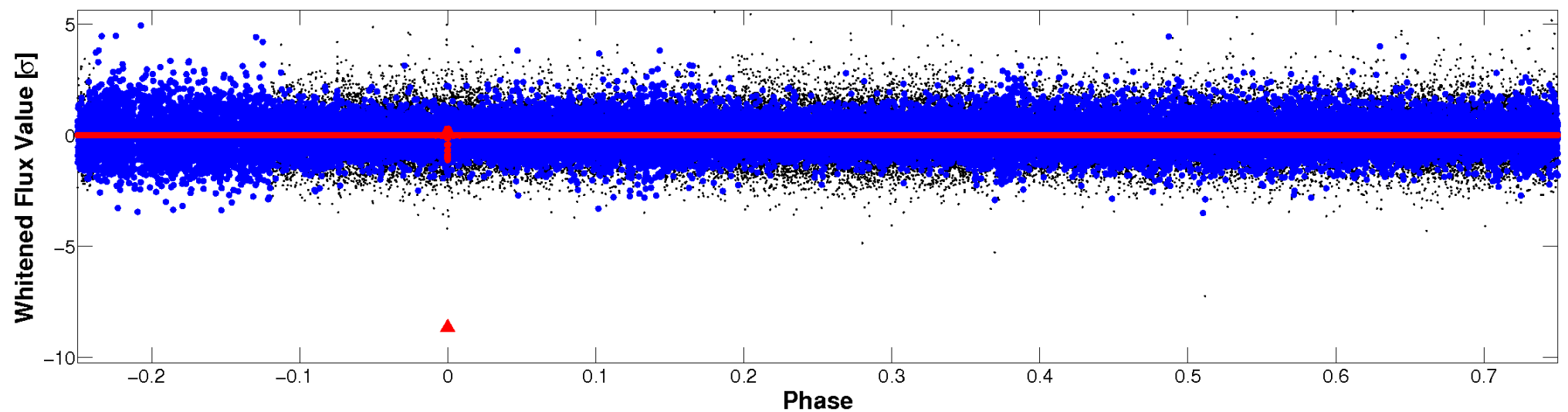


Non-Whitened Vs. Whitened Light Curve

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

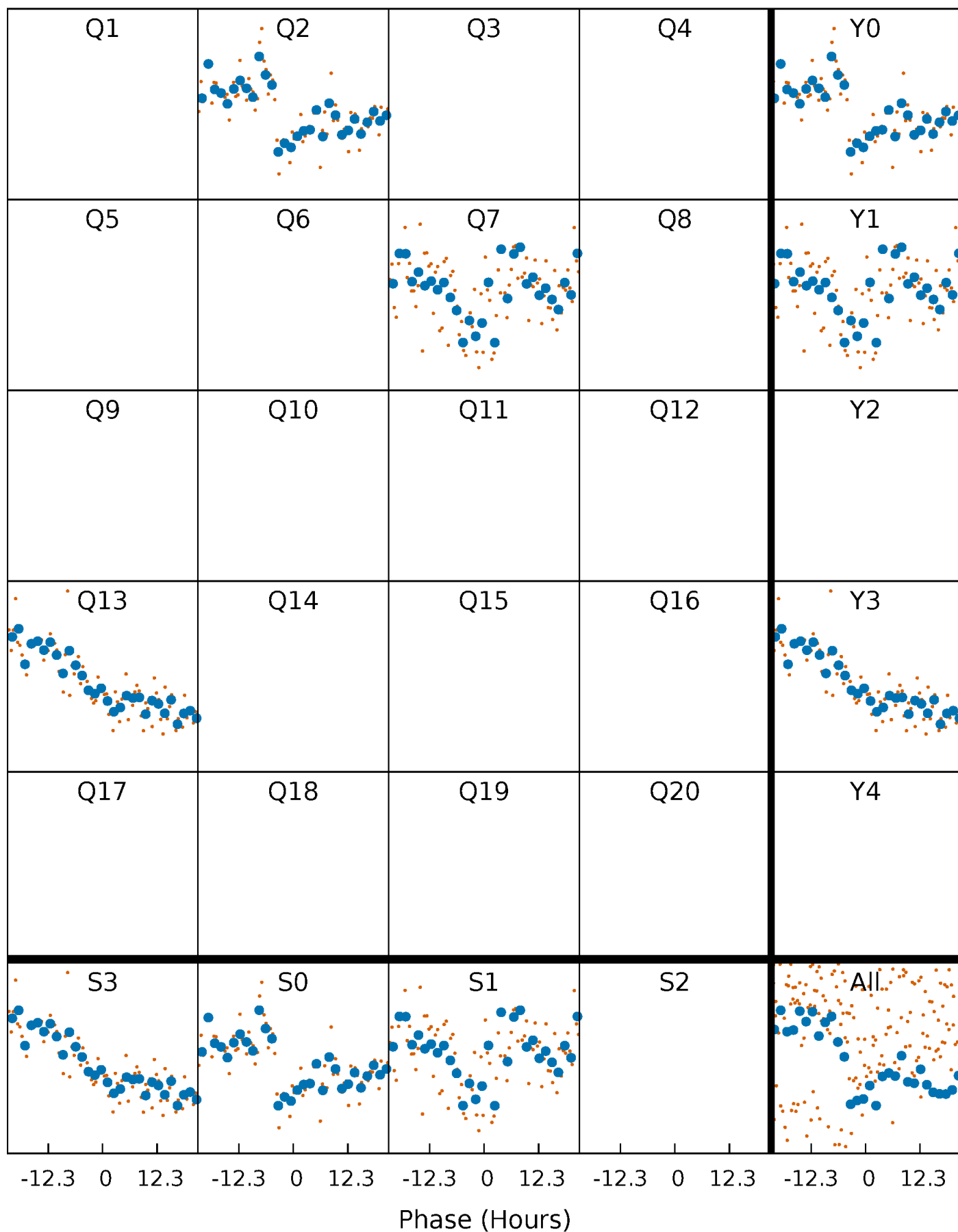


