

KIC 008621614

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})
008621614-01	OBS	No	375.523674	140.839936	1448.2	46.234	8.3	12.3	0.82	5367	3.27	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008621614-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

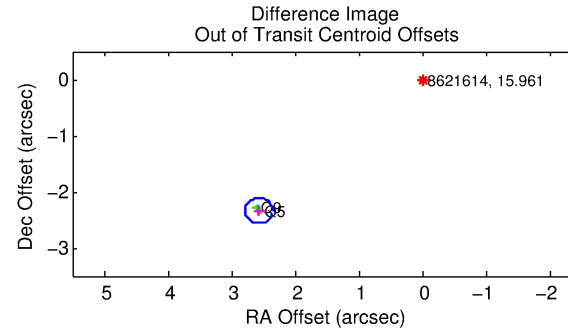
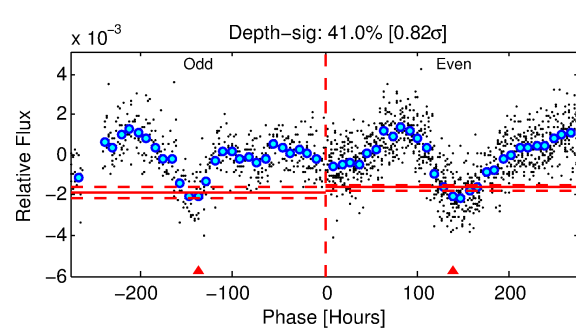
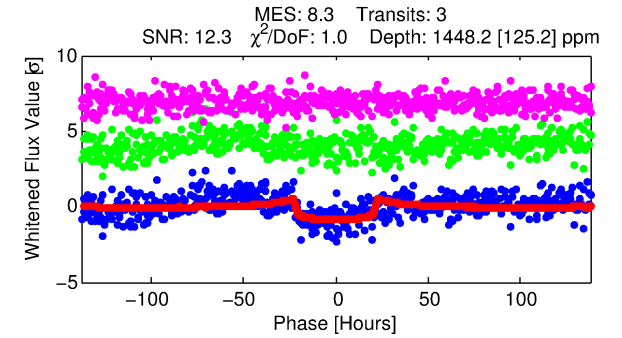
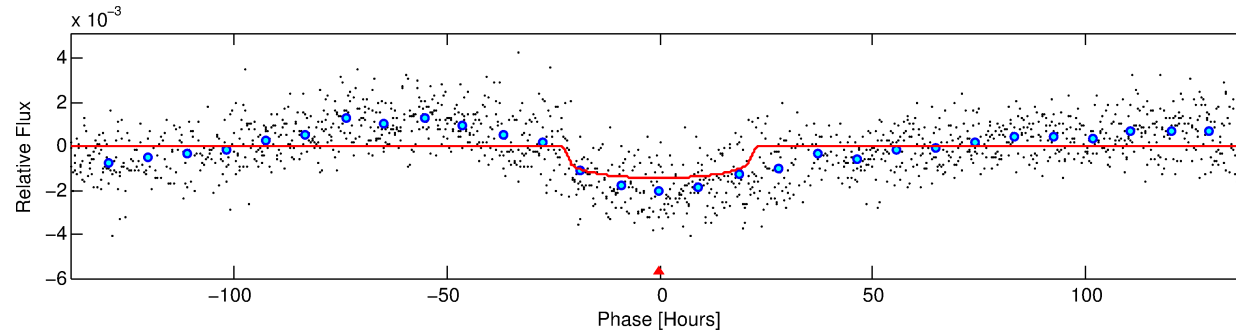
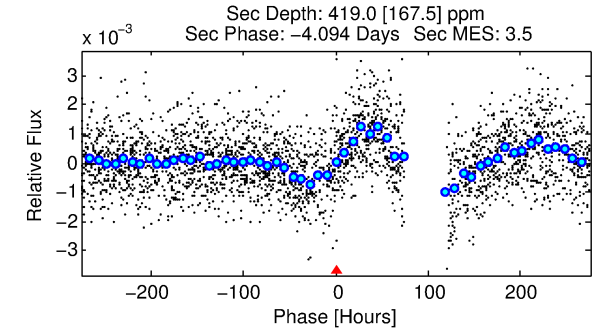
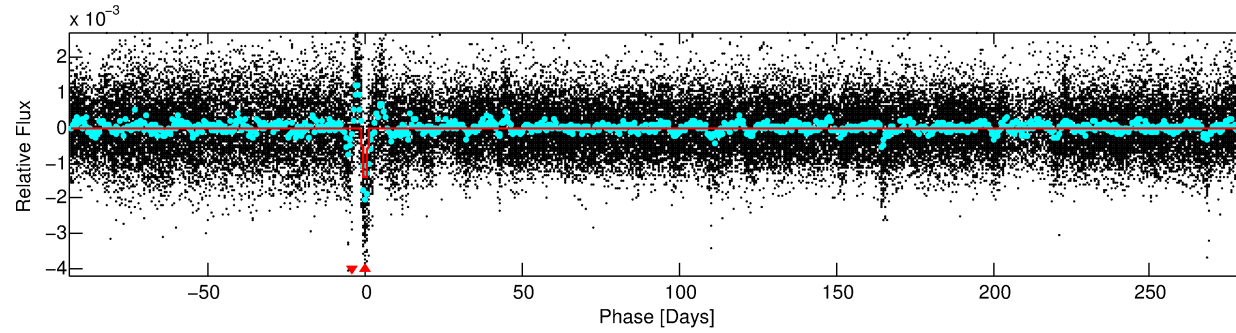
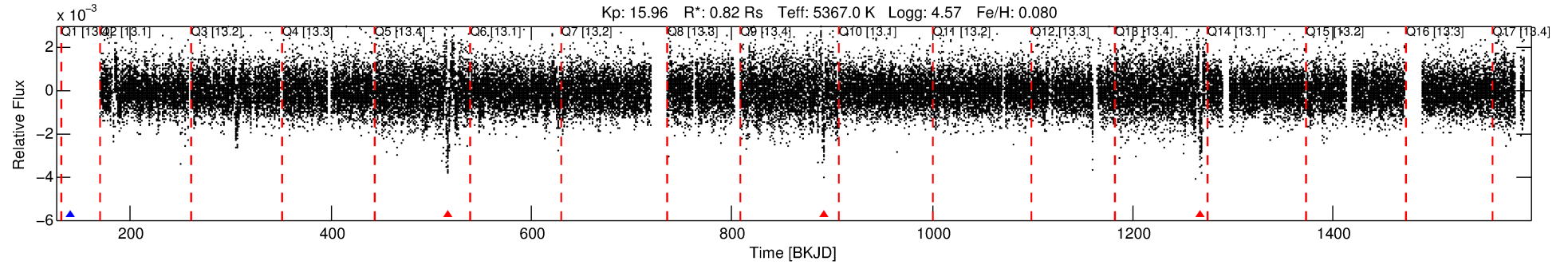
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008621614-01

No Significant Match Found

DV One-Page Summary

KIC: 8621614 Candidate: 1 of 1 Period: 375.524 d



DV Fit Results:

Period = 375.52367 [0.02597] d
Epoch = 140.8399 [0.0553] BKJD
Rp/R* = 0.0363 [0.0050]
a/R* = 51.38 [24.85]
b = 0.62 [0.48]
Seff = 0.52 [0.14]
Teq = 216 [15] K
Rp = 3.27 [0.78] Re
a = 0.9895 [0.1651] AU
Ag = 21112.95 [11479.16] [1.84σ]
Teff = 4029 [503] K [7.58σ]

