

KIC 009834040

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})
009834040-01	OBS	1998.01	6.774101	135.954842	518.3	2.812	28.4	31.5	1.09	6246	2.85	296.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009834040-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

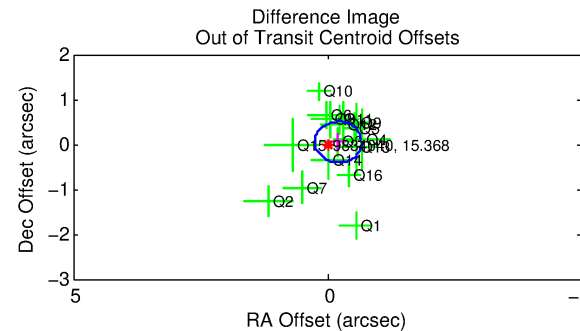
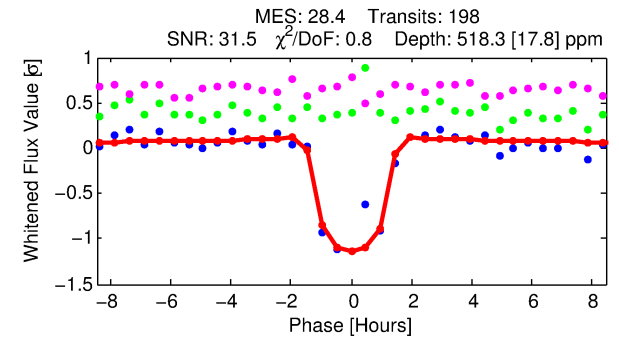
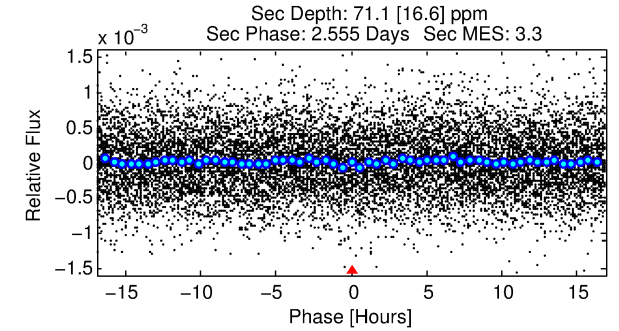
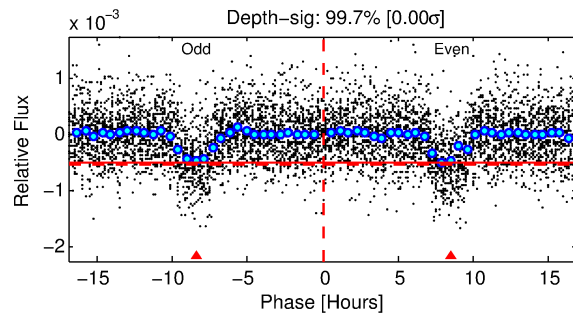
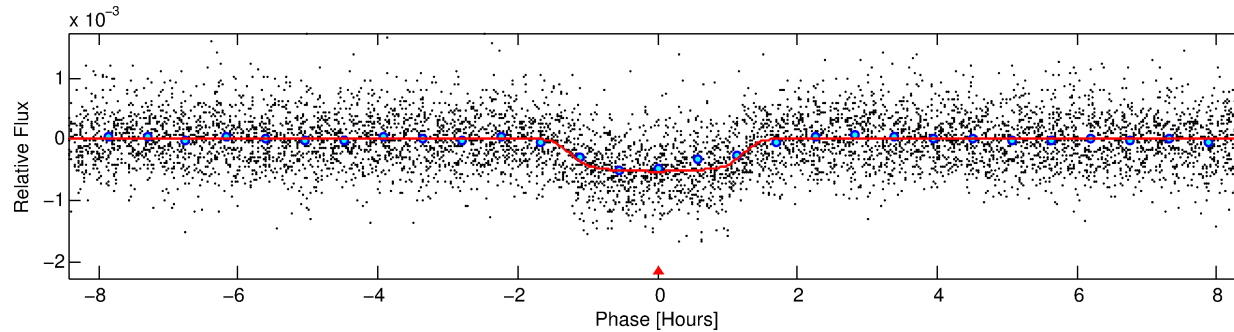
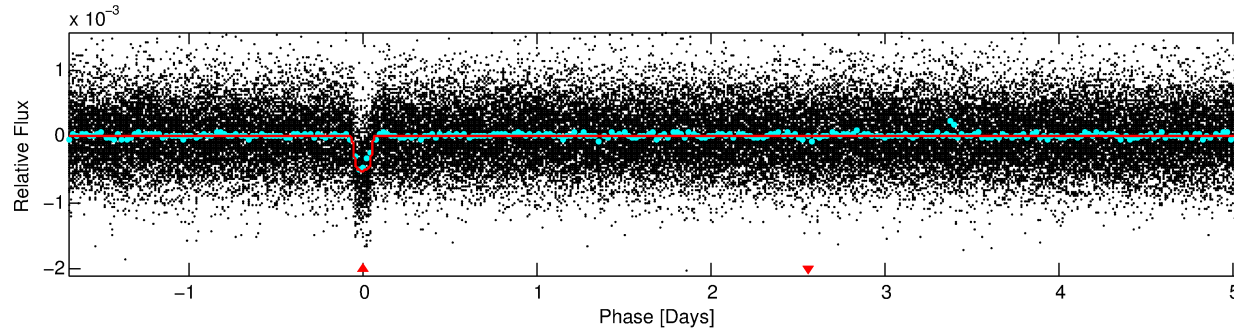
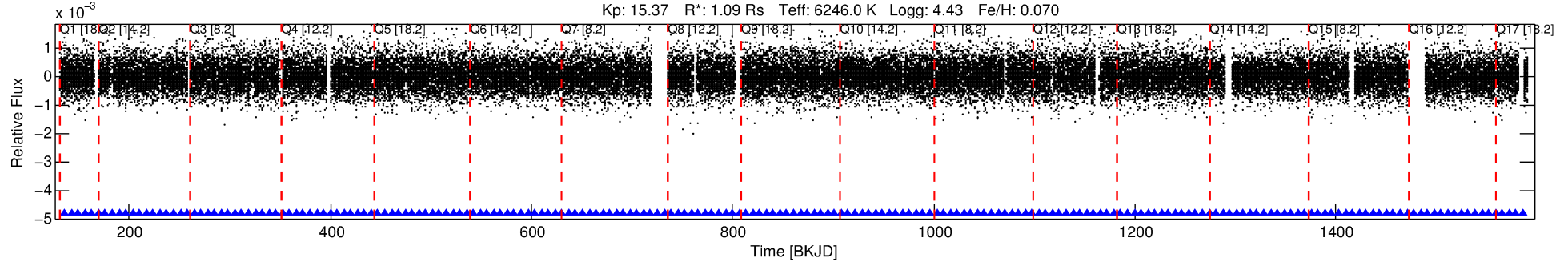
Ephemeris Match Information For 009834040-01

No Significant Match Found

DV One-Page Summary

KIC: 9834040 Candidate: 1 of 1 Period: 6.774 d
KOI: K01998.01 Corr: 0.965

Kp: 15.37 R*: 1.09 Rs Teff: 6246.0 K Logg: 4.43 Fe/H: 0.070



DV Fit Results:

Period = 6.77410 [0.00002] d
Epoch = 135.9548 [0.0017] BKJD
Rp/R* = 0.0240 [0.0033]
a/R* = 10.04 [7.00]
b = 0.87 [0.20]
Seff = 296.70 [120.78]
Teq = 1058 [108] K
Rp = 2.86 [0.95] Re
a = 0.0740 [0.0190] AU
Ag = 26.28 [13.76] [1.84σ]
Teffp = 3705 [365] K [6.95σ]

