

KIC 007662744

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})
007662744-01	OBS	8140.01	135.428519	168.505561	322.4	7.499	7.1	6.5	0.92	5849	1.78	3.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662744-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—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.

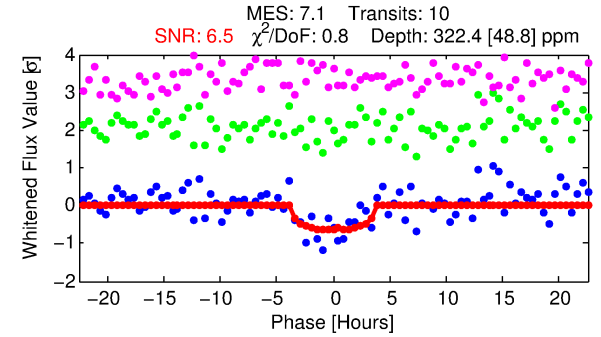
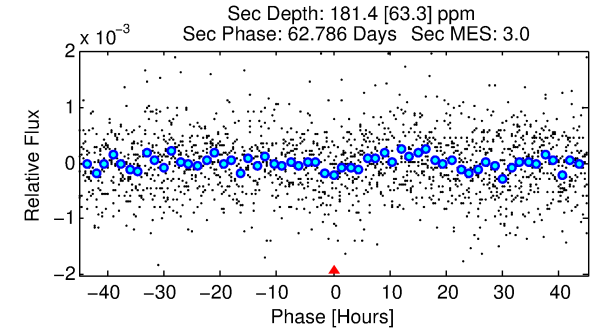
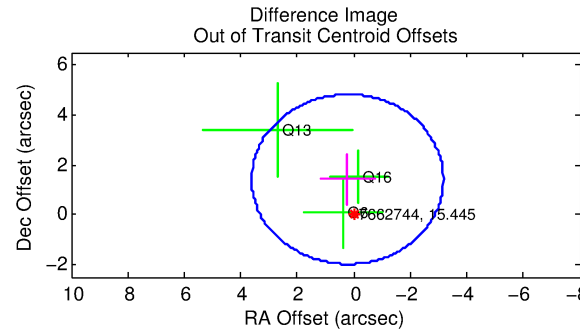
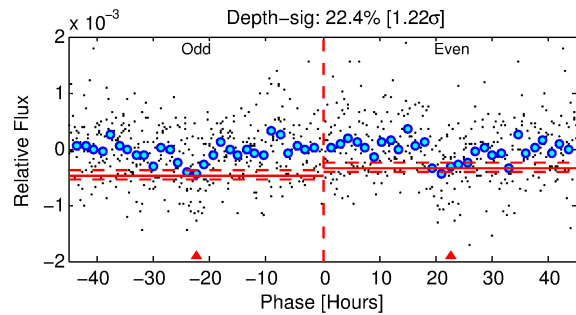
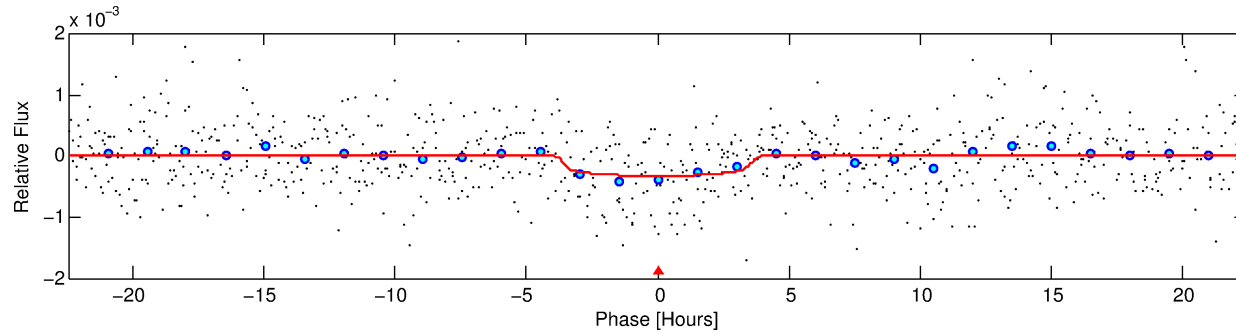
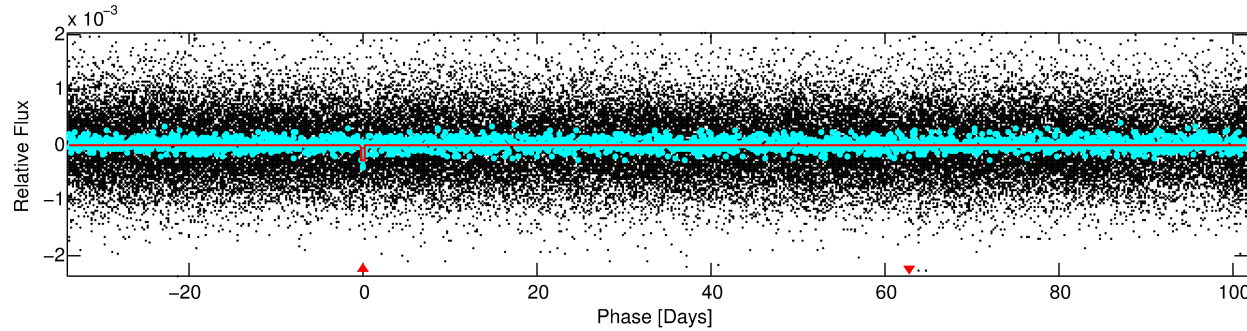
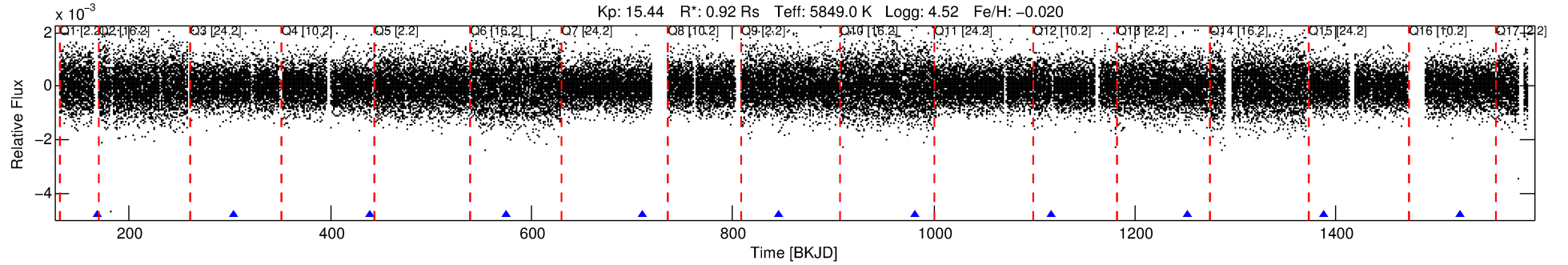
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662744-01

No Significant Match Found

DV One-Page Summary

KIC: 7662744 Candidate: 1 of 1 Period: 135.429 d



DV Fit Results:

Period = 135.42852 [0.00354] d
Epoch = 168.5056 [0.0227] BKJD
Rp/R* = 0.0177 [0.0193]
a/R* = 98.02 [486.56]
b = 0.73 [3.23]
Seff = 3.29 [1.30]
Teq = 344 [34] K
Rp = 1.78 [2.01] Re
a = 0.5185 [0.1315] AU
Ag = 8485.13 [19007.96] [0.45 σ]
Teffp = 5098 [2820] K [1.69 σ]