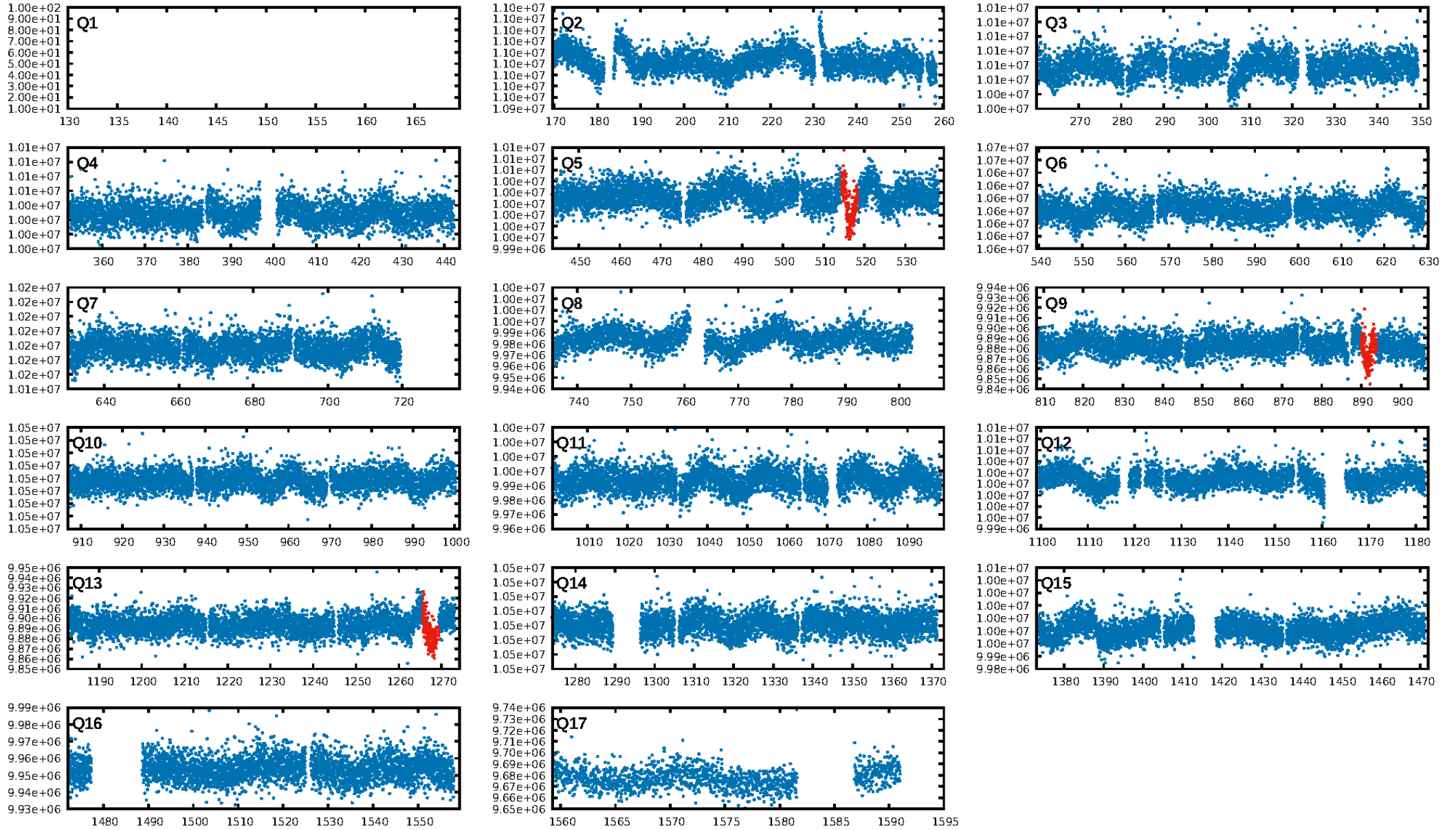
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.67e-11
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 0.5127
Centroid-sig: 0.6%
Centroid-so: 3.744 arcsec [1.98σ]
OotOffset-rm: 3.475 arcsec [46.74σ]
KicOffset-rm: 3.401 arcsec [40.19σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

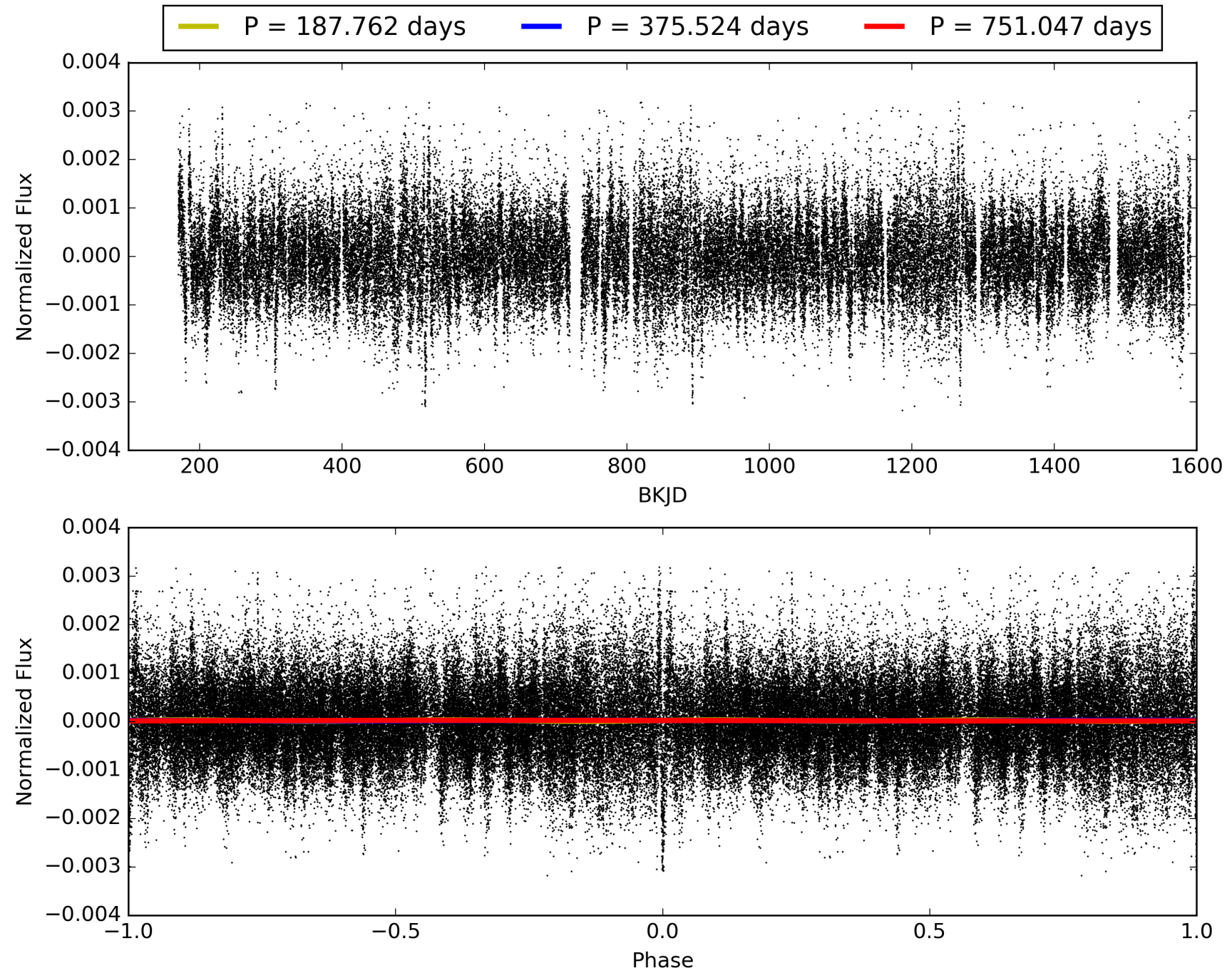
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:57:18 Z

