

KIC 008144325

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})
008144325-01	OBS	No	384.946928	514.707839	73.0	16.780	7.5	6.7	1.06	5912	1.07	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008144325-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

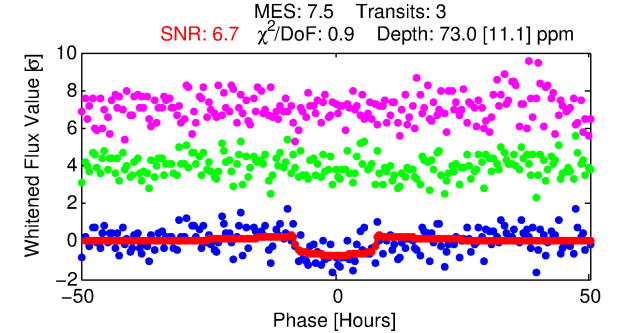
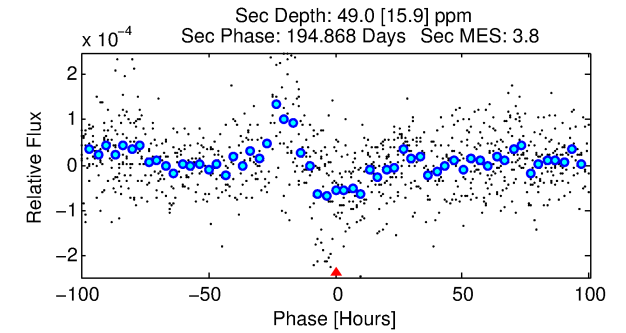
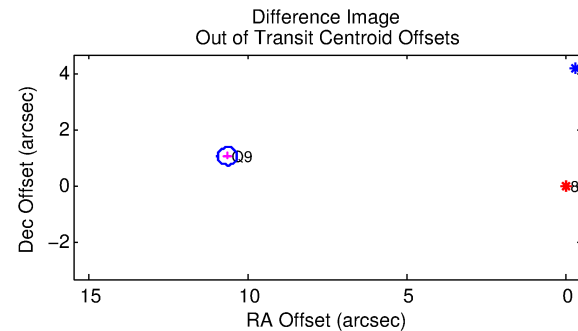
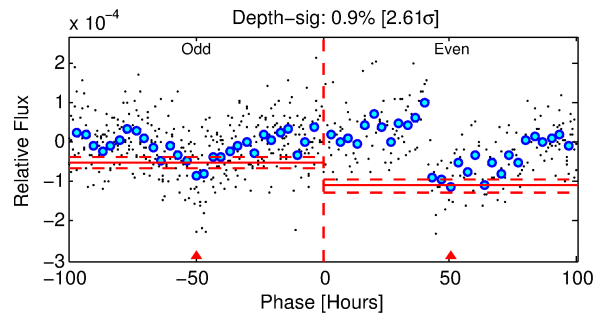
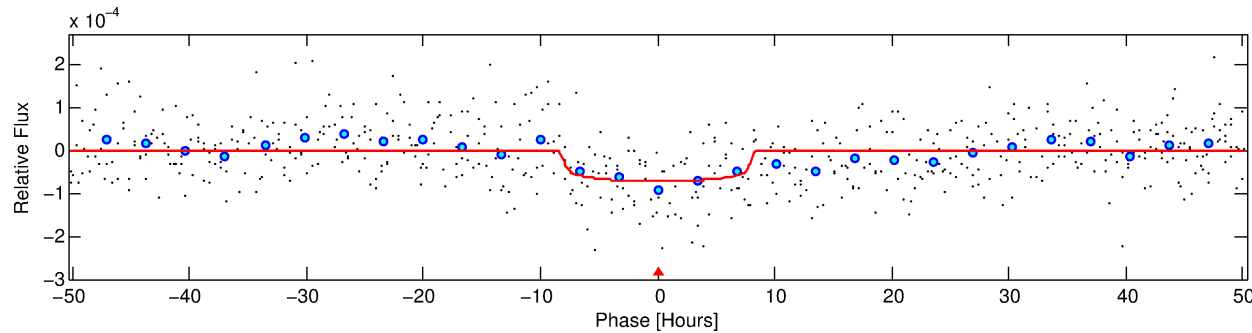
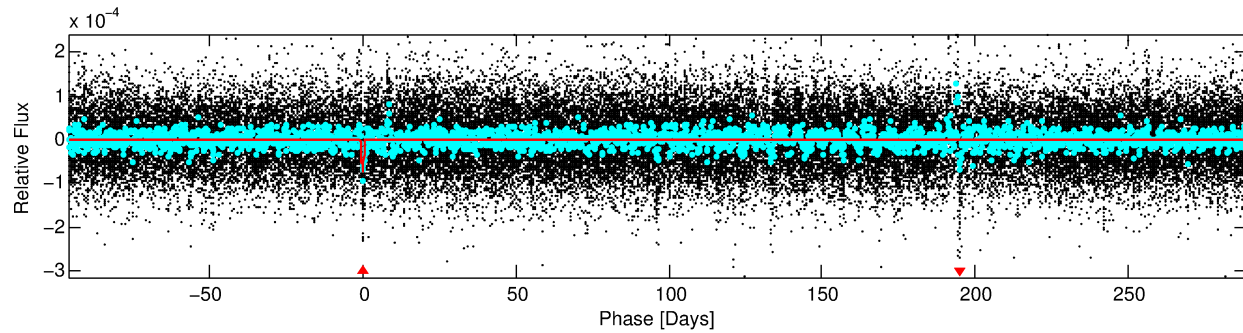
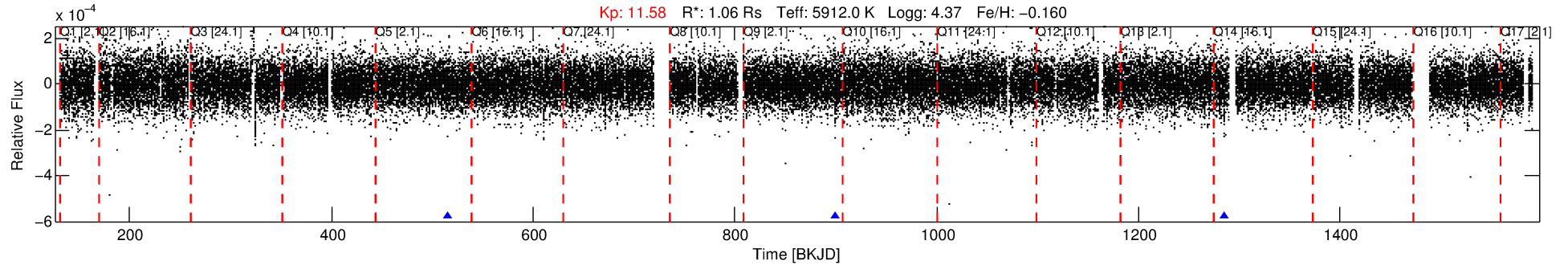
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008144325-01

No Significant Match Found

DV One-Page Summary

KIC: 8144325 Candidate: 1 of 1 Period: 384.947 d



DV Fit Results:

Period = 384.94693 [0.01860] d
Epoch = 514.7078 [0.0239] BKJD
 $R_p/R^* = 0.0092$ [0.0018]
 $a/R^* = 80.11$ [73.80]
 $b = 0.90$ [0.20]
 $\text{Seff} = 1.17$ [0.33]
 $T_{\text{eq}} = 265$ [18] K
 $R_p = 1.07$ [0.30] R_e
 $a = 1.0202$ [0.1735] AU
 $A_g = 24646.04$ [14057.46] [1.75 σ]
 $T_{\text{effp}} = 5143$ [671] K [7.27 σ]

