

KIC 008749844

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
008749844-01	OBS	7909.01	361.511032	249.738114	271.1	5.221	8.1	8.2	4.30	9492	7.45	68.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008749844-01	OBS	FP	0.23	1	0	0	0	MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

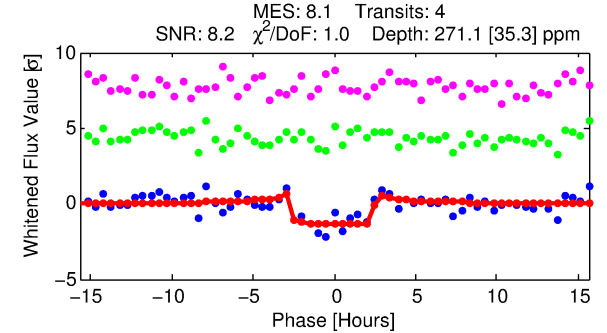
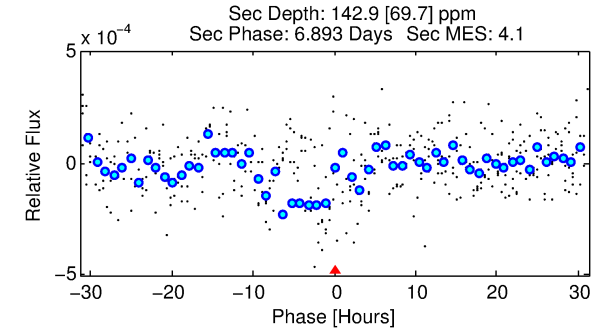
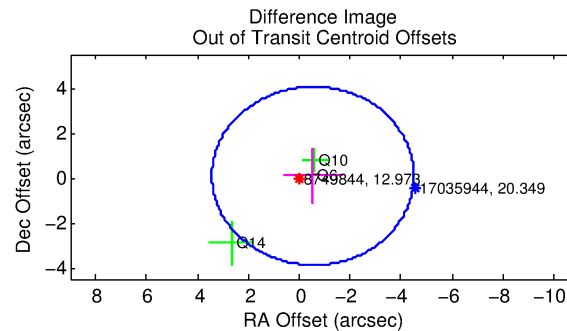
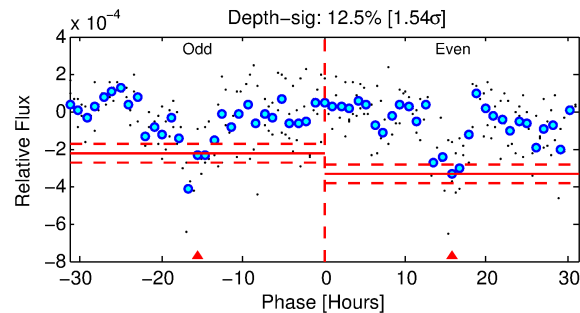
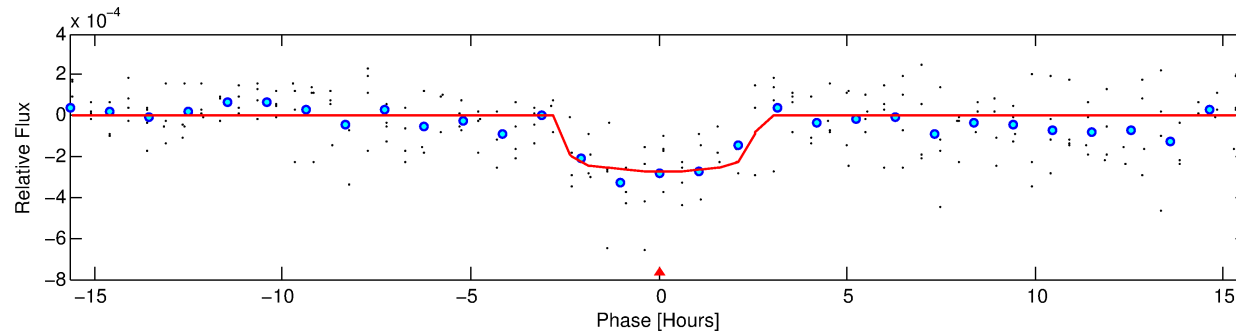
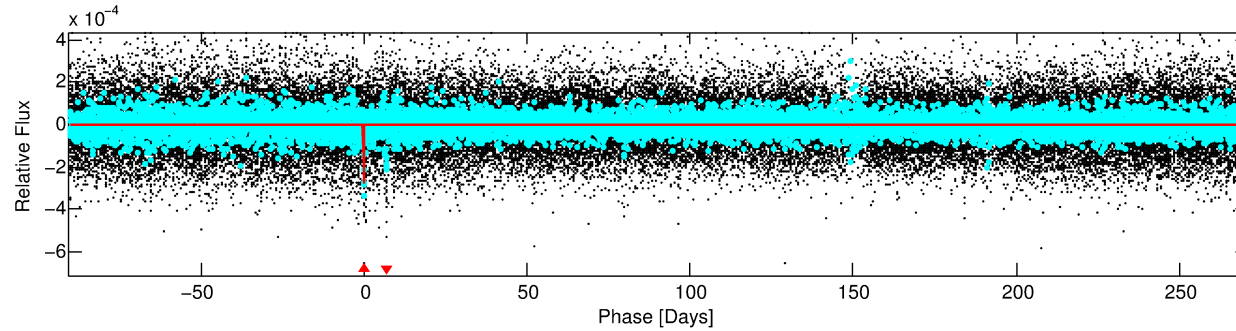
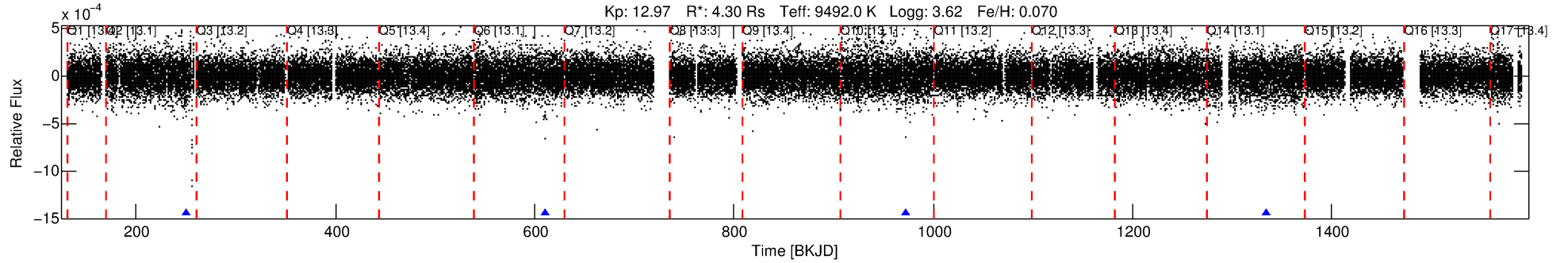
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008749844-01

No Significant Match Found

DV One-Page Summary

KIC: 8749844 Candidate: 1 of 1 Period: 361.511 d



DV Fit Results:

Period = 361.51103 [0.00360] d
Epoch = 249.7381 [0.0065] BKJD
Rp/R* = 0.0159 [0.0089]
a/R* = 444.42 [1707.49]
b = 0.57 [4.54]
Seff = 68.50 [53.49]
Teff = 734 [143] K
Rp = 7.45 [5.52] Re
a = 1.4005 [0.6605] AU
Ag = 2779.07 [4016.10] [0.69 σ]
Teffp = 8235 [2550] K [2.94 σ]

