

KIC 009992325

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})
009992325-01	OBS	2205.01	24.086210	148.202715	1007.0	2.606	15.8	17.7	0.77	4973	3.12	14.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009992325-01	OBS	PC	1.00	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.

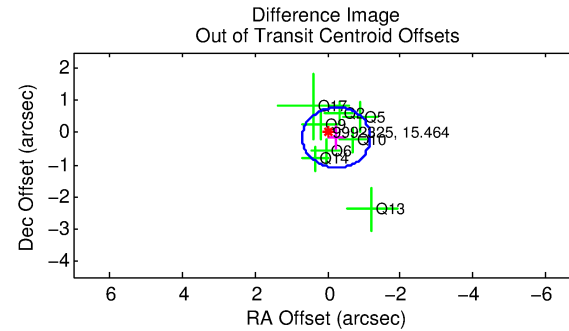
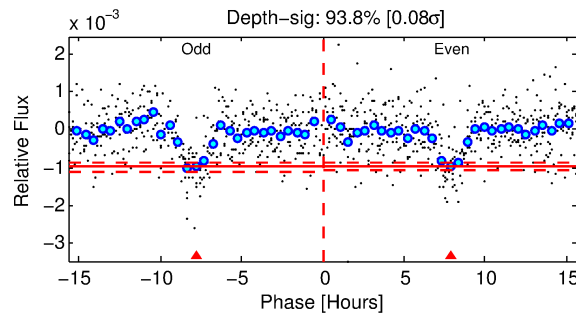
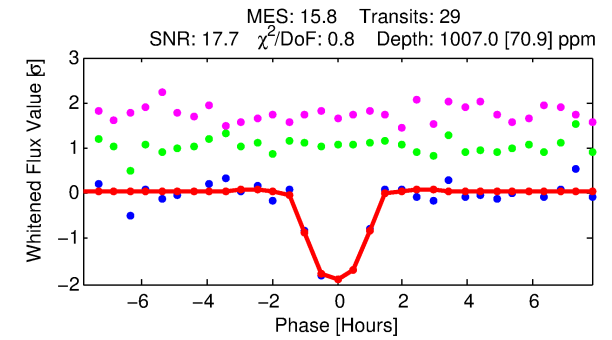
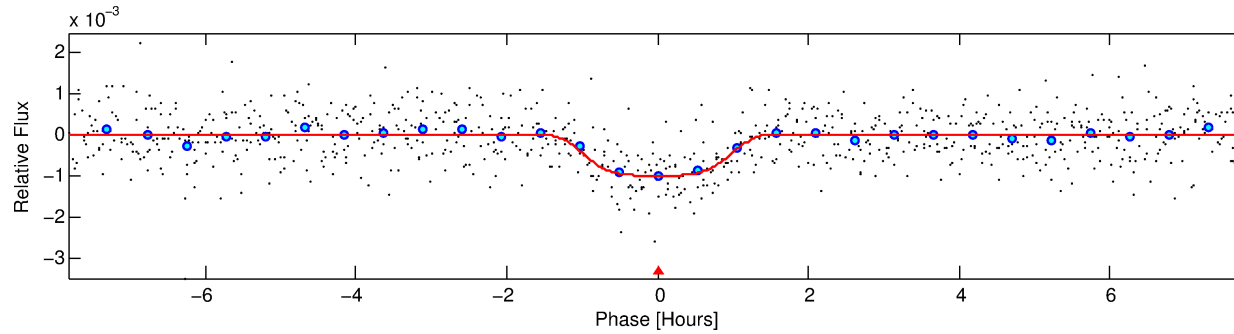
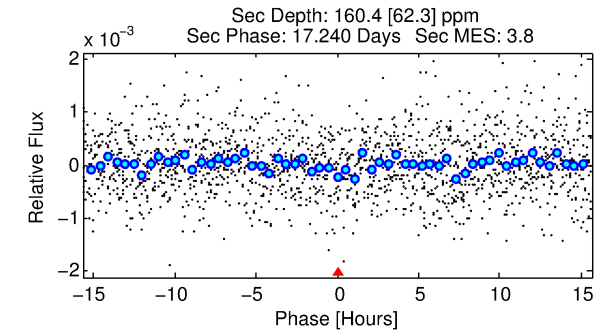
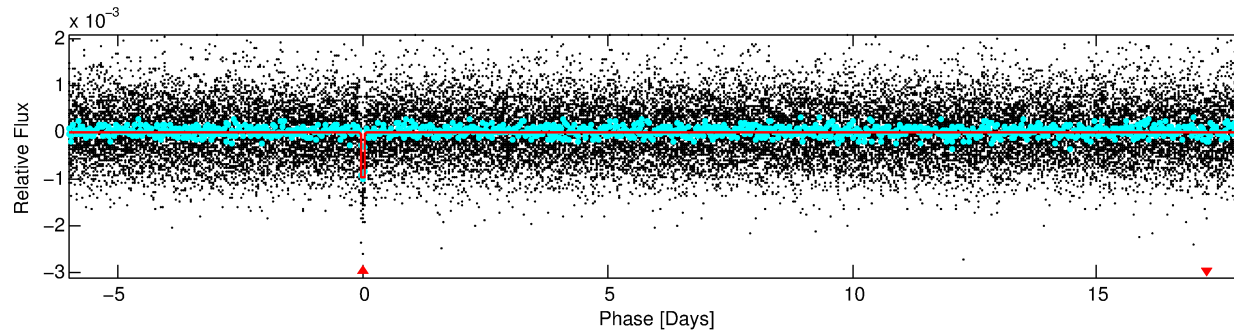
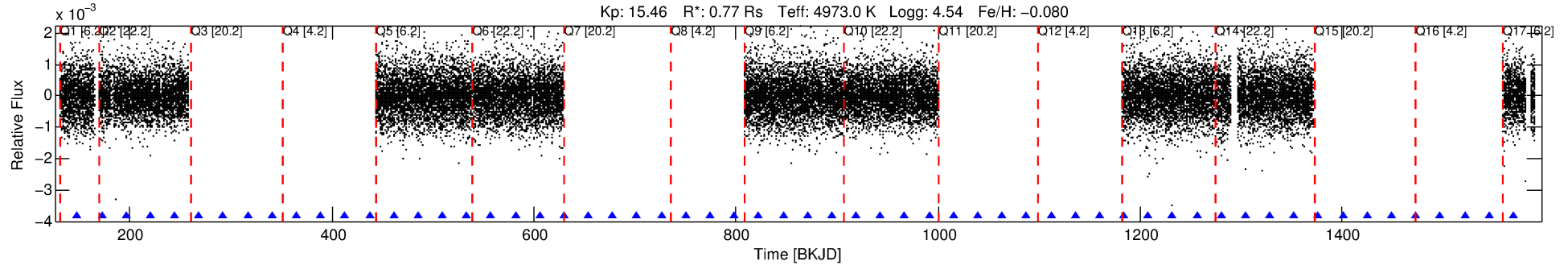
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009992325-01

No Significant Match Found

DV One-Page Summary

KIC: 9992325 Candidate: 1 of 1 Period: 24.086 d
KOI: K02205.01 Corr: 0.925



DV Fit Results:

Period = 24.08621 [0.00012] d
Epoch = 148.2027 [0.0037] BKJD
Rp/R* = 0.0372 [0.0037]
a/R* = 32.10 [10.19]
b = 0.93 [0.05]
Seff = 14.81 [2.88]
Teq = 500 [24] K
Rp = 3.12 [0.45] Re
a = 0.1477 [0.0129] AU
Ag = 198.43 [90.34] [2.19σ]
Teffp = 2903 [334] K [7.17σ]

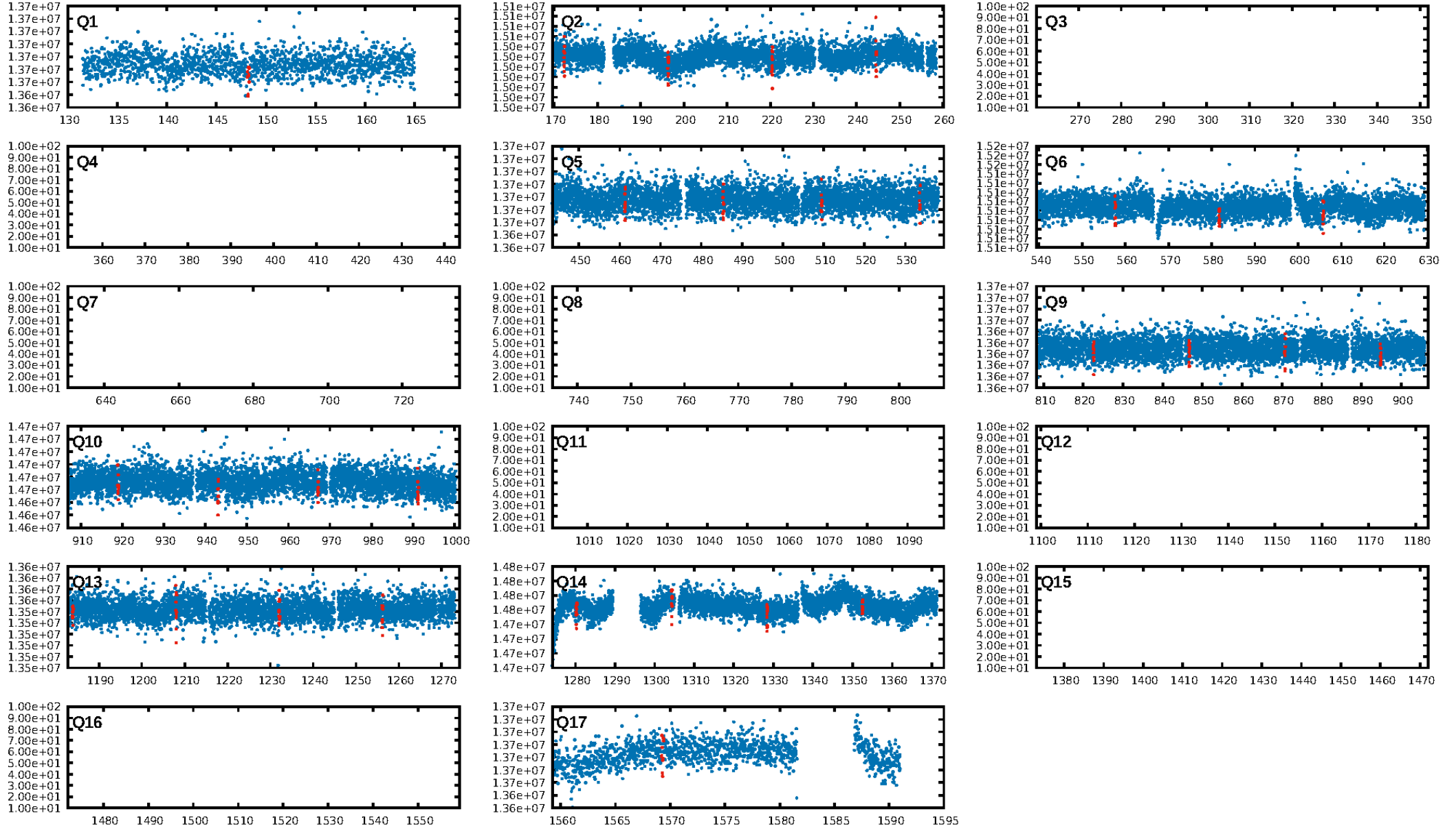
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.39e-54
RollingBand-fgt: 1.00 [27/27]
GhostDiagnostic-chr: 2.046
Centroid-sig: 45.6%
Centroid-so: 0.677 arcsec [0.76σ]
OotOffset-rm: 0.285 arcsec [0.91σ]
KicOffset-rm: 0.196 arcsec [0.73σ]
OotOffset-st: 4/0/0/4 [8]
KicOffset-st: 4/0/0/4 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 1.00 [9/9]

