

KIC 003355104

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})
003355104-01	OBS	4975.01	47.062778	171.949626	1718.2	1.891	11.8	13.7	0.90	5838	6.16	12.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003355104-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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

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

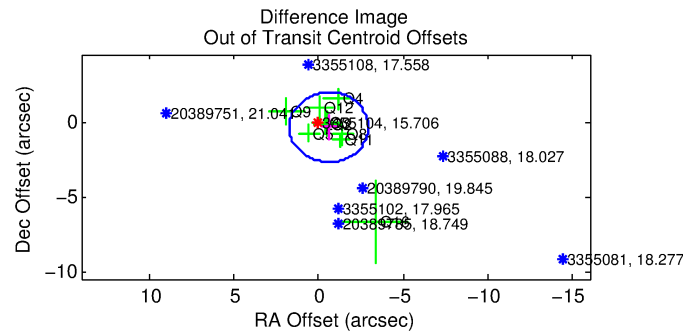
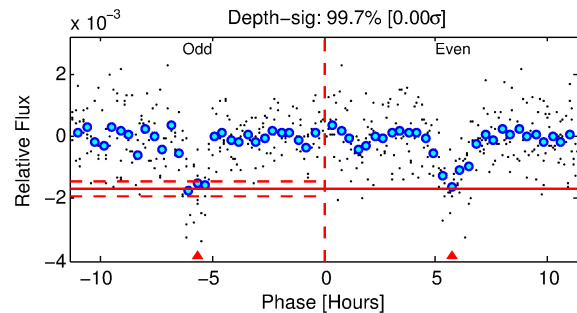
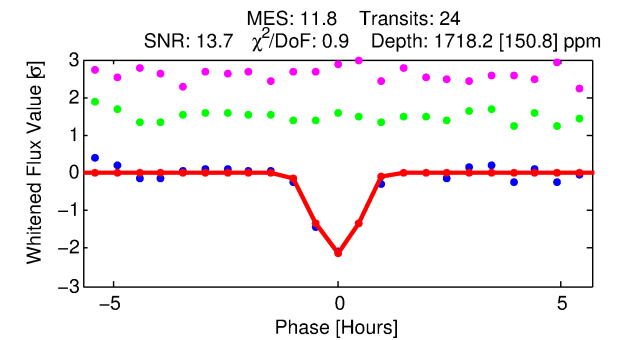
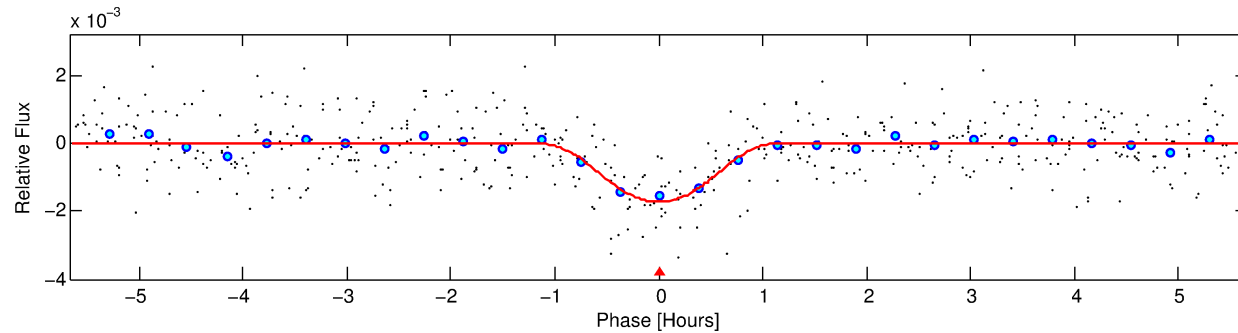
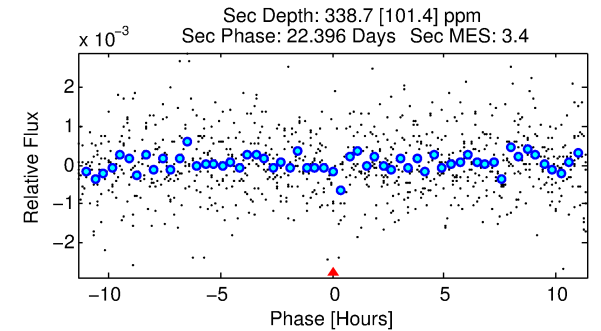
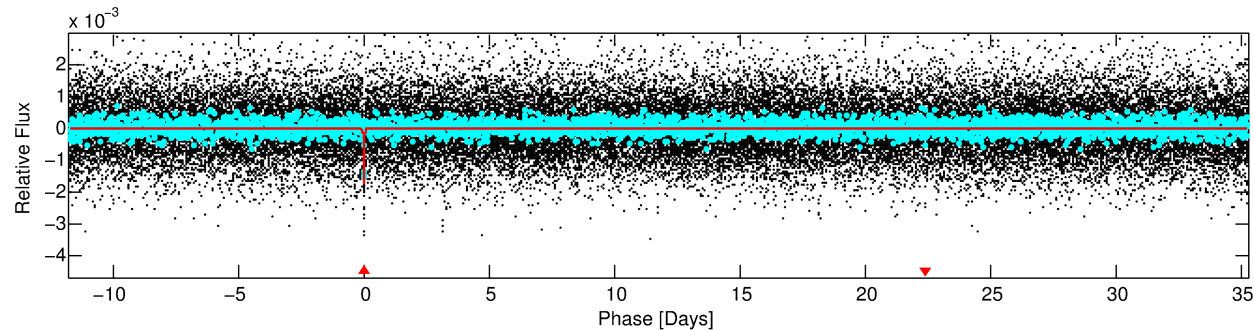
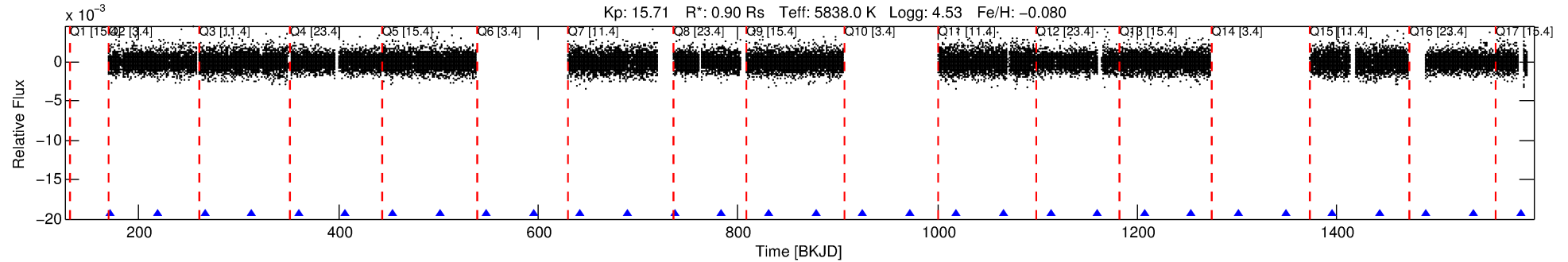
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003355104-01

No Significant Match Found

DV One-Page Summary

KIC: 3355104 Candidate: 1 of 1 Period: 47.063 d
KOI: K04975.01 Corr: 0.880



DV Fit Results:

Period = 47.06278 [0.00019] d
Epoch = 171.9496 [0.0033] BKJD
Rp/R* = 0.0629 [0.1640]
a/R* = 76.74 [60.36]
b = 0.98 [0.28]
Seff = 12.93 [4.99]
Teq = 484 [47] K
Rp = 6.16 [16.16] Re
a = 0.2545 [0.0628] AU
Ag = 317.92 [1663.83] [0.19σ]
Teffp = 3157 [4122] K [0.65σ]