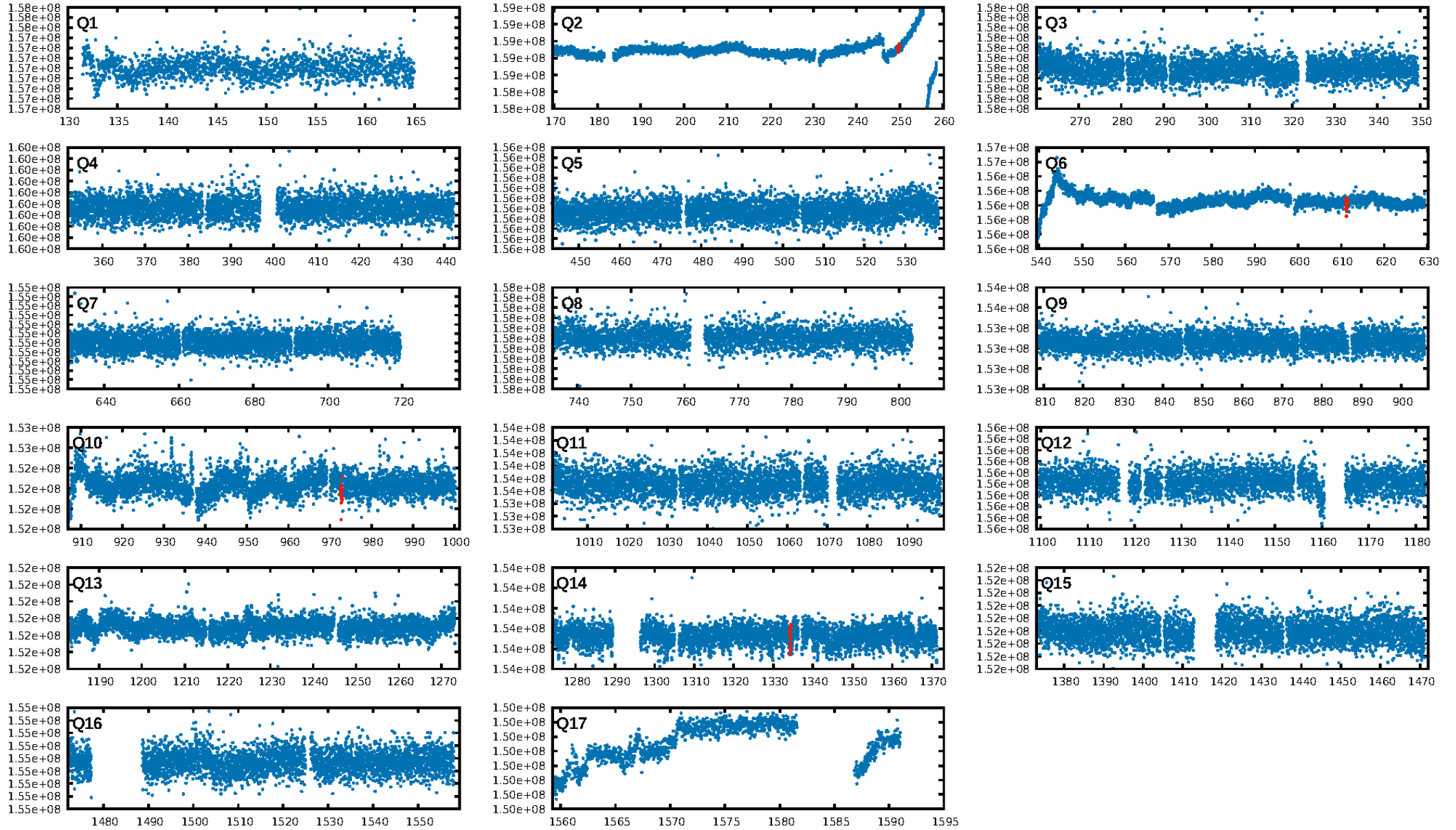
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 62.8%
ModelChiSquareGof-sig: 96.3%
Bootstrap-pfa: 4.66e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -6.192
Centroid-sig: 21.6%
Centroid-so: 1.296 arcsec [1.12 σ]
OotOffset-rm: 0.545 arcsec [0.41 σ]
KicOffset-rm: 0.561 arcsec [0.54 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

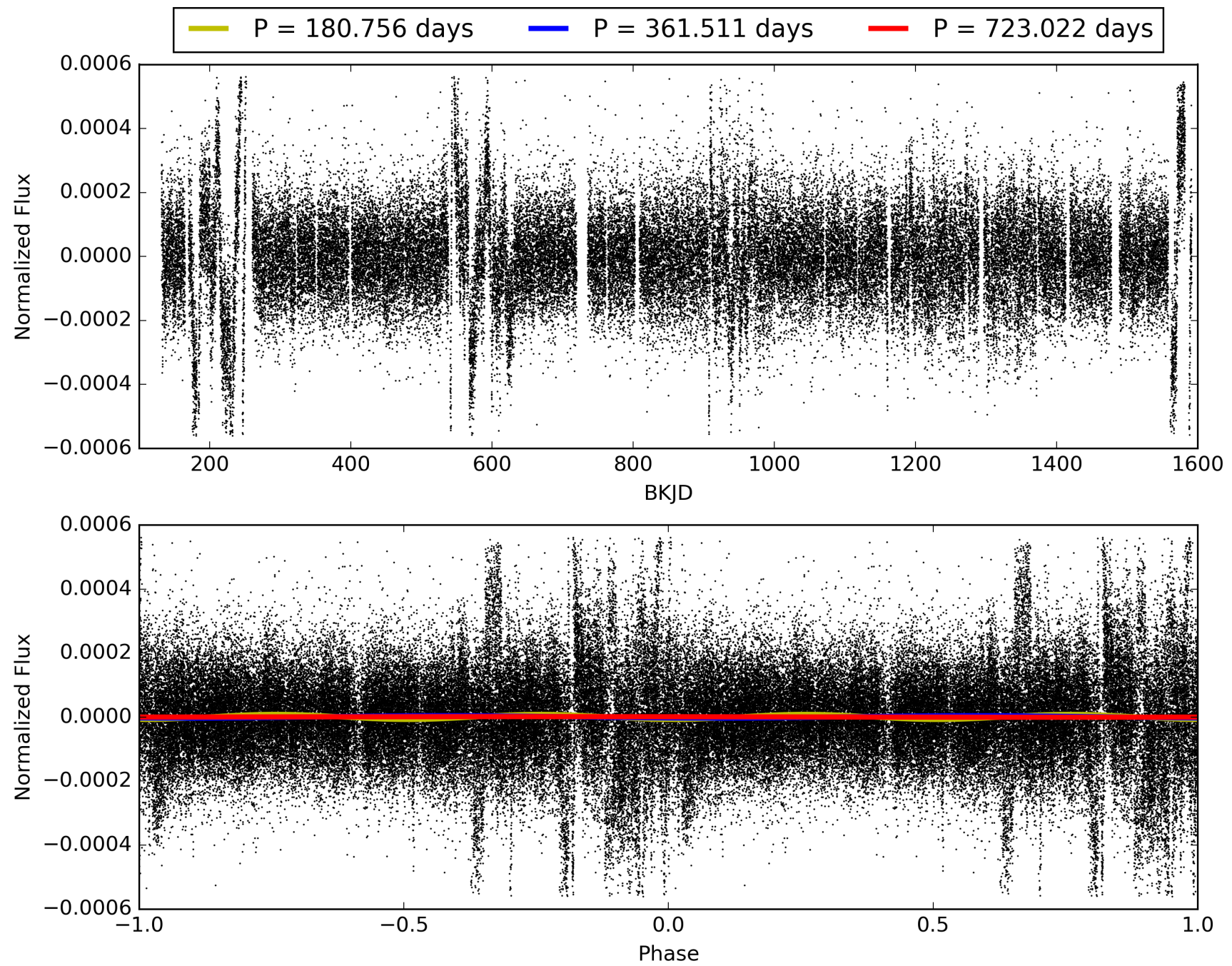
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:12:55 Z