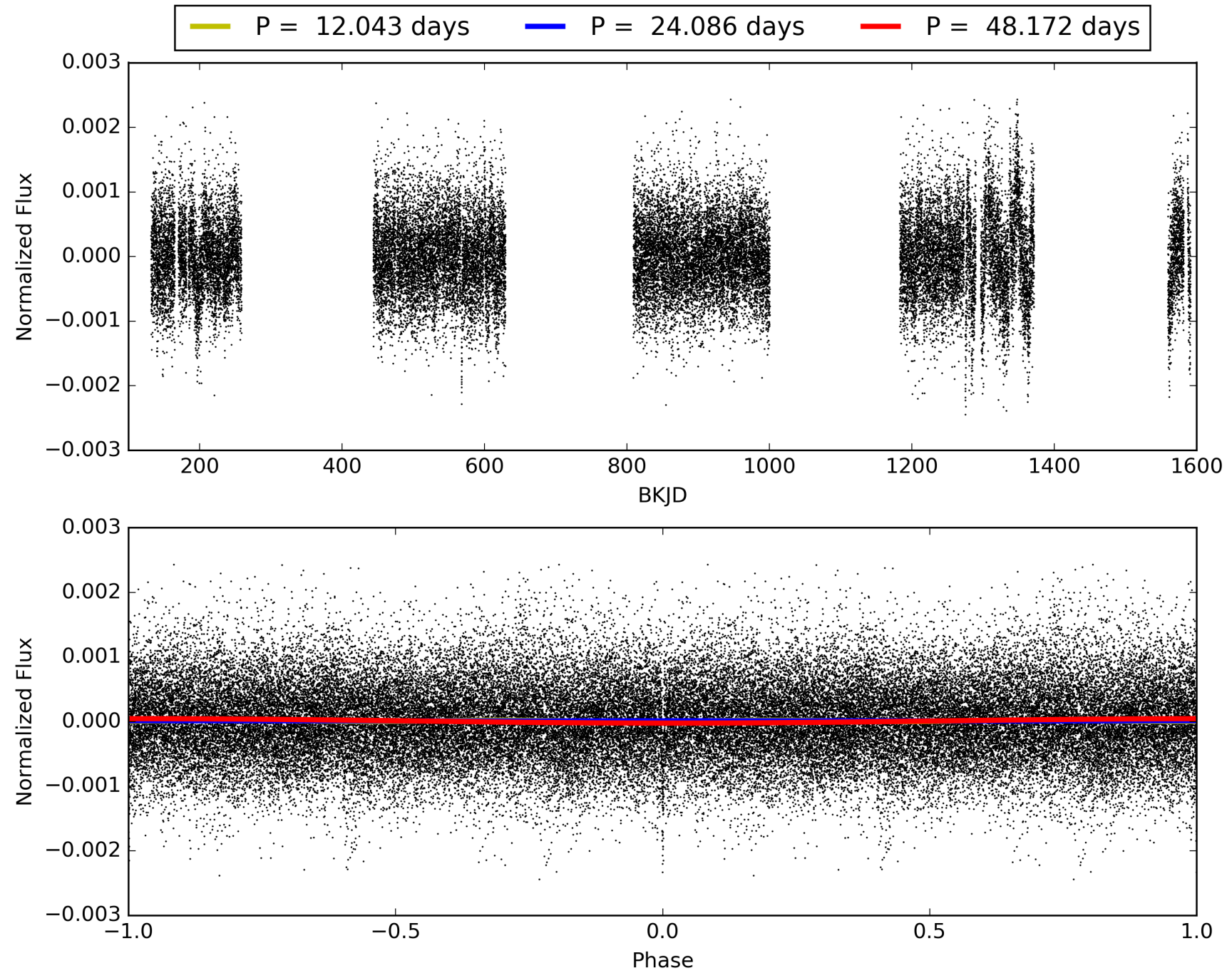
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:31:14 Z

