

KIC 008884274

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})
008884274-01	OBS	2868.01	10.652764	136.088195	763.7	2.854	15.3	17.5	0.82	5602	2.47	70.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008884274-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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 008884274-01

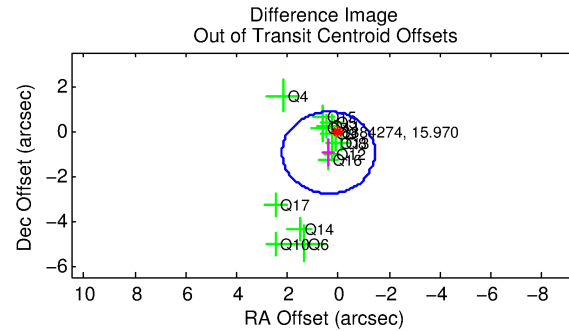
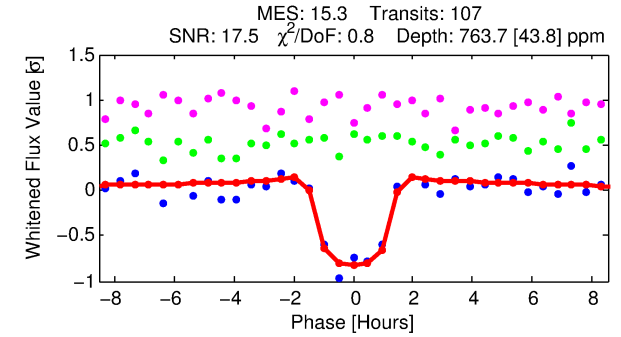
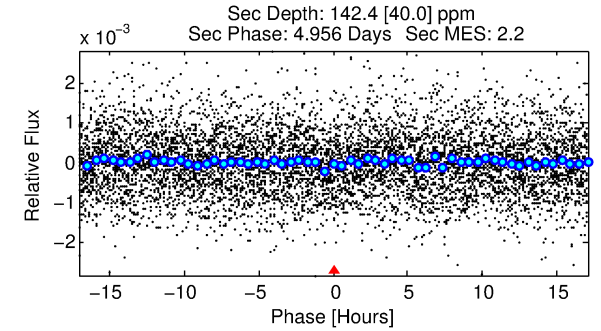
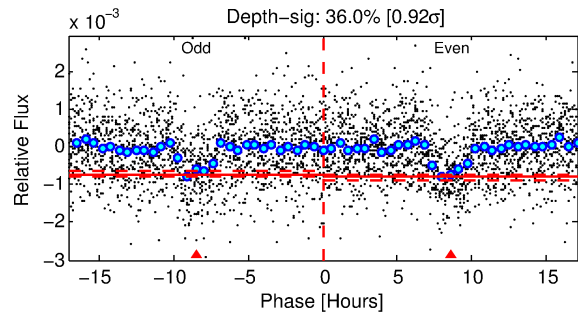
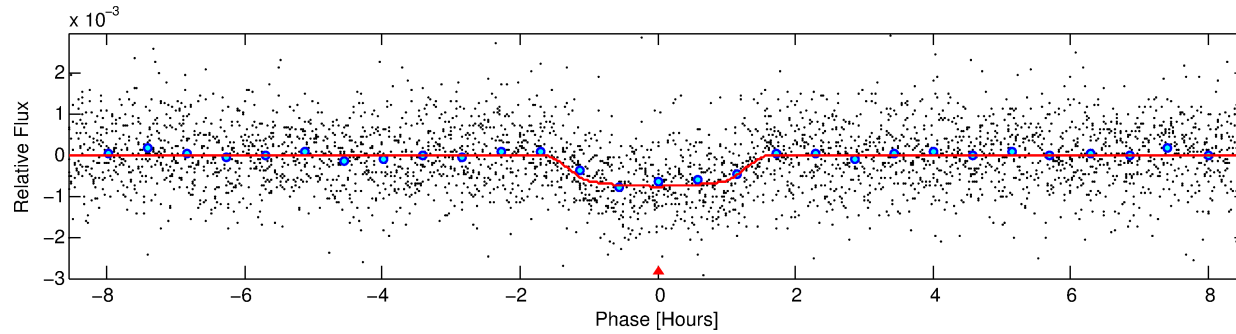
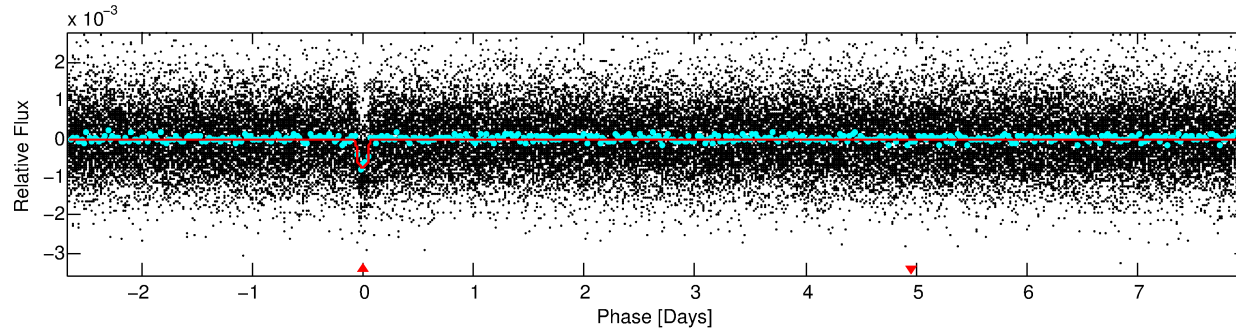
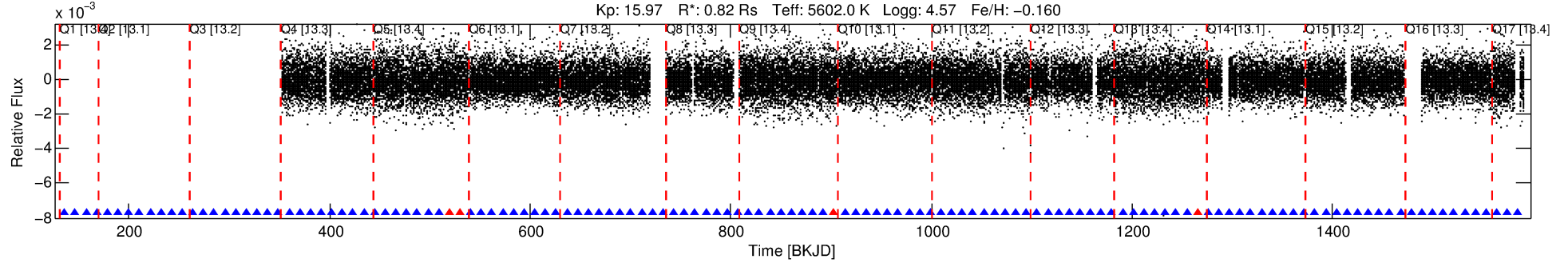
No Significant Match Found

DV One-Page Summary

KIC: 8884274 Candidate: 1 of 1 Period: 10.653 d

KOI: K02868.01 Corr: 0.975

Kp: 15.97 R*: 0.82 Rs Teff: 5602.0 K Logg: 4.57 Fe/H: -0.160



DV Fit Results:

Period = 10.65276 [0.00005] d
Epoch = 136.0882 [0.0038] BKJD
Rp/R* = 0.0277 [0.0134]
a/R* = 19.67 [40.41]
b = 0.76 [1.15]
Seff = 70.01 [21.06]
Teq = 738 [55] K
Rp = 2.47 [1.31] Re
a = 0.0917 [0.0169] AU
Ag = 108.17 [112.55] [0.95σ]
Teffp = 3678 [934] K [3.14σ]

