

KIC 004773392

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})
004773392-01	OBS	4367.01	170.995038	163.960449	477.8	3.849	13.1	13.2	1.98	6127	4.99	10.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004773392-01	OBS	PC	0.97	0	0	0	0	NO_COMMENT

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

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

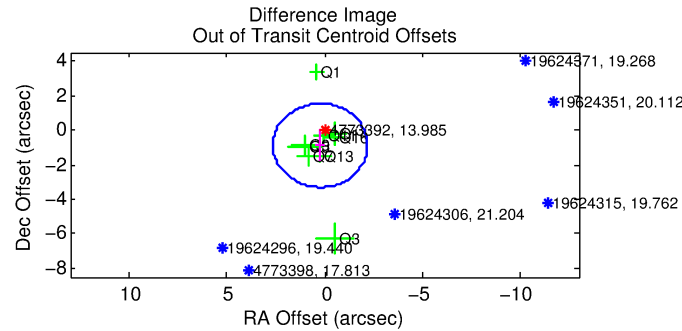
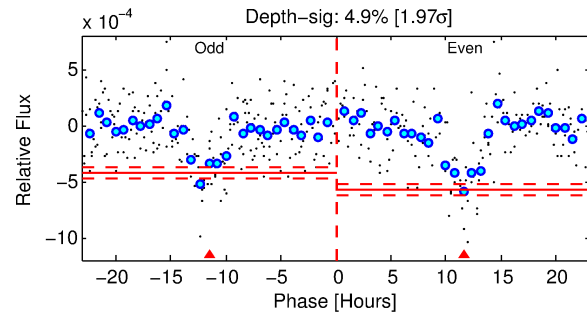
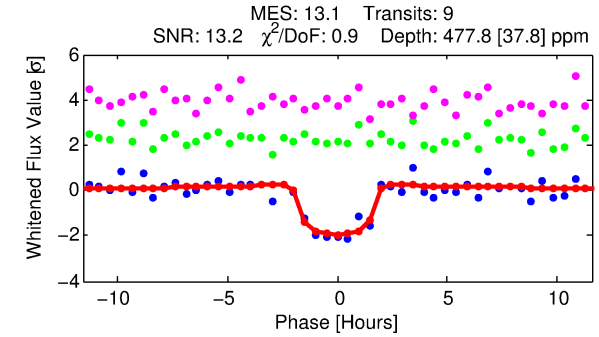
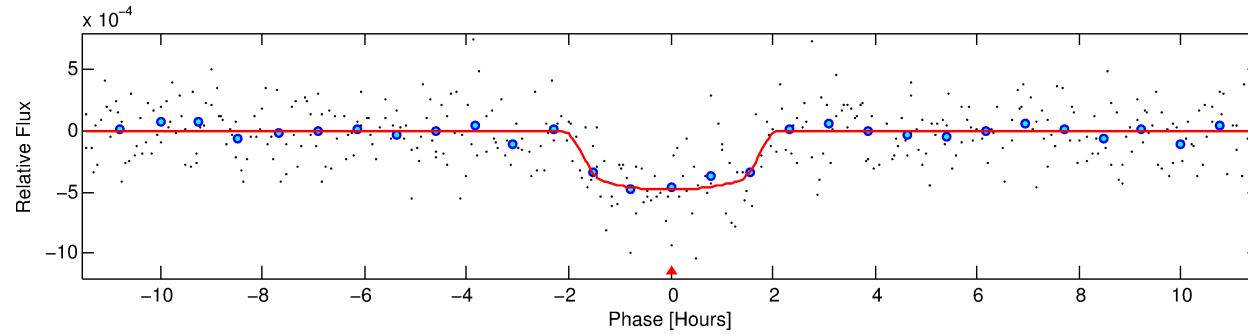
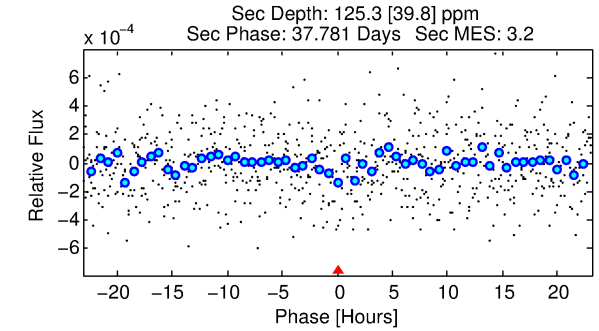
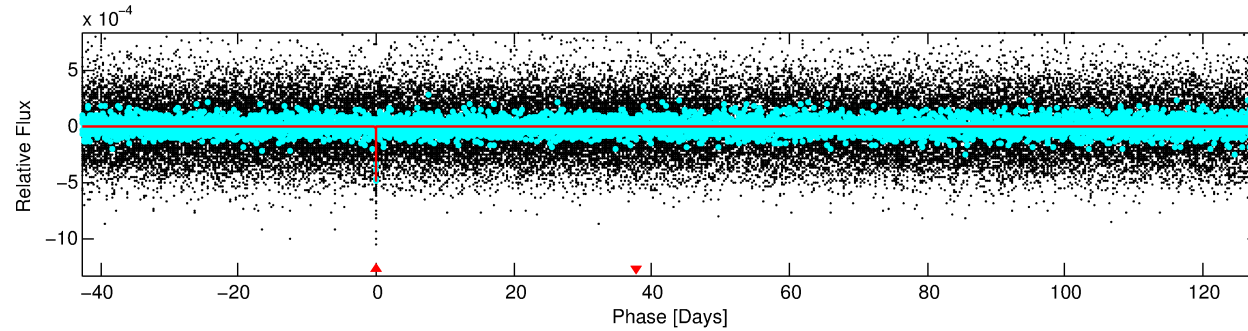
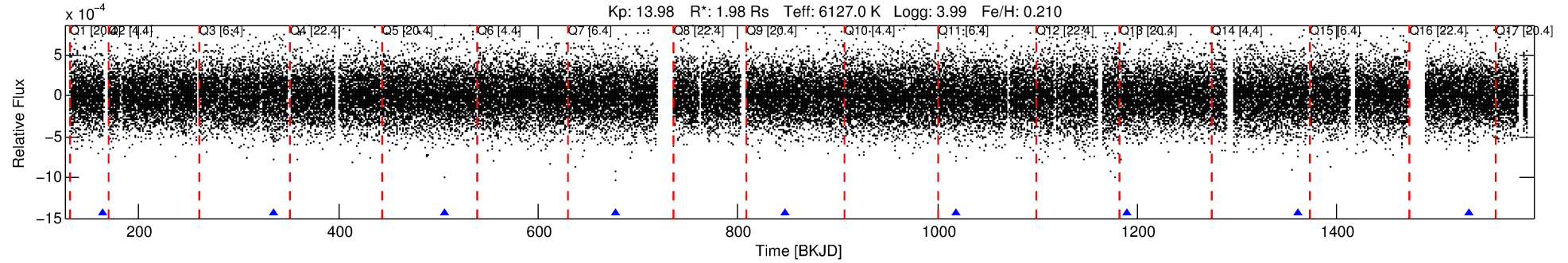
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004773392-01

No Significant Match Found

DV One-Page Summary

KIC: 4773392 Candidate: 1 of 1 Period: 170.995 d
KOI: K04367.01 Corr: 0.953



DV Fit Results:

Period = 170.99504 [0.00120] d
Epoch = 163.9604 [0.0060] BKJD
Rp/R* = 0.0231 [0.0056]
a/R* = 183.22 [213.18]
b = 0.87 [0.33]
Seff = 10.88 [3.70]
Teq = 463 [39] K
Rp = 4.99 [1.76] Re
a = 0.6754 [0.1507] AU
Ag = 1261.59 [843.57] [1.49σ]
Teffp = 4268 [620] K [6.12σ]

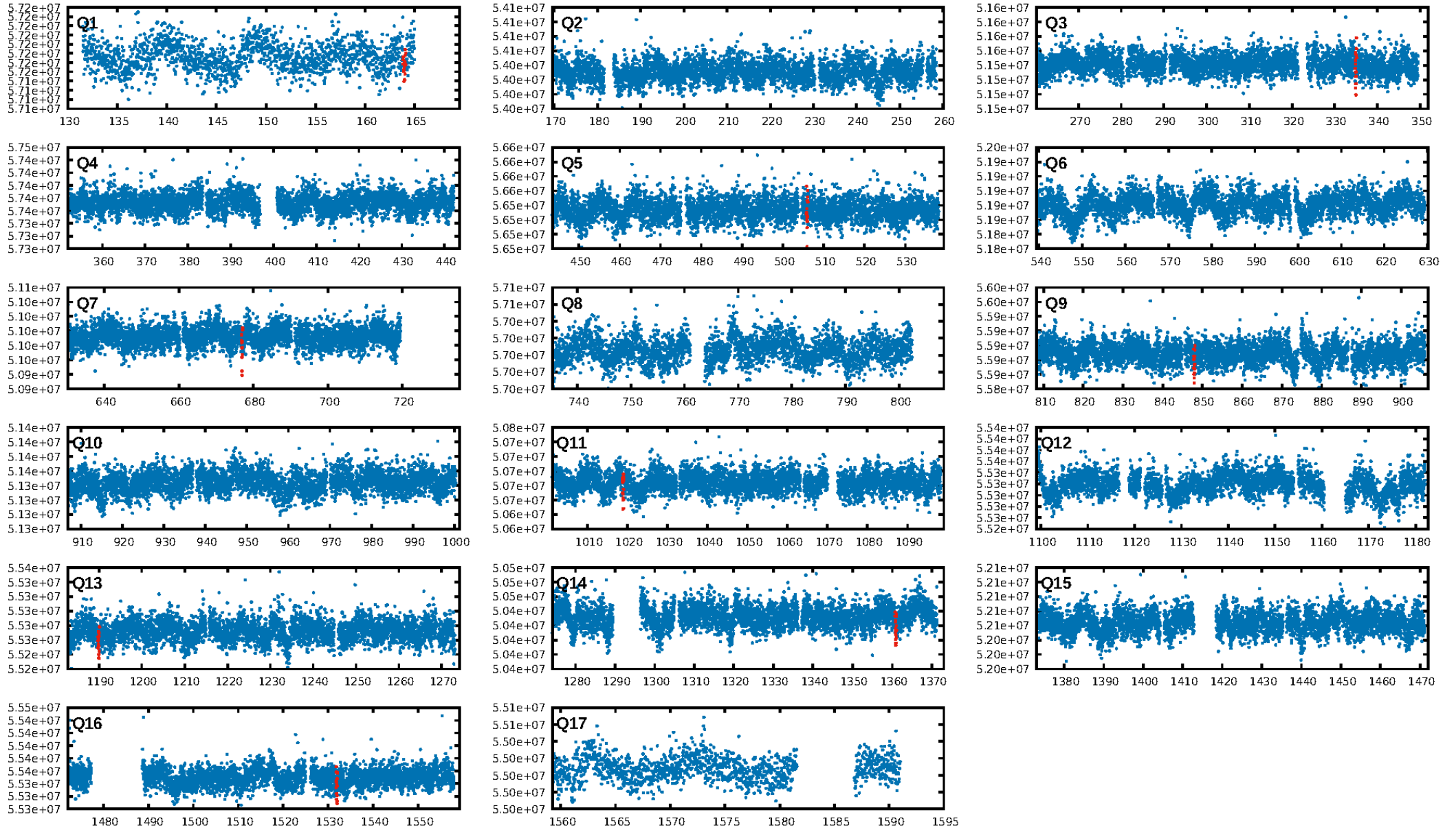
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 3.22e-41
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 2.802
Centroid-sig: 84.0%
Centroid-so: 0.610 arcsec [0.67σ]
OotOffset-rm: 0.919 arcsec [1.14σ]
KicOffset-rm: 0.948 arcsec [1.52σ]
OotOffset-st: 1/3/1/4 [9]
KicOffset-st: 1/3/1/4 [9]
DiffImageQuality-fgm: 0.89 [8/9]
DiffImageOverlap-fno: 1.00 [9/9]