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

TCE 009992325-01, PDC Light Curves

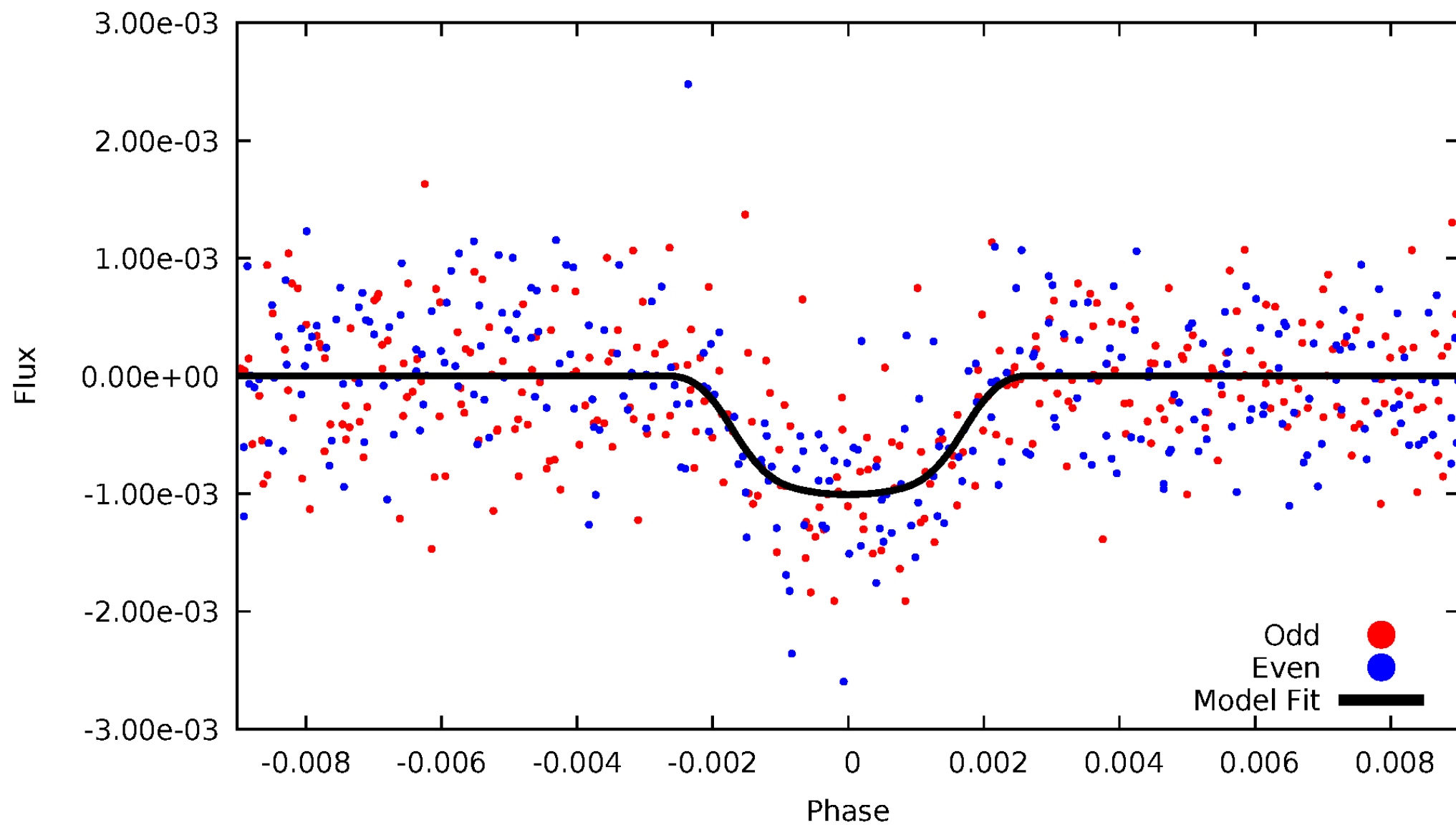


TCE 009992325-01



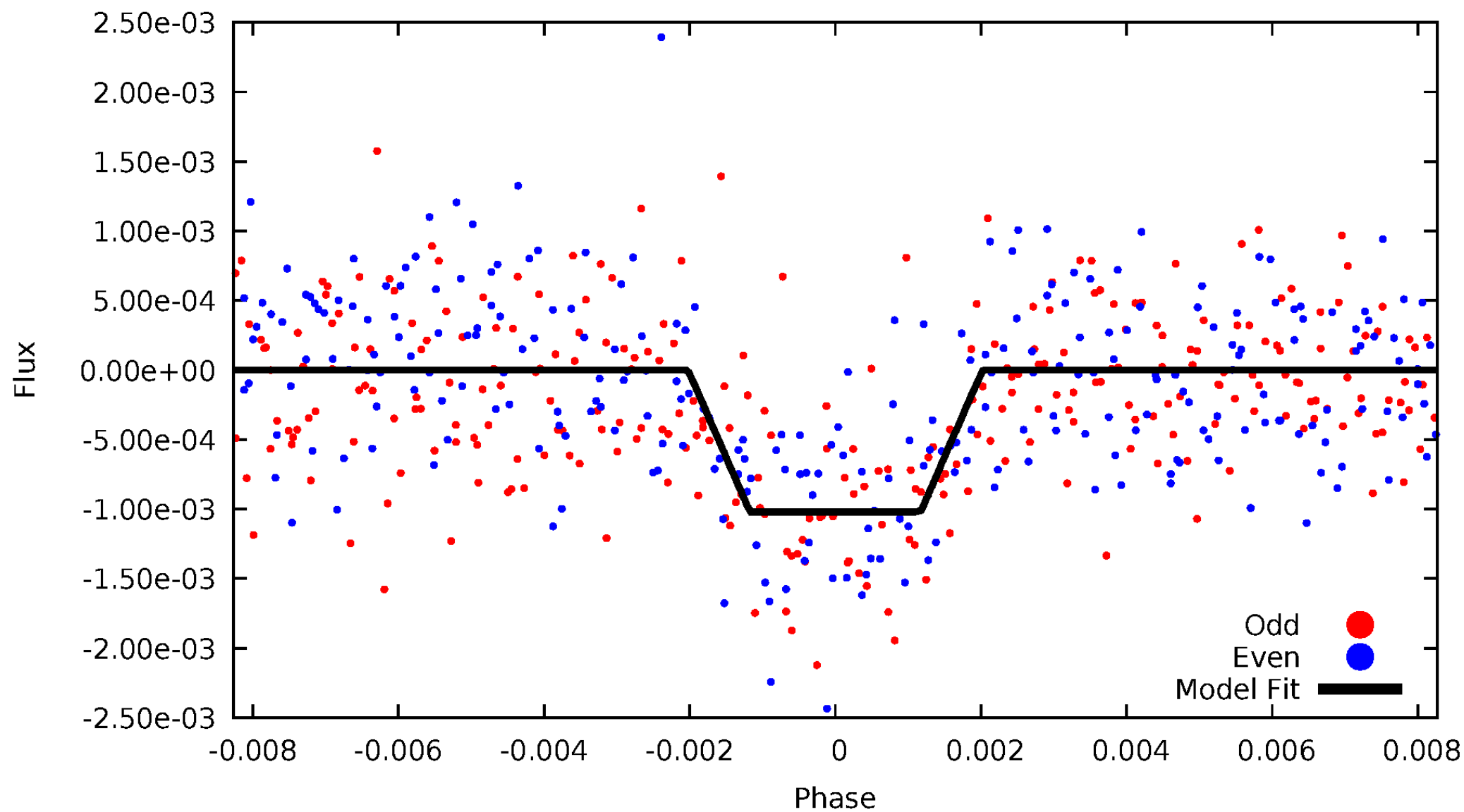
DV Odd/Even

TCE 009992325-01



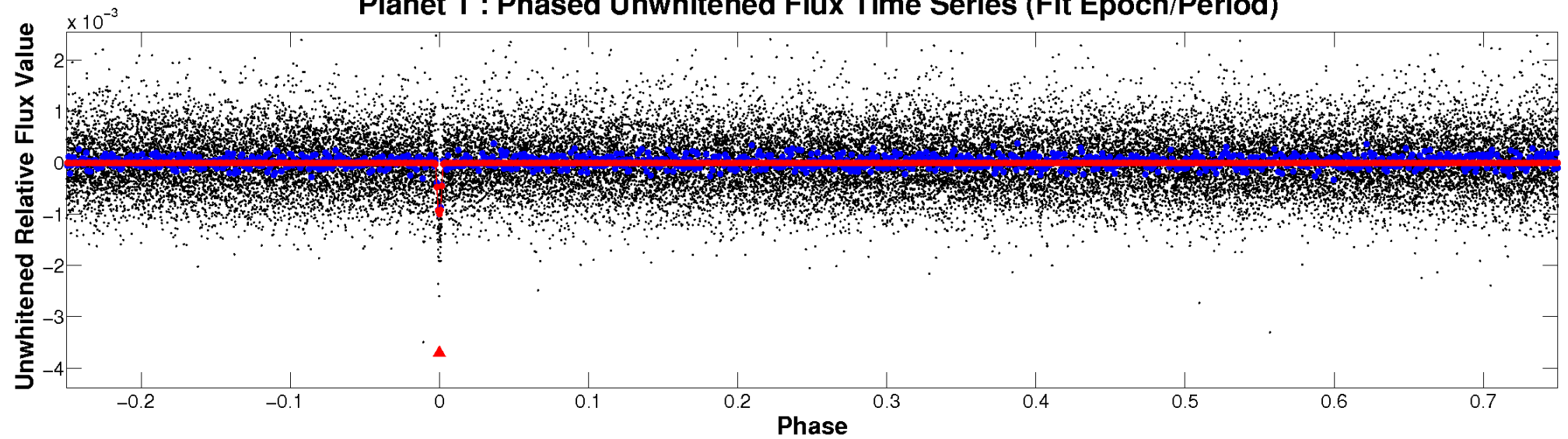
ALT Odd/Even

TCE 009992325-01

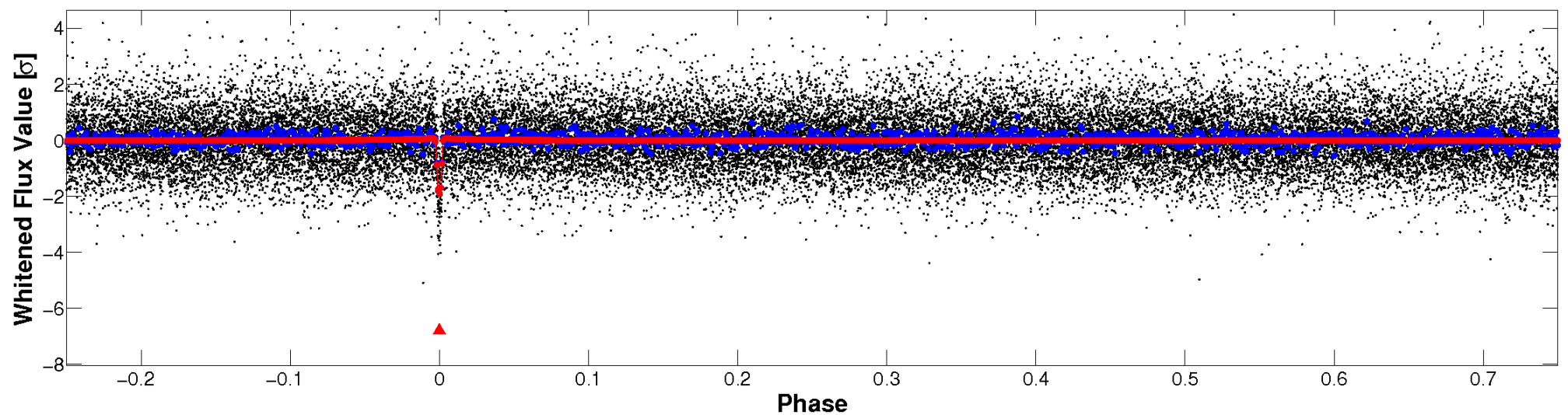


Non-Whitened Vs. Whitened Light Curve

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

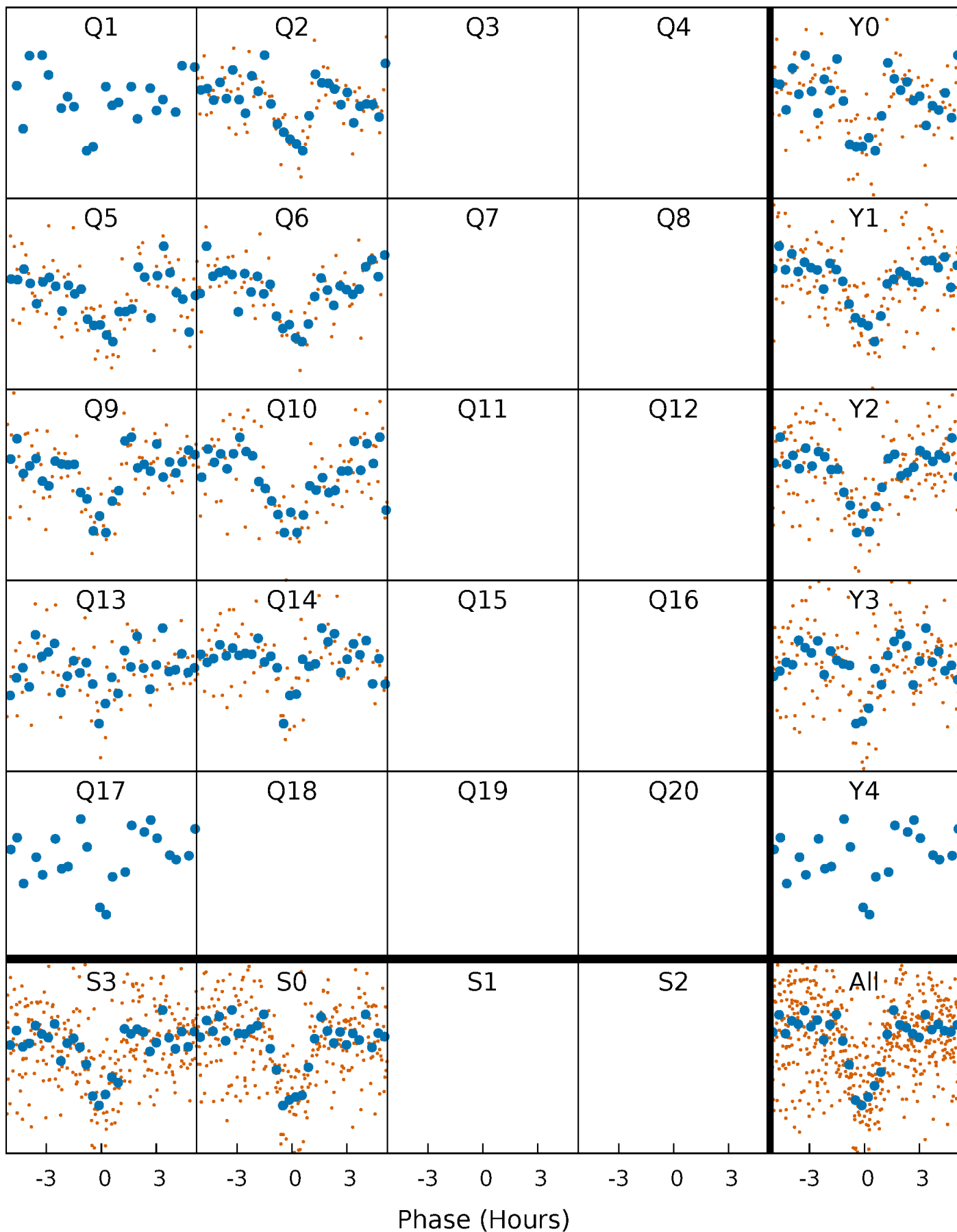