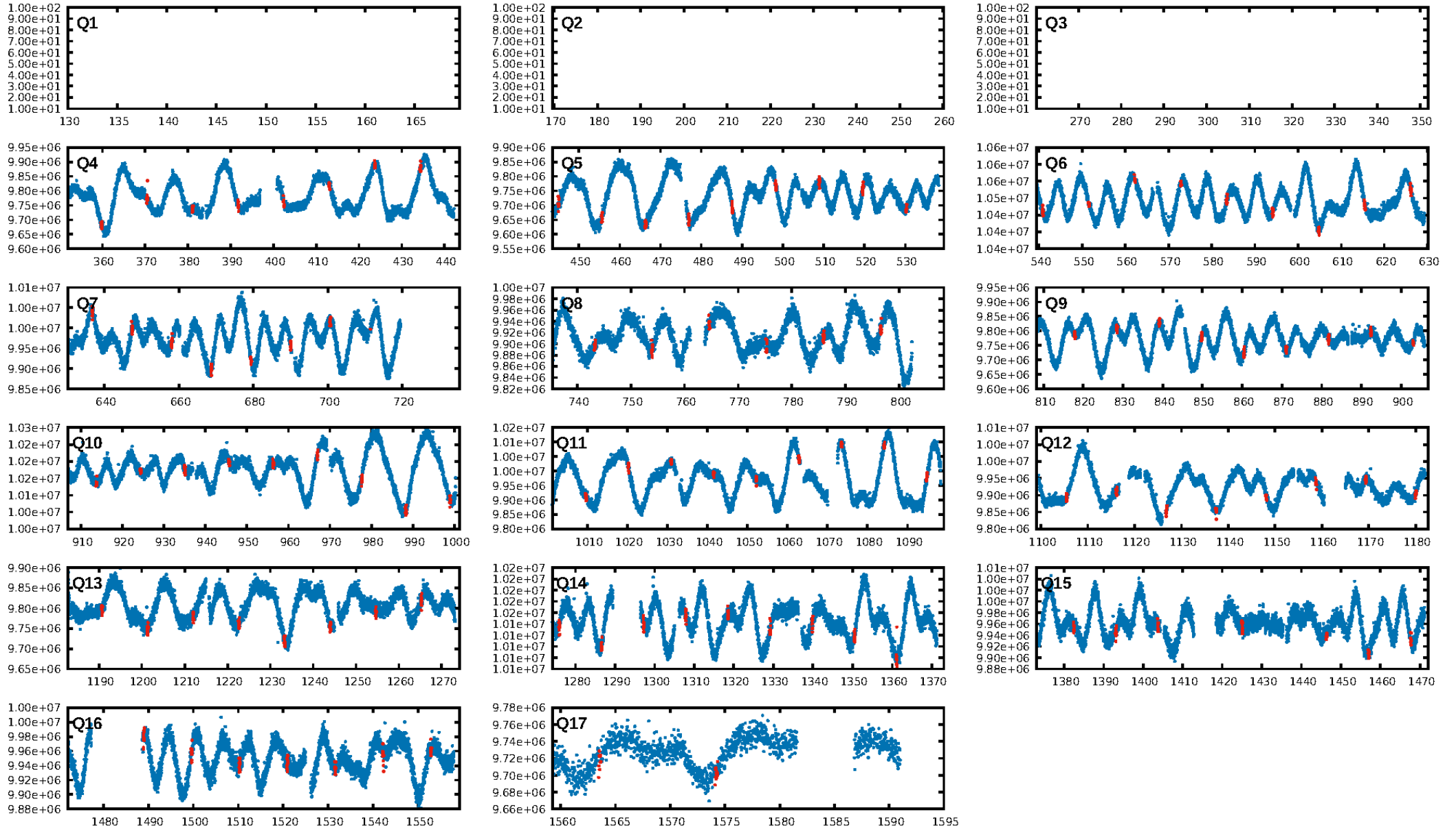
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.47e-50
RollingBand-fgt: 0.96 [101/105]
GhostDiagnostic-chr: 4.174
Centroid-sig: 94.7%
Centroid-so: 0.556 arcsec [0.70σ]
OotOffset-rm: 1.038 arcsec [1.71σ]
KicOffset-rm: 0.398 arcsec [1.33σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

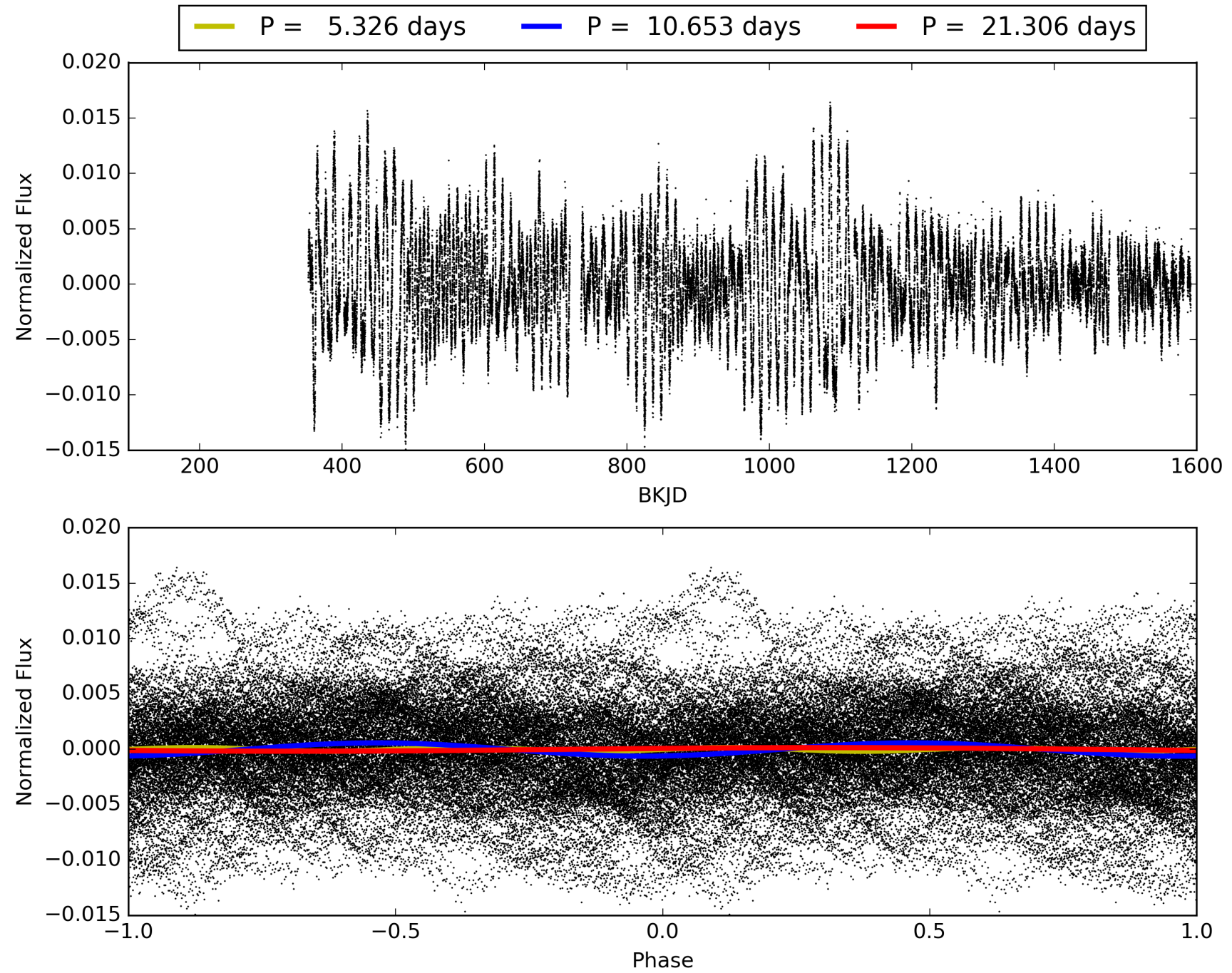
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:16:55 Z