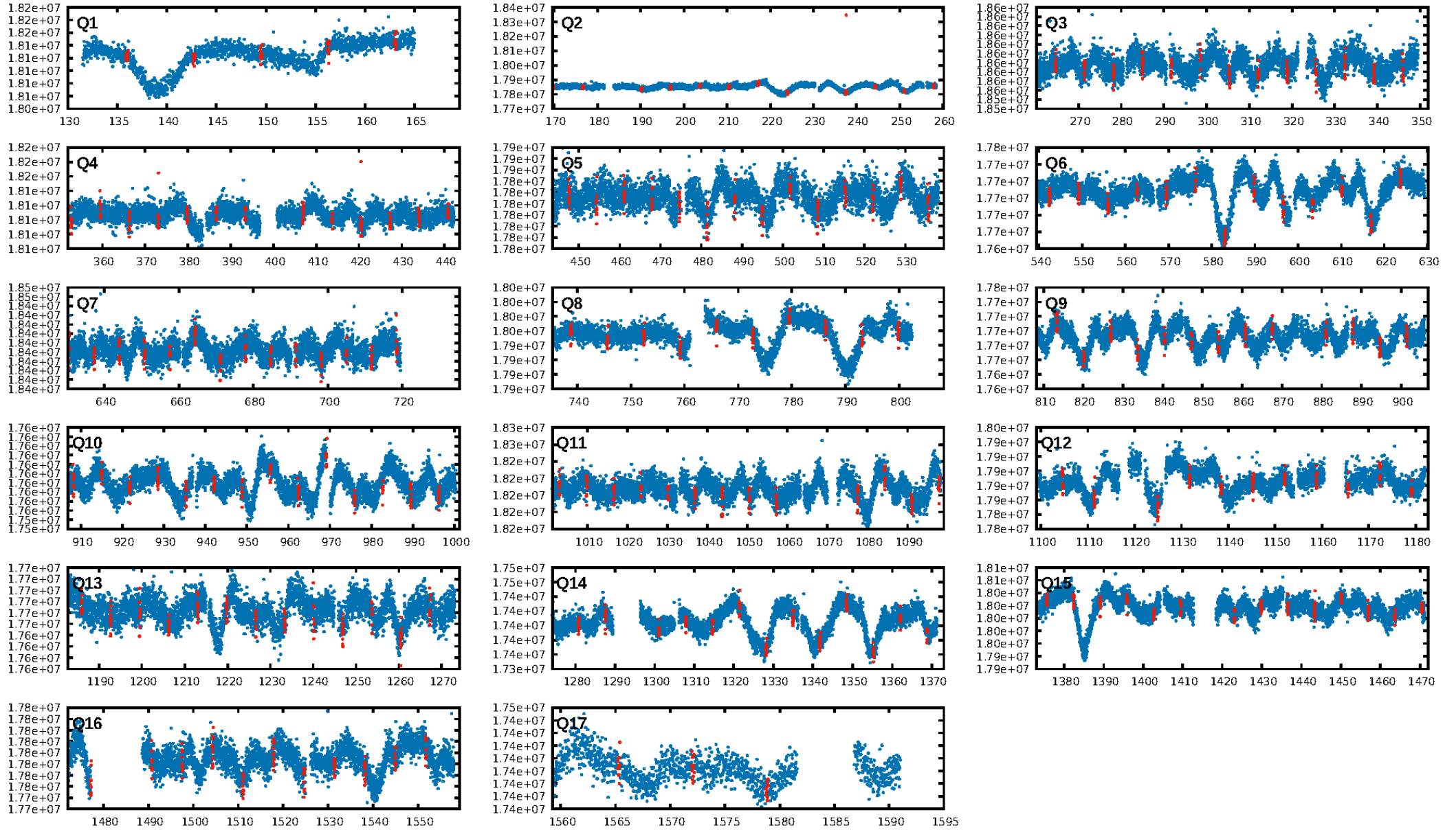
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.15e-176
RollingBand-fgt: 1.00 [190/190]
GhostDiagnostic-chr: 7.456
Centroid-sig: 67.8%
Centroid-so: 0.250 arcsec [0.55σ]
OotOffset-rm: 0.211 arcsec [1.38σ]
KicOffset-rm: 0.358 arcsec [2.64σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

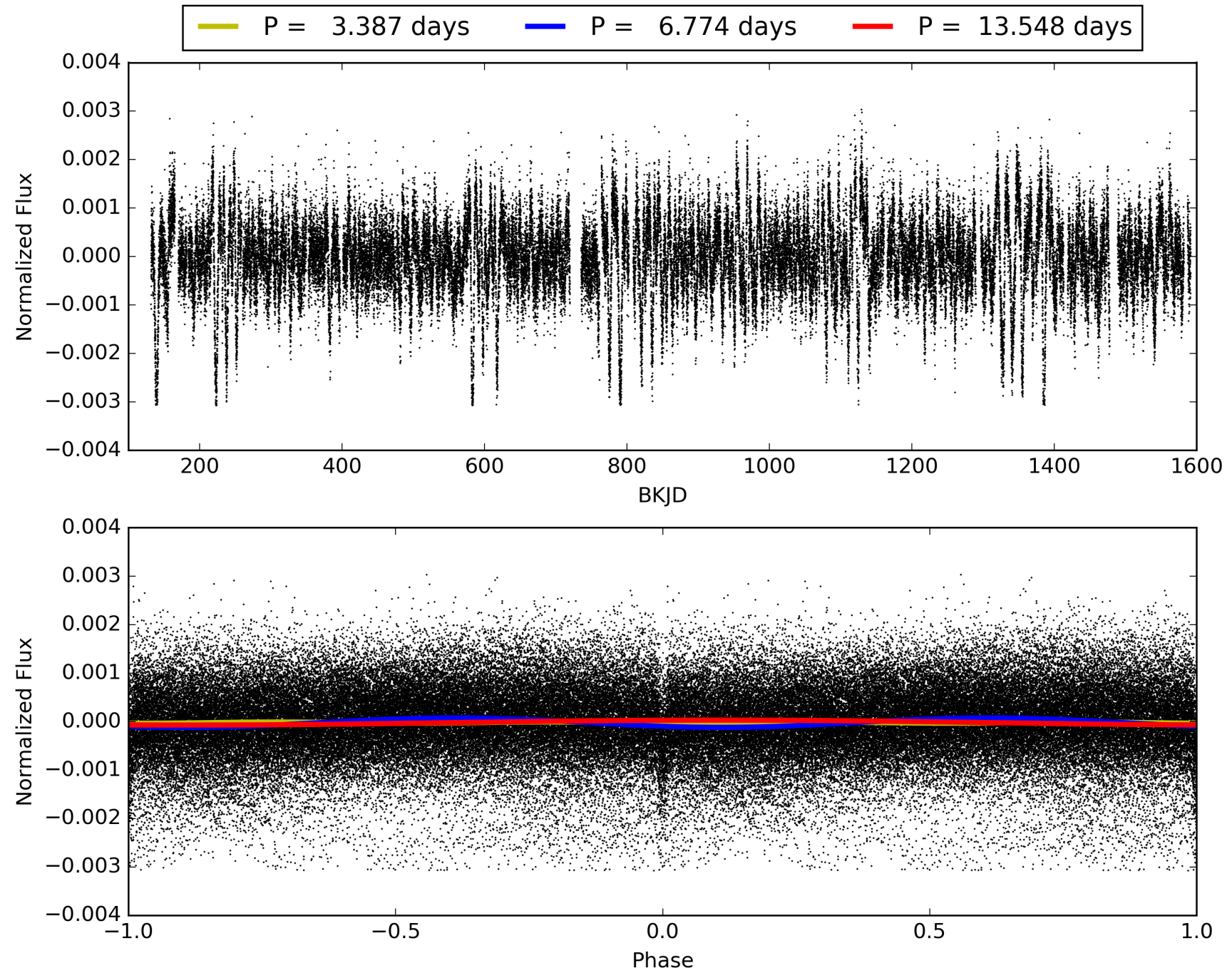
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:19:37 Z

