

KIC 008644911

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})
008644911-01	OBS	5553.01	120.941371	246.224901	754.4	9.186	10.2	9.9	0.84	5456	2.47	2.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008644911-01	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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 008644911-01

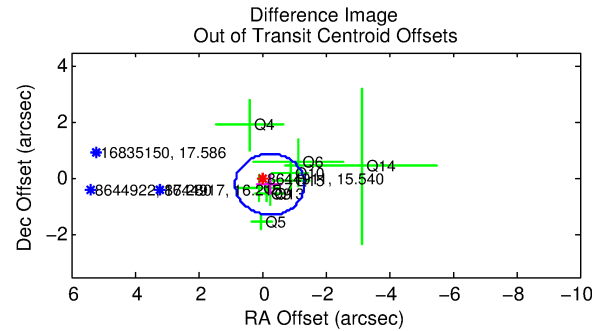
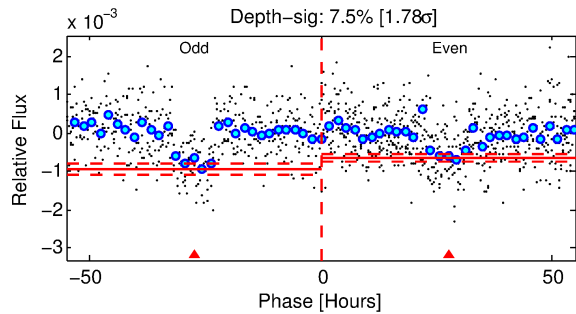
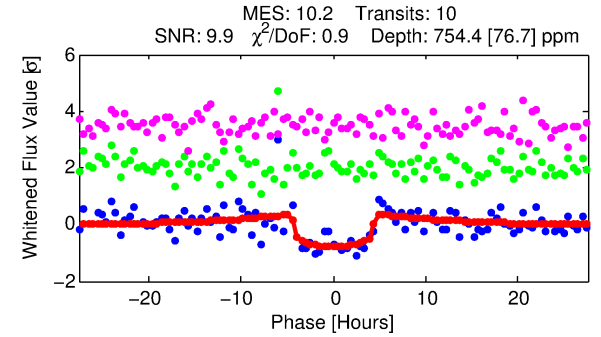
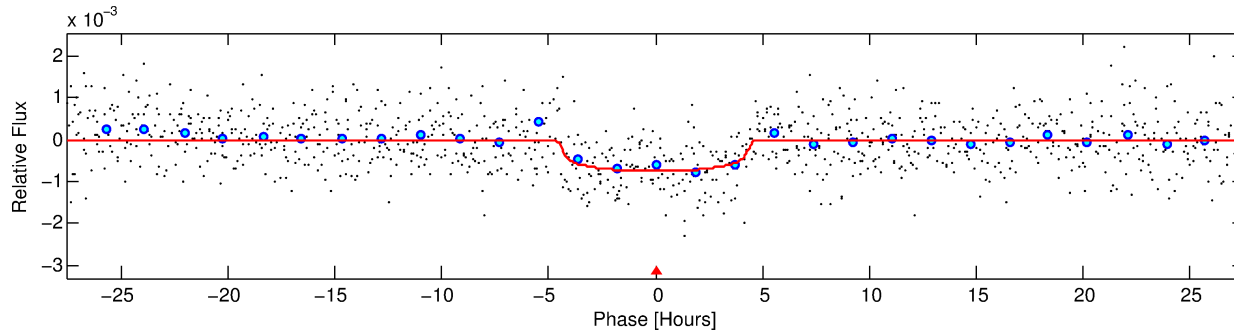
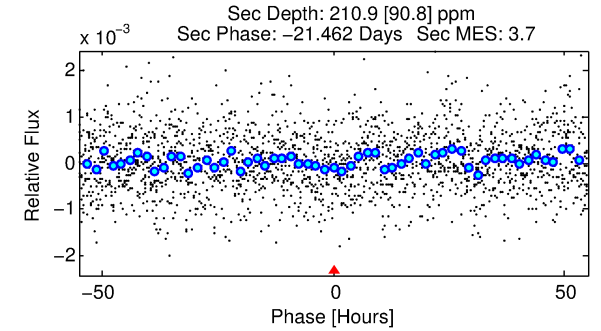
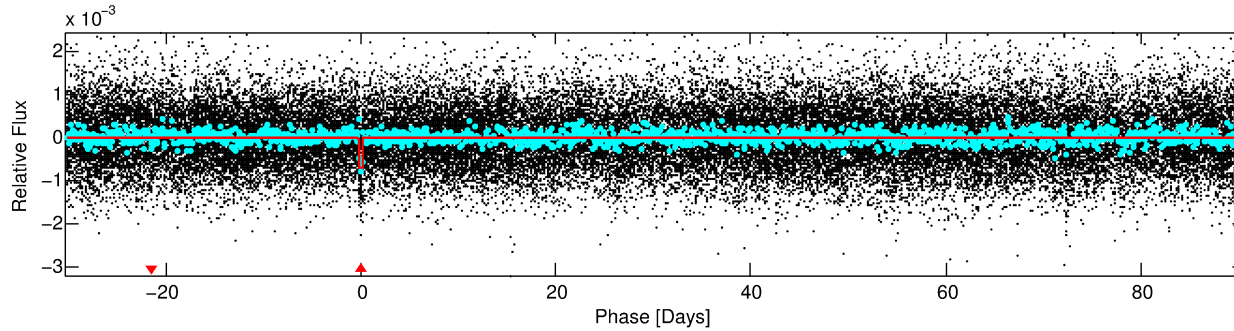
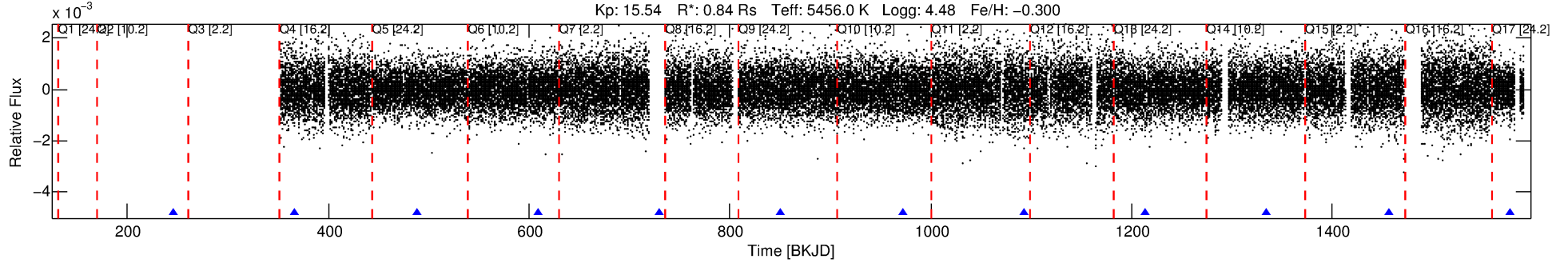
No Significant Match Found

DV One-Page Summary

KIC: 8644911 Candidate: 1 of 1 Period: 120.941 d

KOI: K05553.01 Corr: 0.956

Kp: 15.54 R*: 0.84 Rs Teff: 5456.0 K Logg: 4.48 Fe/H: -0.300



DV Fit Results:

Period = 120.94137 [0.00194] d
Epoch = 246.2249 [0.0137] BKJD
Rp/R* = 0.0268 [0.0098]
a/R* = 75.79 [113.51]
b = 0.70 [1.12]
Seff = 2.91 [0.85]
Teq = 333 [24] K
Rp = 2.47 [1.02] Re
a = 0.4402 [0.0734] AU
Ag = 3690.28 [3266.81] [1.13 σ]
Teff = 4014 [866] K [4.25 σ]

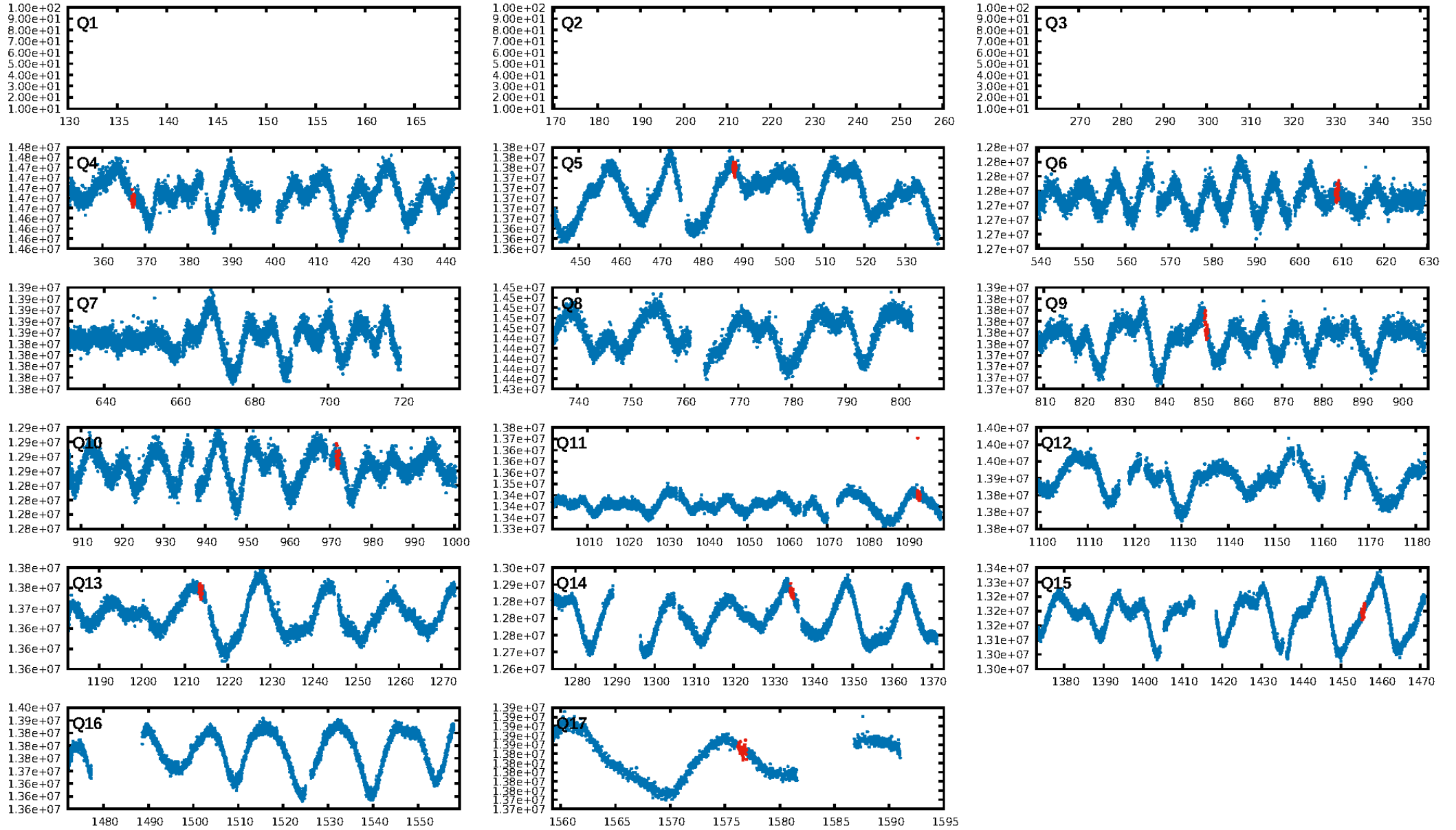
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.57e-20
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 1.894
Centroid-sig: 36.1%
Centroid-so: 0.192 arcsec [0.27 σ]
OotOffset-rm: 0.318 arcsec [0.88 σ]
KicOffset-rm: 0.471 arcsec [1.31 σ]
OotOffset-st: 3/1/1/4 [9]
KicOffset-st: 3/1/1/4 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [9/9]