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

TCE 008884274-01, PDC Light Curves

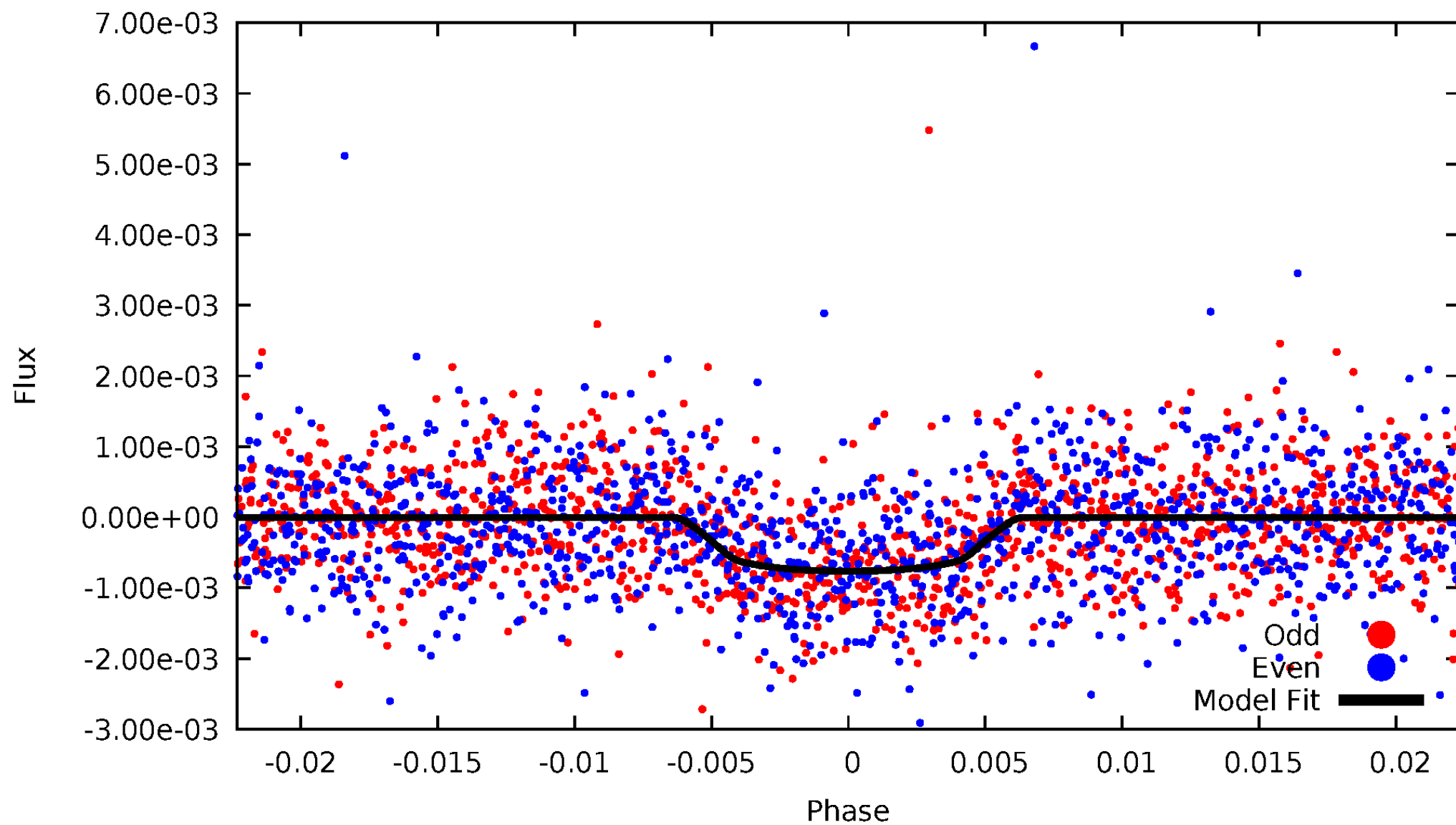


TCE 008884274-01



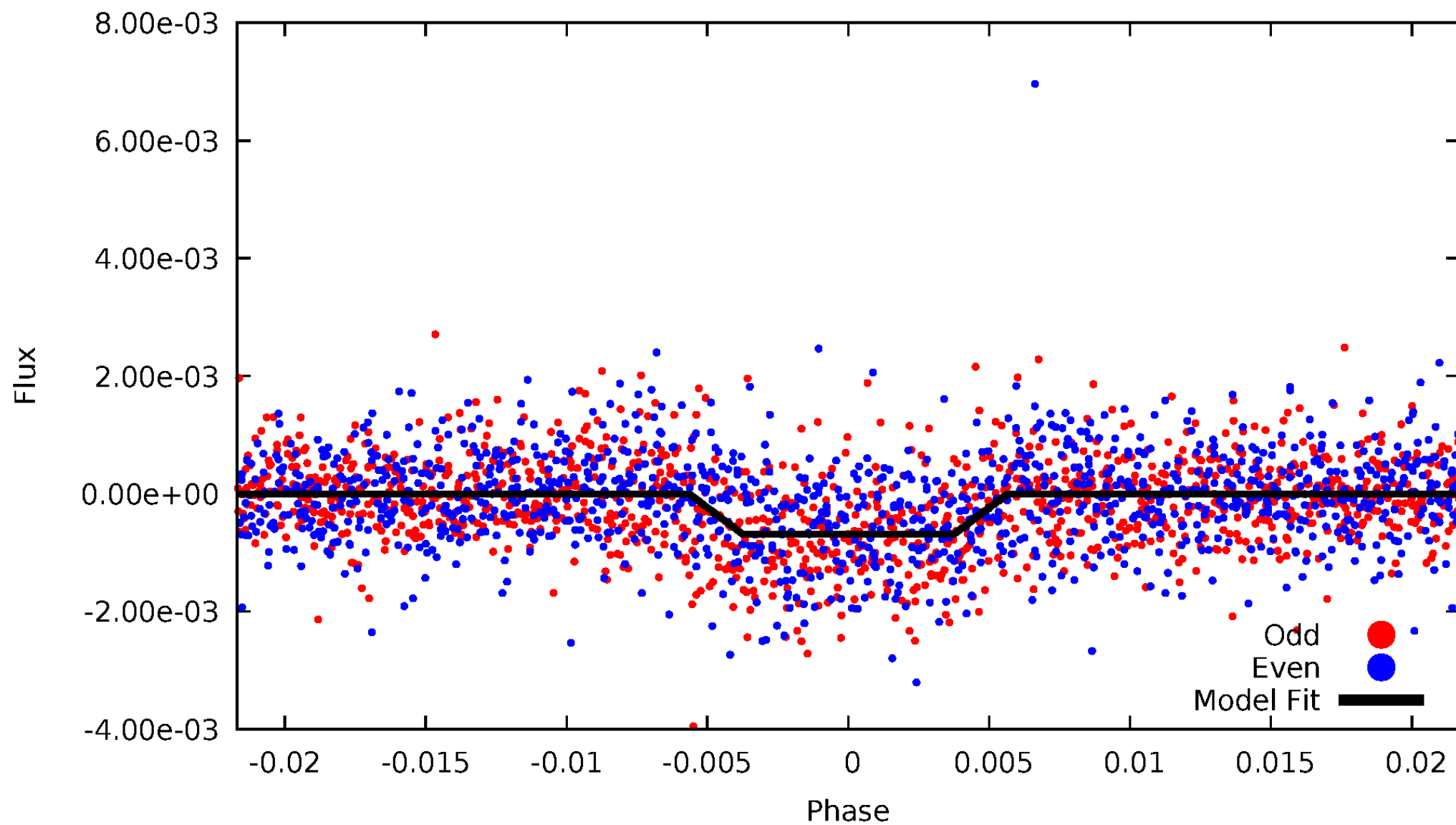
DV Odd/Even

TCE 008884274-01



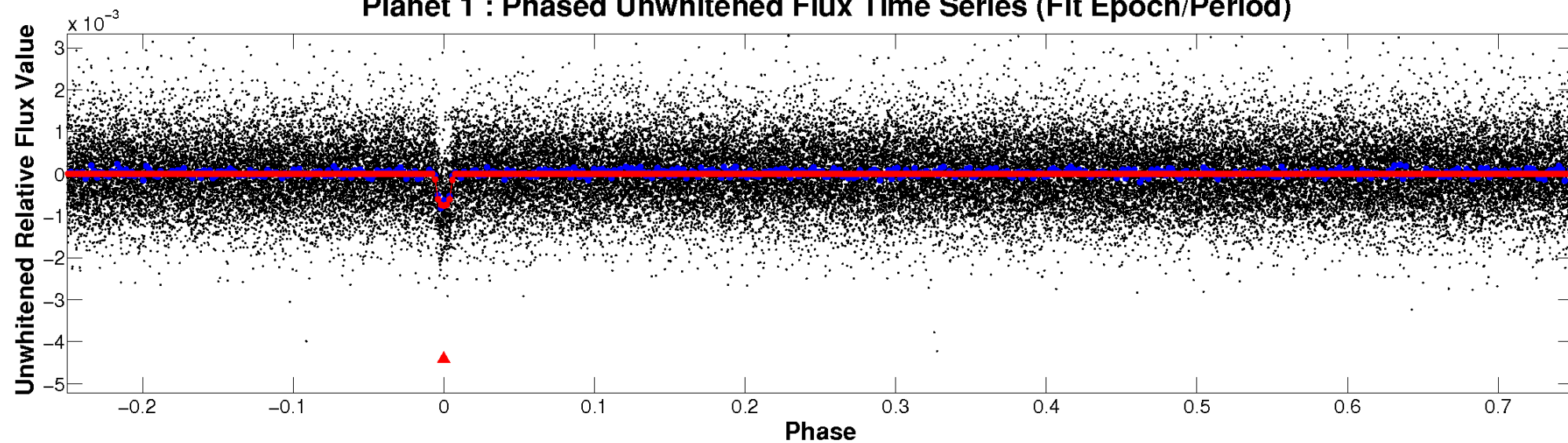
ALT Odd/Even

TCE 008884274-01

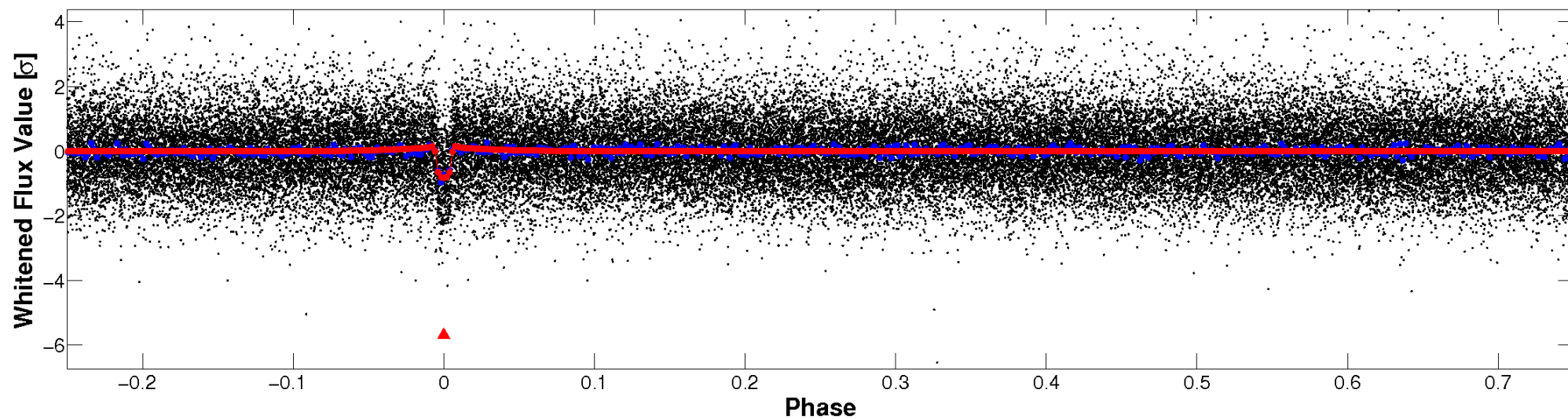