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



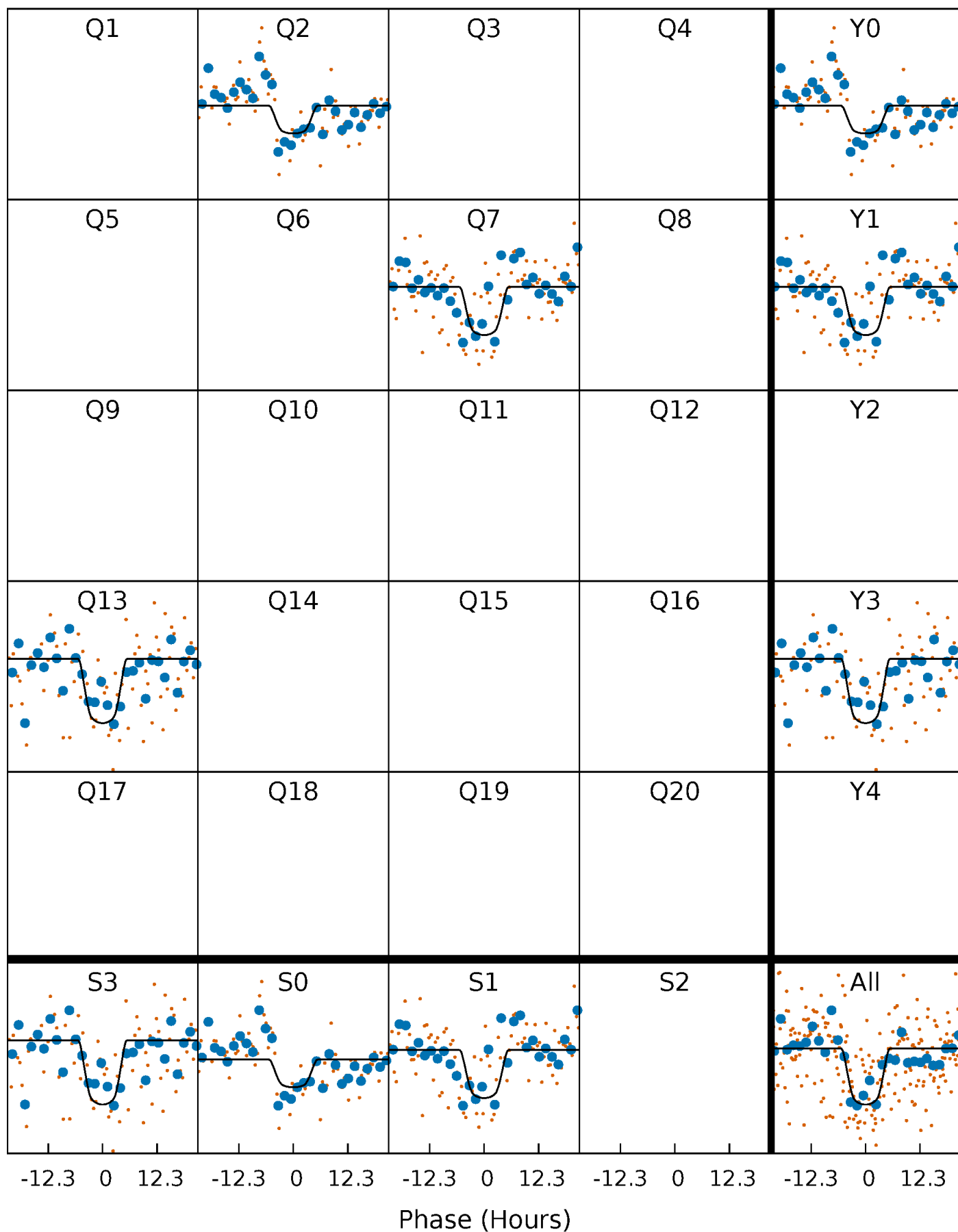
PDC Quarter-Phased Transit Curves

TCE 011954016-01 $P=514.226972$ Days $T_0=192.722685$ (BKJD)