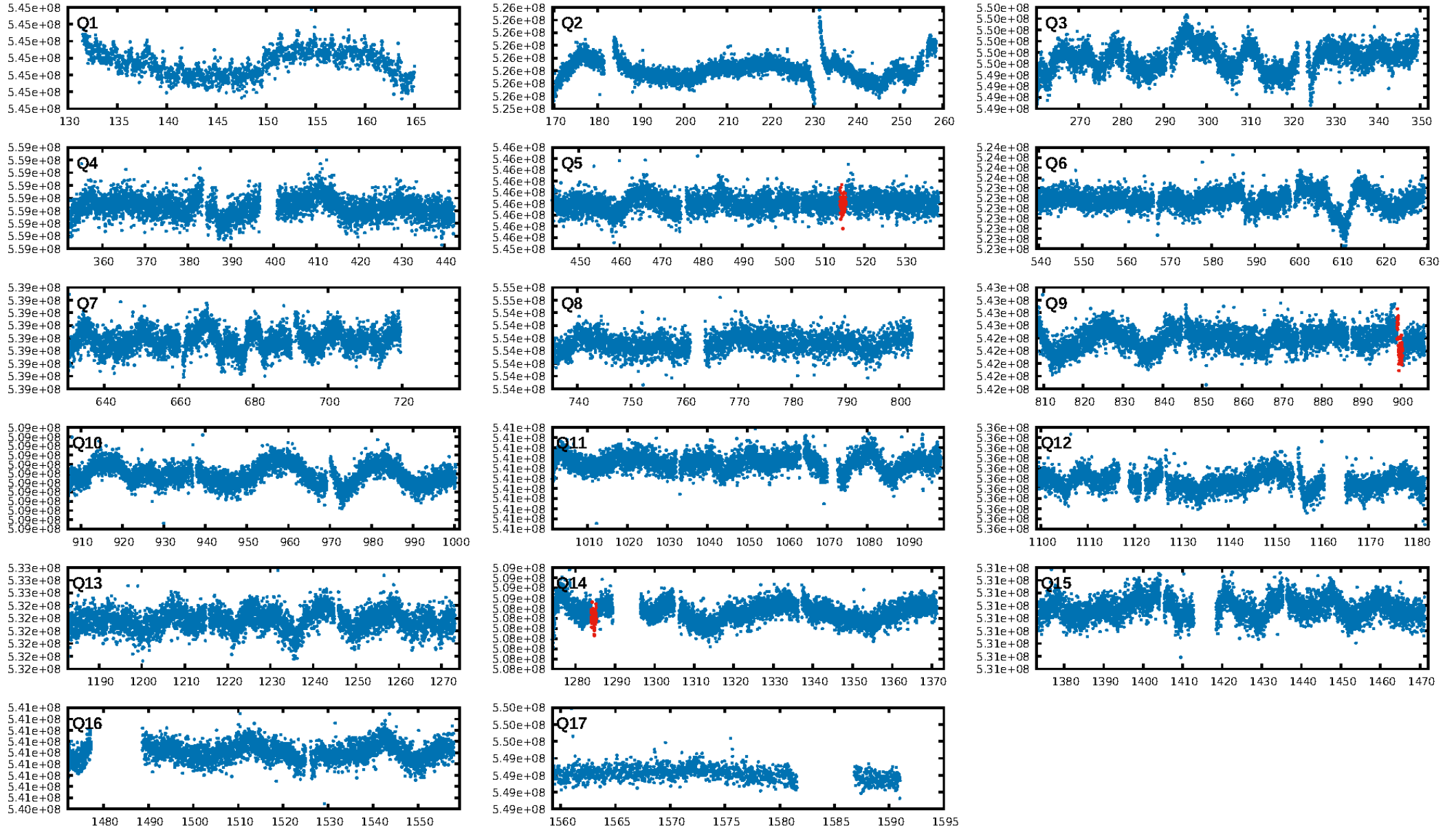
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.6%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 6.80e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.6057
Centroid-sig: 0.5%
Centroid-so: 7.047 arcsec [2.45 σ]
OotOffset-rm: 10.713 arcsec [102.88 σ]
KicOffset-rm: 10.847 arcsec [104.18 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

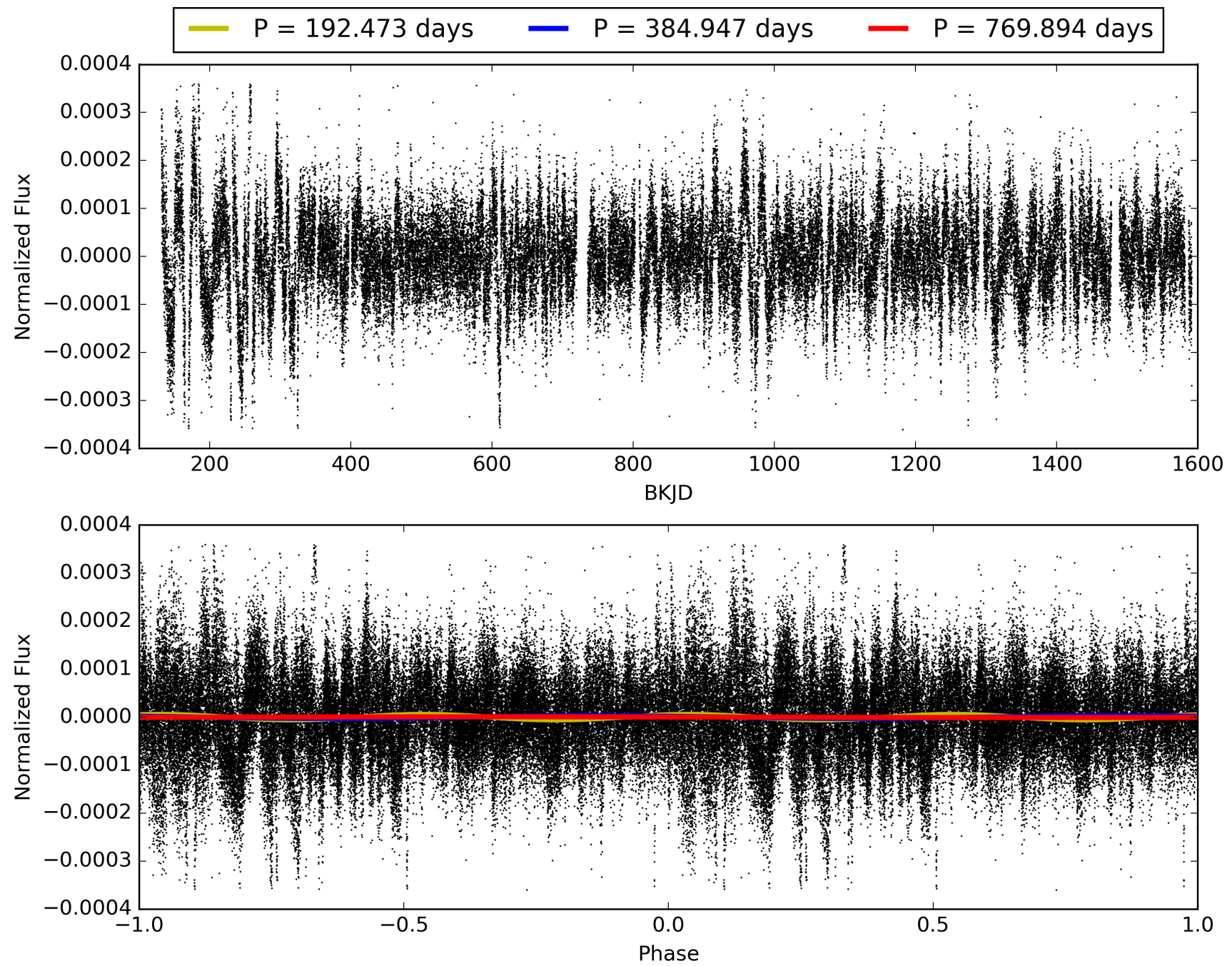
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:40:20 Z