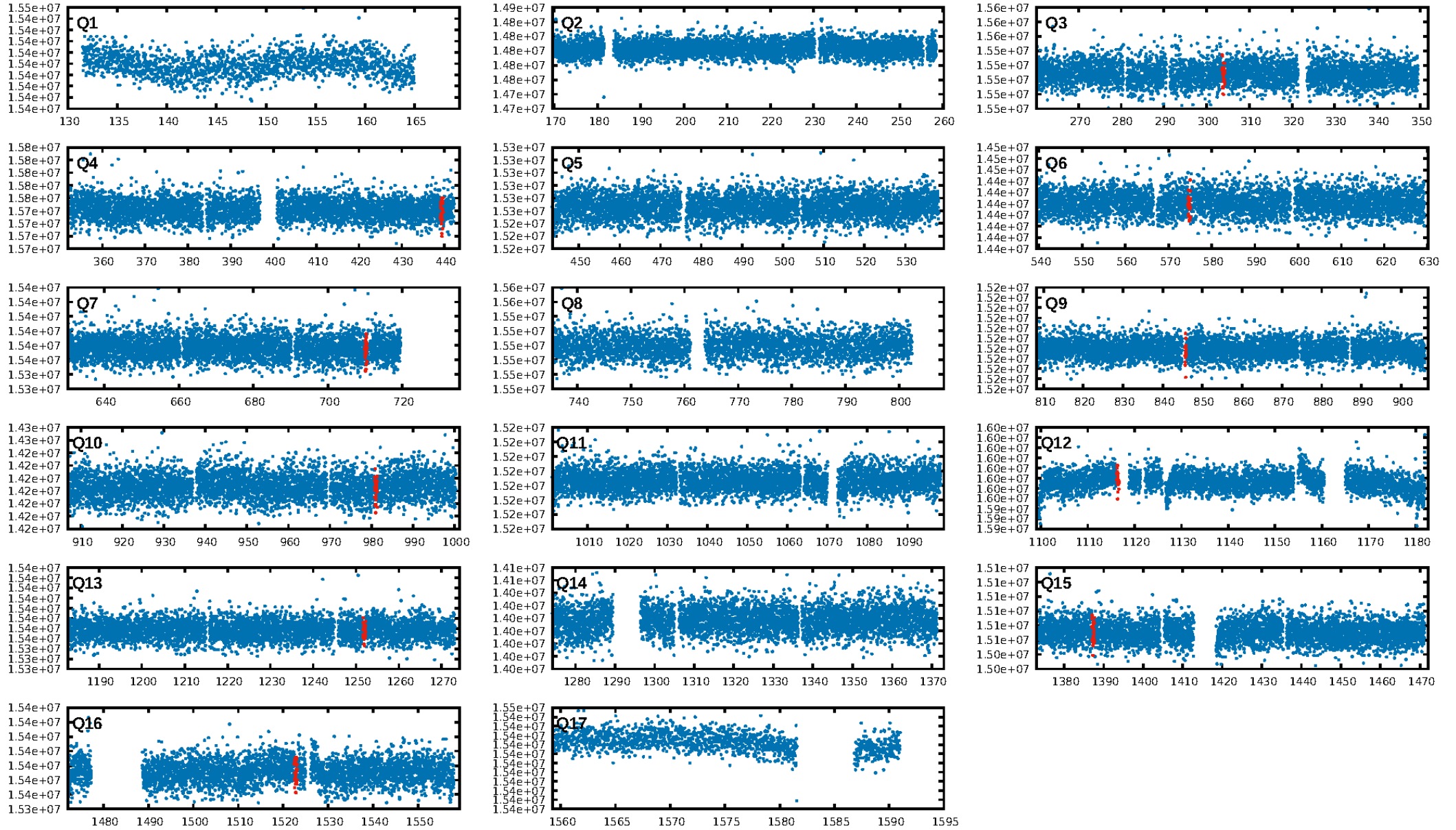
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.67e-13
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -3.475
Centroid-sig: 2.4%
Centroid-so: 4.657 arcsec [2.18 σ]
OotOffset-rm: 1.430 arcsec [1.26 σ]
KicOffset-rm: 1.388 arcsec [1.62 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [7/7]

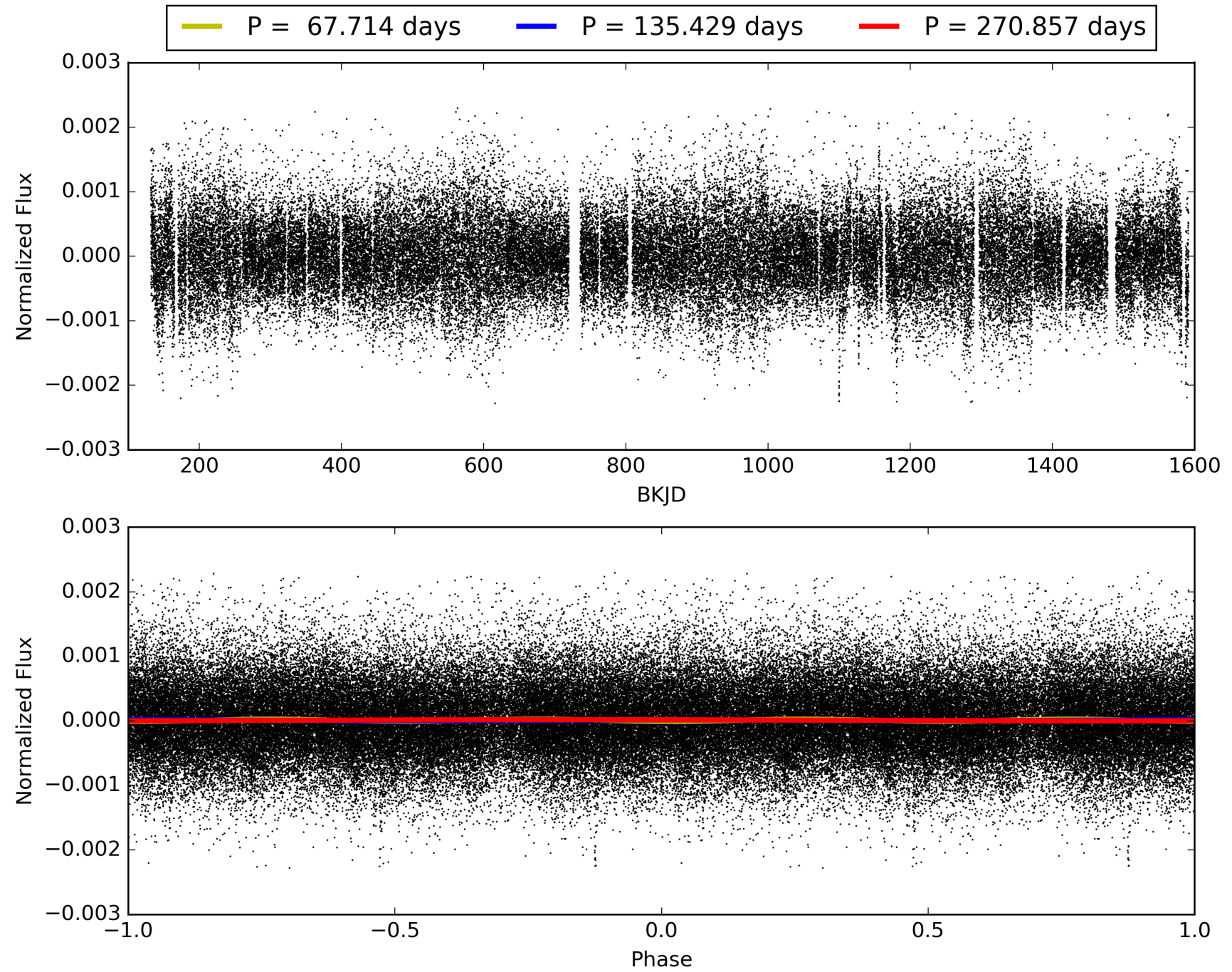
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:07:58 Z