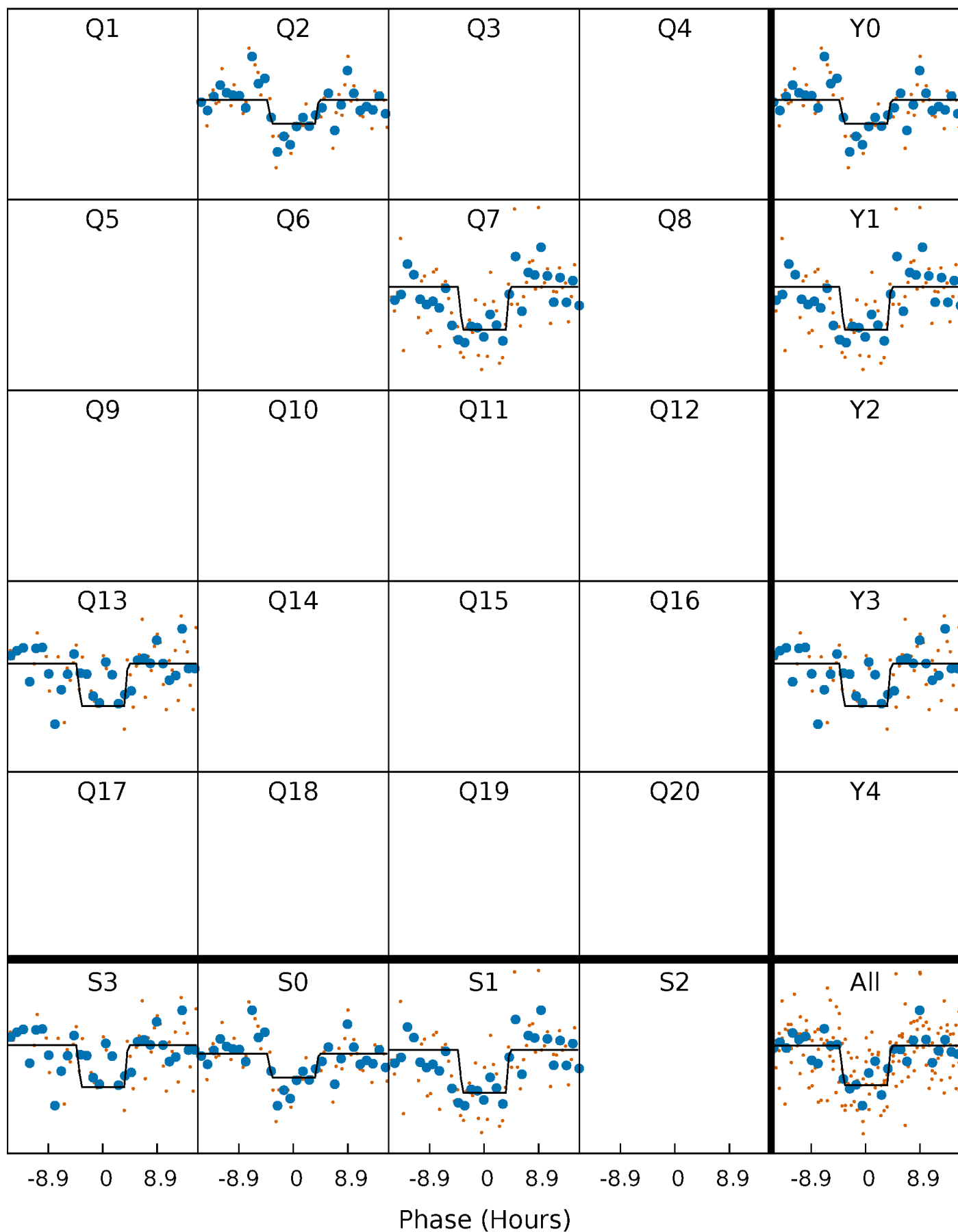
DV Quarter-Phased Transit Curves

TCE 011954016-01 P=514.226972 Days $T_0=192.722685$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