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



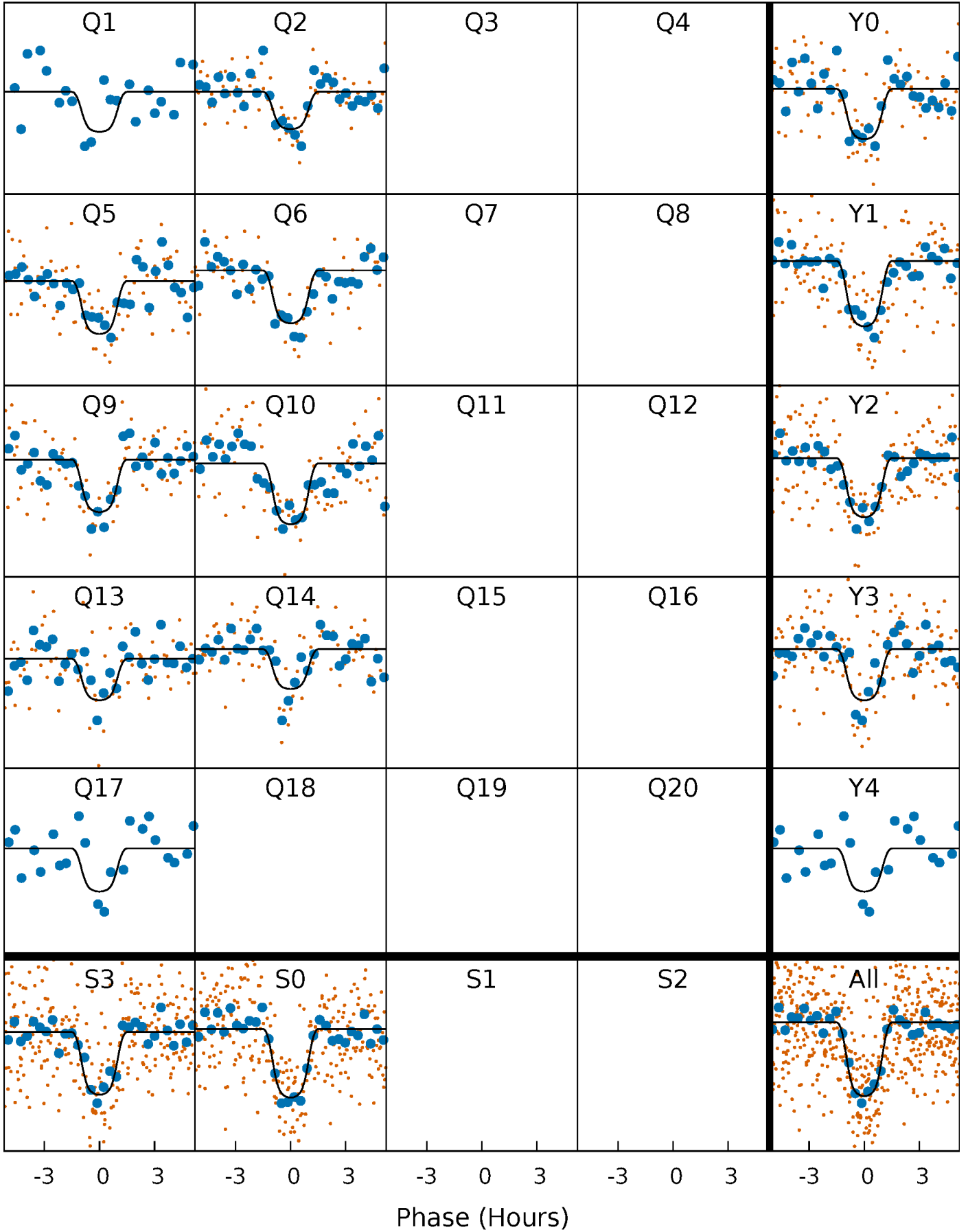
PDC Quarter-Phased Transit Curves

TCE 009992325-01 P= 24.086210 Days $T_0=148.202715$ (BKJD)



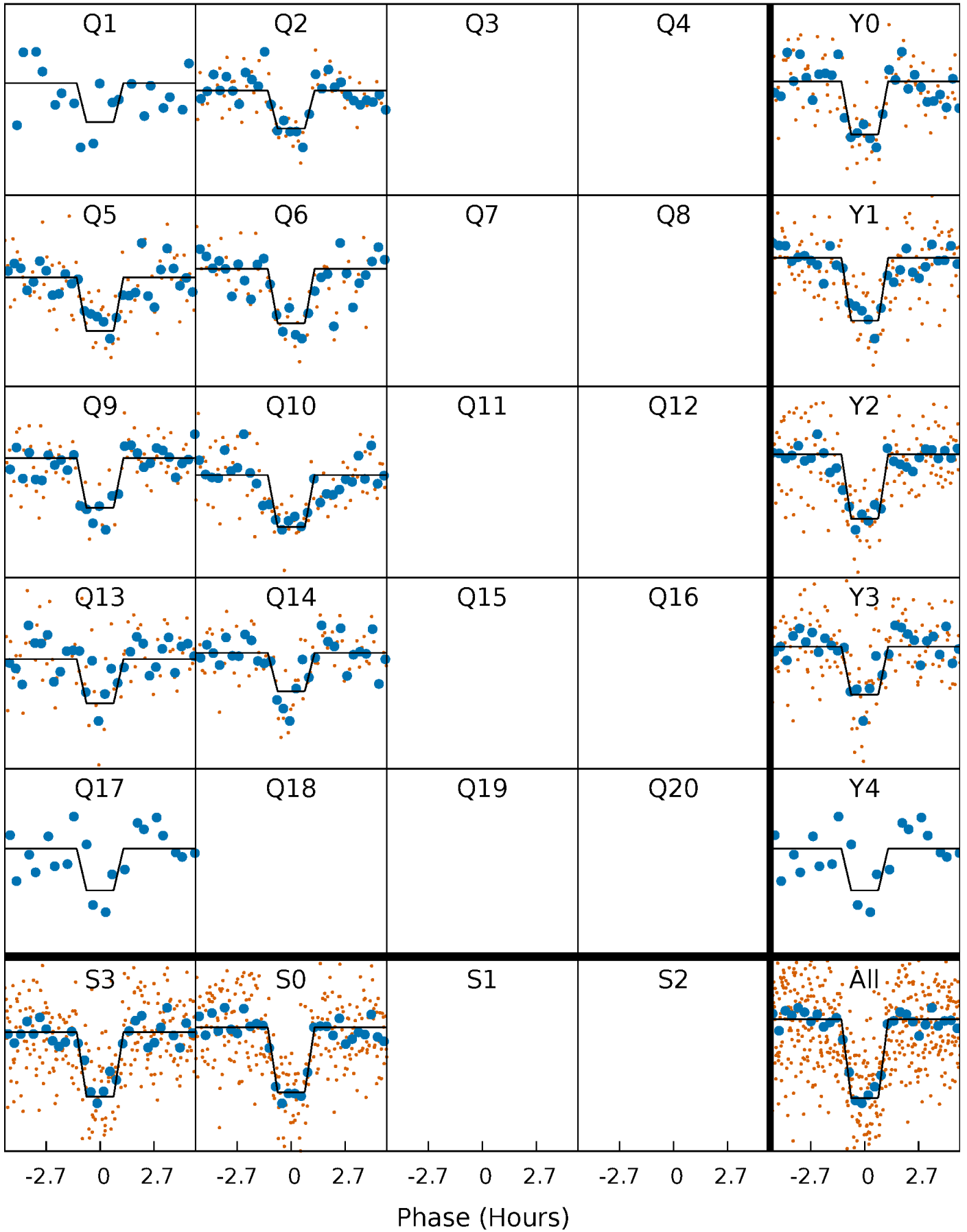
DV Quarter-Phased Transit Curves

TCE 009992325-01 P= 24.086210 Days $T_0=148.202715$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

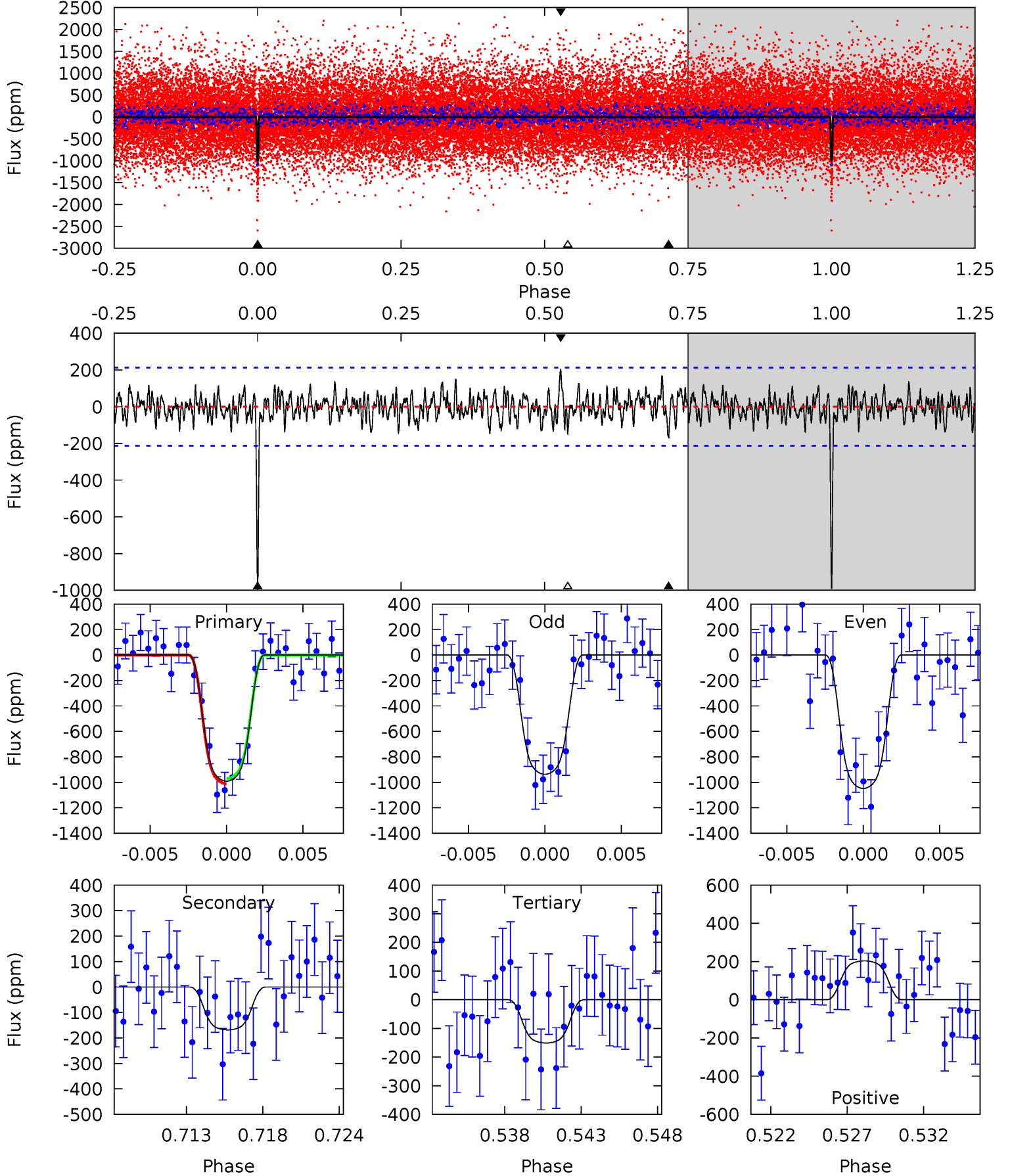
TCE 009992325-01 P= 24.086222 Days $T_0=148.203285$ (BKJD)