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

TCE 007662744-01, PDC Light Curves

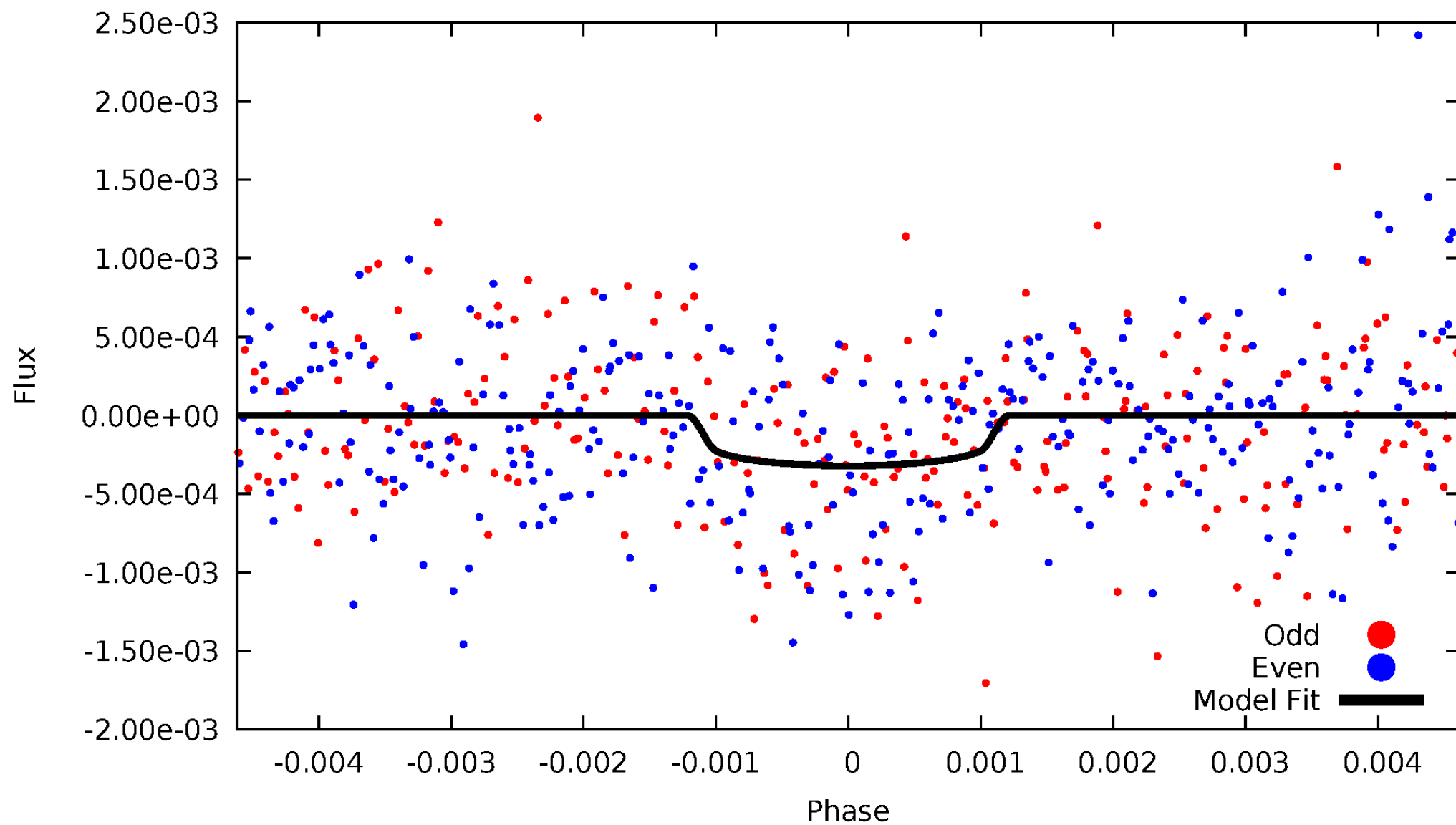


TCE 007662744-01



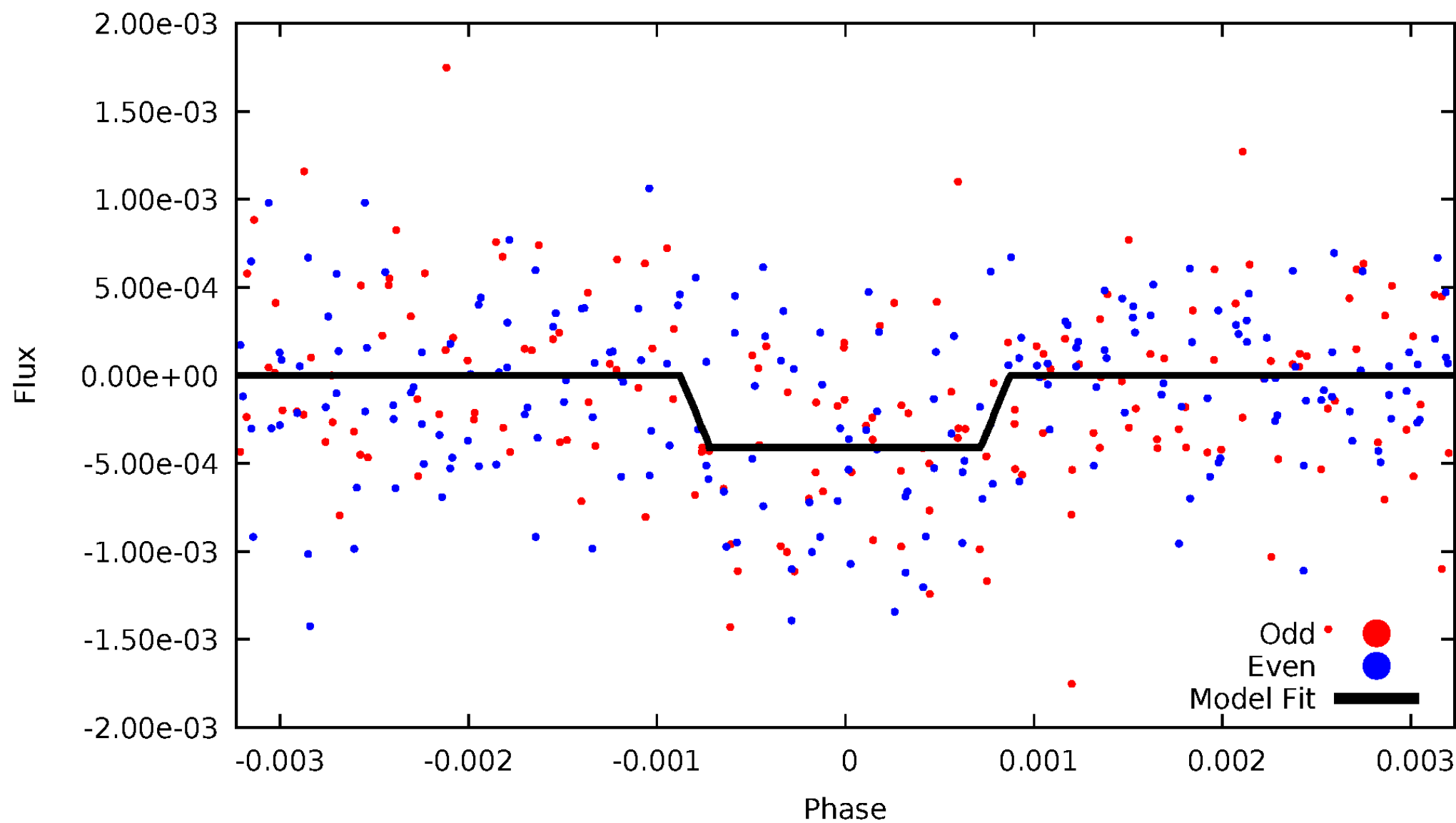
DV Odd/Even

TCE 007662744-01



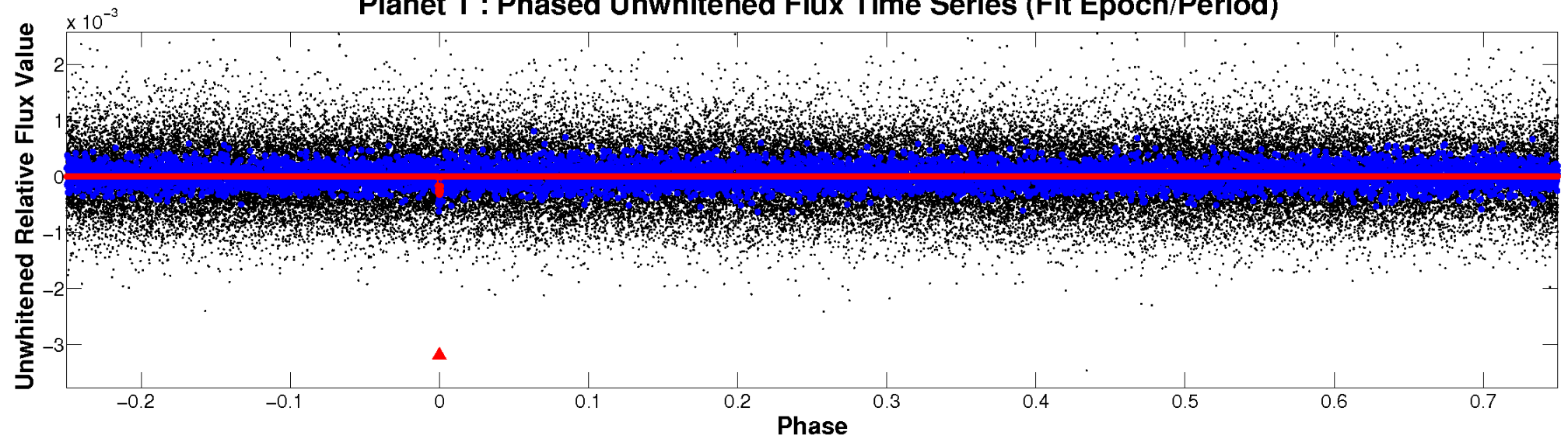
ALT Odd/Even

TCE 007662744-01

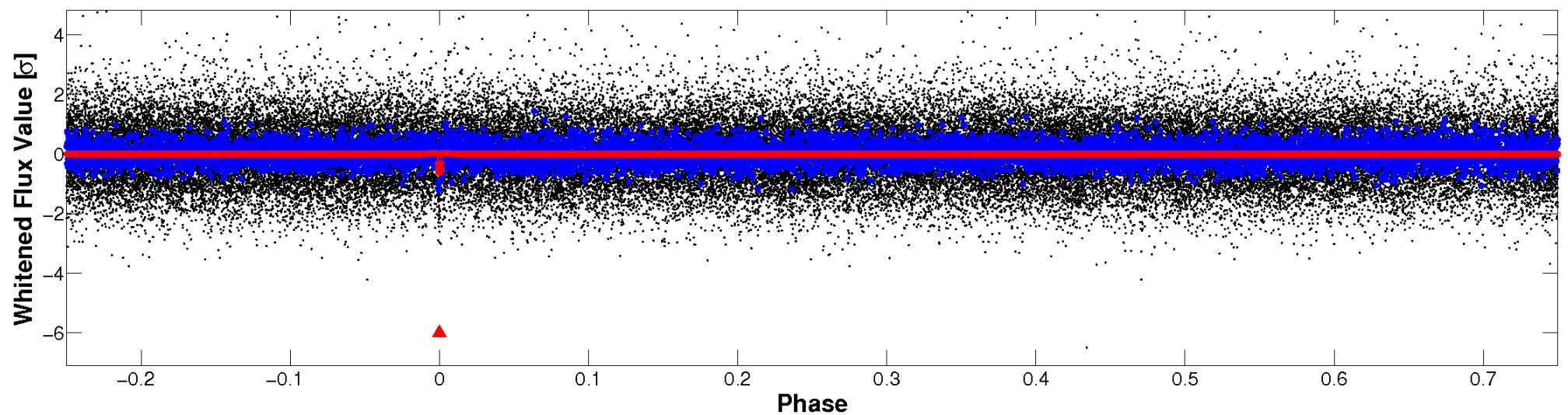


Non-Whitened Vs. Whitened Light Curve

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