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

TCE 008621614-01, PDC Light Curves

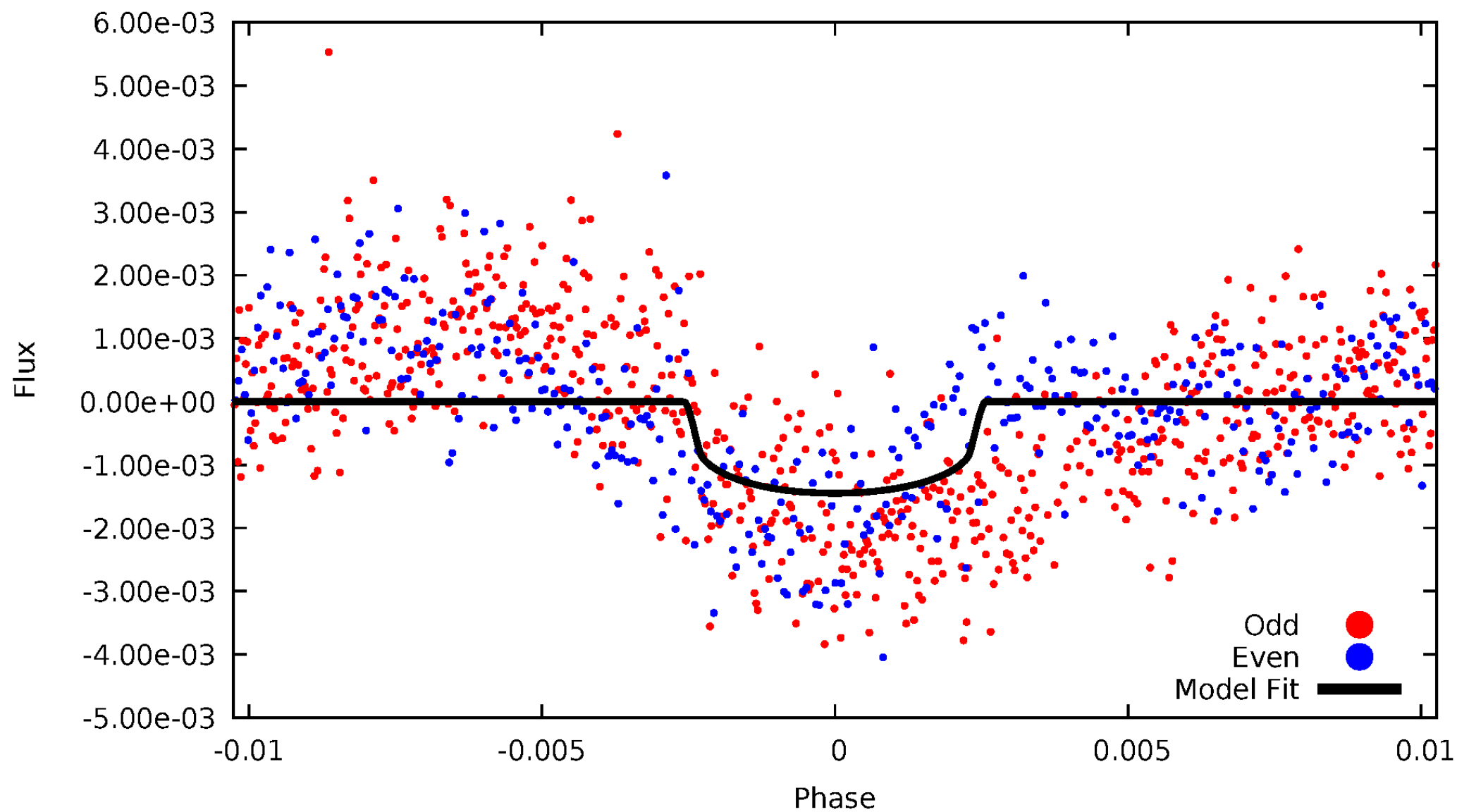


TCE 008621614-01



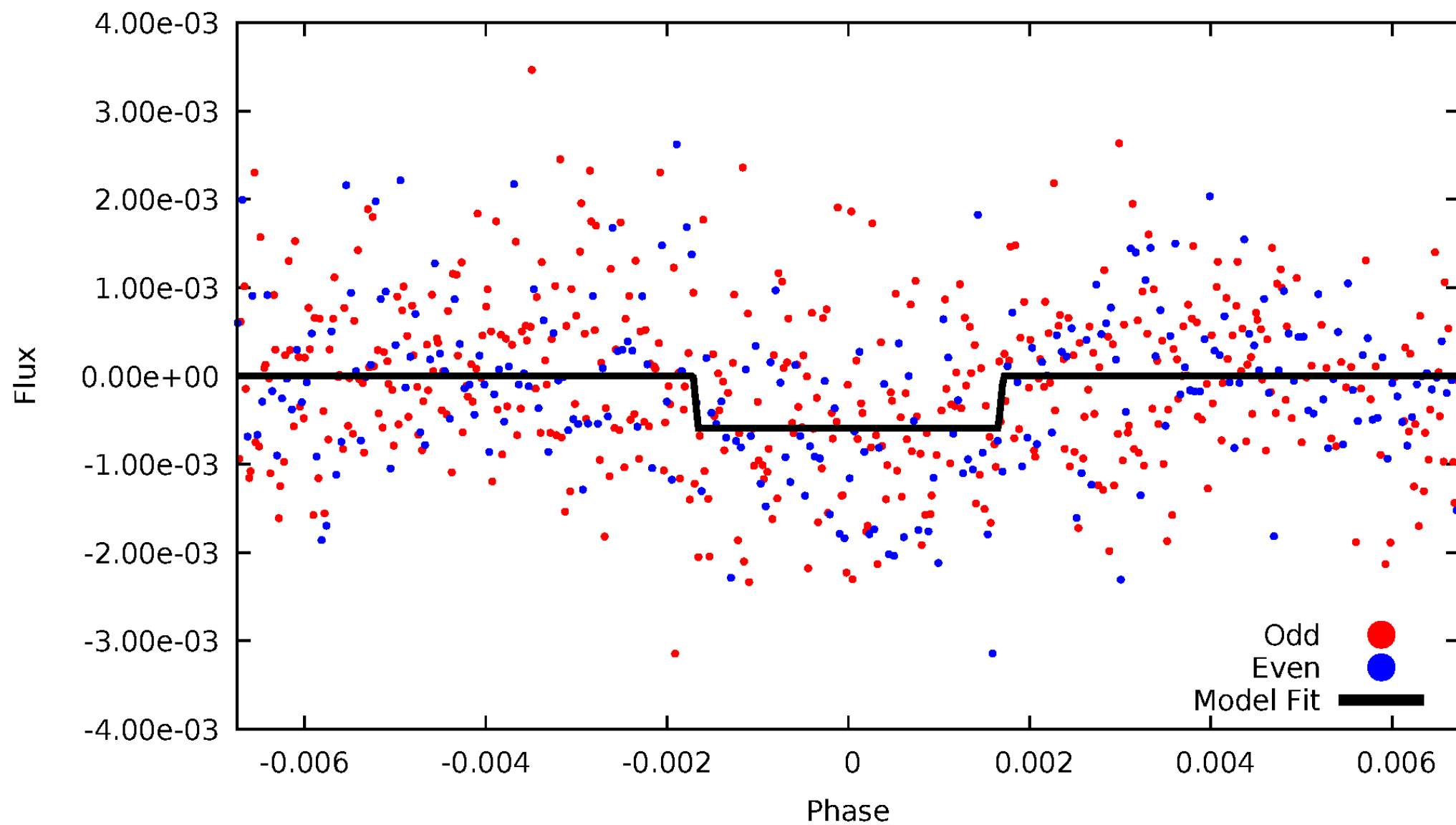
DV Odd/Even

TCE 008621614-01