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

TCE 009834040-01, PDC Light Curves

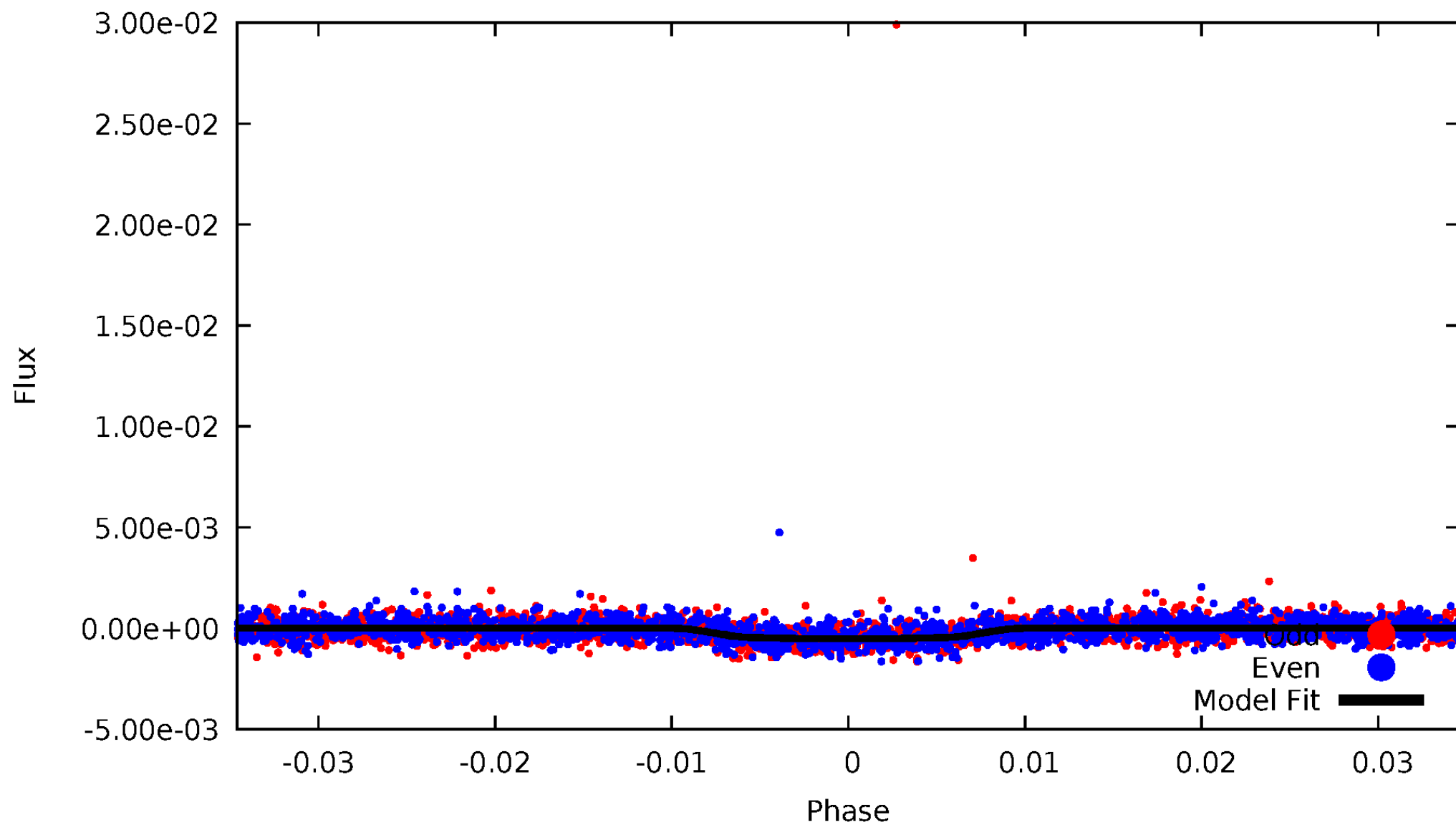


TCE 009834040-01



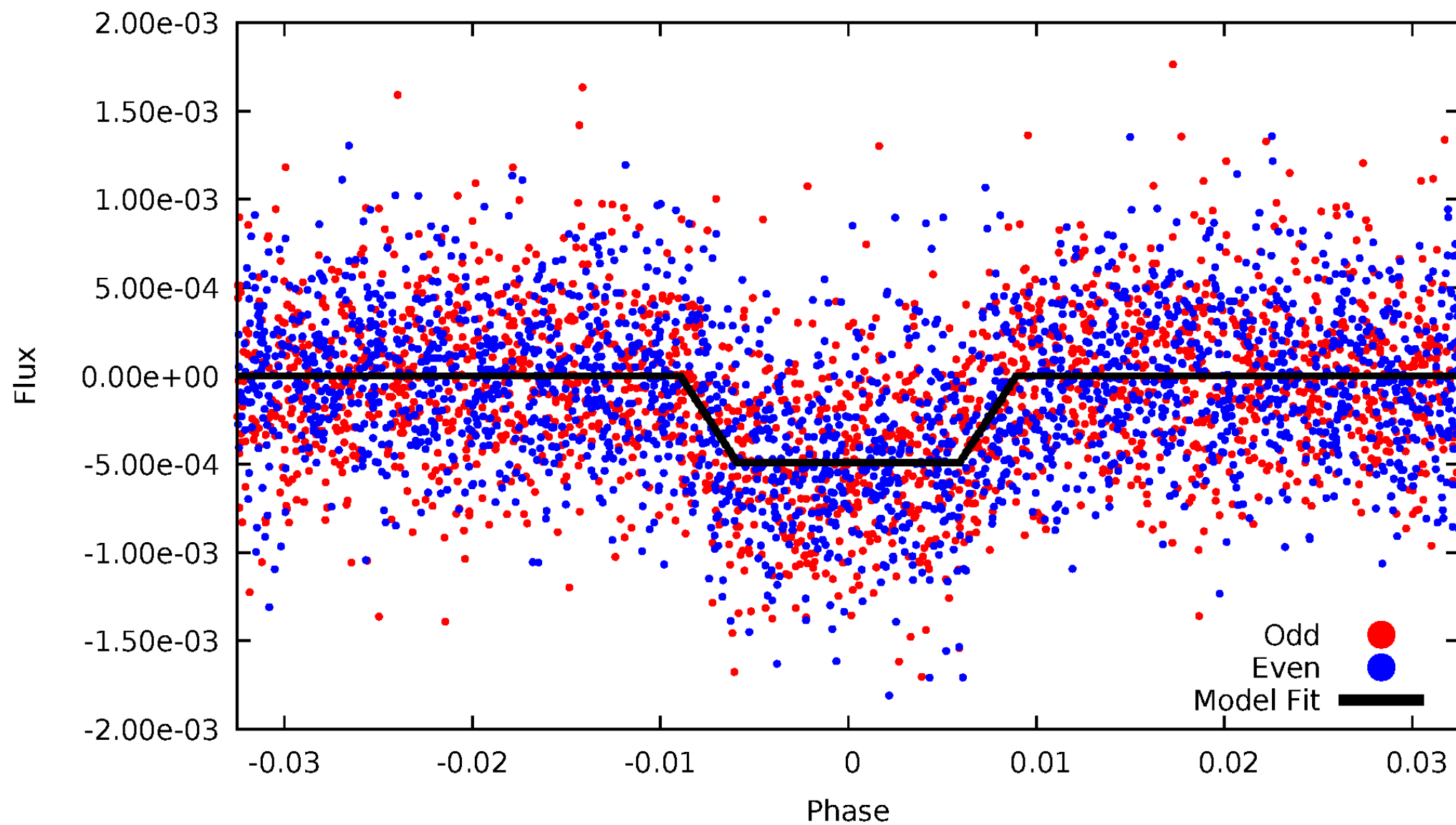
DV Odd/Even

TCE 009834040-01



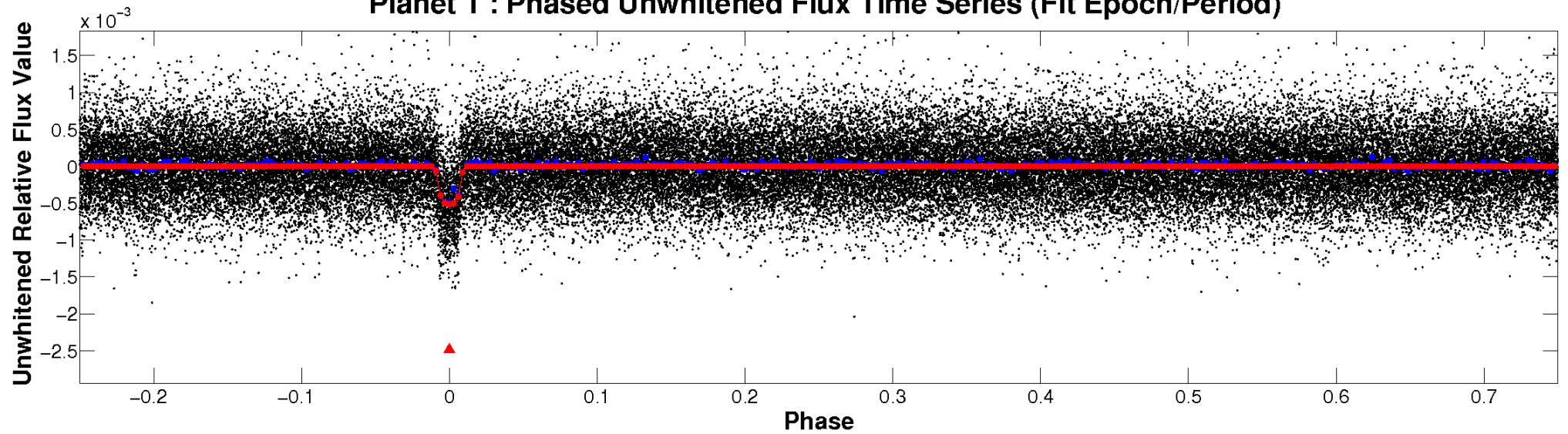
ALT Odd/Even

TCE 009834040-01

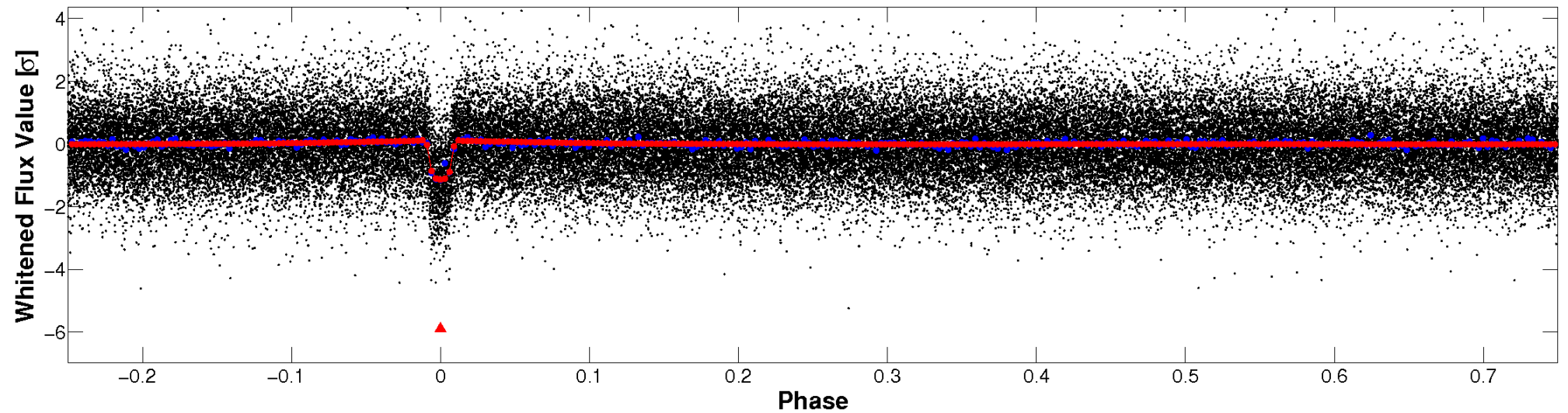