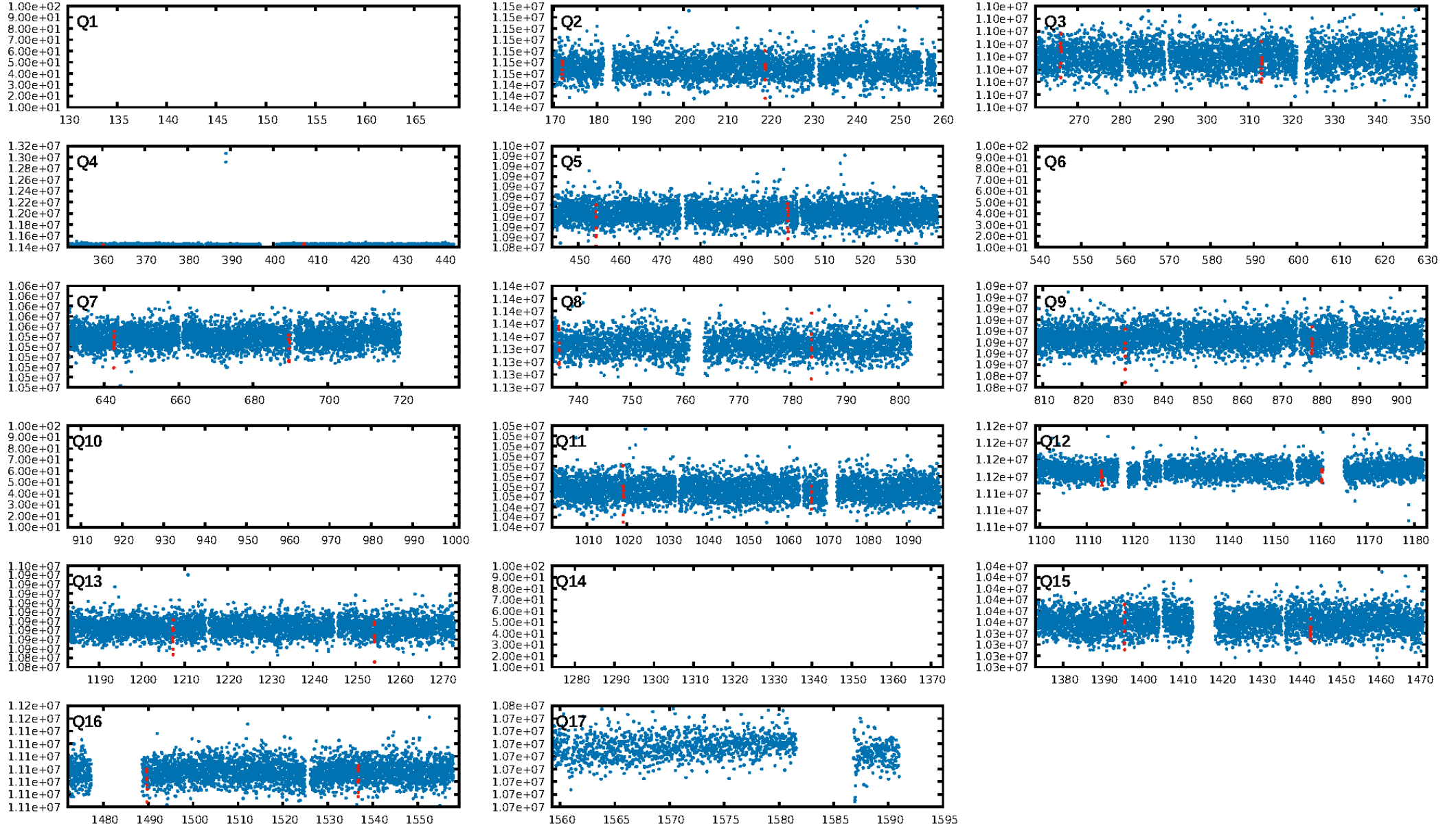
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.77e-32
RollingBand-fgt: 1.00 [24/24]
GhostDiagnostic-chr: 2.291
Centroid-sig: 93.2%
Centroid-so: 0.965 arcsec [1.07σ]
OotOffset-rm: 0.698 arcsec [0.90σ]
KicOffset-rm: 0.792 arcsec [1.07σ]
OotOffset-st: 1/2/4/2 [9]
KicOffset-st: 1/2/4/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [12/12]

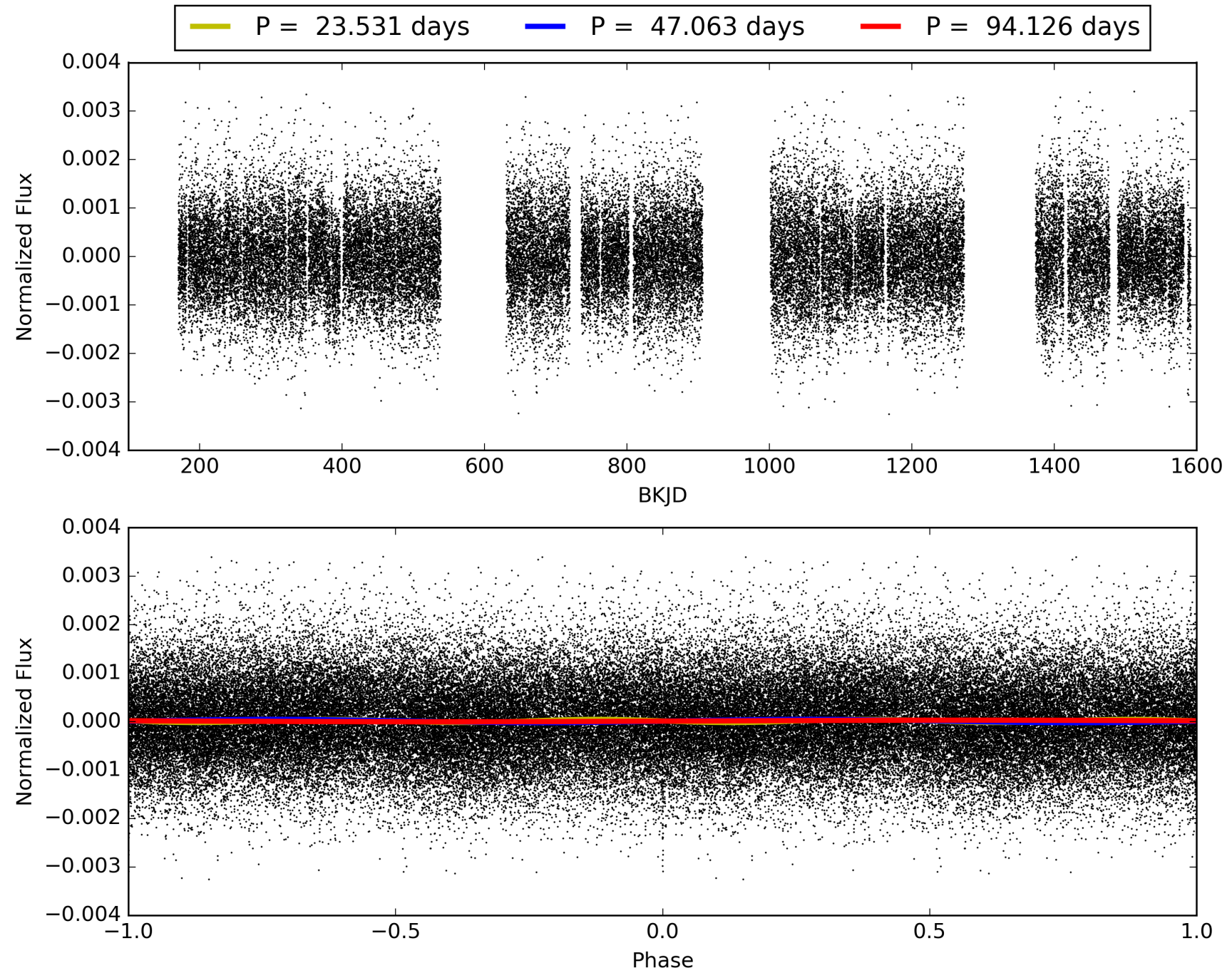
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:05:00 Z