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

TCE 008144325-01, PDC Light Curves

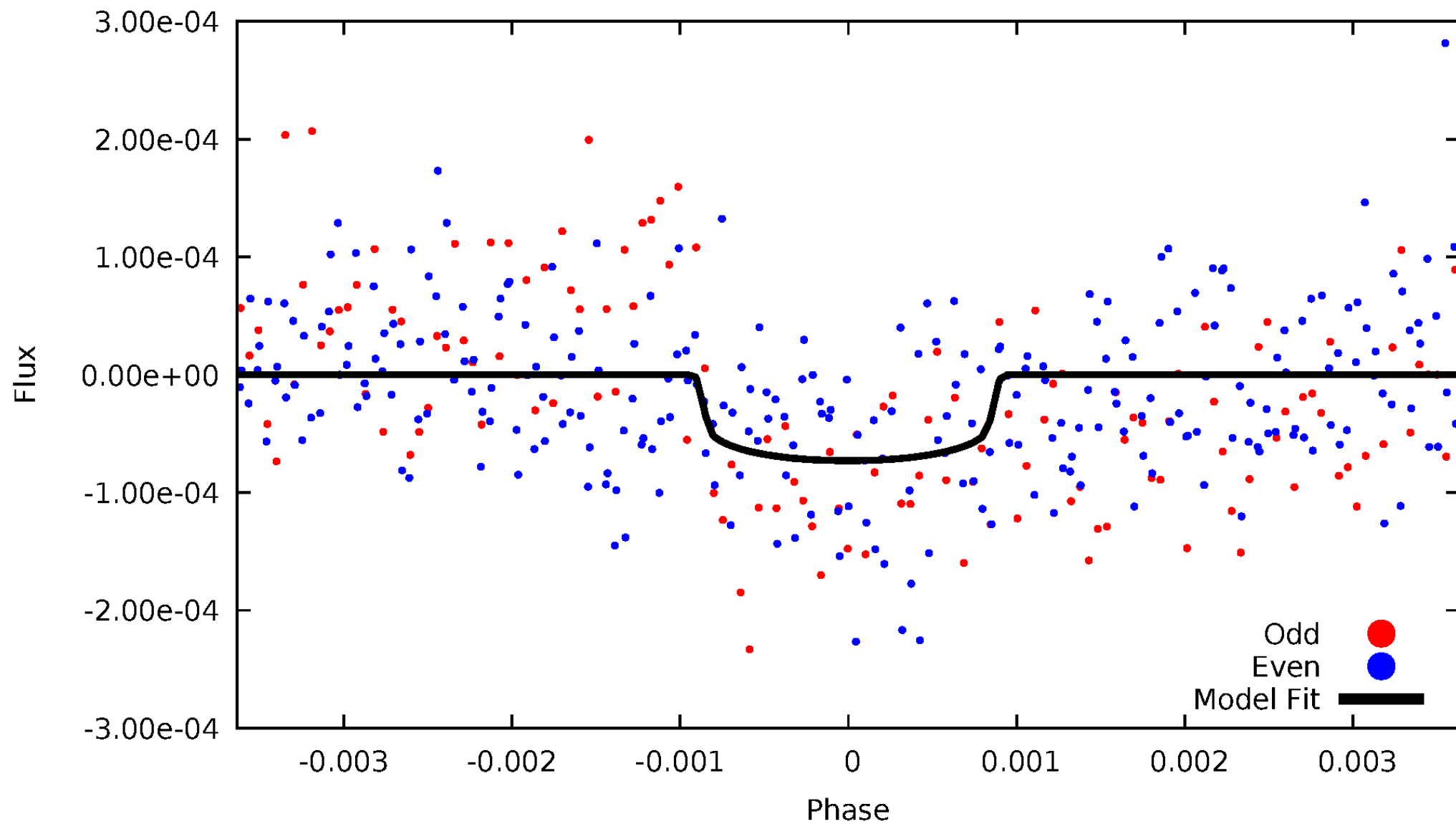


TCE 008144325-01



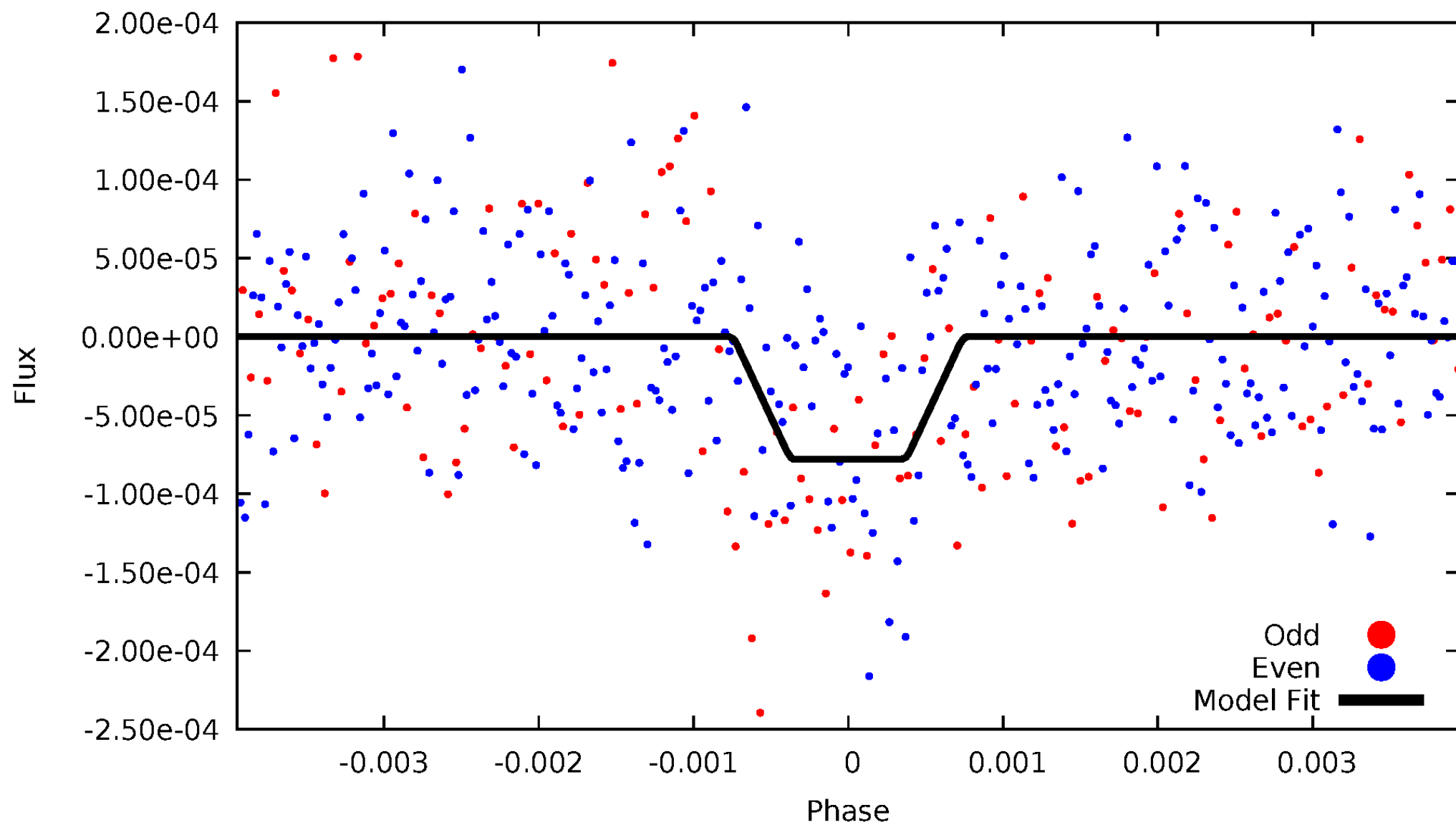
DV Odd/Even

TCE 008144325-01



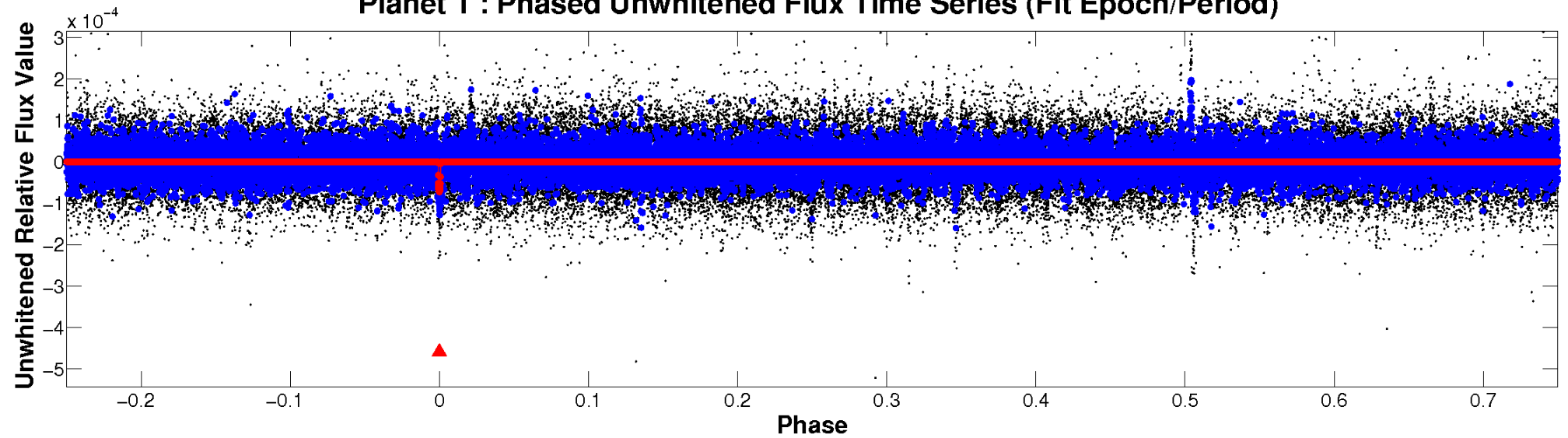
ALT Odd/Even