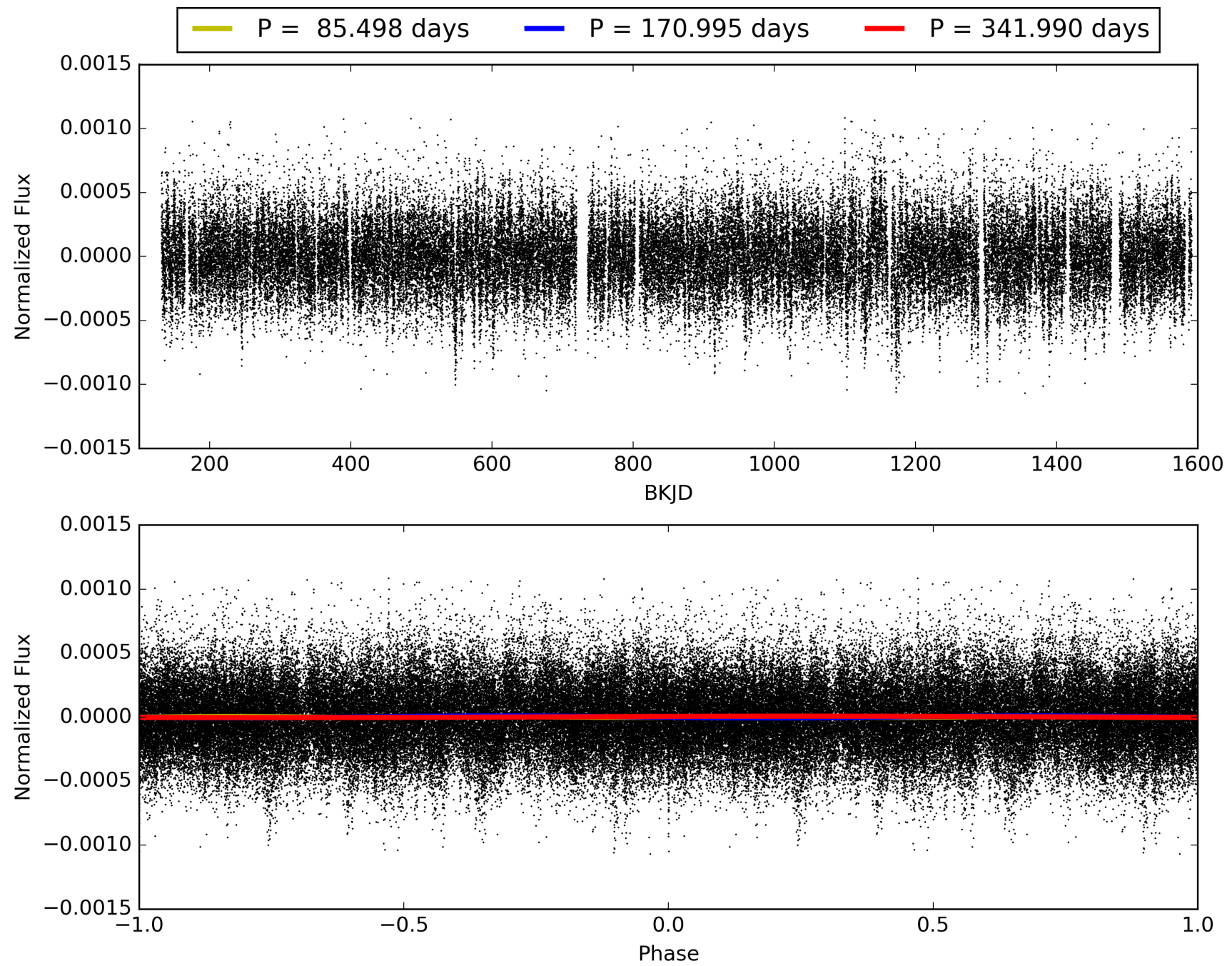
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:51:58 Z