Non-Whitened Vs. Whitened Light Curve

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

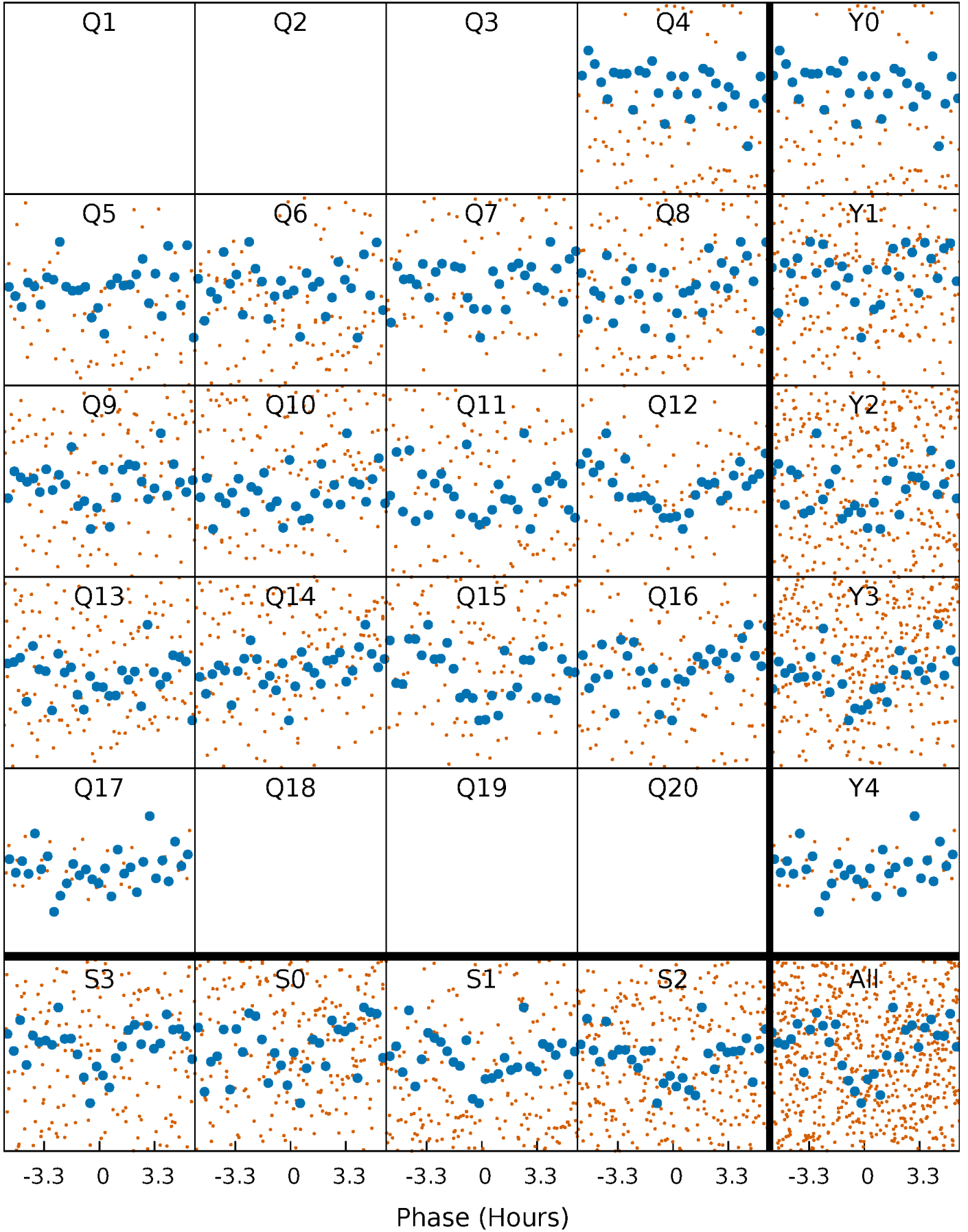


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



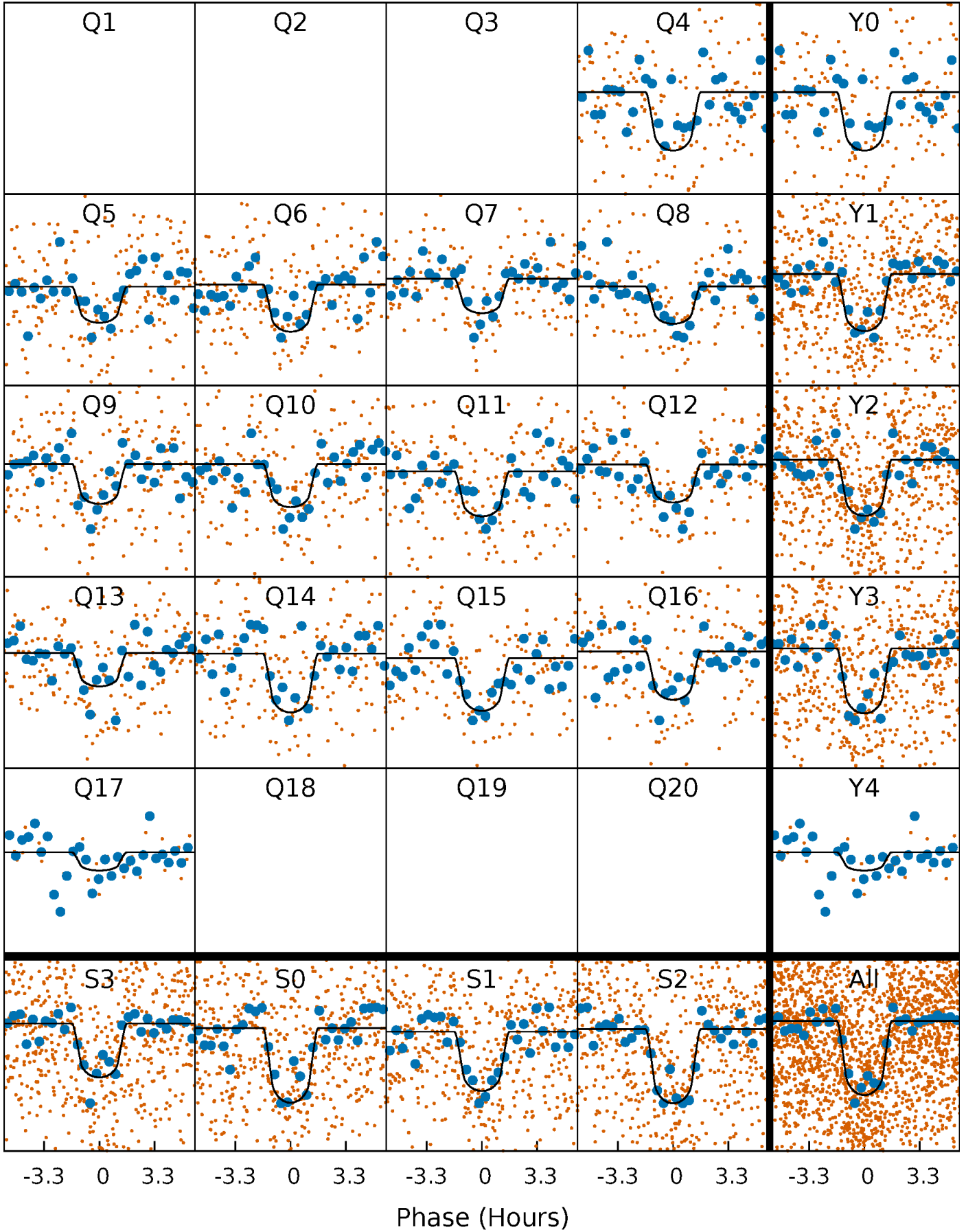
PDC Quarter-Phased Transit Curves

TCE 008884274-01 P= 10.652764 Days $T_0=136.088195$ (BKJD)



