

KIC 008174909

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})
008174909-01	OBS	No	370.323538	231.501498	770.9	15.261	10.4	8.8	0.98	6225	2.79	1.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008174909-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

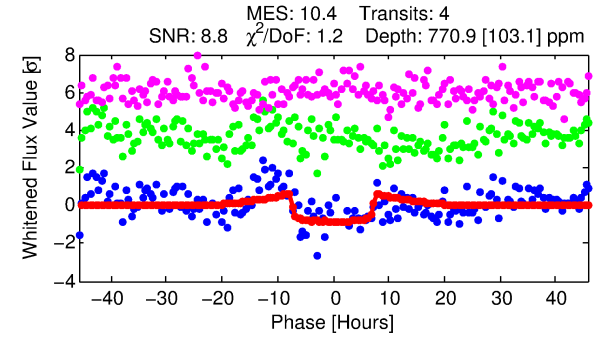
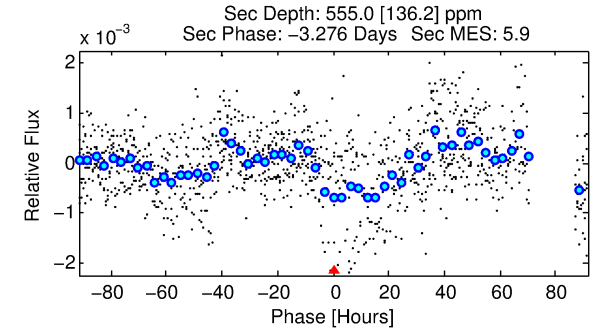
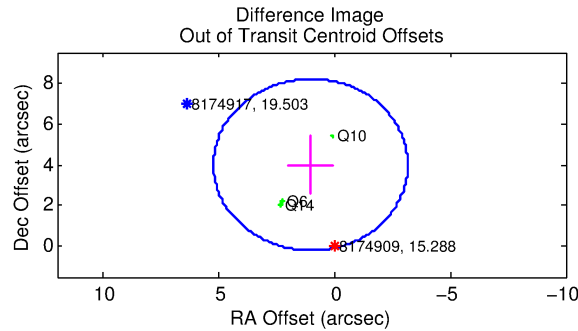
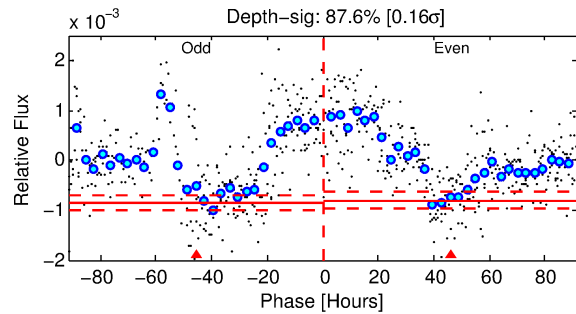
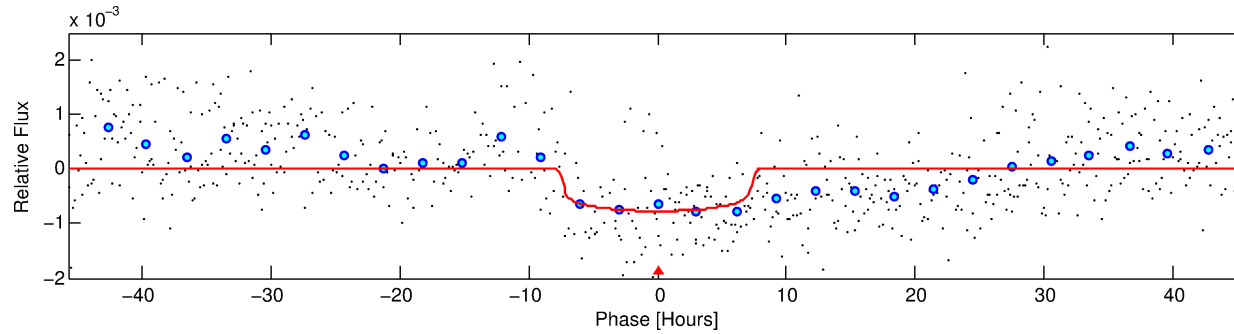
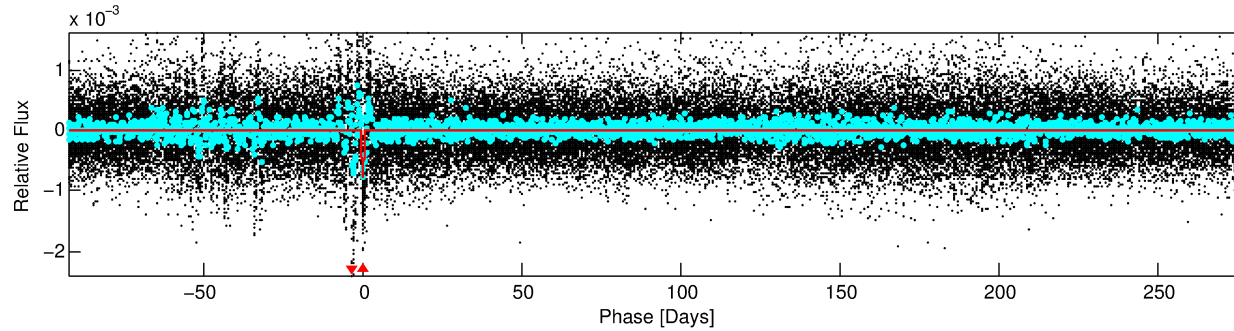
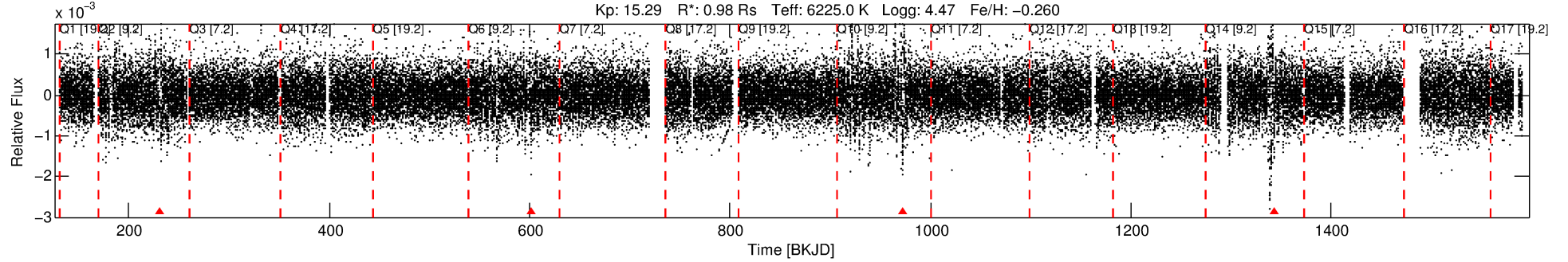
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008174909-01

No Significant Match Found

DV One-Page Summary

KIC: 8174909 Candidate: 1 of 1 Period: 370.324 d



DV Fit Results:

Period = 370.32354 [0.00870] d
Epoch = 231.5015 [0.0198] BKJD
Rp/R* = 0.0260 [0.0110]
a/R* = 173.81 [366.85]
b = 0.42 [4.20]
Seff = 1.25 [0.54]
Teq = 270 [29] K
Rp = 2.79 [1.48] Re
a = 1.0218 [0.2782] AU
Ag = 40939.49 [39690.26] [1.03 σ]
Teffp = 5930 [1327] K [4.26 σ]

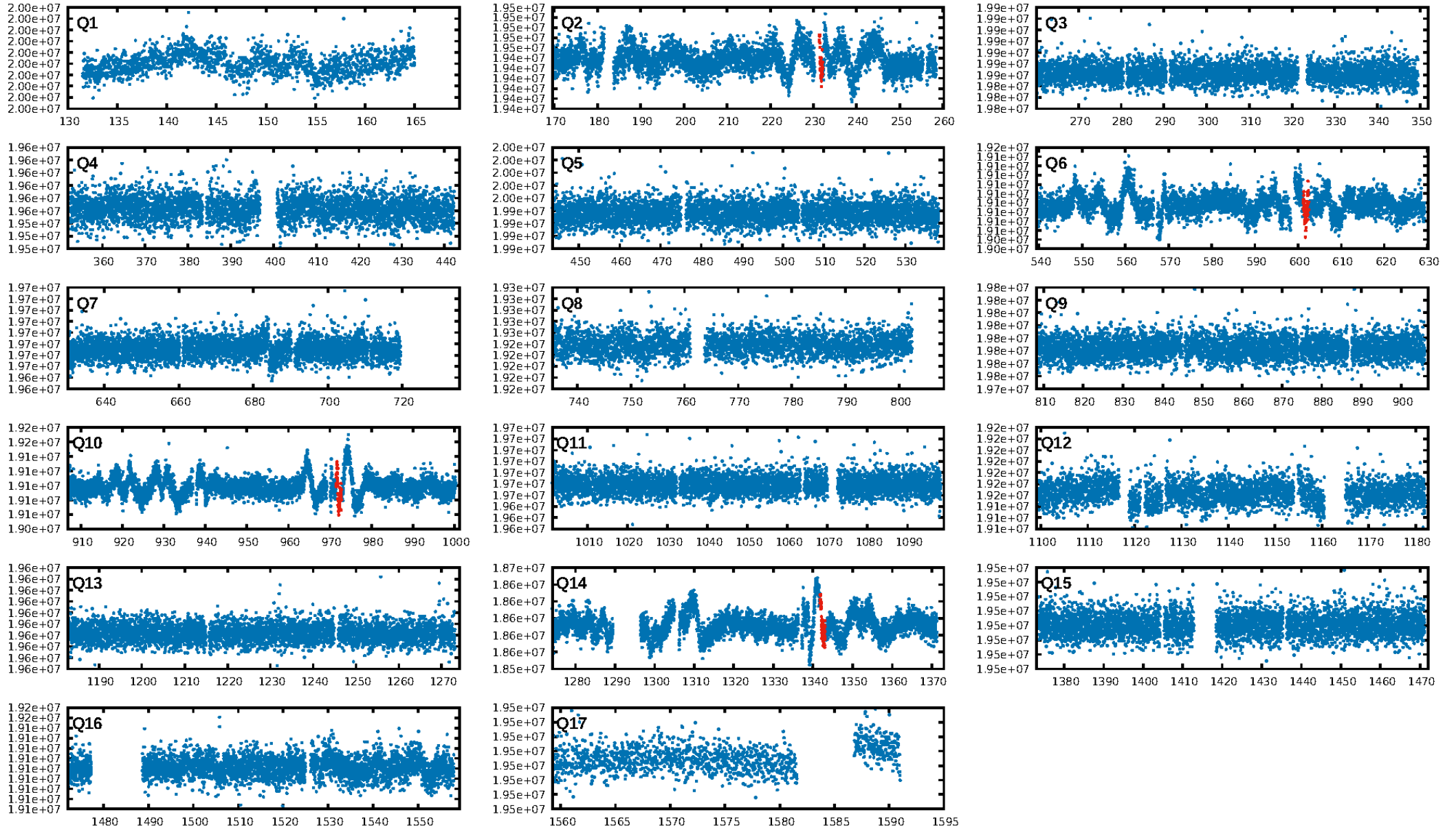
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 1.14e-14
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 0.8894
Centroid-sig: 0.0%
Centroid-so: 9.016 arcsec [3.97 σ]
OotOffset-rm: 4.122 arcsec [2.94 σ]
KicOffset-rm: 4.077 arcsec [2.91 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