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

TCE 003355104-01, PDC Light Curves

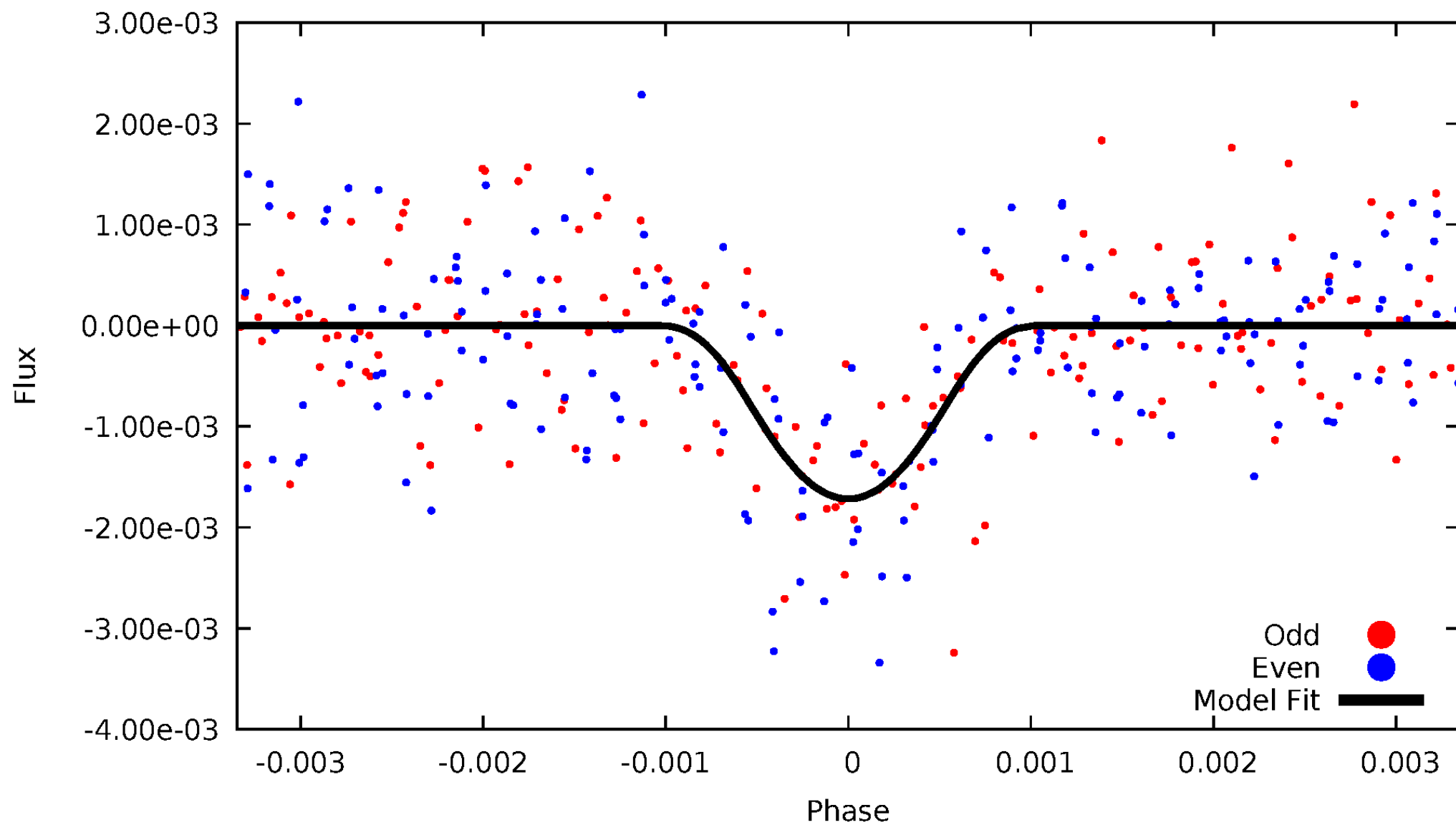


TCE 003355104-01



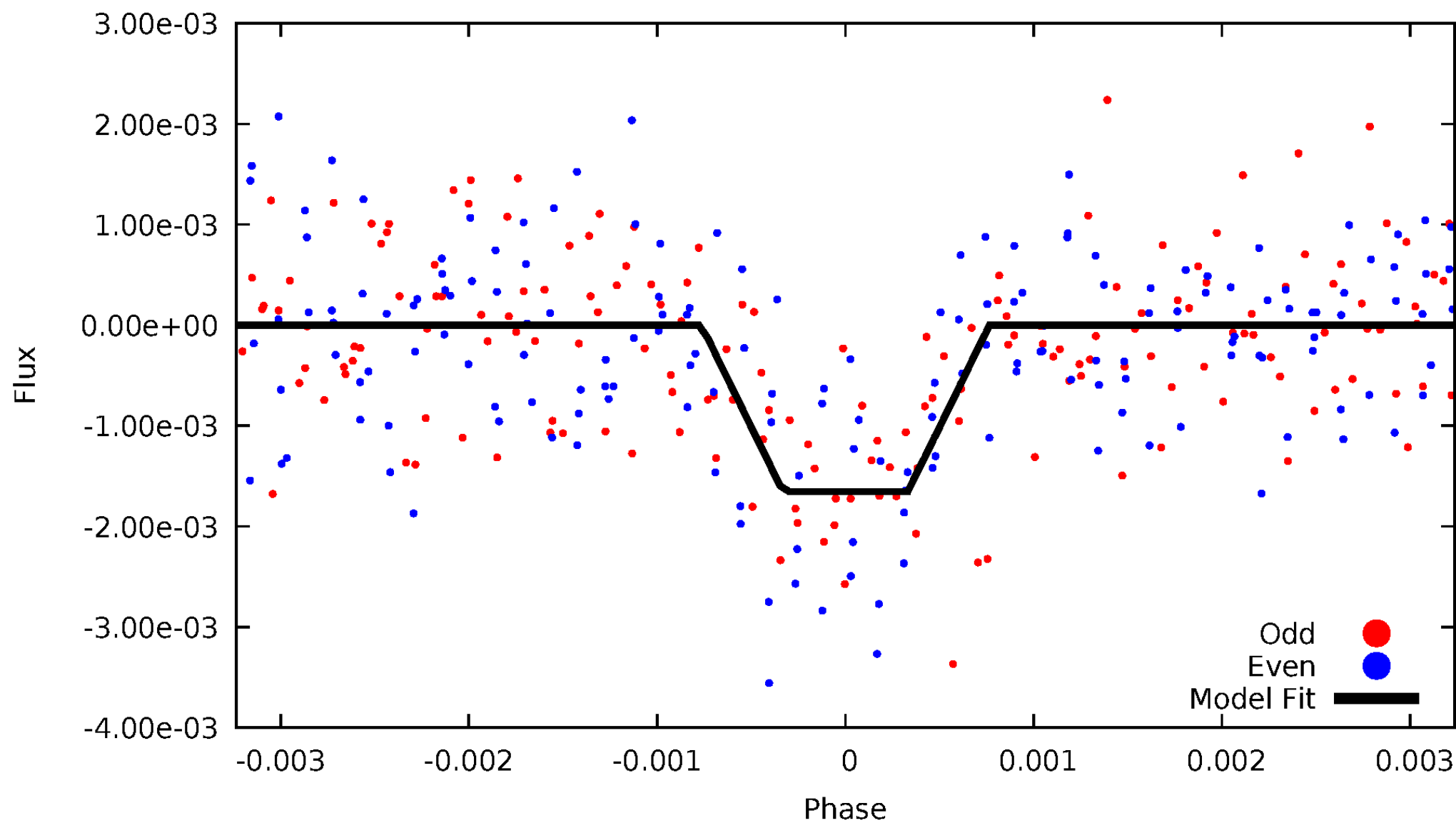
DV Odd/Even

TCE 003355104-01



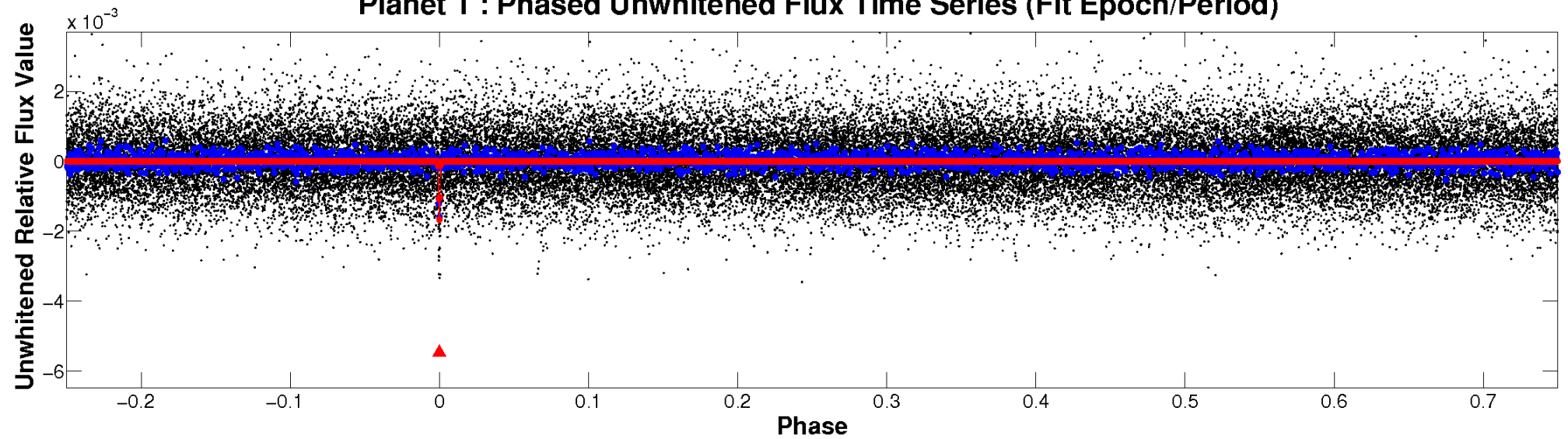
ALT Odd/Even

TCE 003355104-01