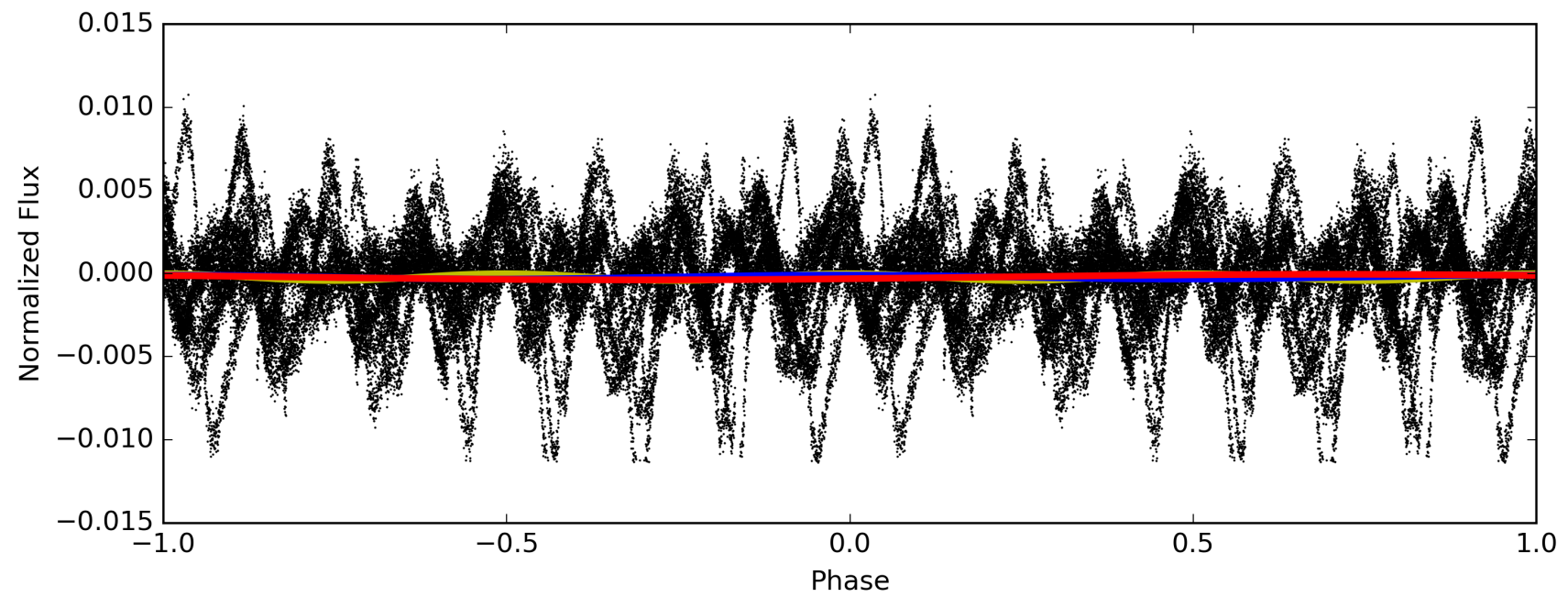
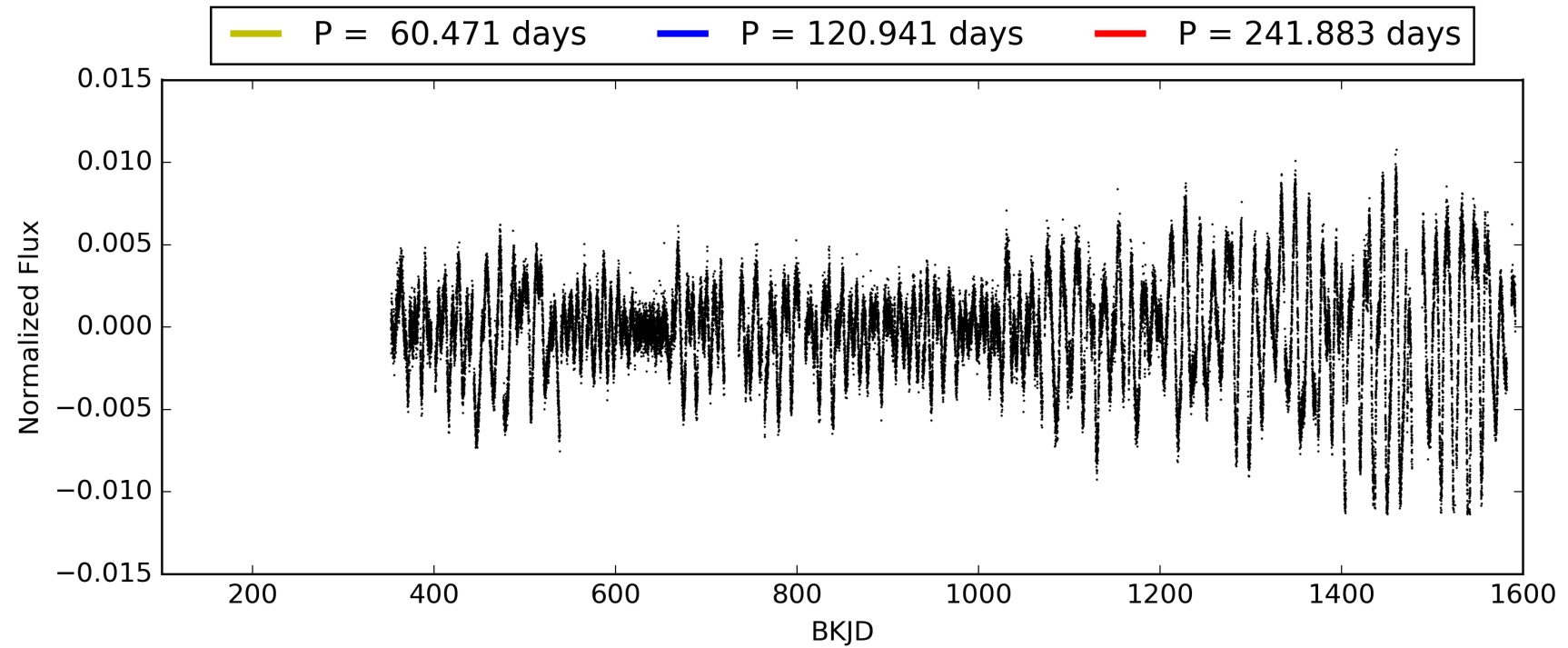
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:43:01 Z

