

KIC 007747457

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})
007747457-01	OBS	4561.01	1.518500	132.091890	187.2	3.962	11.4	13.1	1.27	6302	2.38	3260.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007747457-01	OBS	PC	1.00	0	0	0	0	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.

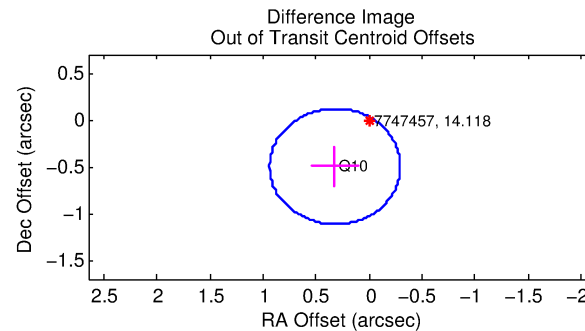
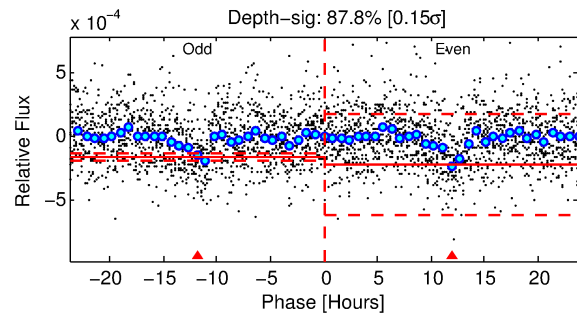
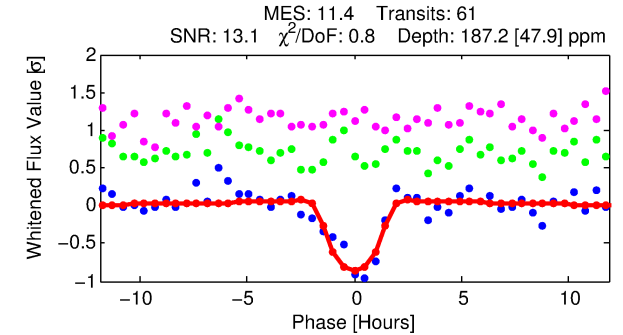
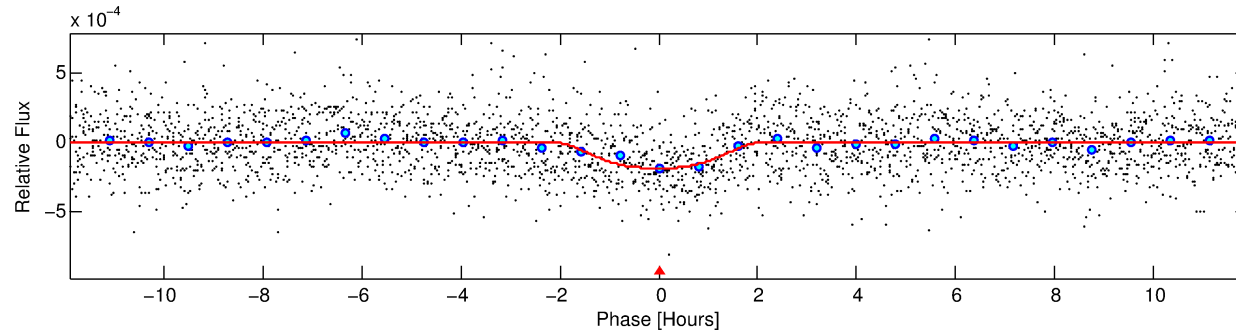
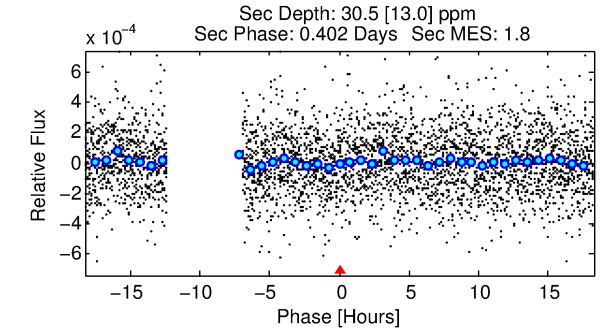
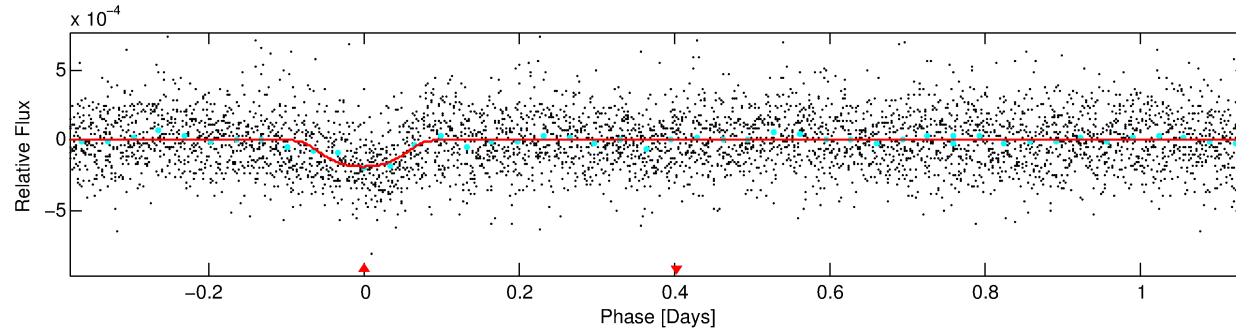
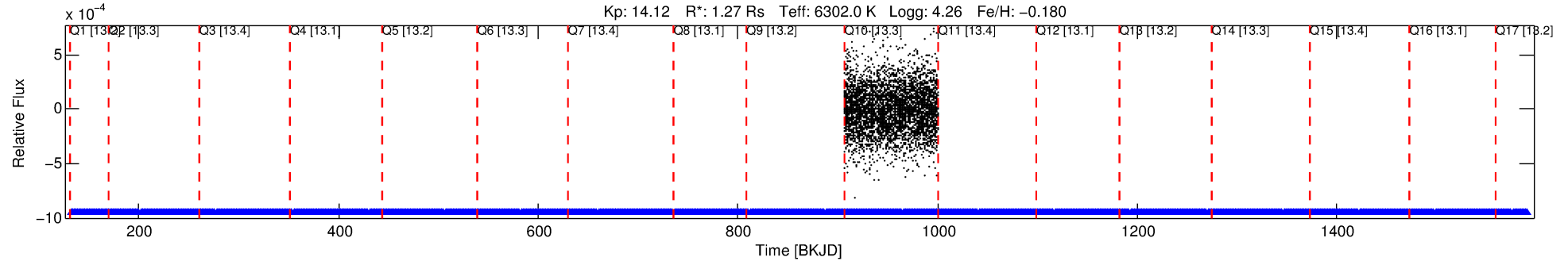
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007747457-01

No Significant Match Found

DV One-Page Summary

KIC: 7747457 Candidate: 1 of 1 Period: 1.518 d
KOI: K04561.01 Corr: 0.877



DV Fit Results:

Period = 1.51850 [0.00002] d
Epoch = 132.0919 [0.0059] BKJD
Rp/R* = 0.0172 [0.0036]
a/R* = 1.25 [0.10]
b = 0.98 [0.01]
Seff = 3260.09 [1270.47]
Teq = 1927 [188] K
Rp = 2.38 [0.88] Re
a = 0.0264 [0.0066] AU
Ag = 2.07 [1.44] [0.74σ]
Teffp = 3571 [550] K [2.83σ]

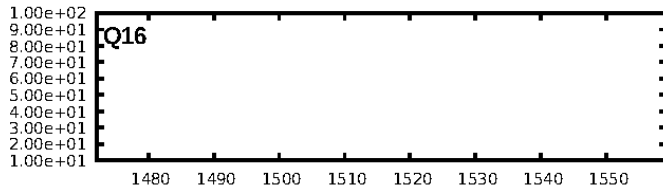
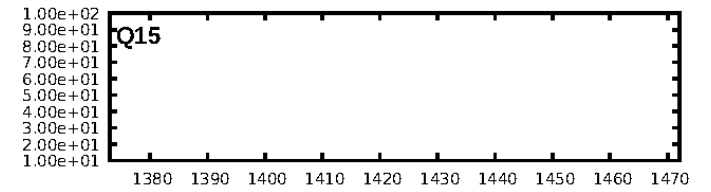
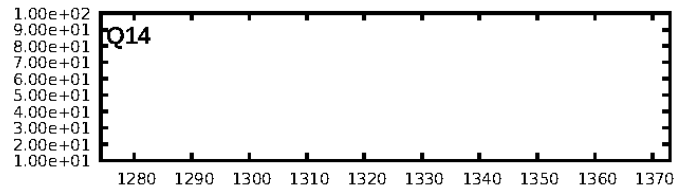
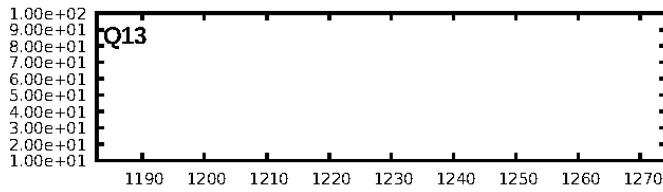
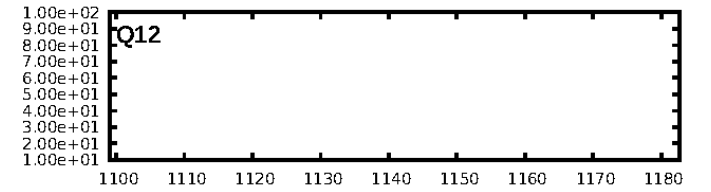
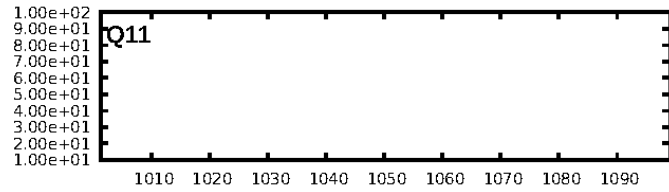
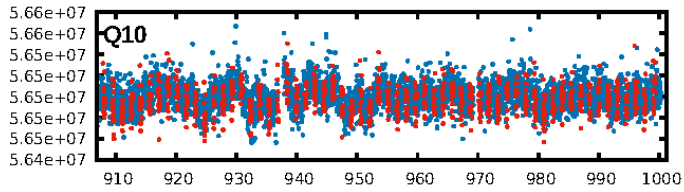
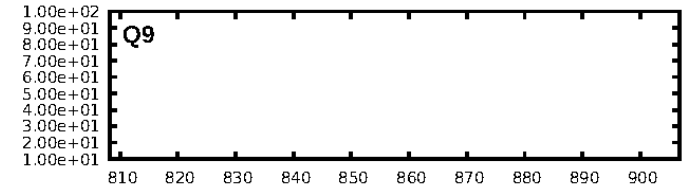
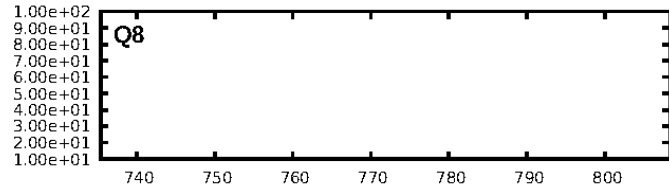
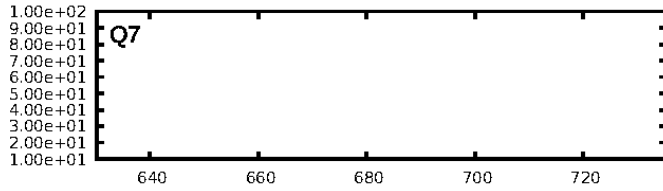
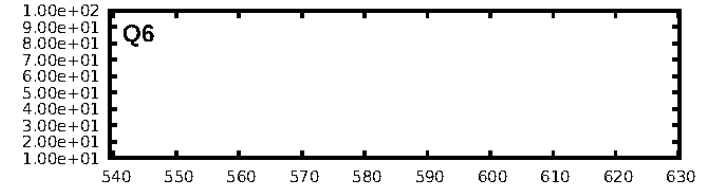
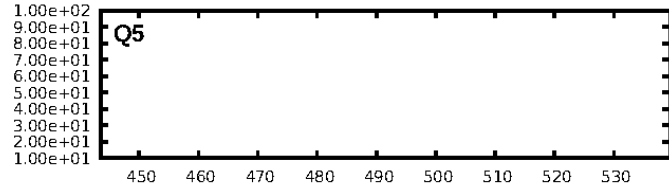
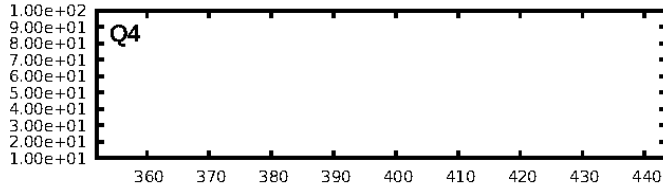
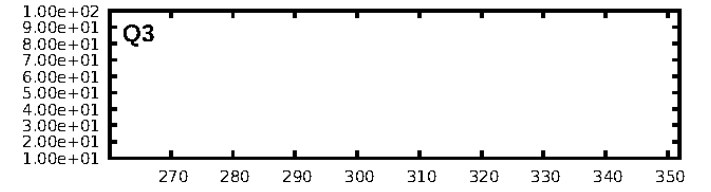
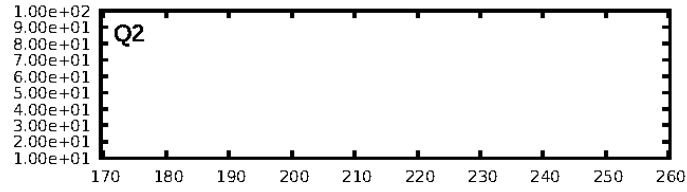
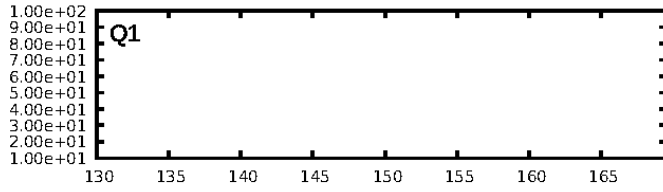
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.28e-27
RollingBand-fgt: 1.00 [61/61]
GhostDiagnostic-chr: 10.24
Centroid-sig: 13.3%
Centroid-so: 1.075 arcsec [1.00σ]
OotOffset-rm: 0.594 arcsec [2.88σ]
KicOffset-rm: 0.616 arcsec [3.00σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