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

TCE 004773392-01, PDC Light Curves

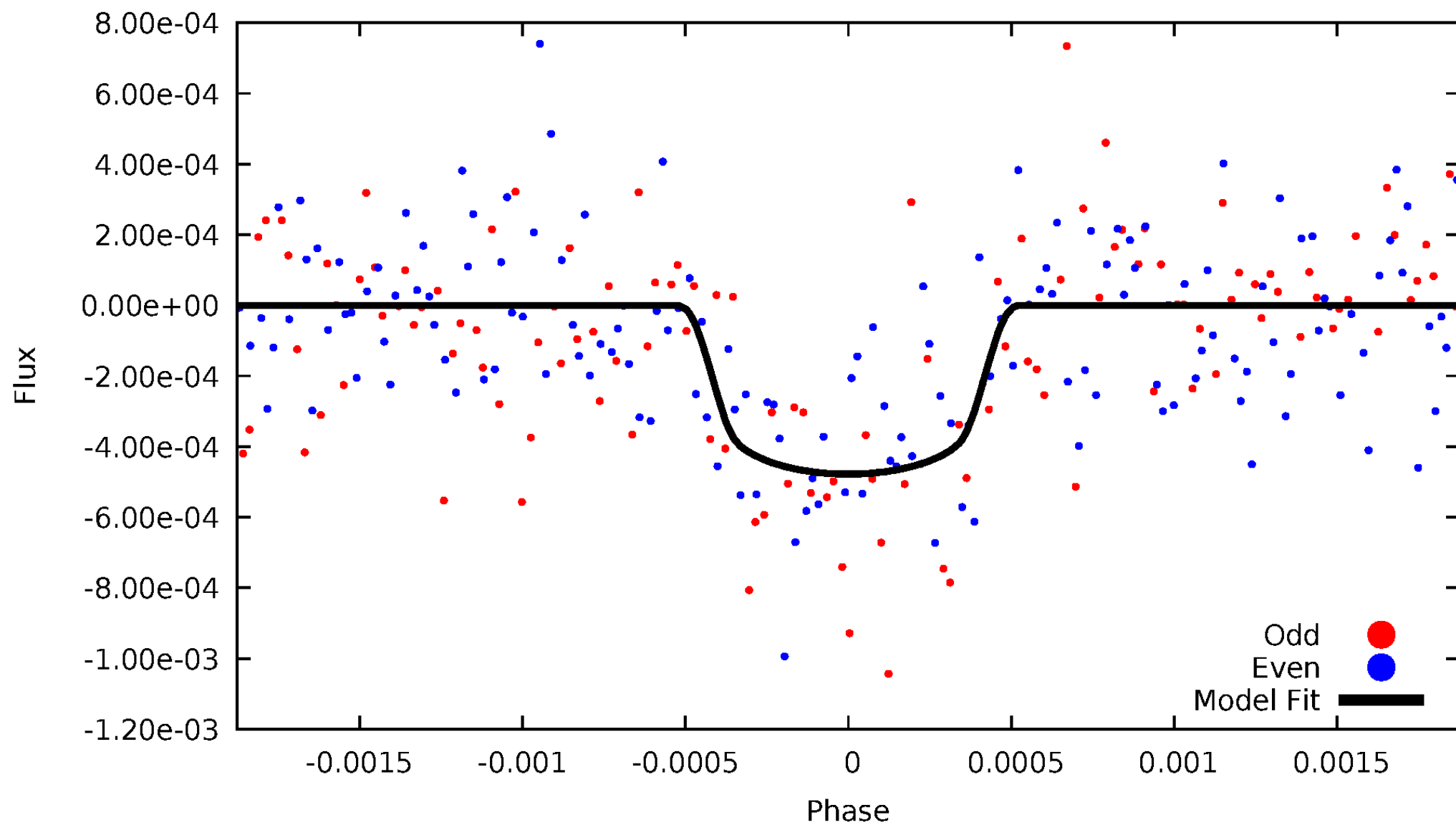


TCE 004773392-01



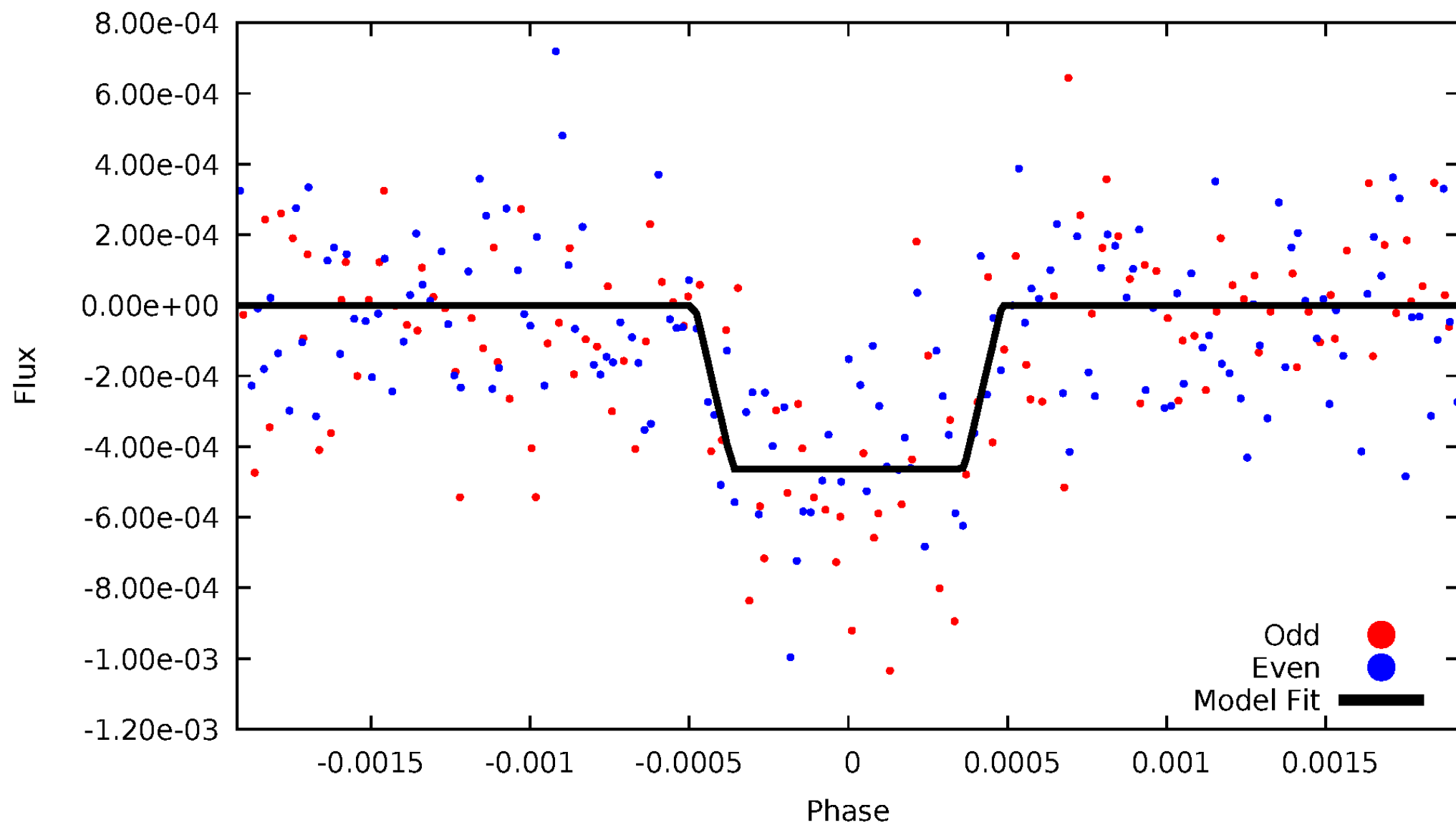
DV Odd/Even

TCE 004773392-01

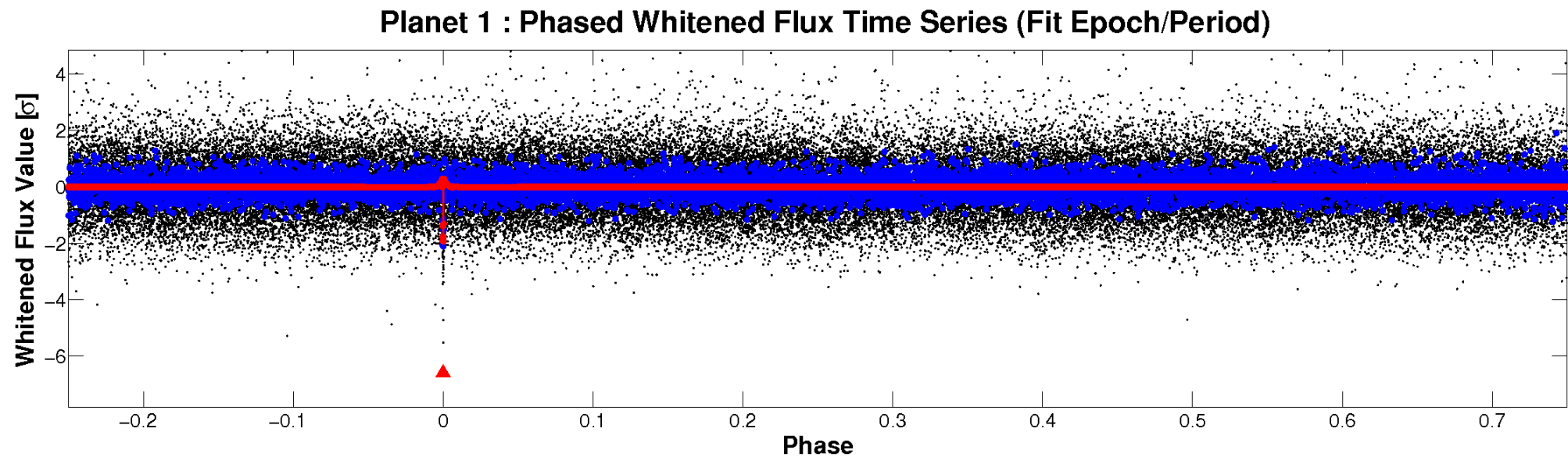
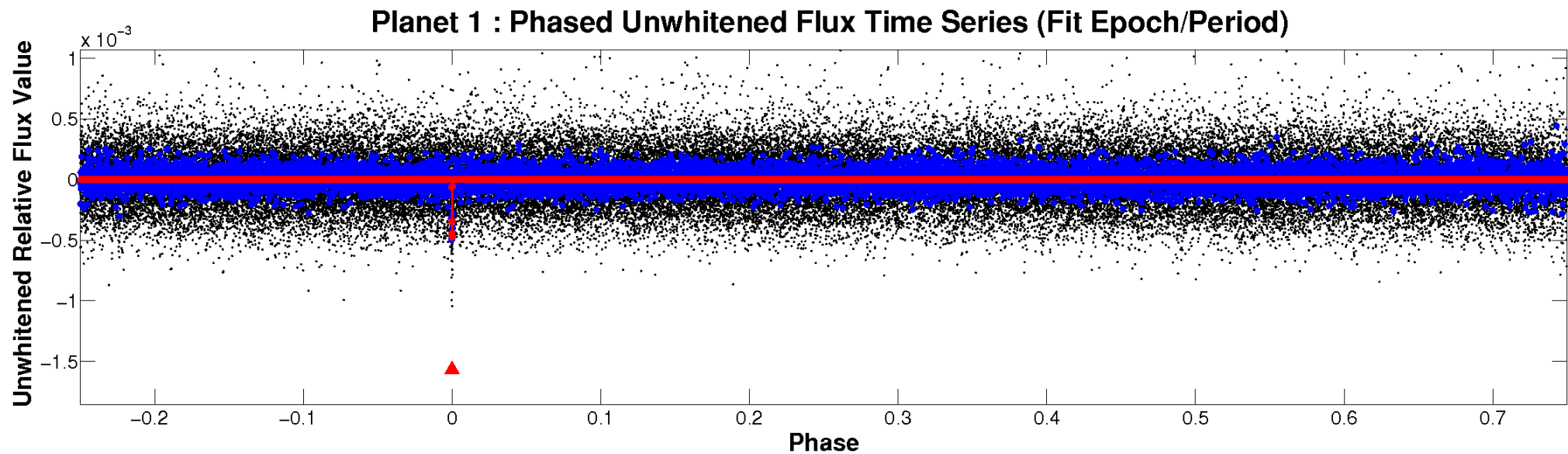