Non-Whitened Vs. Whitened Light Curve

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

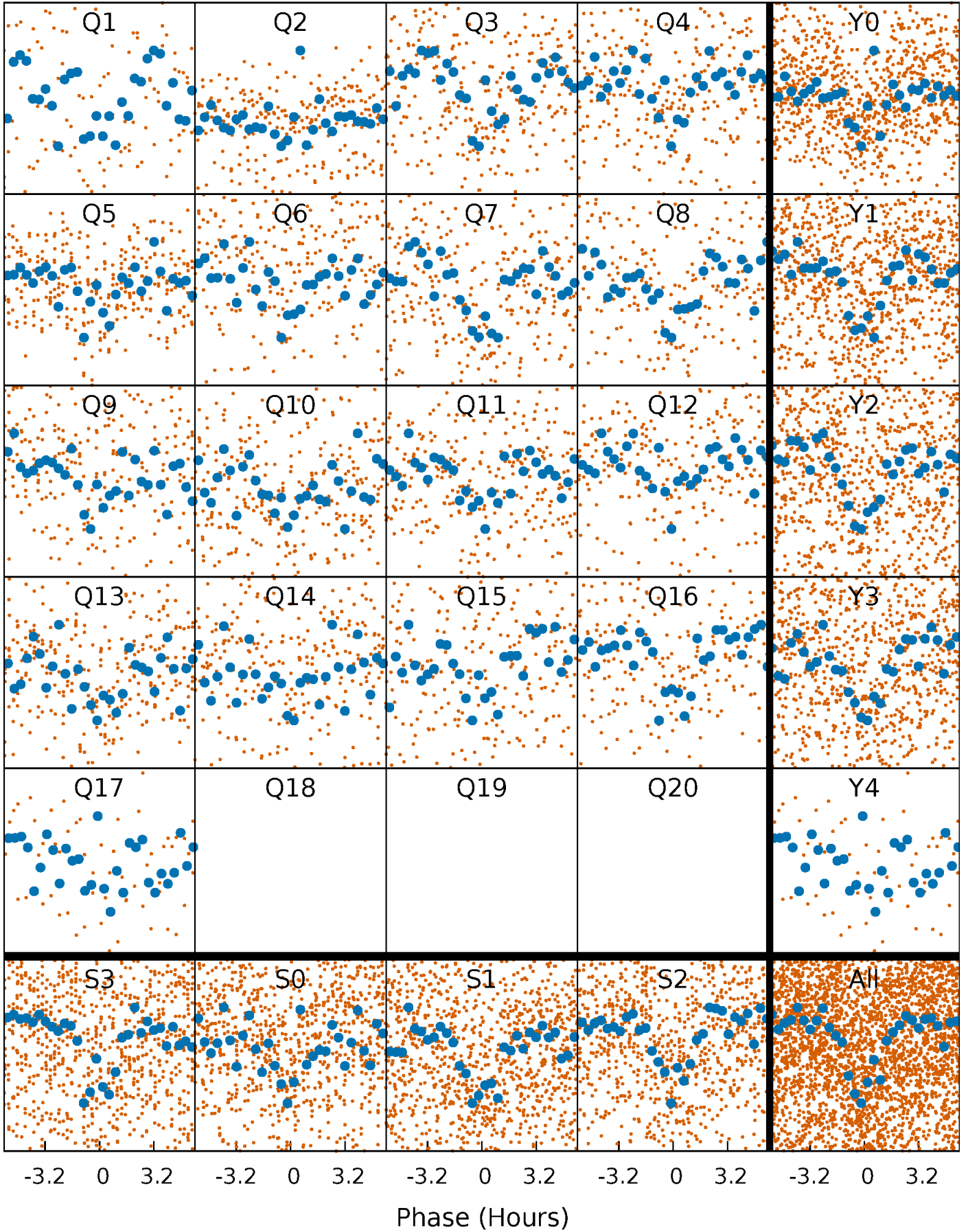


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



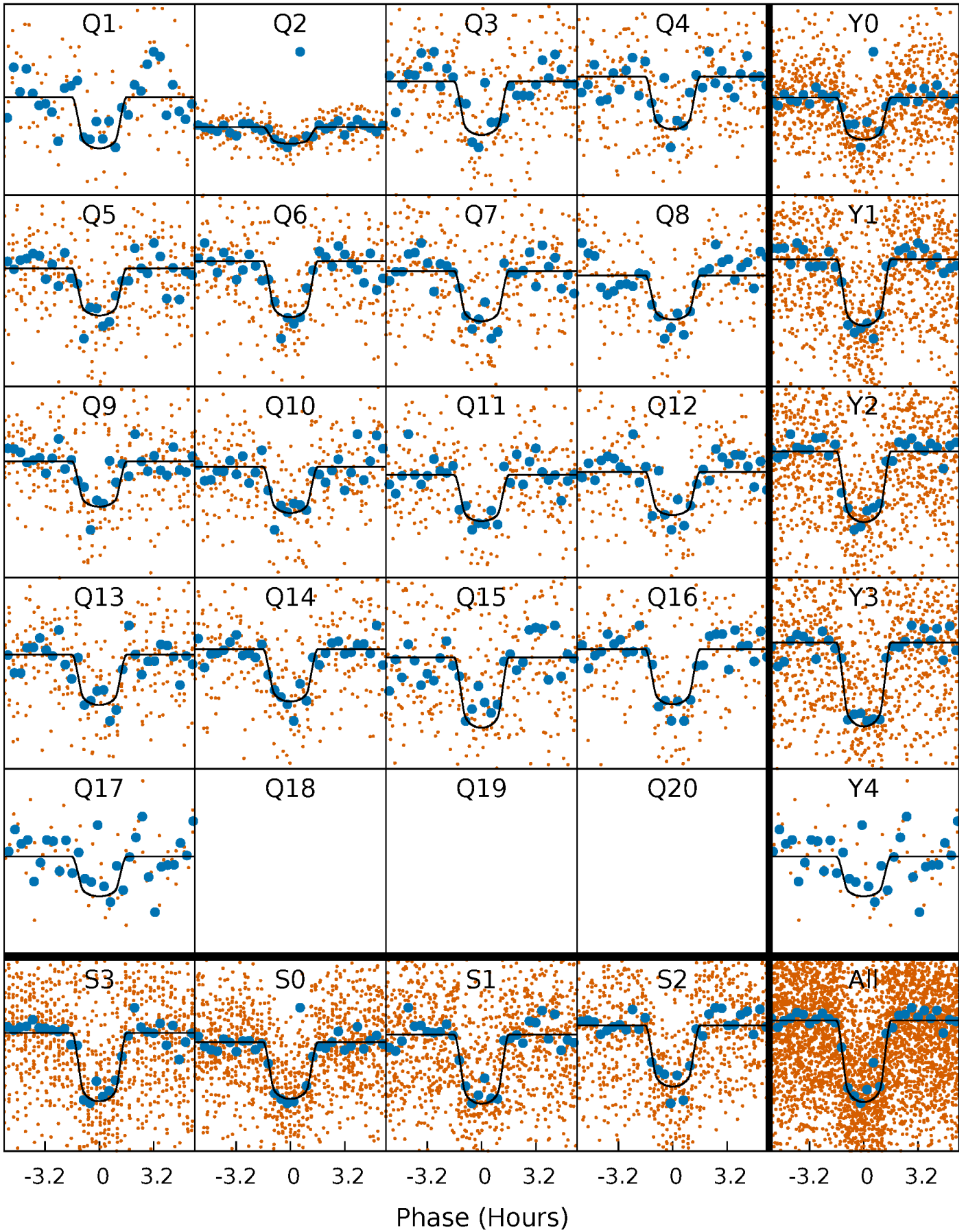
PDC Quarter-Phased Transit Curves

TCE 009834040-01 P= 6.774101 Days $T_0=135.954842$ (BKJD)