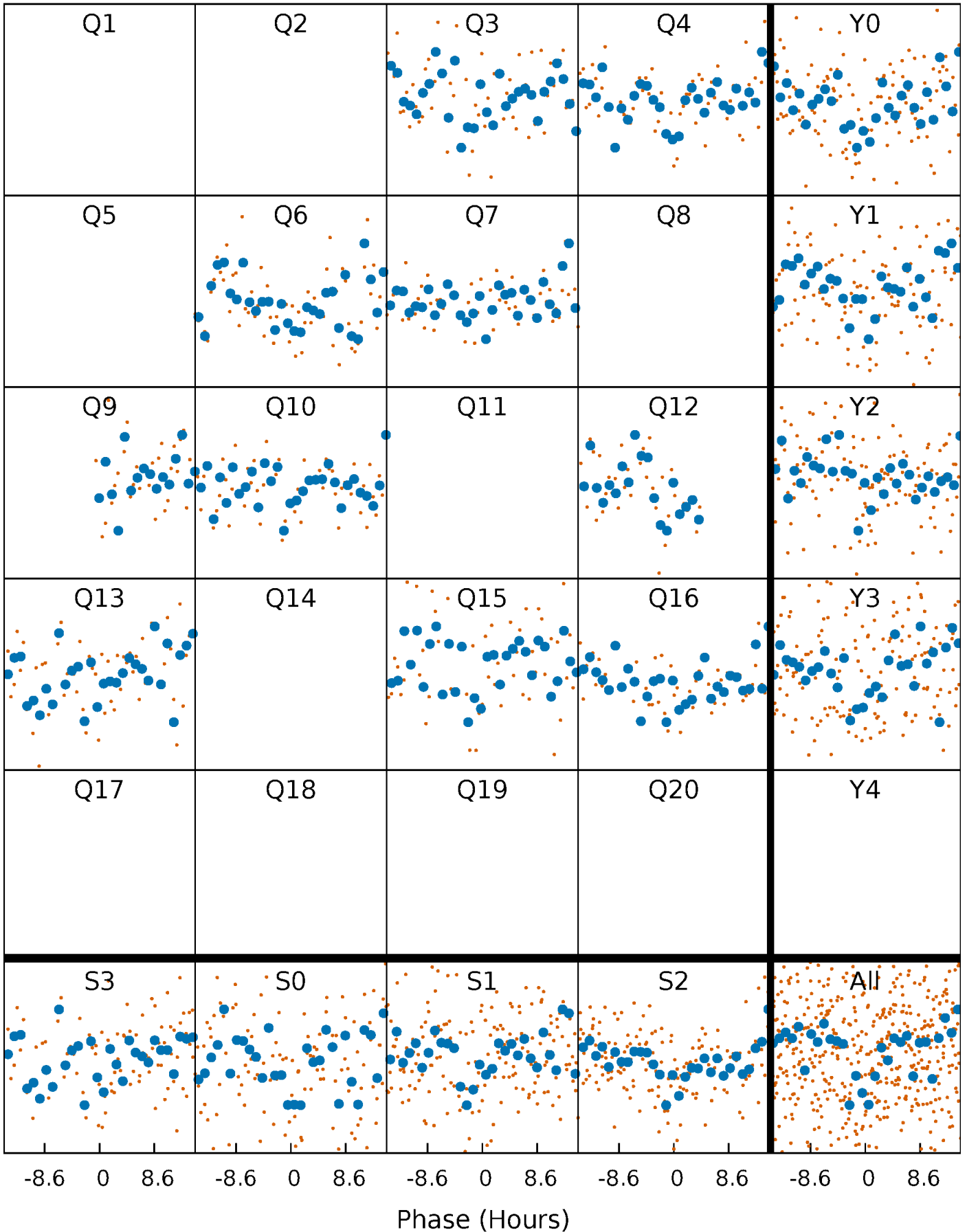


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



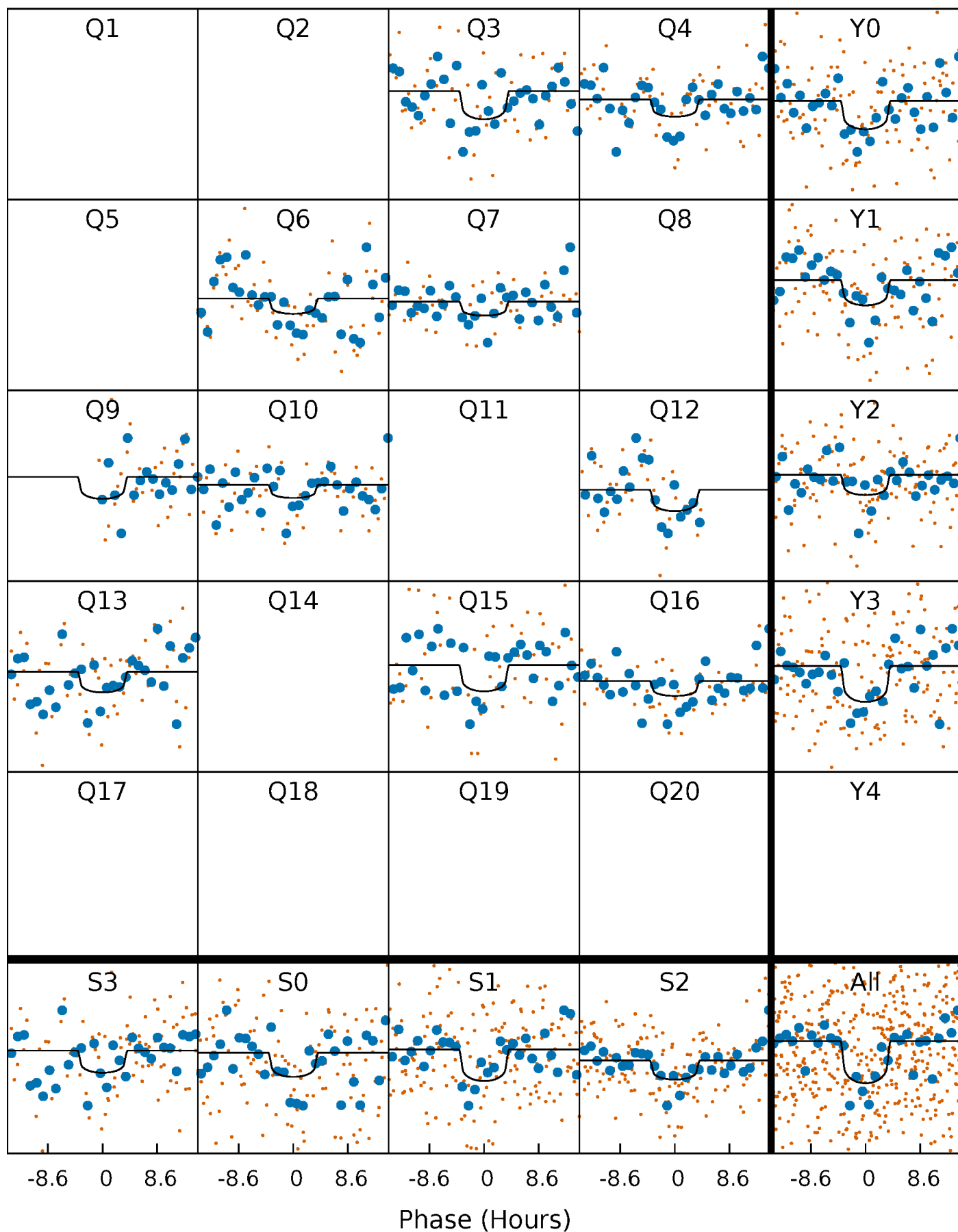
PDC Quarter-Phased Transit Curves

TCE 007662744-01 P=135.428519 Days $T_0=168.505561$ (BKJD)



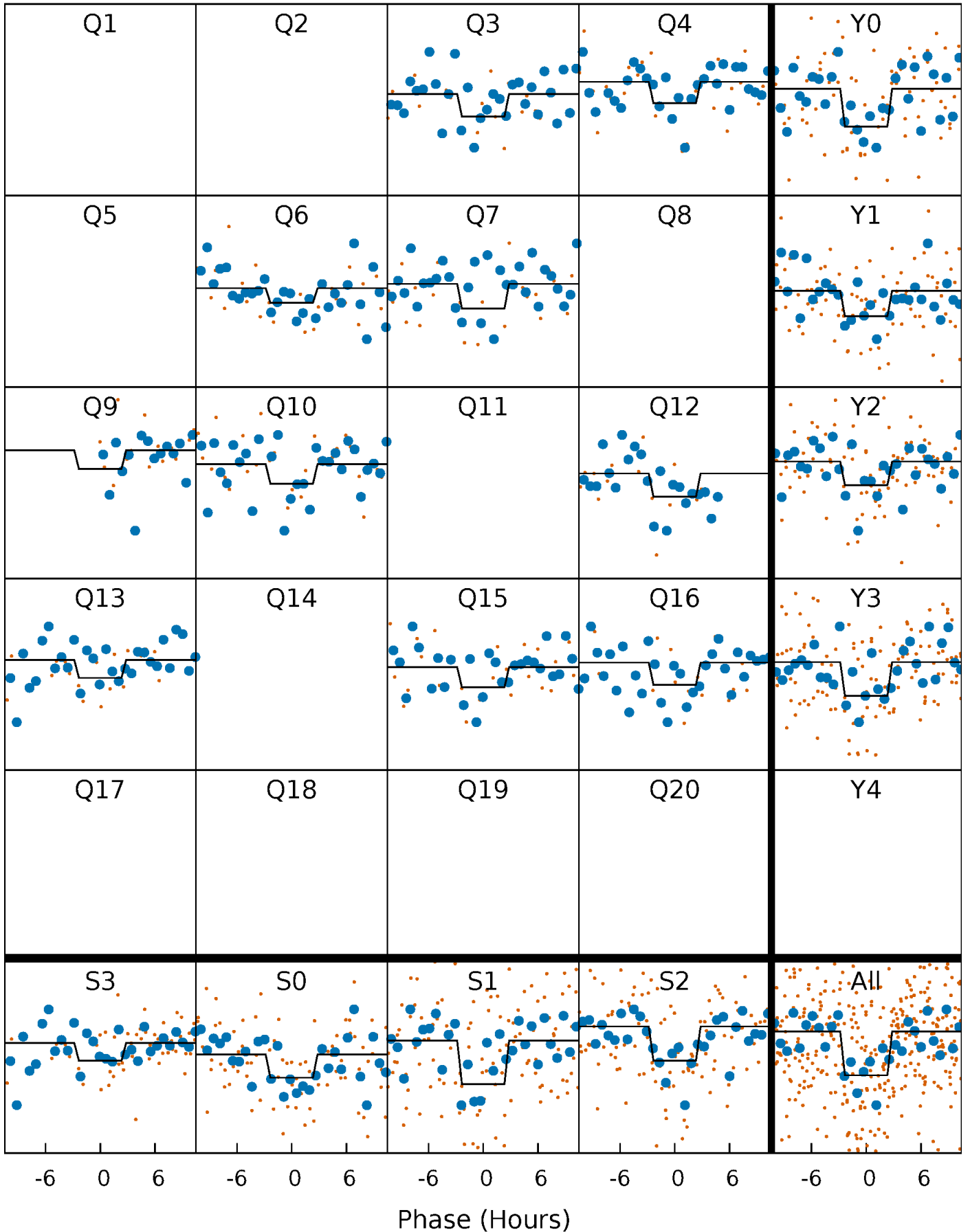
DV Quarter-Phased Transit Curves

TCE 007662744-01 P=135.428519 Days $T_0=168.505561$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