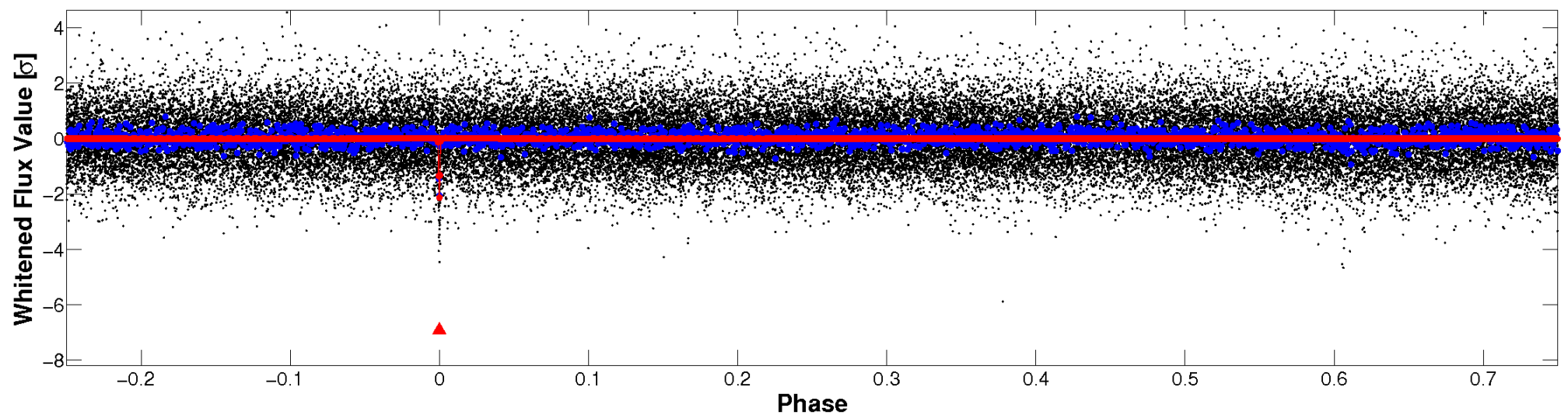


Non-Whitened Vs. Whitened Light Curve

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

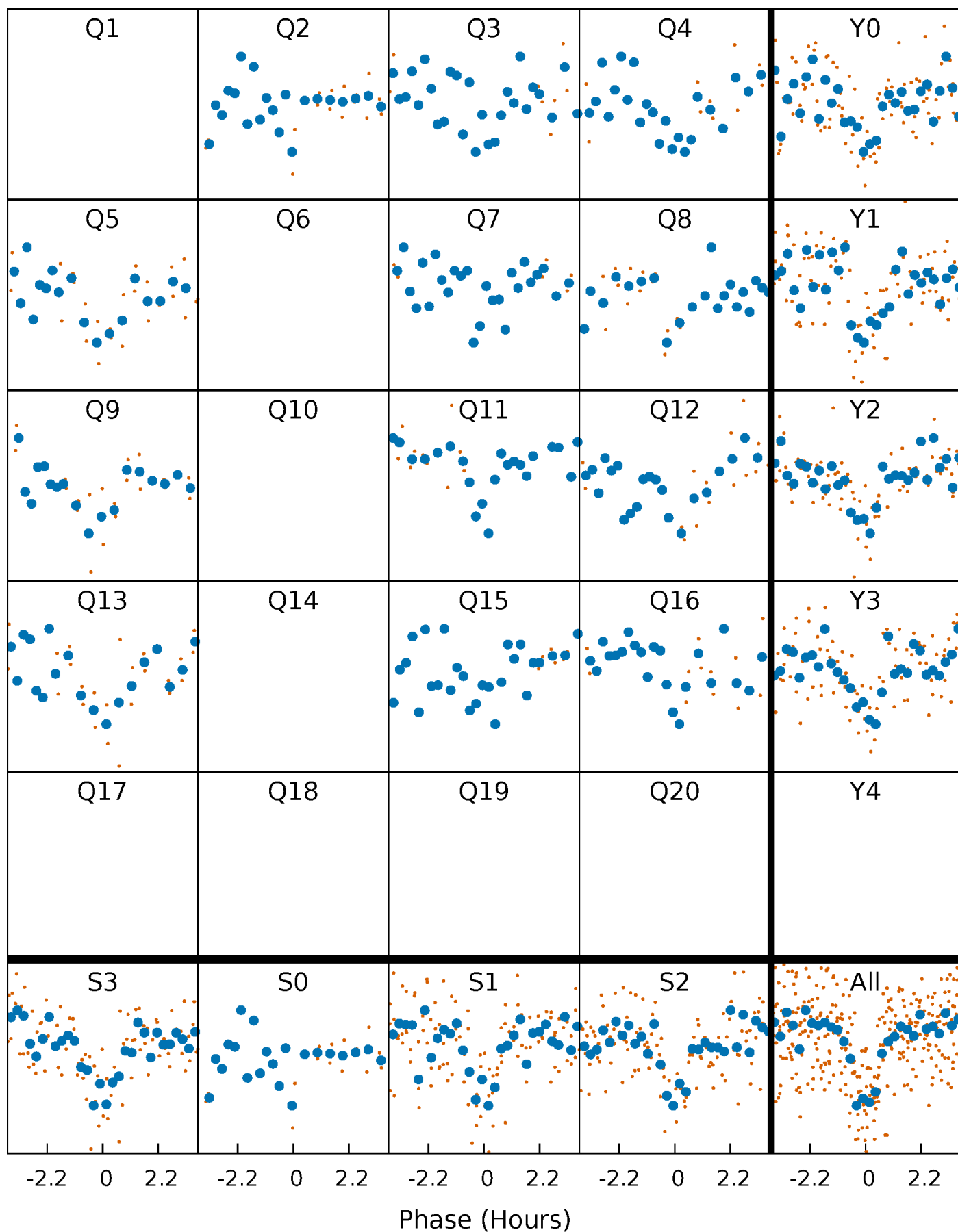


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



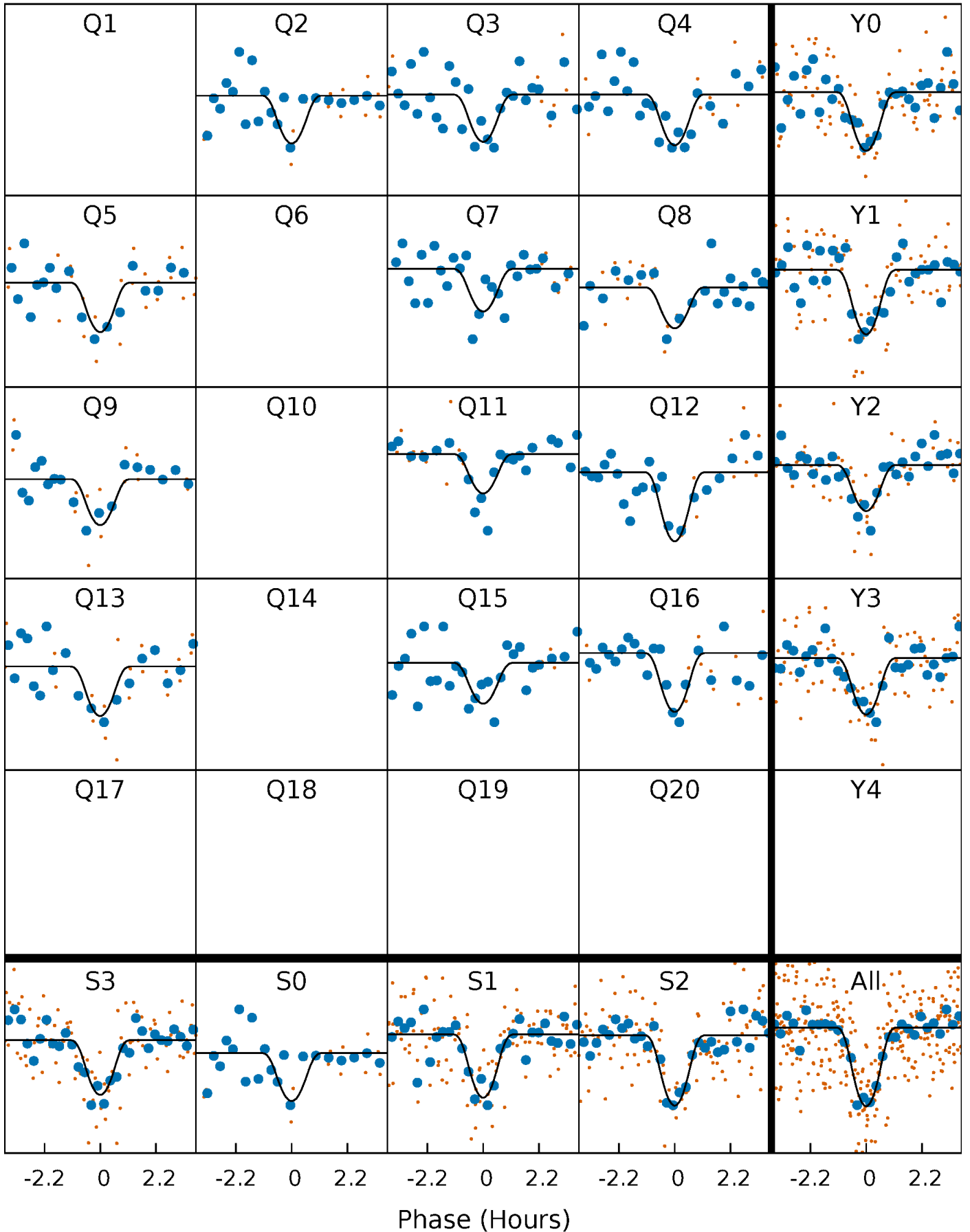
PDC Quarter-Phased Transit Curves