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

TCE 008749844-01, PDC Light Curves

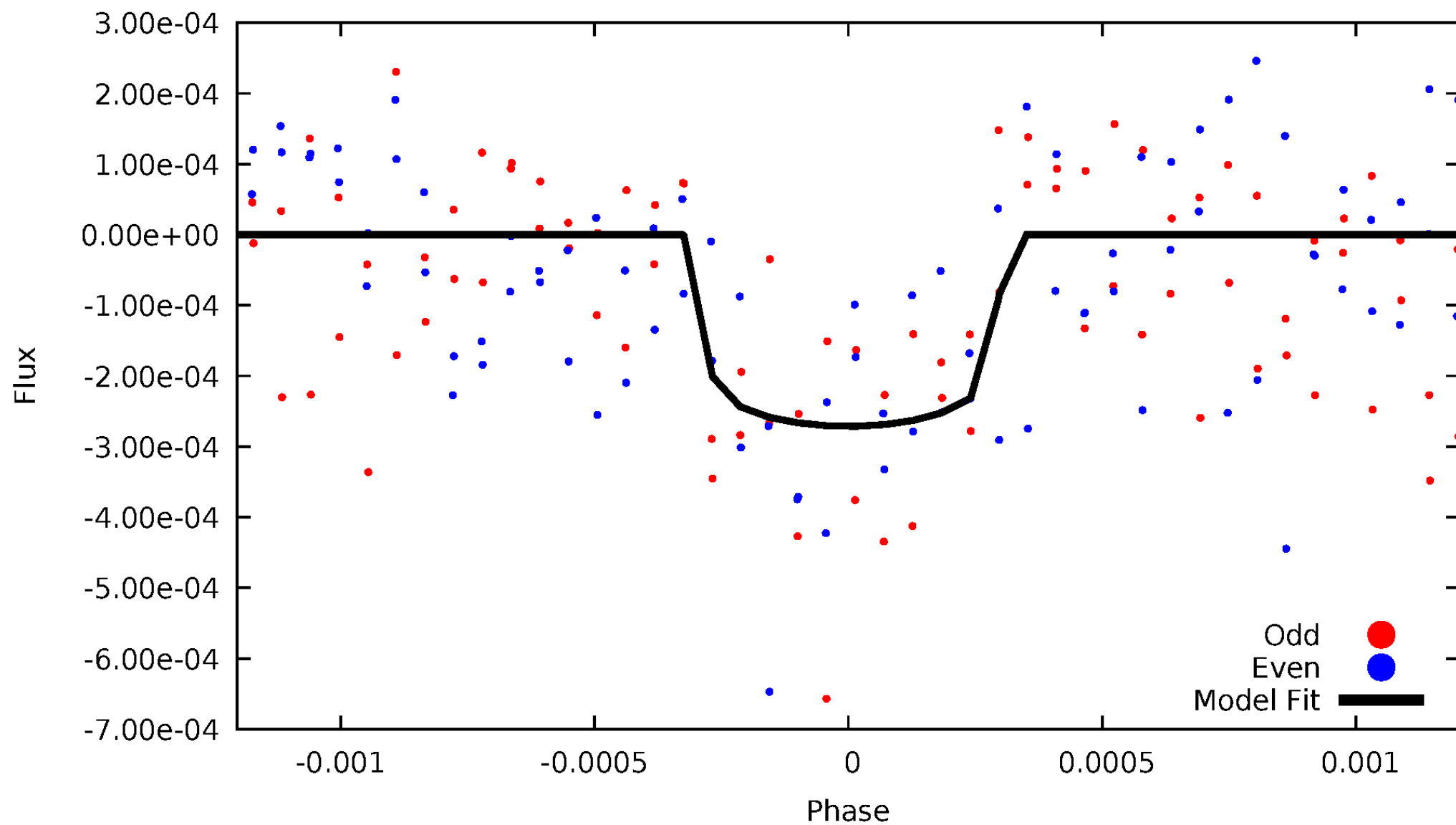


TCE 008749844-01



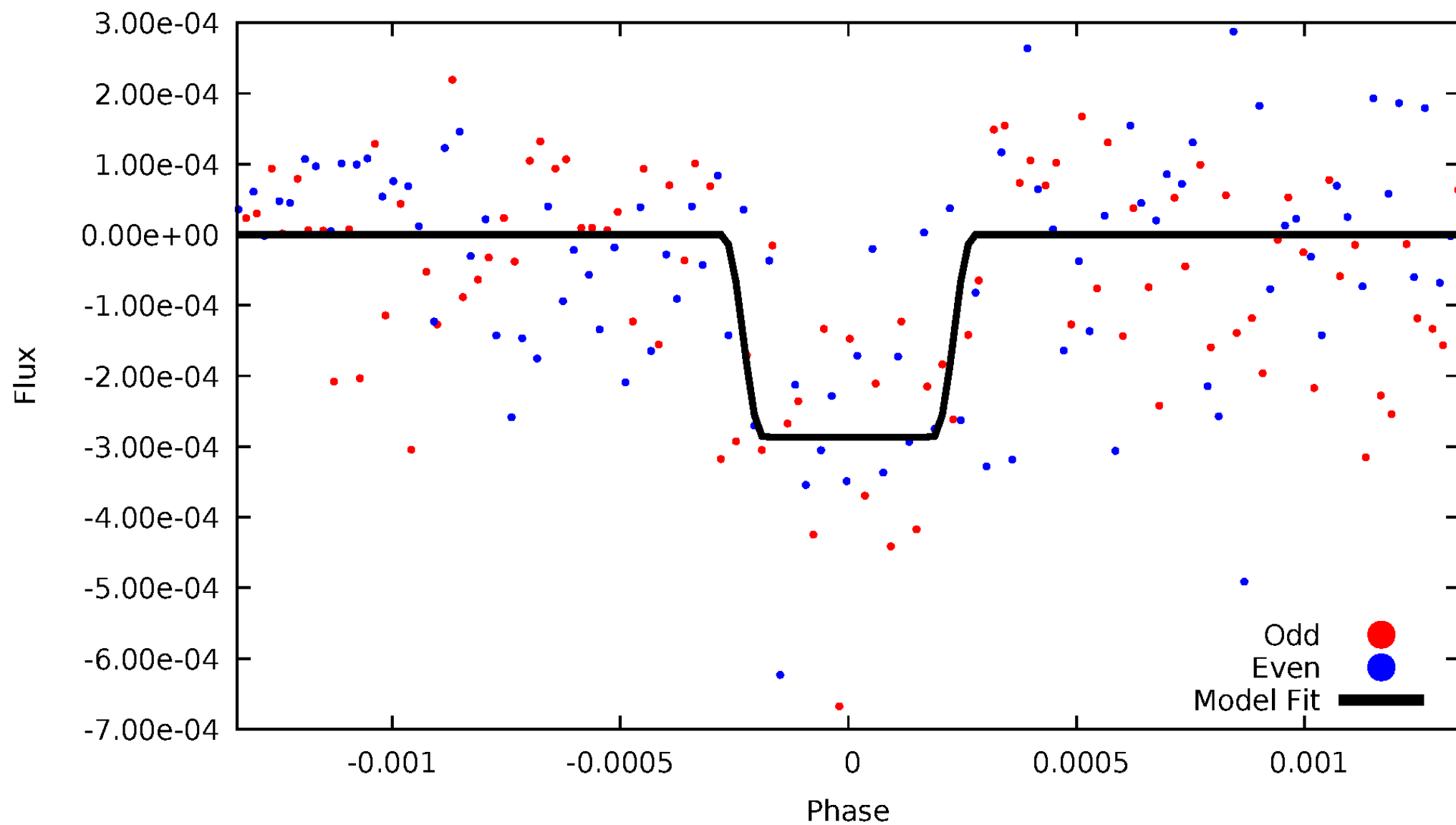
DV Odd/Even

TCE 008749844-01



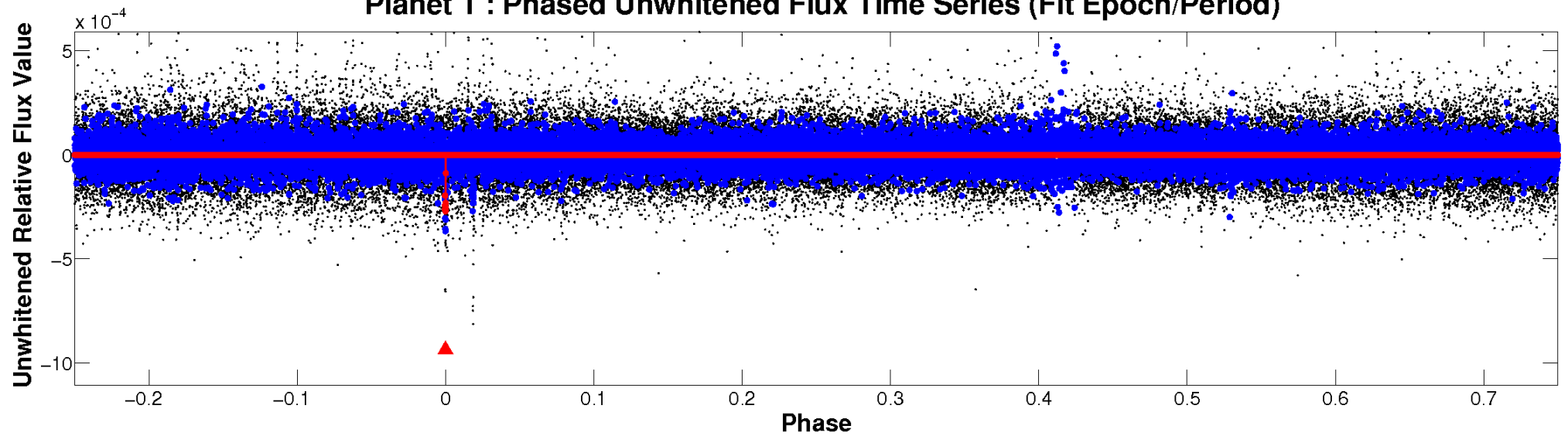
ALT Odd/Even

TCE 008749844-01

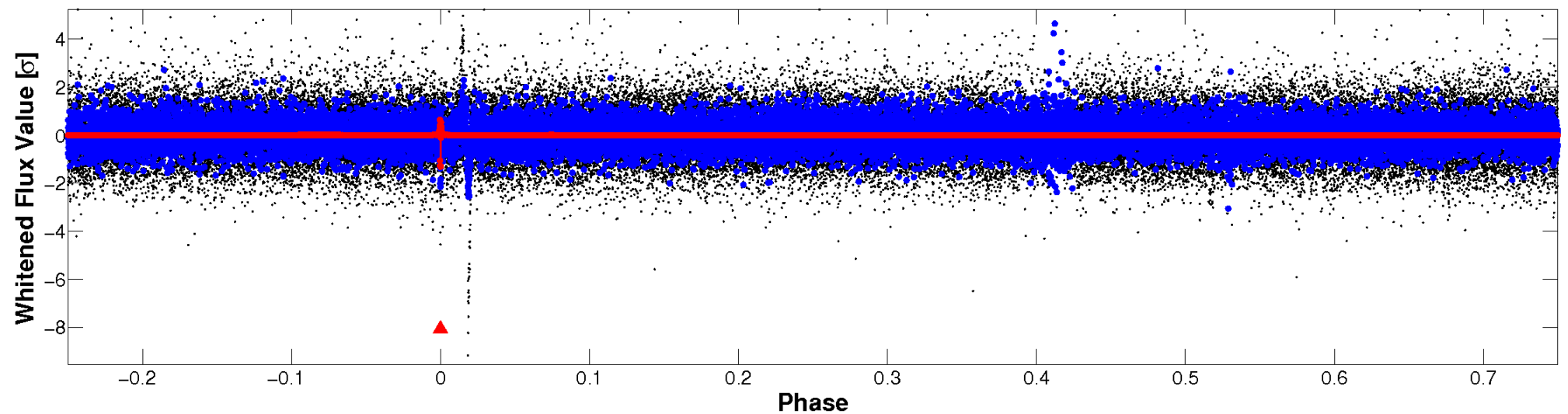