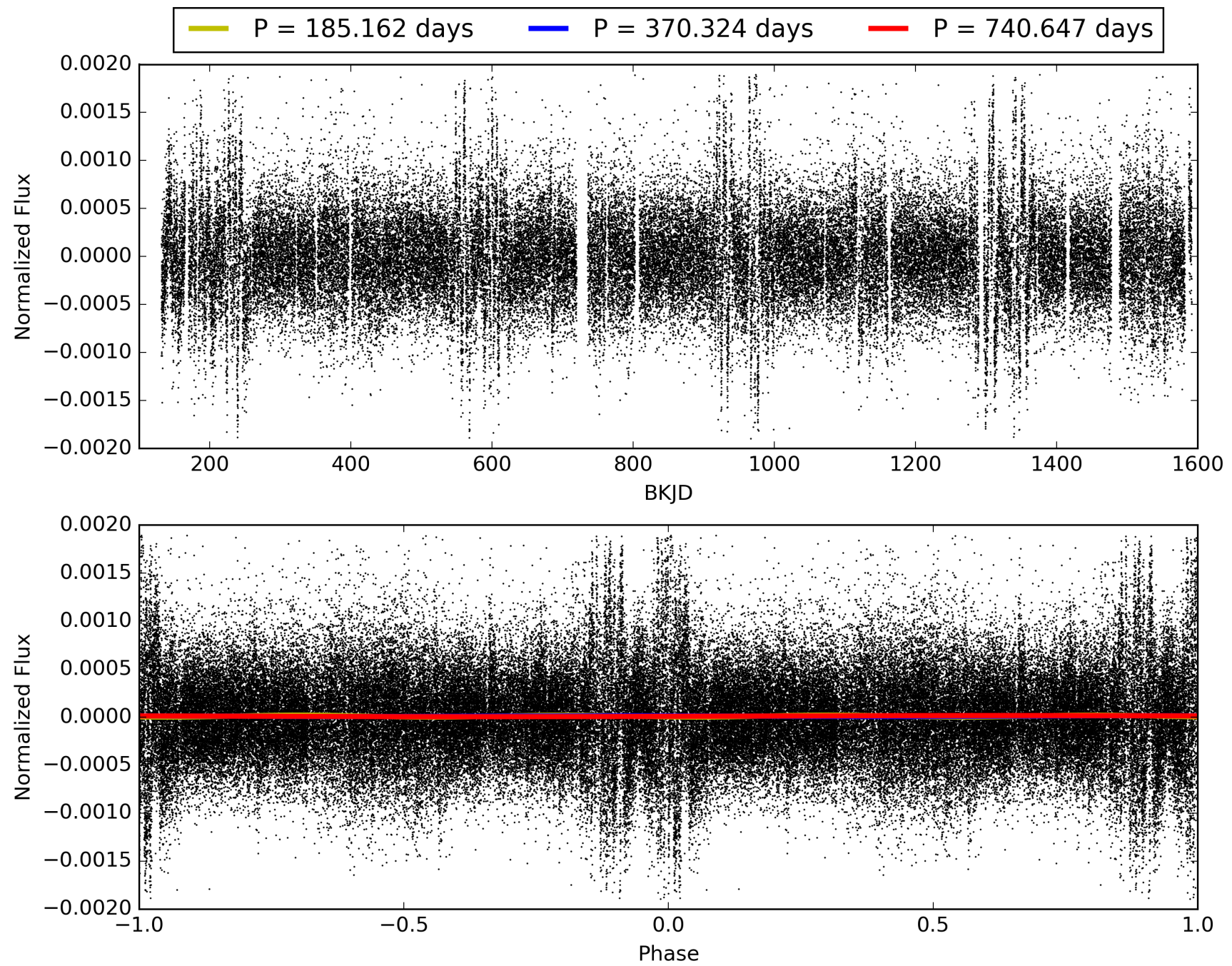
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:31:18 Z