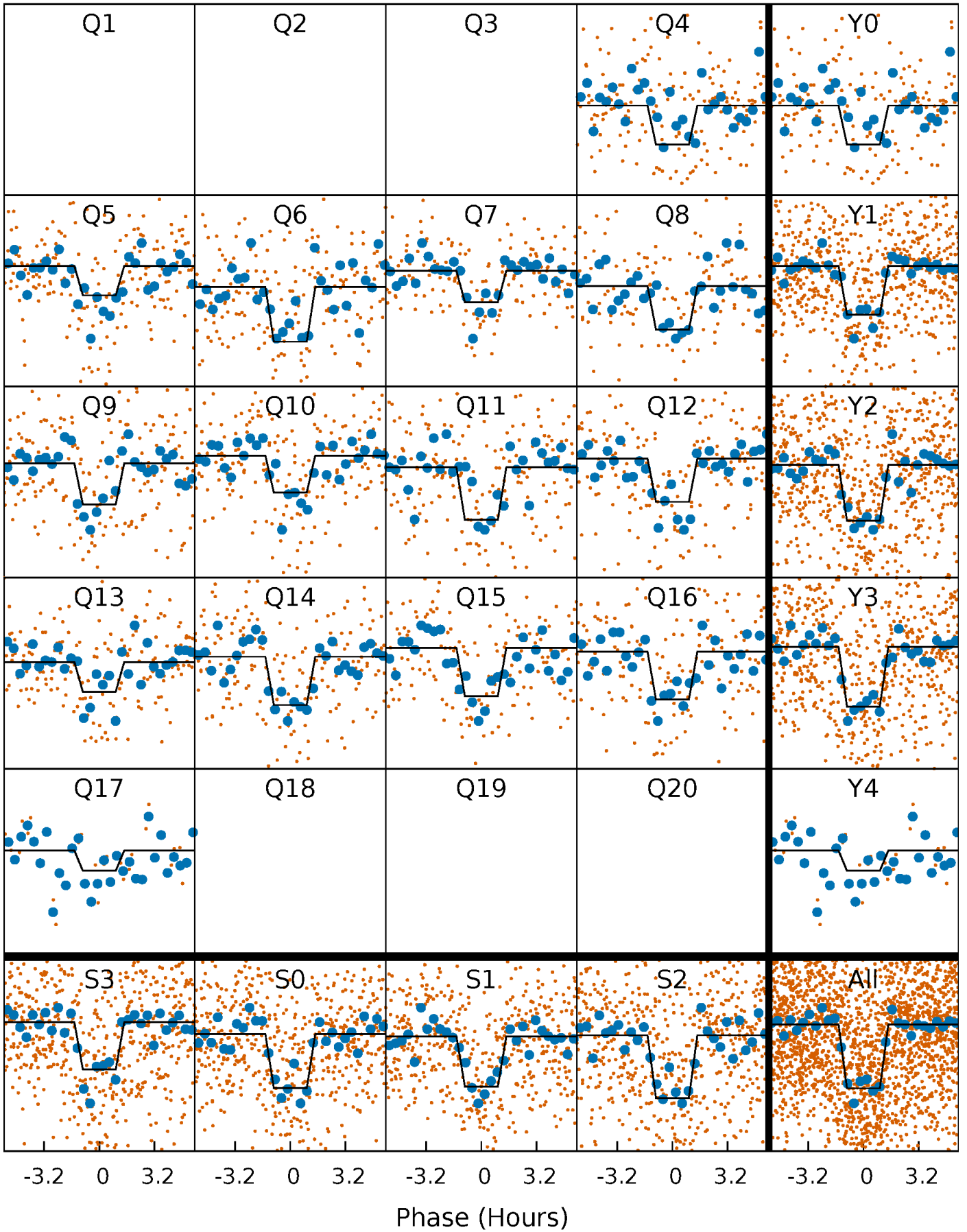
DV Quarter-Phased Transit Curves

TCE 008884274-01 P= 10.652764 Days $T_0=136.088195$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

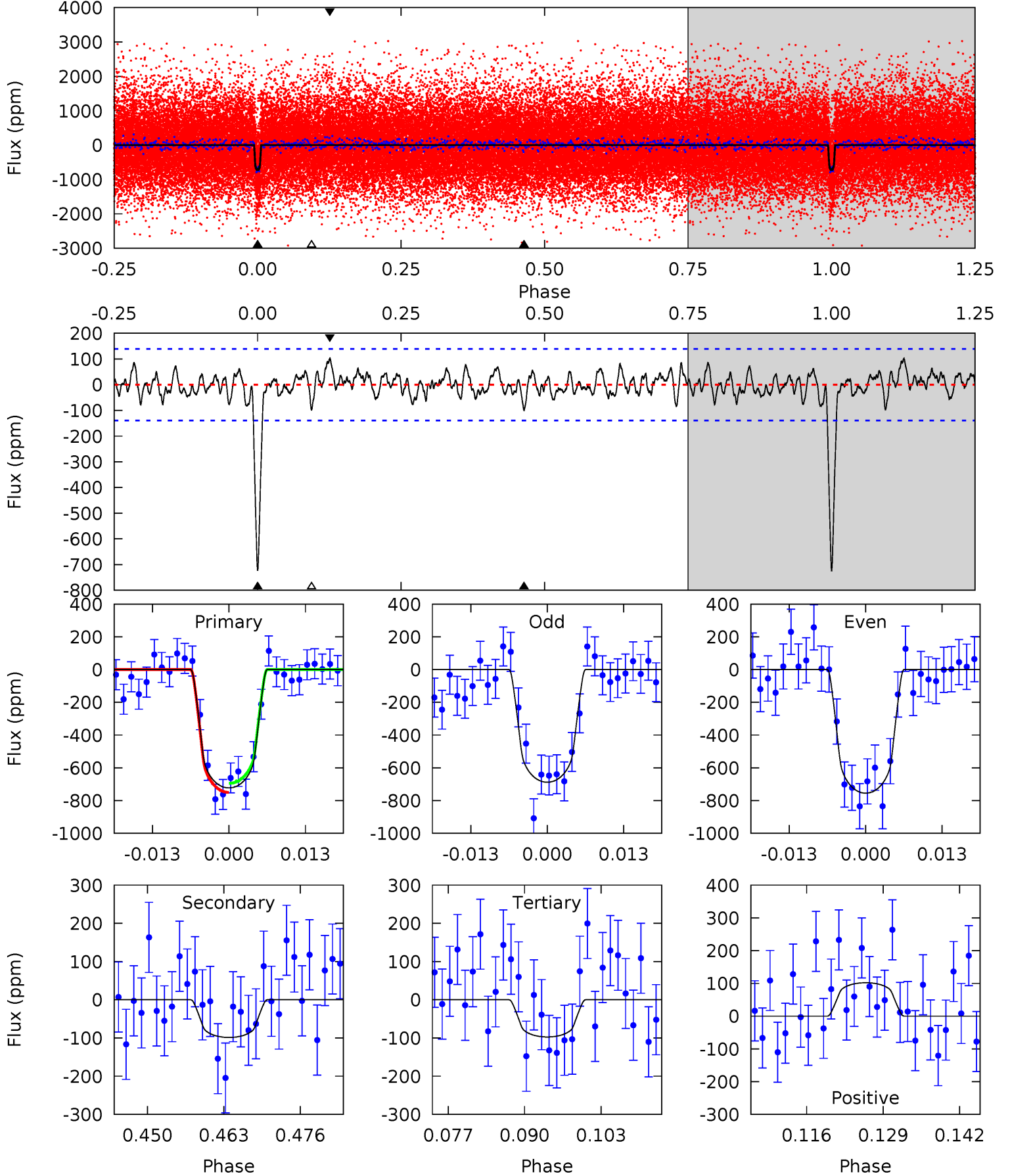
TCE 008884274-01 P= 10.652768 Days $T_0=136.089879$ (BKJD)



DV Model-Shift Uniqueness Test

008884274-01, P = 10.652764 Days, E = 136.088195 Days

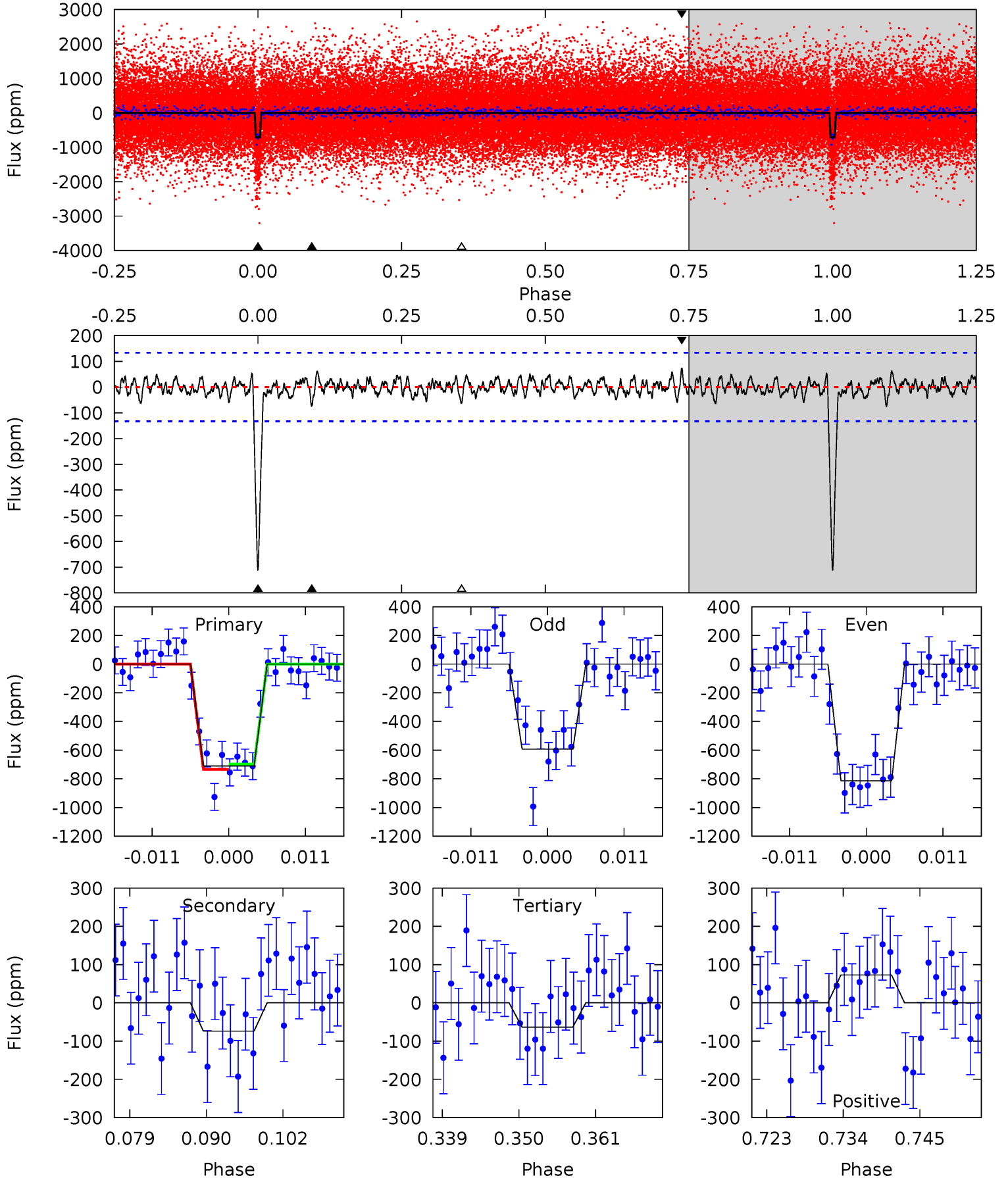
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	3.53	3.48	3.64	4.98	2.49	1.25	22.3	22.2	0.05	-0.12	1.19	1.01	0.12	0.99