Non-Whitened Vs. Whitened Light Curve

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

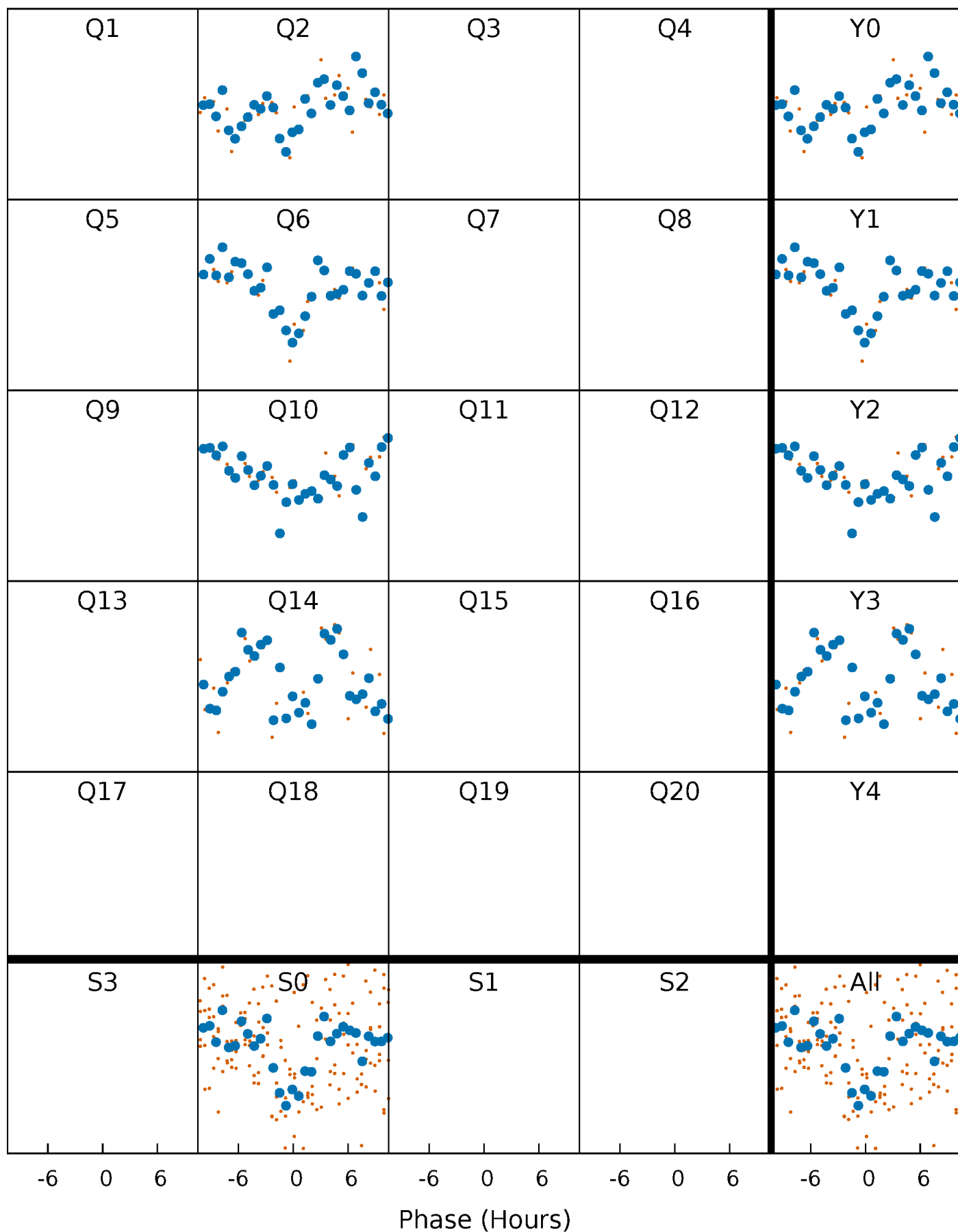


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



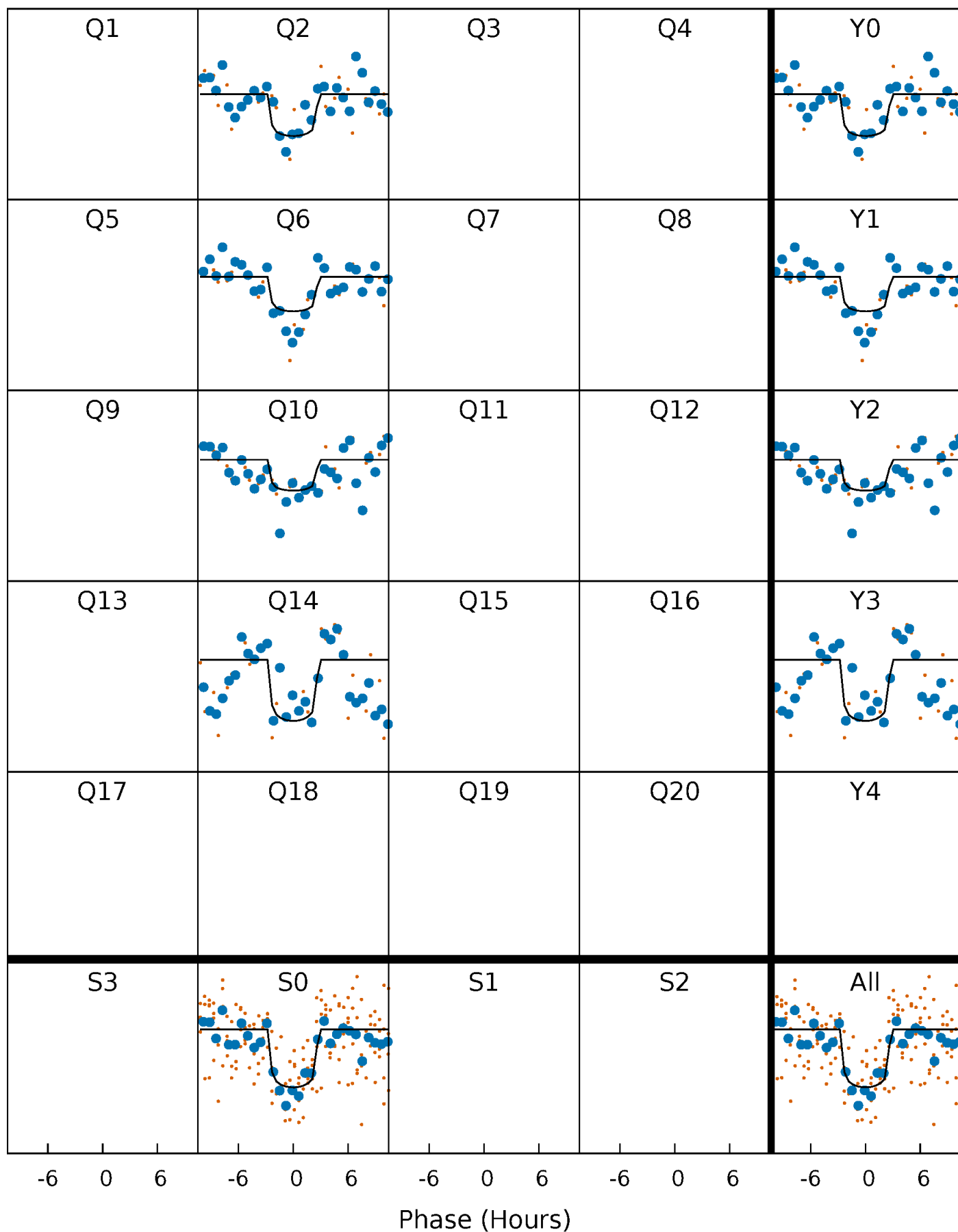
PDC Quarter-Phased Transit Curves

TCE 008749844-01 P=361.511032 Days $T_0=249.738114$ (BKJD)