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

TCE 008174909-01, PDC Light Curves

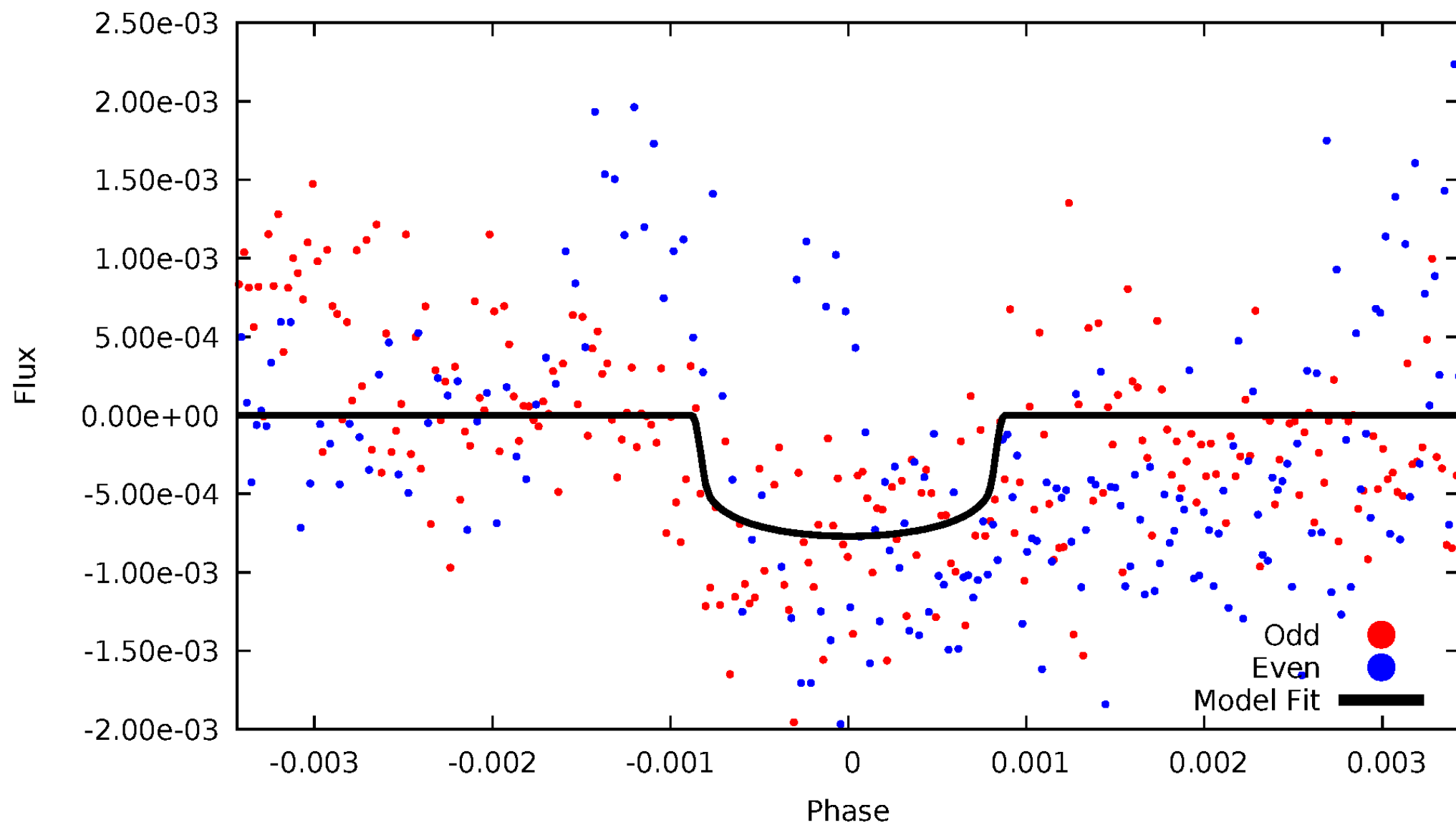


TCE 008174909-01



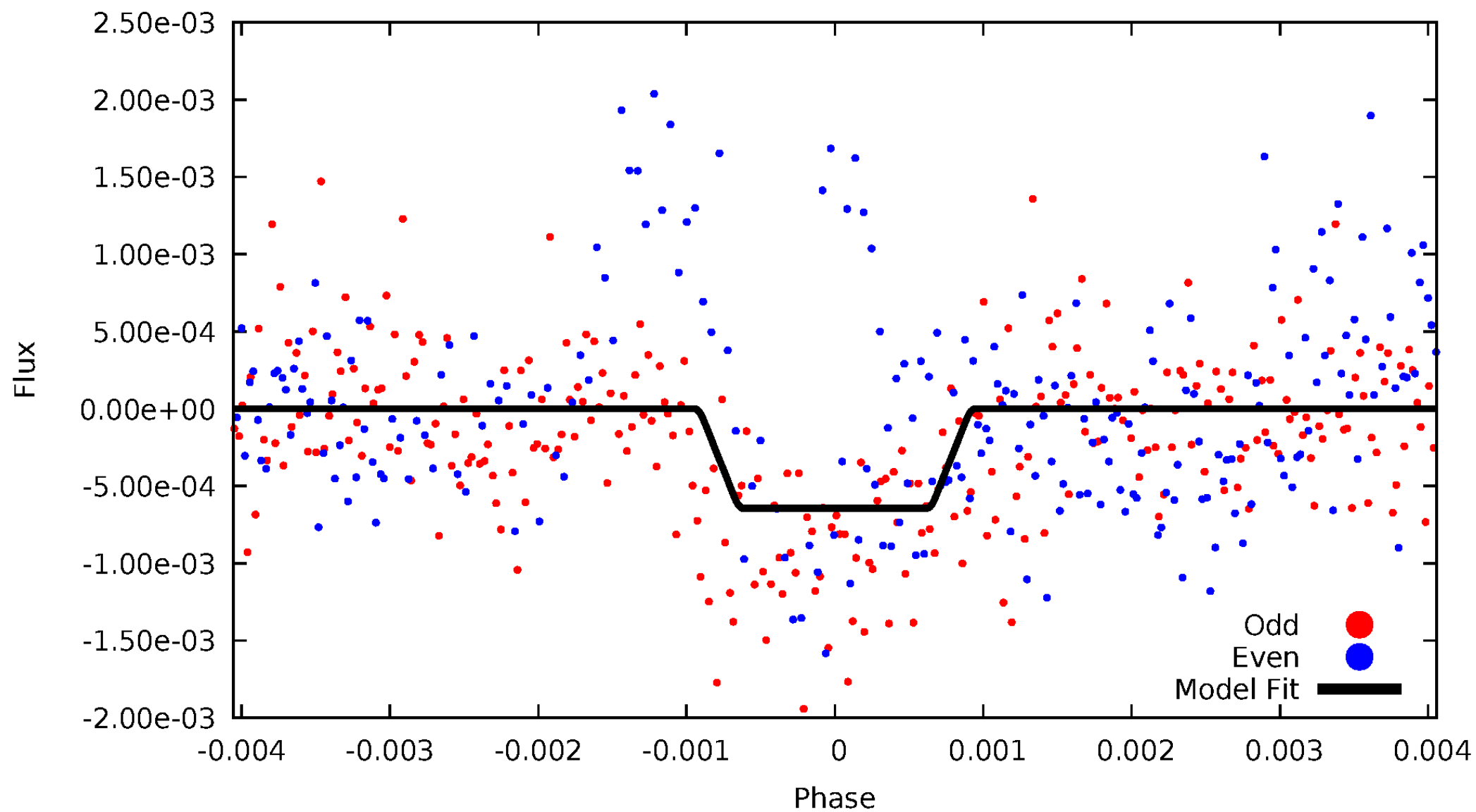
DV Odd/Even

TCE 008174909-01



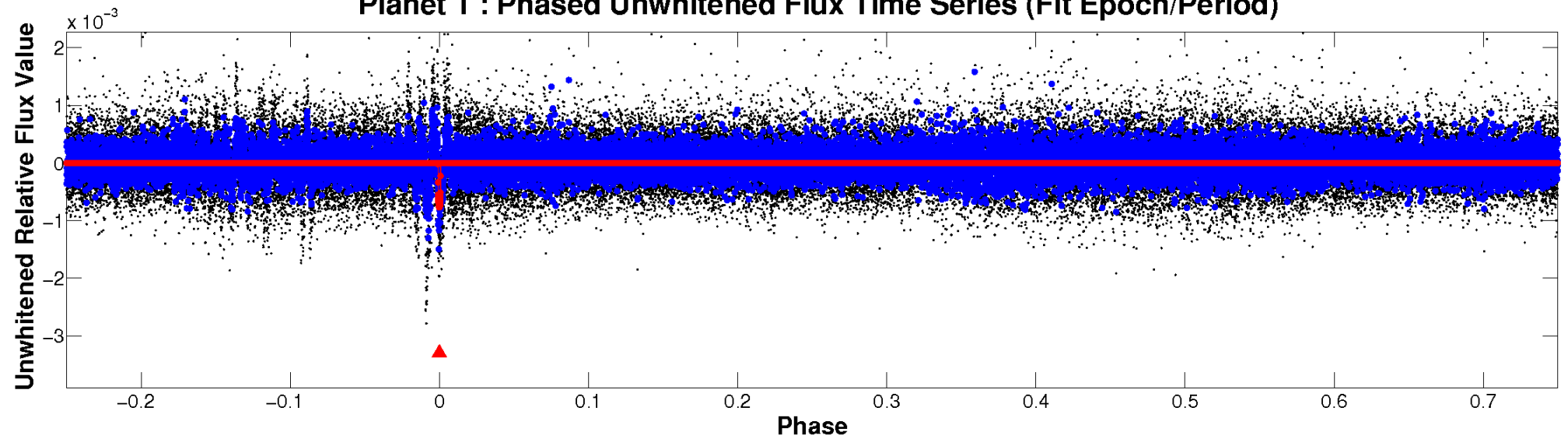
ALT Odd/Even

TCE 008174909-01

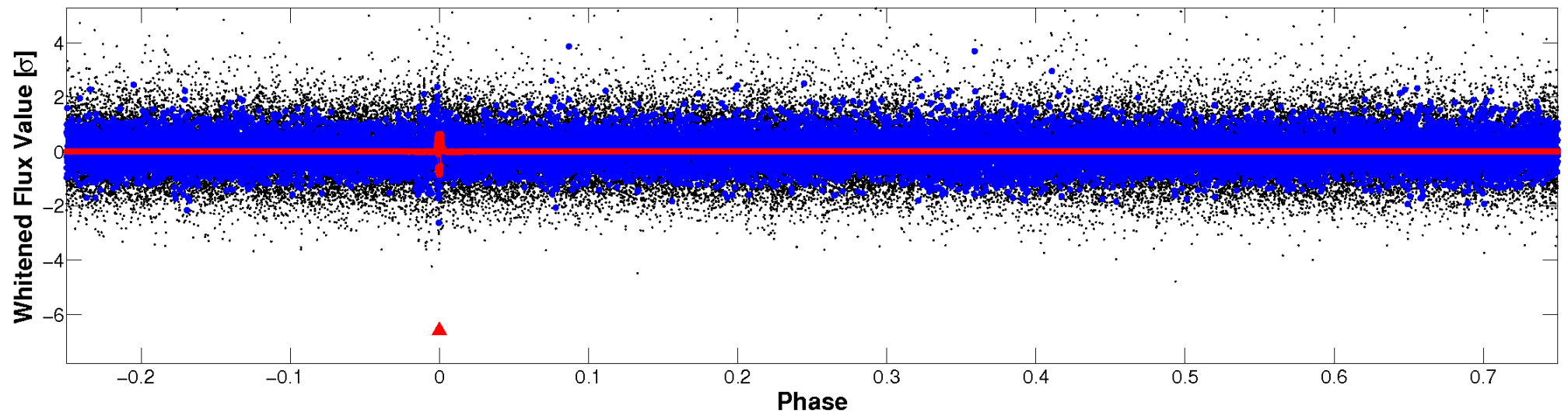


Non-Whitened Vs. Whitened Light Curve

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