DV Model-Shift Uniqueness Test

009992325-01, P = 24.086210 Days, E = 124.116505 Days

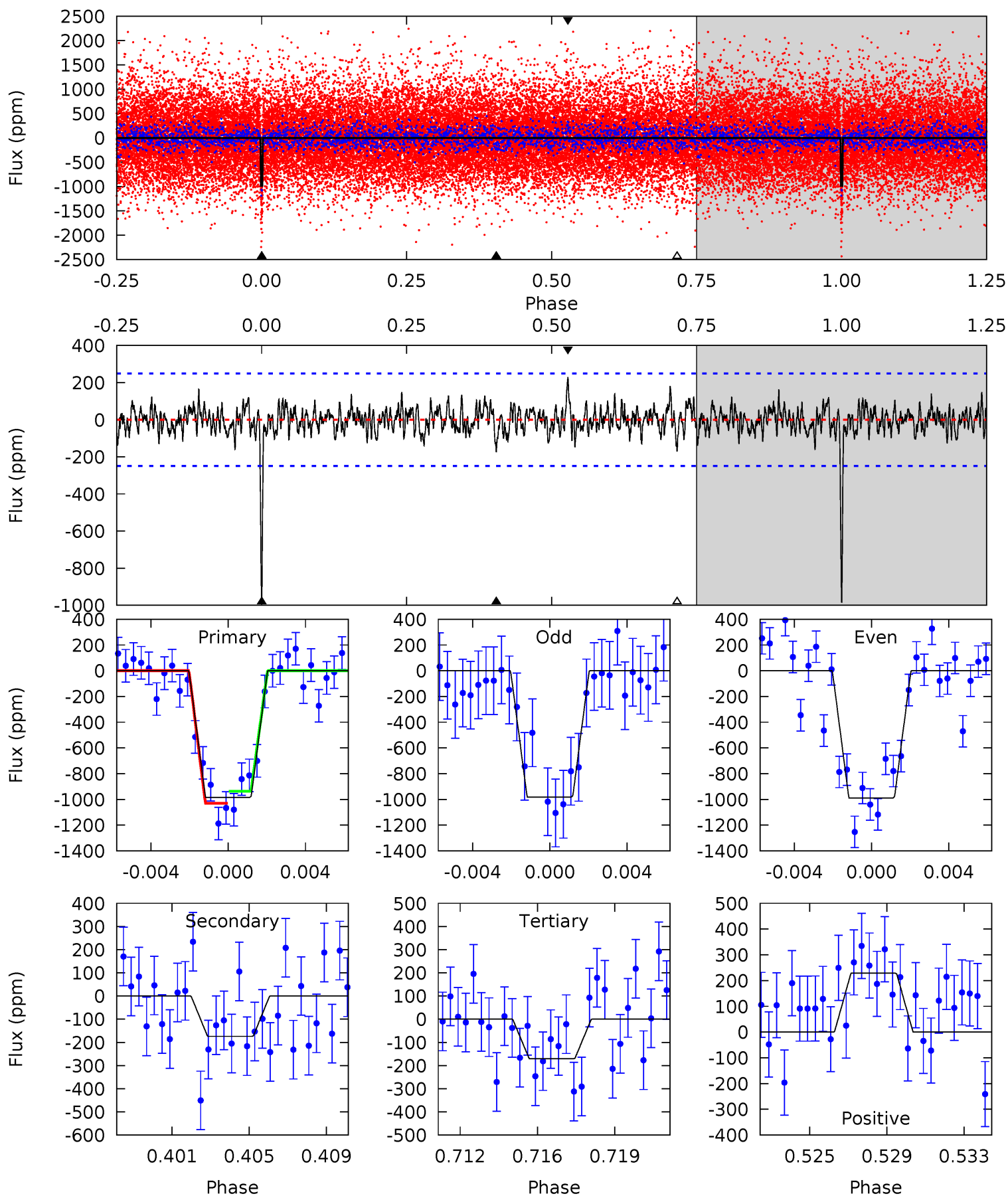
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	4.07	3.65	4.92	5.15	2.79	1.34	20.3	19.0	0.42	-0.86	1.35	0.91	0.17	0.49



Alt Model-Shift Uniqueness Test

009992325-01, P = 24.086222 Days, E = 124.117063 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	3.63	3.56	4.77	5.20	2.88	1.15	17.0	15.8	0.07	-1.13	0.08	0.94	0.19	0.98



Stellar Parameters For KIC 009992325

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4973^{+181}_{-161}	$4.537^{+0.071}_{-0.052}$	$-0.080^{+0.300}_{-0.300}$	$0.768^{+0.071}_{-0.079}$	$0.741^{+0.095}_{-0.055}$	$2.305^{+0.770}_{-0.402}$
	+4%/-3%	+2%/-1%	+375%/-375%	+9%/-10%	+13%/-7%	+33%/-17%
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 009992325-01 / KOI 2205.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-168 ± 41	$3.13^{+0.34}_{-0.37}$	698^{+30}_{-29}	3399^{+193}_{-182}	205^{+84}_{-57}
Alt.	-174 ± 48	$2.68^{+0.37}_{-0.34}$	699^{+31}_{-29}	3593^{+243}_{-223}	292^{+124}_{-91}

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

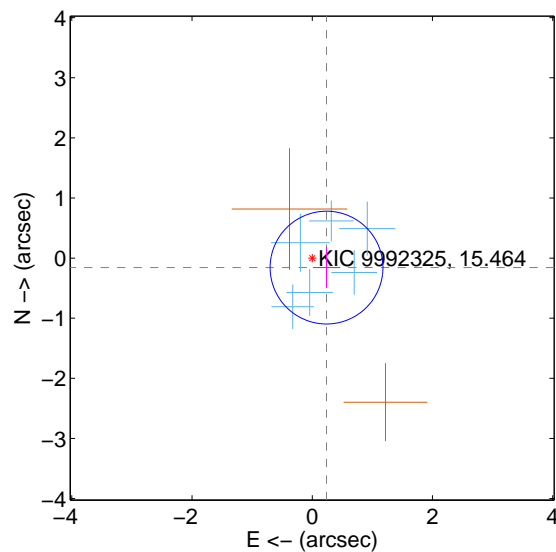
Supplemental centroid analysis for 009992325-01. Kepler magnitude: 15.46. Transit SNR 17.71

There are 6 quarters with good PRF difference image offsets

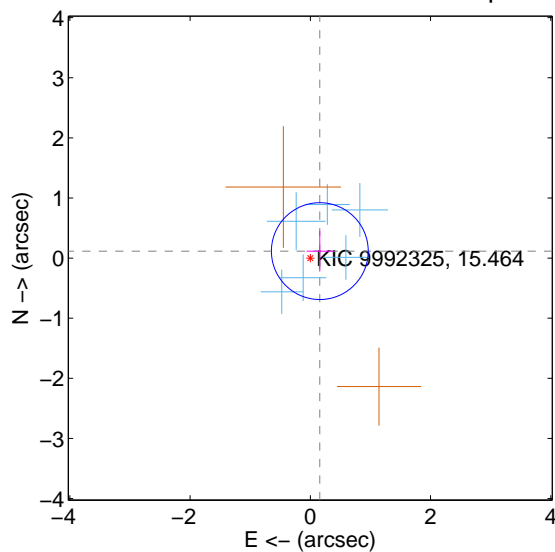
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.285 ± 0.313	0.91	-0.238 ± 0.228	-0.158 ± 0.338
PRF-fit source offset from KIC position	0.196 ± 0.268	0.73	-0.158 ± 0.221	0.116 ± 0.340
photometric centroid source offset	0.68 ± 0.89	0.76	0.65 ± 0.89	-0.20 ± 0.88

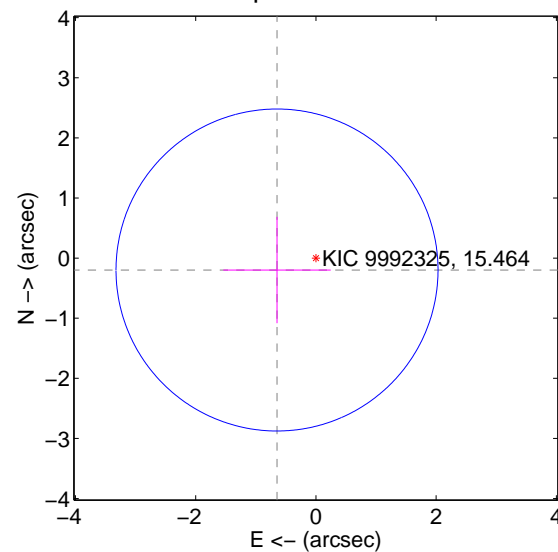
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

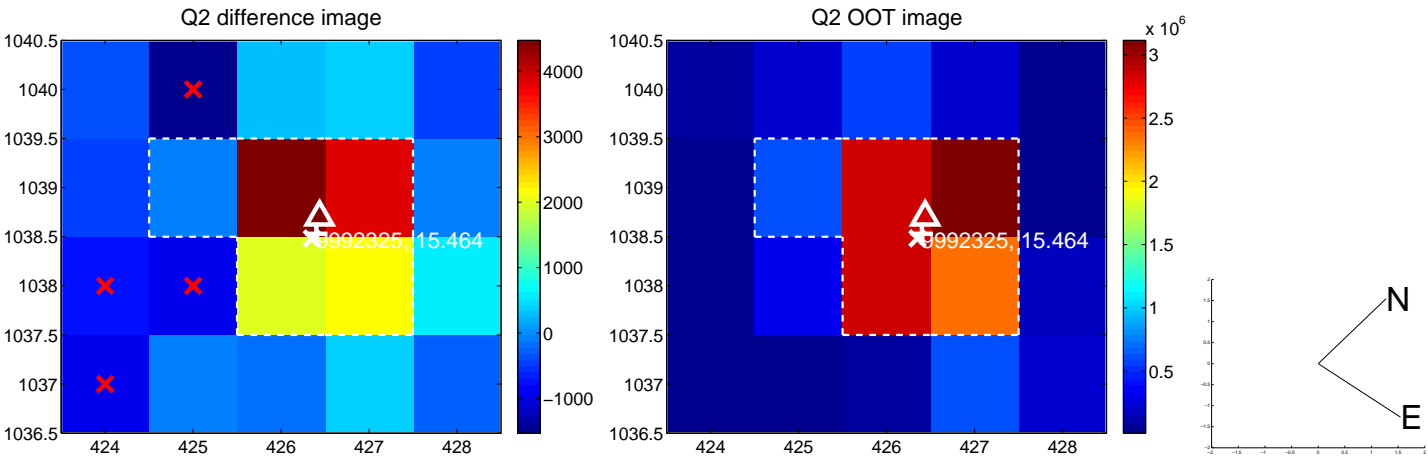
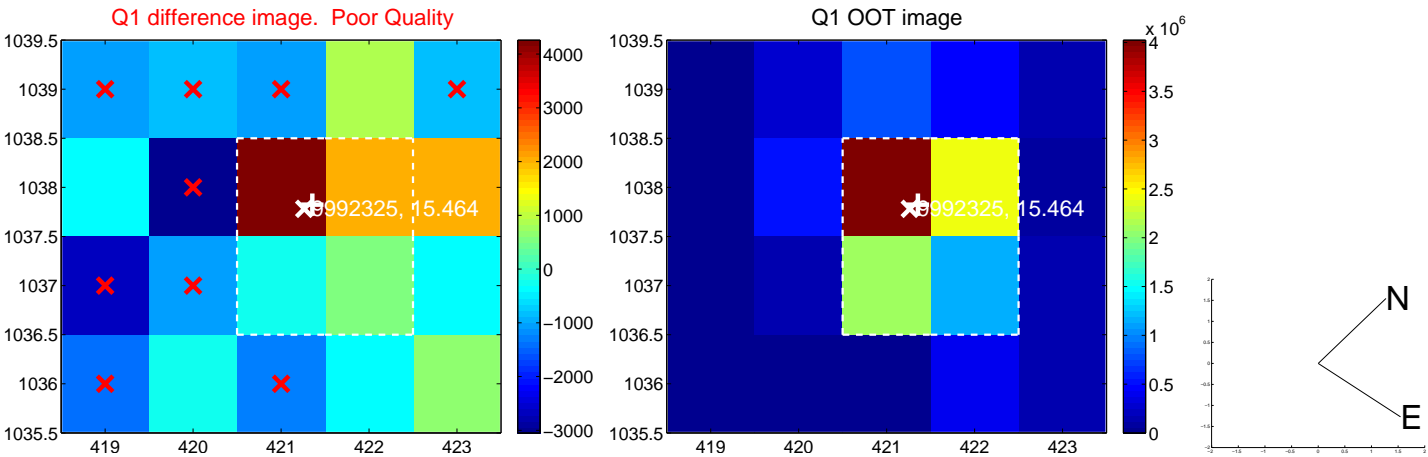