TCE 008144325-01

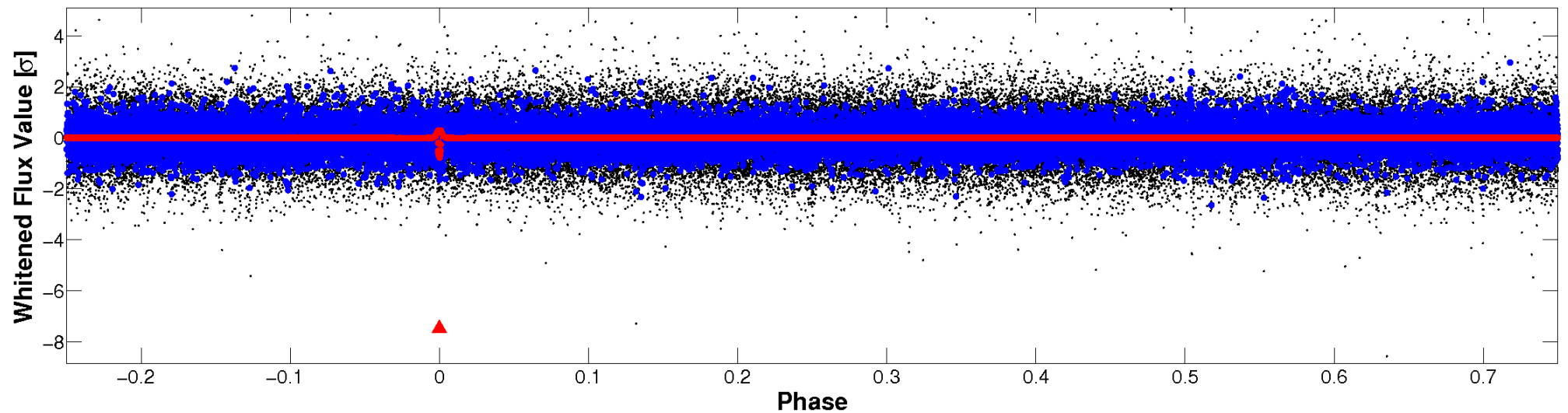


Non-Whitened Vs. Whitened Light Curve

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

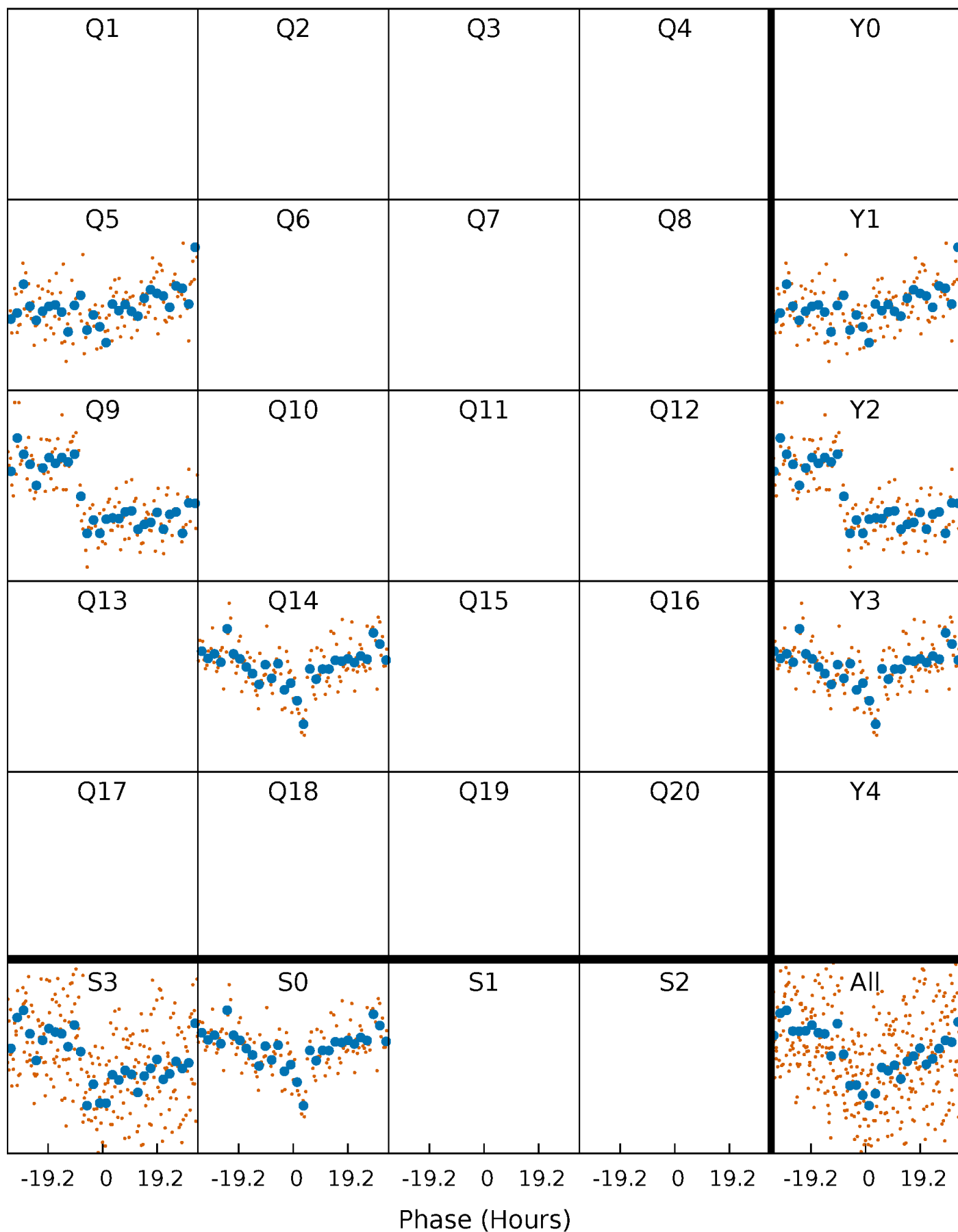


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



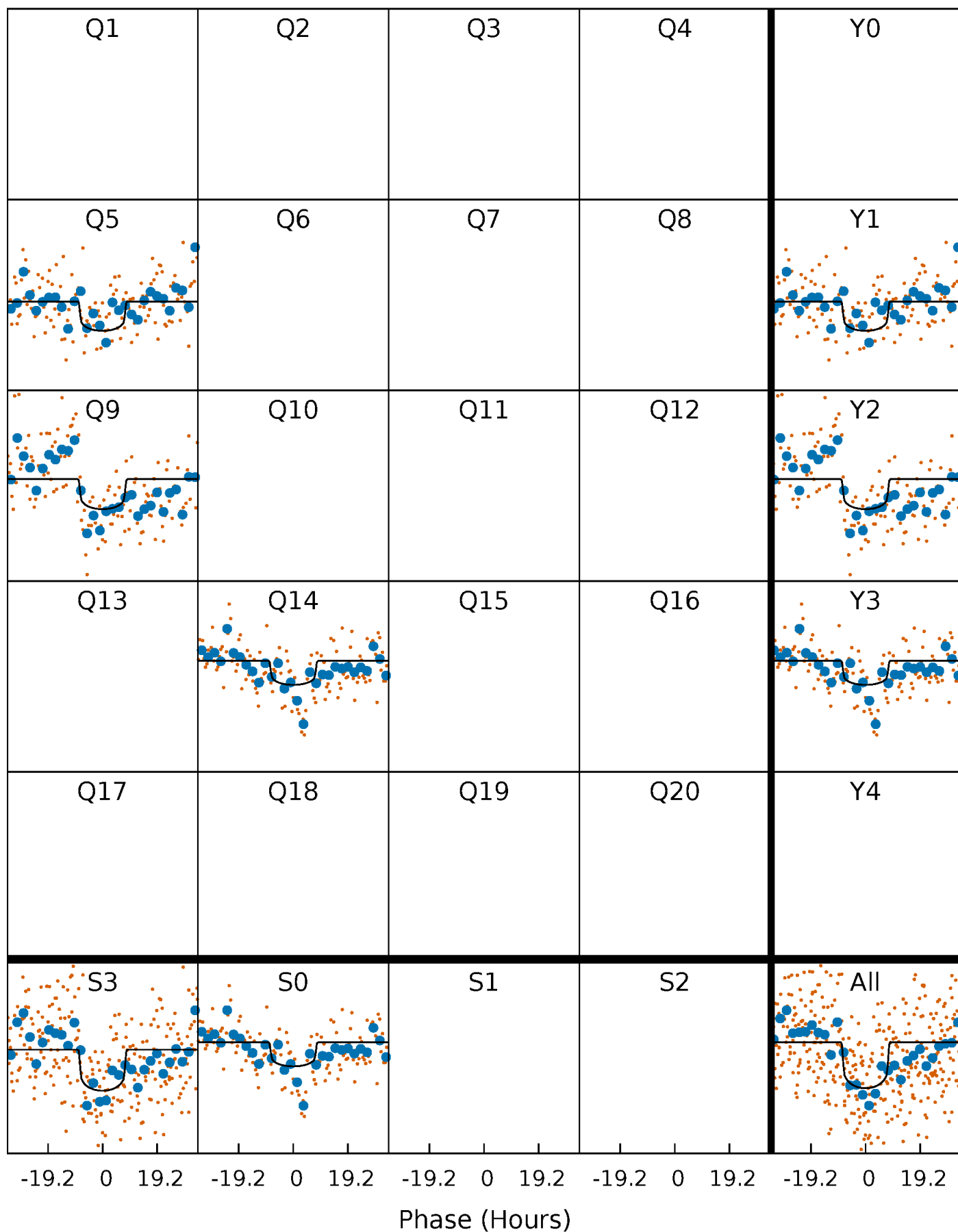