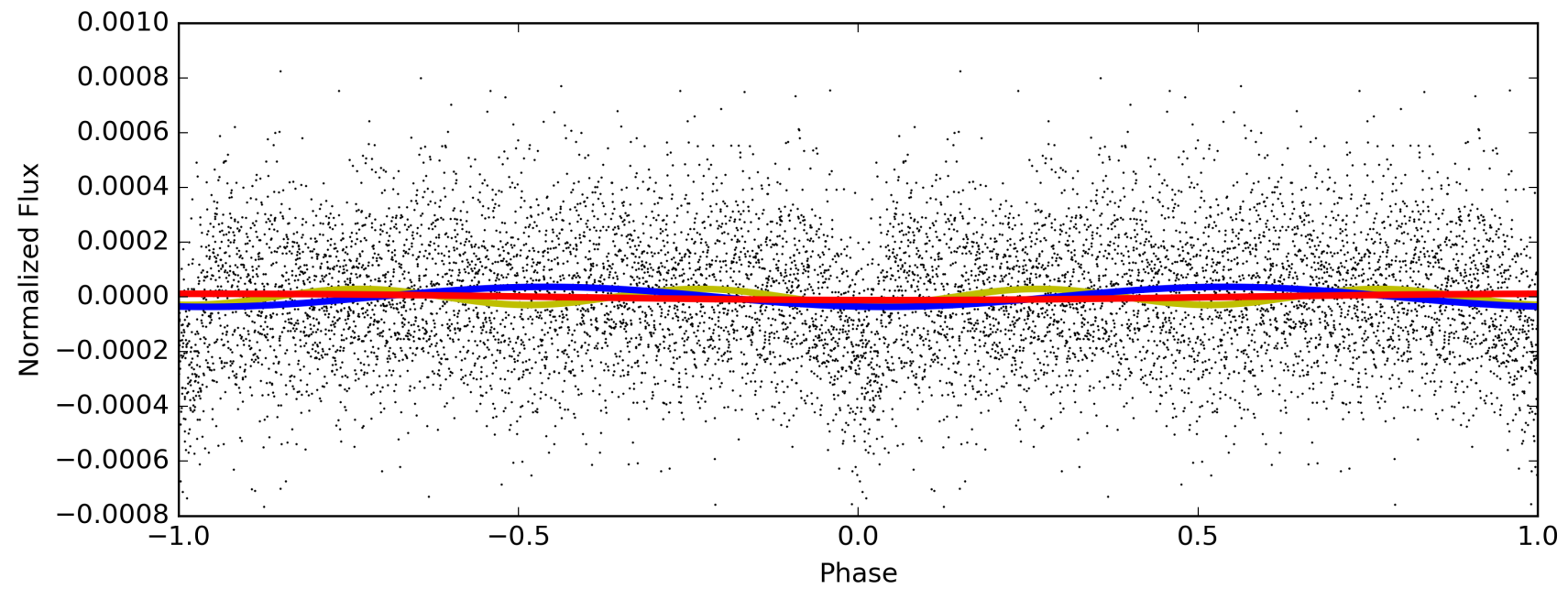
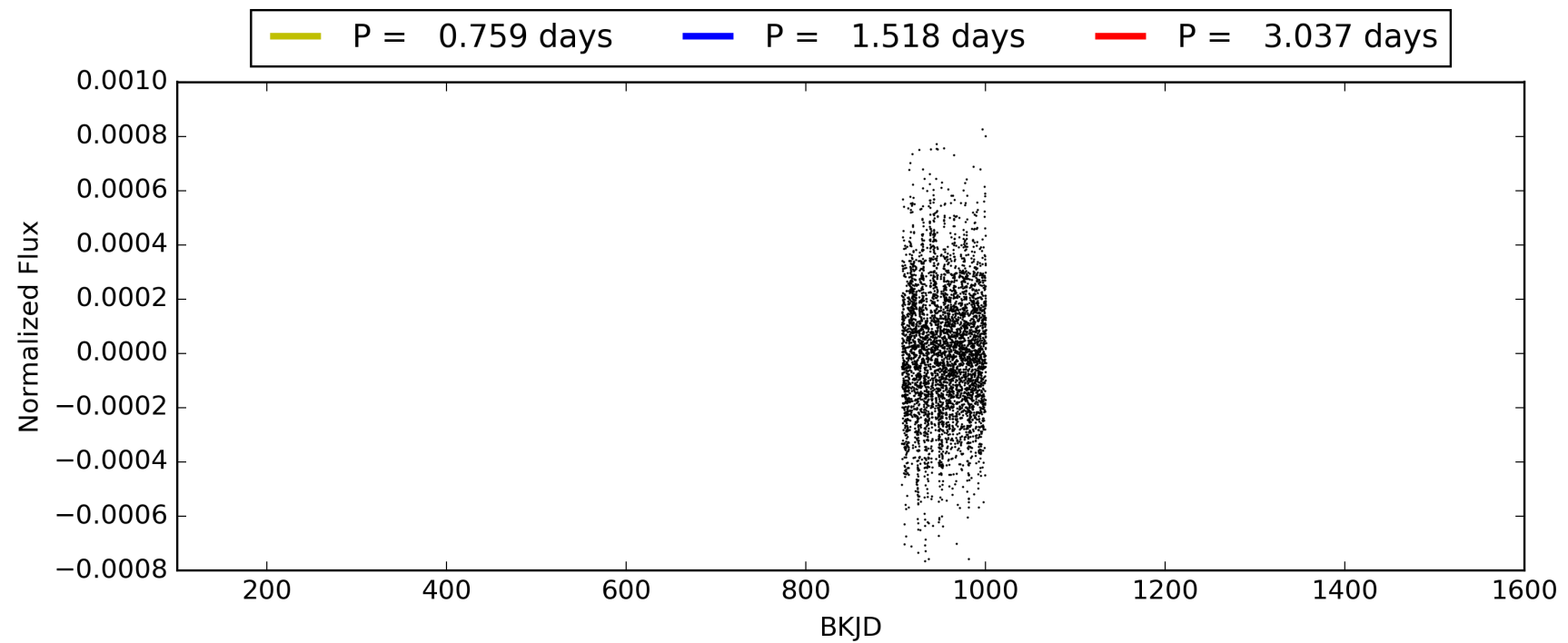
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:23:34 Z