offset from photometric centroids

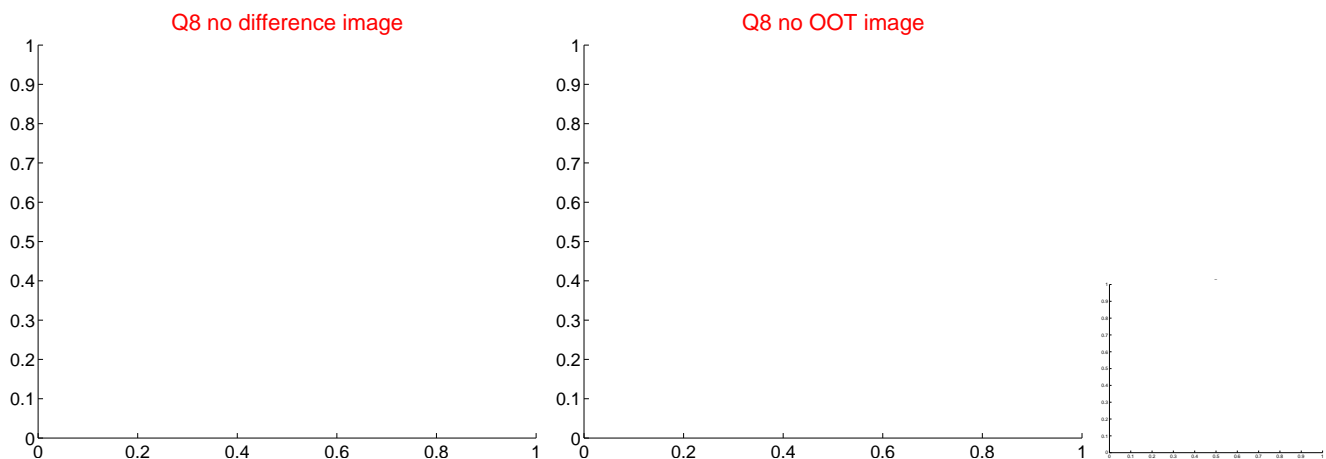
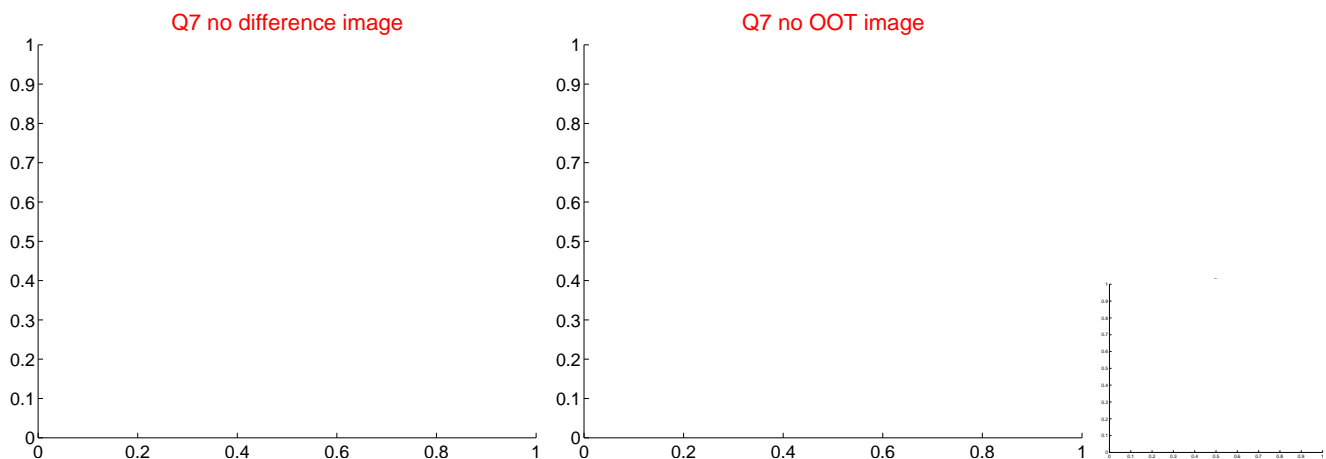
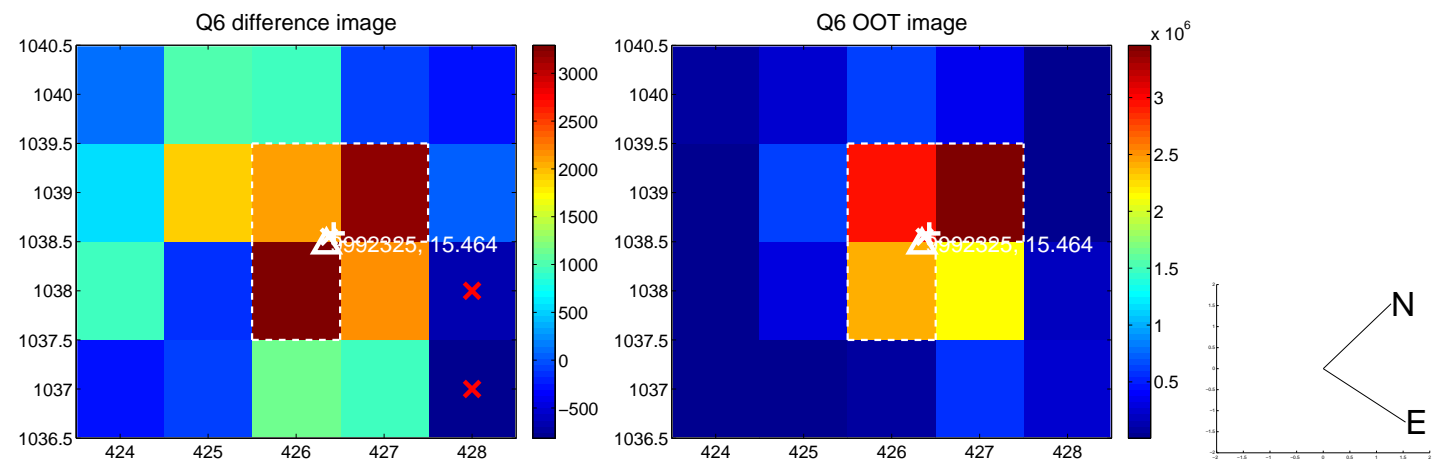
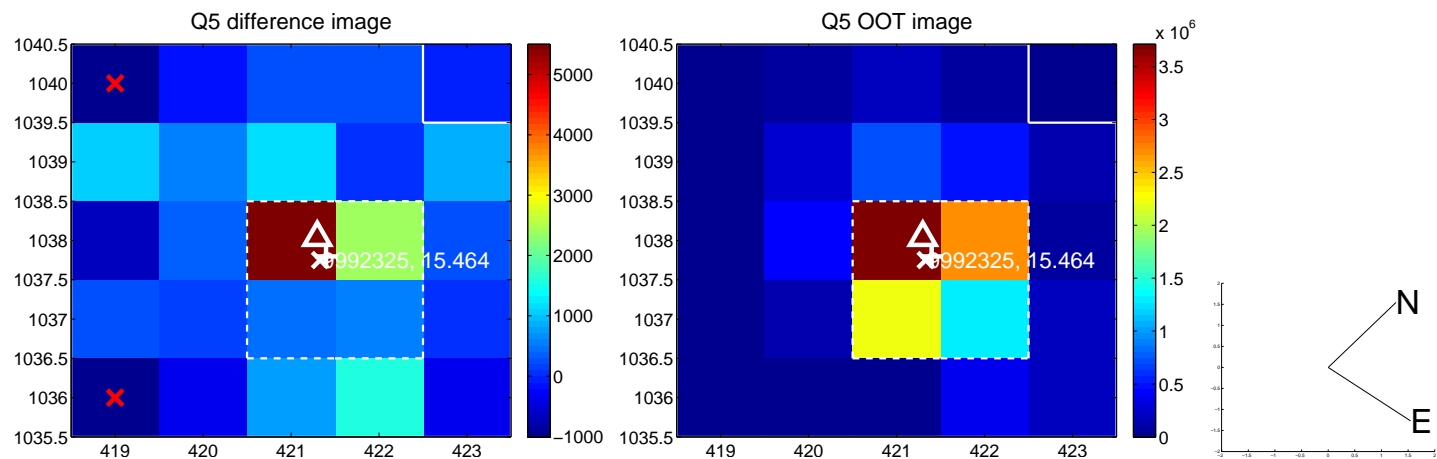