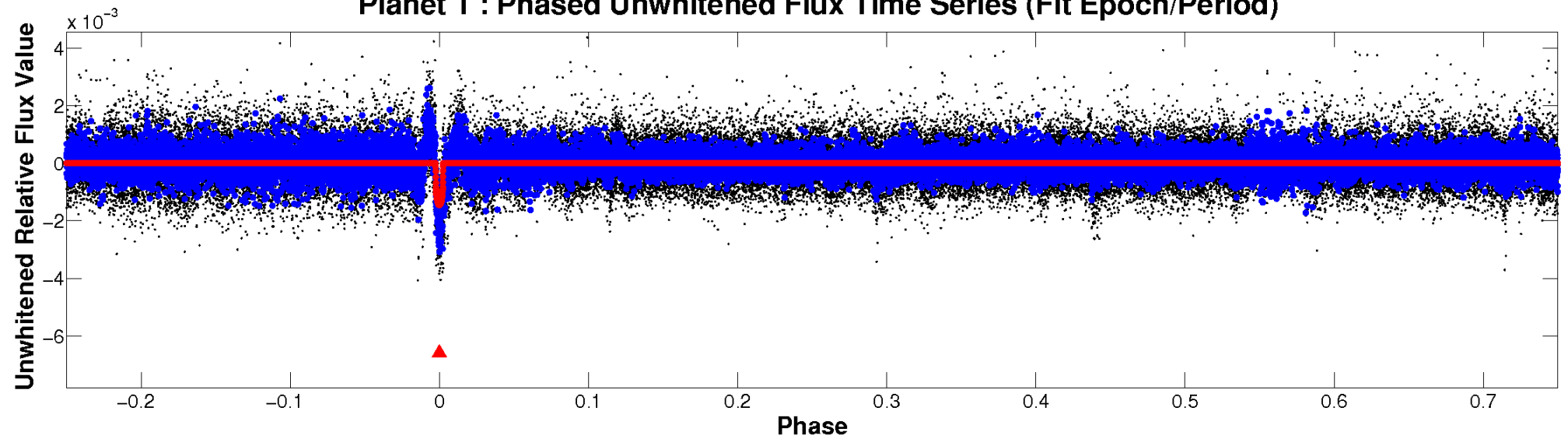
ALT Odd/Even

TCE 008621614-01

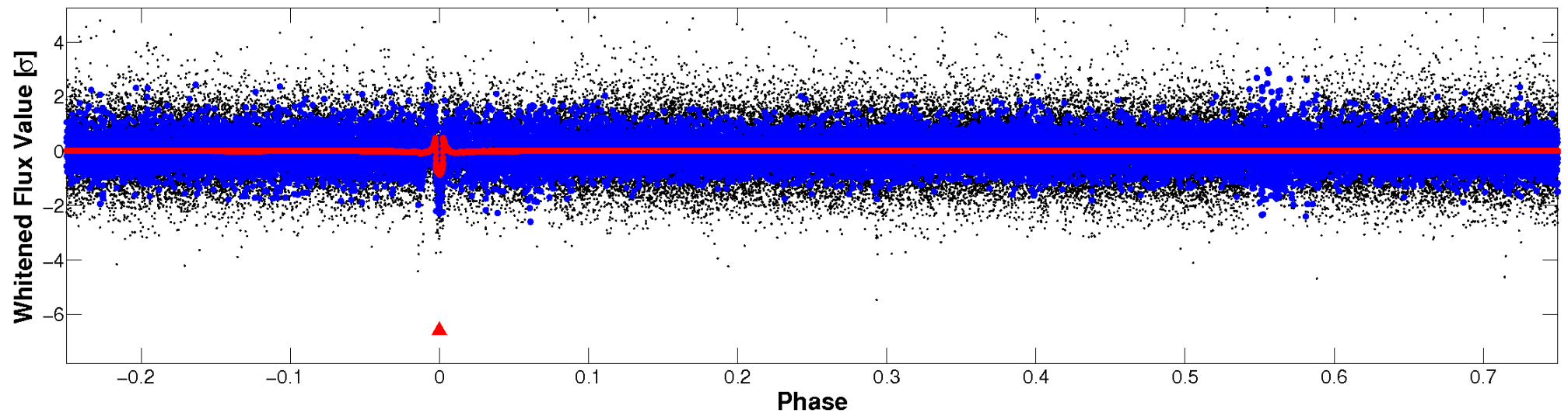


Non-Whitened Vs. Whitened Light Curve

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