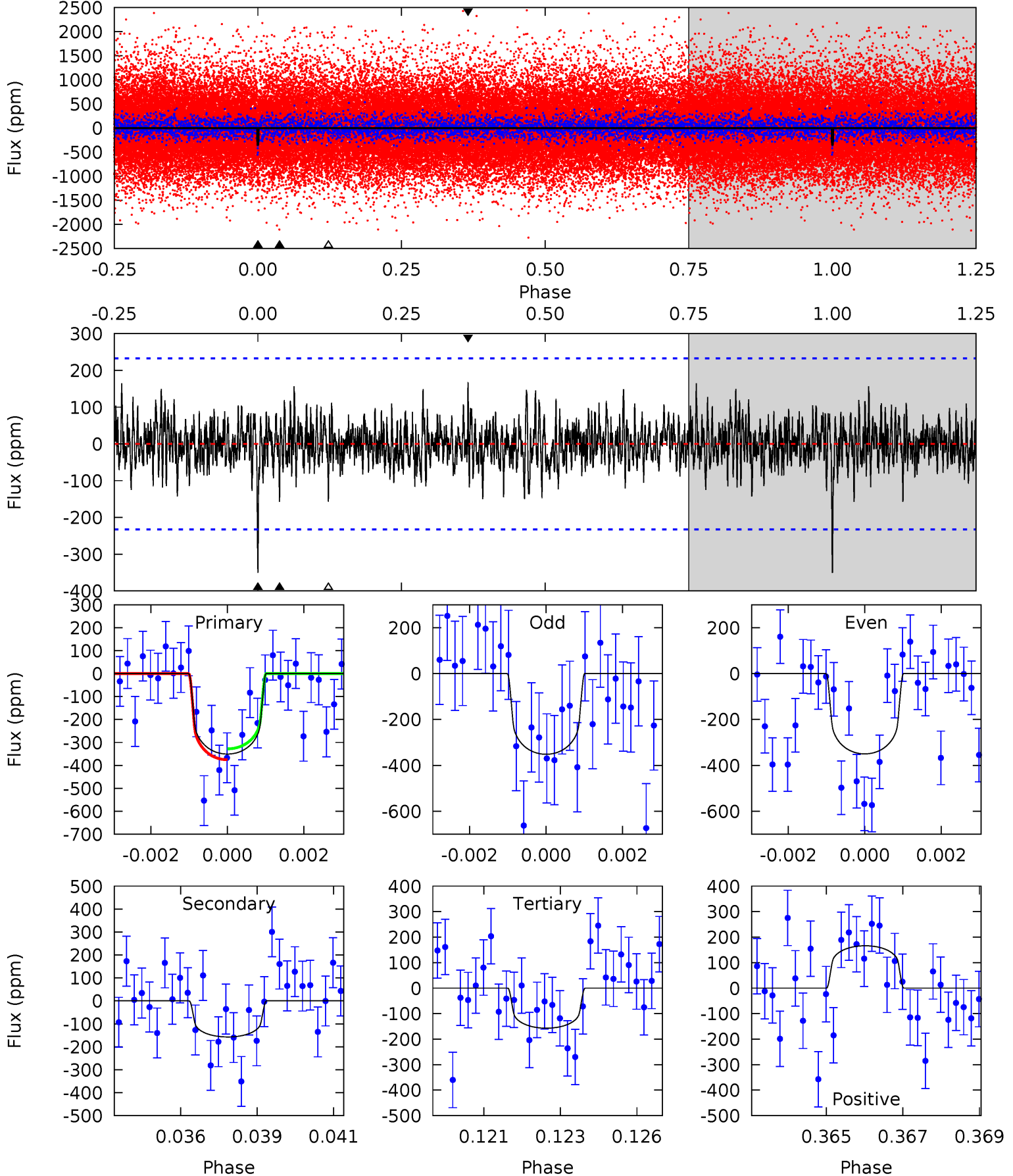
TCE 007662744-01 P=135.432800 Days $T_0=168.462070$ (BKJD)



DV Model-Shift Uniqueness Test

007662744-01, $P = 135.428519$ Days, $E = 33.077042$ Days

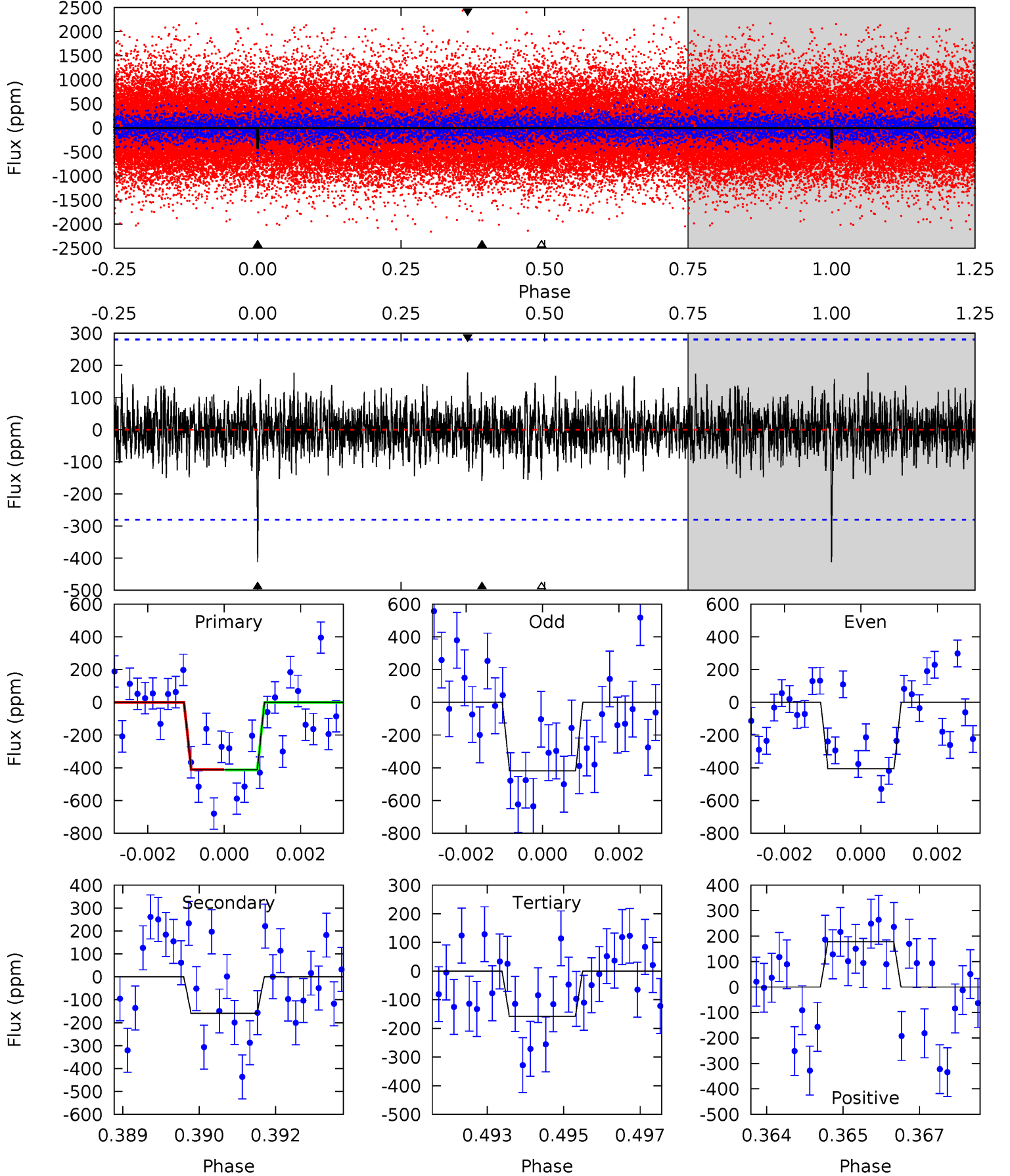
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.98	3.58	3.57	3.78	5.29	3.03	1.09	4.41	4.20	0.00	-0.20	0.02	1.02	0.32	0.54



Alt Model-Shift Uniqueness Test

007662744-01, $P = 135.432800$ Days, $E = 33.029270$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.88	3.04	3.01	3.40	5.36	3.14	0.94	4.87	4.48	0.03	-0.36	0.13	1.06	0.30	0.03