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

TCE 007747457-01, PDC Light Curves

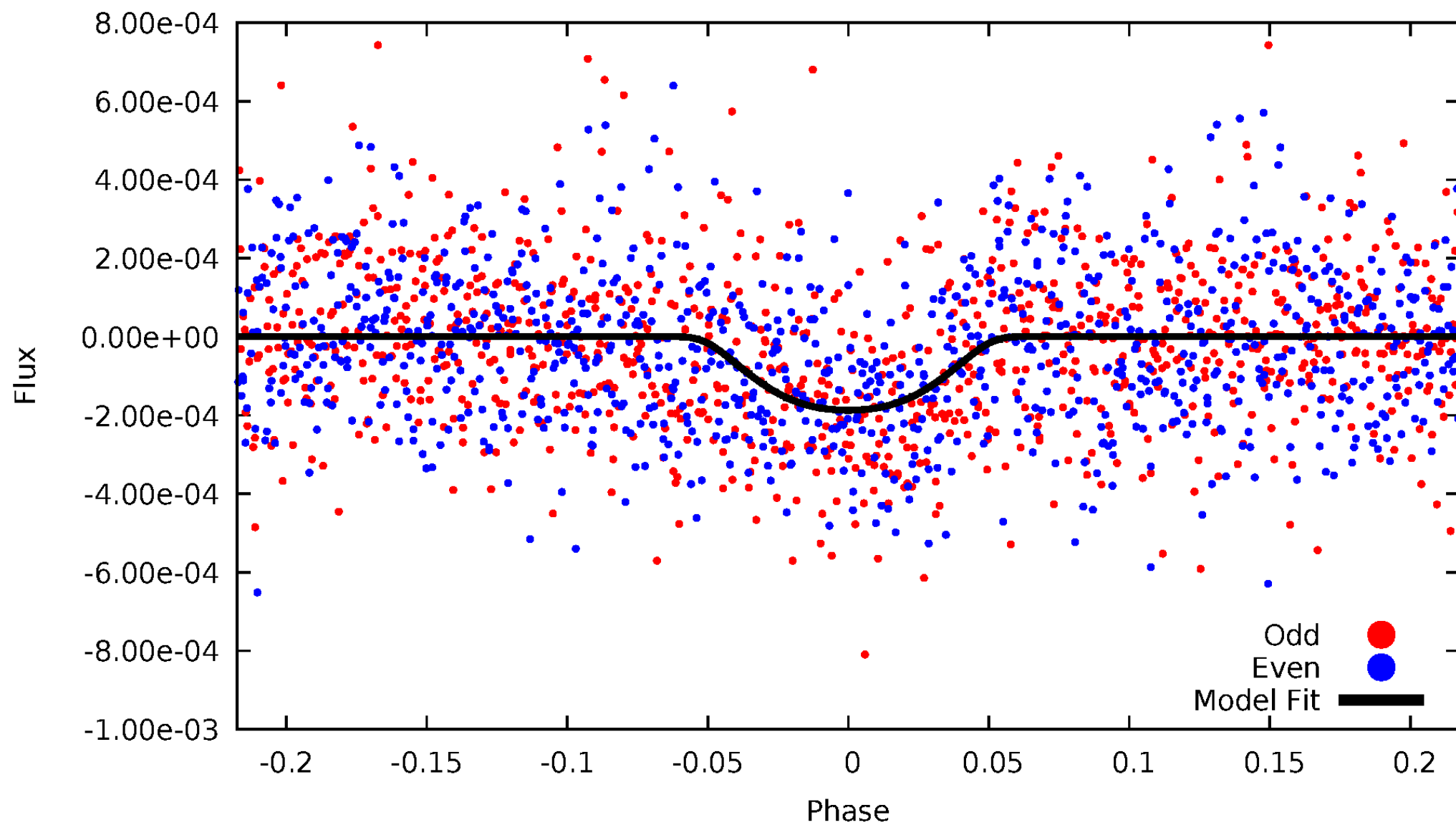


TCE 007747457-01



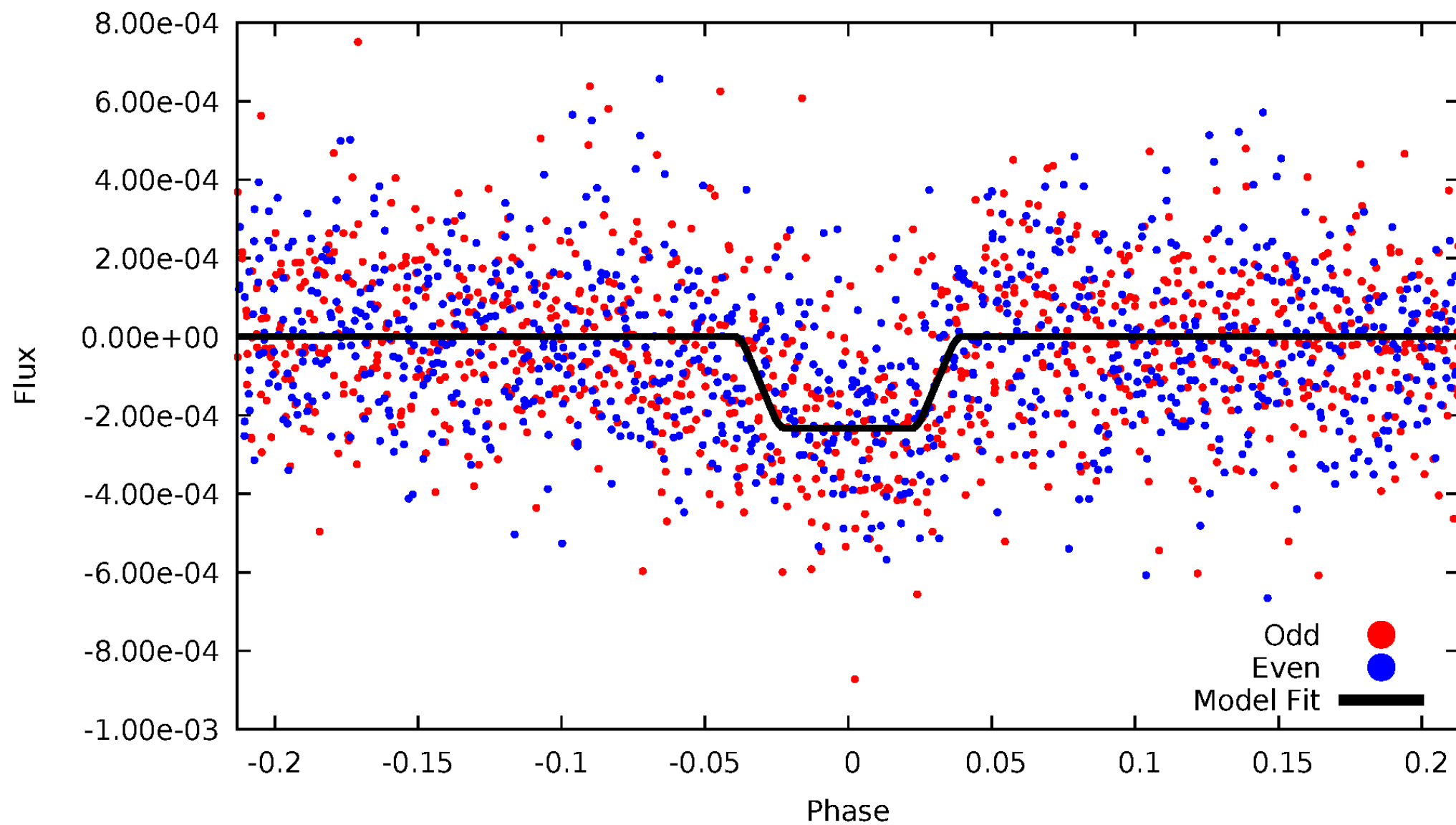
DV Odd/Even

TCE 007747457-01



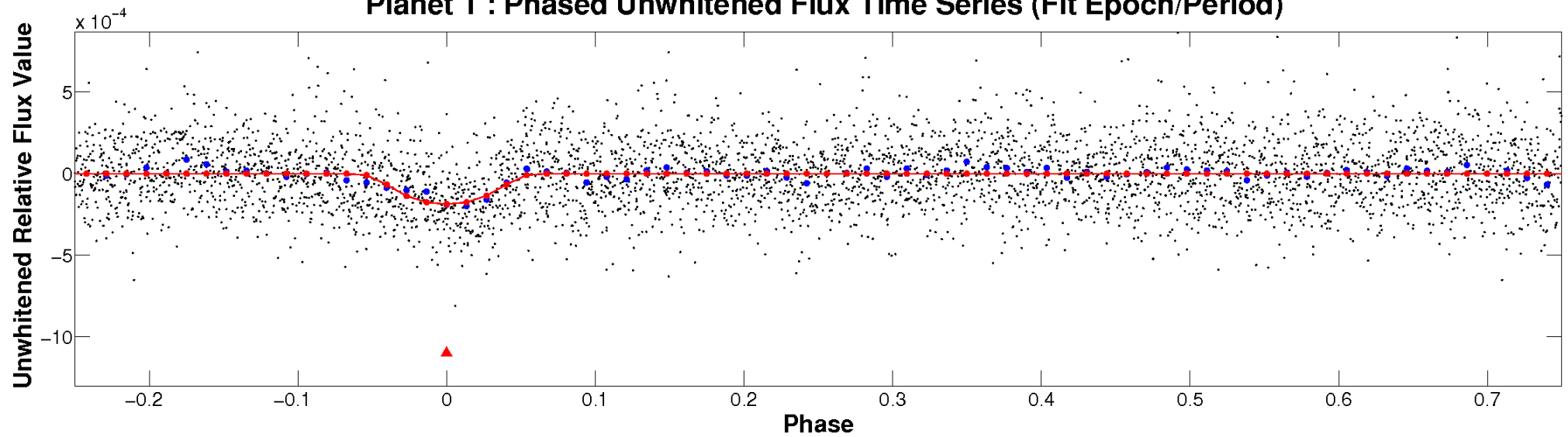
ALT Odd/Even