ALT Odd/Even

TCE 004773392-01

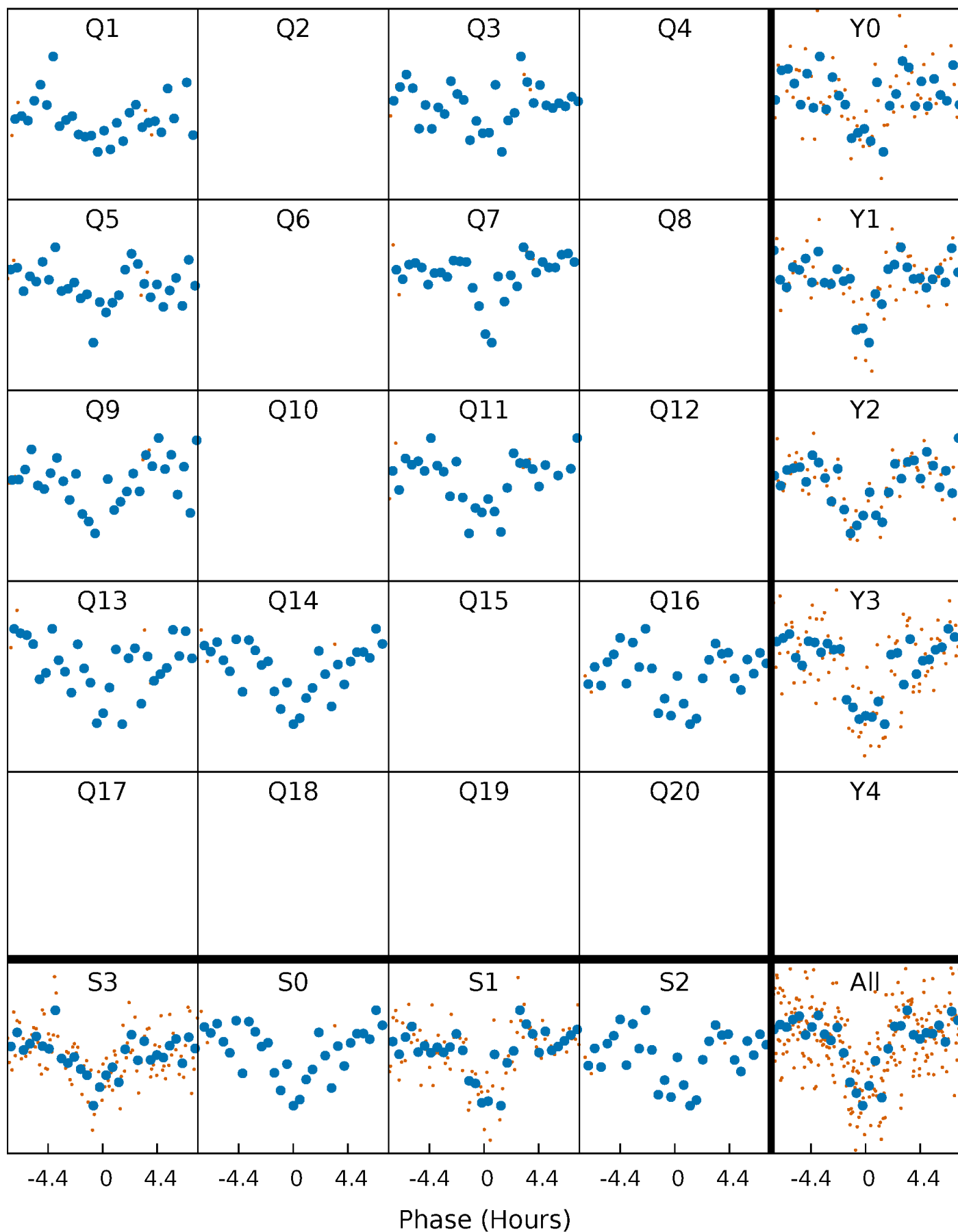


Non-Whitened Vs. Whitened Light Curve



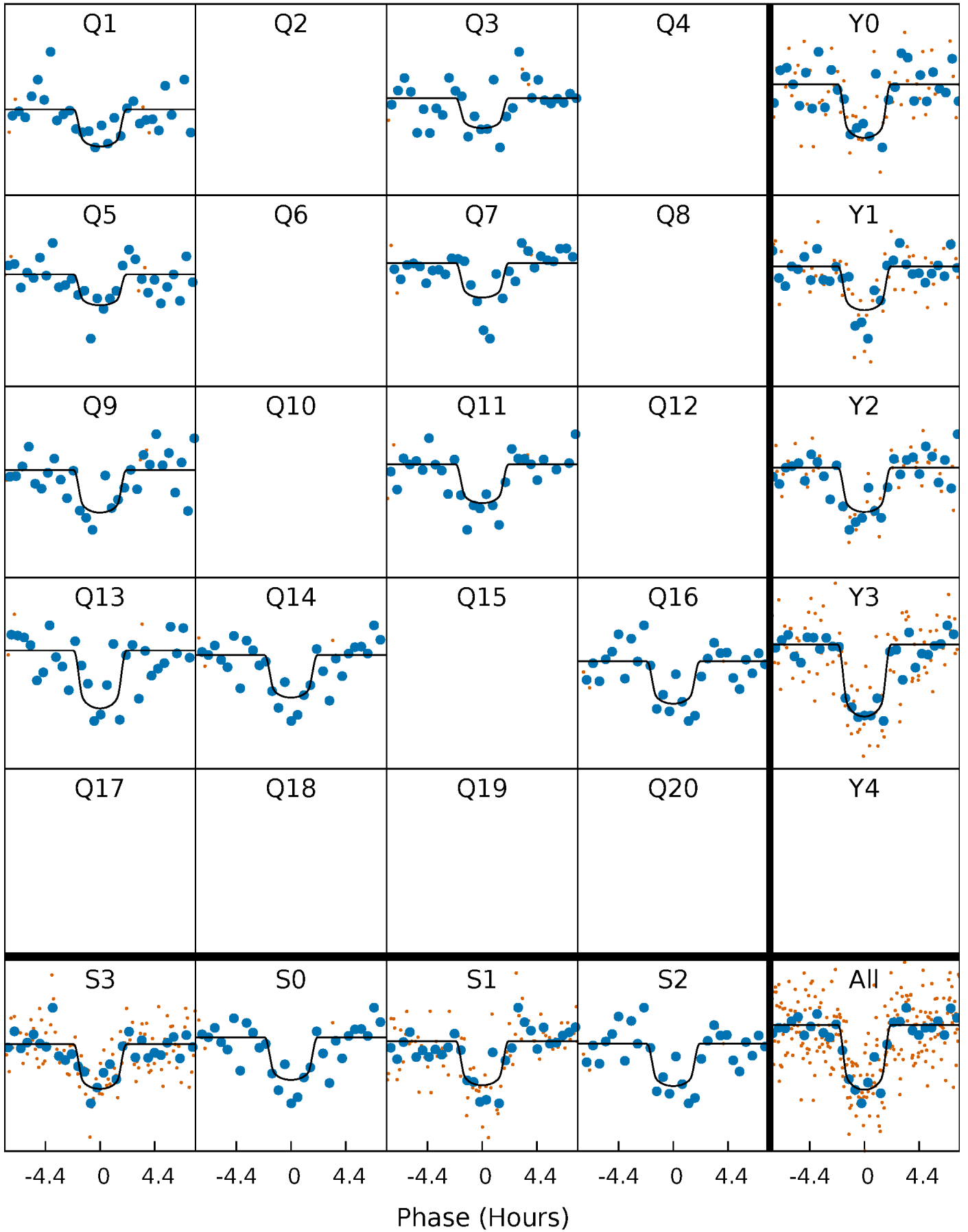
PDC Quarter-Phased Transit Curves

TCE 004773392-01 P=170.995038 Days $T_0=163.960449$ (BKJD)



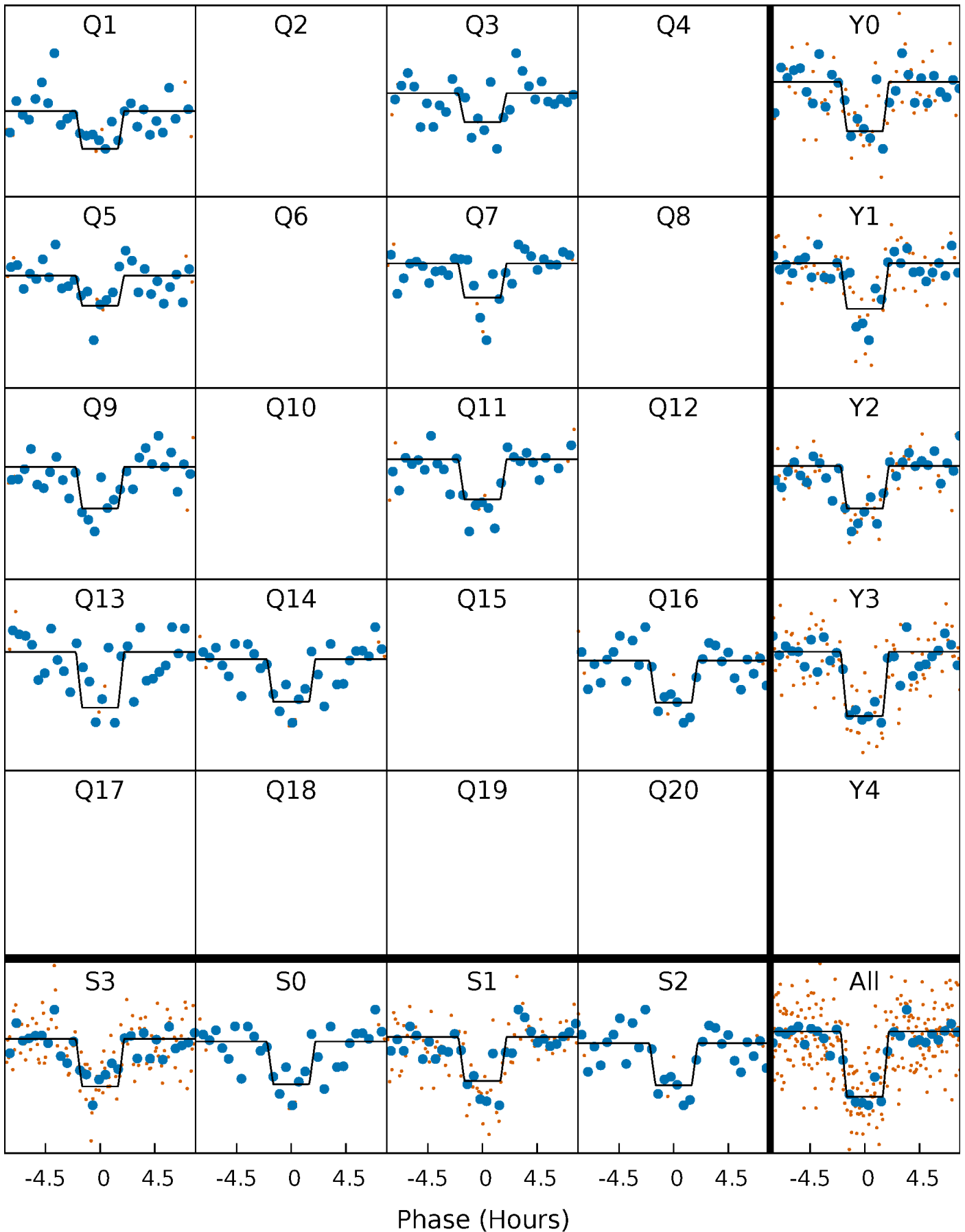
DV Quarter-Phased Transit Curves

TCE 004773392-01 P=170.995038 Days $T_0=163.960449$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

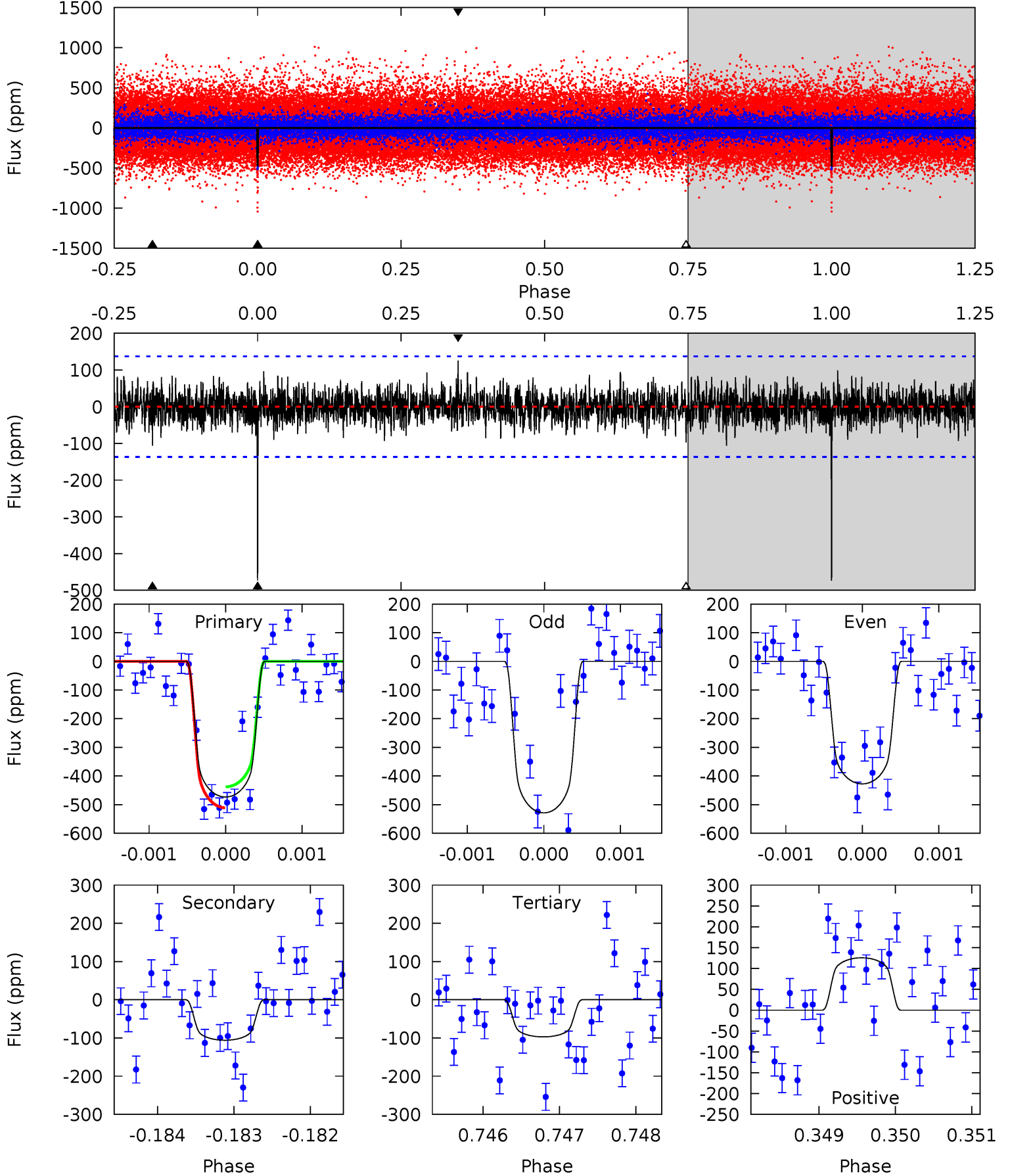
TCE 004773392-01 P=170.996196 Days $T_0=163.955709$ (BKJD)