Stellar Parameters For KIC 007662744

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5849^{+157}_{-192}	$4.517^{+0.048}_{-0.204}$	$-0.020^{+0.250}_{-0.300}$	$0.919^{+0.275}_{-0.092}$	$1.014^{+0.116}_{-0.139}$	$1.839^{+0.368}_{-0.949}$
	+3%/-3%	+1%/-5%	+1250%/-1500%	+30%/-10%	+11%/-14%	+20%/-52%
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 007662744-01 / KOI 8140.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-157 ± 44	$2.40^{+1.90}_{-1.61}$	490^{+34}_{-24}	4522^{+2838}_{-898}	3976^{+30197}_{-2783}
Alt.	-159 ± 52	$2.61^{+1.85}_{-1.59}$	492^{+35}_{-23}	4351^{+2159}_{-759}	3303^{+17234}_{-2225}

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

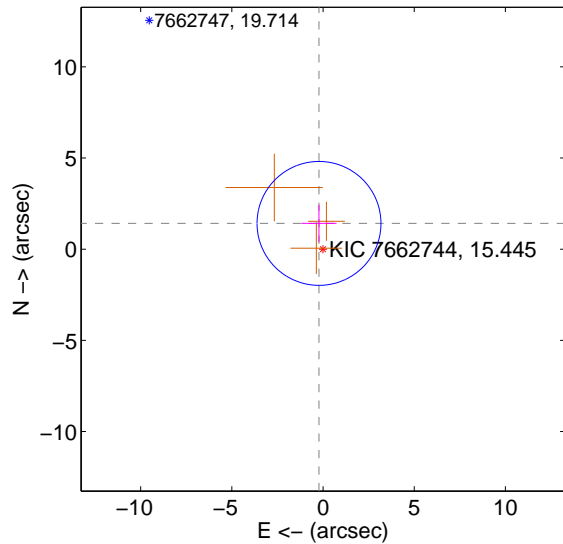
Supplemental centroid analysis for 007662744-01. Kepler magnitude: 15.45. Transit SNR 6.49

There are 0 quarters with good PRF difference image offsets

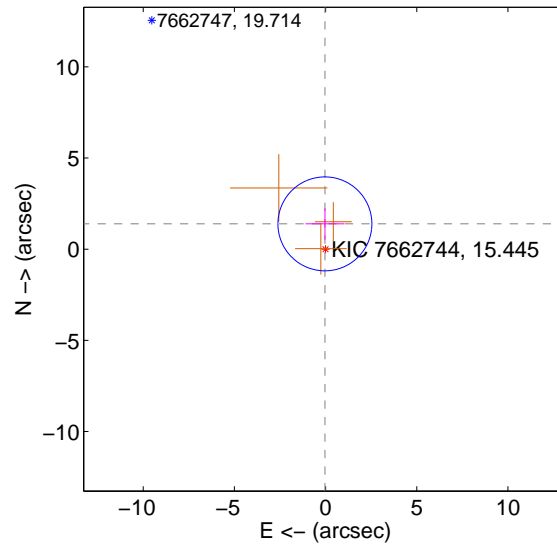
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.430 ± 1.132	1.26	0.221 ± 0.961	1.413 ± 1.017
PRF-fit source offset from KIC position	1.388 ± 0.858	1.62	0.038 ± 1.063	1.388 ± 0.858
photometric centroid source offset	4.66 ± 2.13	2.18	-4.65 ± 2.13	-0.27 ± 2.38

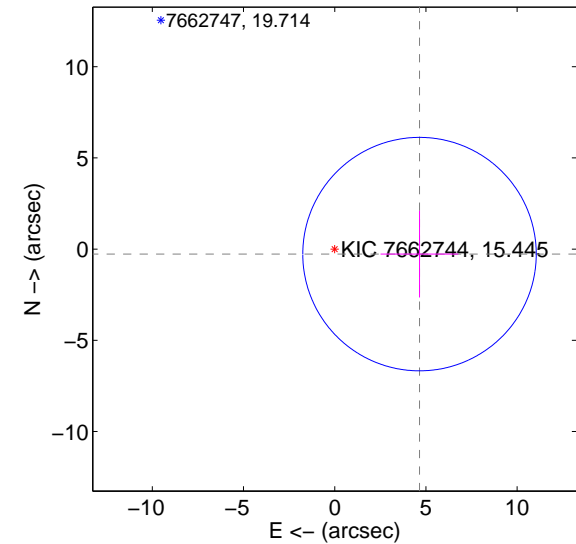
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

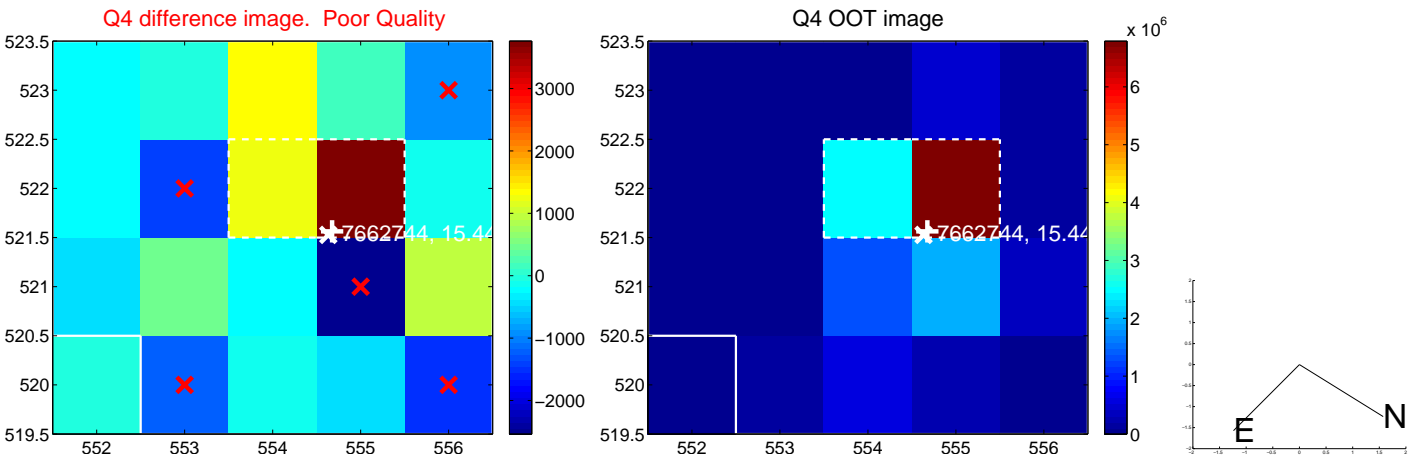
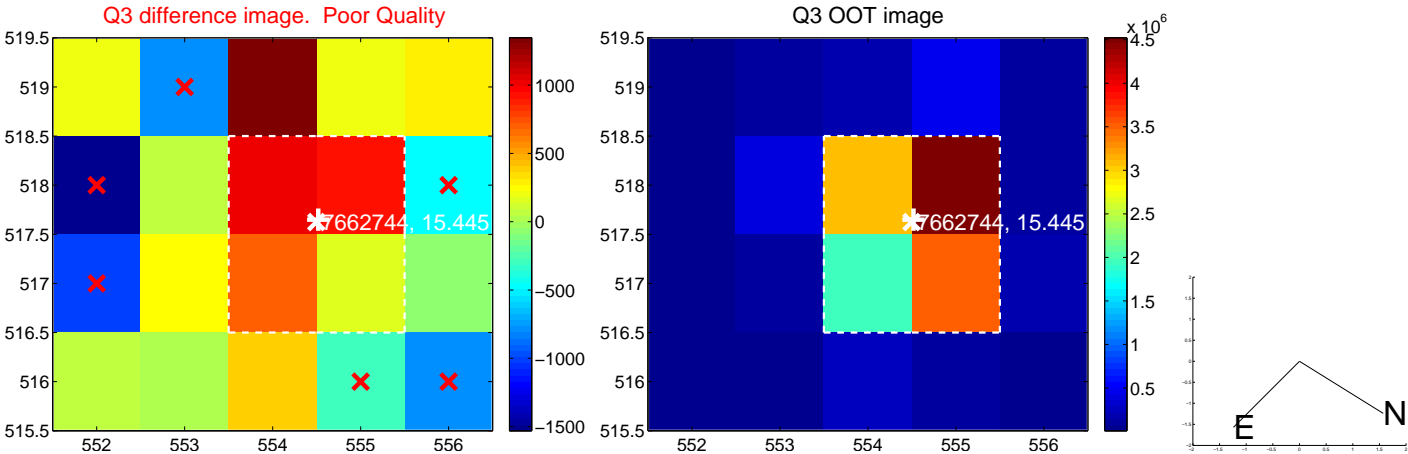