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

TCE 008644911-01, PDC Light Curves

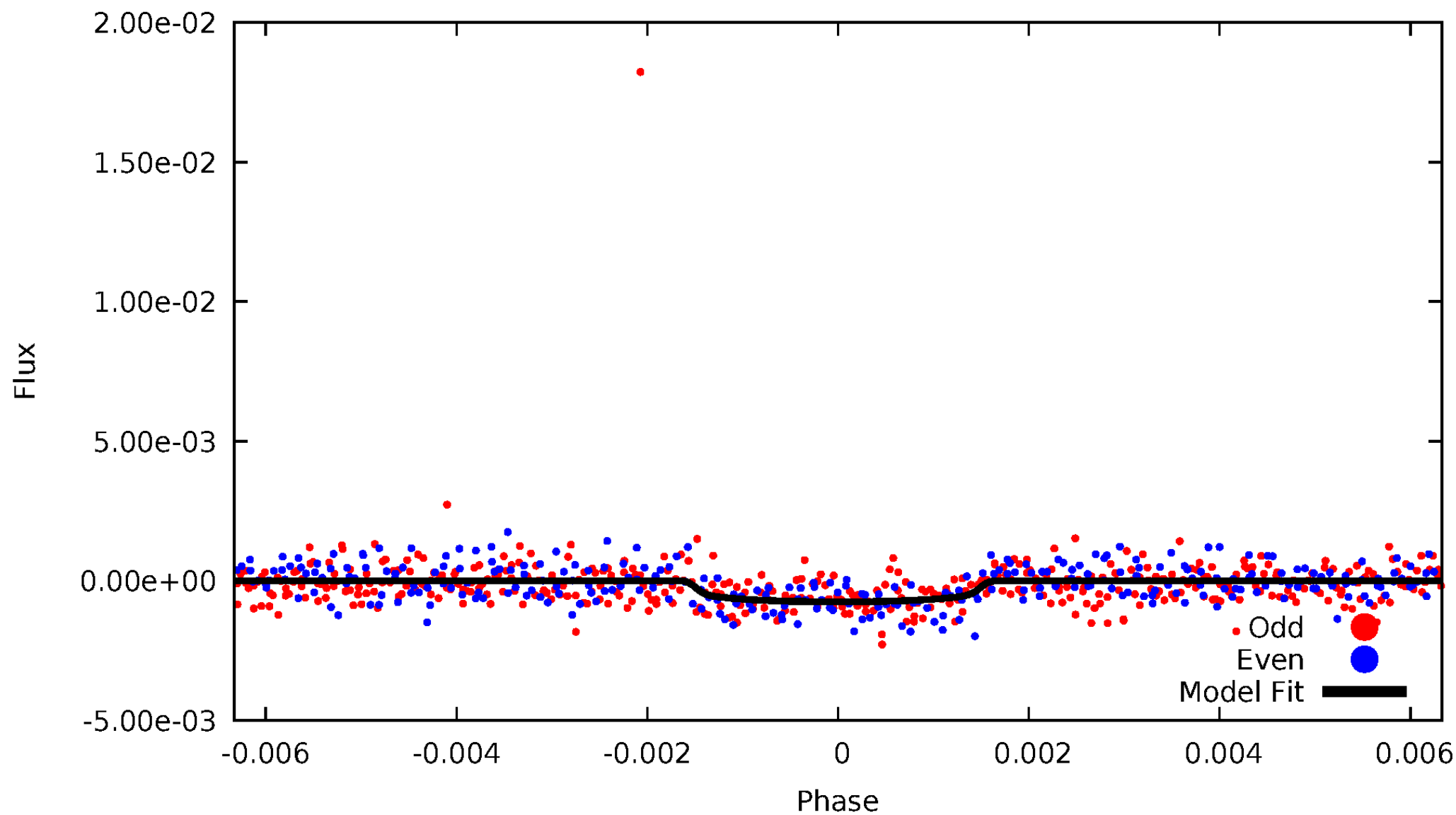


TCE 008644911-01



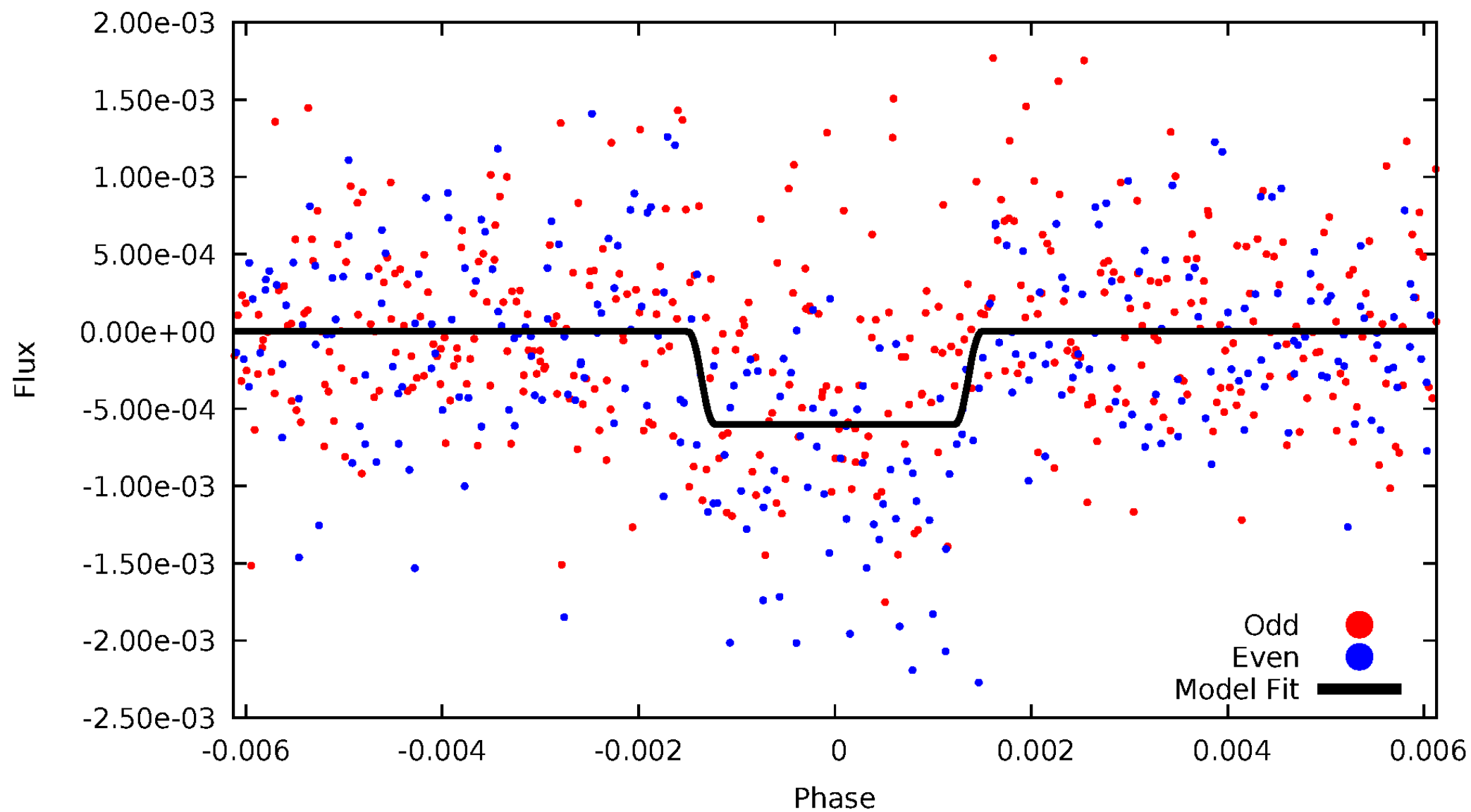
DV Odd/Even

TCE 008644911-01



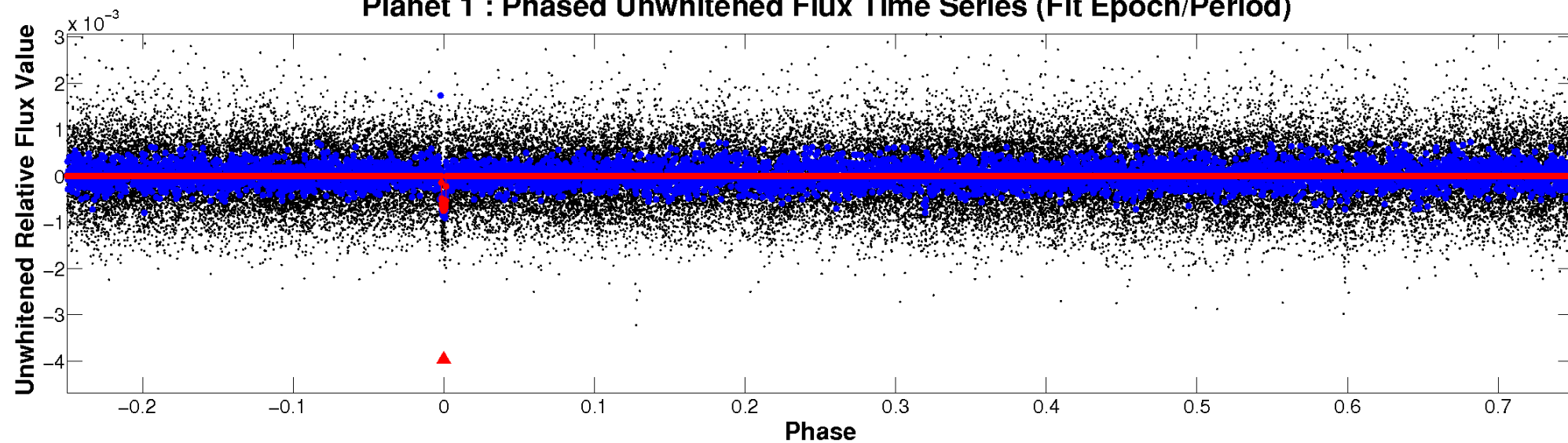
ALT Odd/Even

TCE 008644911-01

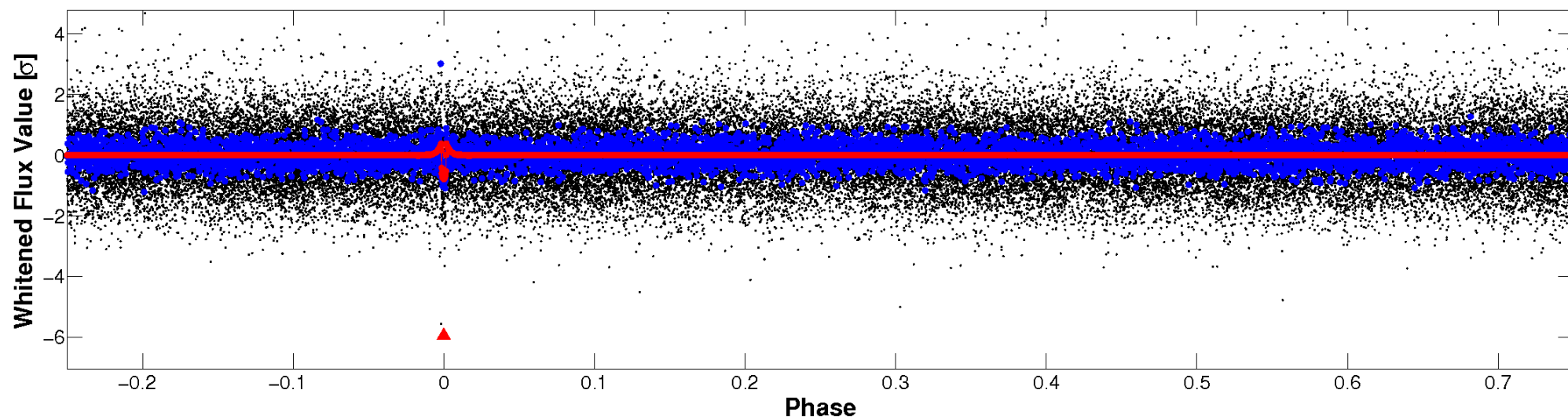


Non-Whitened Vs. Whitened Light Curve

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

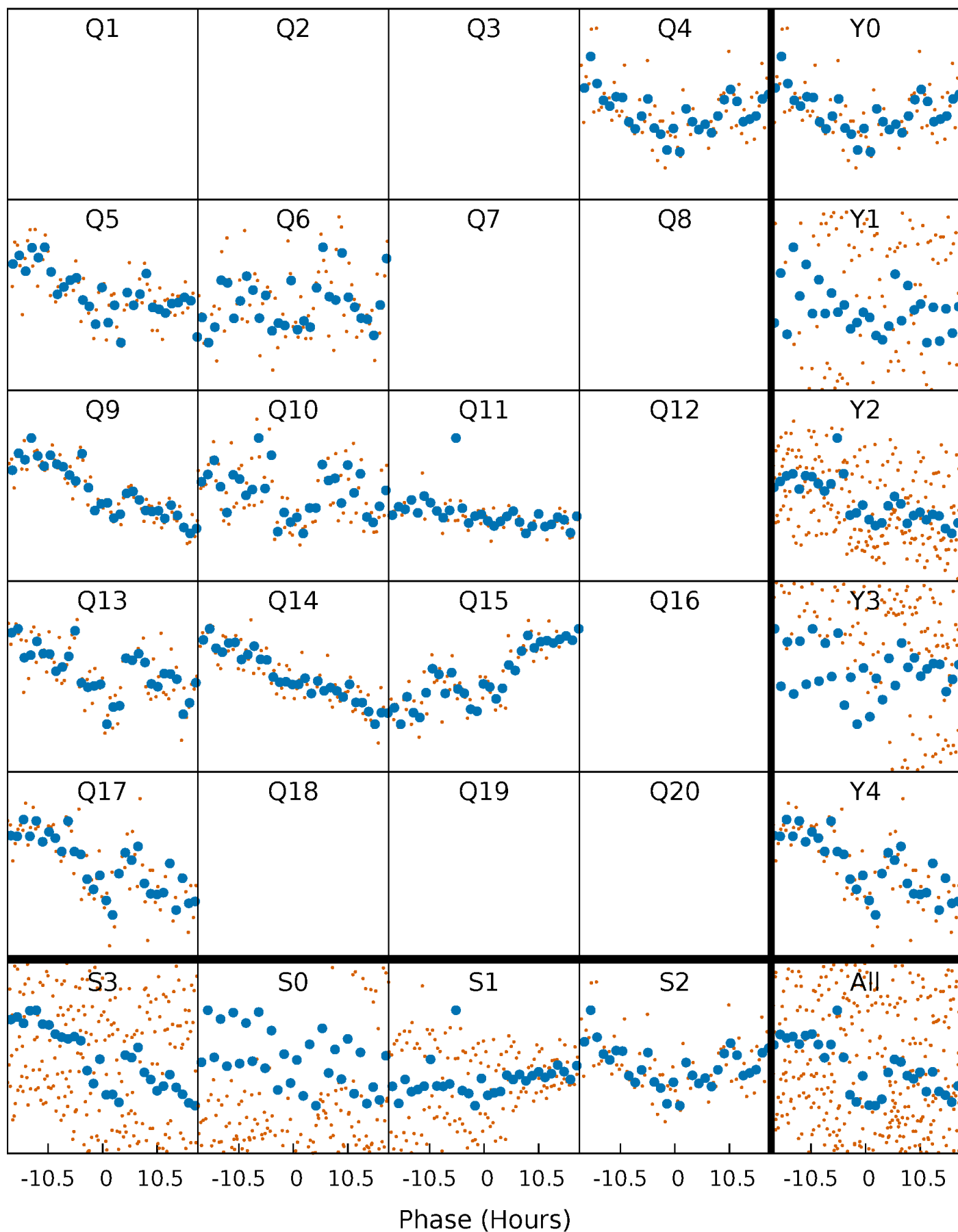