TCE 007747457-01

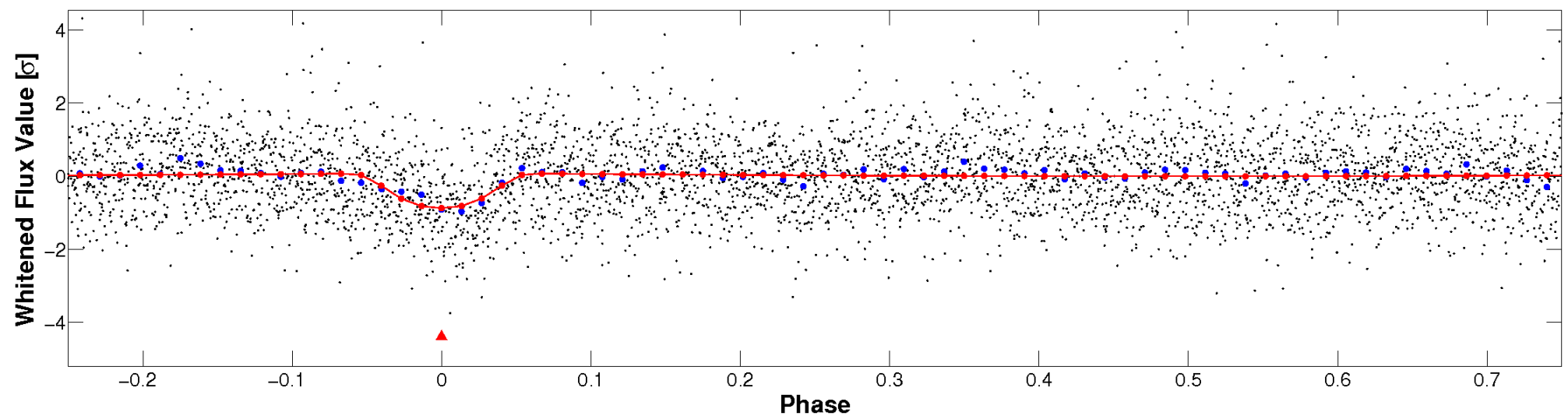


Non-Whitened Vs. Whitened Light Curve

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

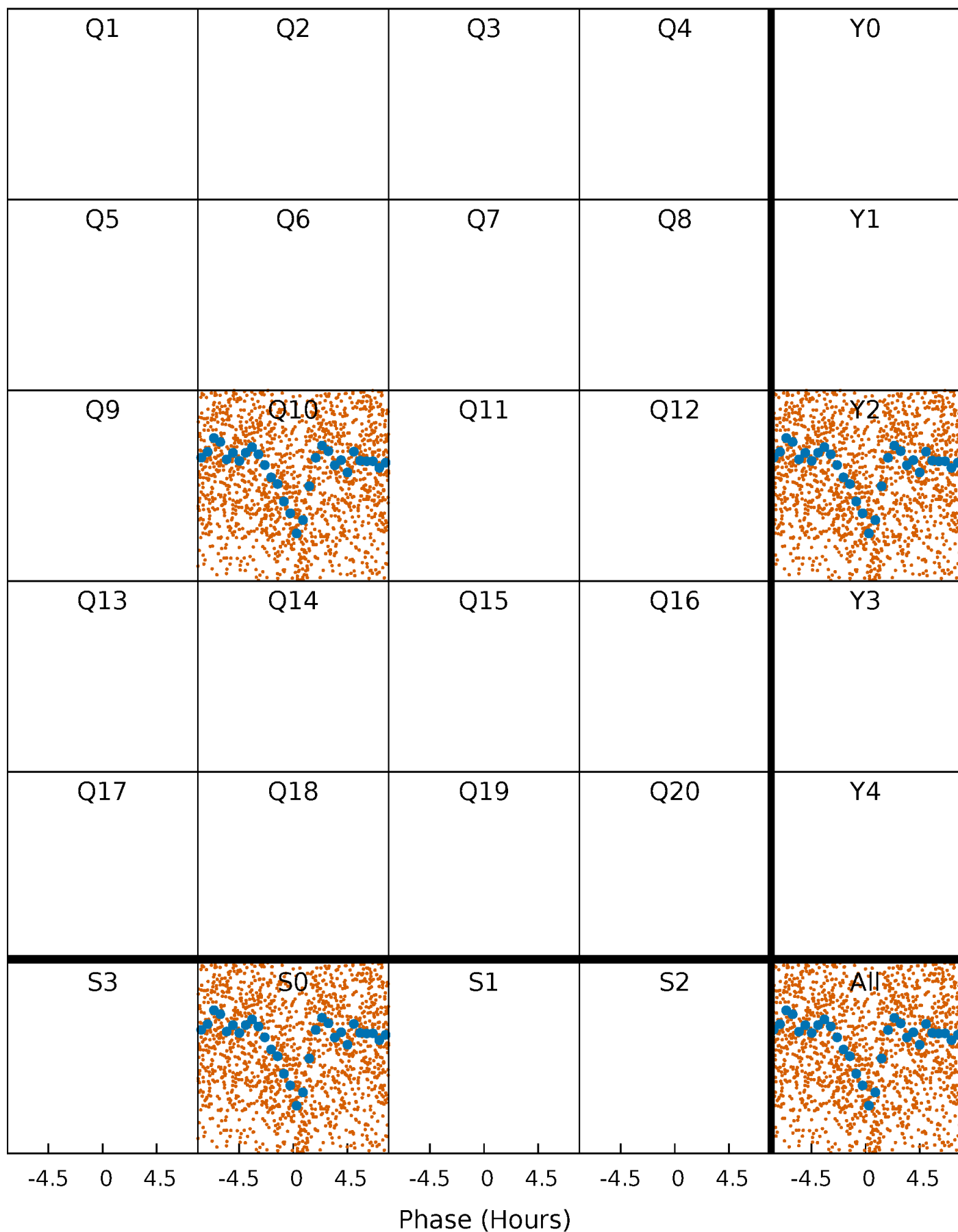


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007747457-01 P= 1.518500 