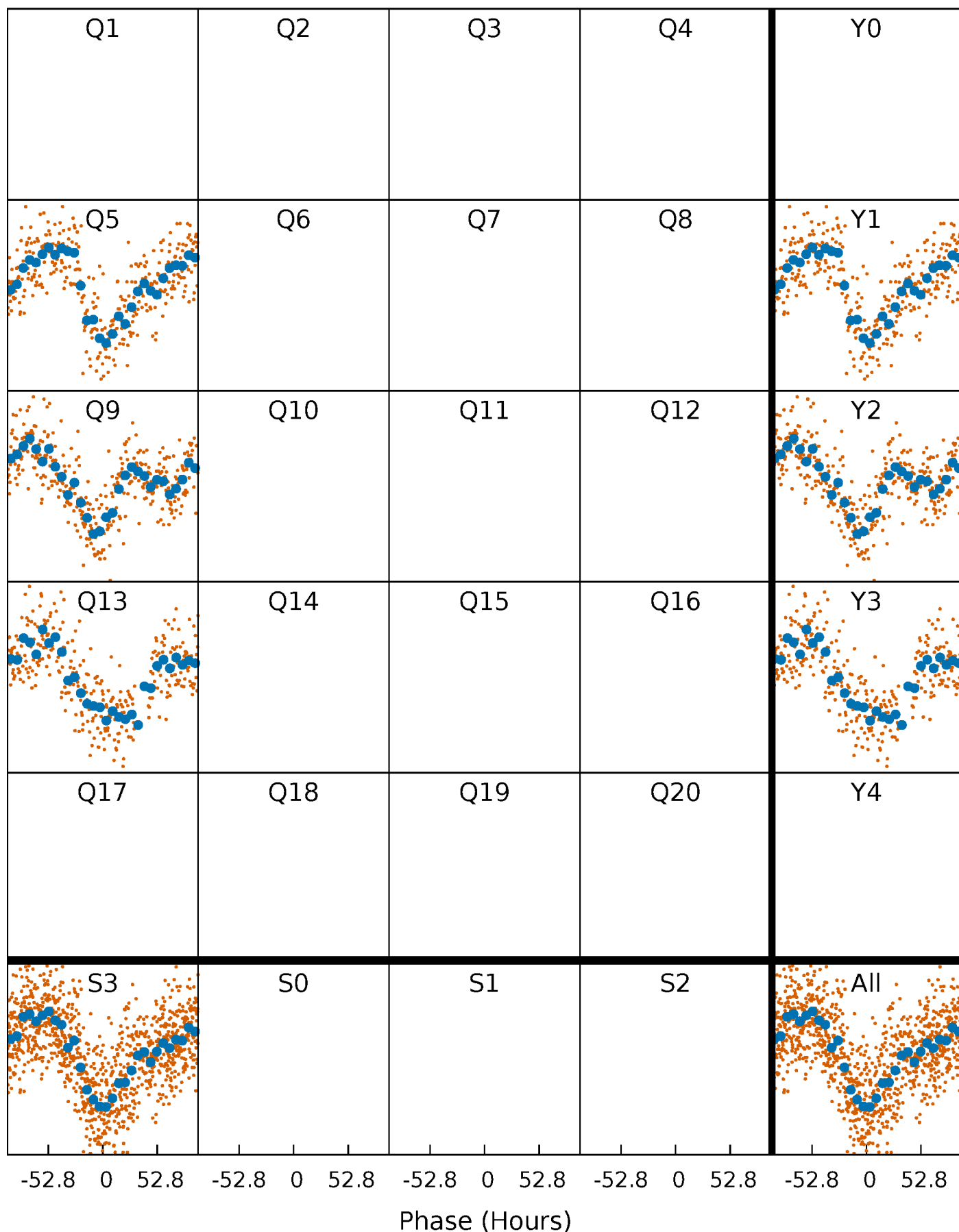


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



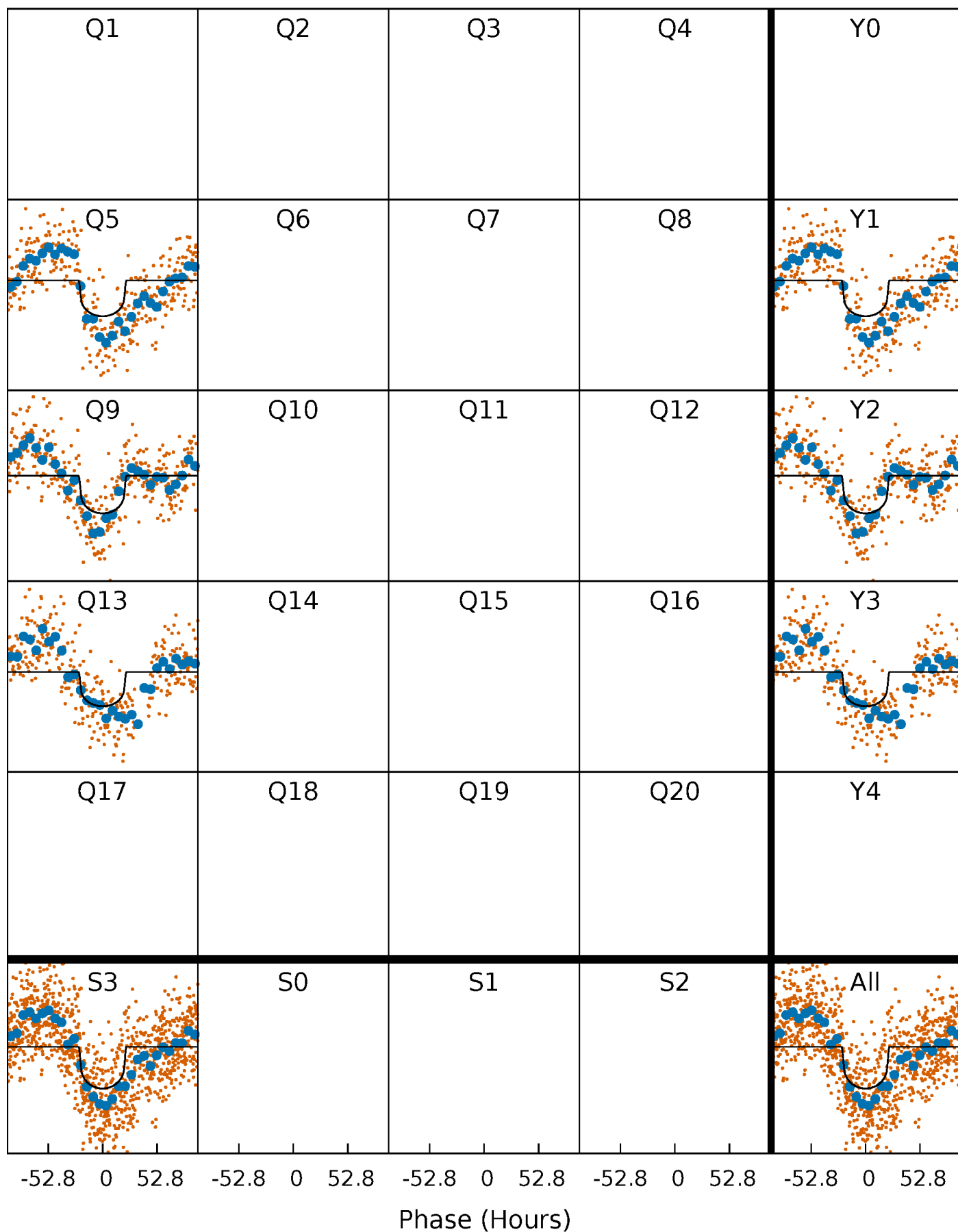
PDC Quarter-Phased Transit Curves

TCE 008621614-01 P=375.523674 Days $T_0=140.839936$ (BKJD)