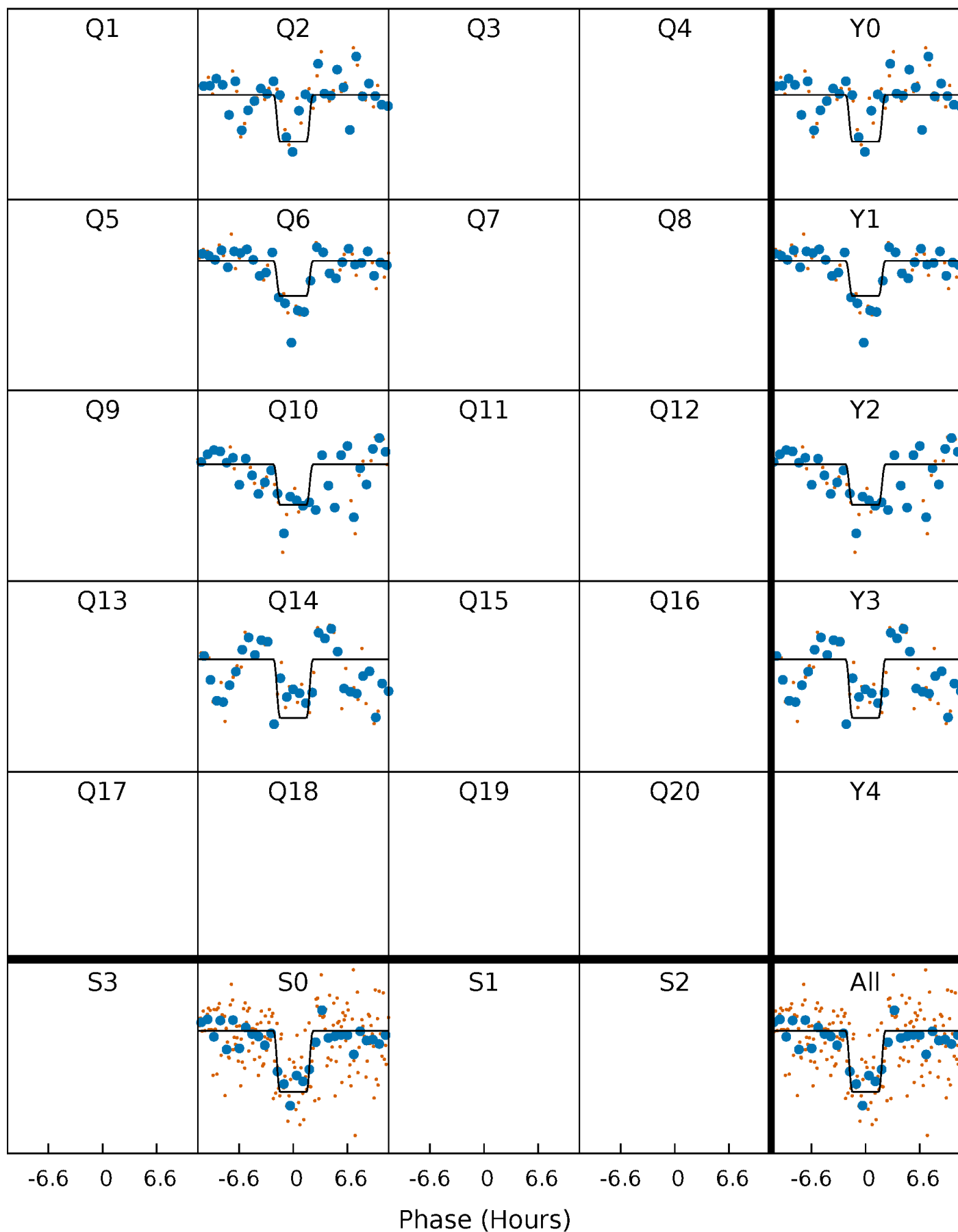
DV Quarter-Phased Transit Curves

TCE 008749844-01 P=361.511032 Days $T_0=249.738114$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

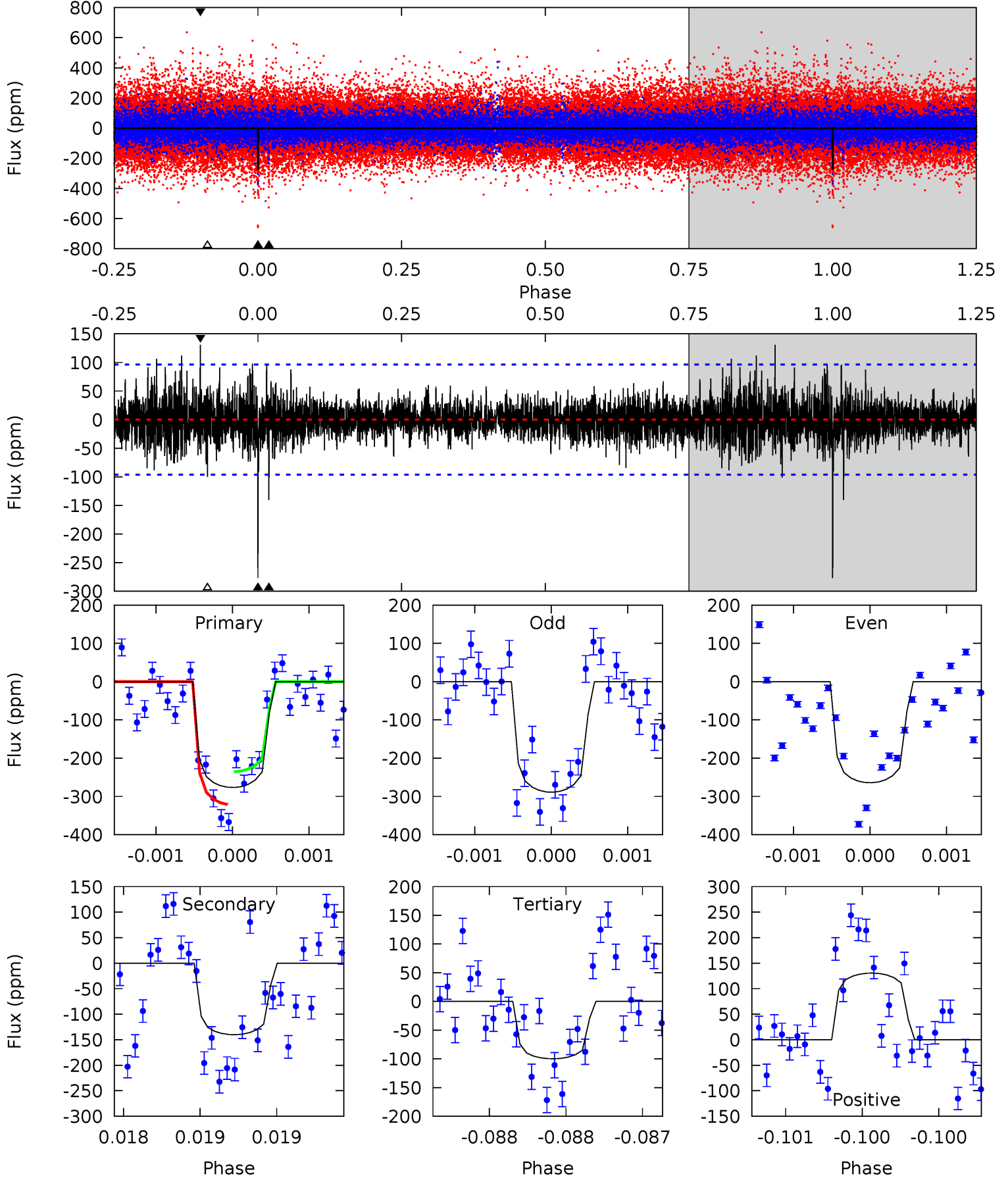
TCE 008749844-01 P=361.517355 Days $T_0=249.723426$ (BKJD)



DV Model-Shift Uniqueness Test

008749844-01, P = 361.511032 Days, E = 249.738114 Days

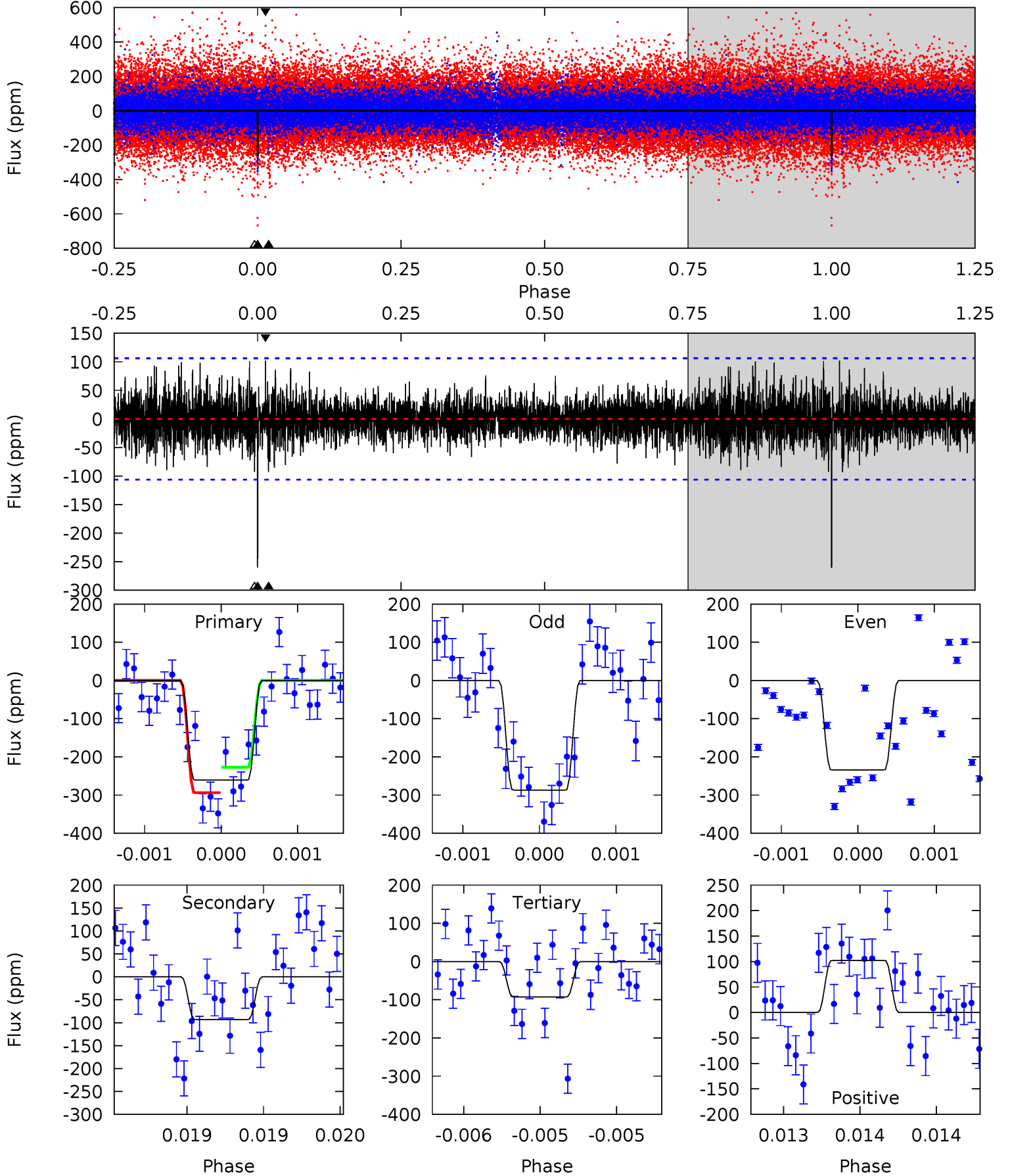
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	8.06	5.74	7.51	5.53	3.42	1.33	10.2	8.40	2.32	0.55	0.71	1.02	0.32	2.46