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

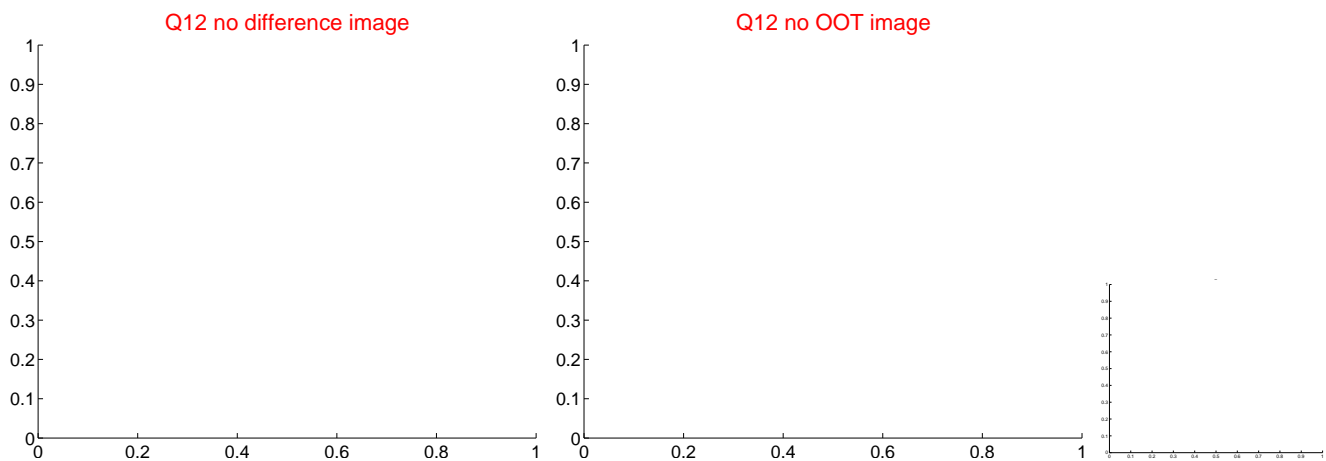
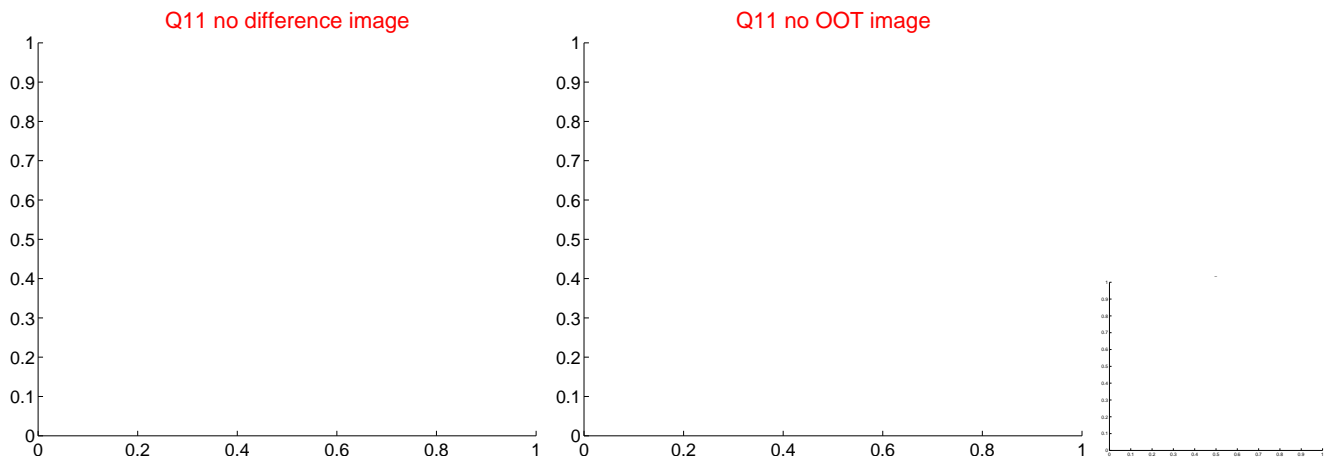
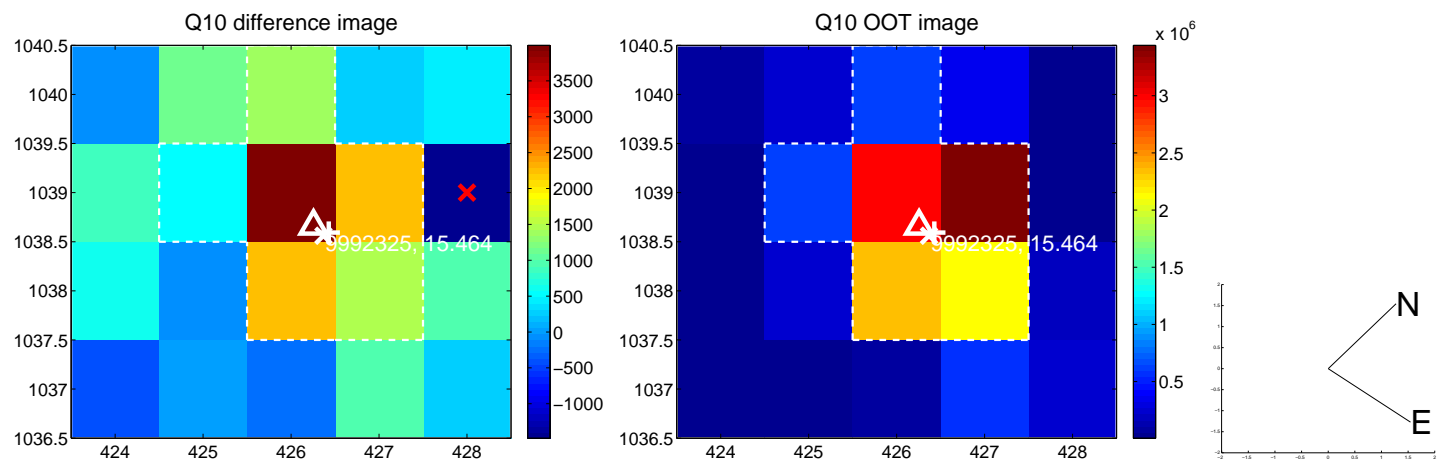
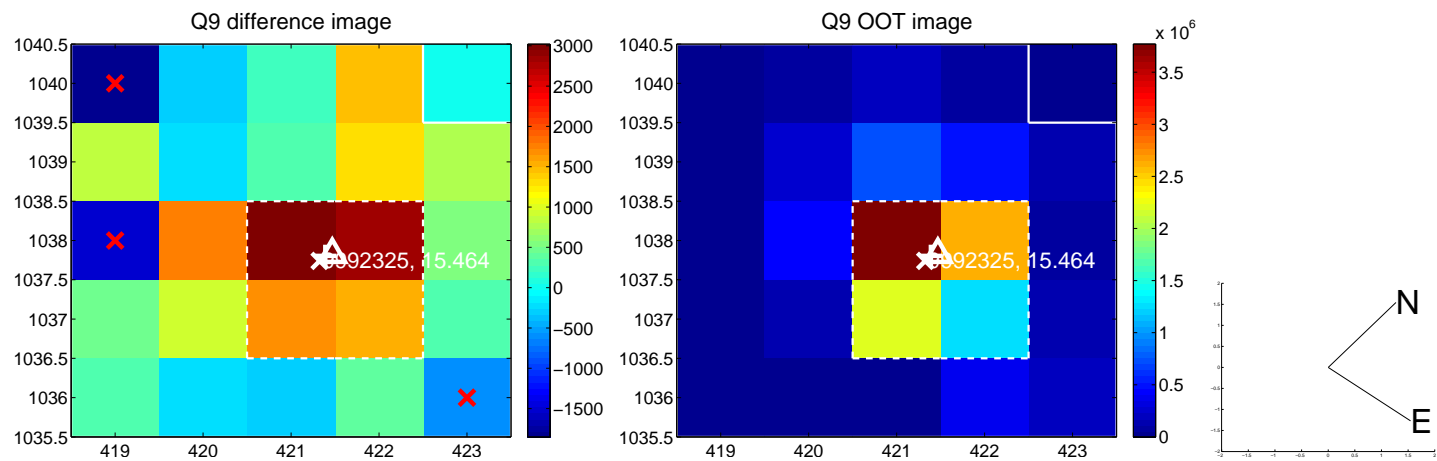
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