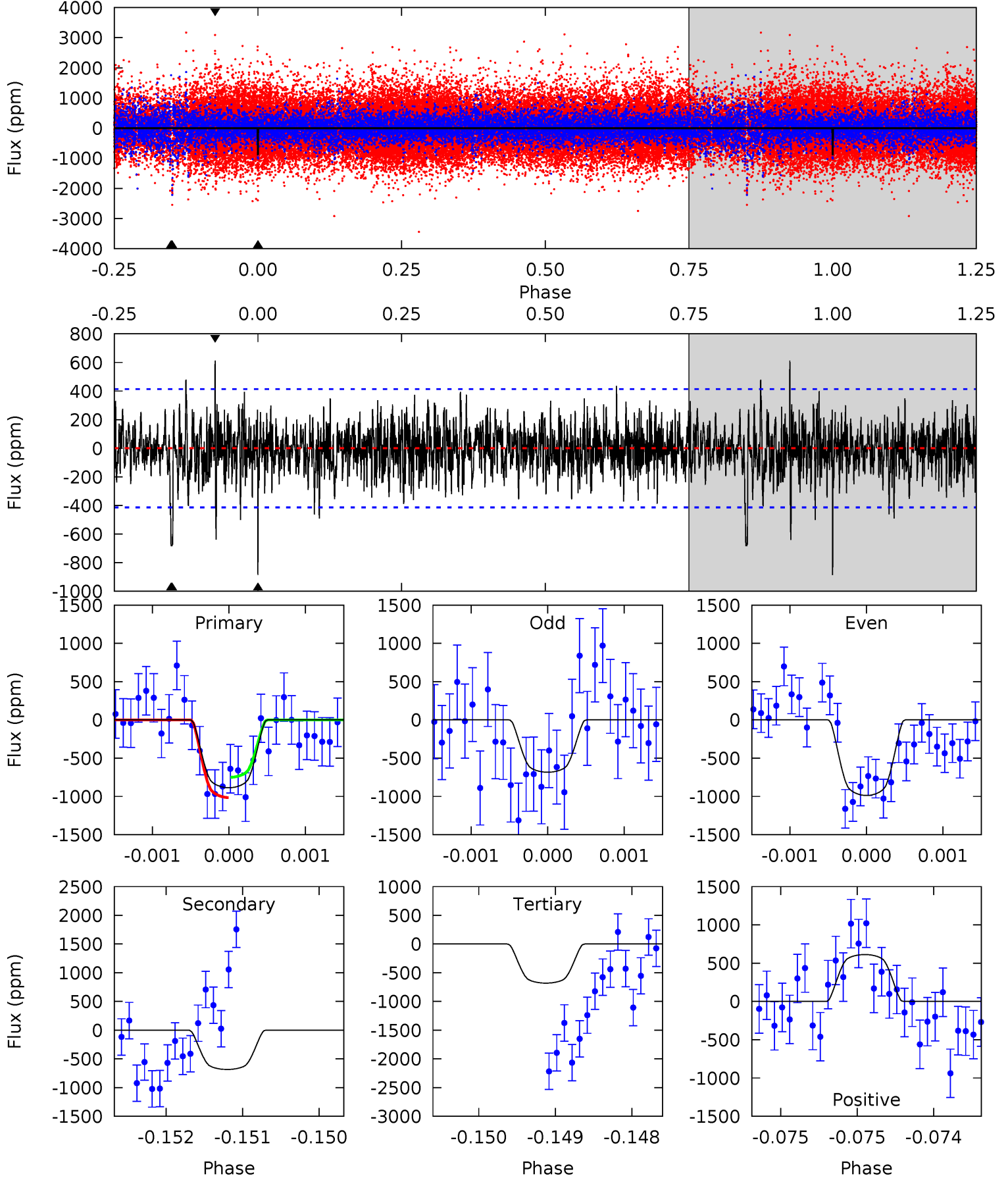
TCE 011954016-01 P=514.210537 Days $T_0=192.707215$ (BKJD)