Alt Model-Shift Uniqueness Test

008749844-01, P = 361.517355 Days, E = 249.723426 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	4.87	4.84	5.34	5.56	3.47	1.23	8.79	8.30	0.03	-0.47	1.25	1.03	0.28	1.74



Stellar Parameters For KIC 008749844

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9492^{+297}_{-396}	$3.619^{+0.451}_{-0.080}$	$0.070^{+0.150}_{-0.550}$	$4.298^{+0.688}_{-2.065}$	$2.806^{+0.317}_{-0.589}$	$0.050^{+0.202}_{-0.017}$
	+3%/-4%	+12%/-2%	+214%/-786%	+16%/-48%	+11%/-21%	+406%/-34%
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 008749844-01 / KOI 7909.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-140 ± 17	$6.55^{+4.50}_{-3.47}$	986^{+68}_{-119}	7800^{+5578}_{-1753}	3517^{+12360}_{-2307}
Alt.	-93 ± 19	$7.44^{+4.33}_{-3.89}$	988^{+76}_{-123}	6562^{+3175}_{-1176}	1850^{+5999}_{-1113}

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

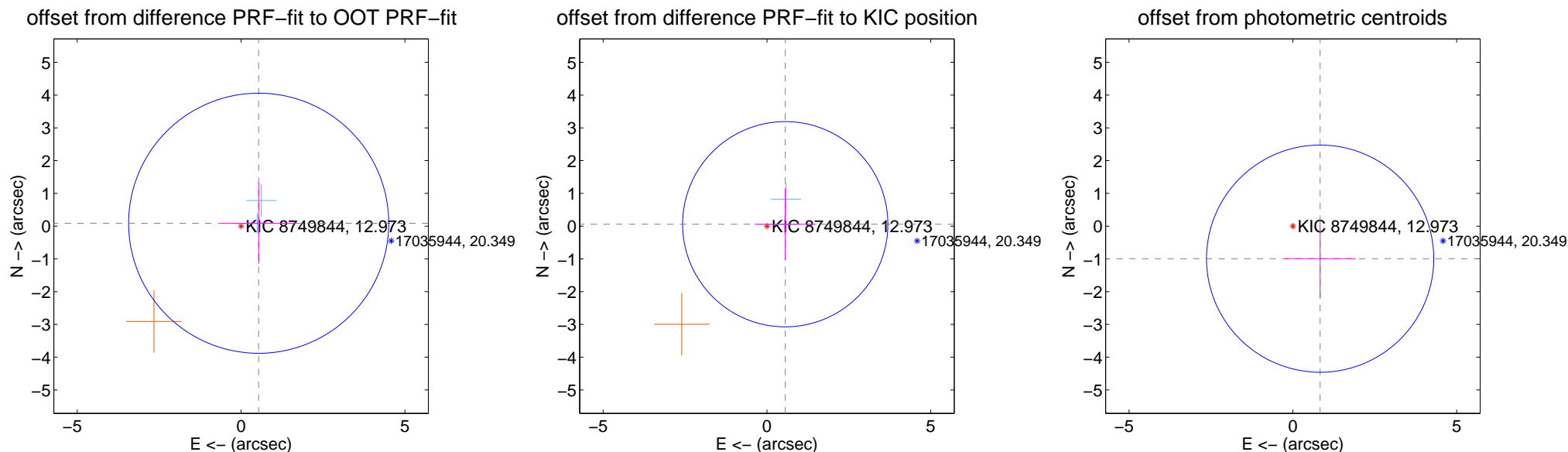
DV Centroid Data

Supplemental centroid analysis for 008749844-01. Kepler magnitude: 12.97. Transit SNR 8.20

There are 2 quarters with good PRF difference image offsets

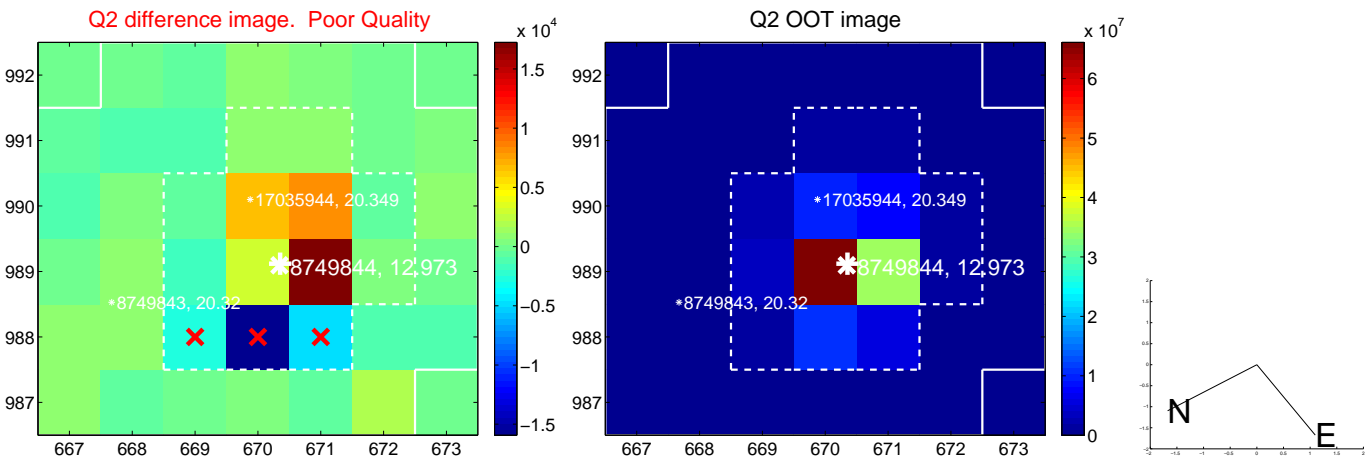
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.545 ± 1.323	0.41	-0.538 ± 1.140	0.088 ± 1.236
PRF-fit source offset from KIC position	0.561 ± 1.044	0.54	-0.558 ± 0.937	0.058 ± 1.098
photometric centroid source offset	1.30 ± 1.16	1.12	-0.83 ± 1.09	-0.99 ± 1.20