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



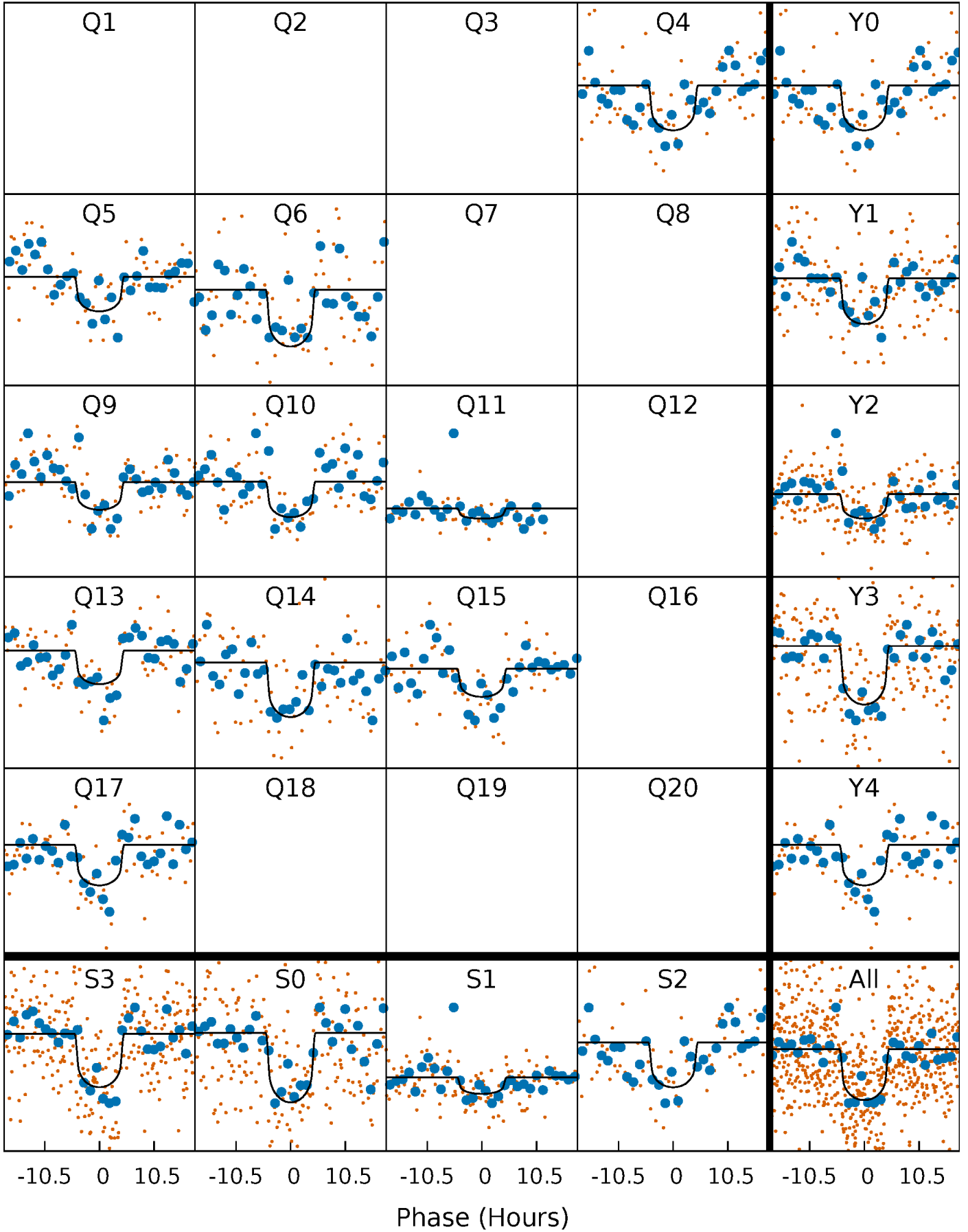
PDC Quarter-Phased Transit Curves

TCE 008644911-01 P=120.941371 Days $T_0=246.224901$ (BKJD)



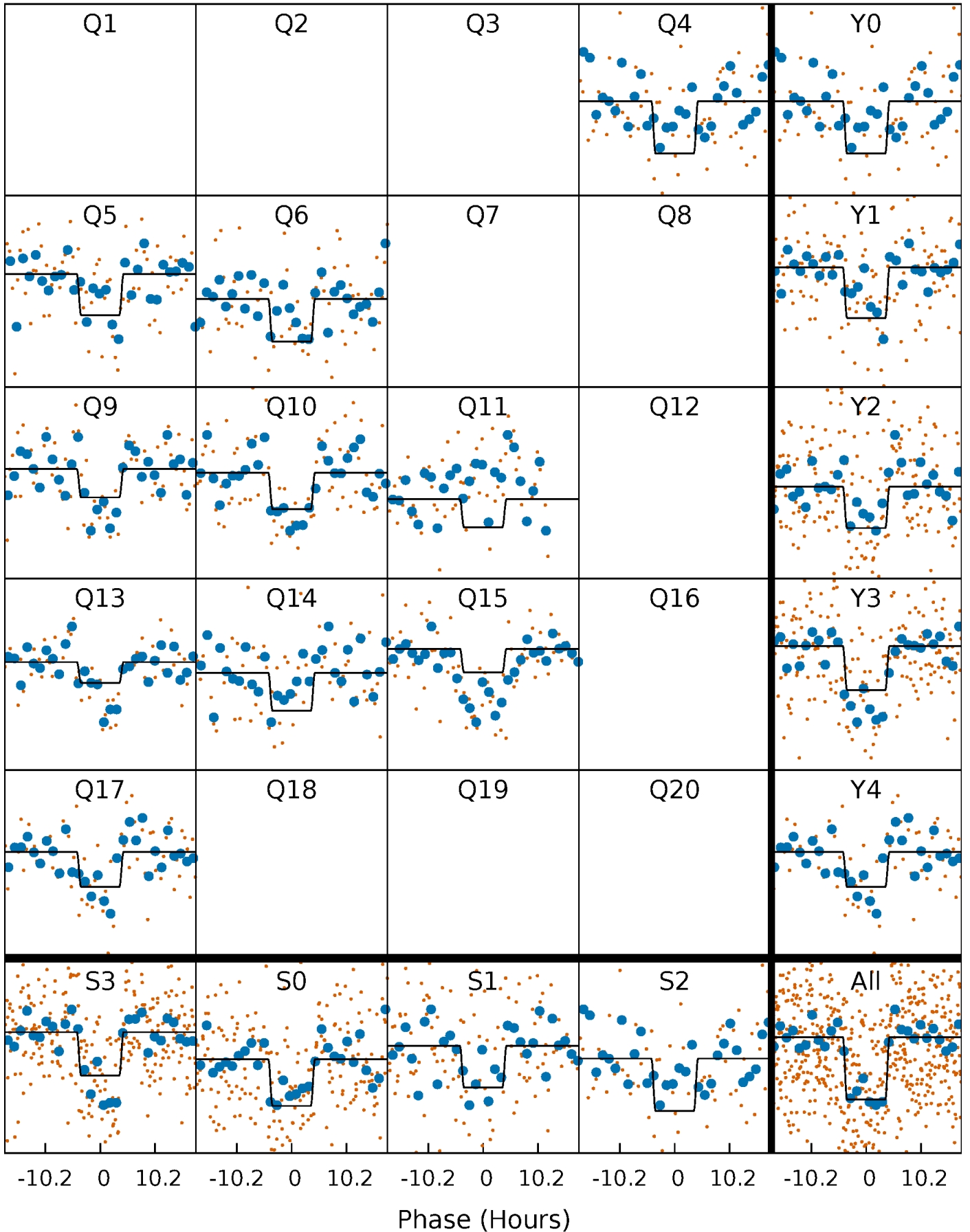
DV Quarter-Phased Transit Curves

TCE 008644911-01 P=120.941371 Days $T_0=246.224901$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

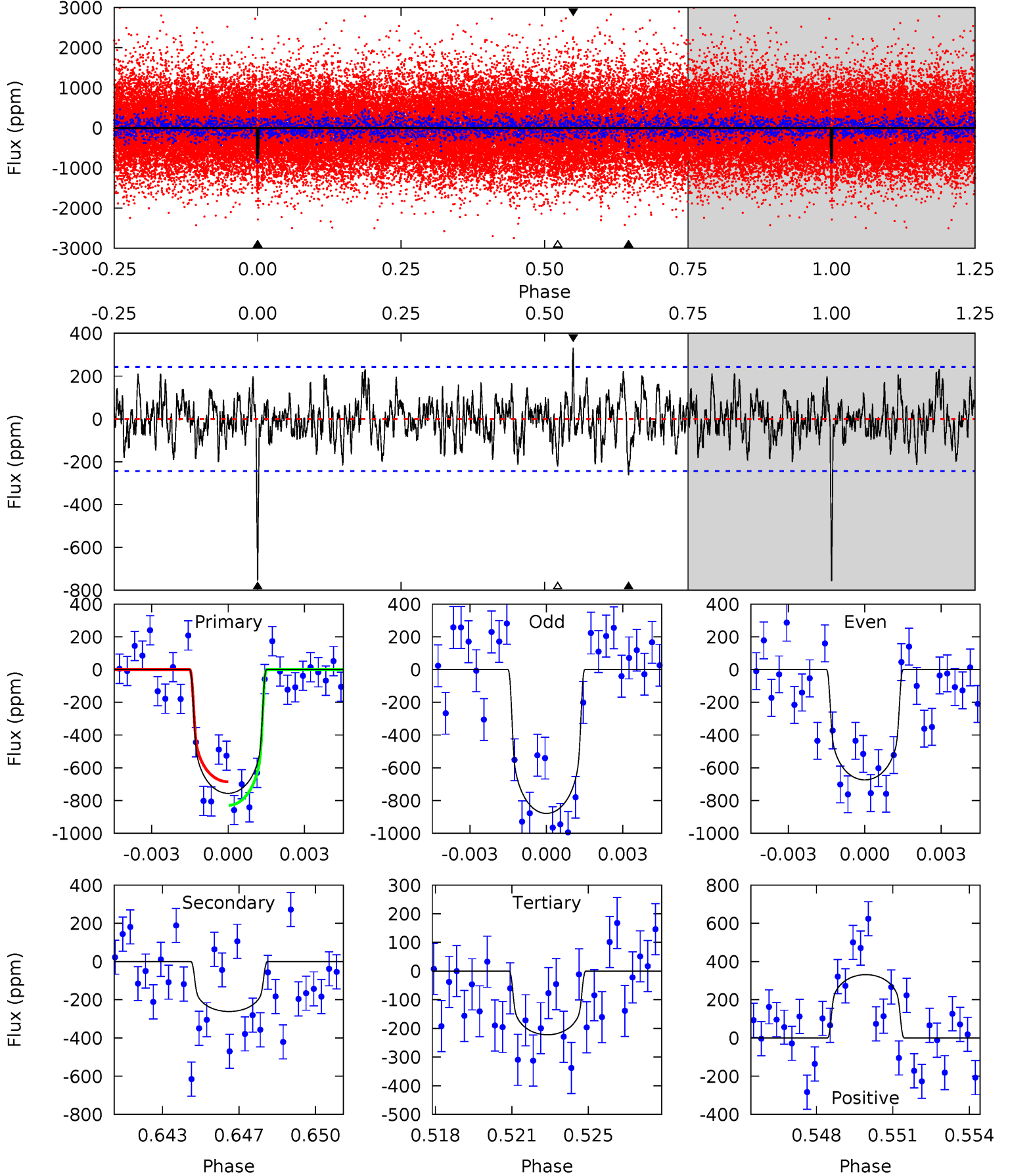
TCE 008644911-01 P=120.938809 Days $T_0=246.246982$ (BKJD)