TCE 003355104-01 P= 47.062778 Days $T_0=171.949626$ (BKJD)



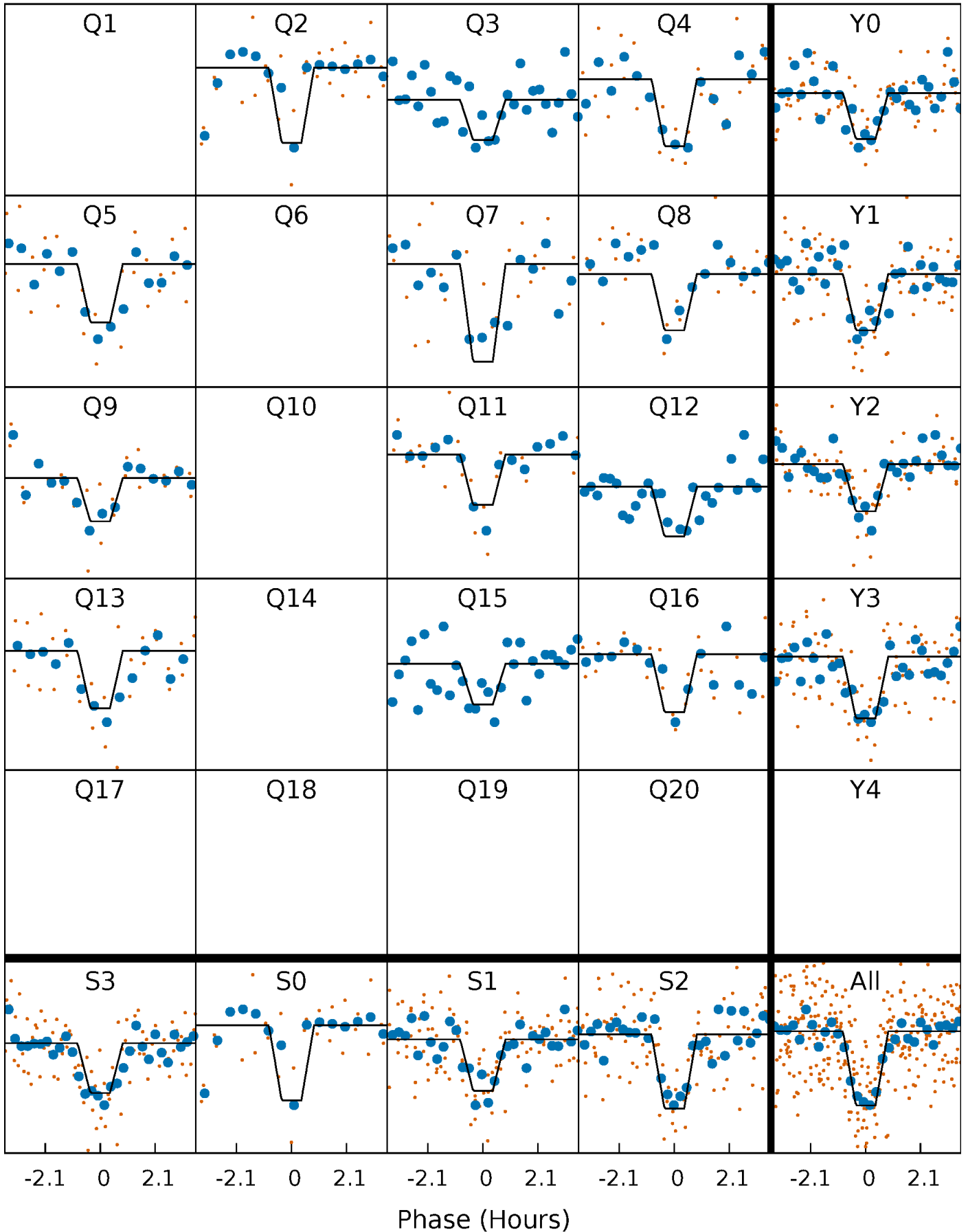
DV Quarter-Phased Transit Curves

TCE 003355104-01 P= 47.062778 Days $T_0=171.949626$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

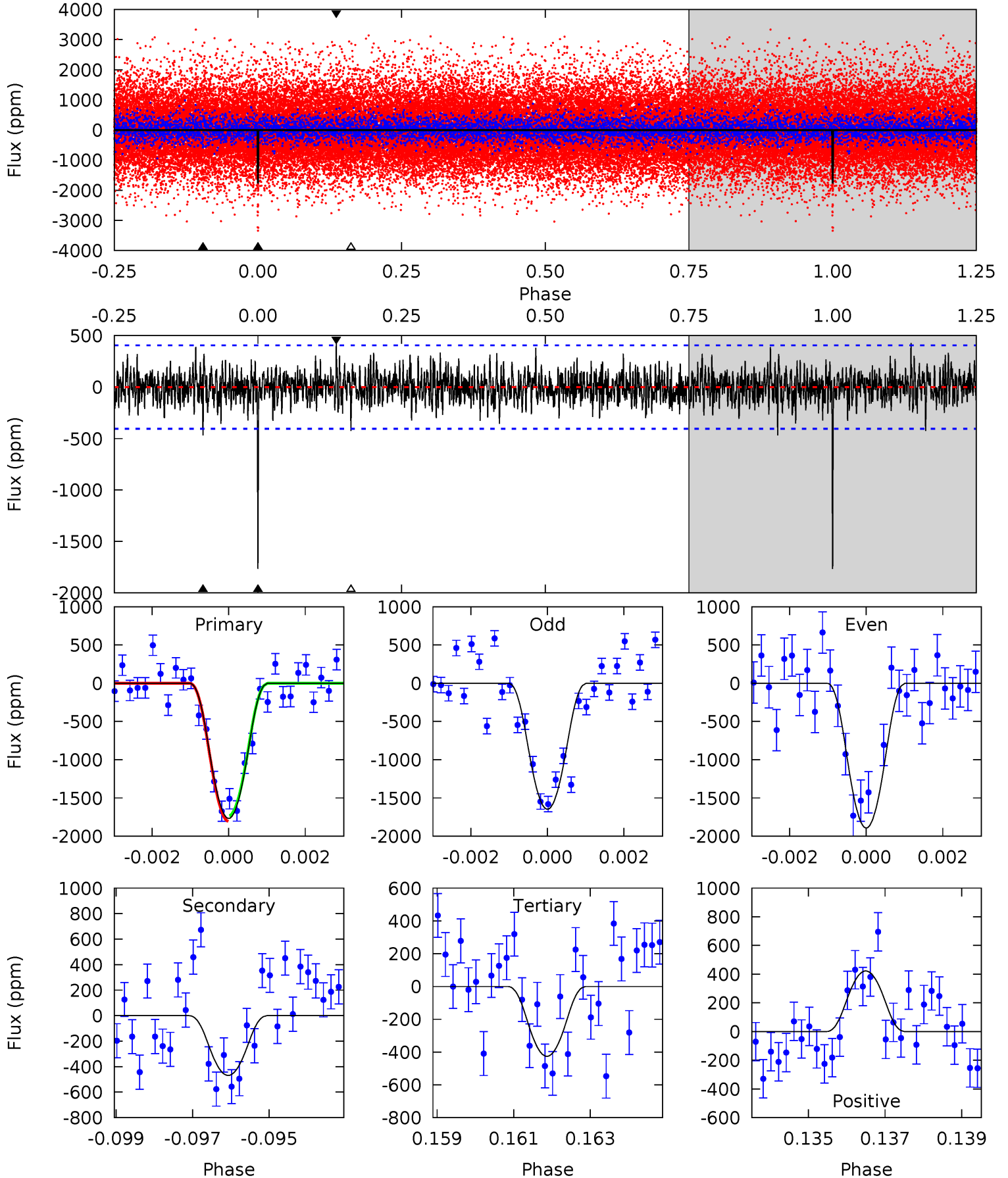
TCE 003355104-01 P= 47.062828 Days $T_0=171.948821$ (BKJD)