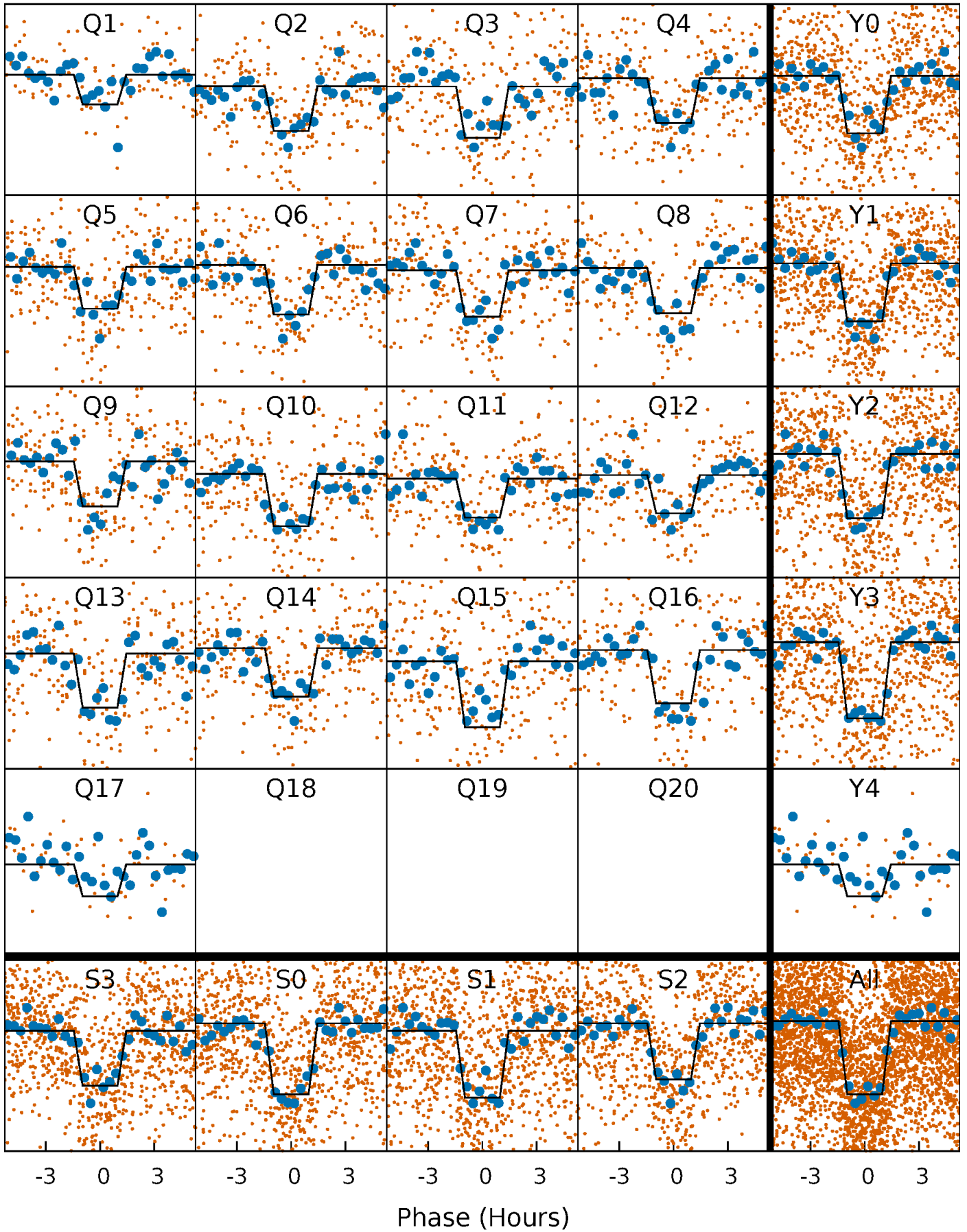
DV Quarter-Phased Transit Curves

TCE 009834040-01 P= 6.774101 Days $T_0=135.954842$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

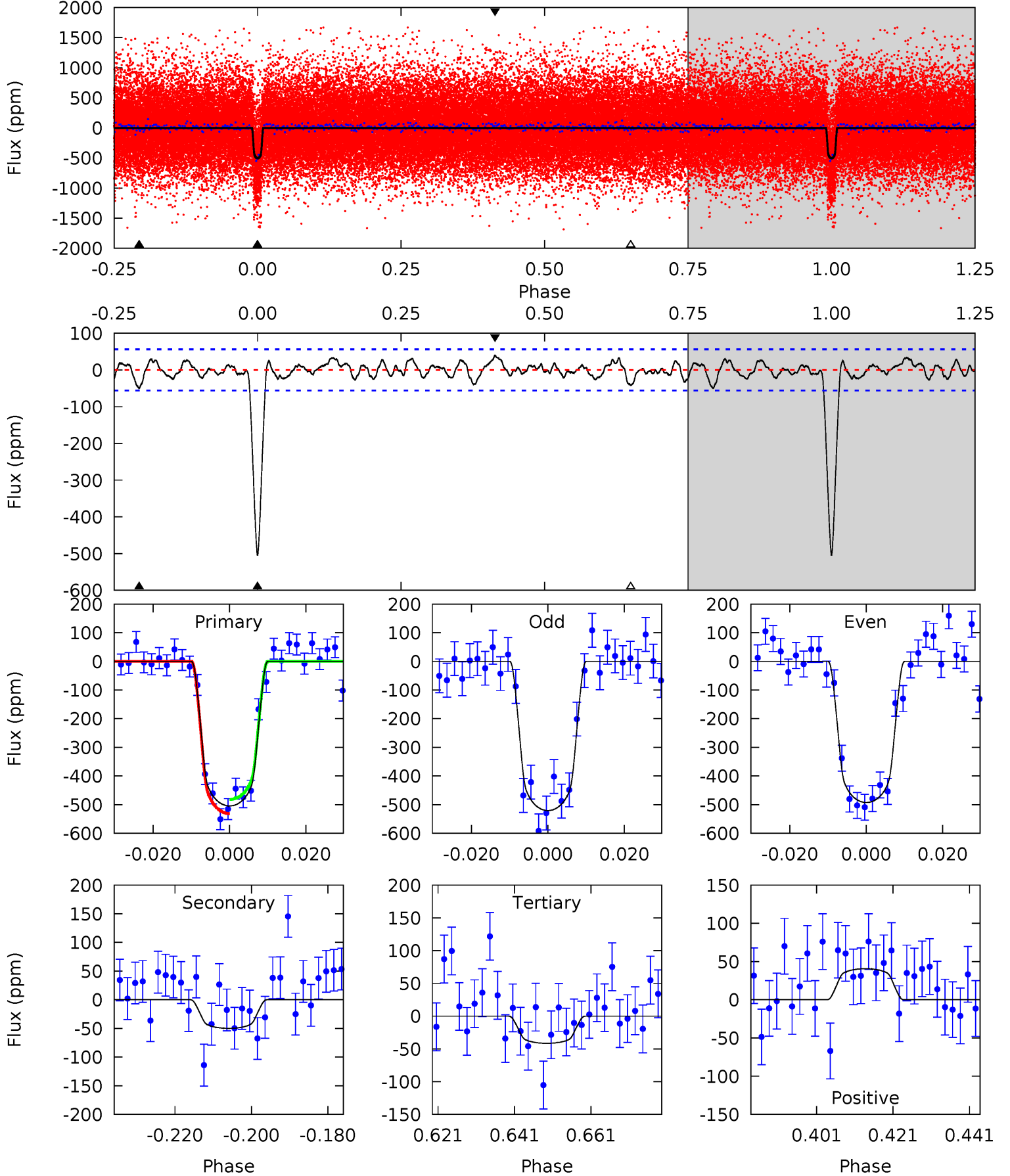
TCE 009834040-01 P= 6.774076 Days $T_0=135.957210$ (BKJD)