DV Model-Shift Uniqueness Test

011954016-01, P = 514.226972 Days, E = 192.722685 Days

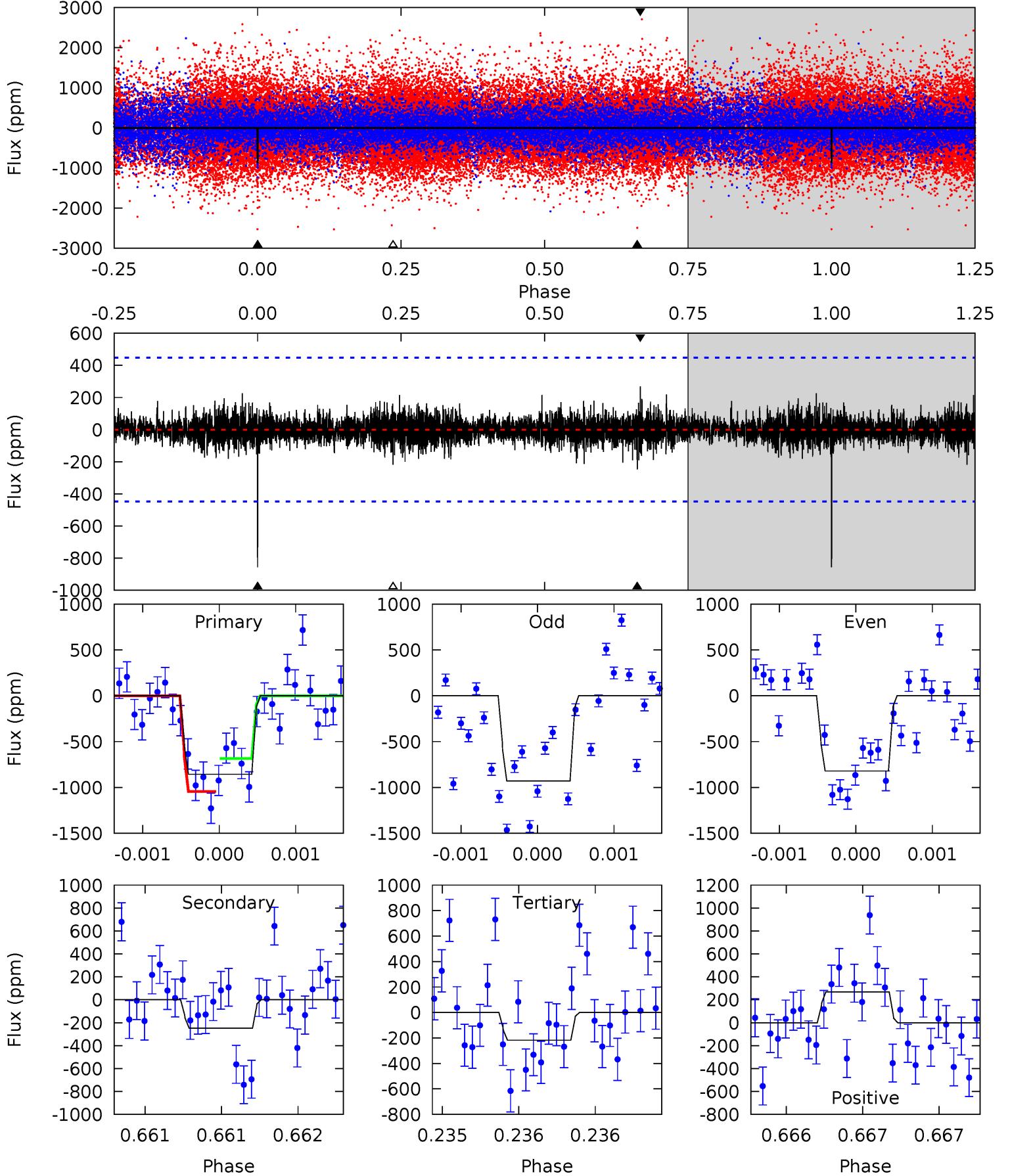
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	9.06	9.01	8.11	5.47	3.32	1.79	2.71	3.62	0.04	0.95	1.88	1.16	0.41	1.75



Alt Model-Shift Uniqueness Test

011954016-01, P = 514.210537 Days, E = 192.707215 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	3.06	2.68	3.32	5.52	3.40	0.66	7.87	7.24	0.38	-0.26	0.61	0.92	0.24	2.21



Stellar Parameters For KIC 011954016

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5792^{+161}_{-202}	$4.514^{+0.050}_{-0.200}$	$0.040^{+0.250}_{-0.300}$	$0.923^{+0.287}_{-0.096}$	$1.015^{+0.114}_{-0.136}$	$1.815^{+0.376}_{-0.958}$
	+3%/-3%	+1%/-4%	+625%/-750%	+31%/-10%	+11%/-13%	+21%/-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 011954016-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-684 ± 76	$3.75^{+0.77}_{-0.59}$	311^{+23}_{-15}	5007^{+352}_{-288}	41161^{+16519}_{-12269}
Alt.	-248 ± 81	$3.12^{+0.63}_{-0.48}$	311^{+22}_{-16}	4401^{+398}_{-381}	21336^{+12156}_{-8525}