PDC Quarter-Phased Transit Curves

TCE 008144325-01 P=384.946928 Days $T_0=514.707839$ (BKJD)



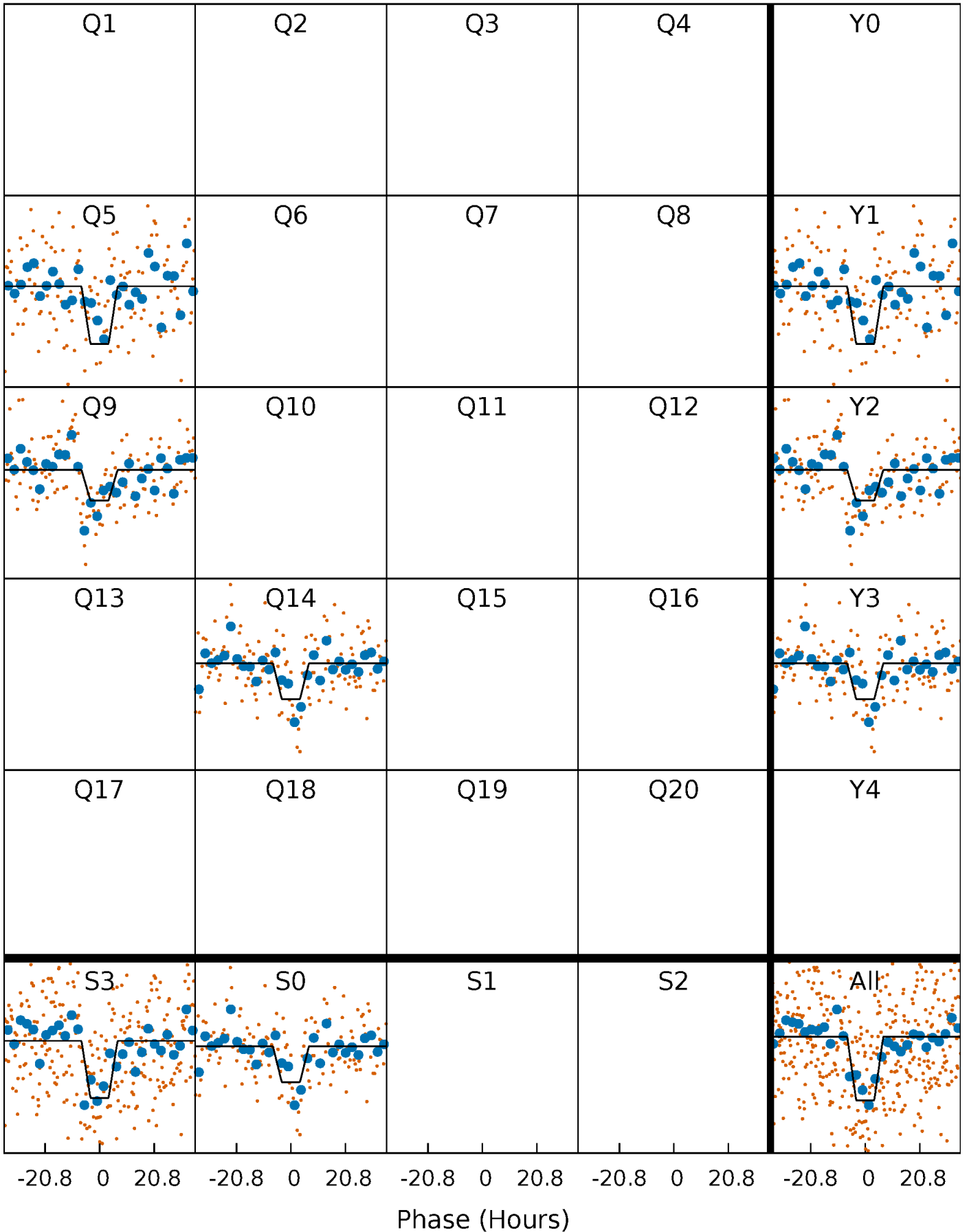
DV Quarter-Phased Transit Curves

TCE 008144325-01 P=384.946928 Days $T_0=514.707839$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