DV Model-Shift Uniqueness Test

009834040-01, P = 6.774101 Days, E = 129.180741 Days

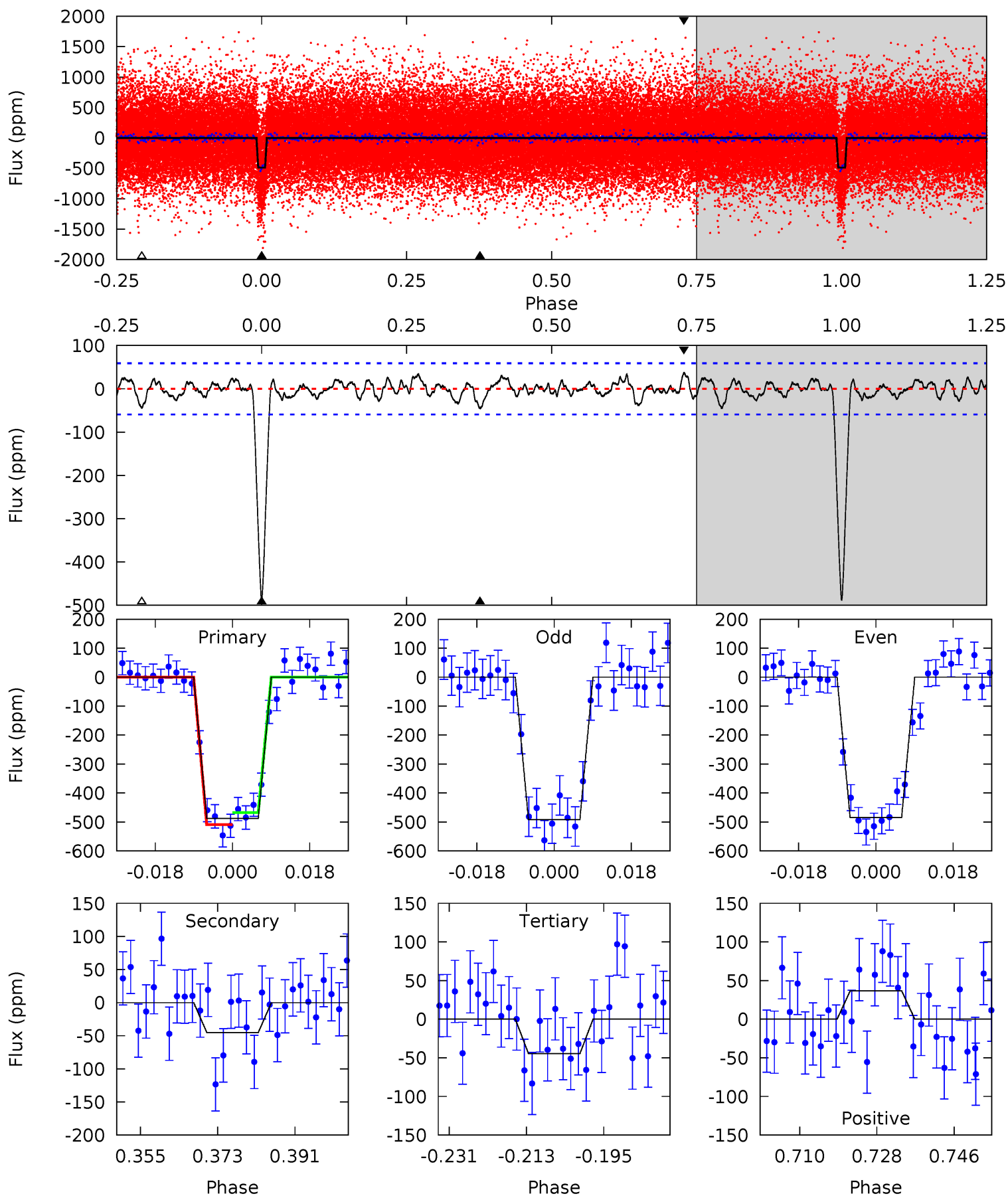
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.0	4.35	3.62	3.54	4.89	2.33	1.37	40.4	40.5	0.73	0.81	1.23	0.91	0.07	2.16



Alt Model-Shift Uniqueness Test

009834040-01, P = 6.774076 Days, E = 129.183134 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	3.75	3.70	3.05	4.91	2.37	1.22	36.9	37.5	0.05	0.70	0.28	0.97	0.07	1.71



Stellar Parameters For KIC 009834040

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6246^{+174}_{-239}	$4.433^{+0.052}_{-0.208}$	$0.070^{+0.200}_{-0.350}$	$1.092^{+0.329}_{-0.141}$	$1.180^{+0.141}_{-0.173}$	$1.276^{+0.355}_{-0.670}$
	+3%/-4%	+1%/-5%	+286%/-500%	+30%/-13%	+12%/-15%	+28%/-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 009834040-01 / KOI 1998.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-50 ± 11	$2.96^{+0.63}_{-0.47}$	1511^{+115}_{-81}	3756^{+255}_{-238}	16^{+8}_{-6}
Alt.	-45 ± 12	$2.77^{+0.58}_{-0.48}$	1517^{+108}_{-77}	3782^{+330}_{-259}	17^{+10}_{-7}

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 $A_{obs} \gg 1.0$

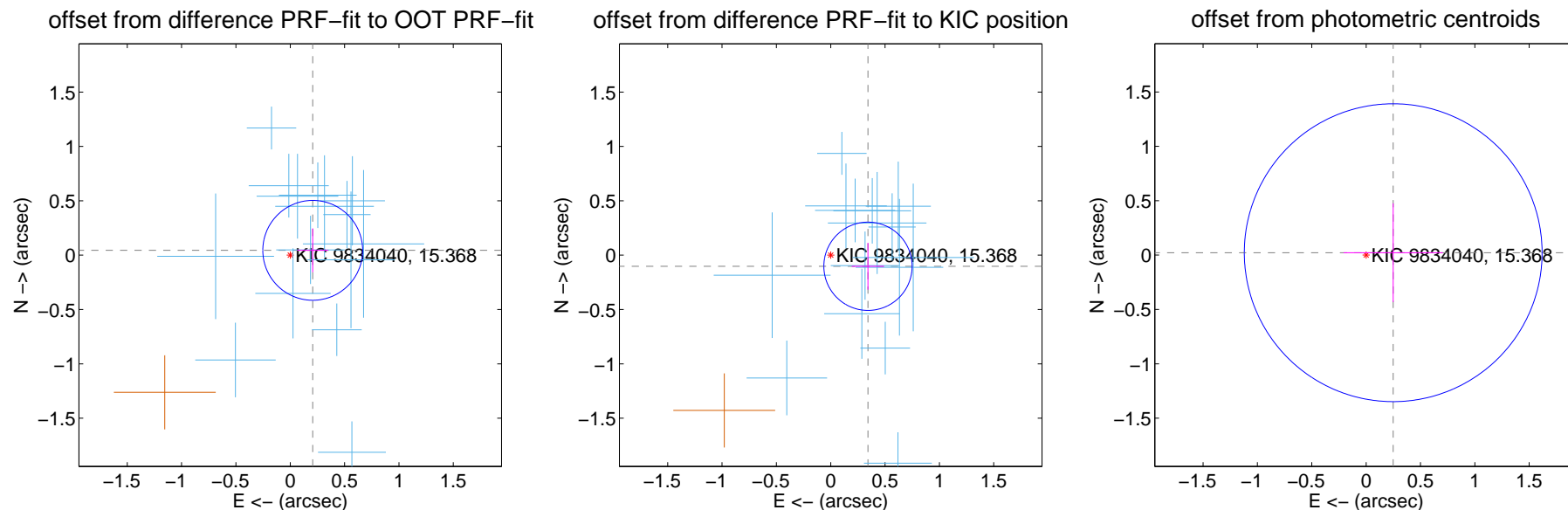
DV Centroid Data

Supplemental centroid analysis for 009834040-01. Kepler magnitude: 15.37. Transit SNR 31.52