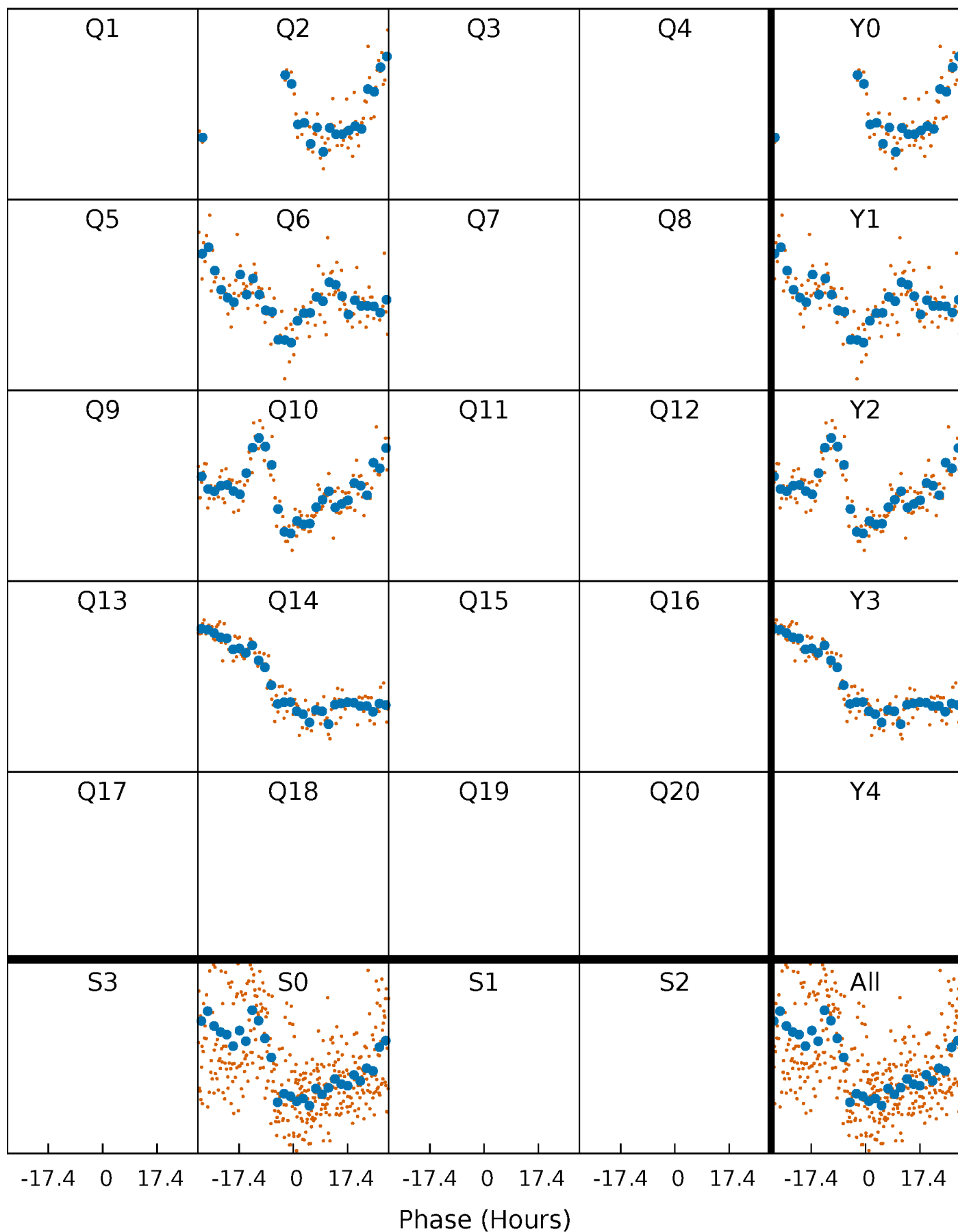


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



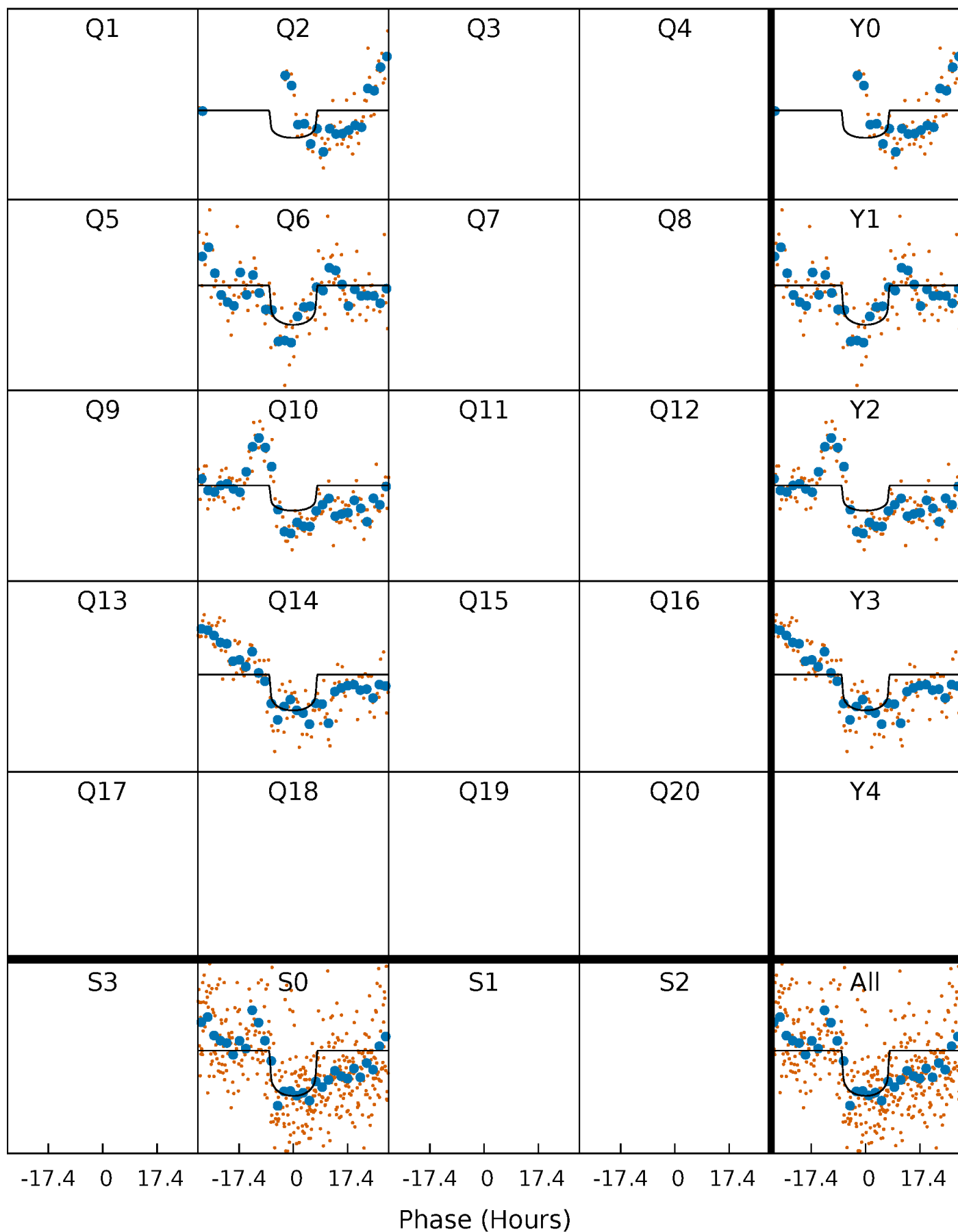
PDC Quarter-Phased Transit Curves

TCE 008174909-01 P=370.323538 Days $T_0=231.501497$ (BKJD)



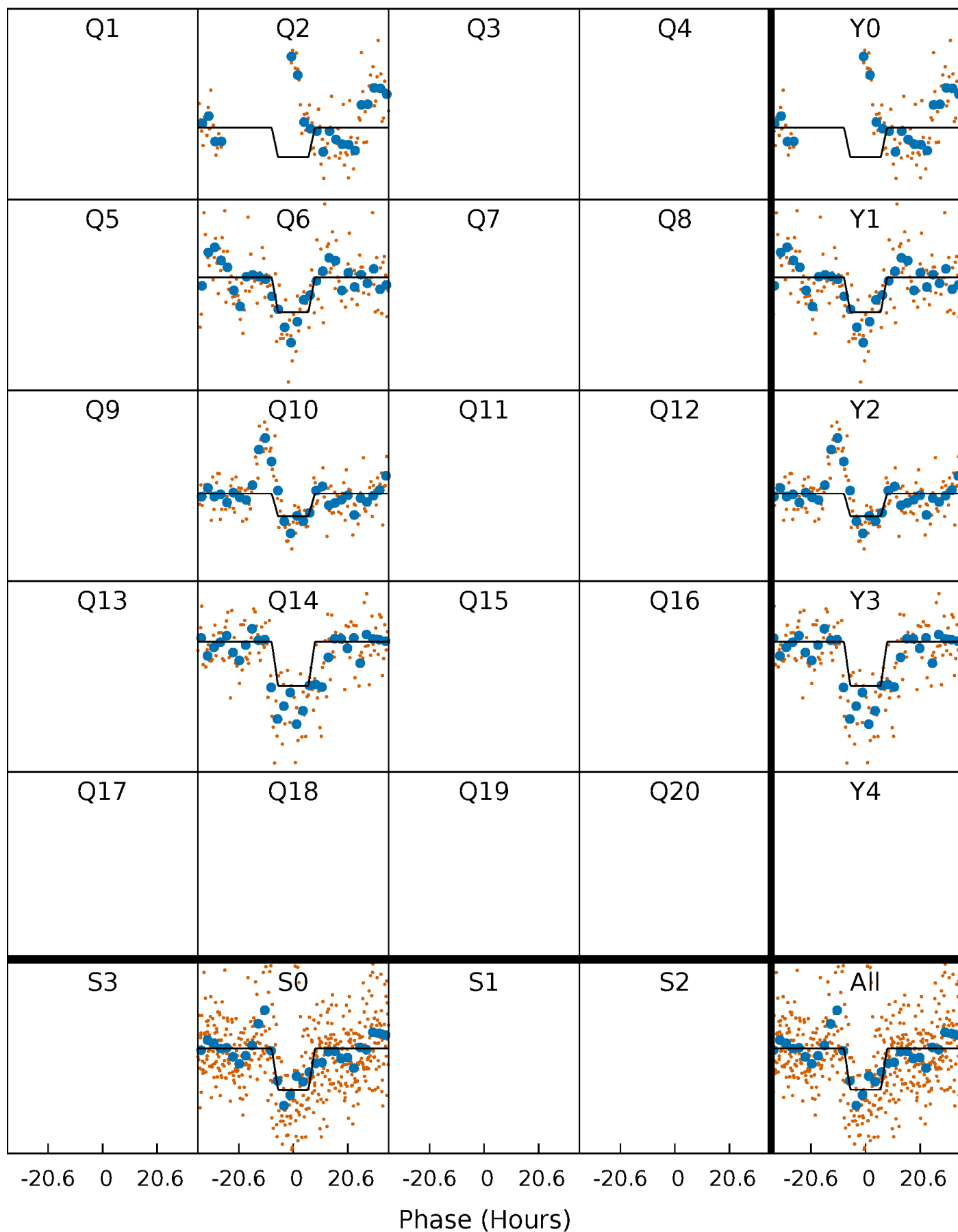
DV Quarter-Phased Transit Curves

TCE 008174909-01 P=370.323538 Days $T_0=231.501497$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