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 $A_{obs} \gg 1.0$

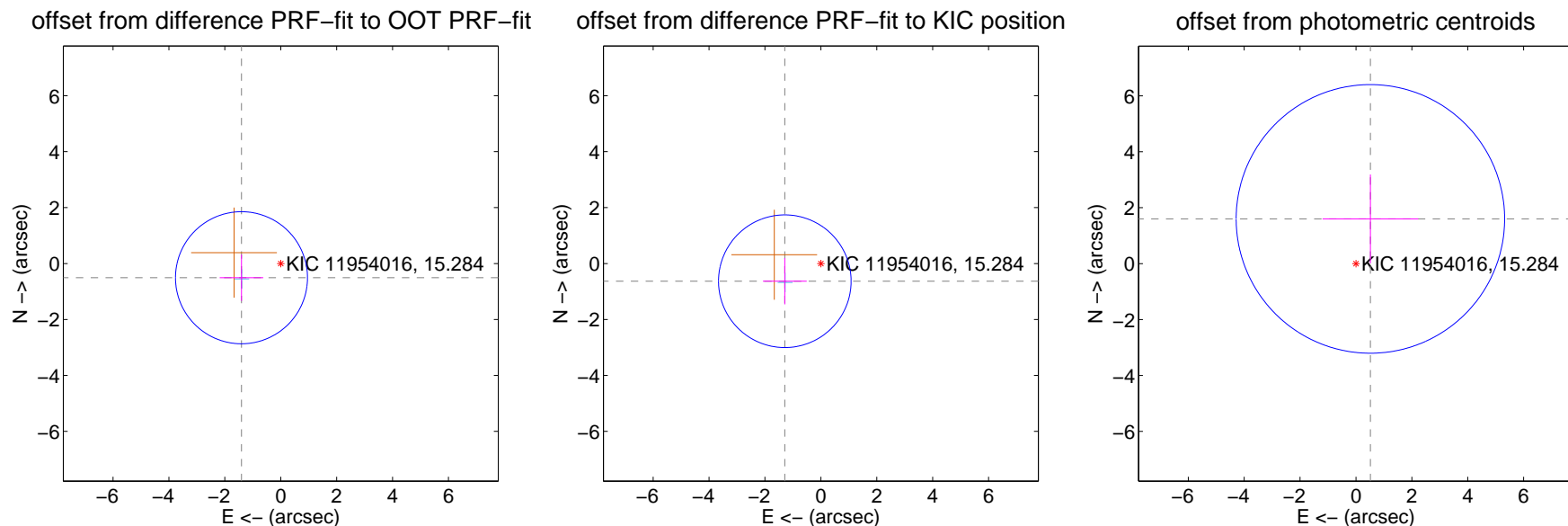
DV Centroid Data

Supplemental centroid analysis for 011954016-01. Kepler magnitude: 15.28. Transit SNR 7.08

There are 1 quarters with good PRF difference image offsets

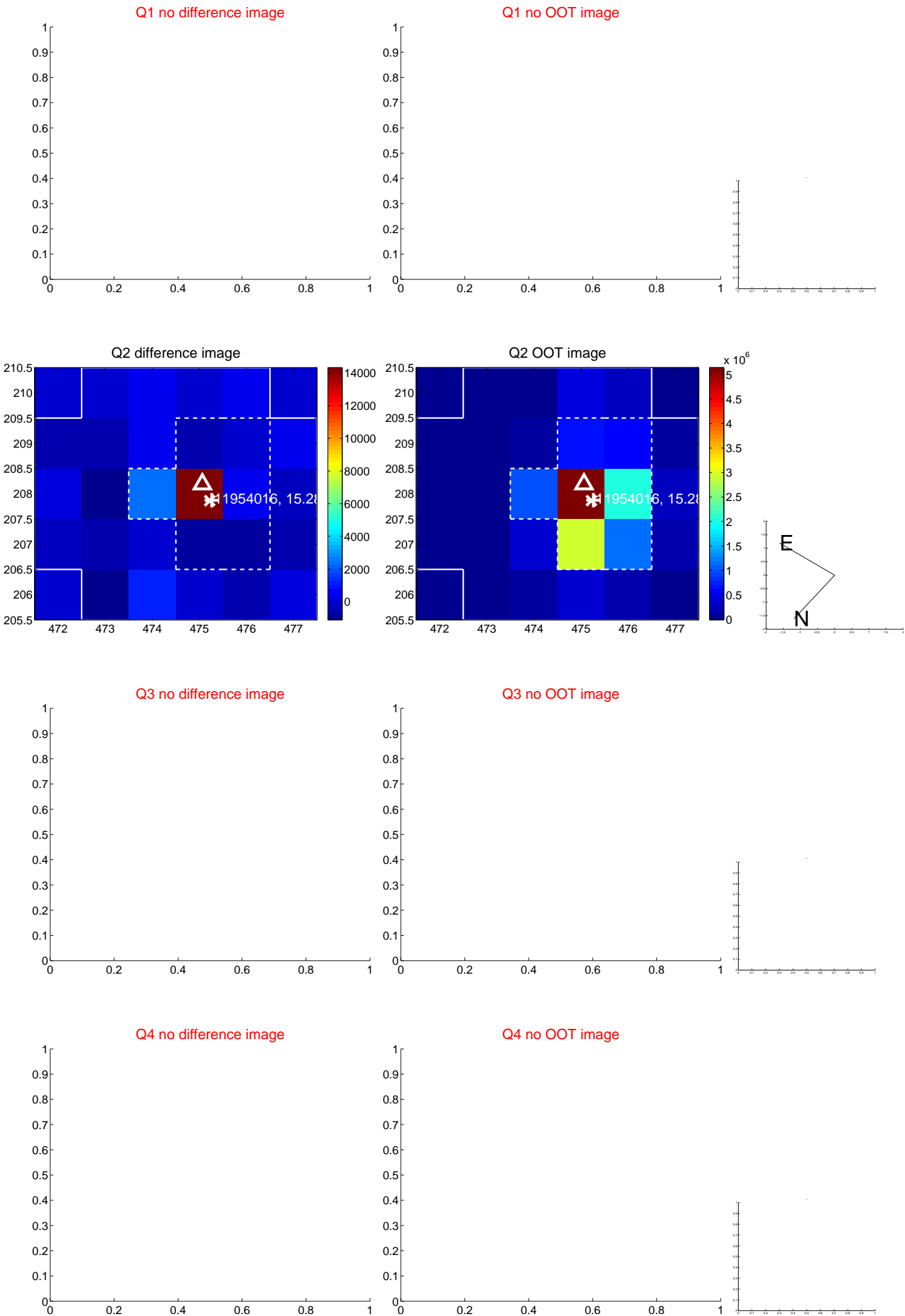
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.494 ± 0.787	1.90	1.405 ± 0.782	-0.508 ± 0.826
PRF-fit source offset from KIC position	1.436 ± 0.791	1.82	1.290 ± 0.782	-0.632 ± 0.826
photometric centroid source offset	1.68 ± 1.60	1.05	-0.52 ± 1.71	1.60 ± 1.59