There are 15 quarters with good PRF difference image offsets

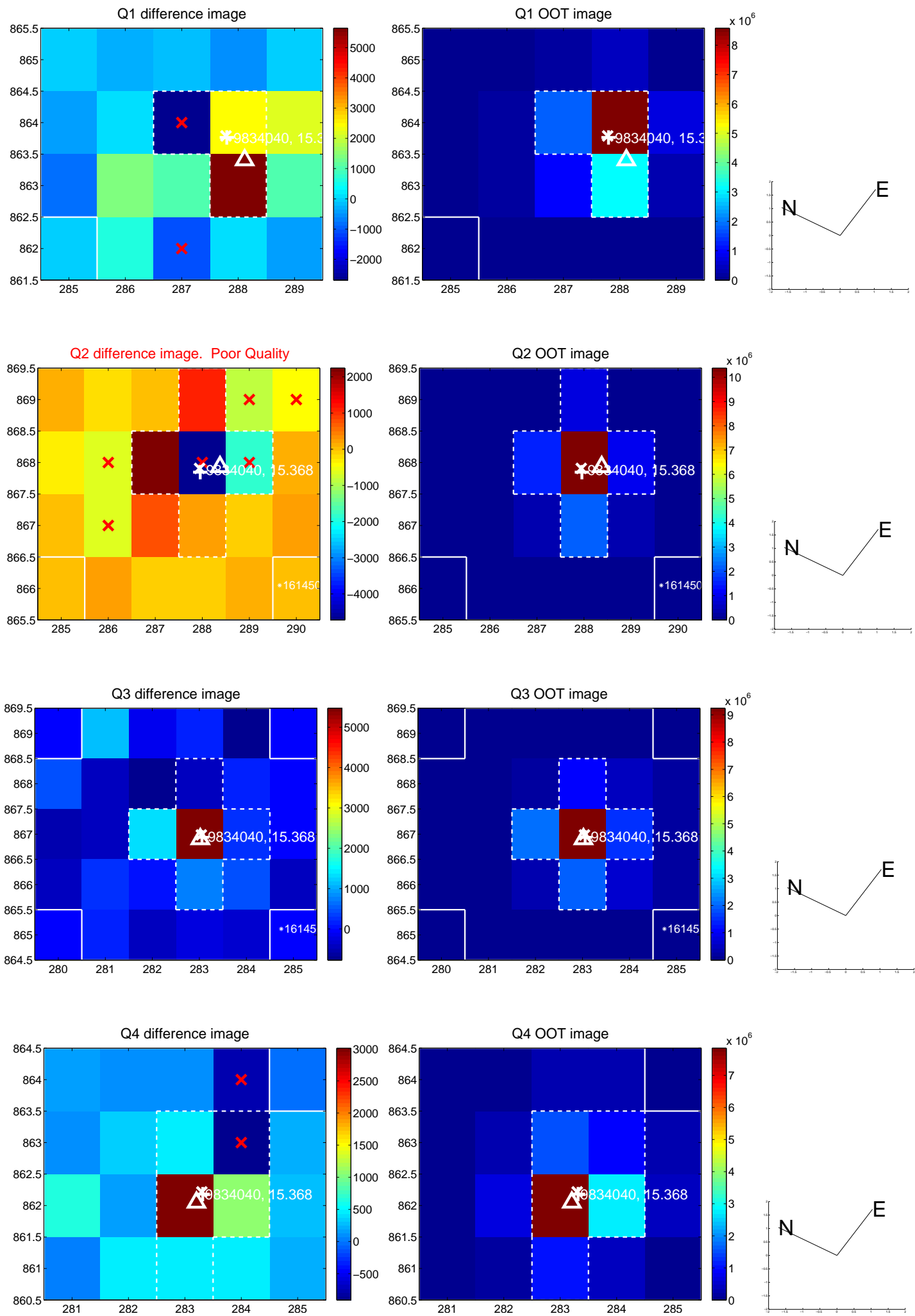
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.211 ± 0.153	1.38	-0.207 ± 0.143	0.044 ± 0.201
PRF-fit source offset from KIC position	0.358 ± 0.135	2.64	-0.343 ± 0.149	-0.102 ± 0.215
photometric centroid source offset	0.25 ± 0.46	0.55	-0.25 ± 0.46	0.02 ± 0.45