DV Model-Shift Uniqueness Test

003355104-01, $P = 47.062778$ Days, $E = 124.886848$ Days

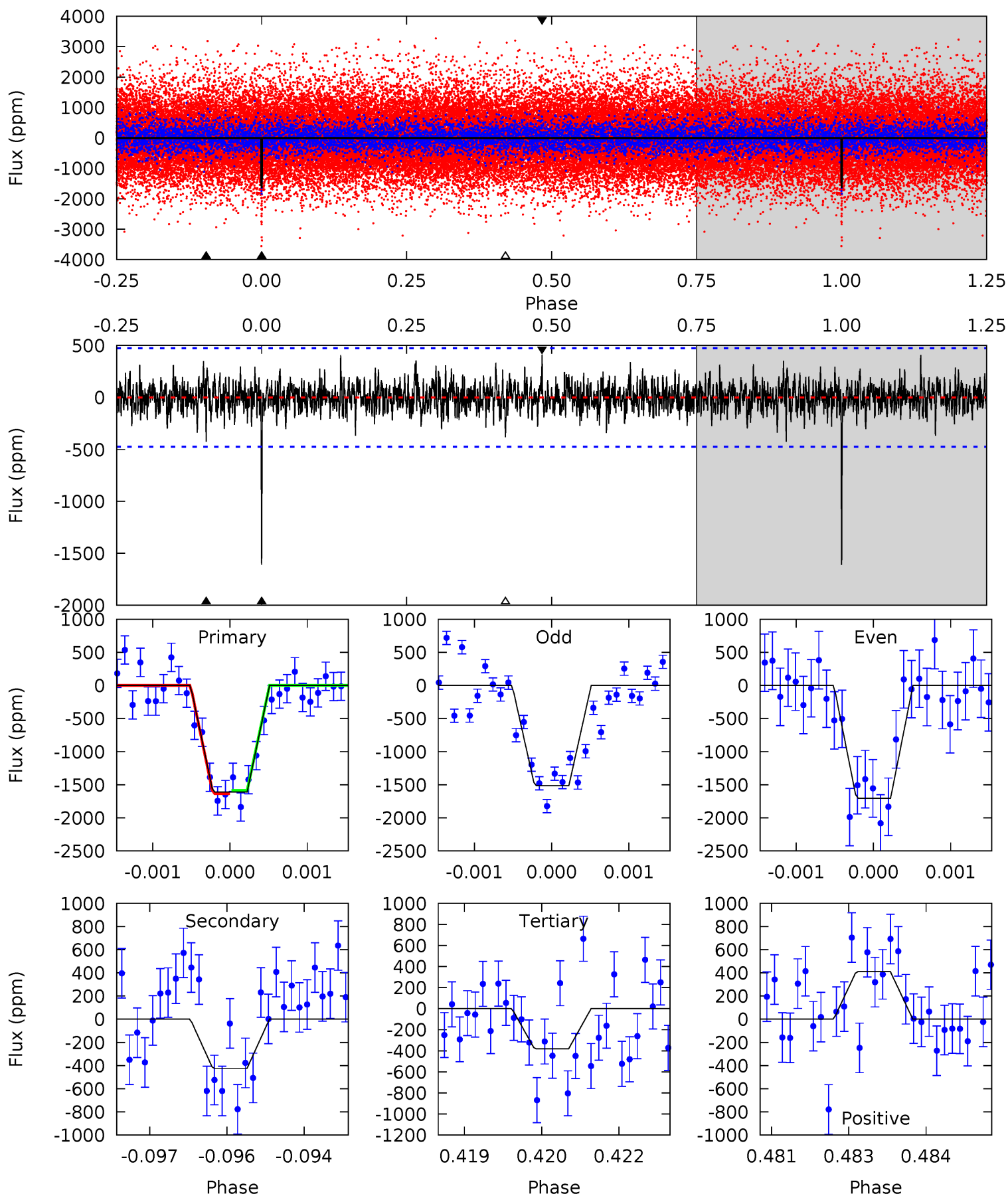
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.2	6.15	5.59	5.54	5.33	3.09	1.51	17.6	17.6	0.57	0.61	1.61	1.06	0.19	0.48



Alt Model-Shift Uniqueness Test

003355104-01, $P = 47.062828$ Days, $E = 124.885993$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	4.82	4.33	4.66	5.38	3.18	1.21	13.9	13.6	0.50	0.17	1.07	1.06	0.20	0.26



Stellar Parameters For KIC 003355104

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5838^{+157}_{-192}	$4.529^{+0.037}_{-0.200}$	$-0.080^{+0.300}_{-0.300}$	$0.897^{+0.260}_{-0.087}$	$0.992^{+0.113}_{-0.126}$	$1.938^{+0.384}_{-0.999}$
	+3%/-3%	+1%/-4%	+375%/-375%	+29%/-10%	+11%/-13%	+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 003355104-01 / KOI 4975.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-469 ± 76	$14.00^{+14.10}_{-9.99}$	693^{+51}_{-32}	2993^{+1493}_{-492}	83^{+863}_{-63}
Alt.	-425 ± 88	$13.65^{+14.20}_{-8.97}$	692^{+50}_{-32}	2990^{+1271}_{-531}	79^{+630}_{-60}

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 $A_{obs} \gg 1.0$

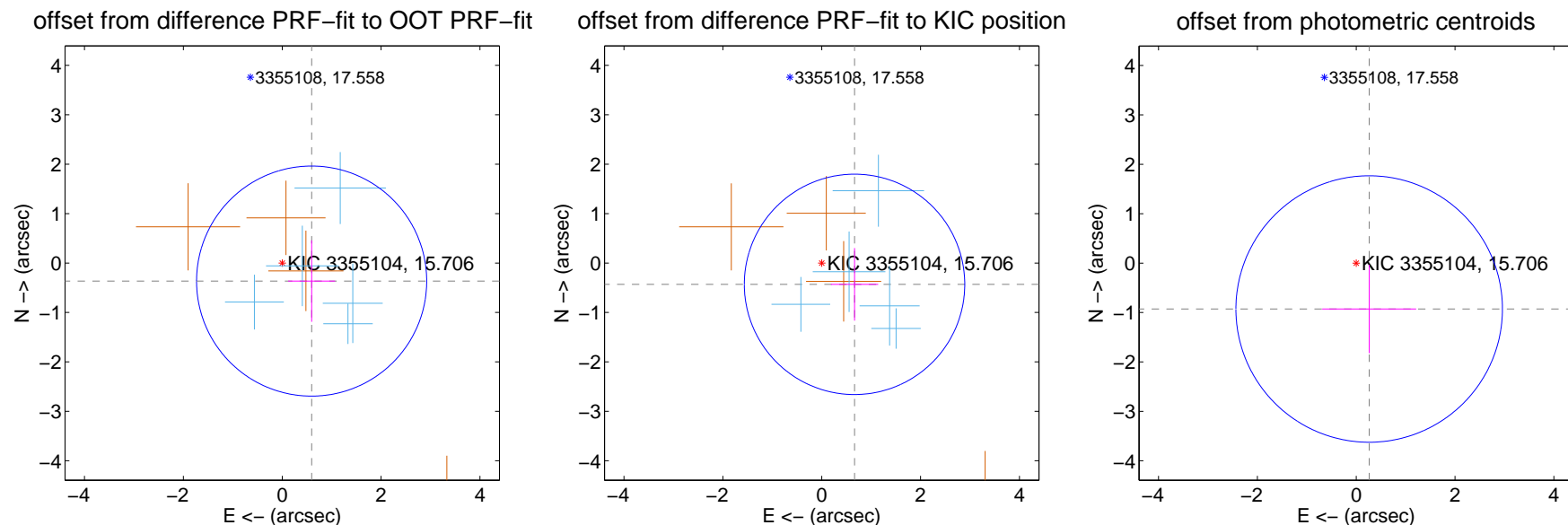
DV Centroid Data

Supplemental centroid analysis for 003355104-01. Kepler magnitude: 15.71. Transit SNR 13.68