offset from photometric centroids

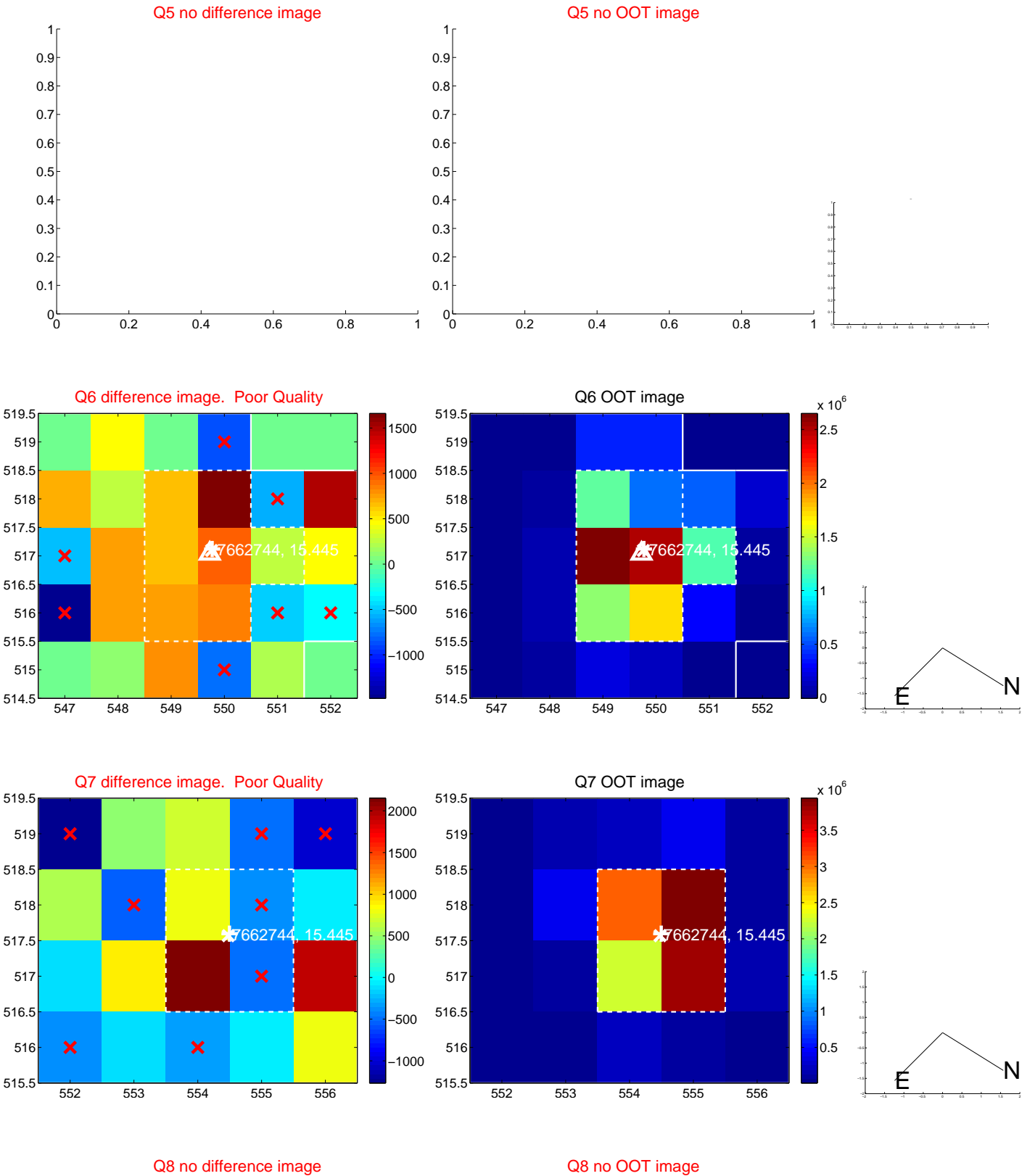


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

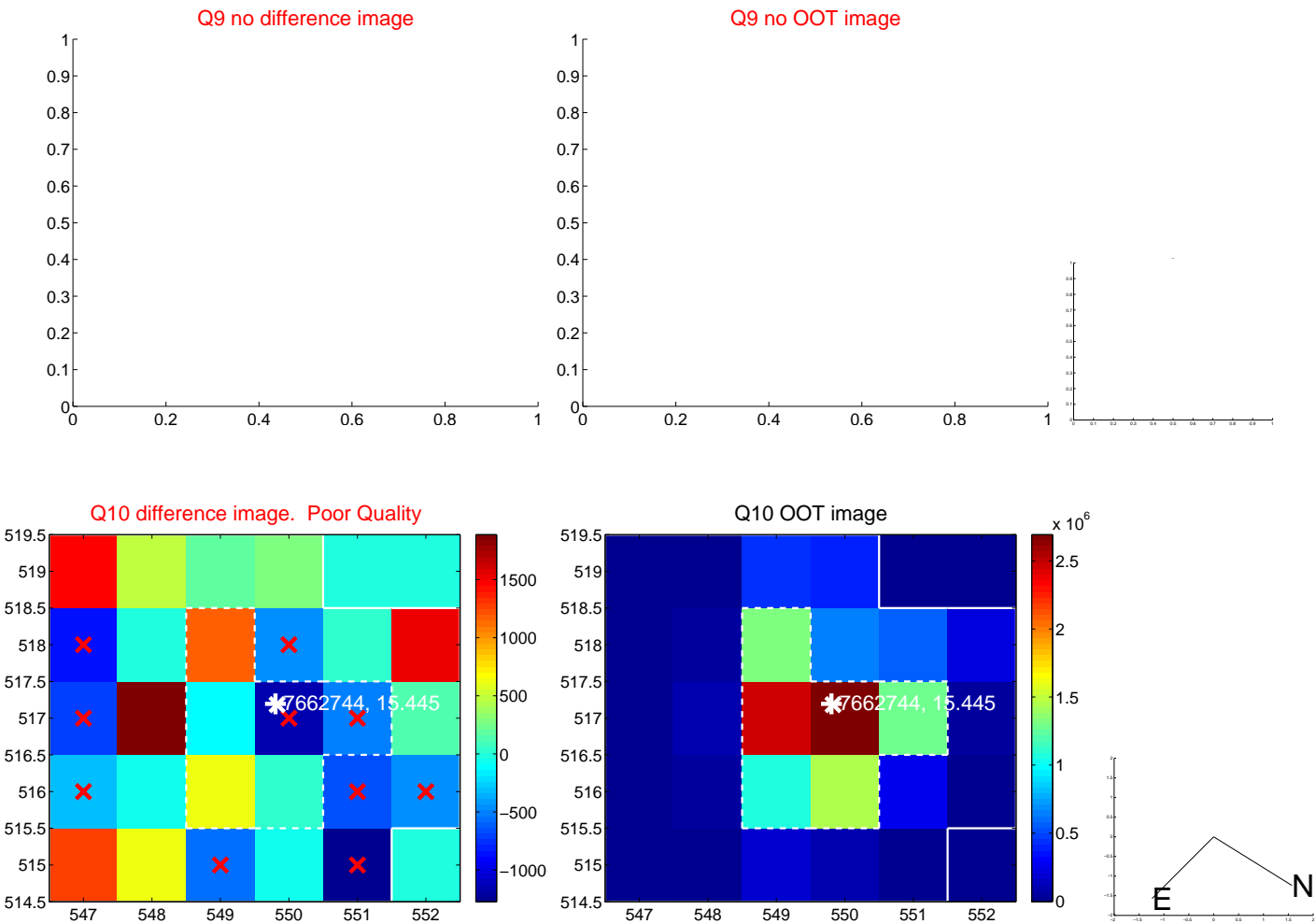
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

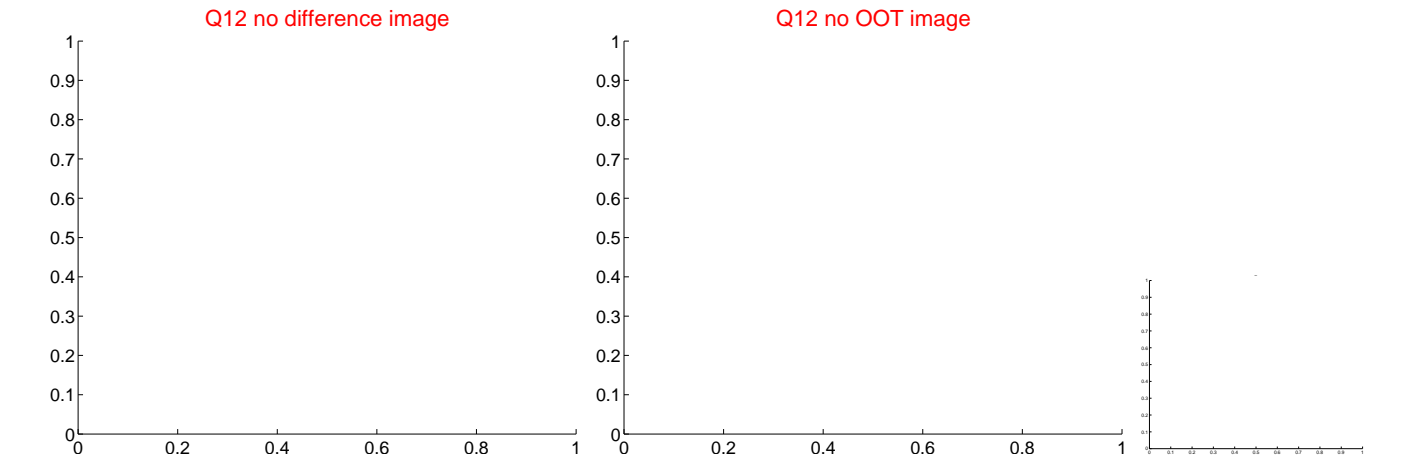
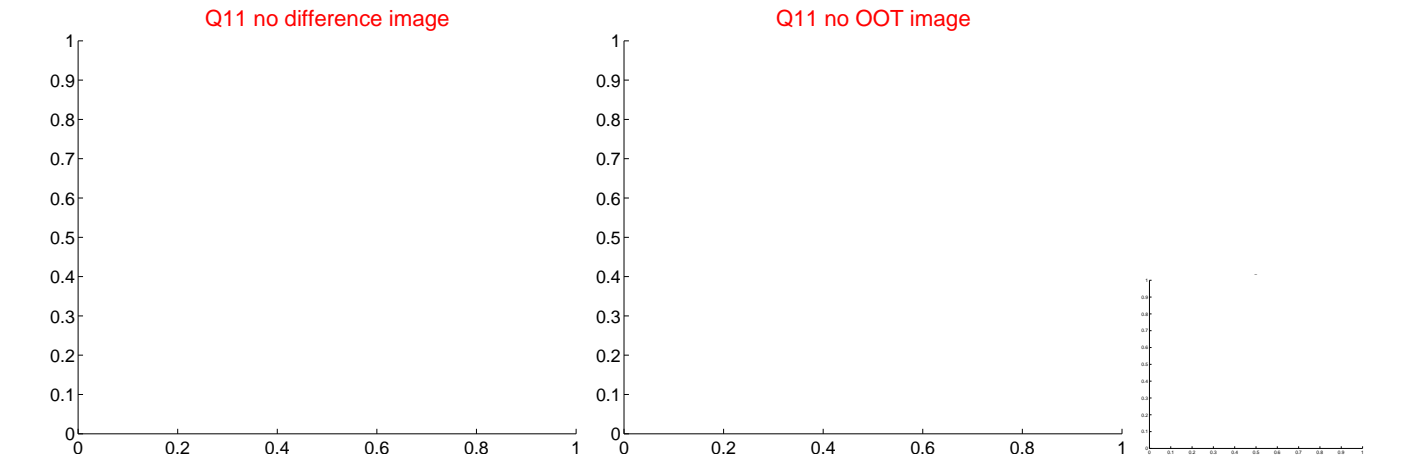