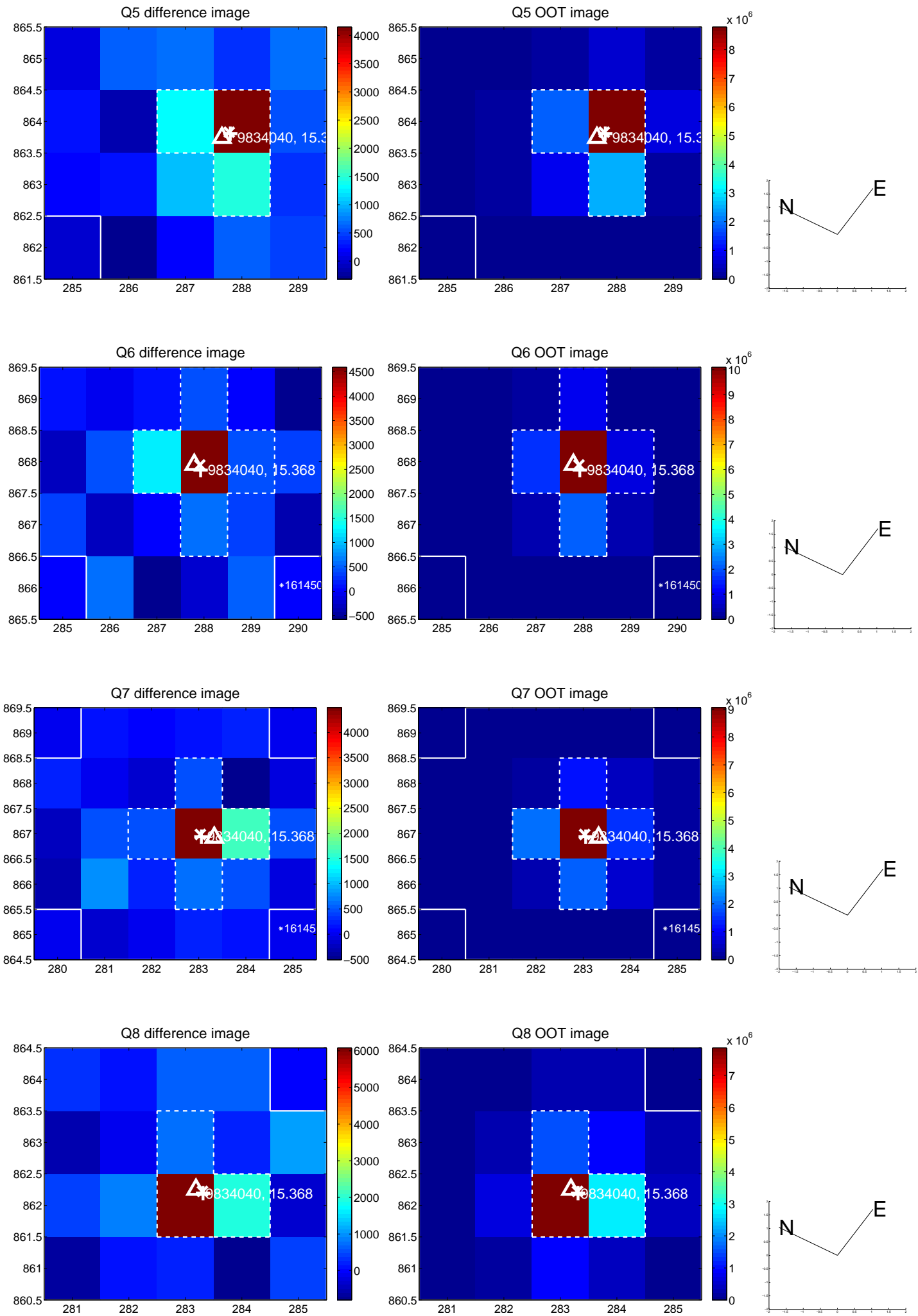


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

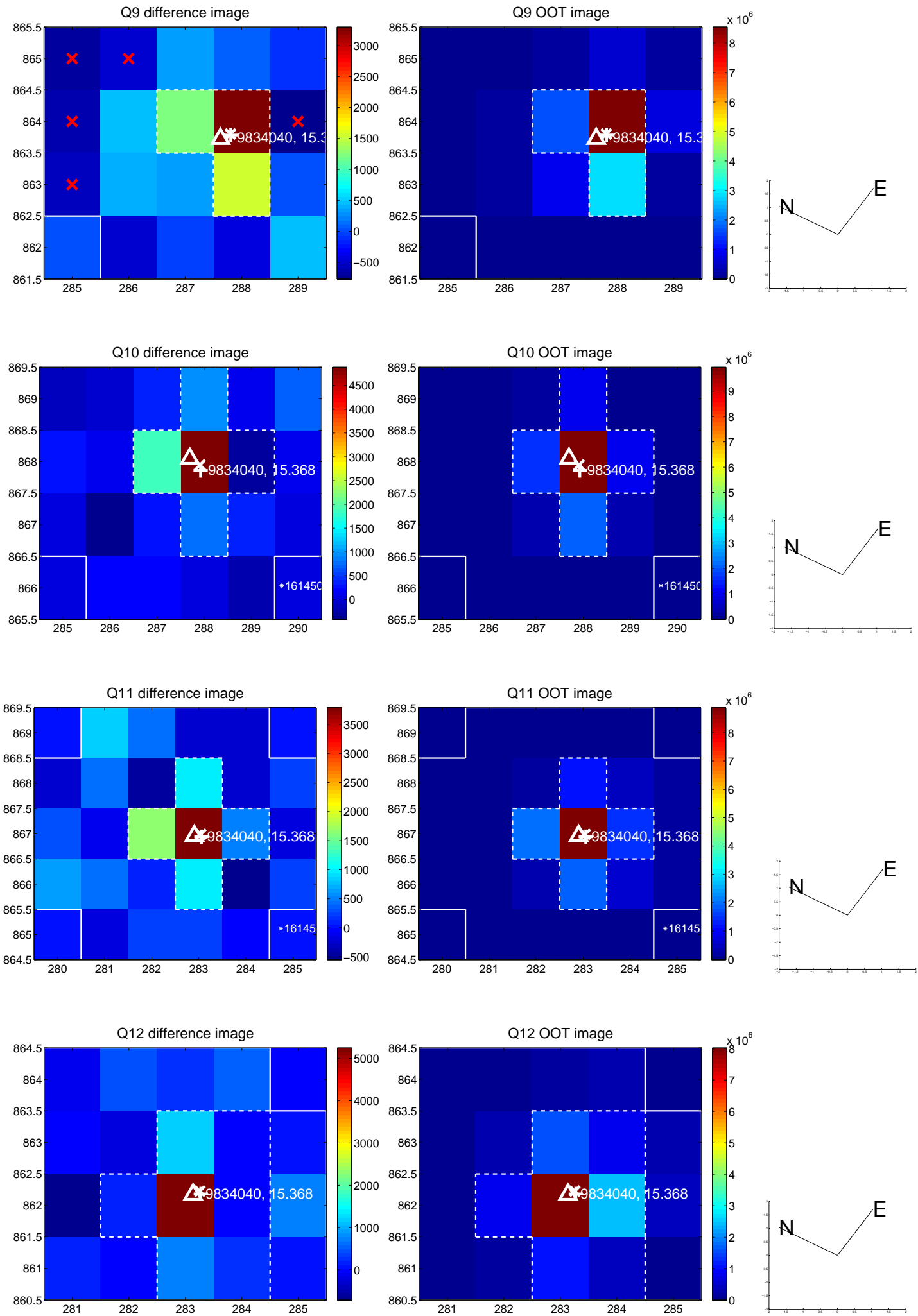
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



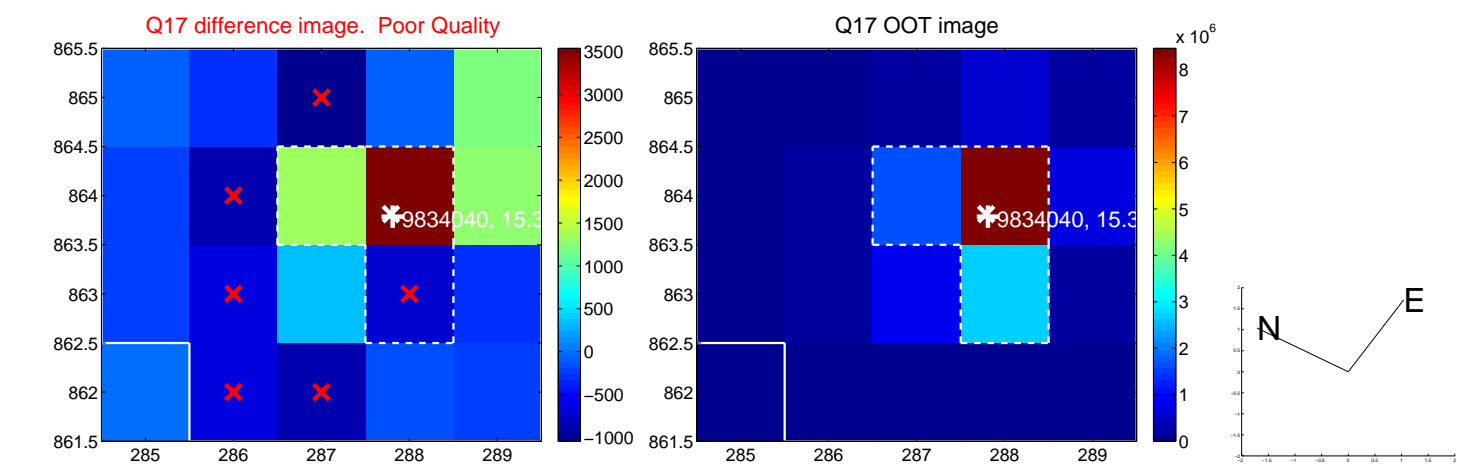
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



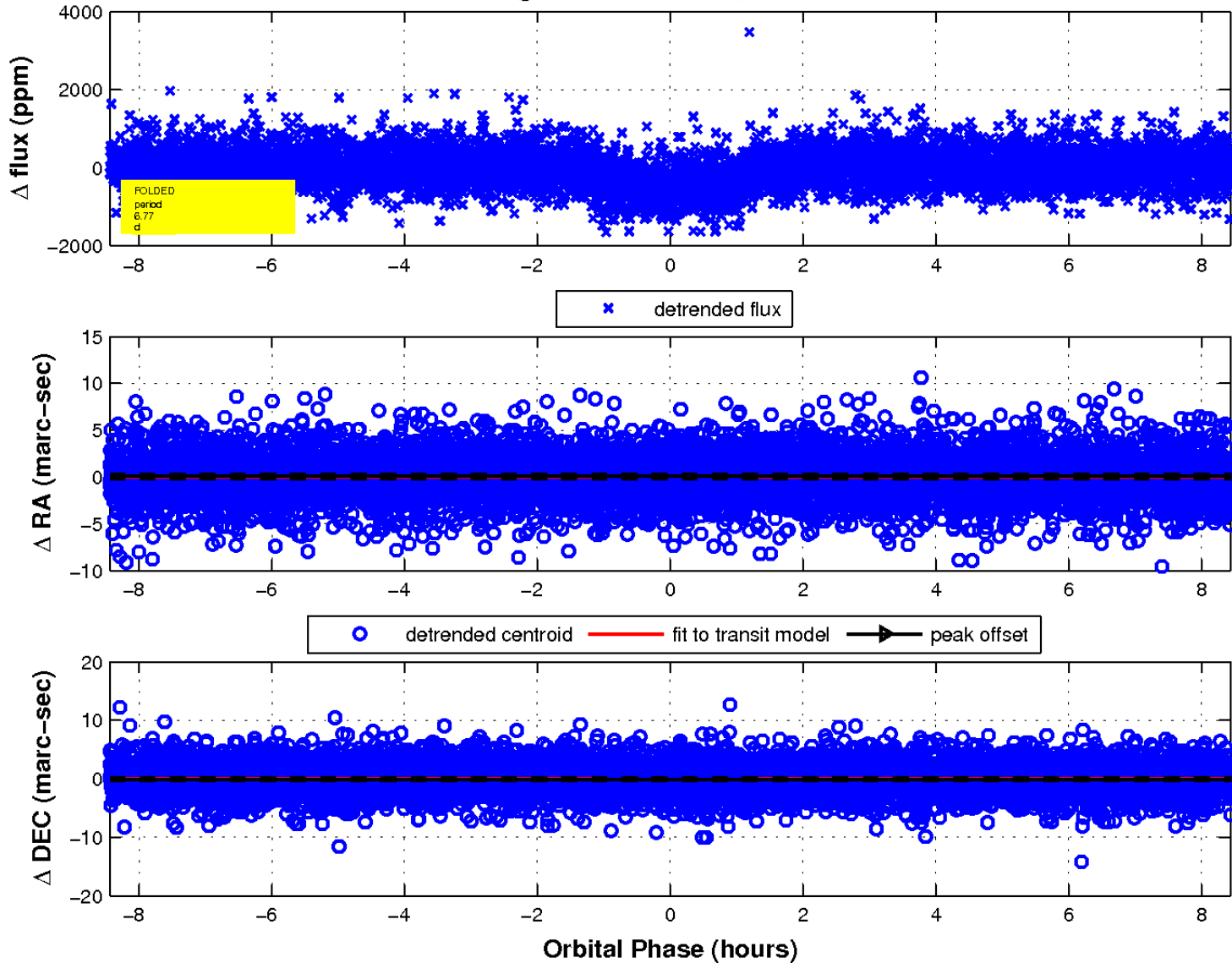
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