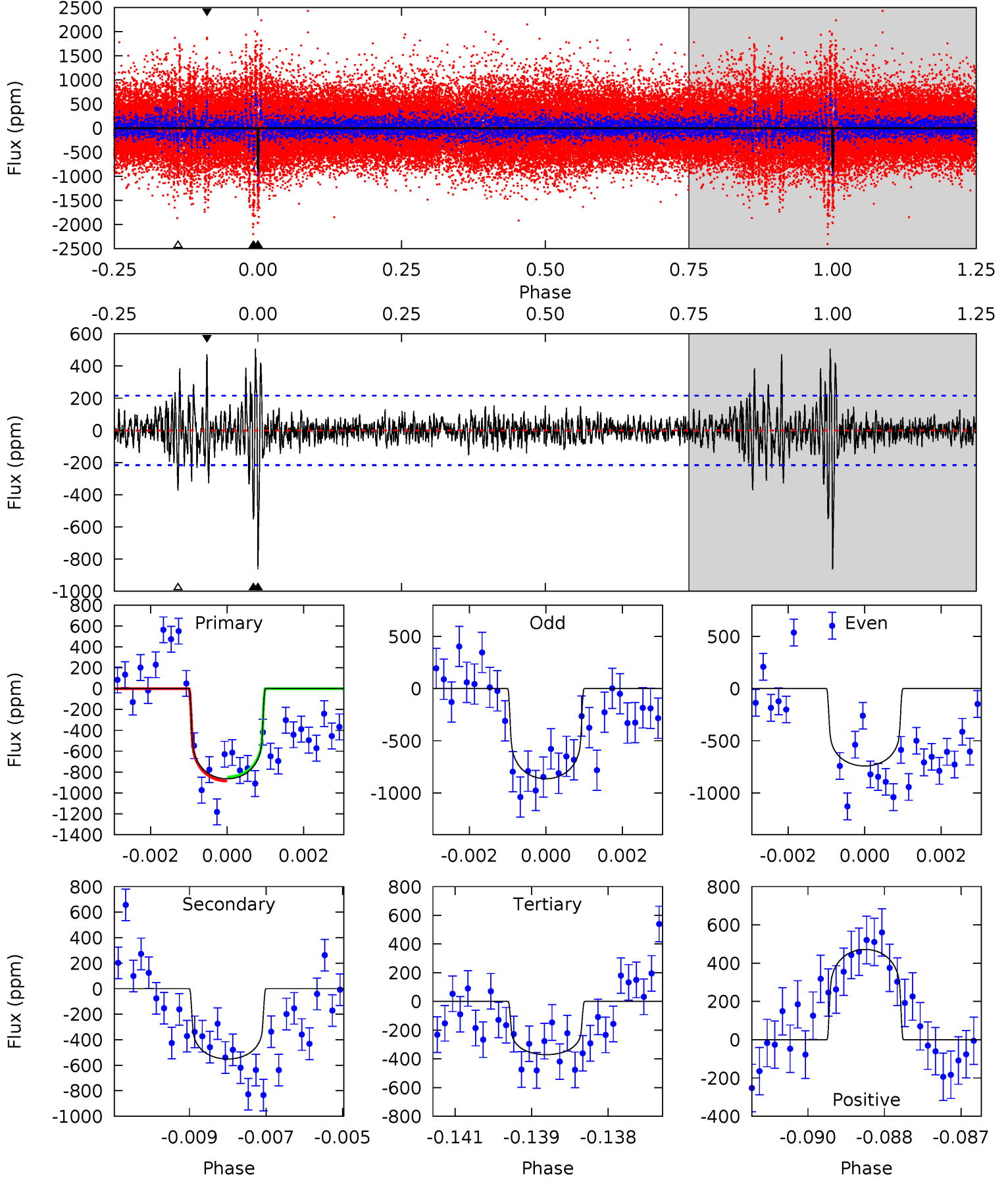
TCE 008174909-01 P=370.365086 Days $T_0=231.424687$ (BKJD)



DV Model-Shift Uniqueness Test

008174909-01, P = 370.323538 Days, E = 231.501497 Days

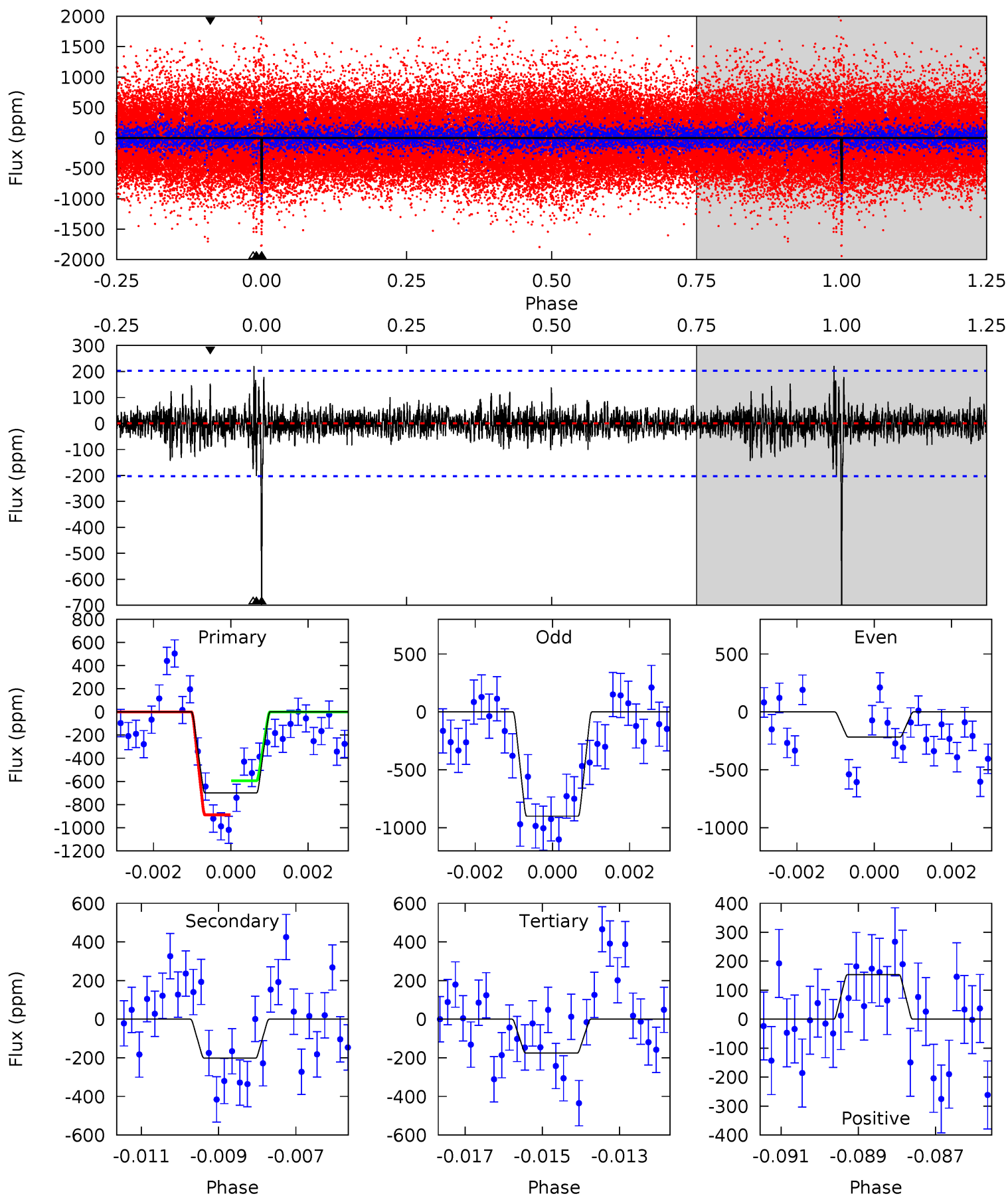
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	13.7	9.19	11.7	5.35	3.13	1.88	12.2	9.73	4.48	1.96	1.53	0.88	0.37	0.46



Alt Model-Shift Uniqueness Test

008174909-01, P = 370.365086 Days, E = 231.424687 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	5.30	4.62	4.04	5.34	3.11	0.94	13.8	14.4	0.68	1.26	9.05	0.61	0.24	3.82



Stellar Parameters For KIC 008174909

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6225^{+175}_{-241}	$4.467^{+0.056}_{-0.224}$	$-0.260^{+0.250}_{-0.300}$	$0.985^{+0.312}_{-0.112}$	$1.033^{+0.144}_{-0.144}$	$1.521^{+0.434}_{-0.801}$
	+3%/-4%	+1%/-5%	+96%/-115%	+32%/-11%	+14%/-14%	+29%/-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 008174909-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-551 ± 40	$2.97^{+1.39}_{-1.30}$	384^{+33}_{-20}	5931^{+1987}_{-989}	35655^{+70965}_{-19608}
Alt.	-202 ± 38	$2.79^{+1.37}_{-1.18}$	385^{+30}_{-20}	4779^{+1451}_{-658}	13519^{+29898}_{-7380}