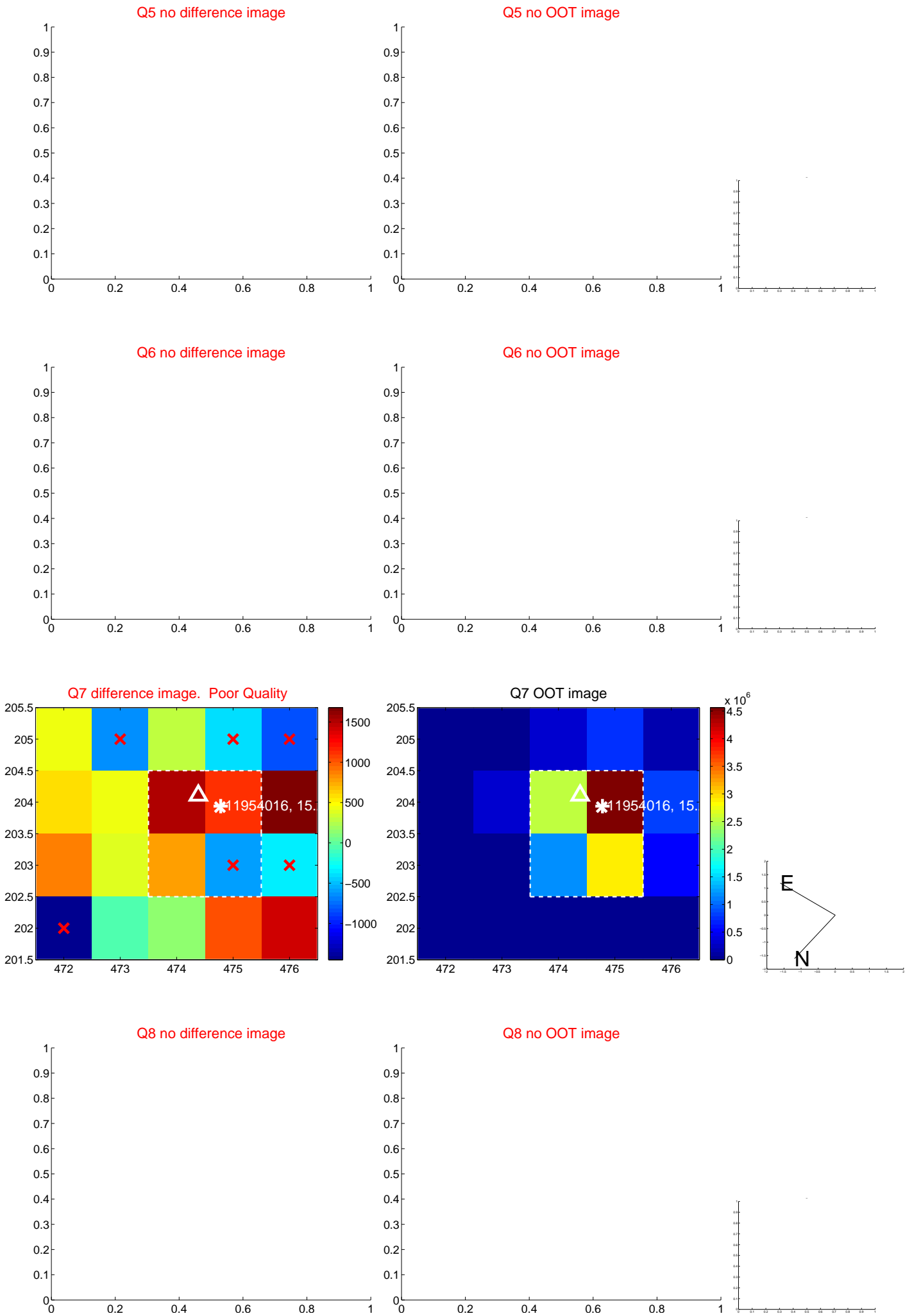


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