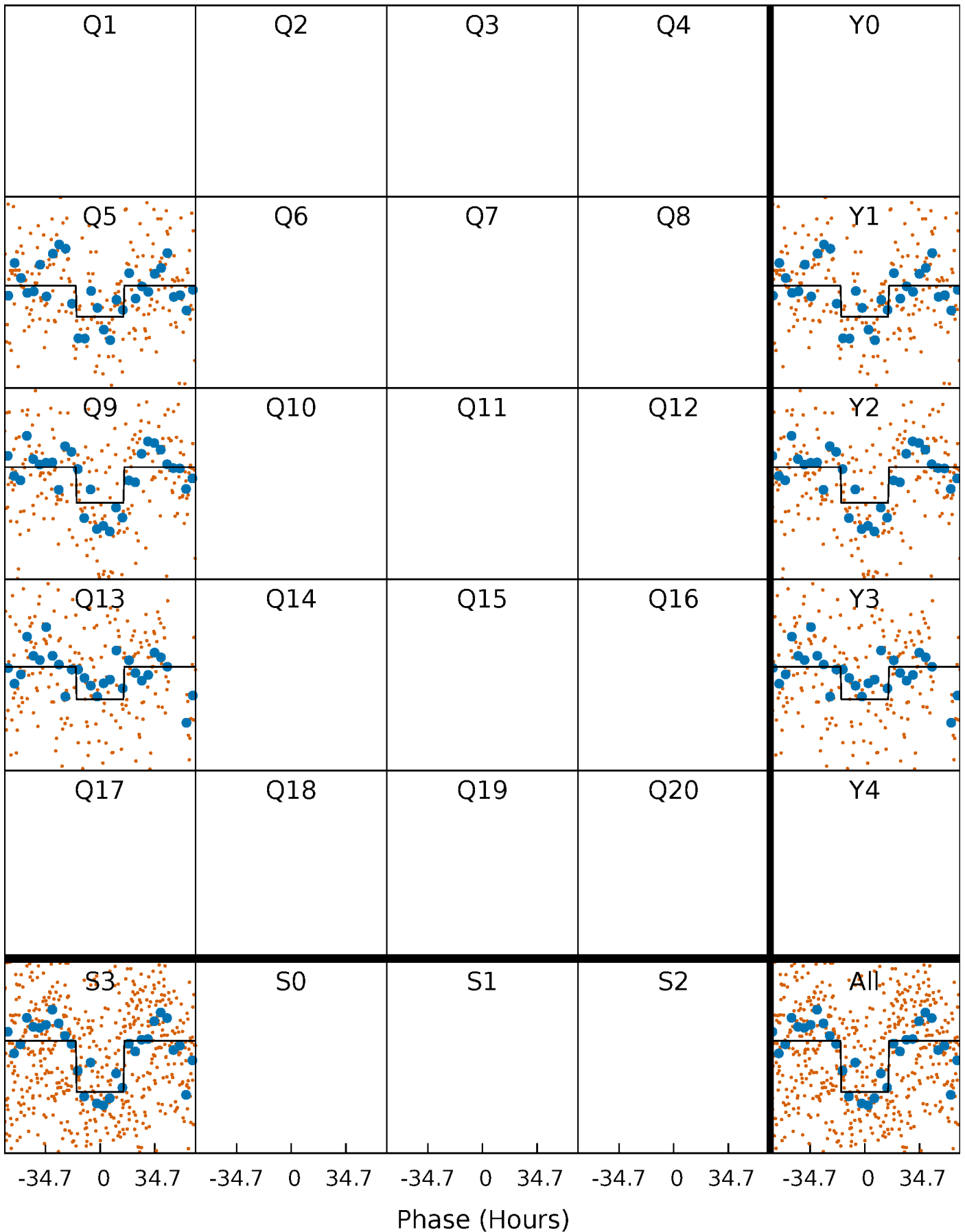
DV Quarter-Phased Transit Curves

TCE 008621614-01 P=375.523674 Days $T_0=140.839936$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

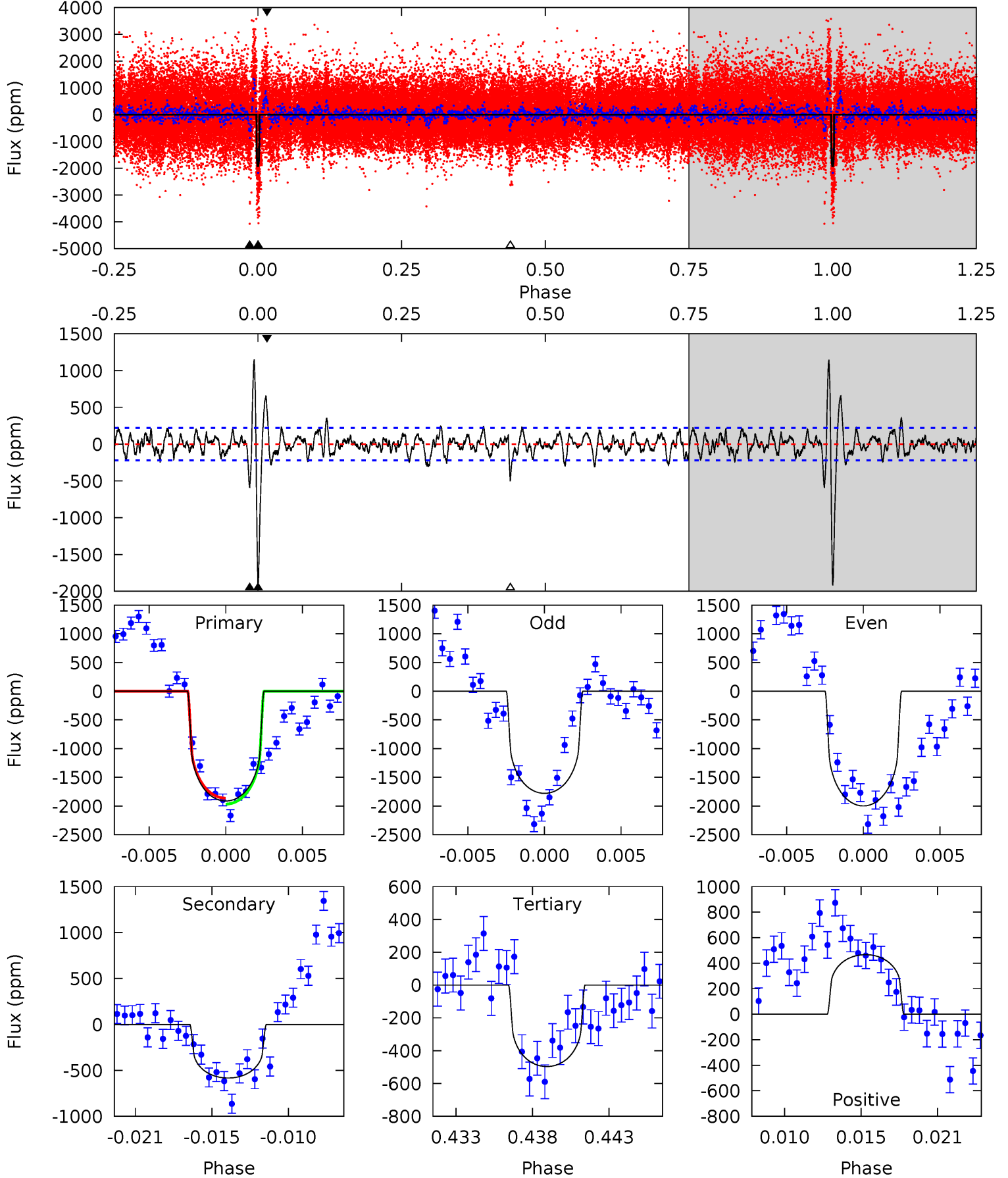
TCE 008621614-01 P=375.316819 Days $T_0=140.963421$ (BKJD)