Days $T_0=132.091890$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007747457-01 P= 1.518500 Days $T_0=132.091890$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

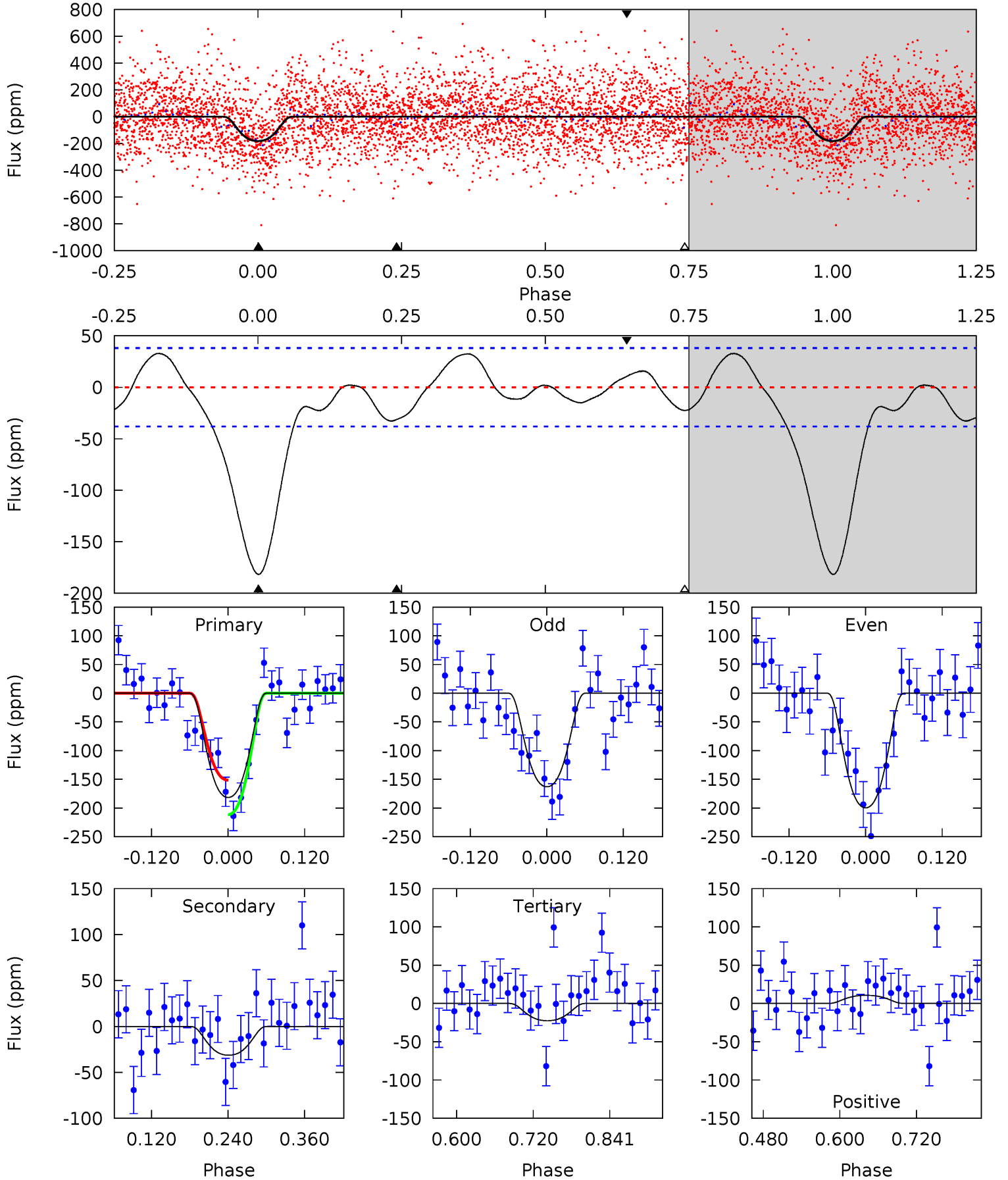
TCE 007747457-01 P= 1.518475 Days $T_0=132.110584$ (BKJD)