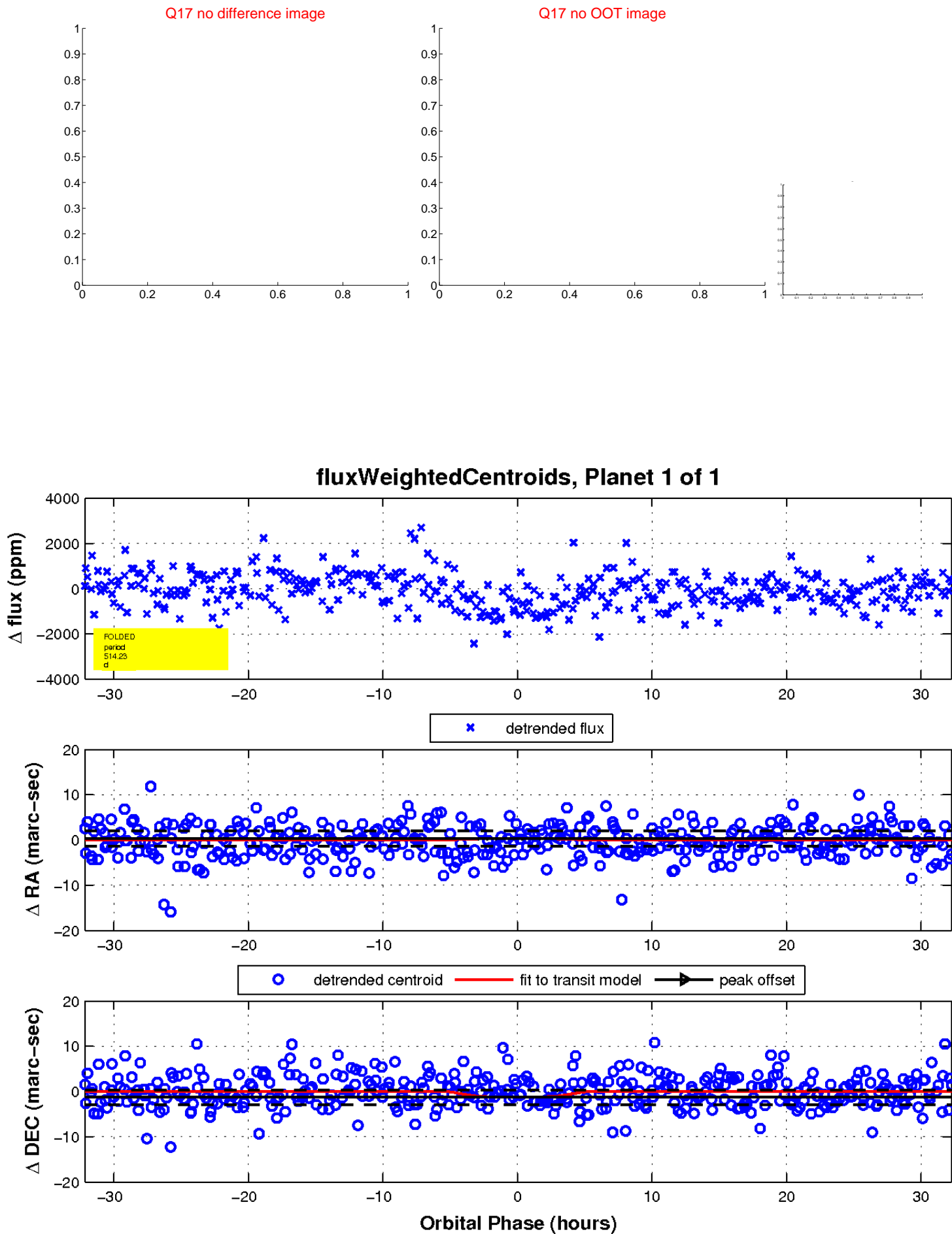
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