There are 5 quarters with good PRF difference image offsets

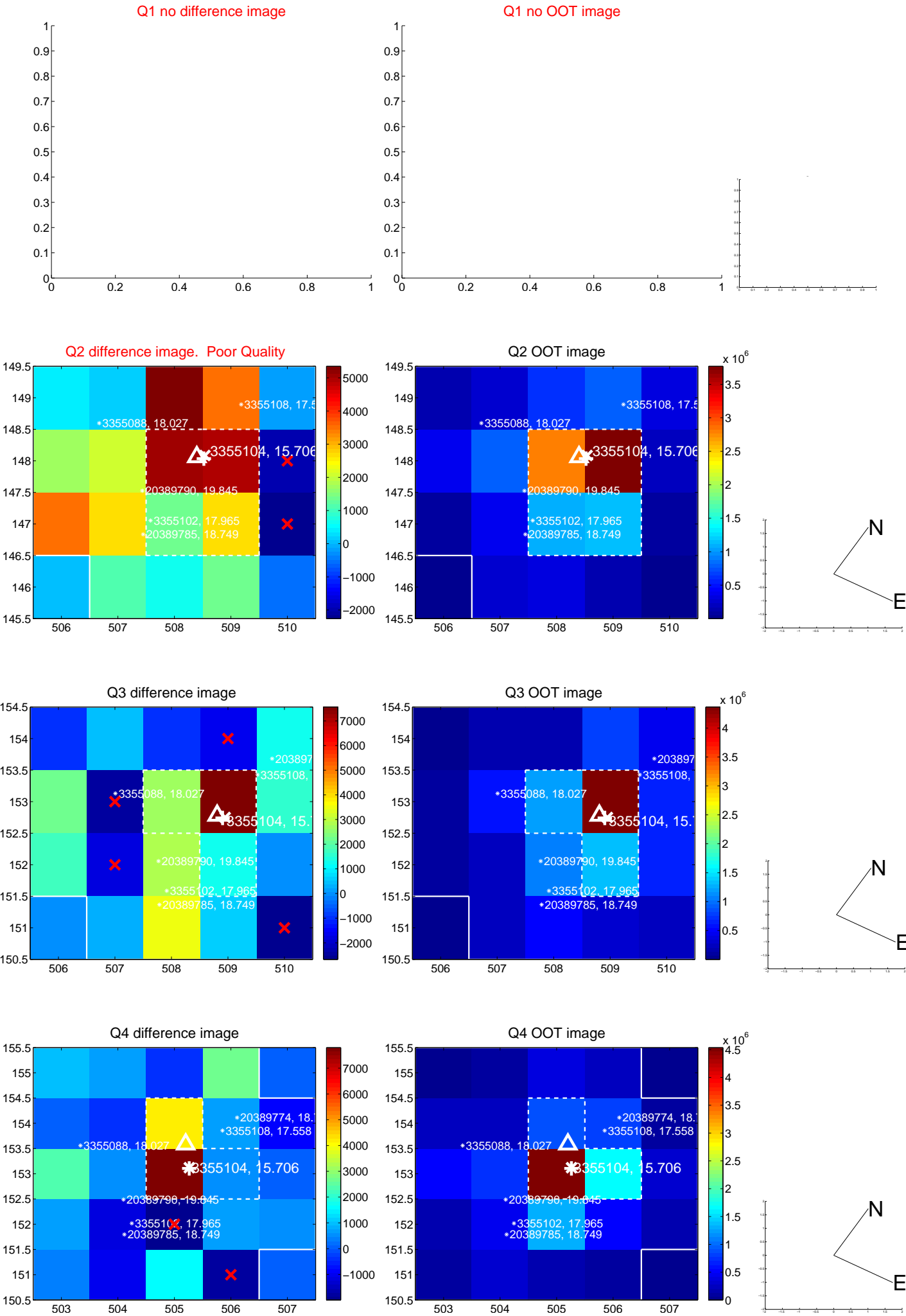
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.698 ± 0.776	0.90	-0.595 ± 0.475	-0.365 ± 0.824
PRF-fit source offset from KIC position	0.792 ± 0.743	1.07	-0.664 ± 0.479	-0.431 ± 0.734
photometric centroid source offset	0.97 ± 0.90	1.07	-0.26 ± 0.95	-0.93 ± 0.89