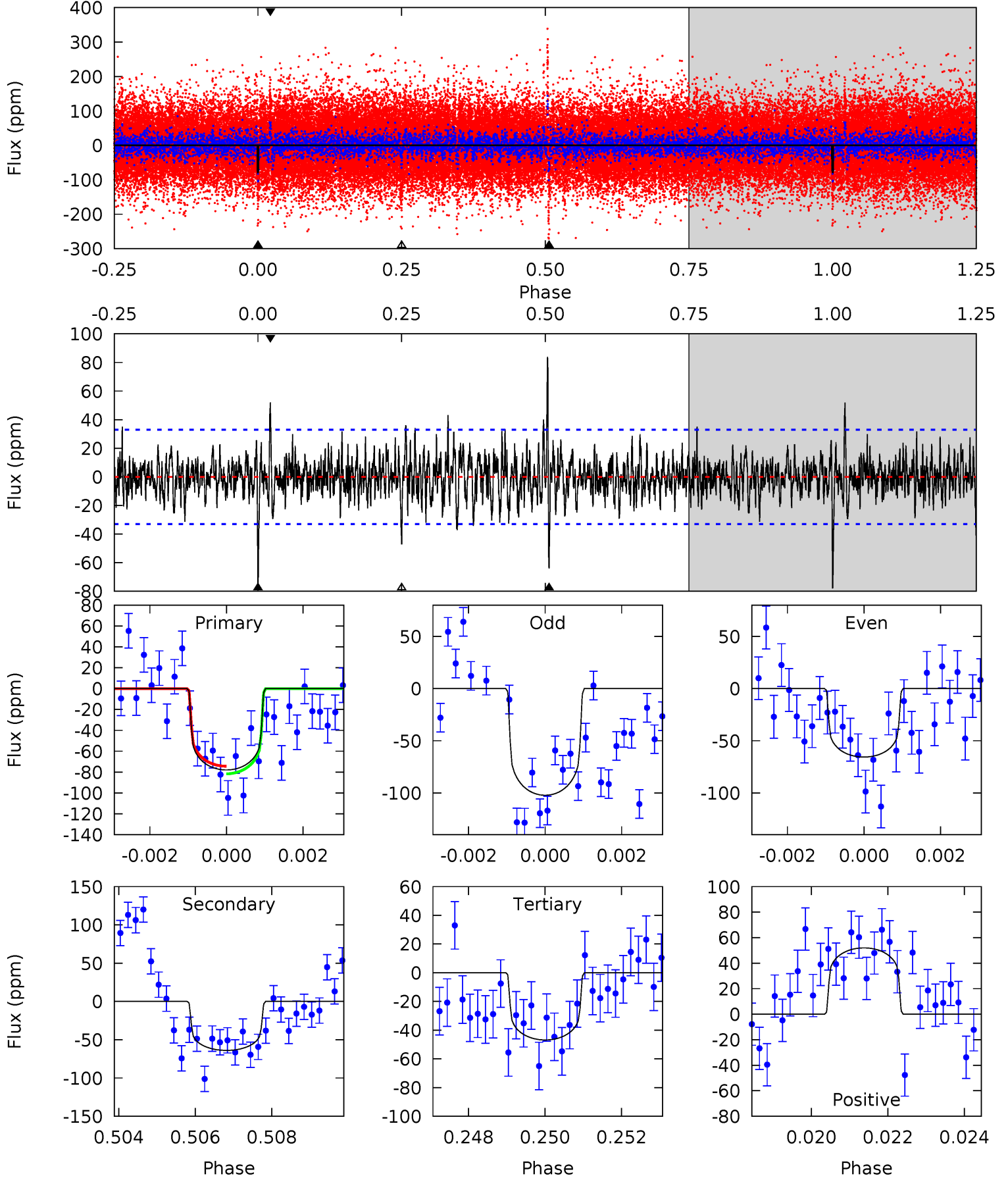
TCE 008144325-01 P=384.975082 Days $T_0=514.672962$ (BKJD)



DV Model-Shift Uniqueness Test

008144325-01, P = 384.946928 Days, E = 129.760911 Days

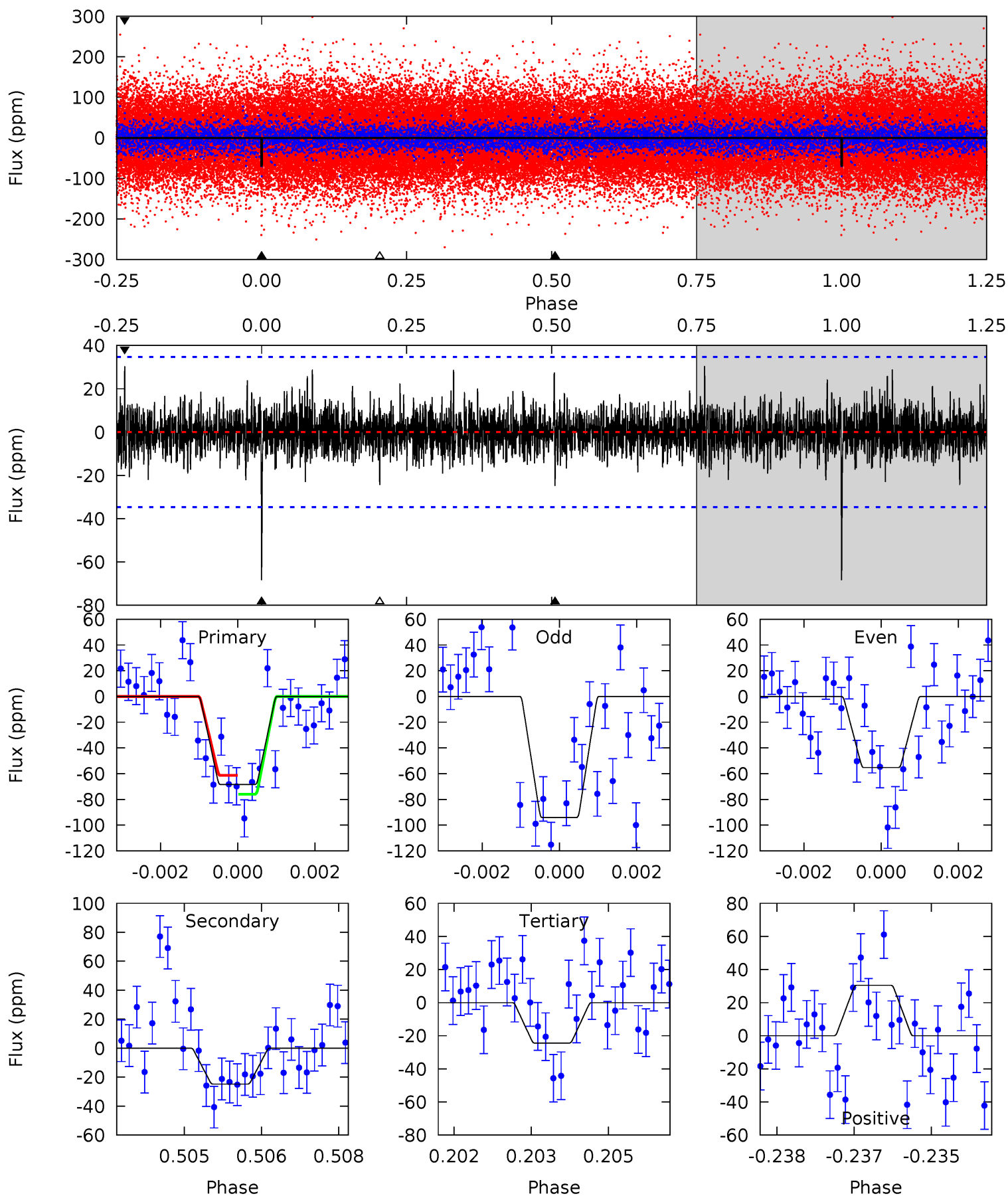
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	10.4	7.58	8.42	5.34	3.11	1.90	5.04	4.20	2.77	1.94	2.79	0.88	0.52	0.59



Alt Model-Shift Uniqueness Test

008144325-01, $P = 384.975082$ Days, $E = 129.697880$ 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	3.85	3.78	4.72	5.38	3.17	1.06	6.83	5.89	0.06	-0.88	2.87	0.96	0.31	1.13