DV Model-Shift Uniqueness Test

008621614-01, P = 375.523674 Days, E = 140.839936 Days

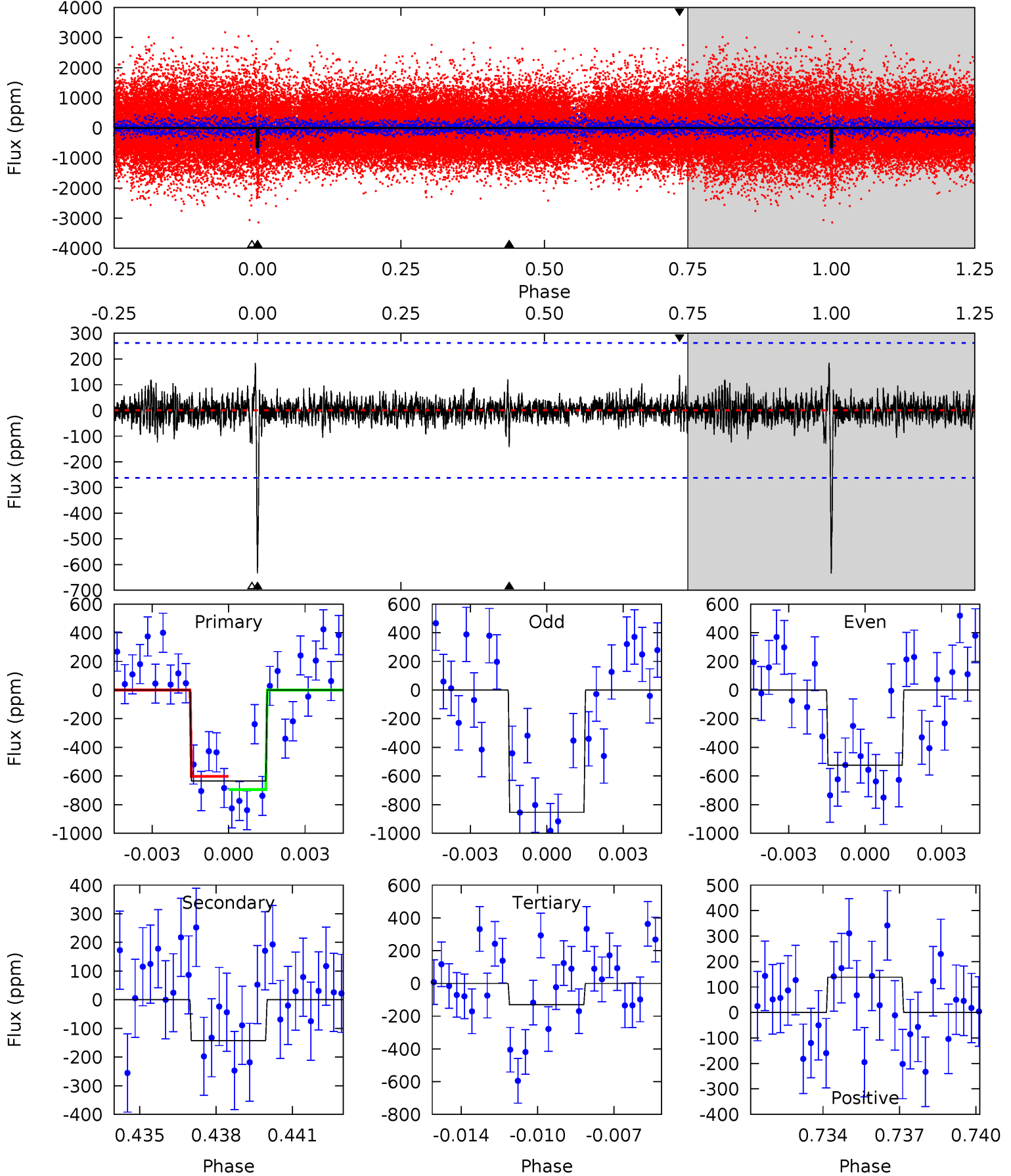
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.0	13.7	11.7	11.0	5.15	2.80	3.08	33.3	34.0	2.04	2.74	2.43	1.07	0.37	1.21



Alt Model-Shift Uniqueness Test

008621614-01, P = 375.316819 Days, E = 140.963421 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	2.84	2.60	2.76	5.23	2.93	0.60	10.0	9.88	0.24	0.08	3.12	0.87	0.23	0.91



Stellar Parameters For KIC 008621614

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5367^{+159}_{-159}	$4.567^{+0.034}_{-0.136}$	$0.080^{+0.250}_{-0.300}$	$0.825^{+0.161}_{-0.069}$	$0.914^{+0.066}_{-0.090}$	$2.294^{+0.333}_{-0.918}$
	+3%/-3%	+1%/-3%	+312%/-375%	+20%/-8%	+7%/-10%	+15%/-40%
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 008621614-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-583 ± 43	$3.38^{+0.51}_{-0.49}$	308^{+14}_{-13}	4515^{+304}_{-248}	26886^{+9361}_{-6779}
Alt.	-143 ± 50	$2.23^{+0.49}_{-0.43}$	308^{+14}_{-13}	4020^{+456}_{-342}	14474^{+11296}_{-6003}

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

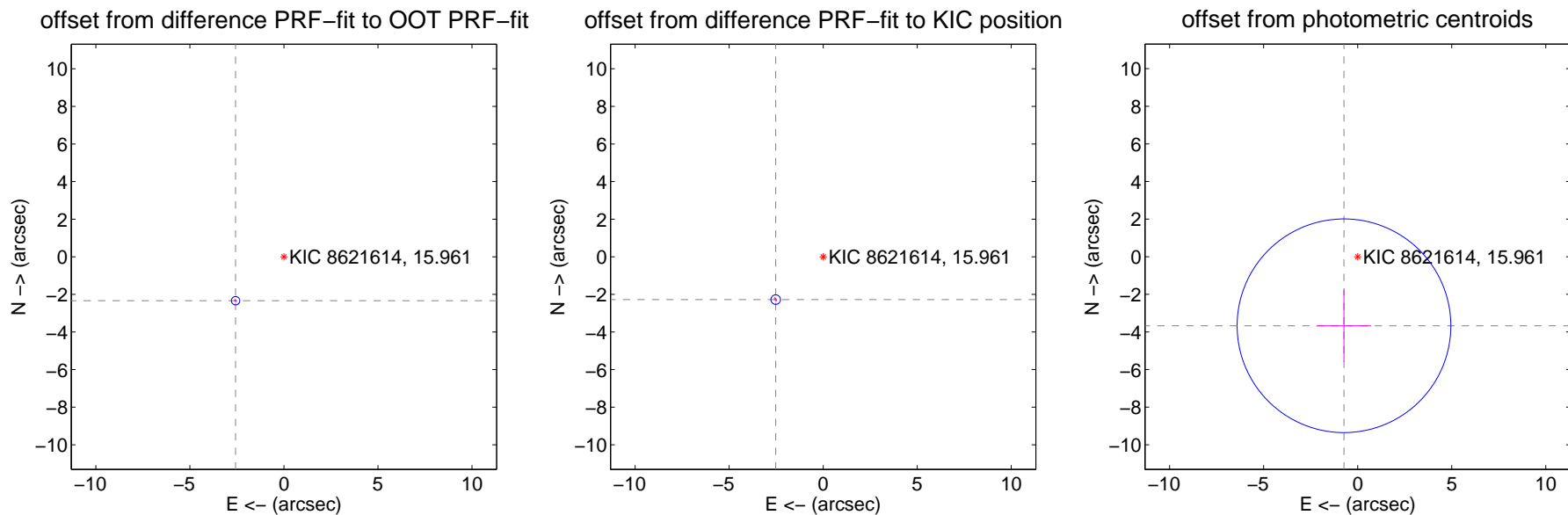
DV Centroid Data

Supplemental centroid analysis for 008621614-01. Kepler magnitude: 15.96. Transit SNR 12.29

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.475 ± 0.074	46.74	2.571 ± 0.074	-2.337 ± 0.075
PRF-fit source offset from KIC position	3.401 ± 0.085	40.19	2.525 ± 0.078	-2.278 ± 0.092
photometric centroid source offset	3.74 ± 1.89	1.98	0.73 ± 1.45	-3.67 ± 1.91