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

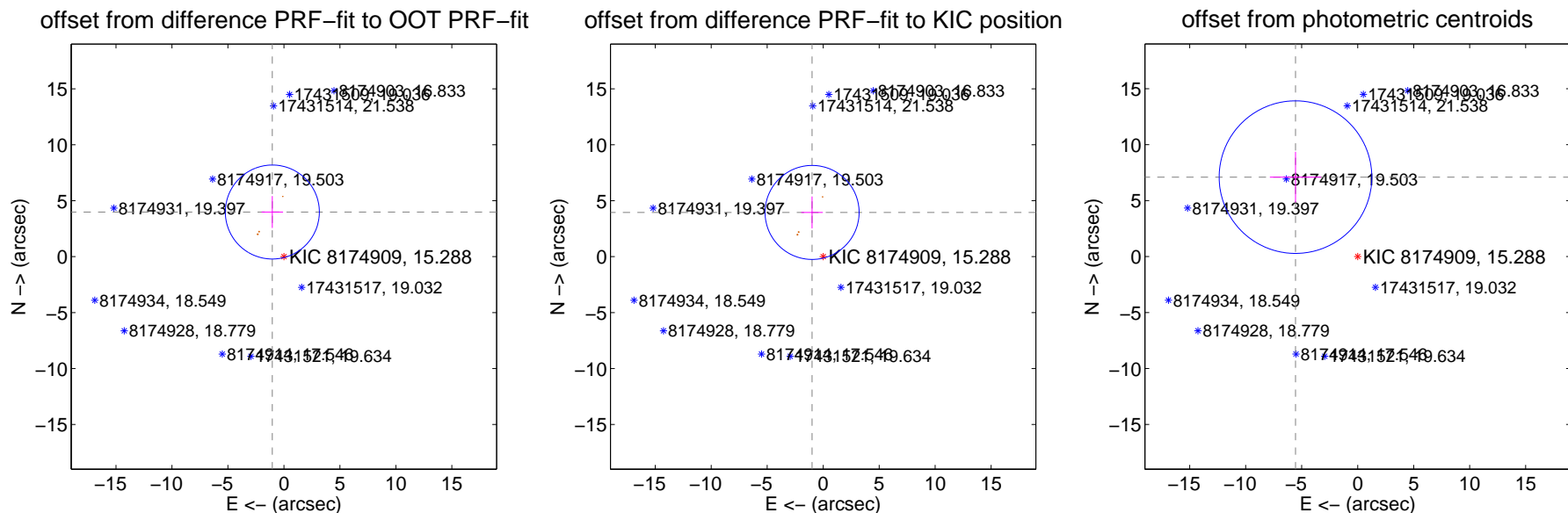
DV Centroid Data

Supplemental centroid analysis for 008174909-01. Kepler magnitude: 15.29. Transit SNR 8.77

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.122 ± 1.400	2.94	1.034 ± 0.959	3.991 ± 1.425
PRF-fit source offset from KIC position	4.077 ± 1.401	2.91	0.991 ± 0.960	3.954 ± 1.424
photometric centroid source offset	9.02 ± 2.27	3.97	5.55 ± 2.29	7.10 ± 2.26

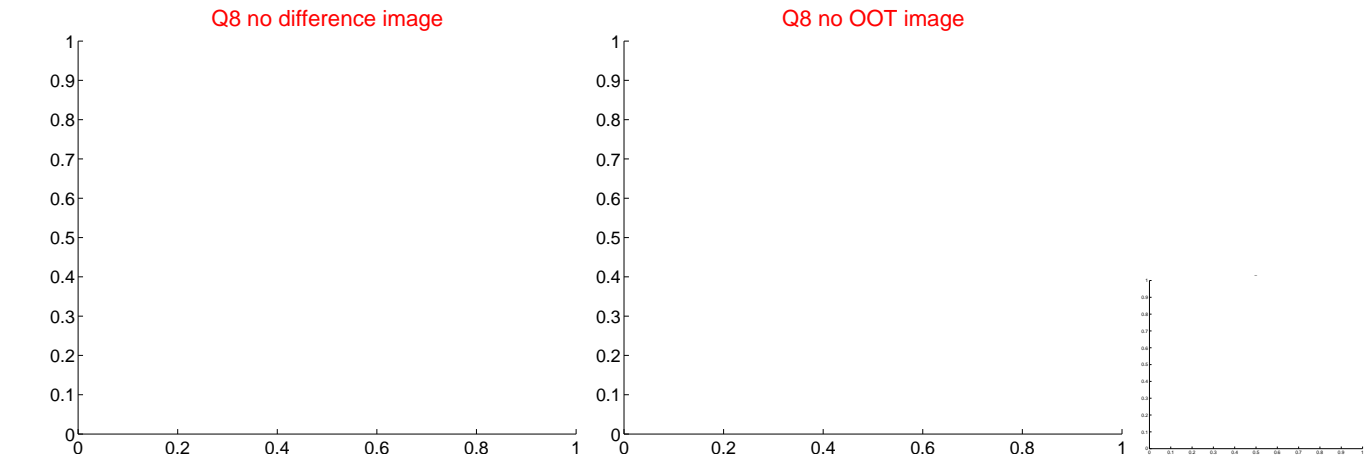
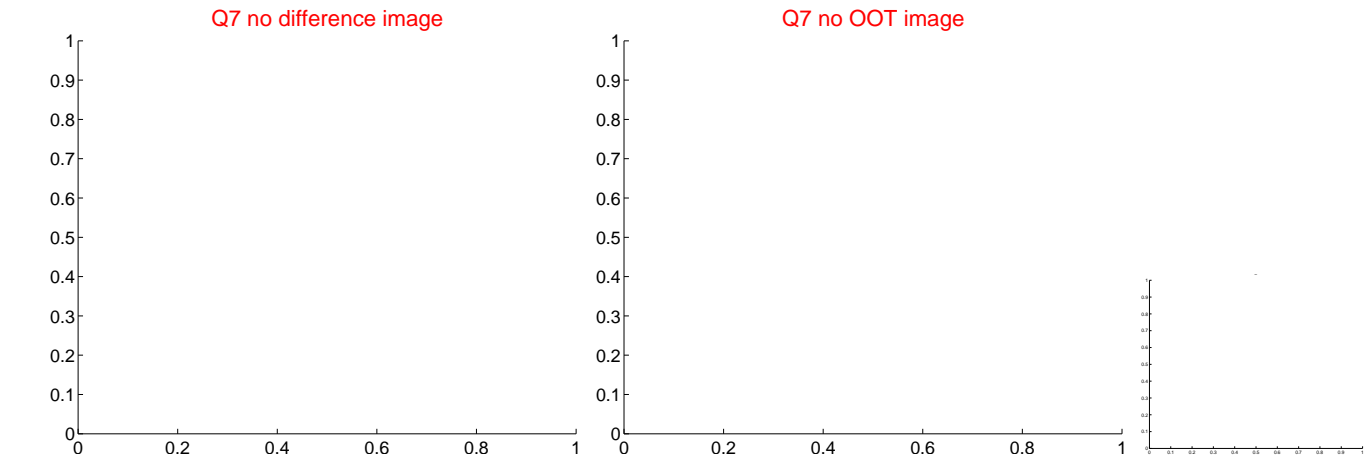
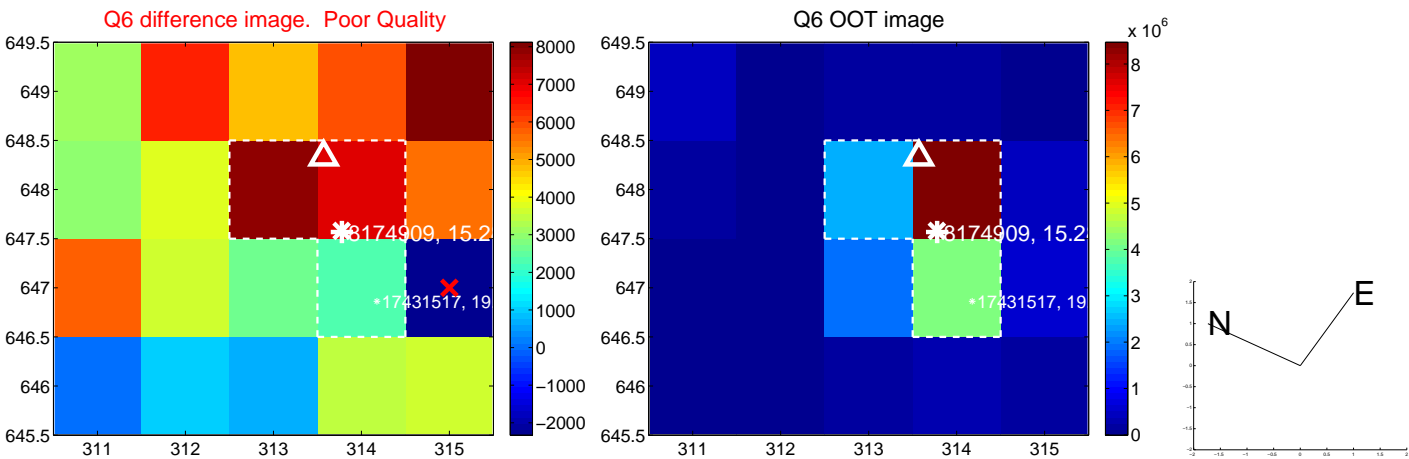
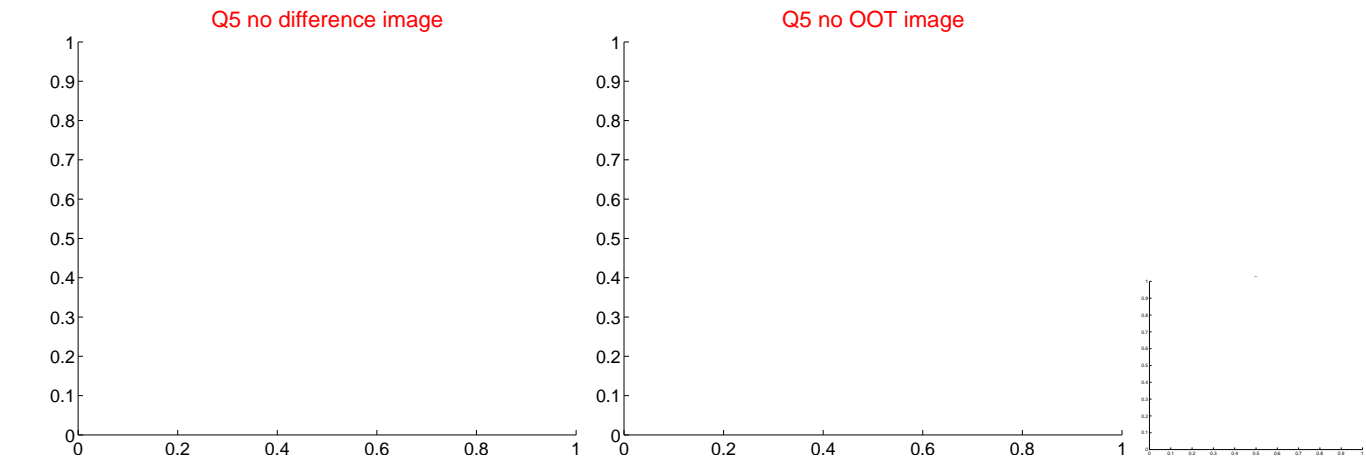