DV Model-Shift Uniqueness Test

008644911-01, P = 120.941371 Days, E = 246.224901 Days

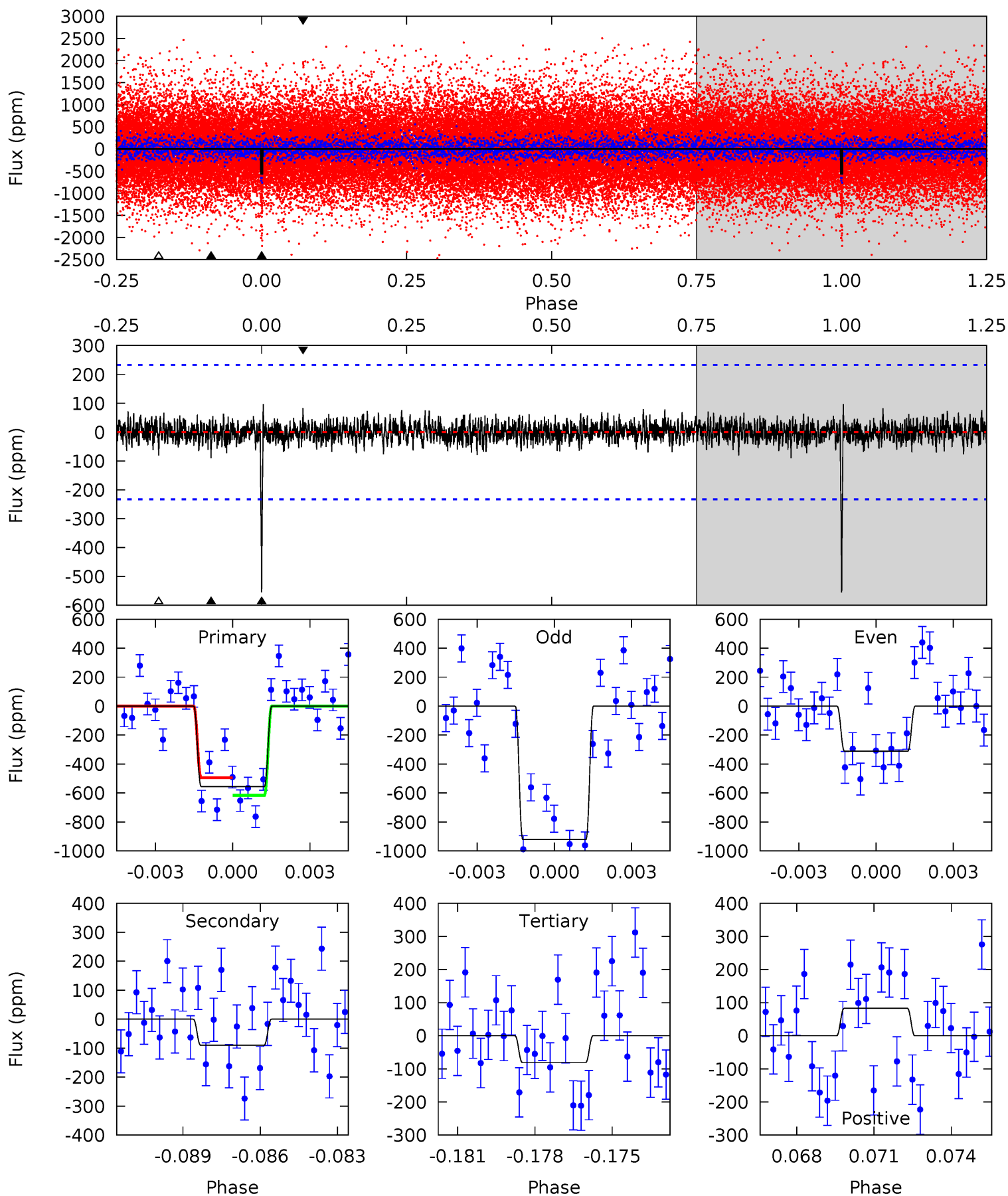
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	5.63	4.78	7.14	5.24	2.94	1.73	11.5	9.15	0.85	-1.51	2.18	1.00	0.30	1.55



Alt Model-Shift Uniqueness Test

008644911-01, P = 120.938809 Days, E = 246.246982 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	2.04	1.82	1.87	5.25	2.97	0.55	10.7	10.7	0.21	0.17	6.79	0.98	0.15	1.38



Stellar Parameters For KIC 008644911

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5456^{+207}_{-189}	$4.477^{+0.112}_{-0.138}$	$-0.300^{+0.350}_{-0.300}$	$0.843^{+0.163}_{-0.122}$	$0.777^{+0.113}_{-0.061}$	$1.830^{+0.884}_{-0.700}$
	+4%/-3%	+3%/-3%	+117%/-100%	+19%/-14%	+15%/-8%	+48%/-38%
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 008644911-01 / KOI 5553.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-261 ± 46	$2.42^{+0.93}_{-0.91}$	468^{+28}_{-26}	4487^{+917}_{-526}	4801^{+7527}_{-2446}
Alt.	-90 ± 44	$2.33^{+0.93}_{-0.88}$	469^{+27}_{-26}	3727^{+797}_{-539}	1700^{+3090}_{-1065}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

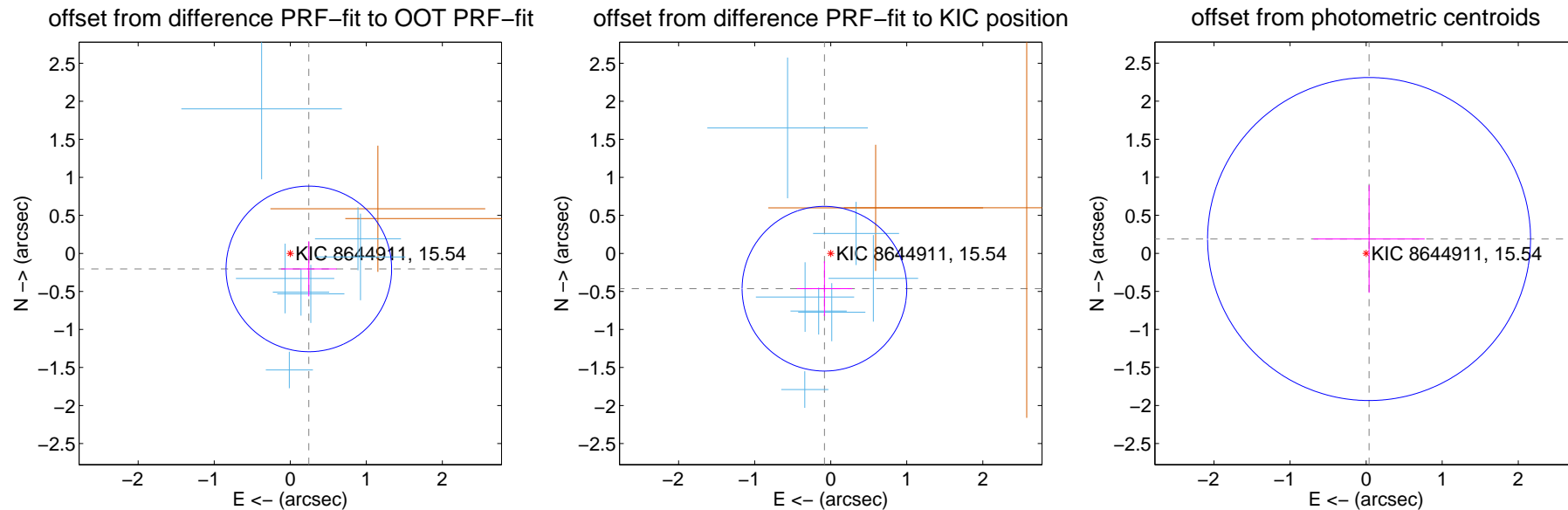
DV Centroid Data

Supplemental centroid analysis for 008644911-01. Kepler magnitude: 15.54. Transit SNR 9.90