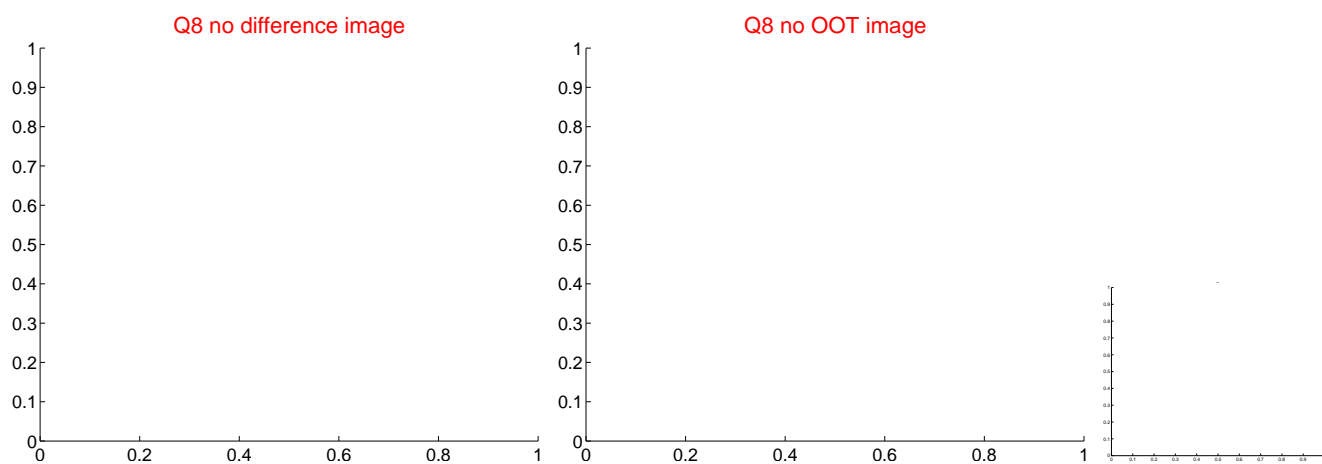
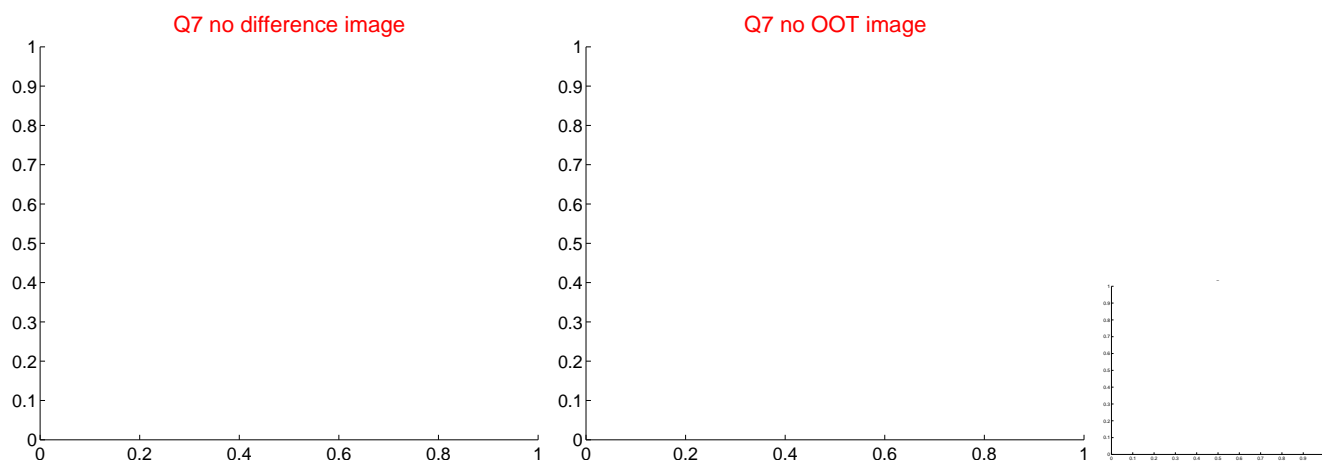
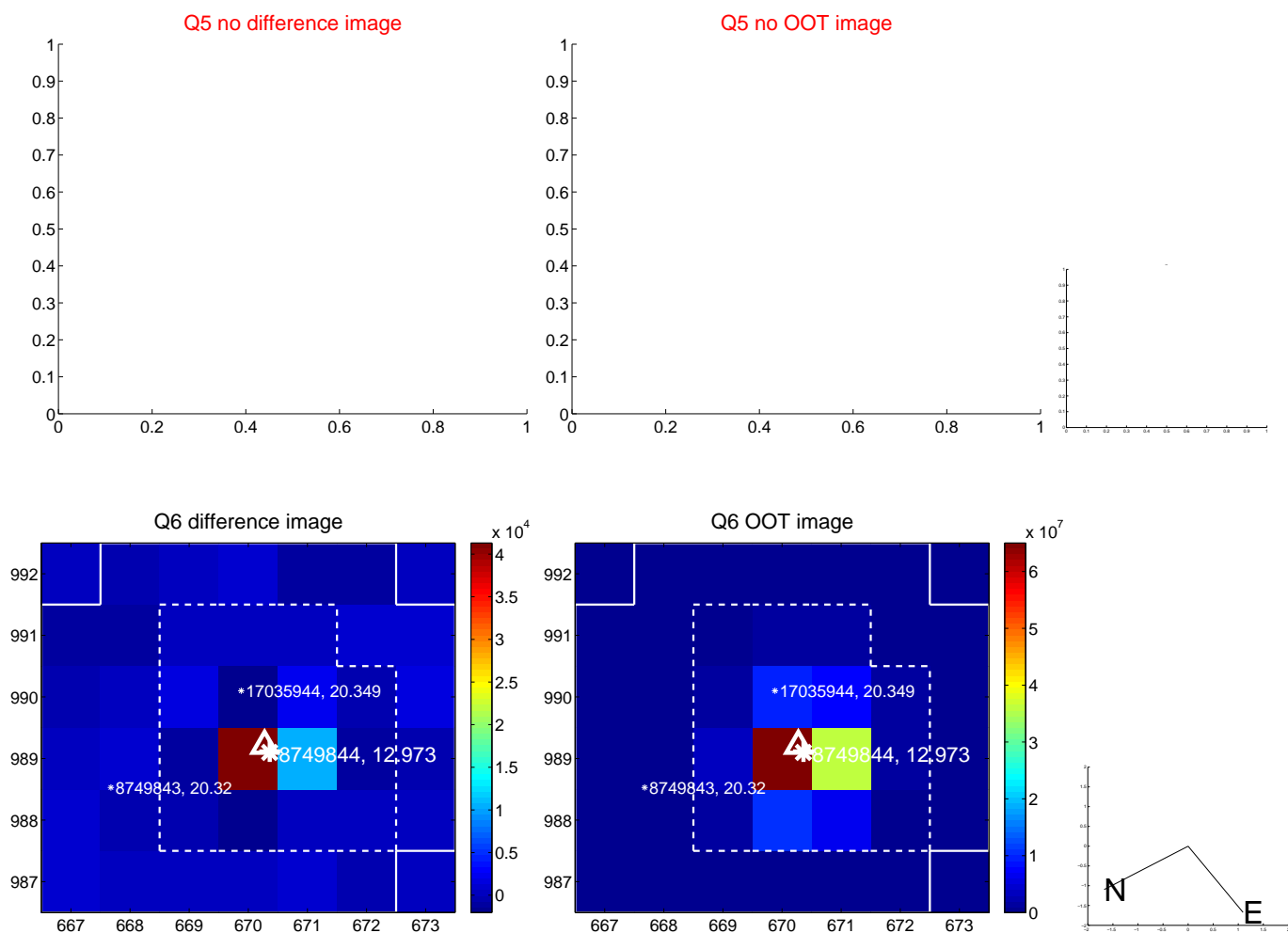


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

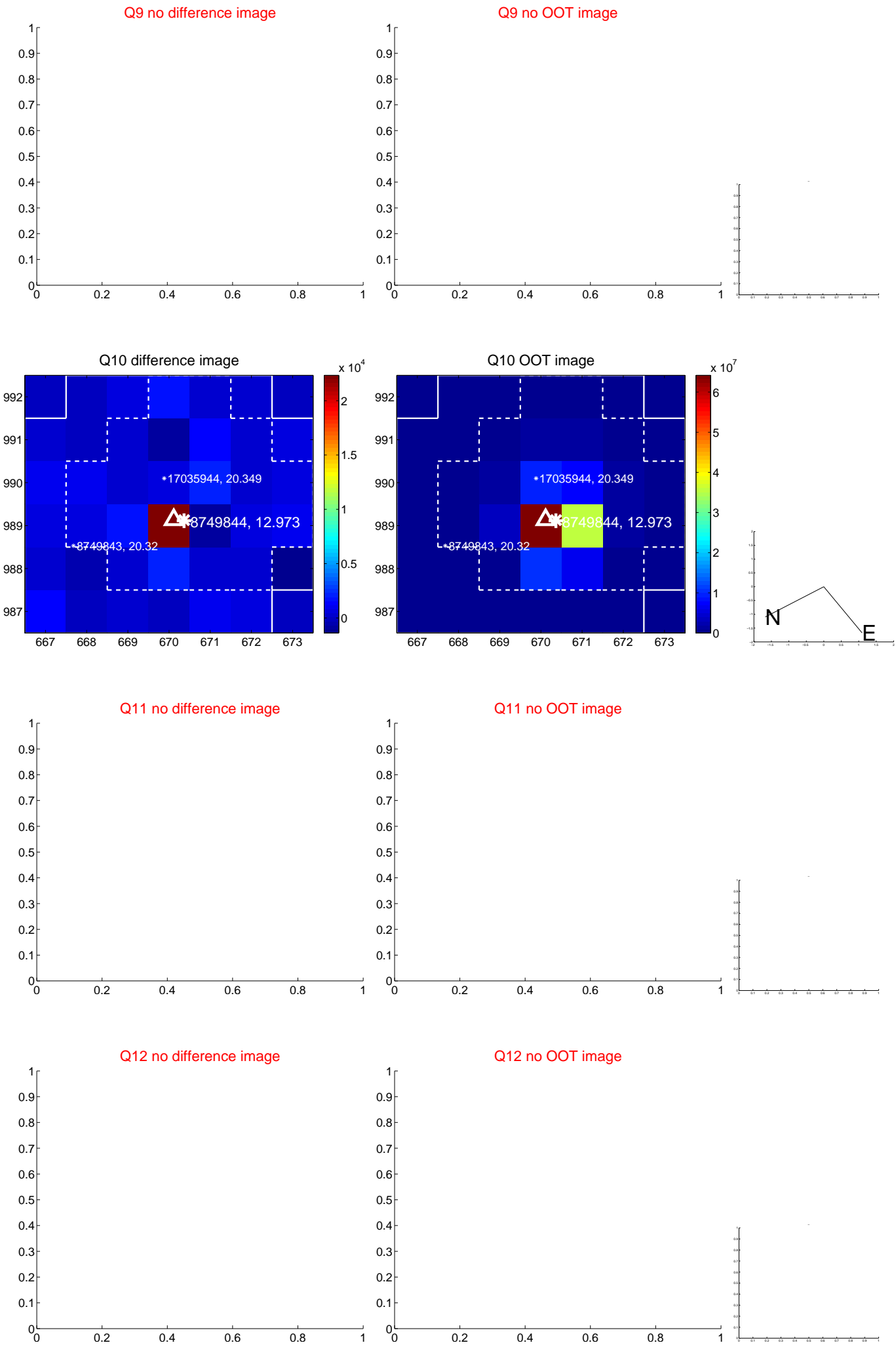
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