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

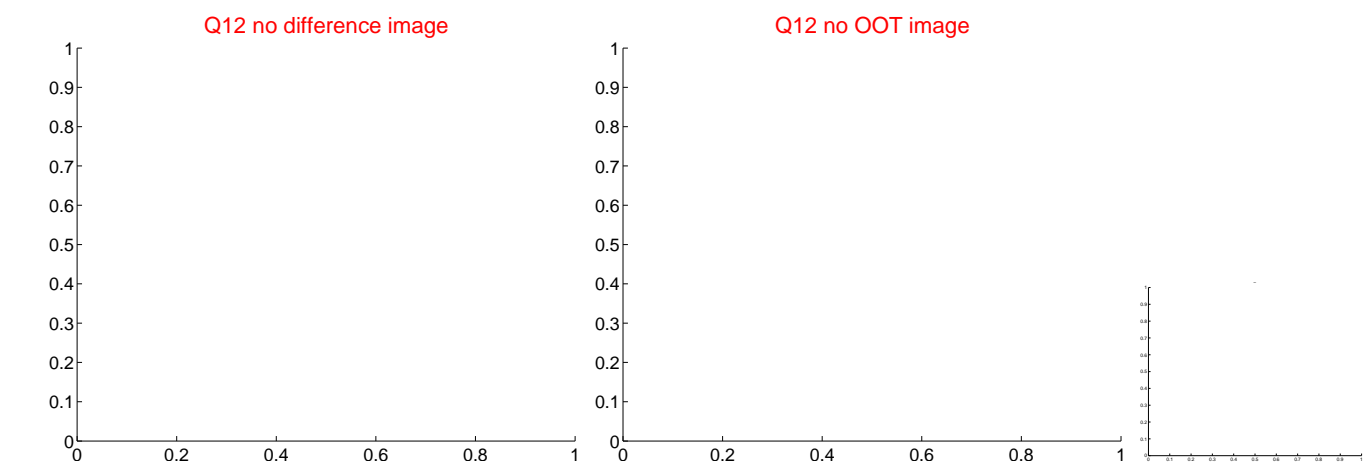
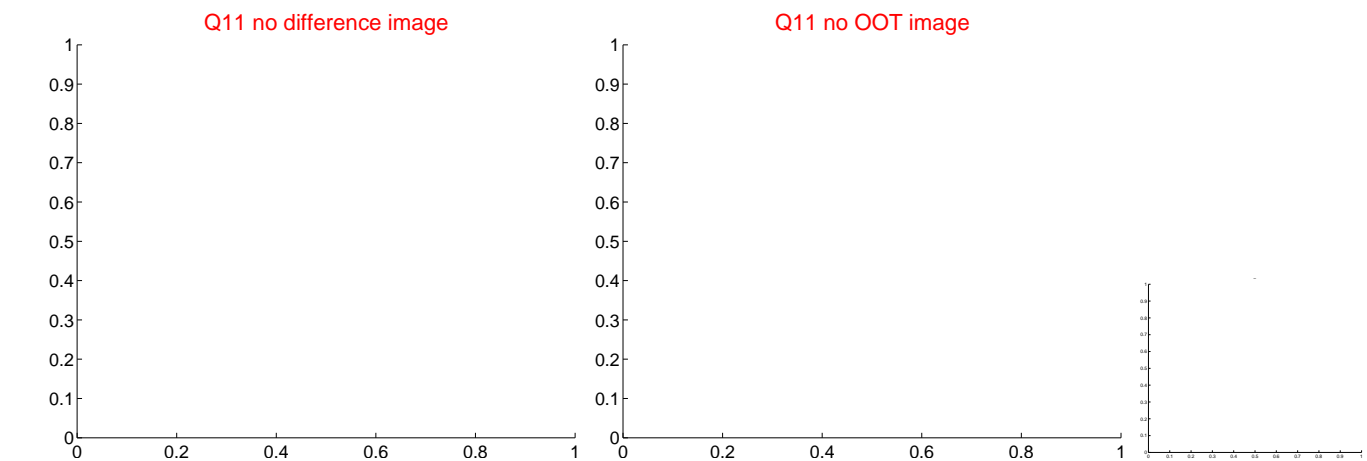
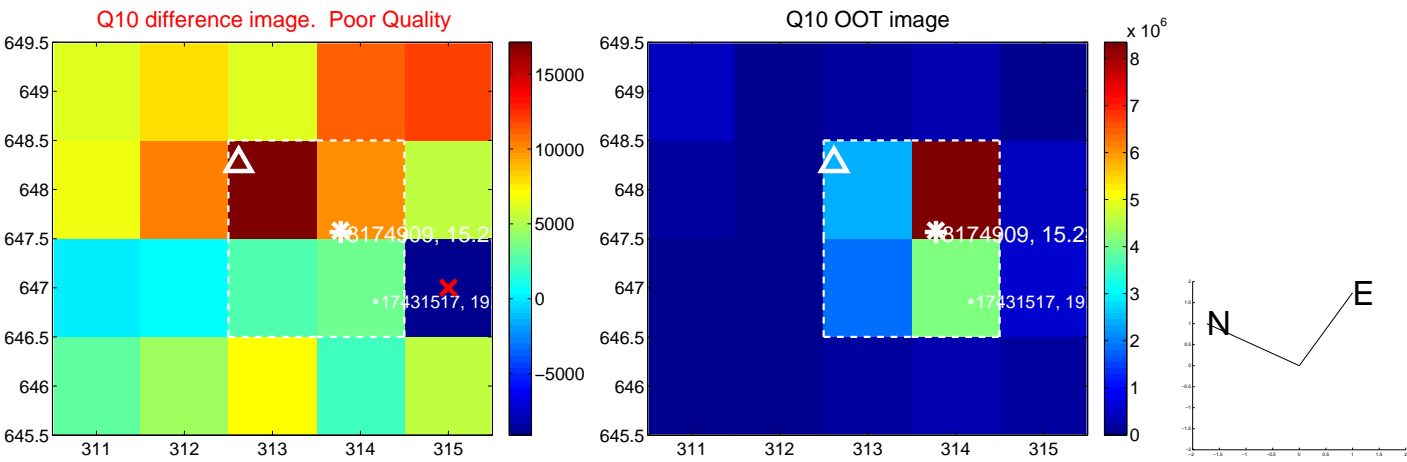
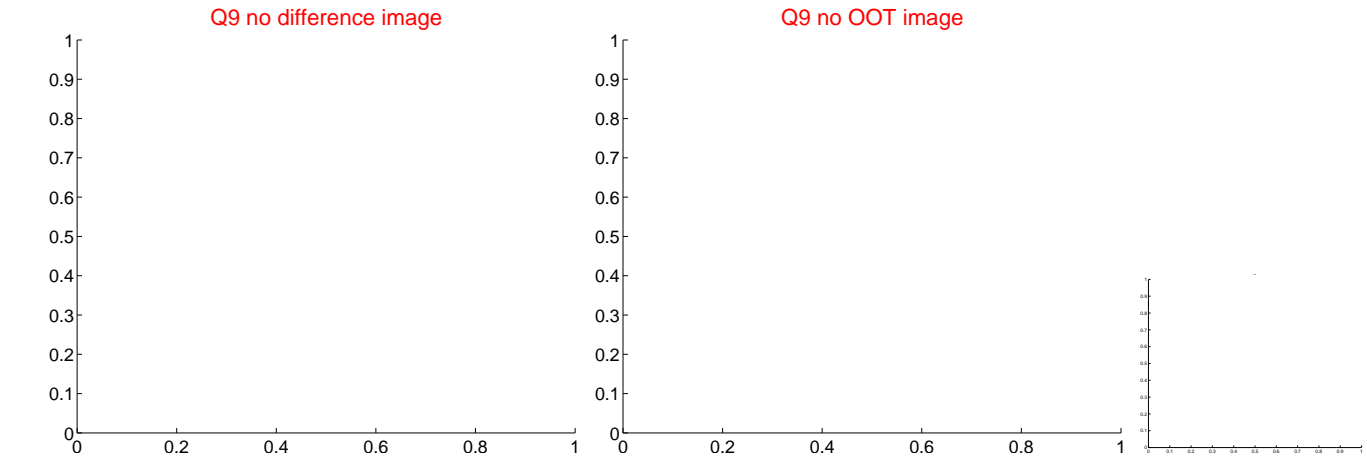
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