DV Model-Shift Uniqueness Test

007747457-01, P = 1.518500 Days, E = 132.091890 Days

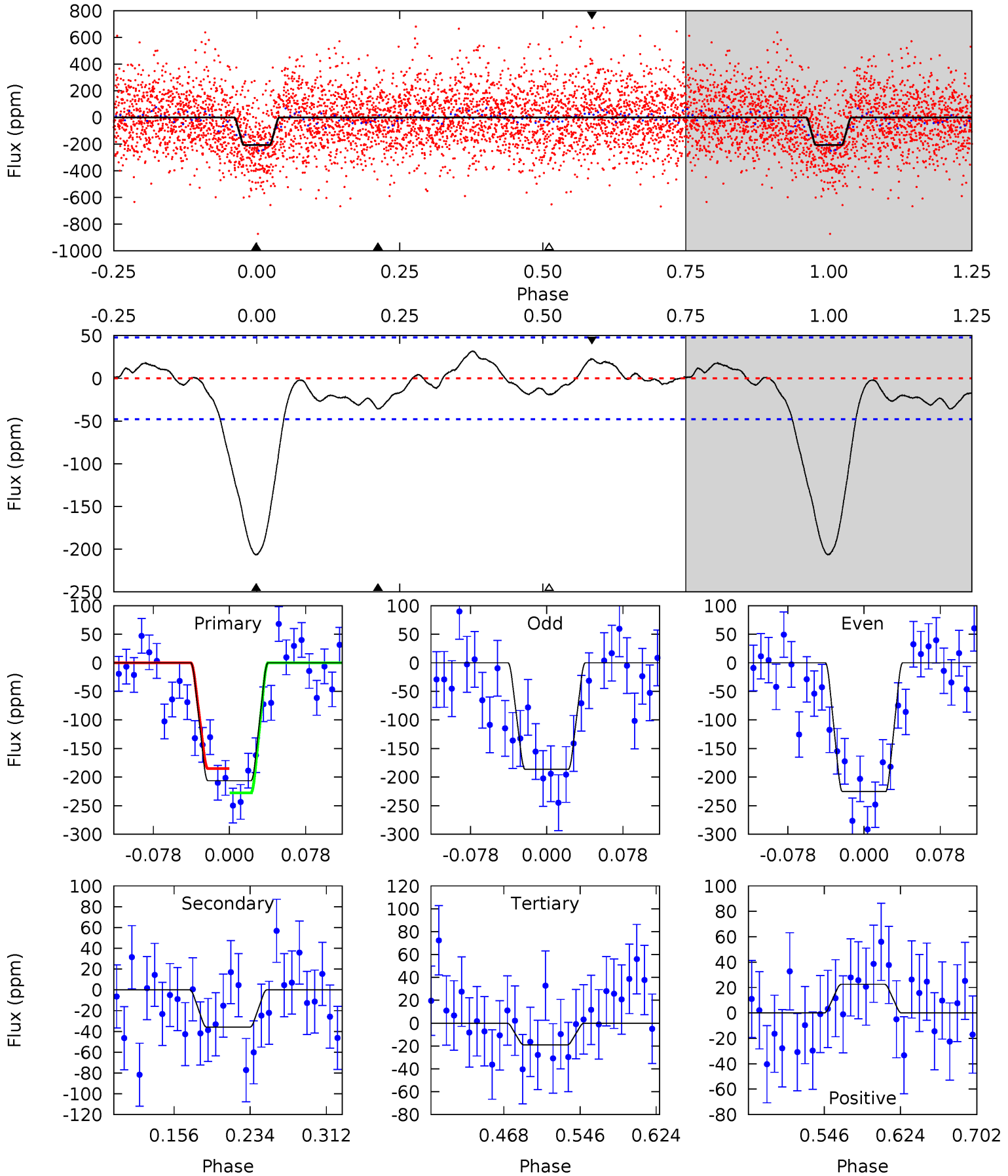
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	3.73	2.68	1.26	4.53	1.55	1.83	18.9	20.4	1.05	2.47	2.20	1.00	0.15	3.66



Alt Model-Shift Uniqueness Test

007747457-01, P = 1.518475 Days, E = 132.110584 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	3.46	1.84	2.17	4.62	1.76	1.29	18.0	17.7	1.62	1.29	1.89	0.95	0.13	2.08



Stellar Parameters For KIC 007747457

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6302^{+197}_{-241}	$4.259^{+0.158}_{-0.193}$	$-0.180^{+0.250}_{-0.300}$	$1.269^{+0.384}_{-0.256}$	$1.063^{+0.181}_{-0.131}$	$0.733^{+0.591}_{-0.382}$
	+3%/-4%	+4%/-5%	+139%/-167%	+30%/-20%	+17%/-12%	+81%/-52%
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 007747457-01 / KOI 4561.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 8	$2.38^{+0.64}_{-0.54}$	2690^{+207}_{-172}	3812^{+441}_{-340}	$2.049^{+1.774}_{-0.834}$
Alt.	-36 ± 10	$2.09^{+0.64}_{-0.51}$	2703^{+197}_{-197}	4113^{+554}_{-455}	$3.058^{+2.676}_{-1.462}$

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

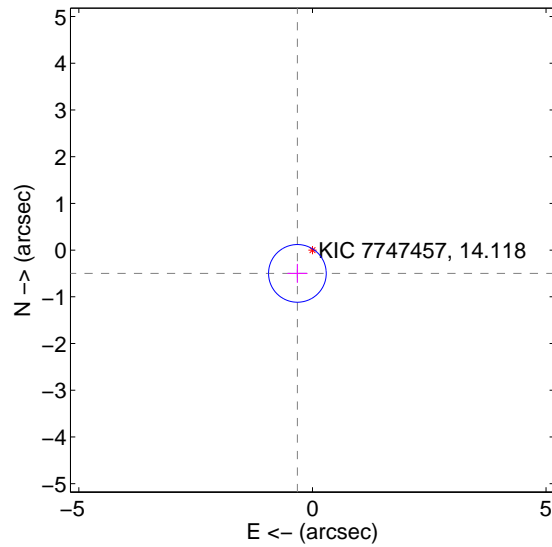
Supplemental centroid analysis for 007747457-01. Kepler magnitude: 14.12. Transit SNR 13.12

There are 1 quarters with good PRF difference image offsets

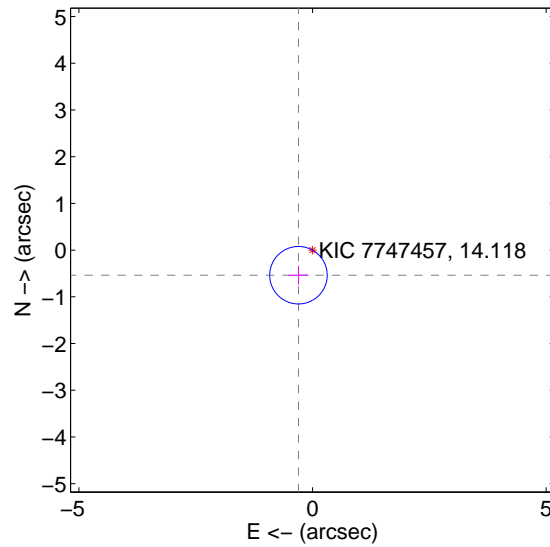
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.594 ± 0.206	2.88	0.322 ± 0.214	-0.499 ± 0.202
PRF-fit source offset from KIC position	0.616 ± 0.205	3.00	0.301 ± 0.214	-0.538 ± 0.202
photometric centroid source offset	1.08 ± 1.08	1.00	0.05 ± 0.91	-1.07 ± 1.08

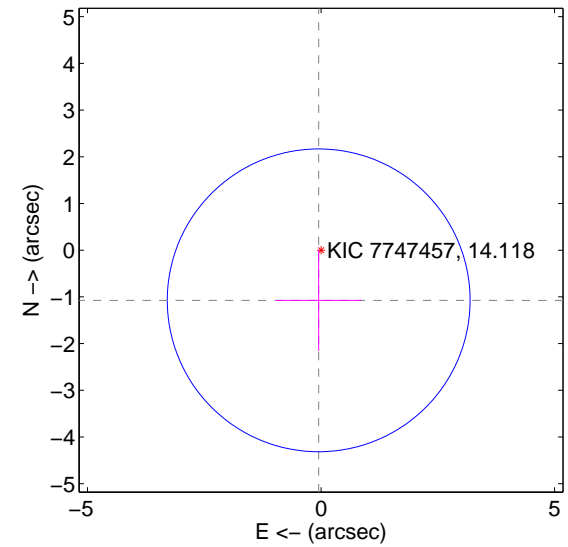
offset from difference PRF-fit to OOT PRF-fit



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.