Alt Model-Shift Uniqueness Test

008884274-01, P = 10.652768 Days, E = 136.089879 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	2.77	2.39	2.74	5.00	2.53	0.87	24.3	23.9	0.38	0.03	4.15	0.98	0.09	0.70



Stellar Parameters For KIC 008884274

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5602^{+177}_{-197}	$4.571^{+0.036}_{-0.144}$	$-0.160^{+0.300}_{-0.300}$	$0.817^{+0.181}_{-0.072}$	$0.913^{+0.083}_{-0.115}$	$2.362^{+0.454}_{-0.964}$
	+3%/-4%	+1%/-3%	+188%/-188%	+22%/-9%	+9%/-13%	+19%/-41%
Source	KIC0	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 008884274-01 / KOI 2868.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-99 ± 28	$2.57^{+1.28}_{-1.22}$	1049^{+56}_{-47}	3752^{+929}_{-510}	67^{+168}_{-39}
Alt.	-74 ± 27	$2.45^{+1.35}_{-1.14}$	1045^{+62}_{-46}	3576^{+899}_{-459}	52^{+133}_{-31}

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

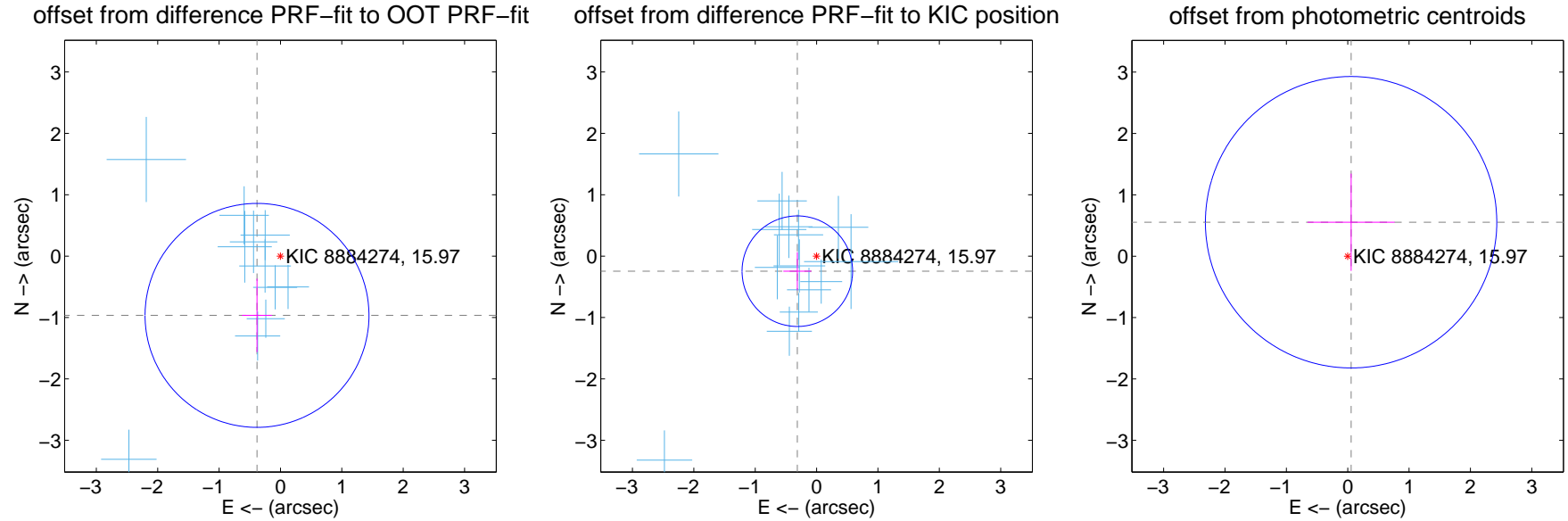
DV Centroid Data

Supplemental centroid analysis for 008884274-01. Kepler magnitude: 15.97. Transit SNR 17.53

There are 14 quarters with good PRF difference image offsets

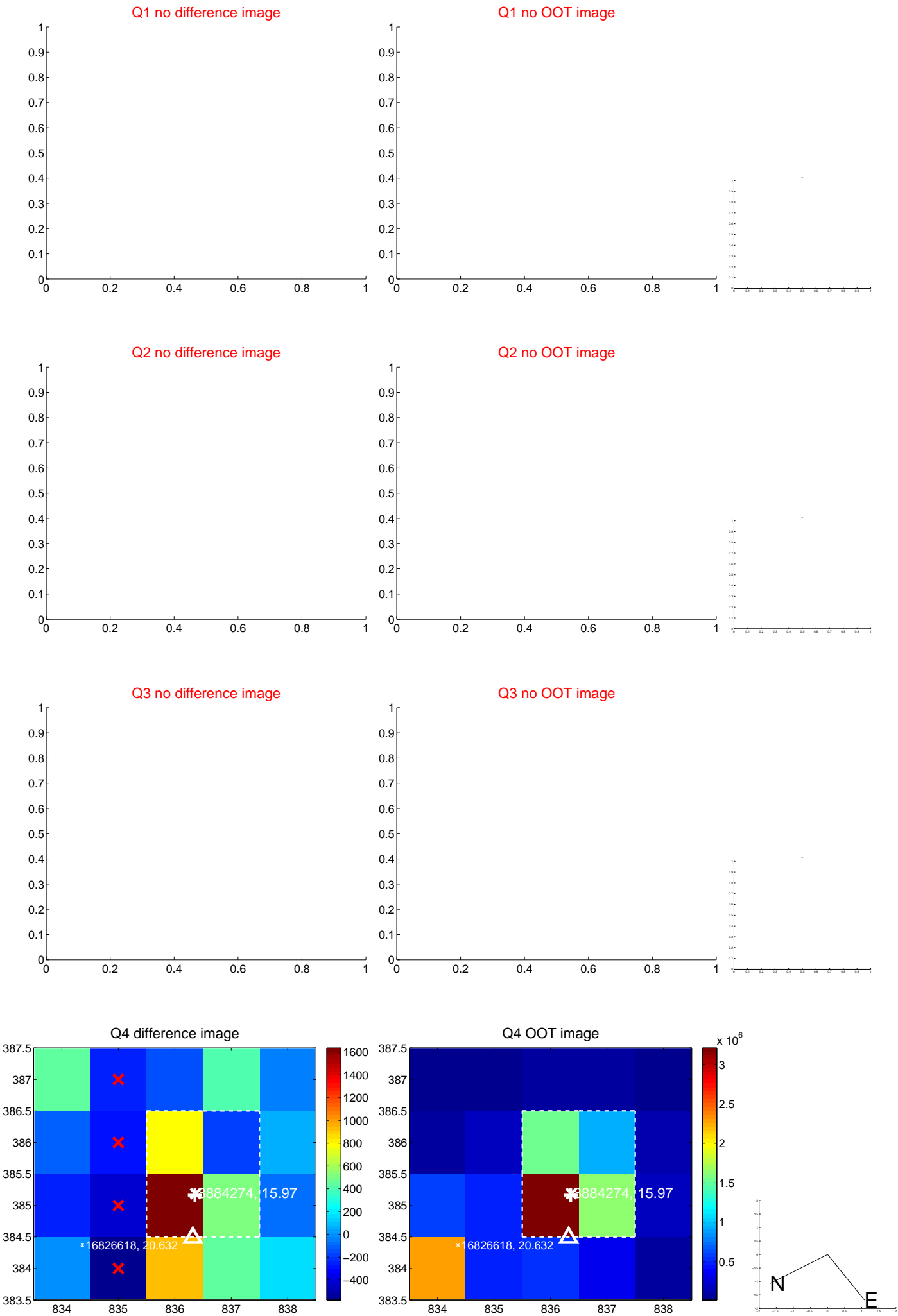
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.038 ± 0.608	1.71	0.382 ± 0.243	-0.965 ± 0.598
PRF-fit source offset from KIC position	0.398 ± 0.300	1.33	0.313 ± 0.228	-0.245 ± 0.310
photometric centroid source offset	0.56 ± 0.79	0.70	-0.05 ± 0.71	0.55 ± 0.79