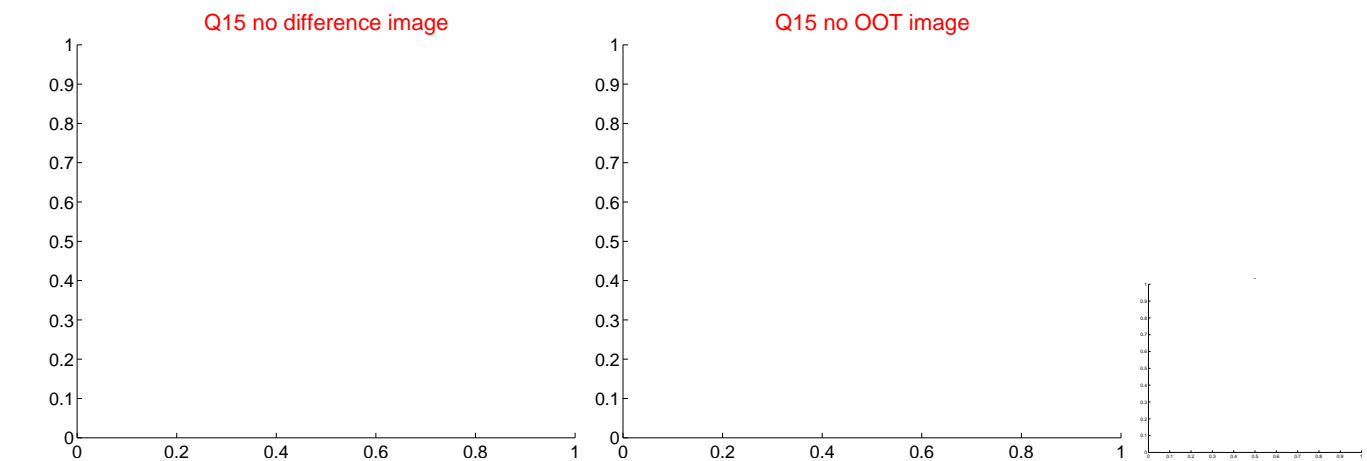
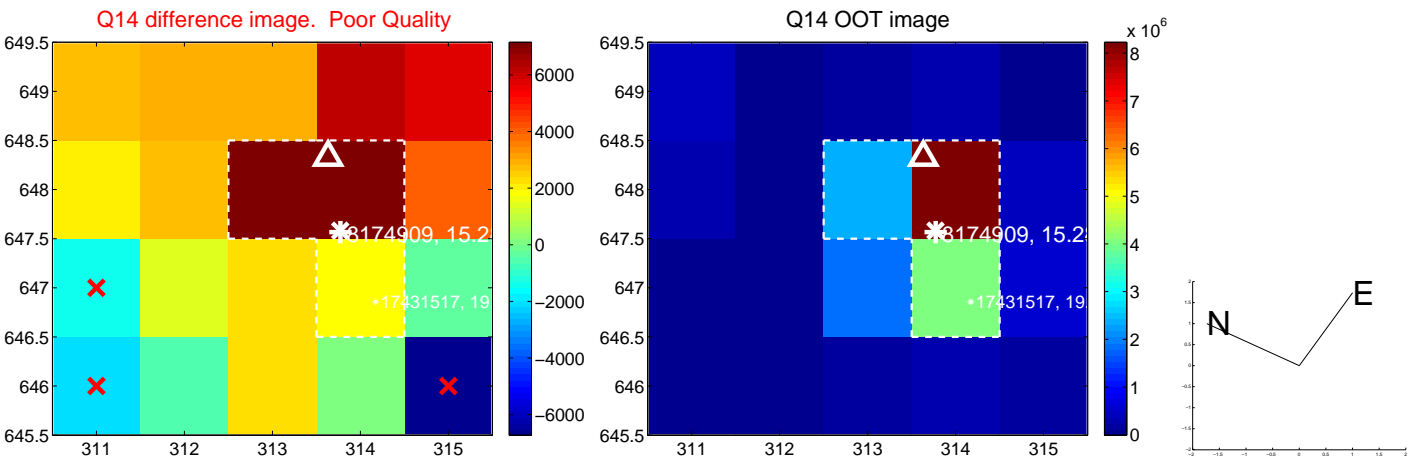
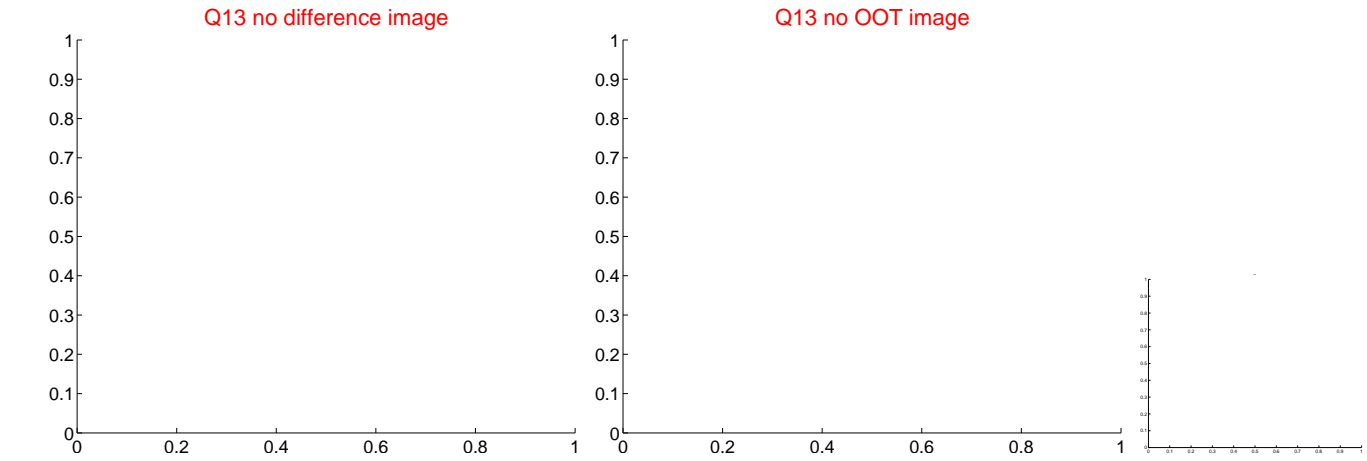
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



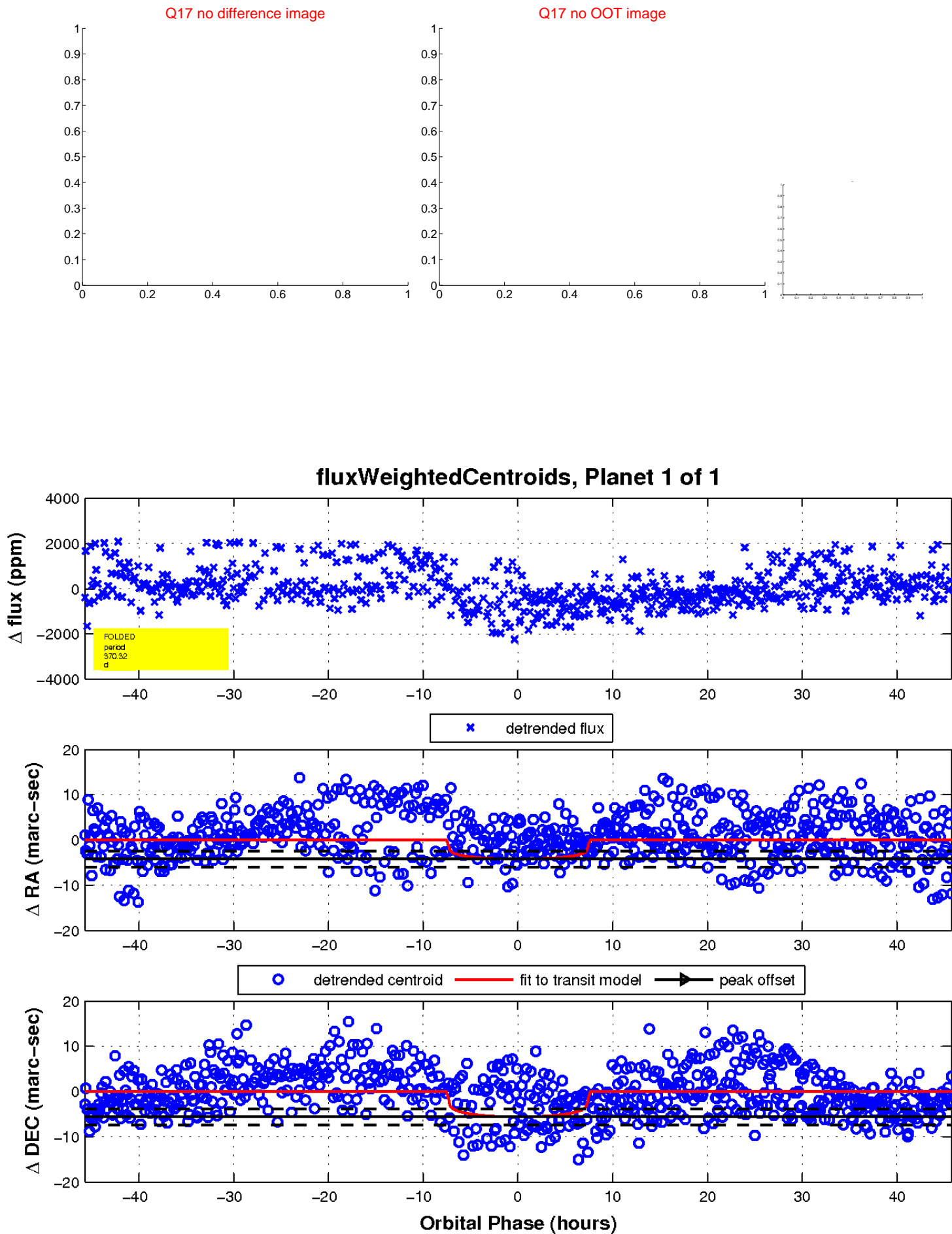
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