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

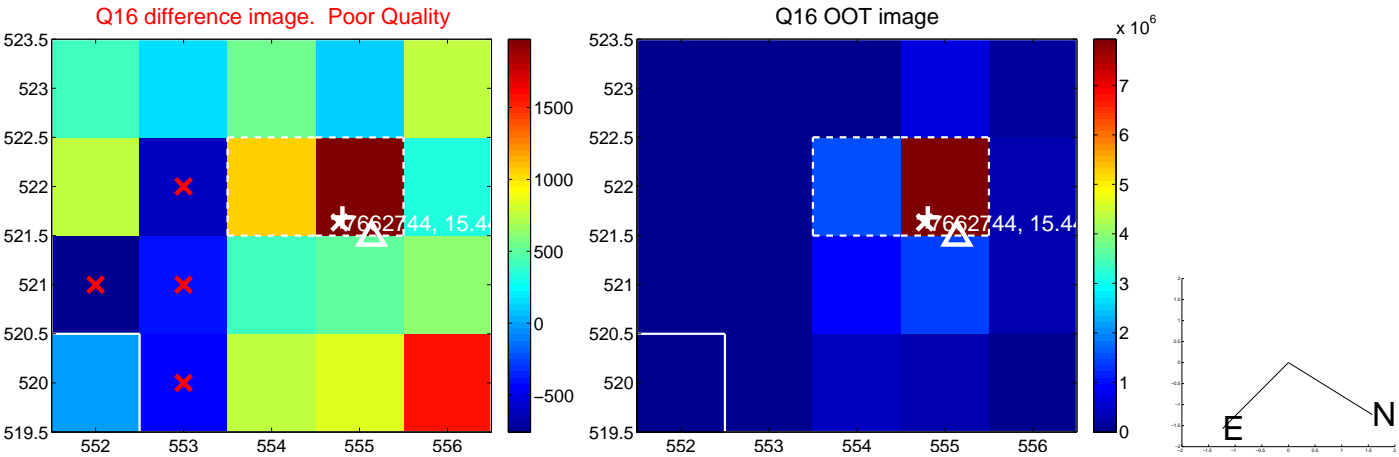
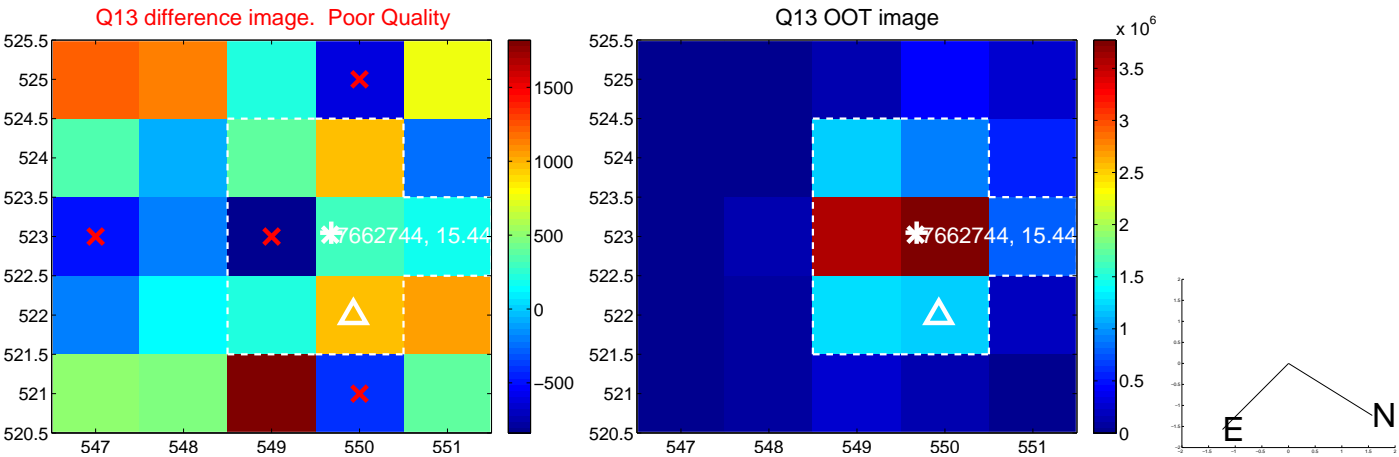


Q10 difference image. Poor Quality

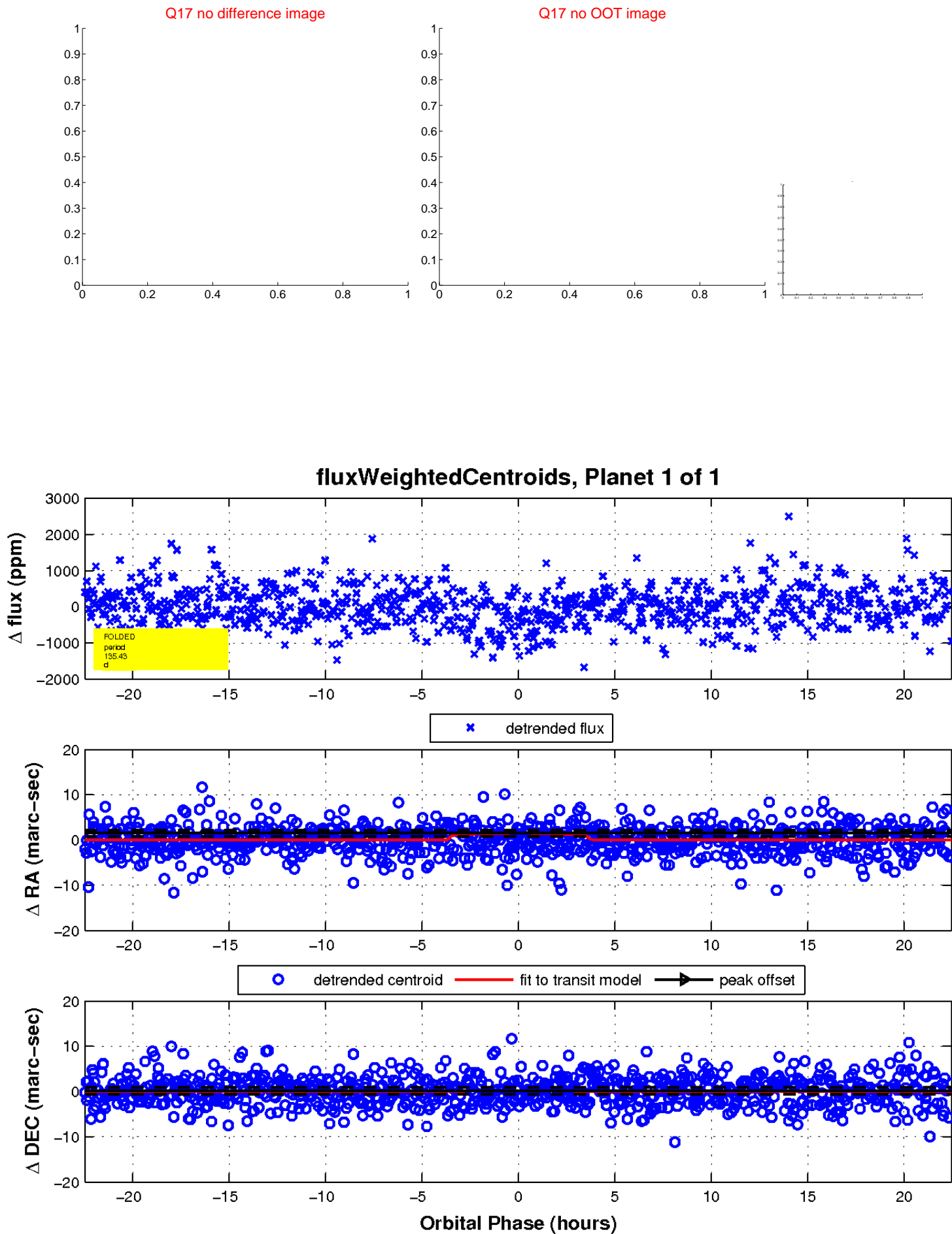
Q10 OOT image



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