There are 7 quarters with good PRF difference image offsets

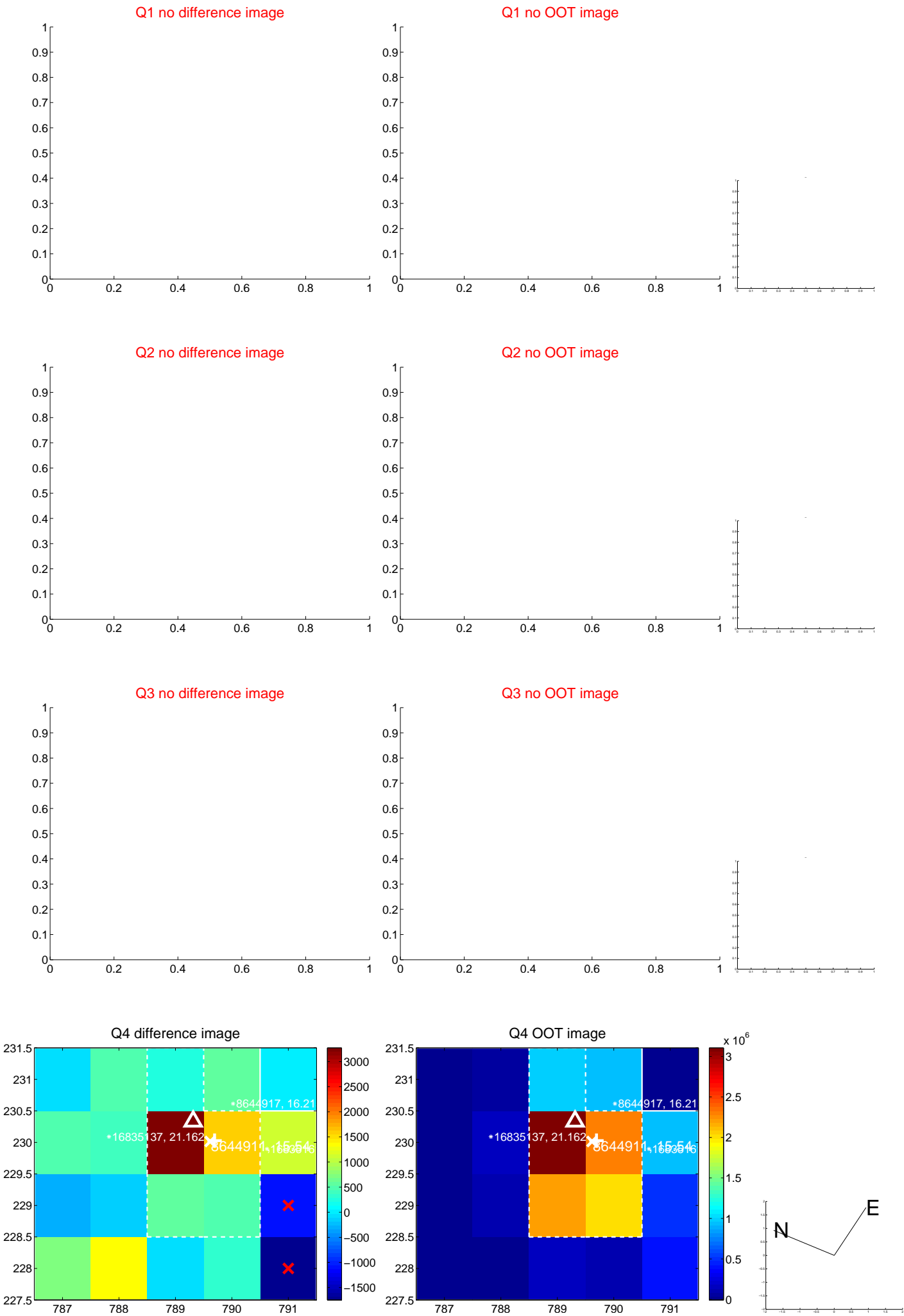
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.318 ± 0.363	0.88	-0.244 ± 0.364	-0.204 ± 0.361
PRF-fit source offset from KIC position	0.471 ± 0.361	1.31	0.083 ± 0.364	-0.464 ± 0.361
photometric centroid source offset	0.19 ± 0.71	0.27	-0.04 ± 0.73	0.19 ± 0.71

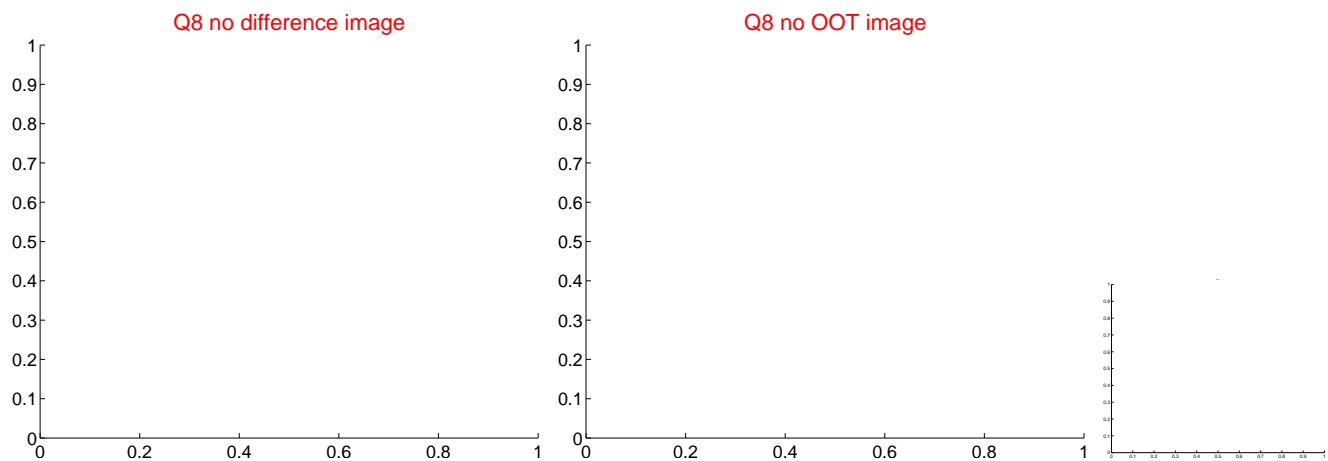
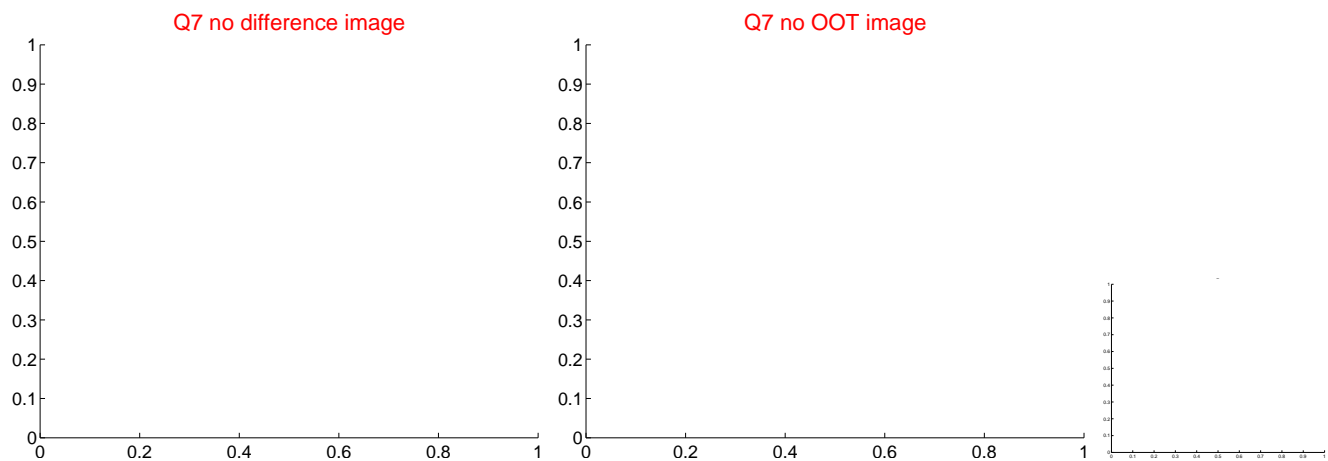
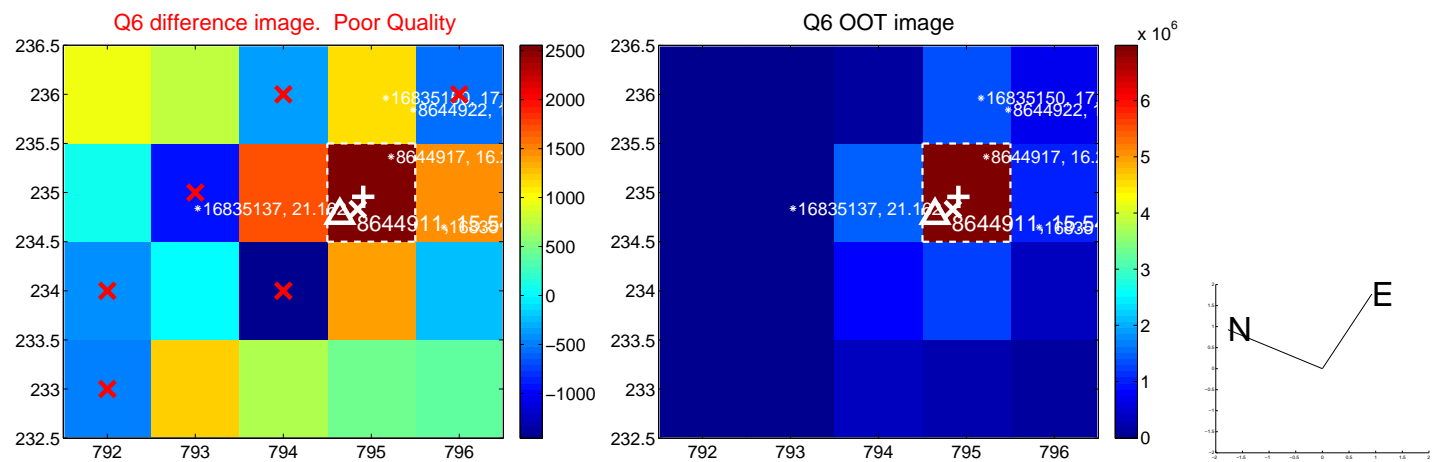
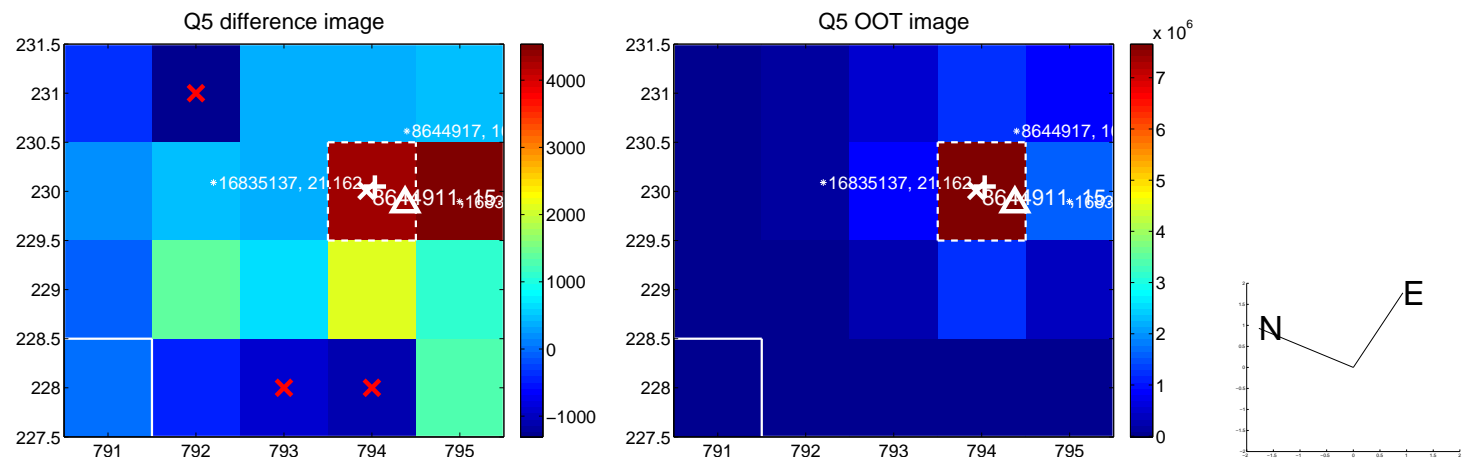