DV Model-Shift Uniqueness Test

004773392-01, P = 170.995038 Days, E = 163.960449 Days

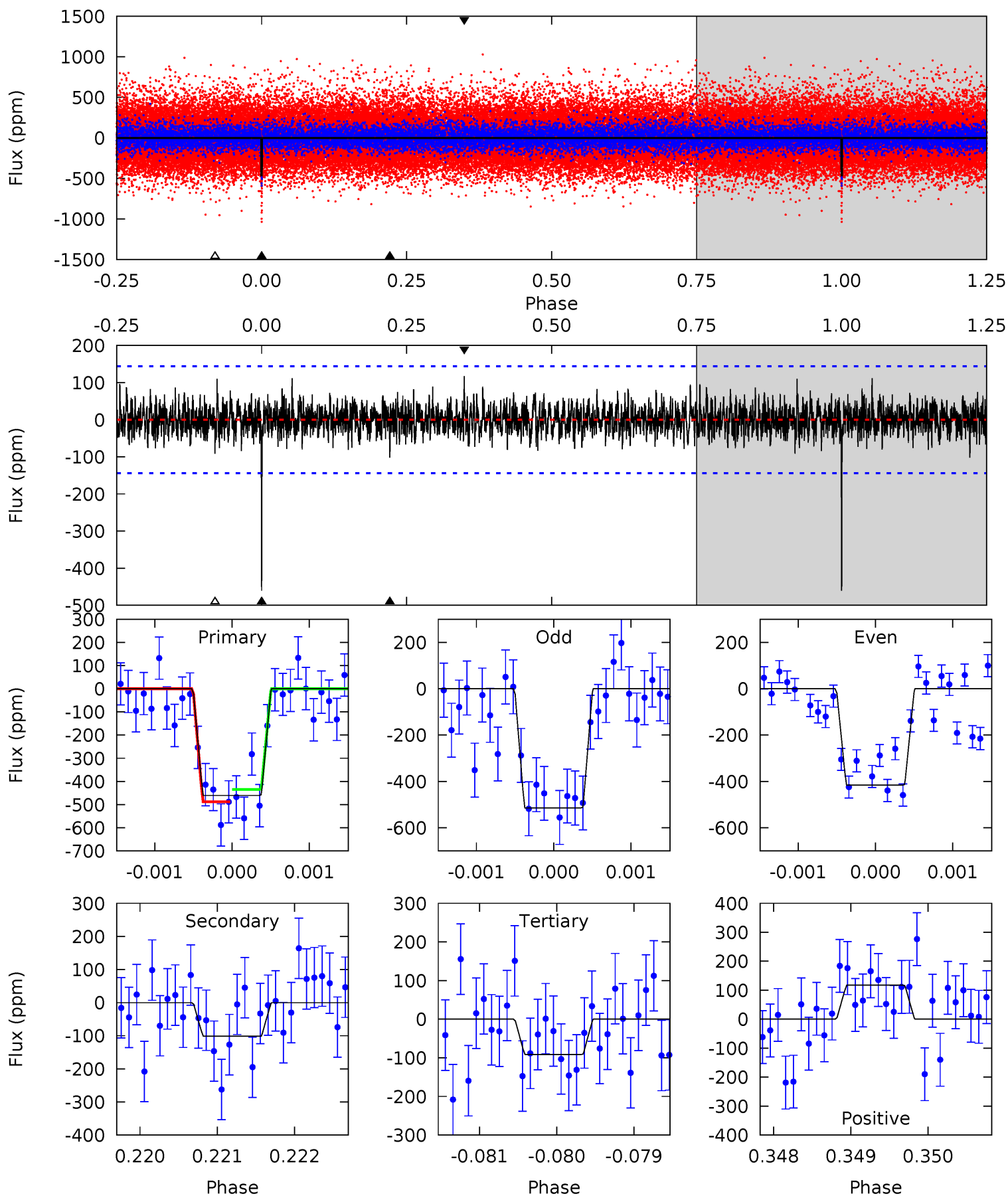
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	4.21	3.86	4.99	5.45	3.28	1.18	14.9	13.8	0.35	-0.78	2.00	1.01	0.21	1.45



Alt Model-Shift Uniqueness Test

004773392-01, P = 170.996196 Days, E = 163.955709 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	3.85	3.46	4.44	5.46	3.30	1.10	14.0	13.0	0.39	-0.58	1.86	0.96	0.20	1.00



Stellar Parameters For KIC 004773392

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6127^{+73}_{-85}	$3.991^{+0.188}_{-0.101}$	$0.210^{+0.150}_{-0.150}$	$1.983^{+0.337}_{-0.506}$	$1.405^{+0.127}_{-0.190}$	$0.254^{+0.270}_{-0.081}$
	+1%/-1%	+5%/-3%	+71%/-71%	+17%/-26%	+9%/-14%	+106%/-32%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004773392-01 / KOI 4367.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-106 ± 25	$4.92^{+1.32}_{-1.24}$	646^{+28}_{-38}	4296^{+565}_{-338}	1063^{+962}_{-413}
Alt.	-102 ± 26	$4.48^{+1.42}_{-1.35}$	643^{+29}_{-39}	4393^{+678}_{-450}	1243^{+1287}_{-577}

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

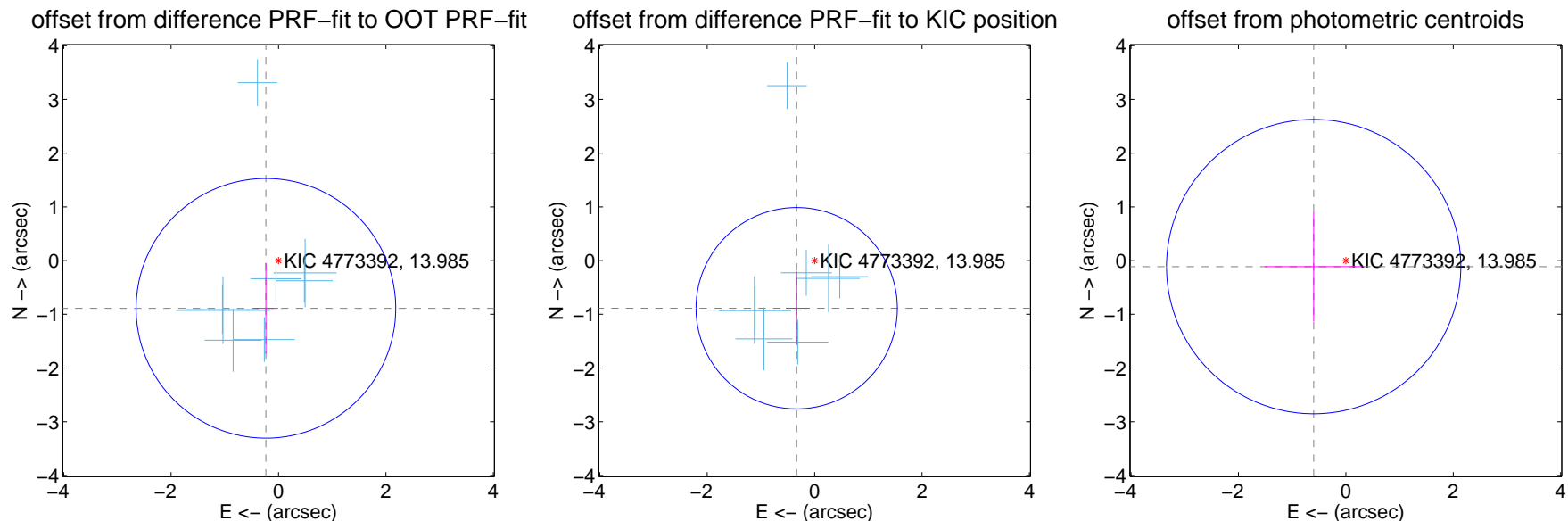
DV Centroid Data

Supplemental centroid analysis for 004773392-01. Kepler magnitude: 13.98. Transit SNR 13.19