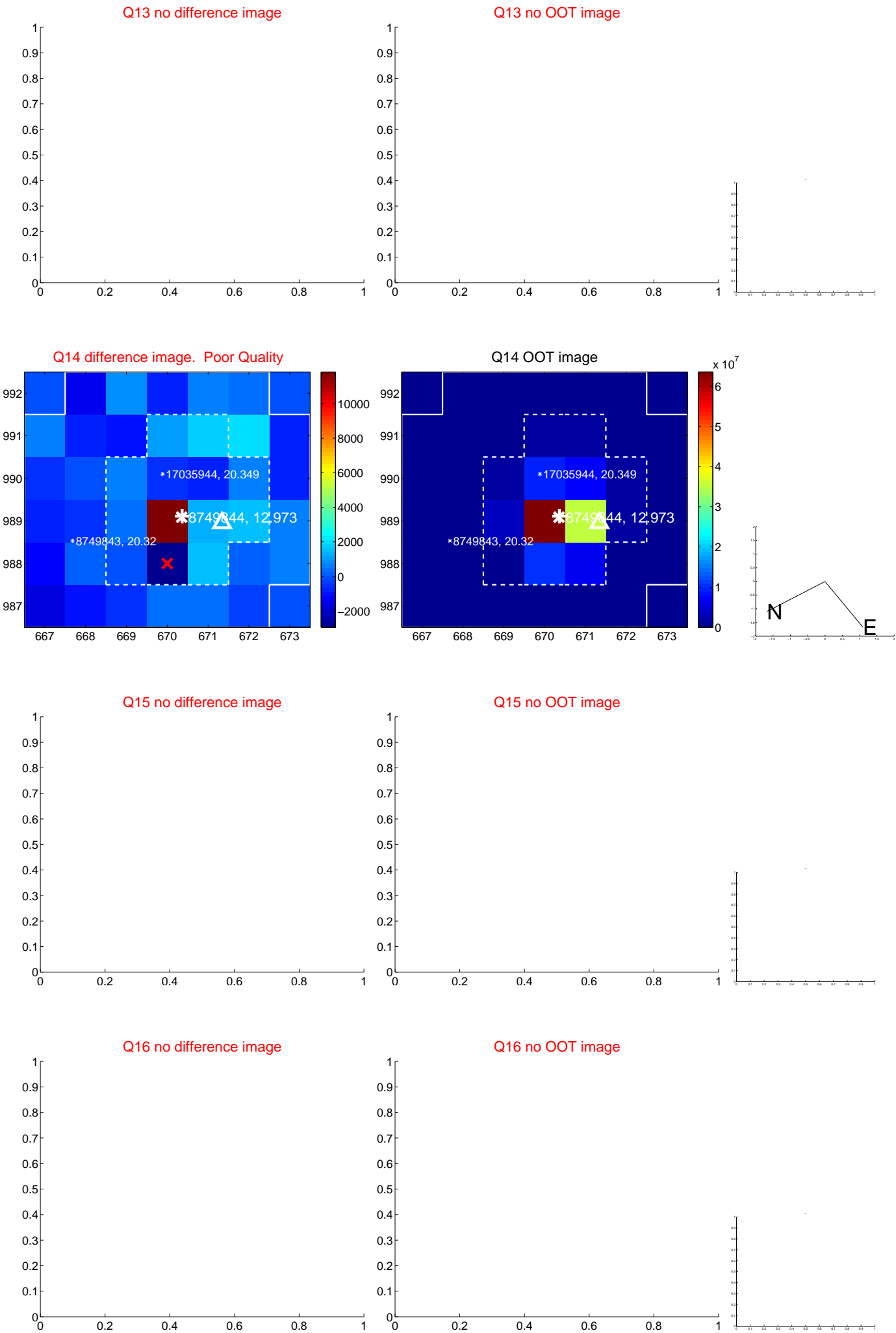
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



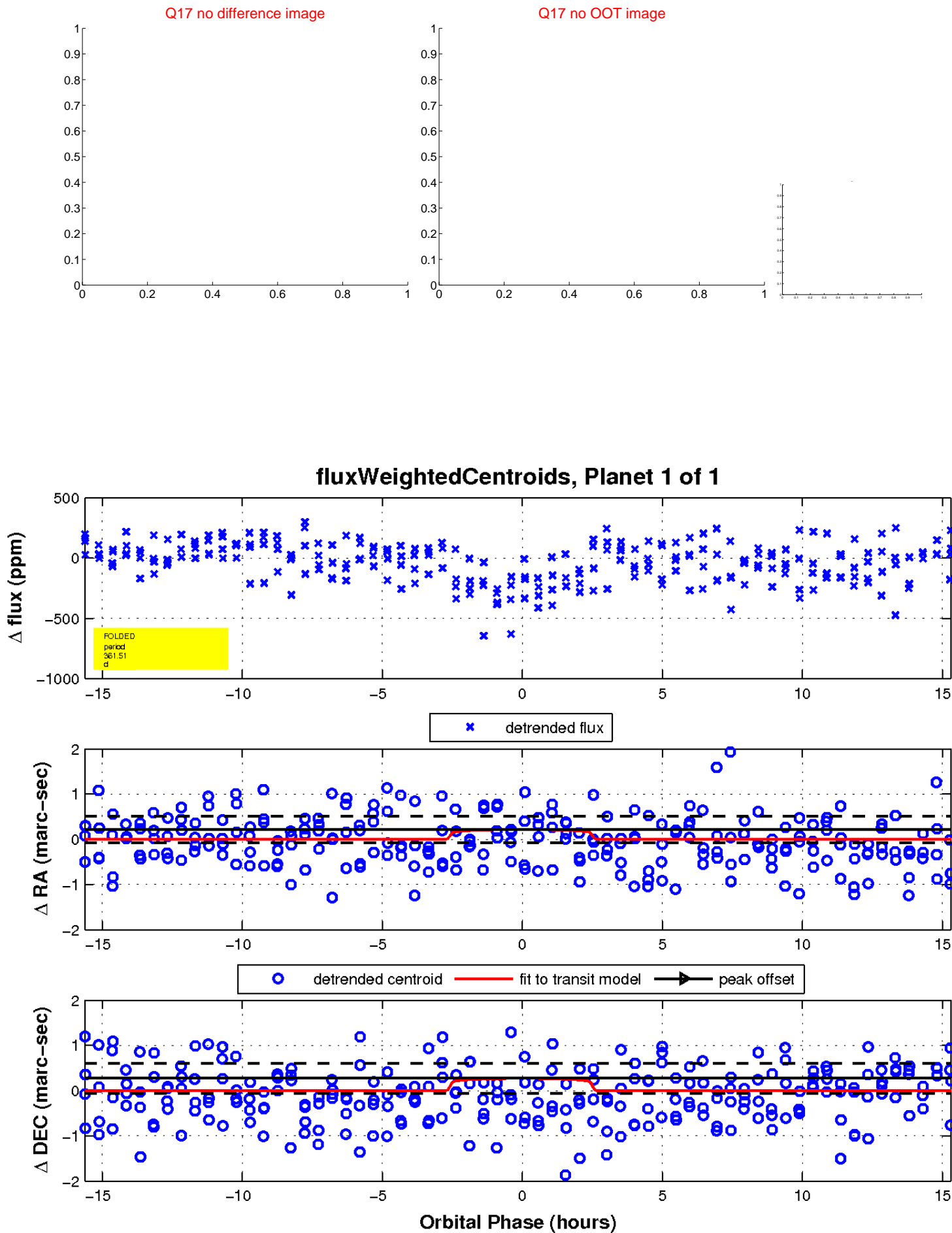
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