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

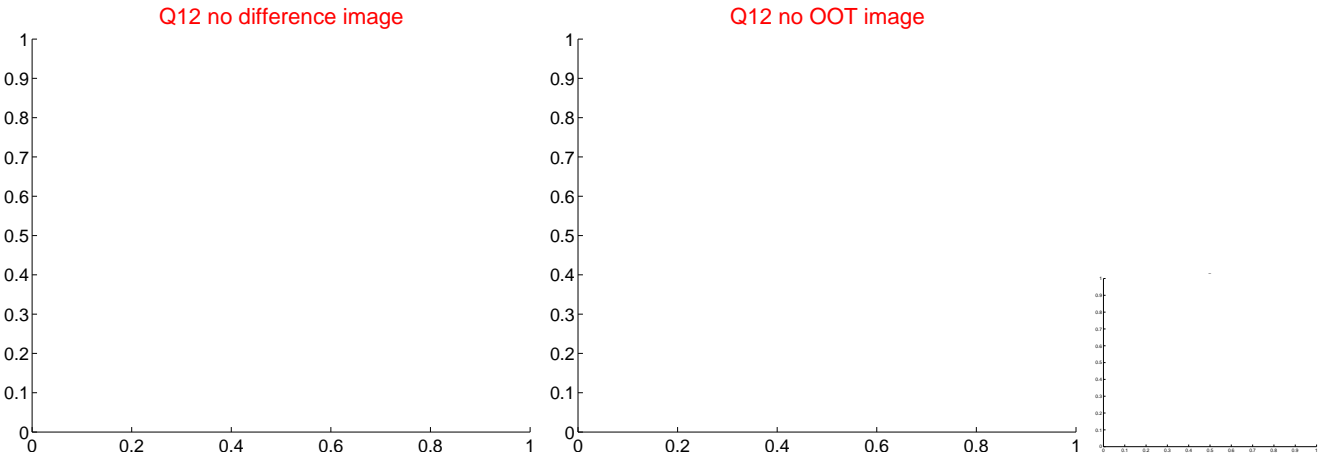
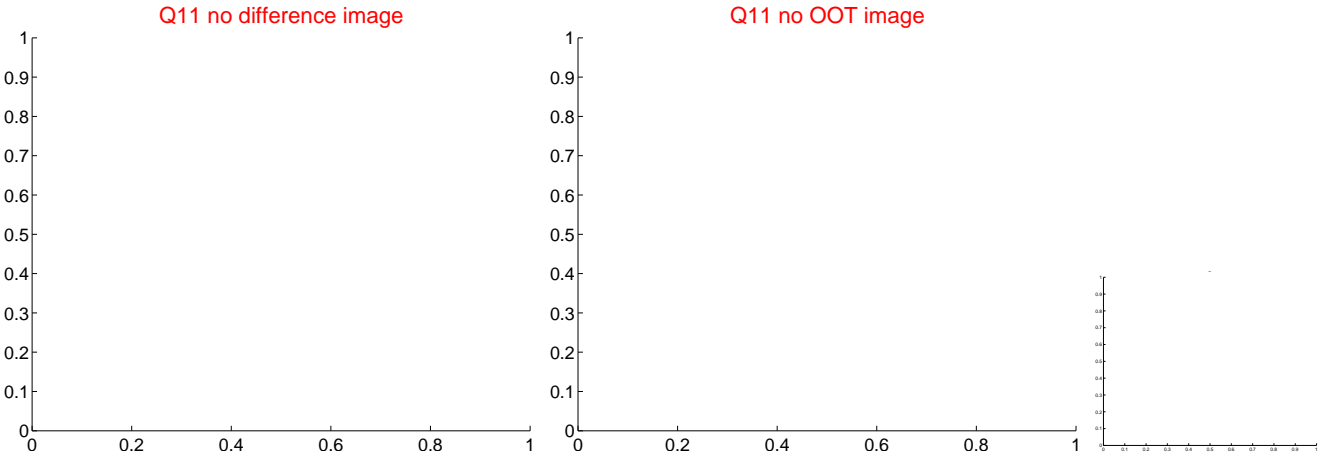
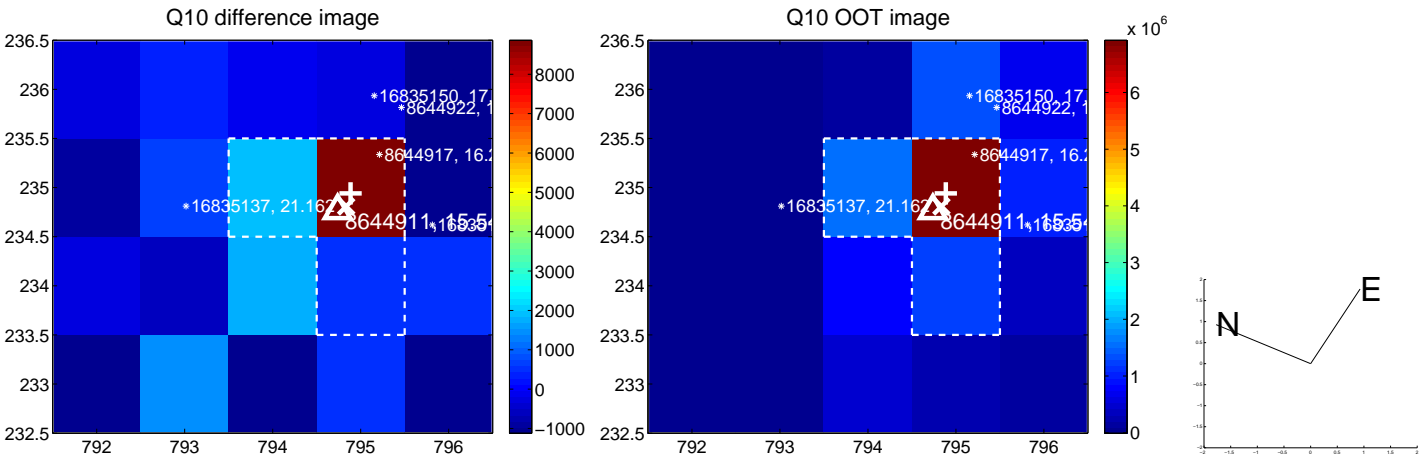
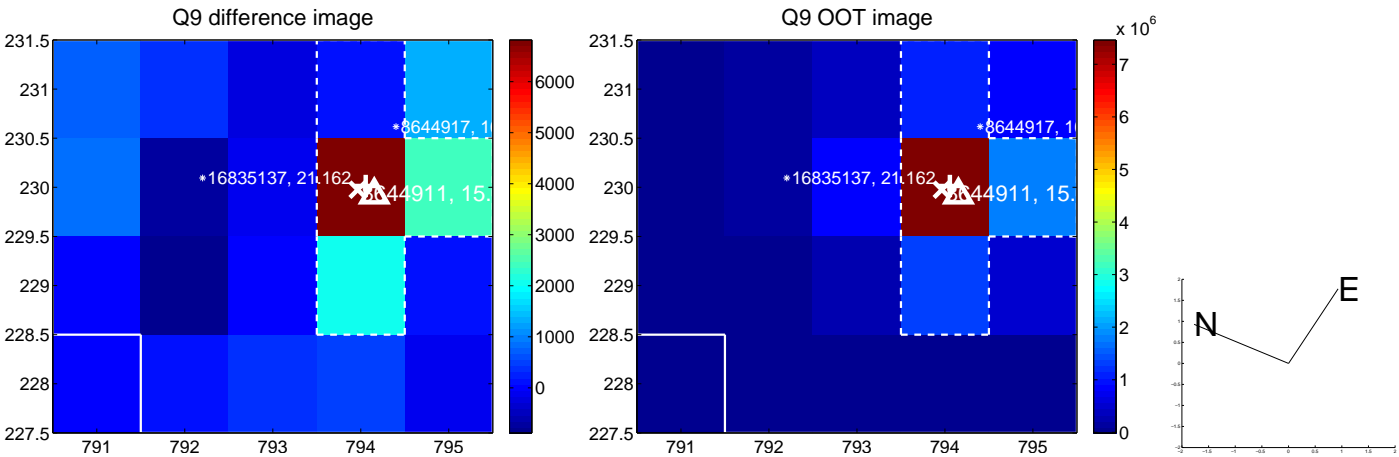
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