There are 8 quarters with good PRF difference image offsets

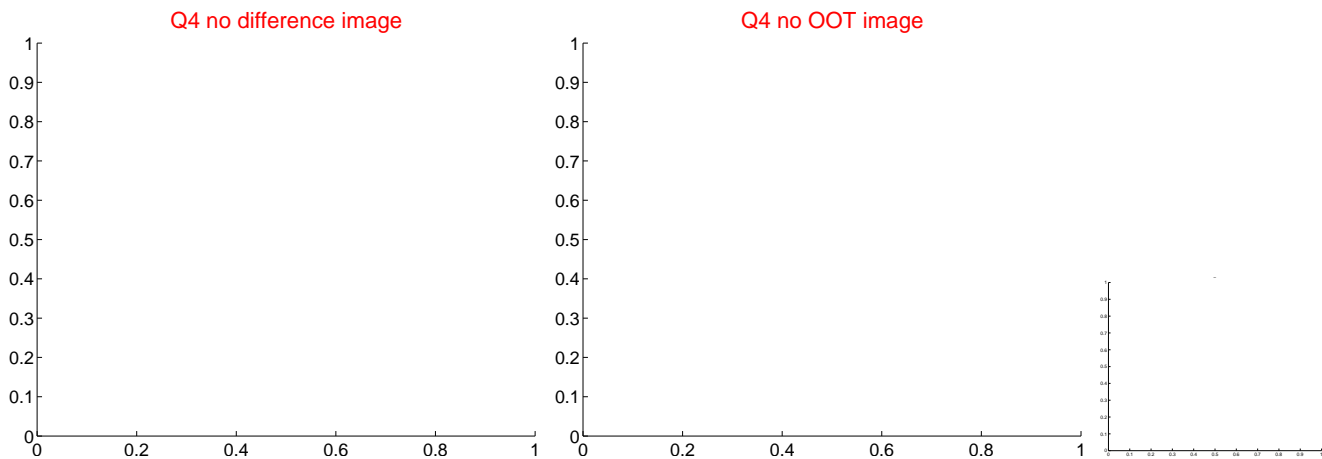
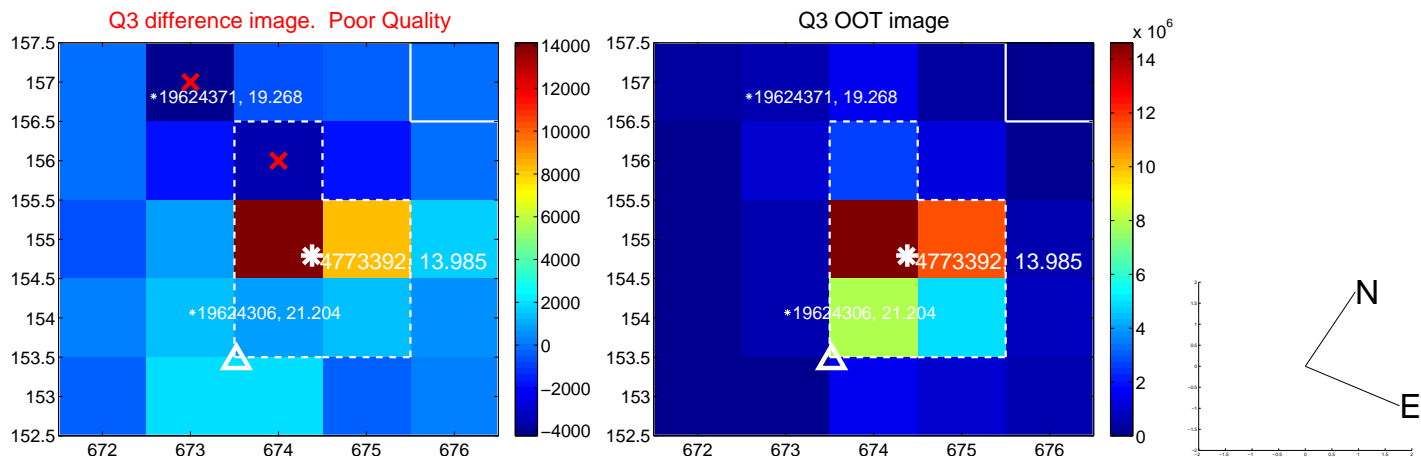
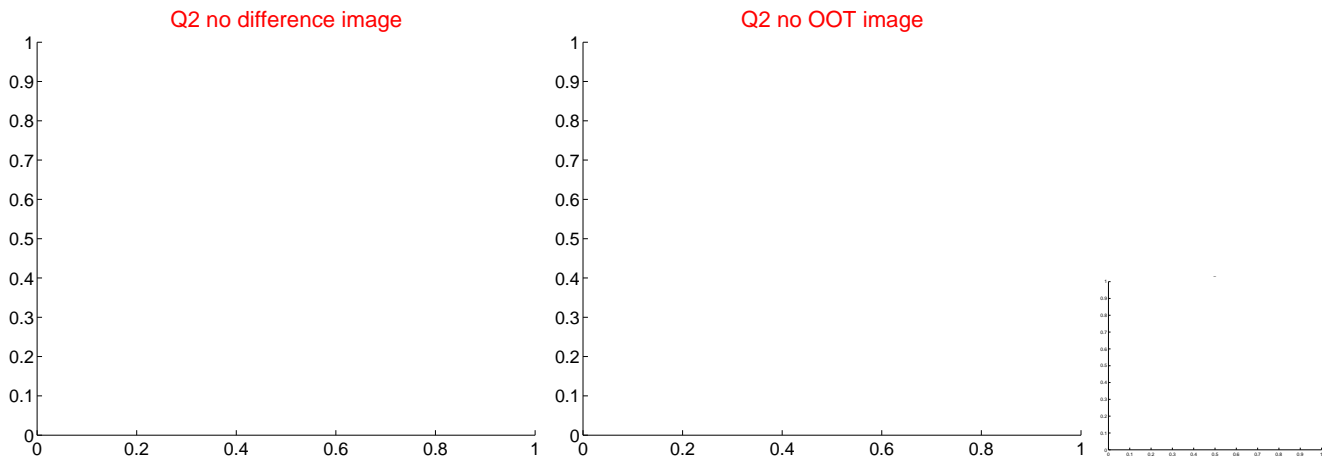
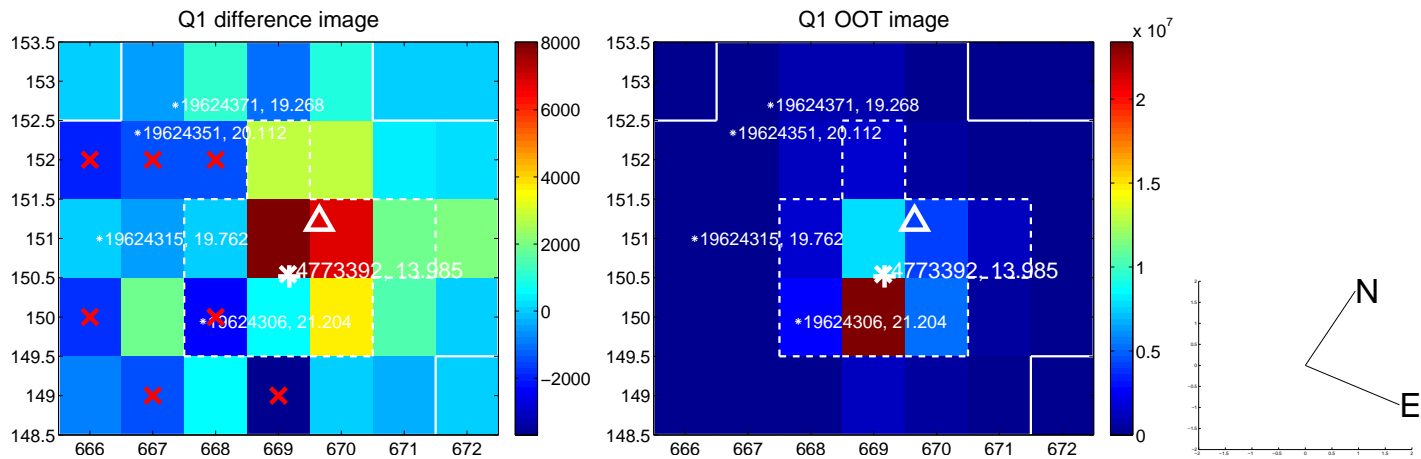
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.919 ± 0.806	1.14	0.234 ± 0.226	-0.889 ± 0.845
PRF-fit source offset from KIC position	0.948 ± 0.625	1.52	0.334 ± 0.204	-0.887 ± 0.684
photometric centroid source offset	0.61 ± 0.91	0.67	0.60 ± 0.91	-0.11 ± 1.02

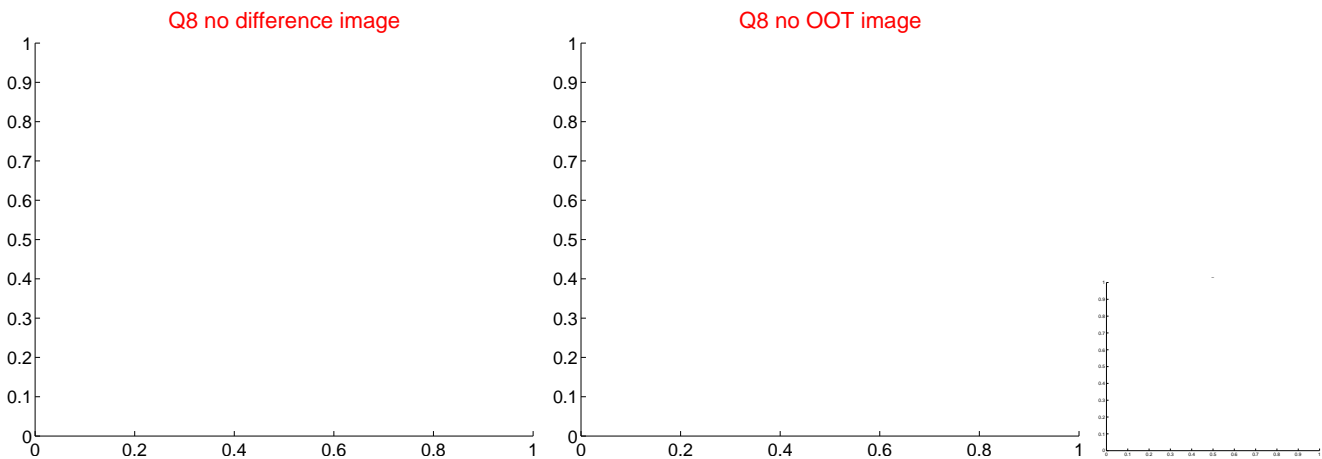
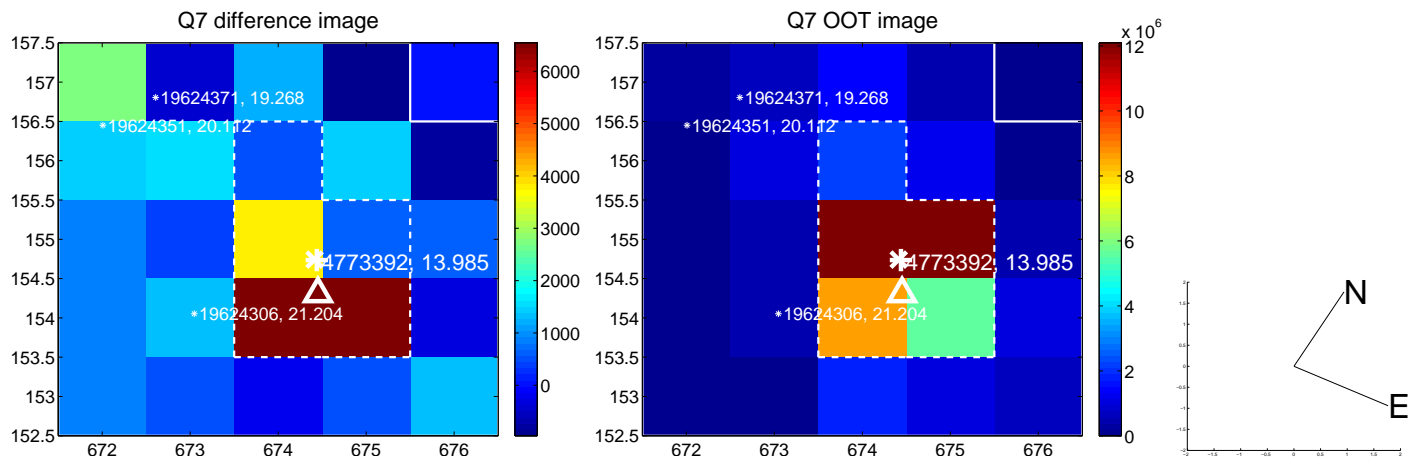
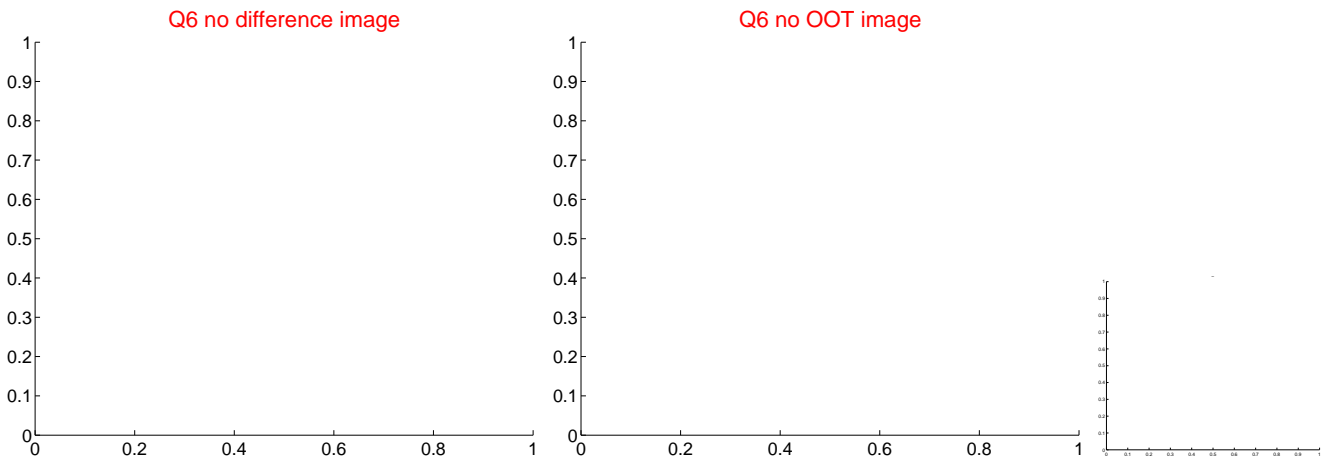
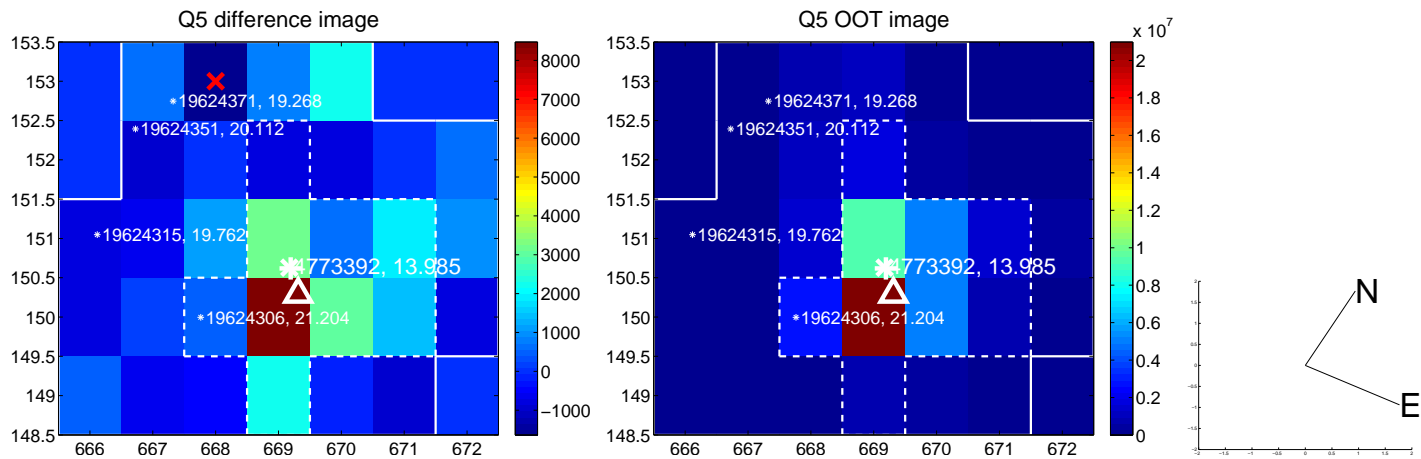