Stellar Parameters For KIC 008144325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5912^{+148}_{-163}	$4.370^{+0.117}_{-0.143}$	$-0.160^{+0.300}_{-0.300}$	$1.057^{+0.206}_{-0.168}$	$0.954^{+0.123}_{-0.101}$	$1.138^{+0.599}_{-0.426}$
	+3%/-3%	+3%/-3%	+188%/-188%	+19%/-16%	+13%/-11%	+53%/-37%
Source	PHO1	FLK73	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 008144325-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-64 ± 6	$1.09^{+0.24}_{-0.23}$	374^{+22}_{-19}	5493^{+595}_{-407}	31023^{+18480}_{-10661}
Alt.	-25 ± 6	$1.01^{+0.24}_{-0.23}$	372^{+21}_{-18}	4609^{+530}_{-401}	13854^{+9058}_{-5753}

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

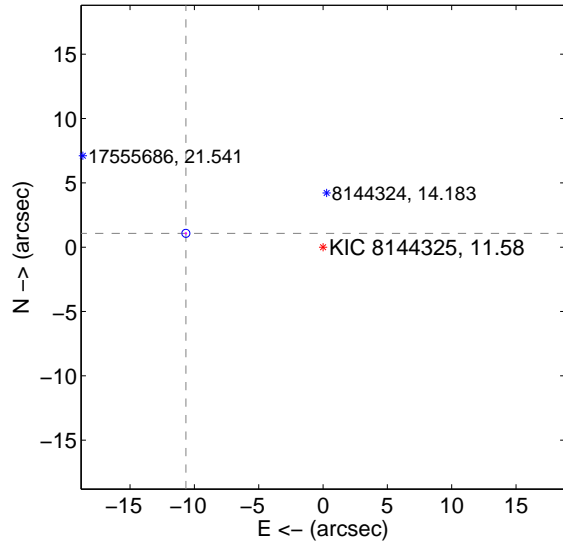
Supplemental centroid analysis for 008144325-01. **Kepler magnitude: 11.58.** Transit SNR 6.69

There are 1 quarters with good PRF difference image offsets

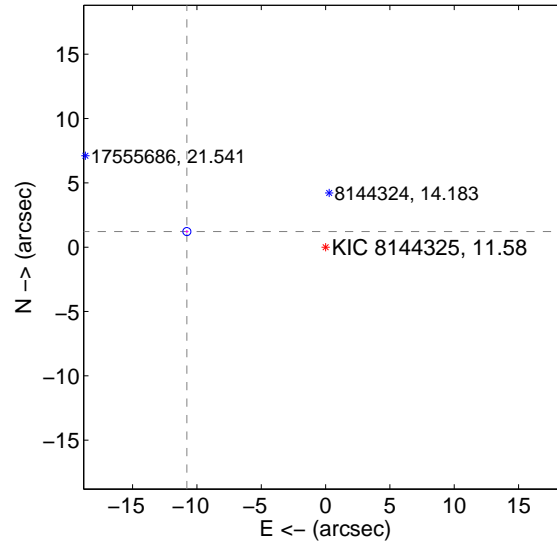
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.713 \pm 0.104	102.88	10.659 \pm 0.104	1.075 \pm 0.103
PRF-fit source offset from KIC position	10.847 \pm 0.104	104.18	10.779 \pm 0.104	1.214 \pm 0.103
photometric centroid source offset	7.05 \pm 2.87	2.45	6.99 \pm 2.89	-0.93 \pm 1.78

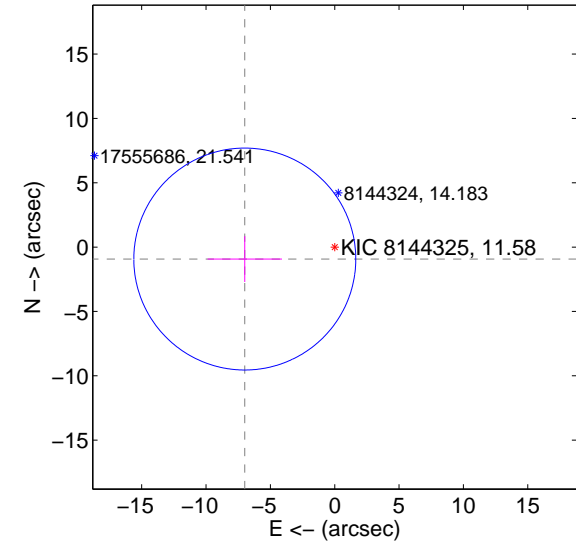
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

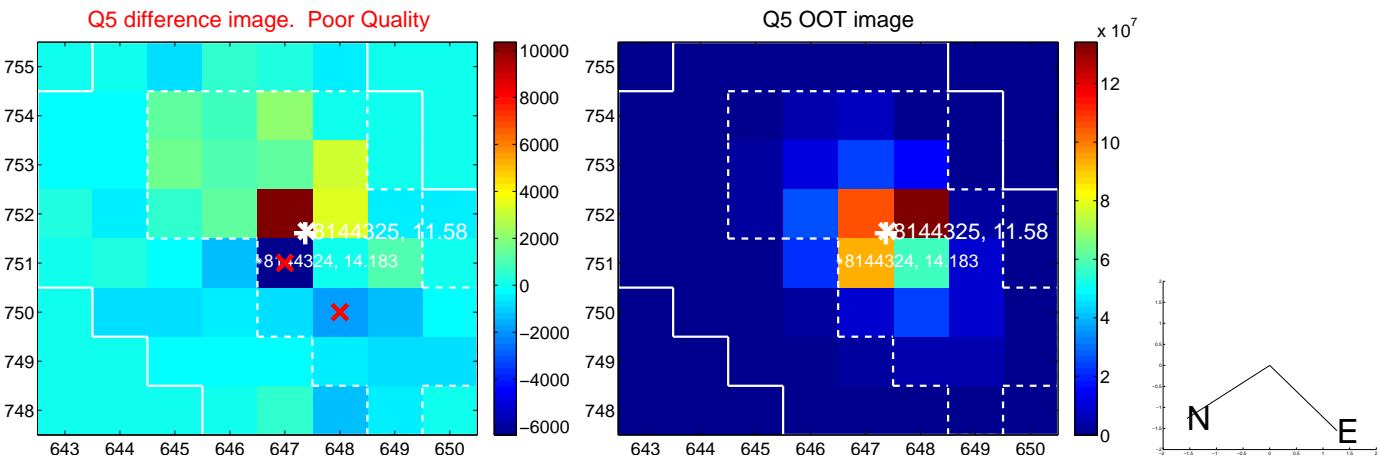


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

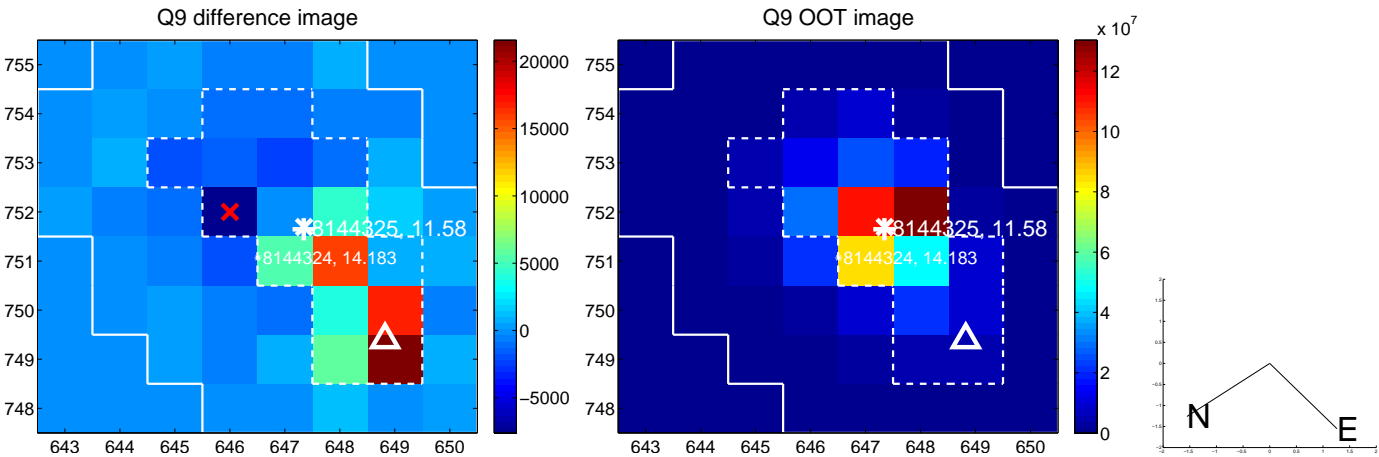
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