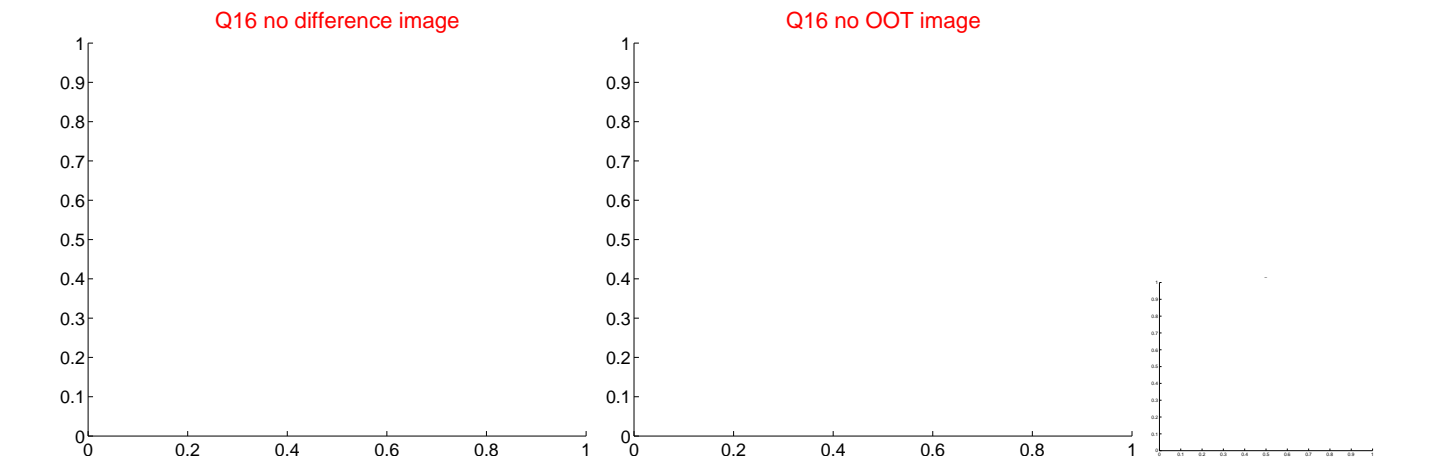
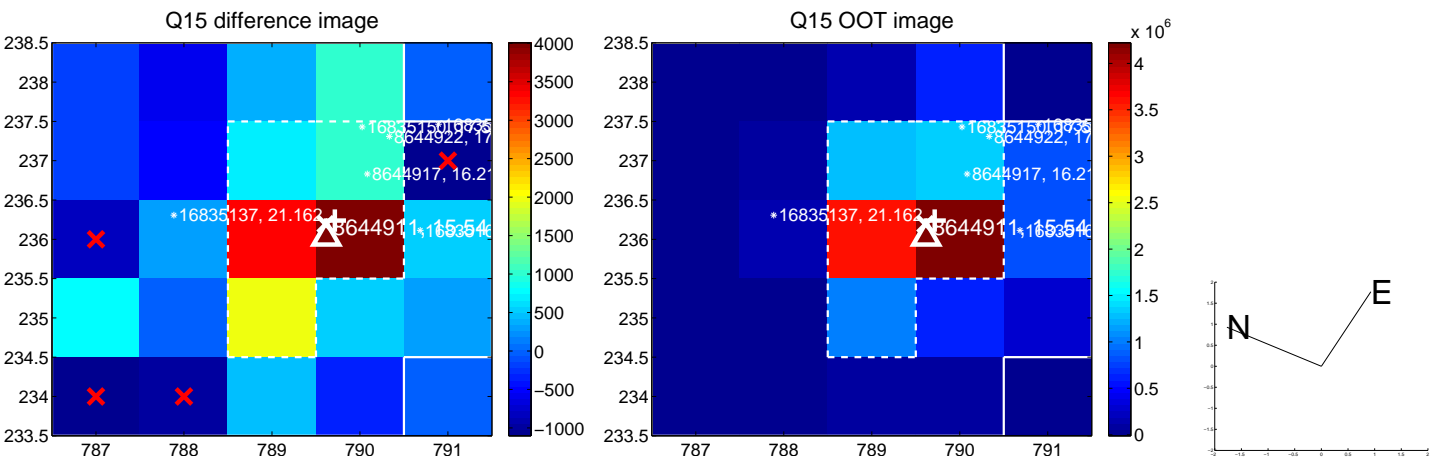
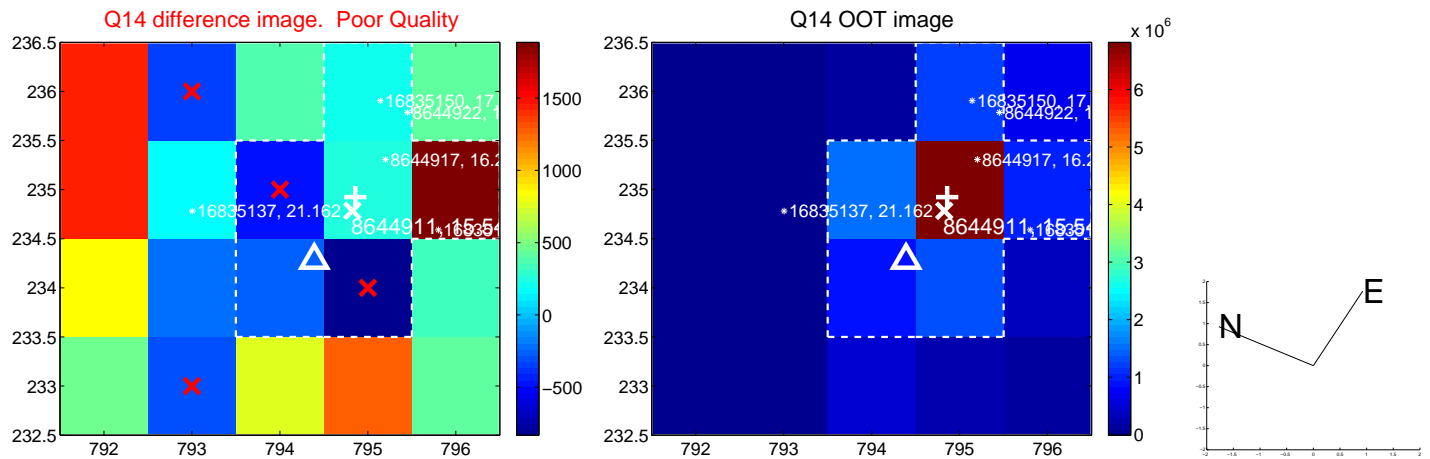
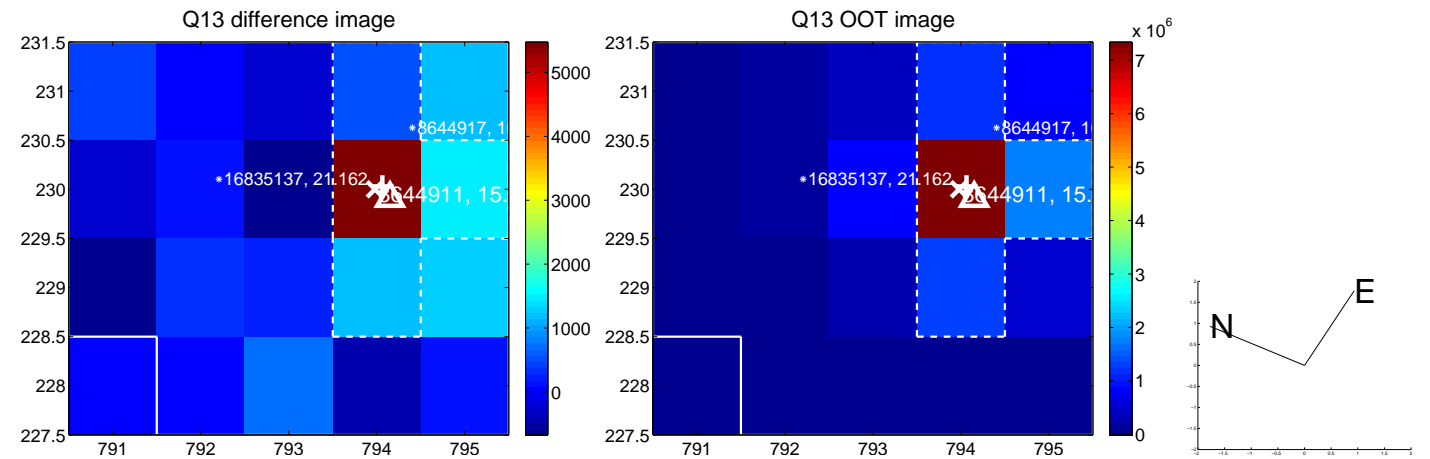
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



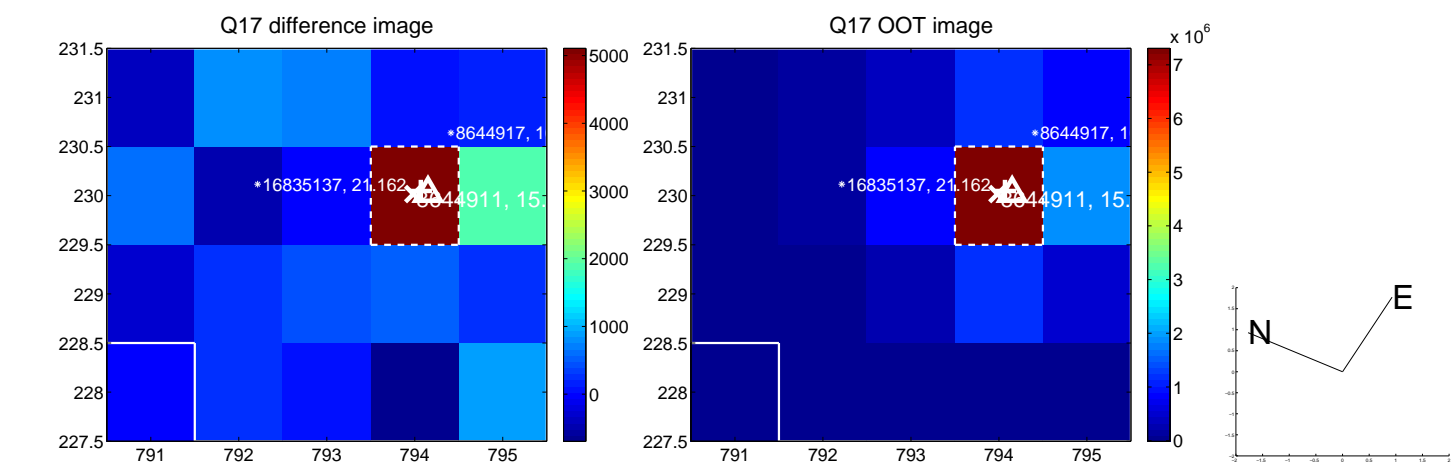
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



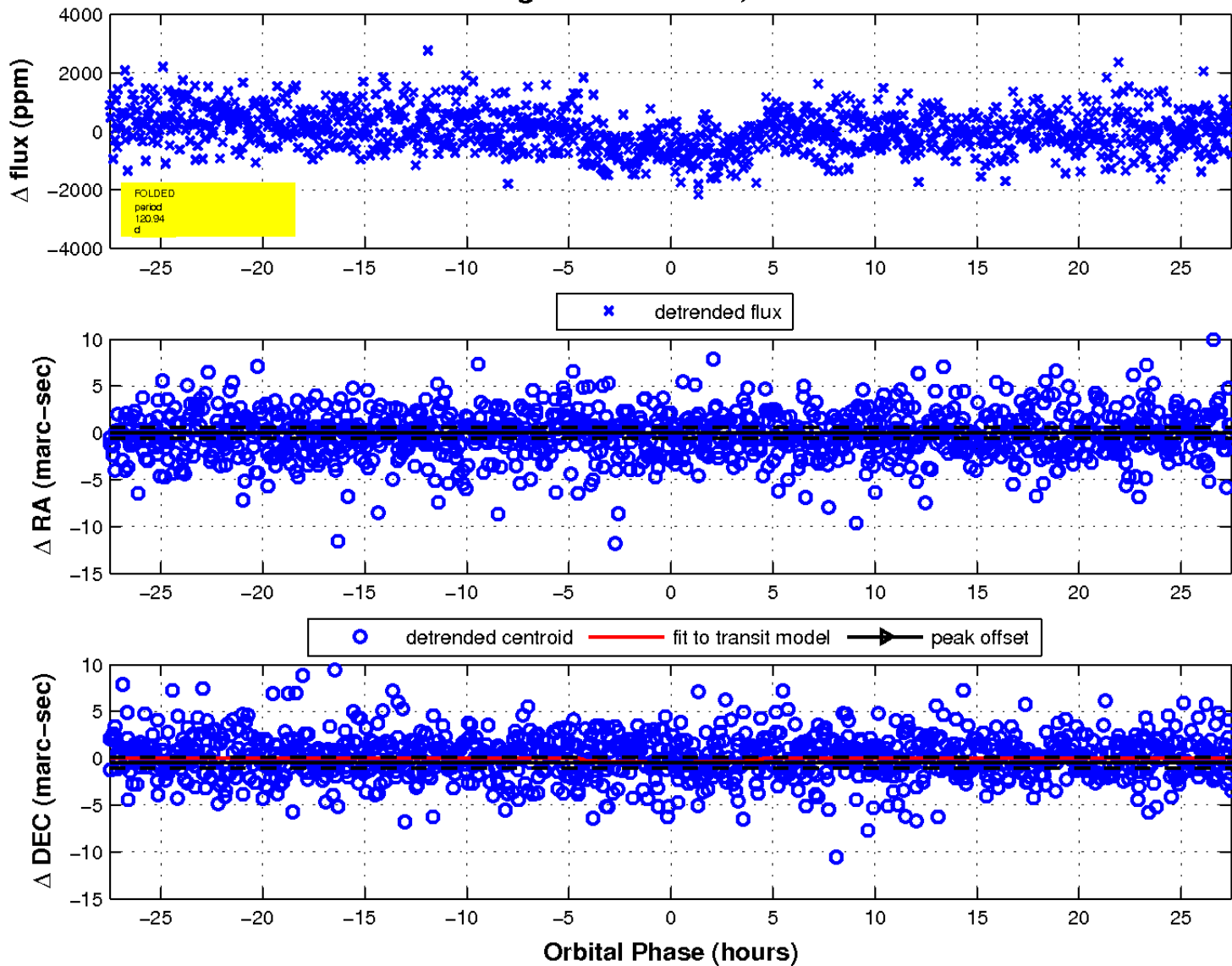
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