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

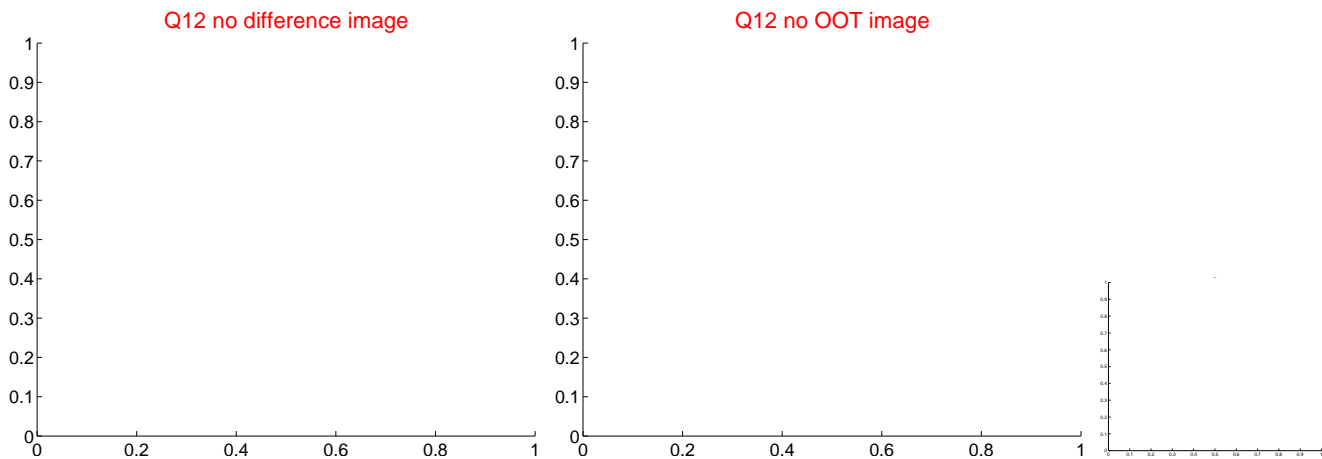
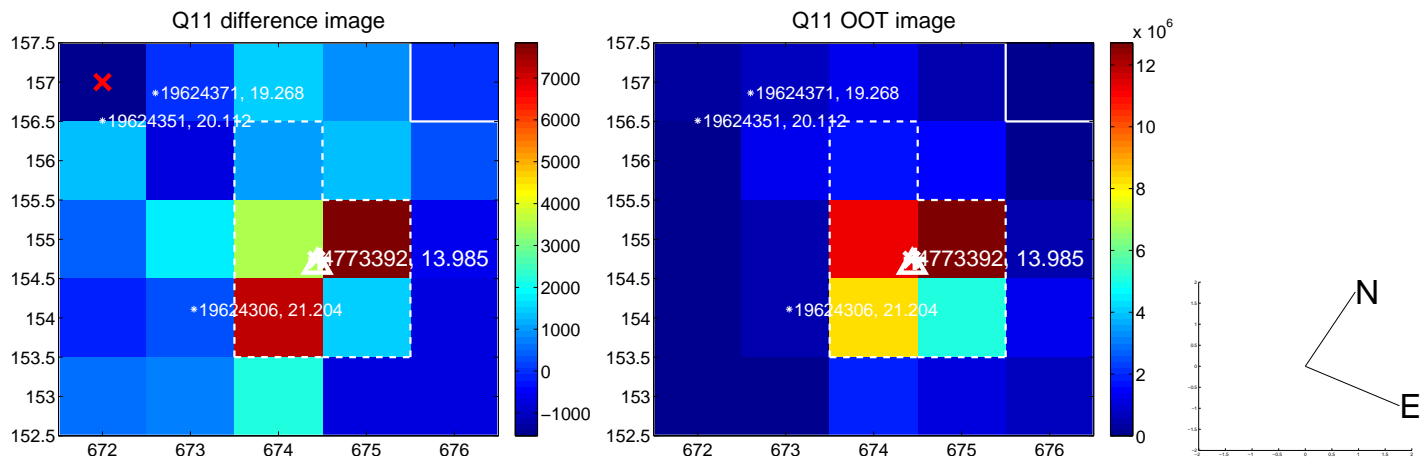
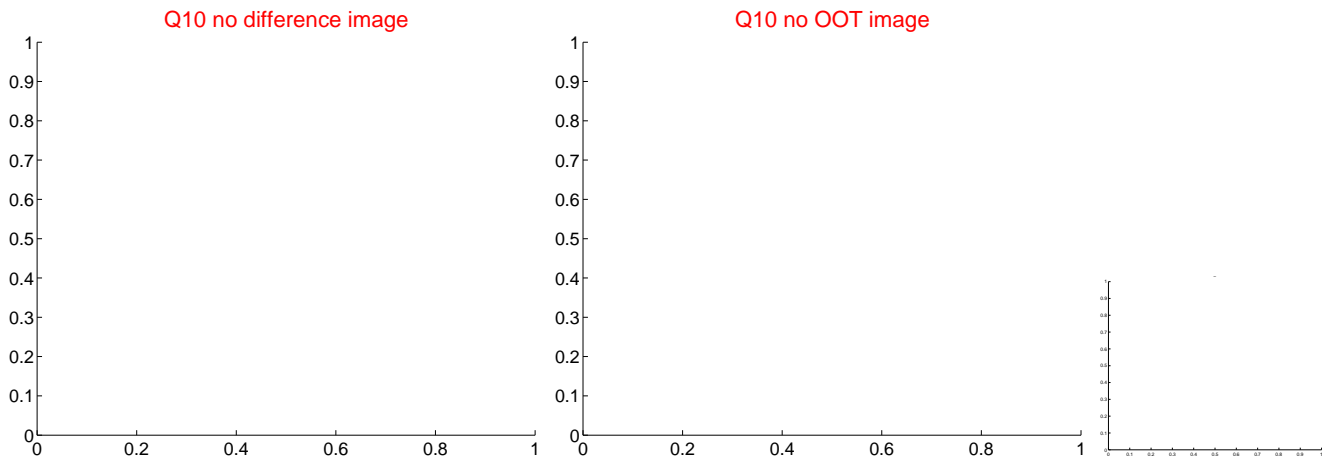
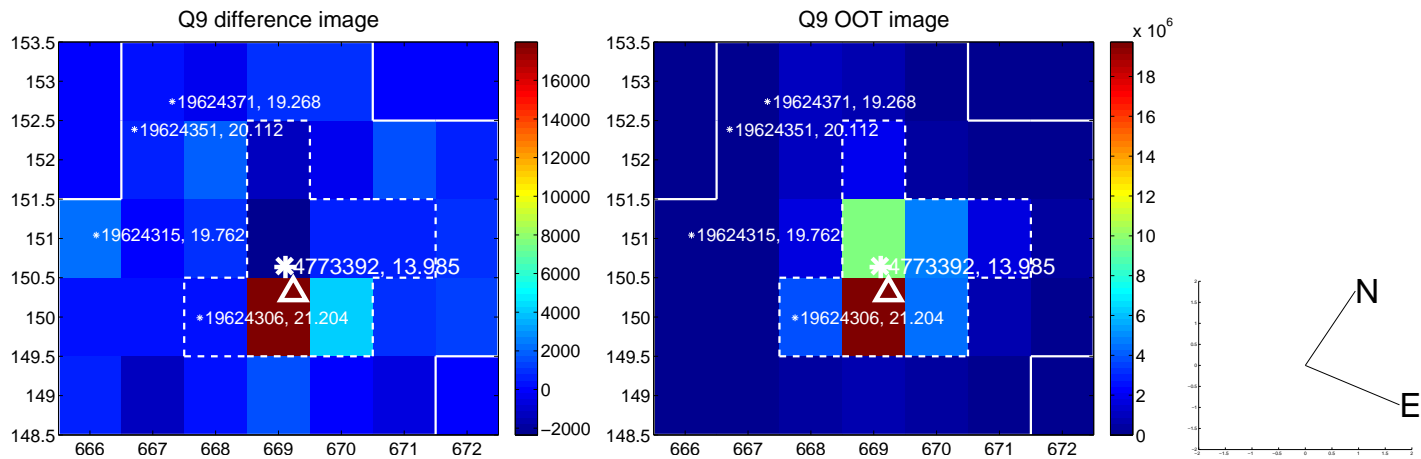
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