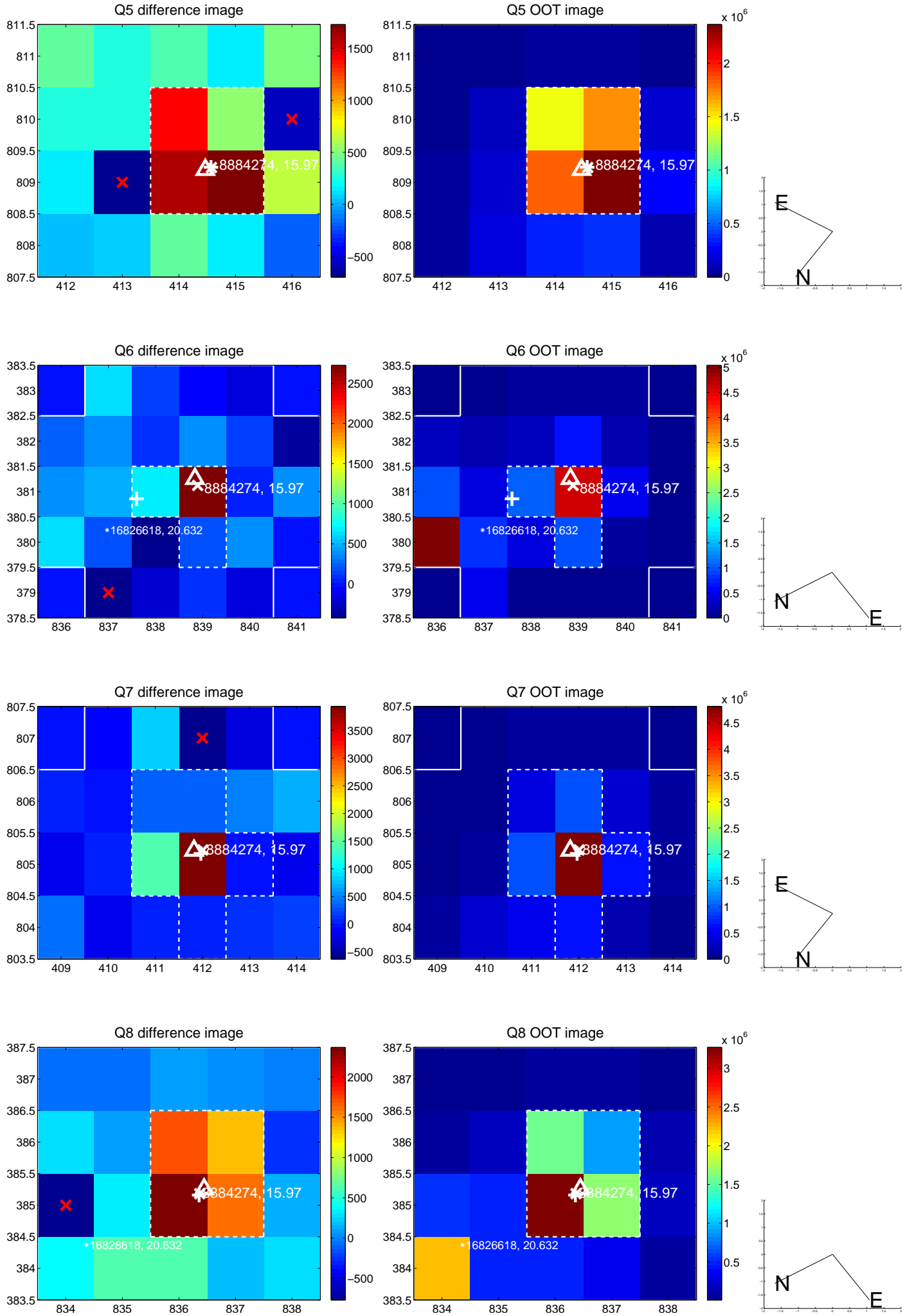


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

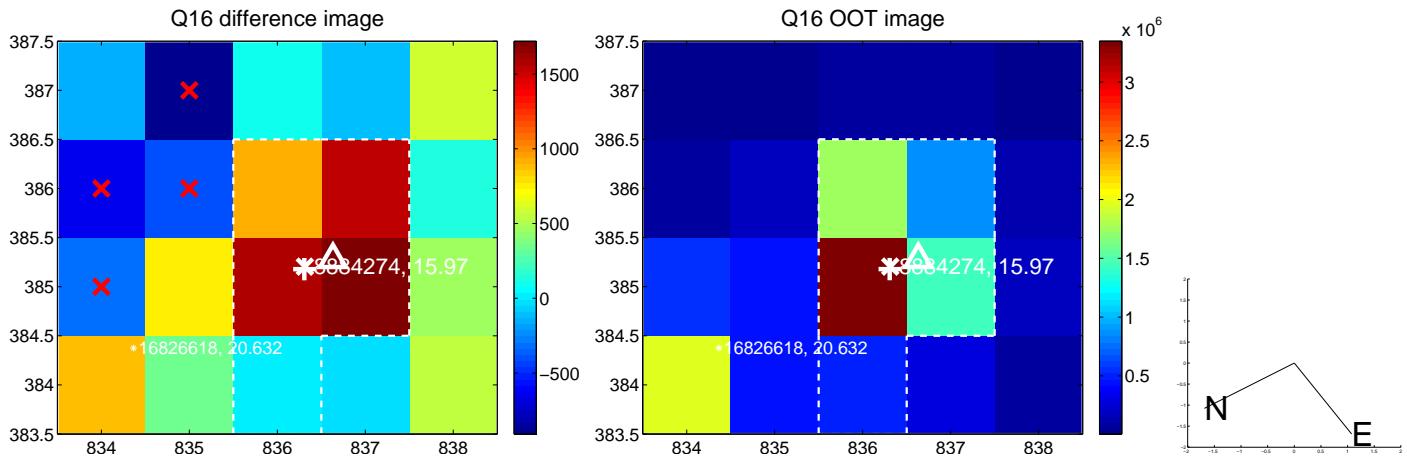
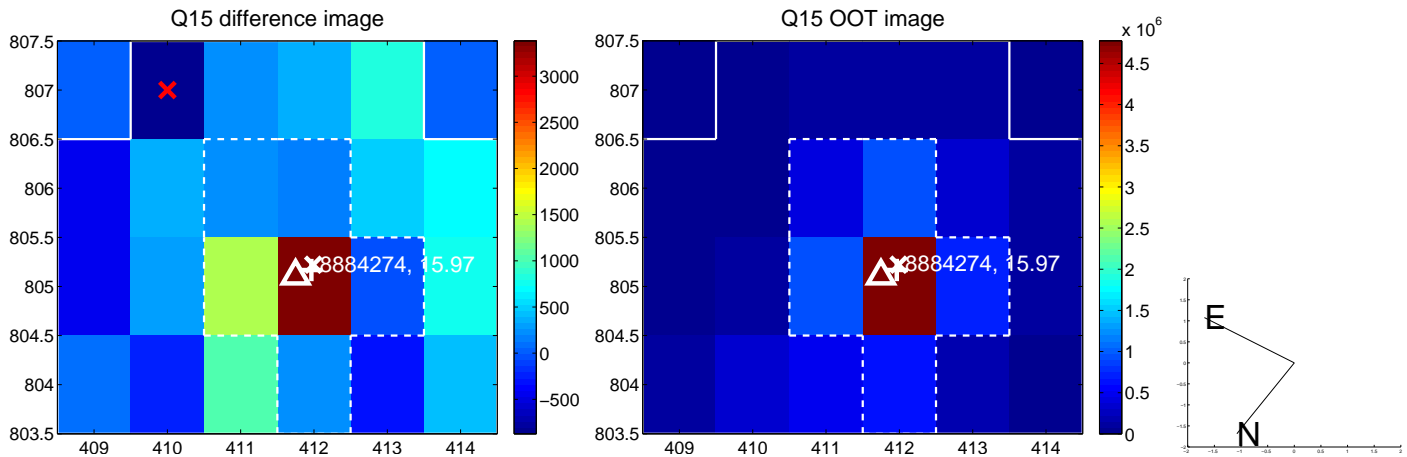
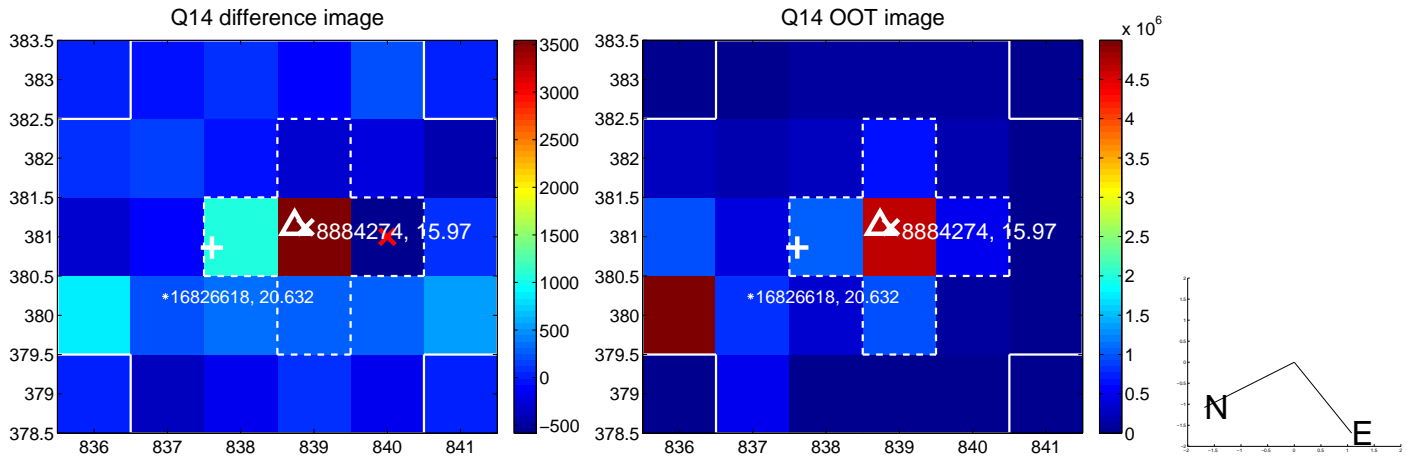
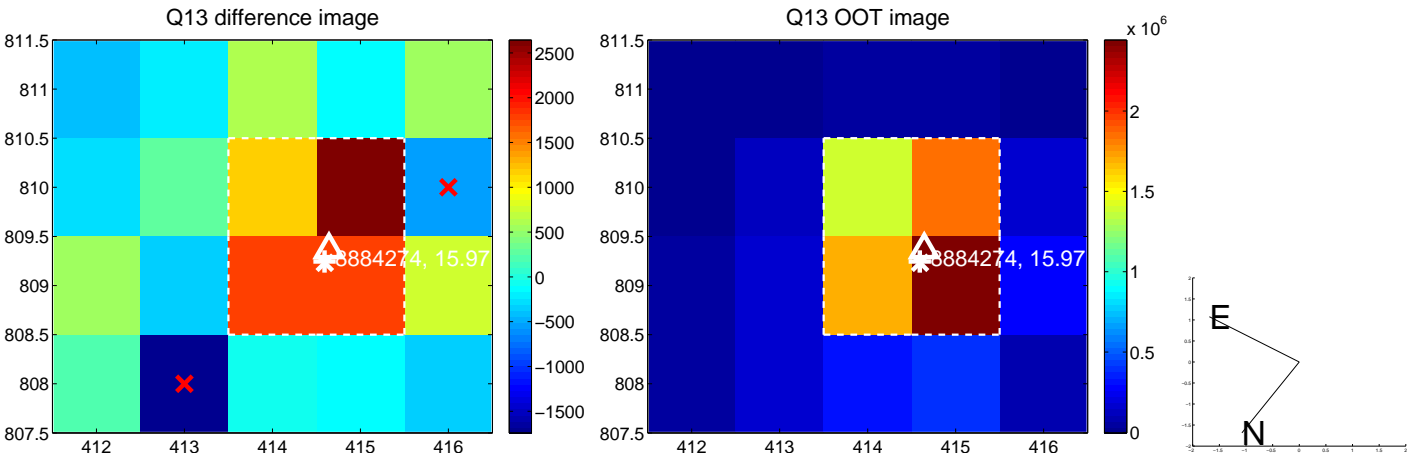
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