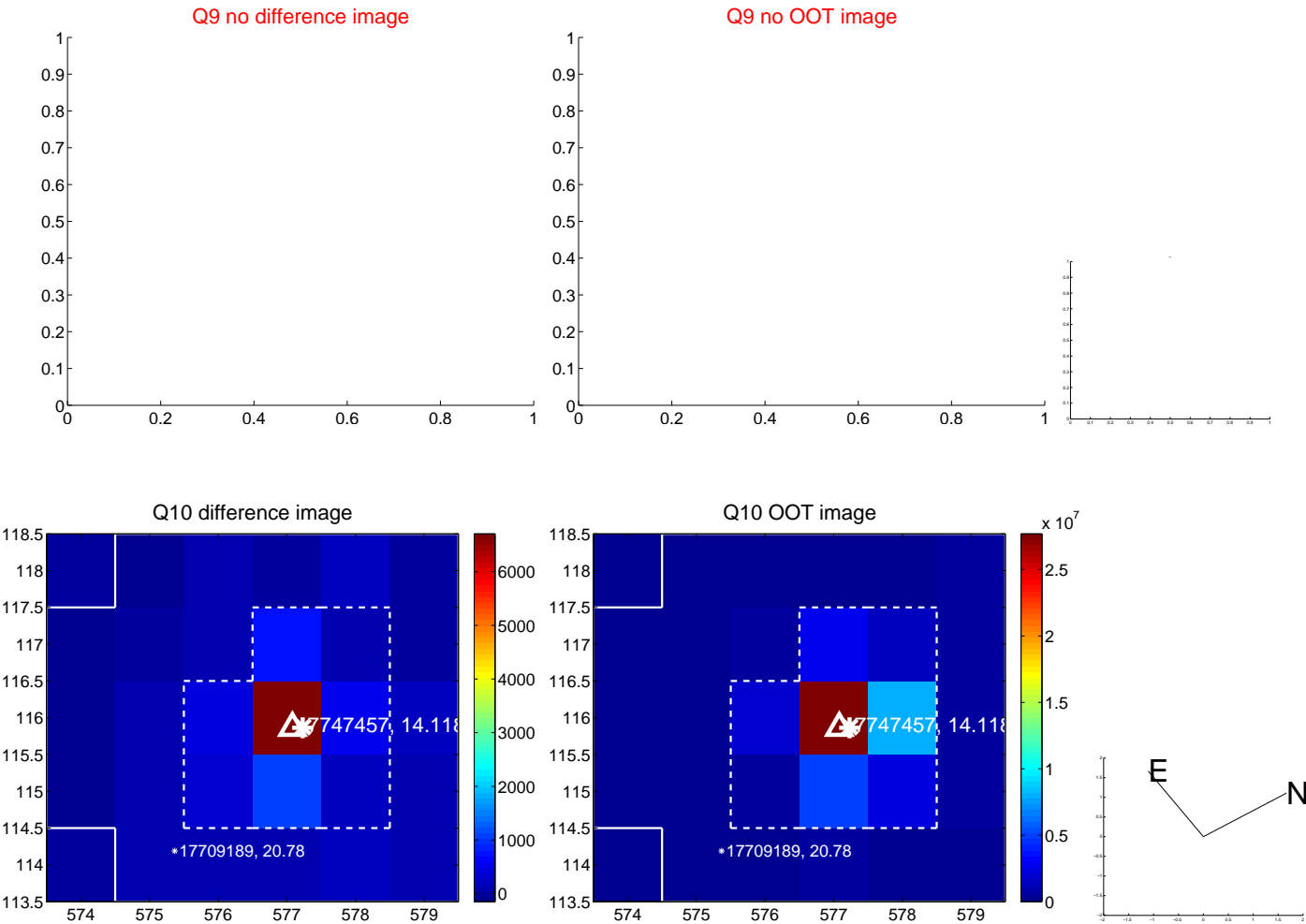
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



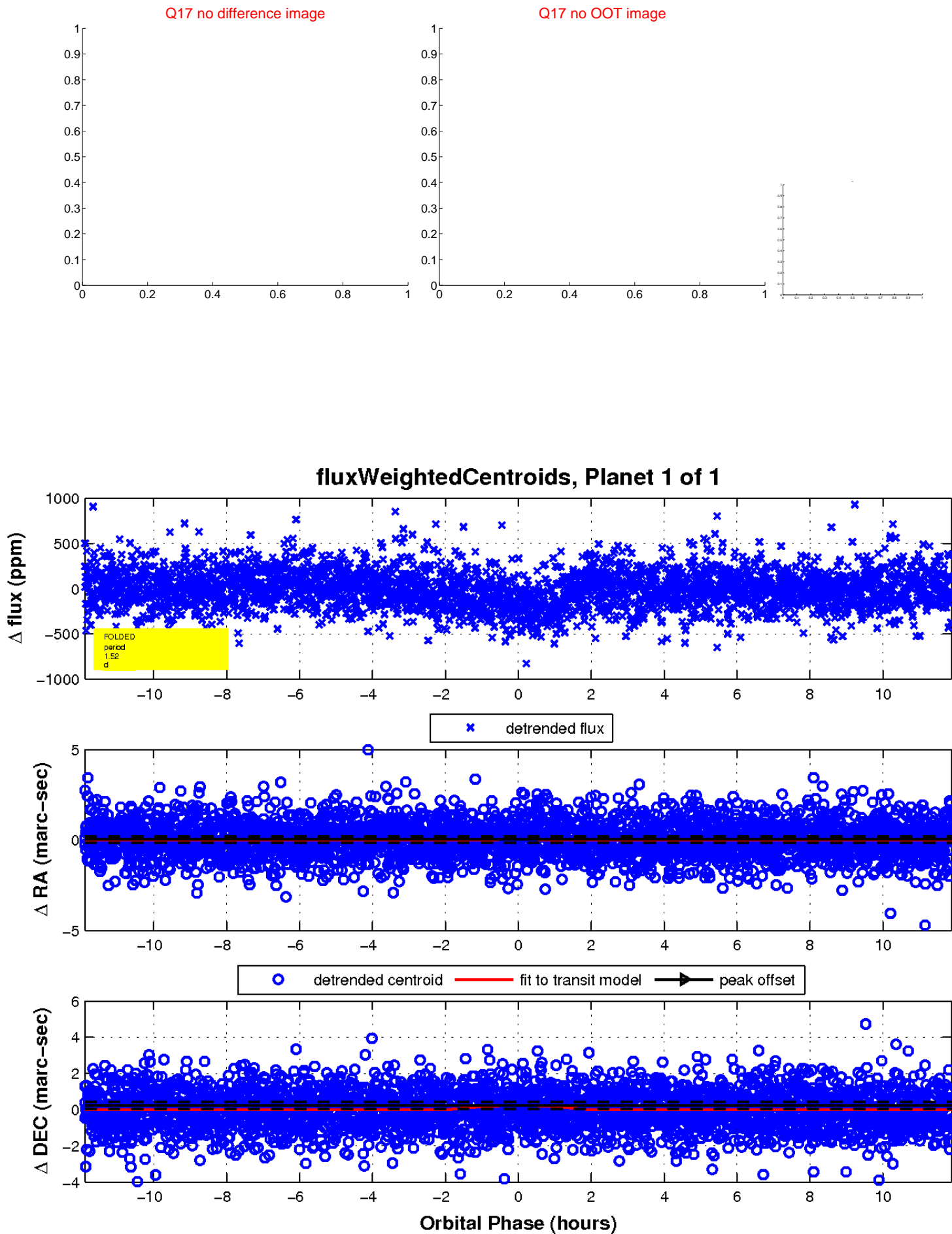
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