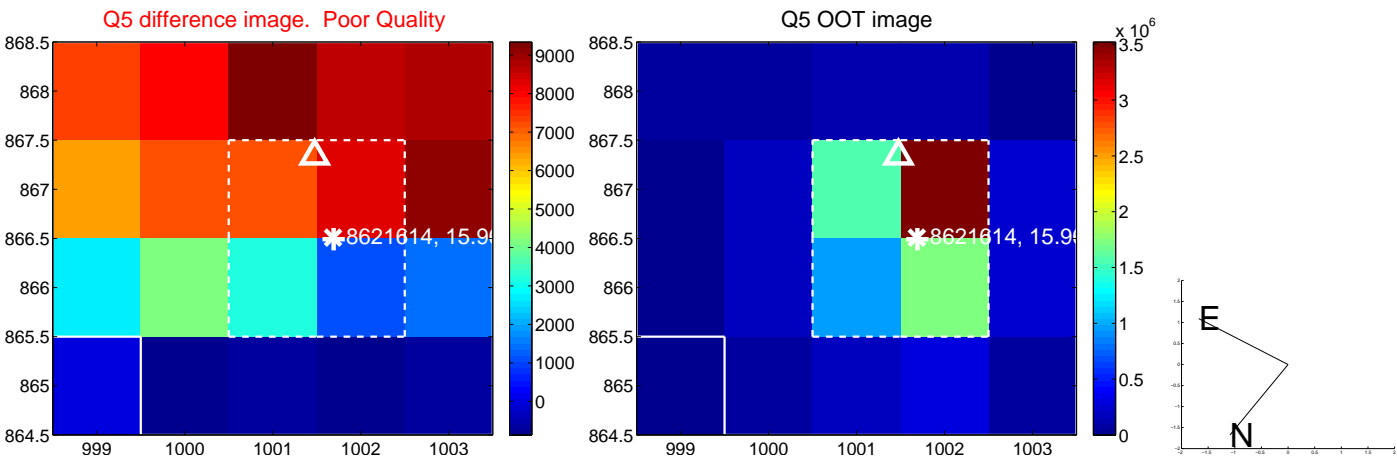


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

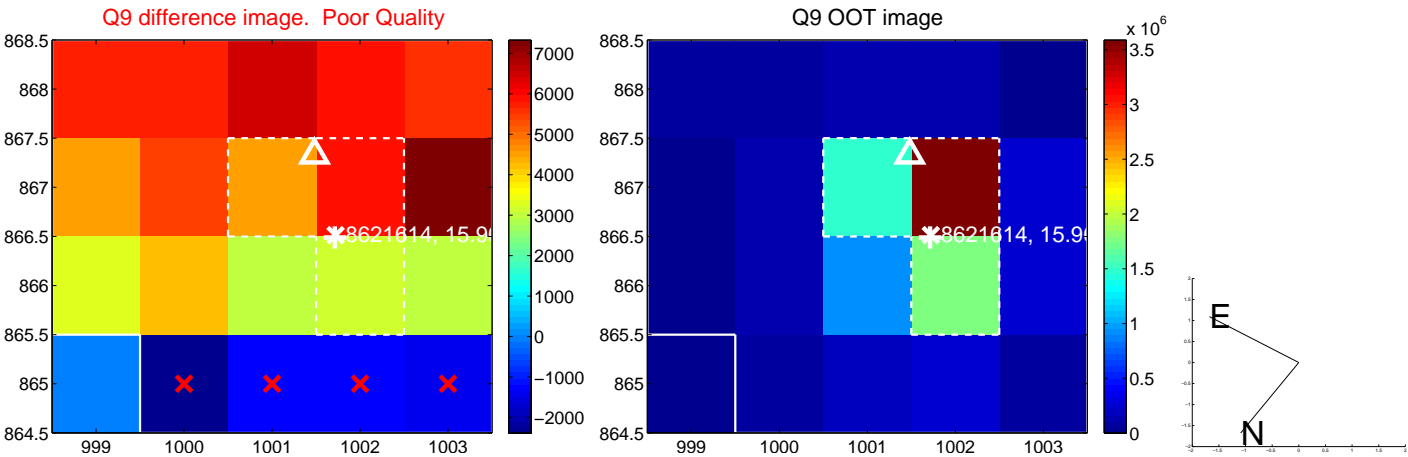
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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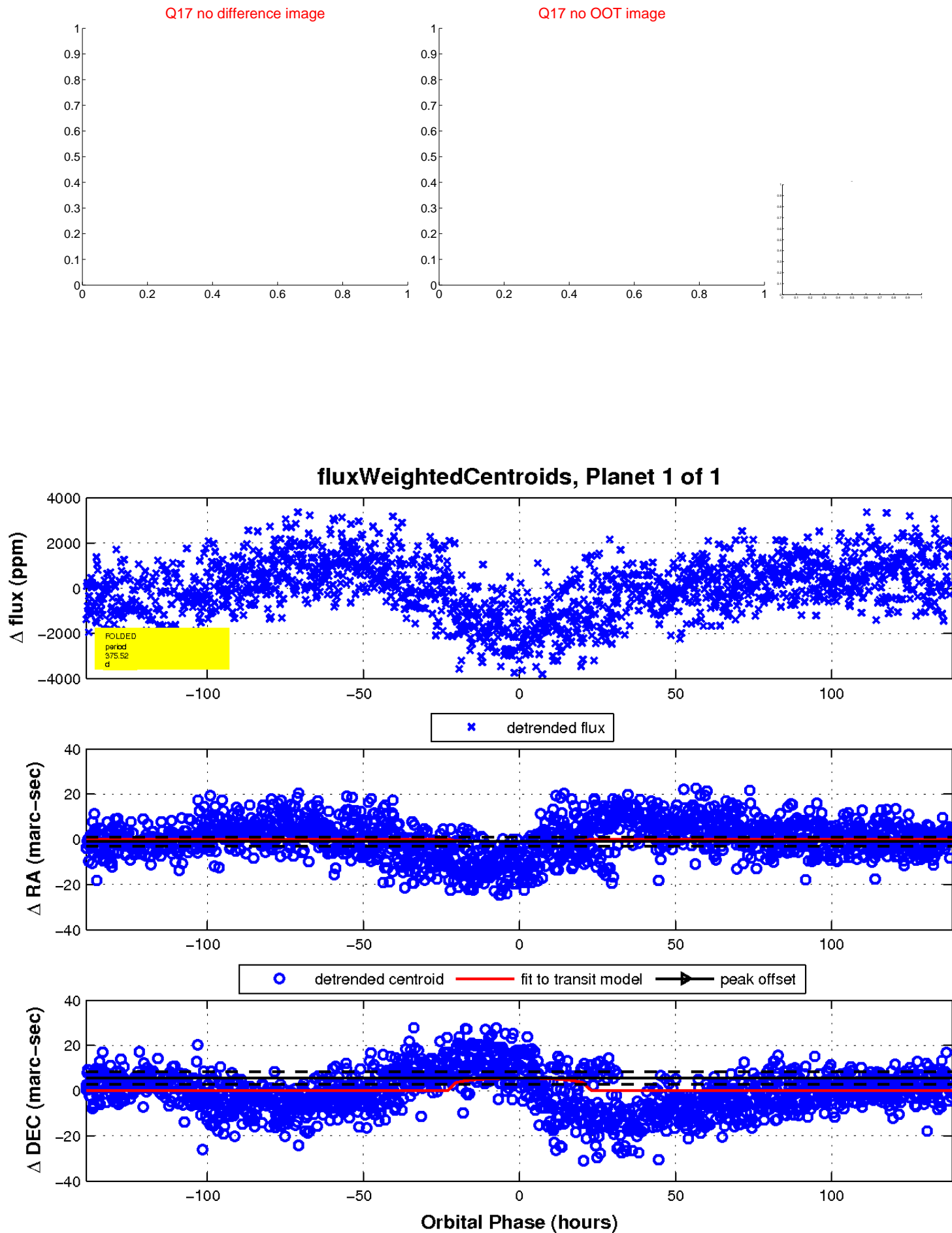
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