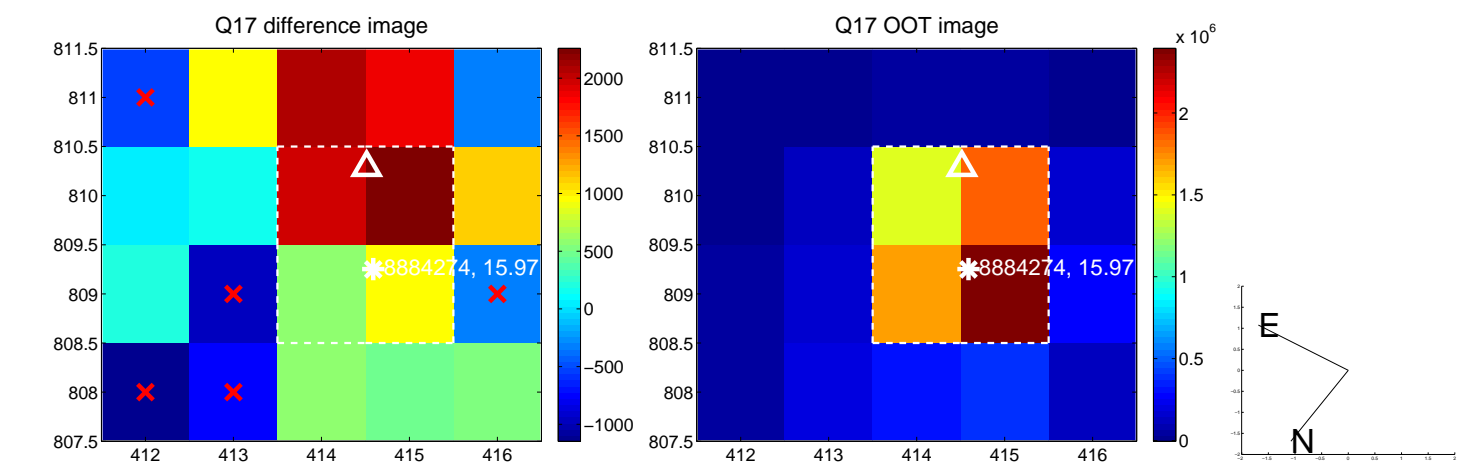
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



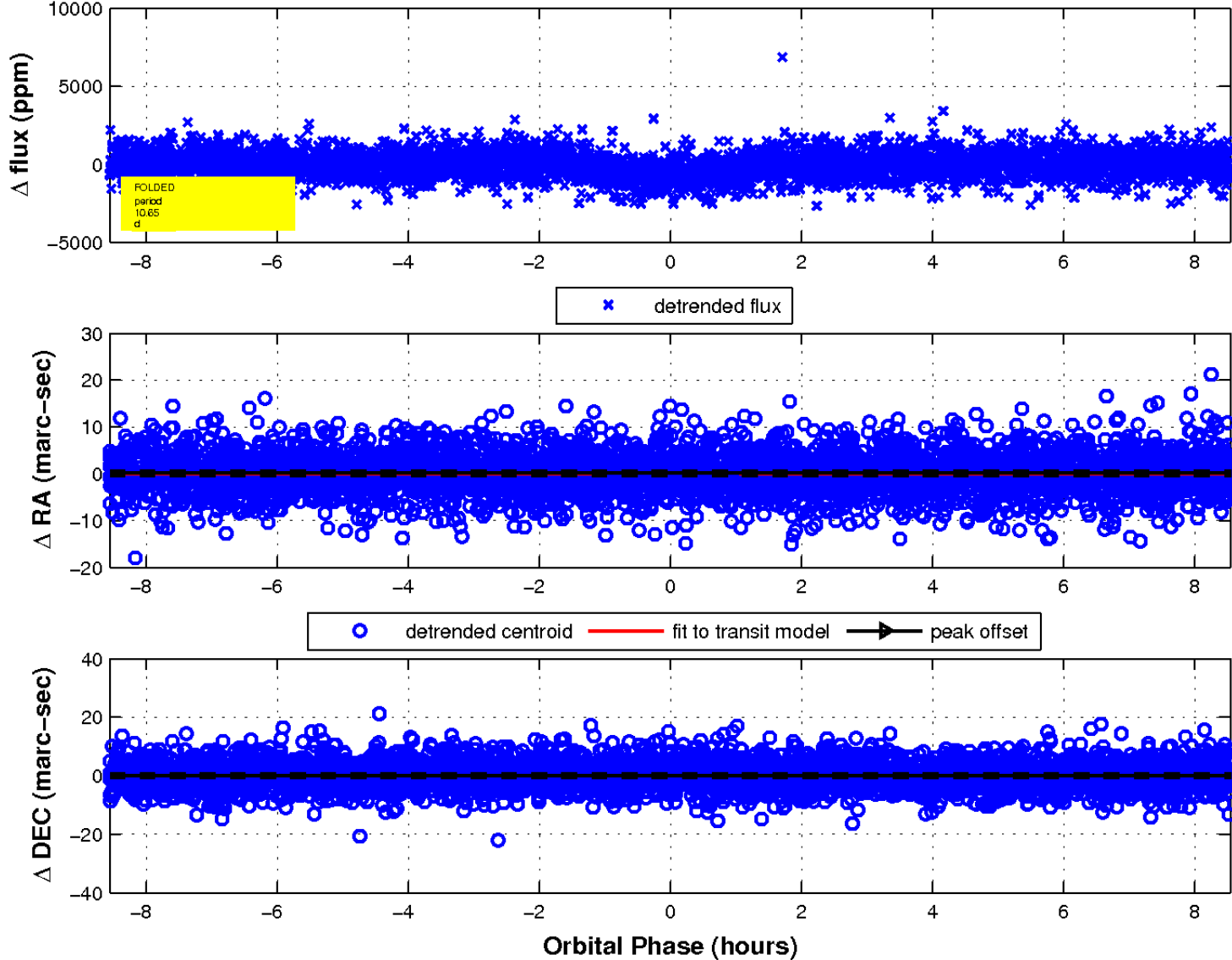
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