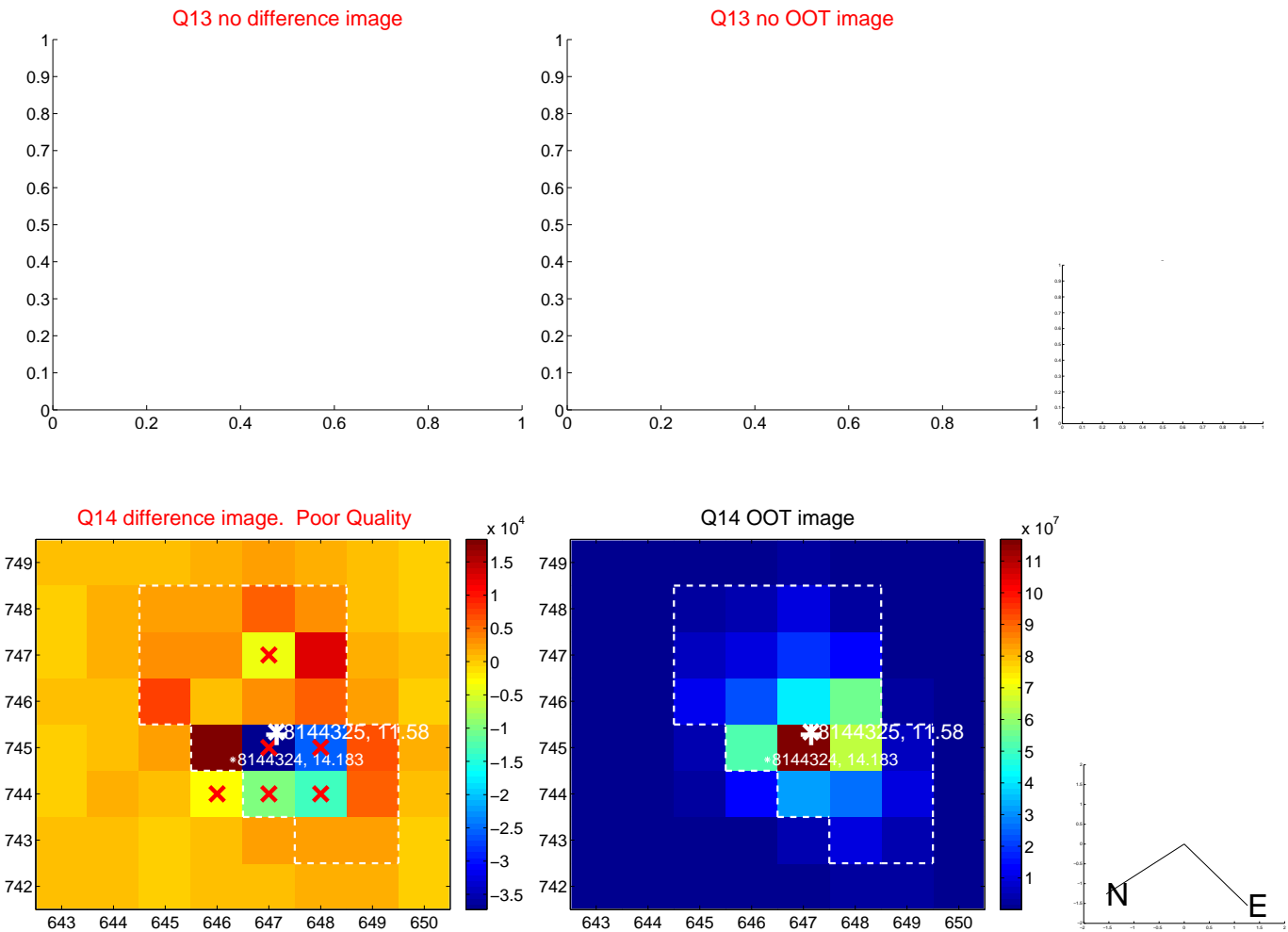
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



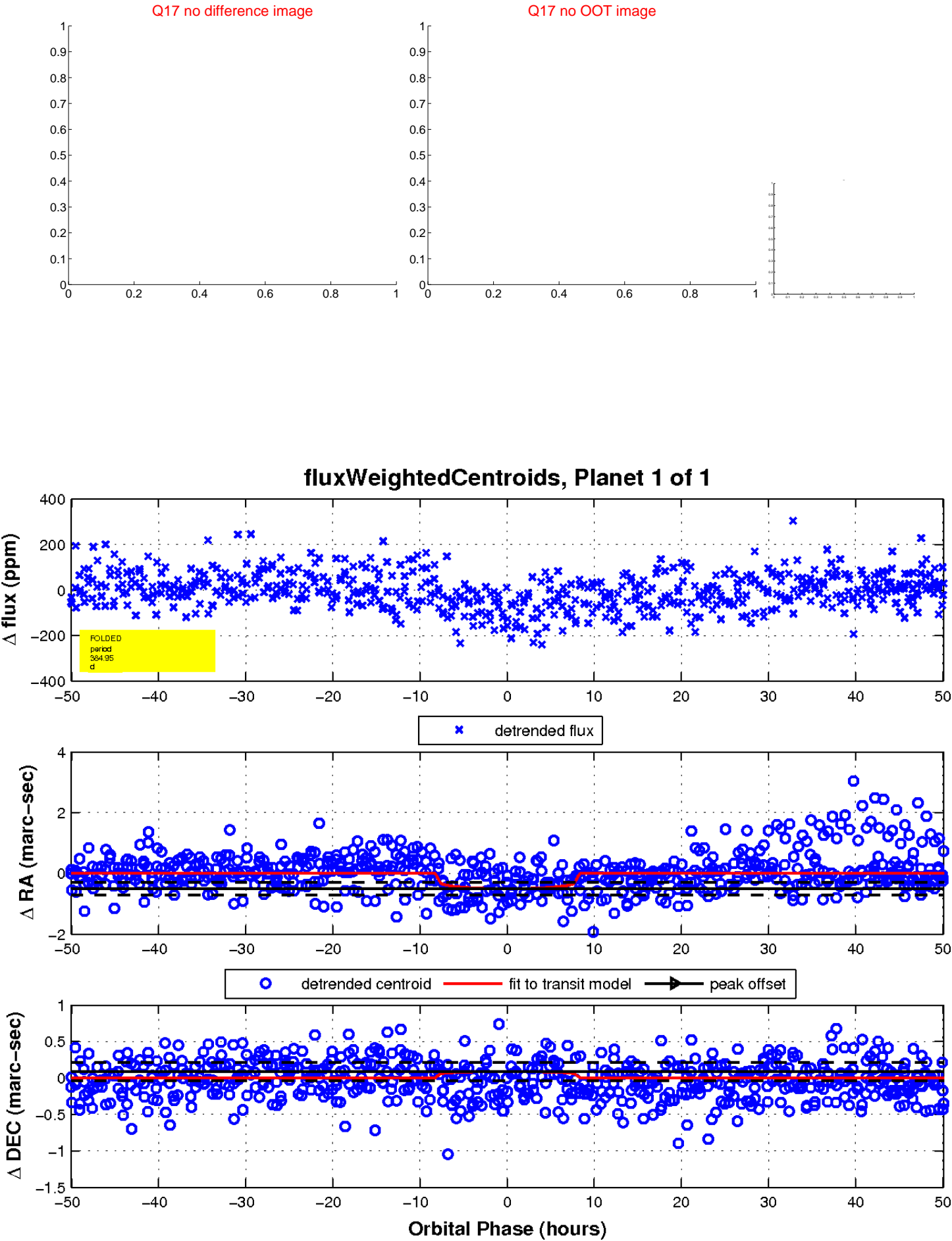
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