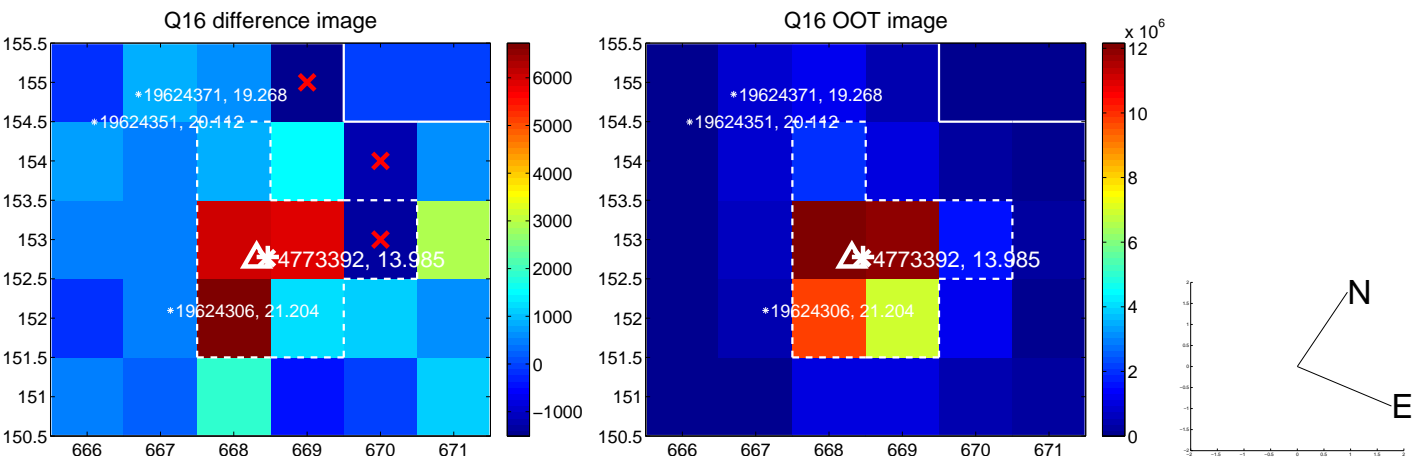
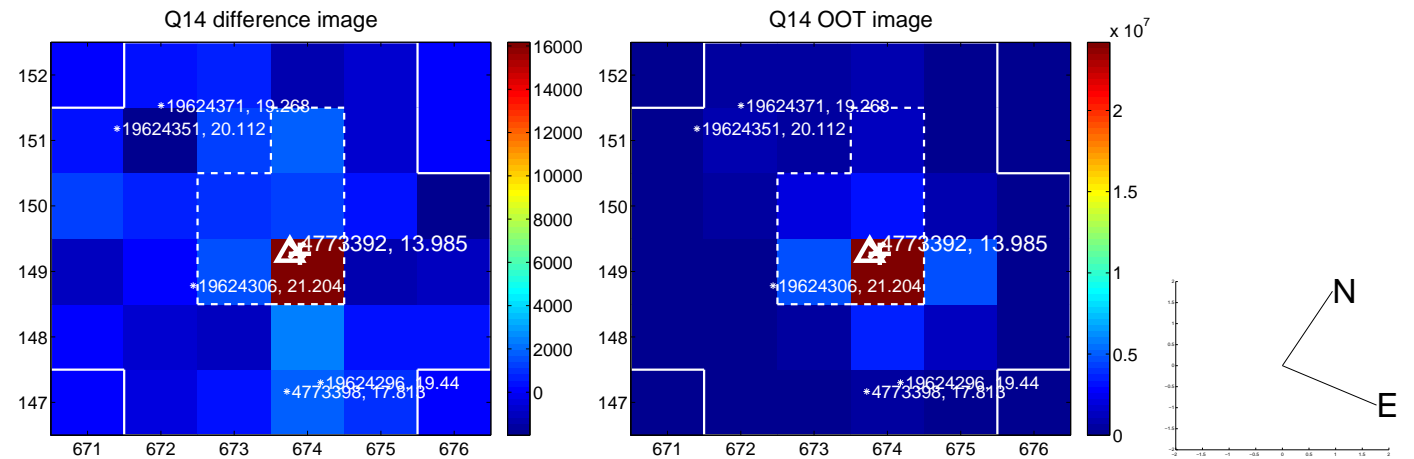
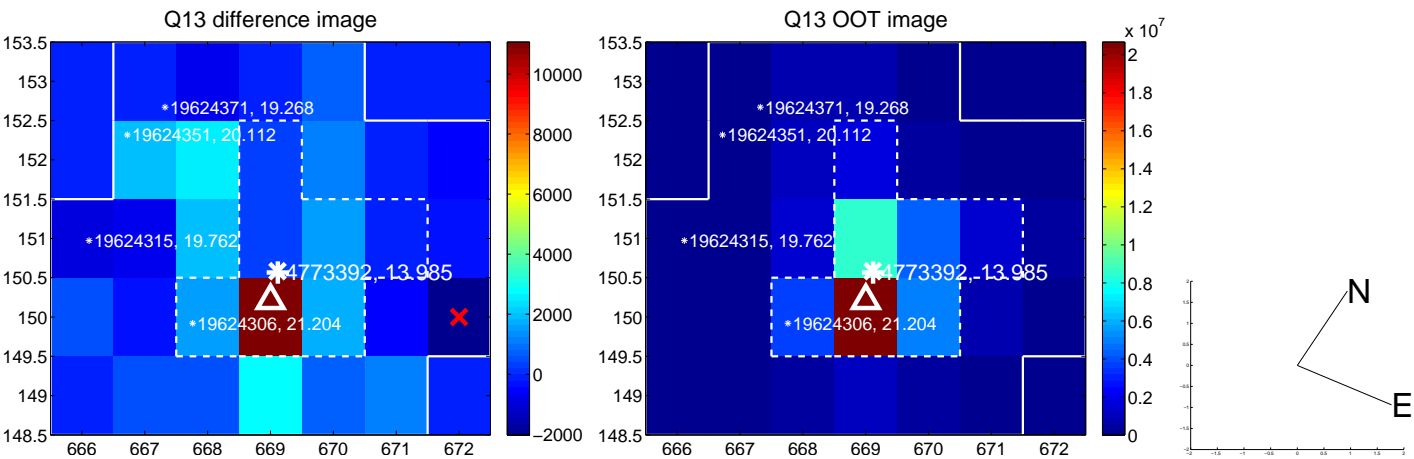
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



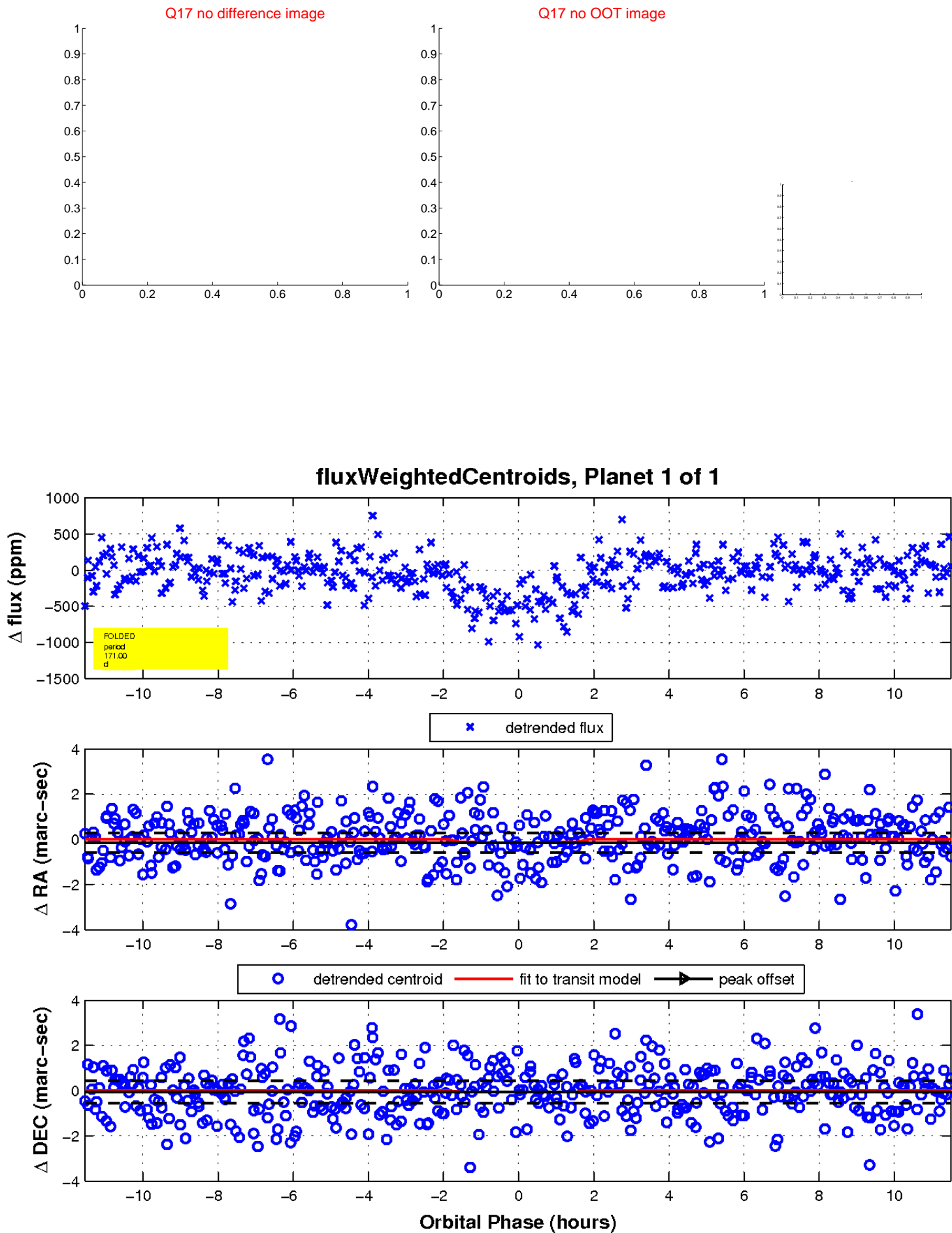
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