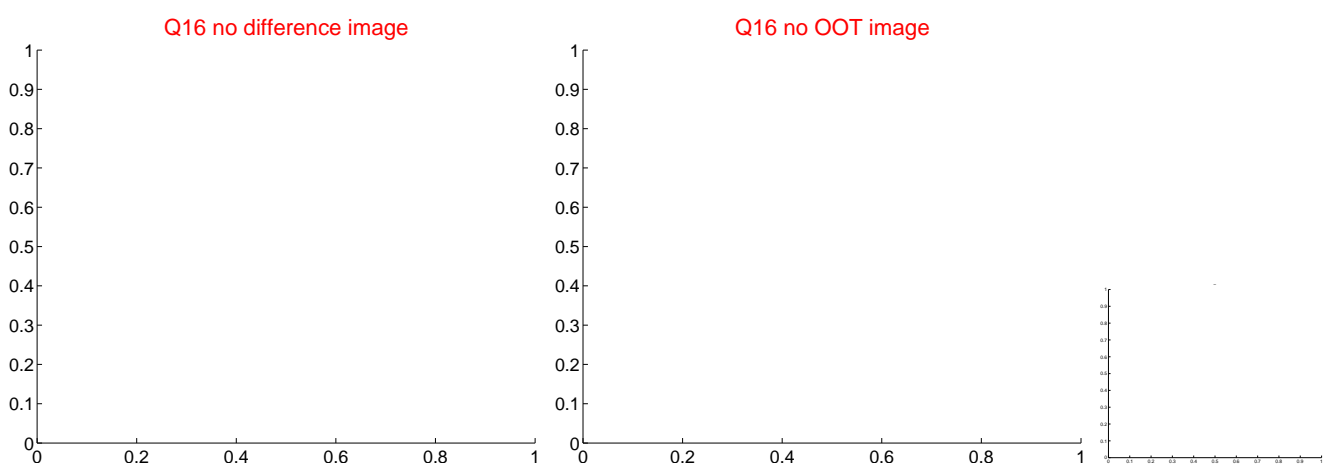
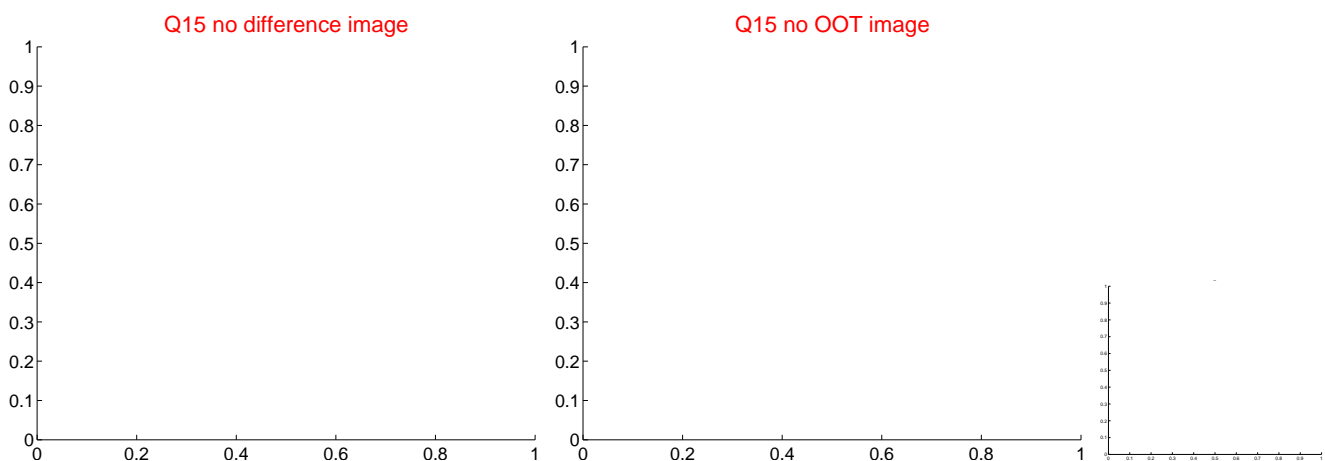
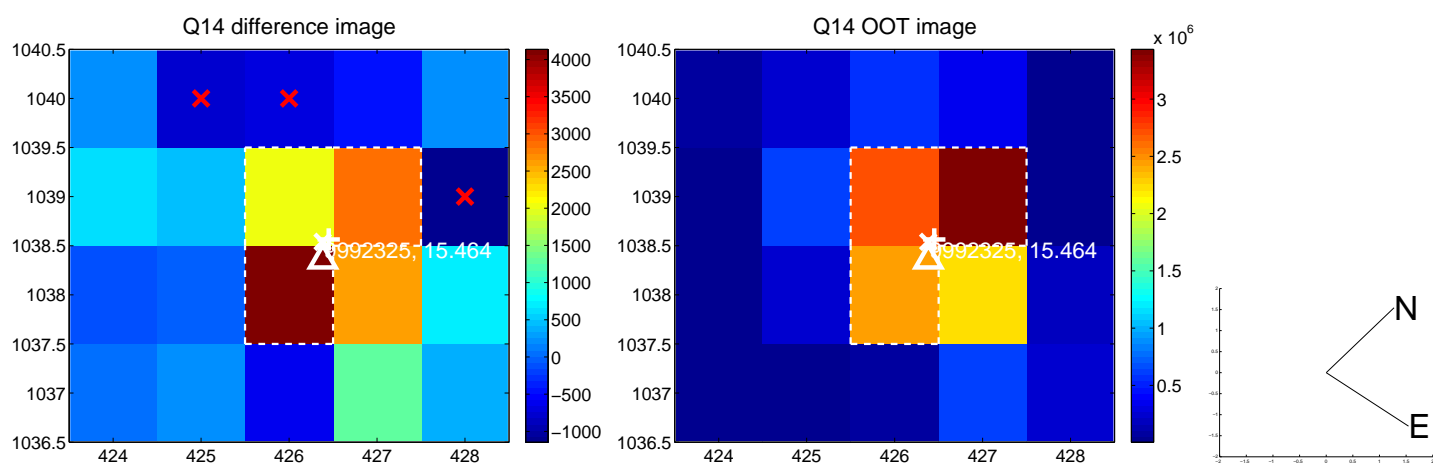
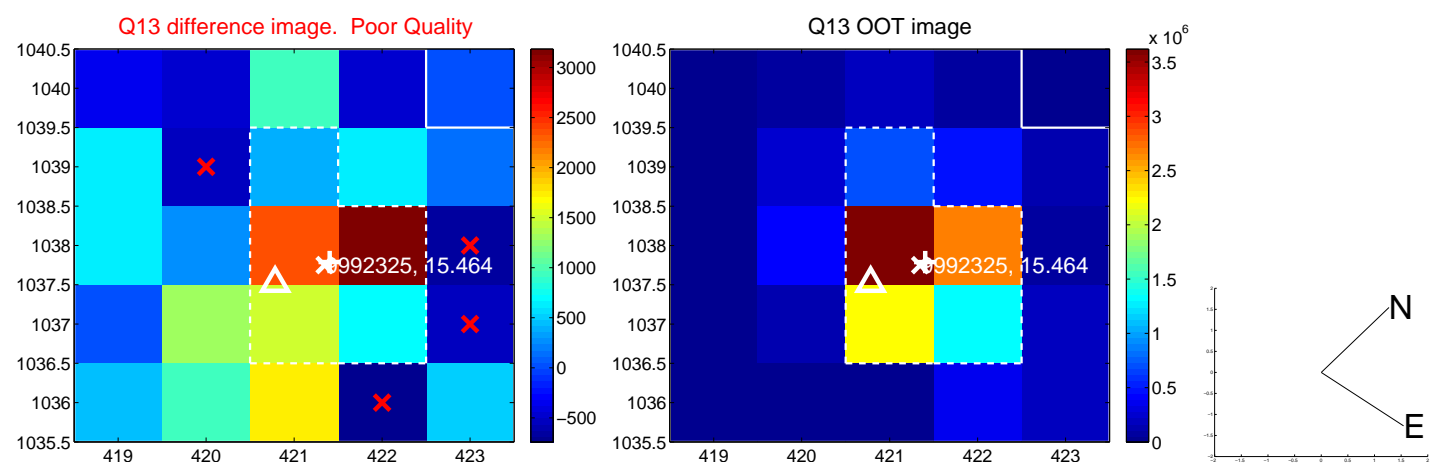
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



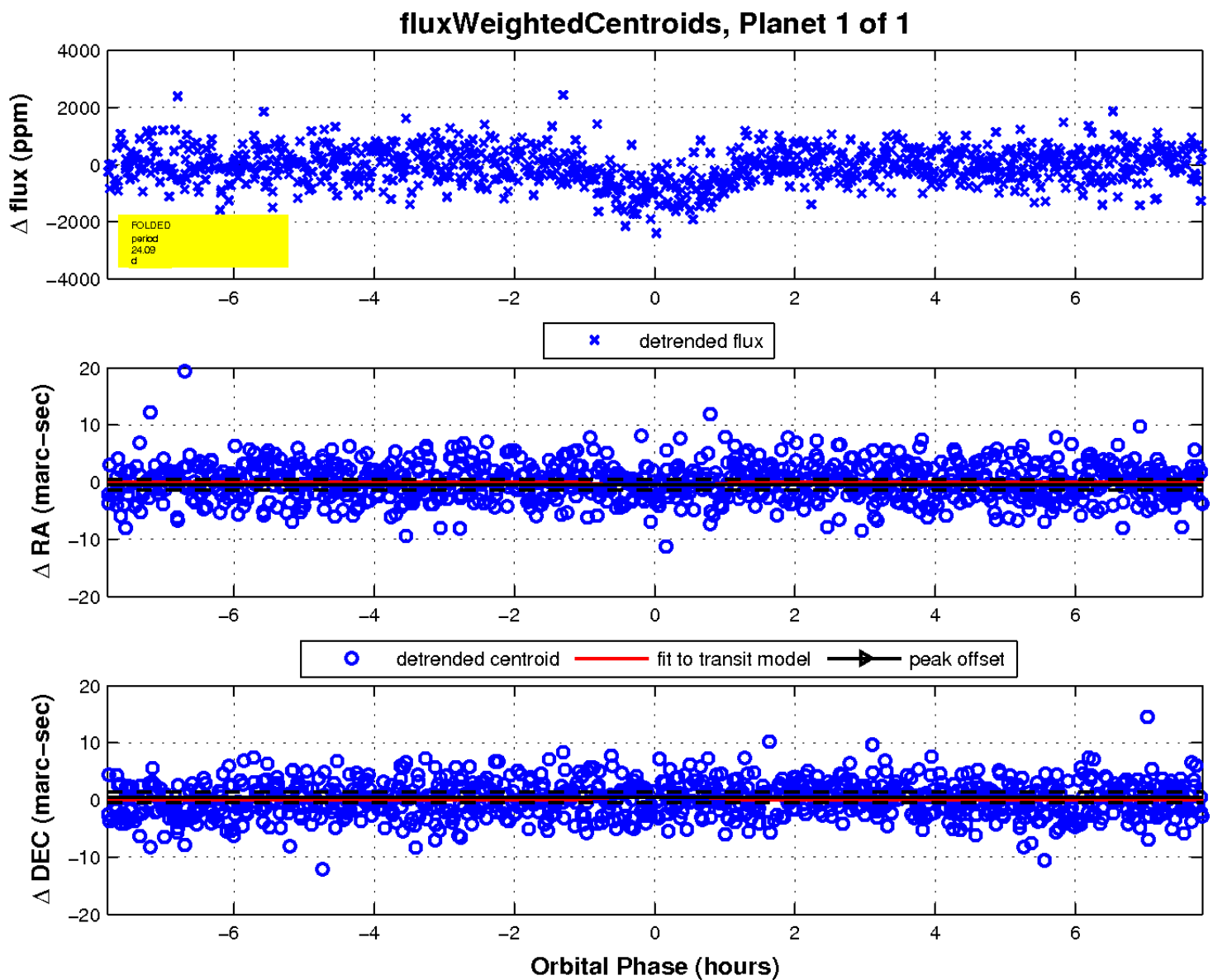
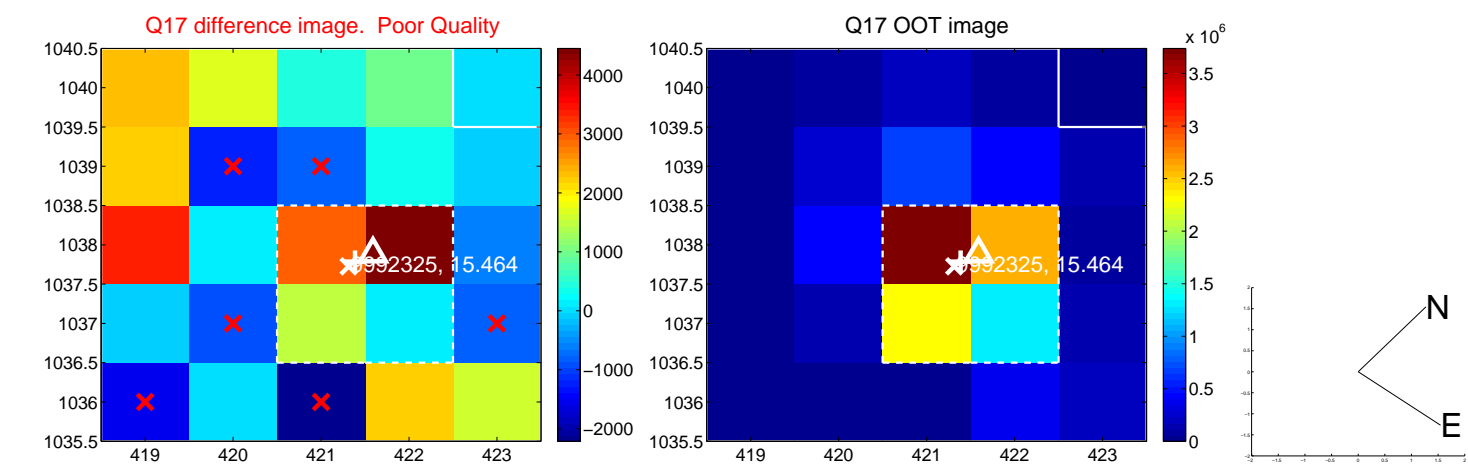
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