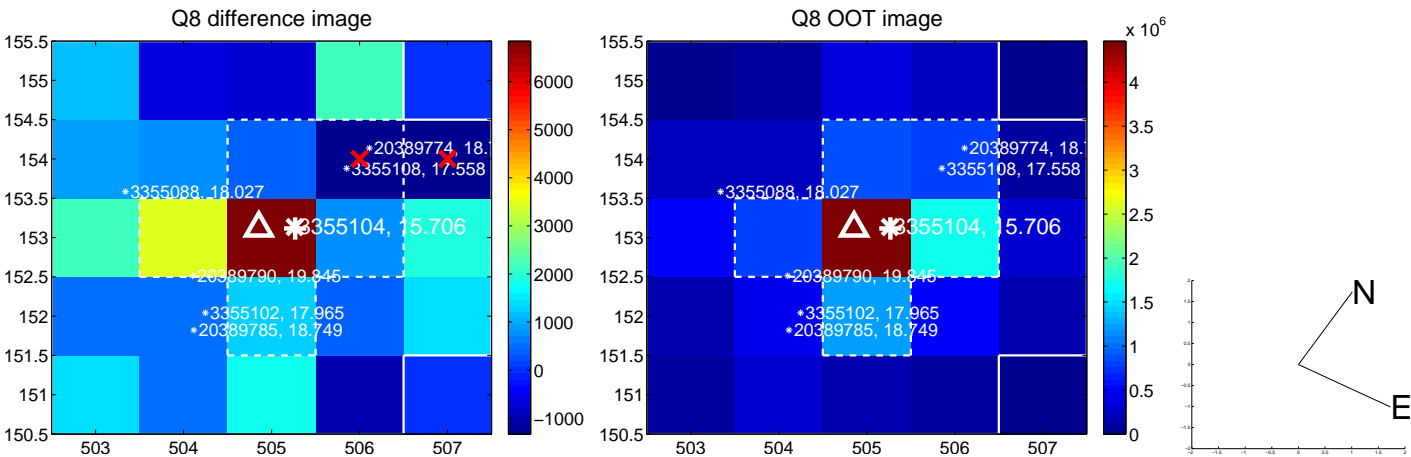
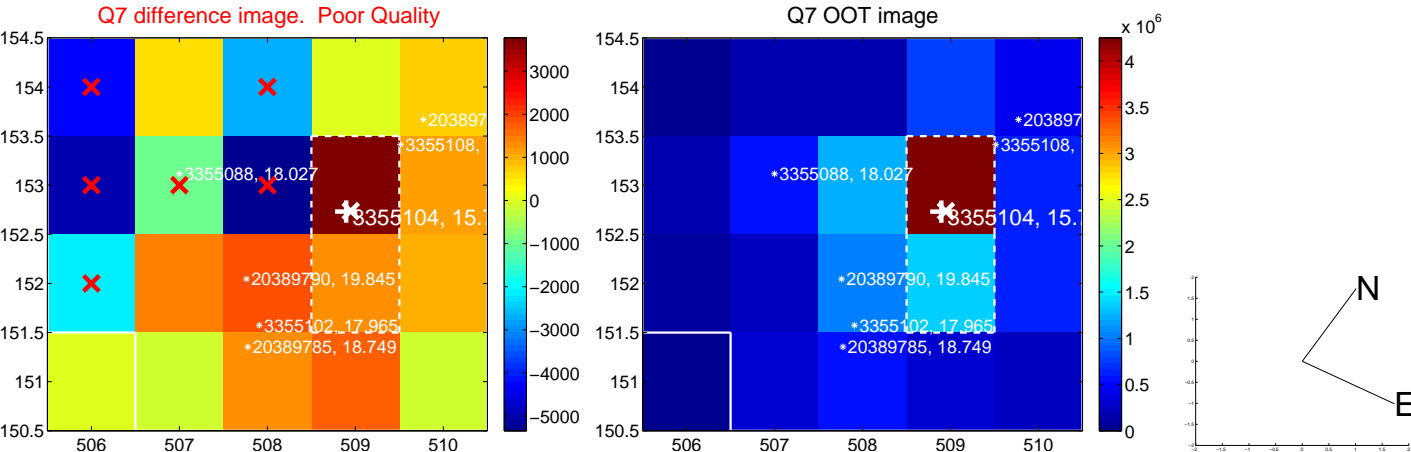
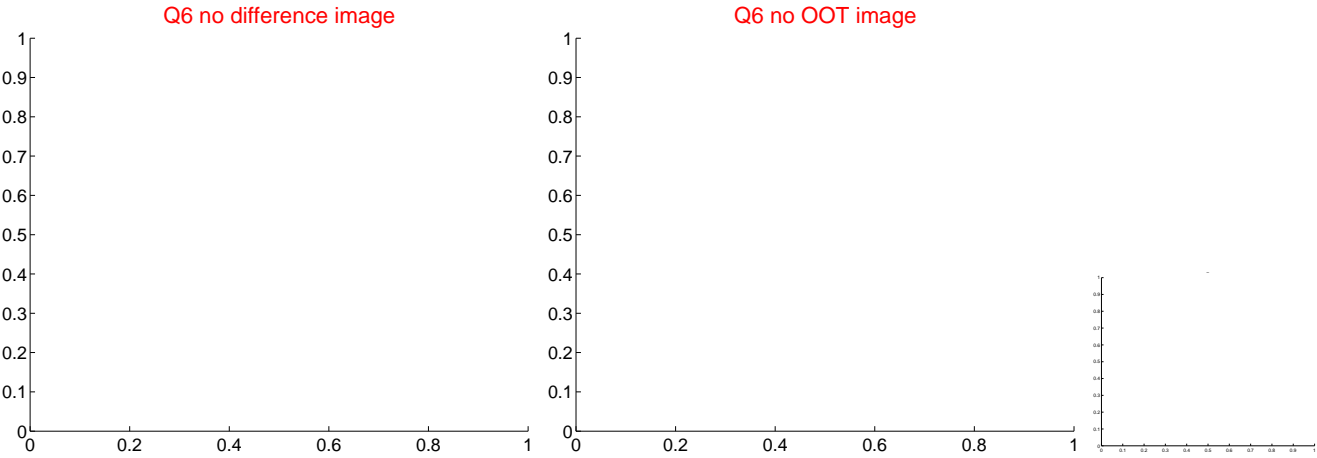
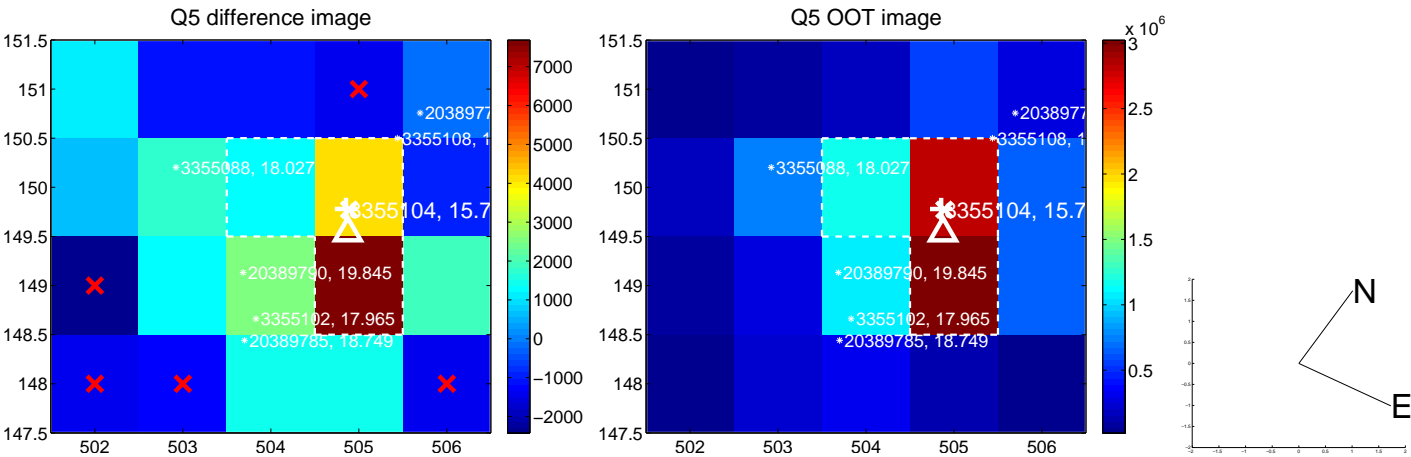


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

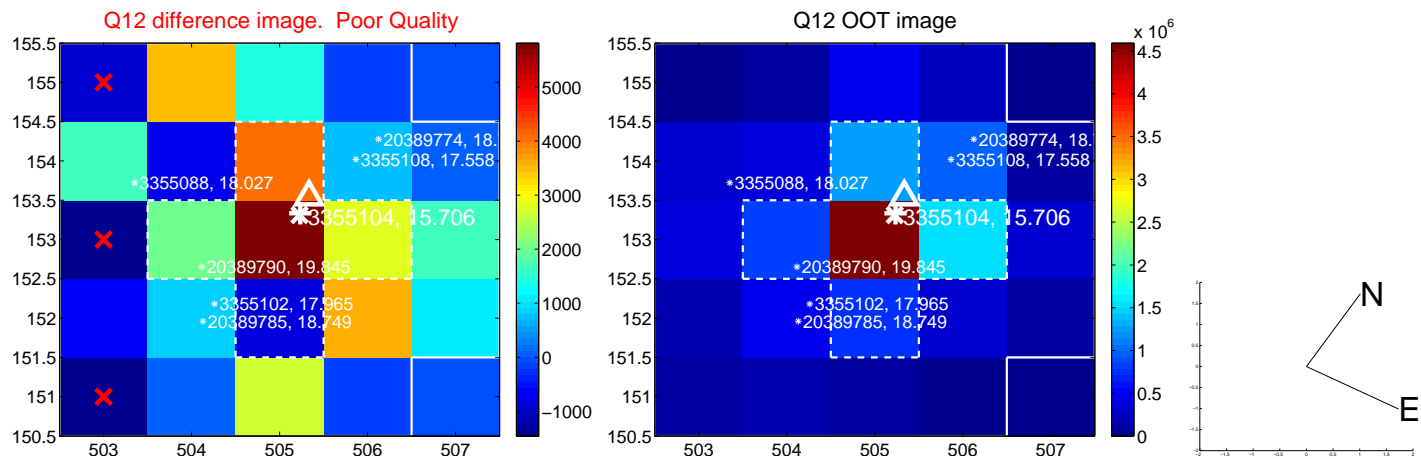
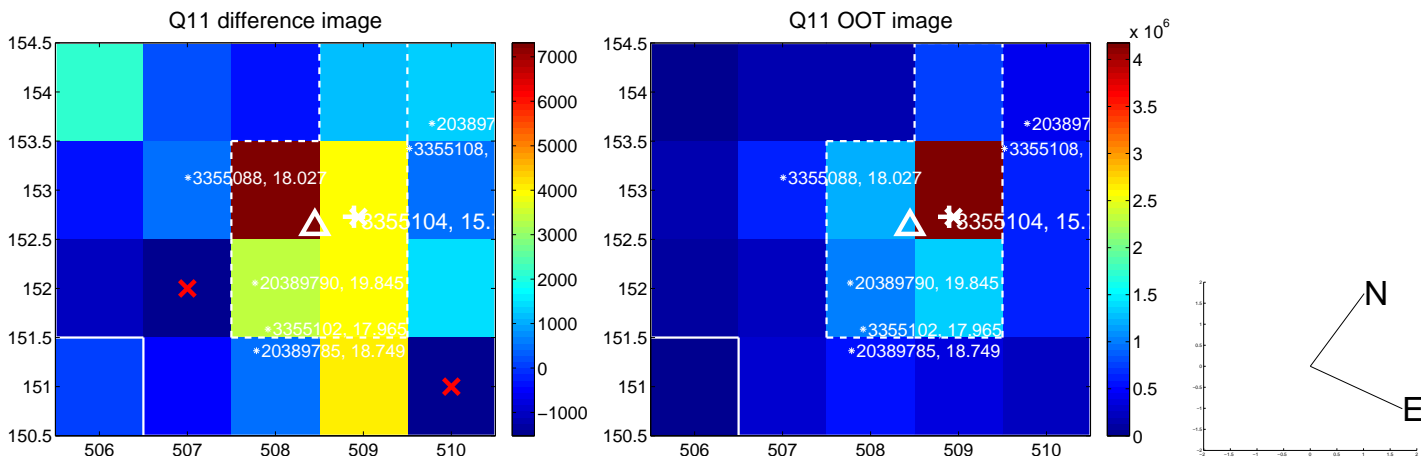
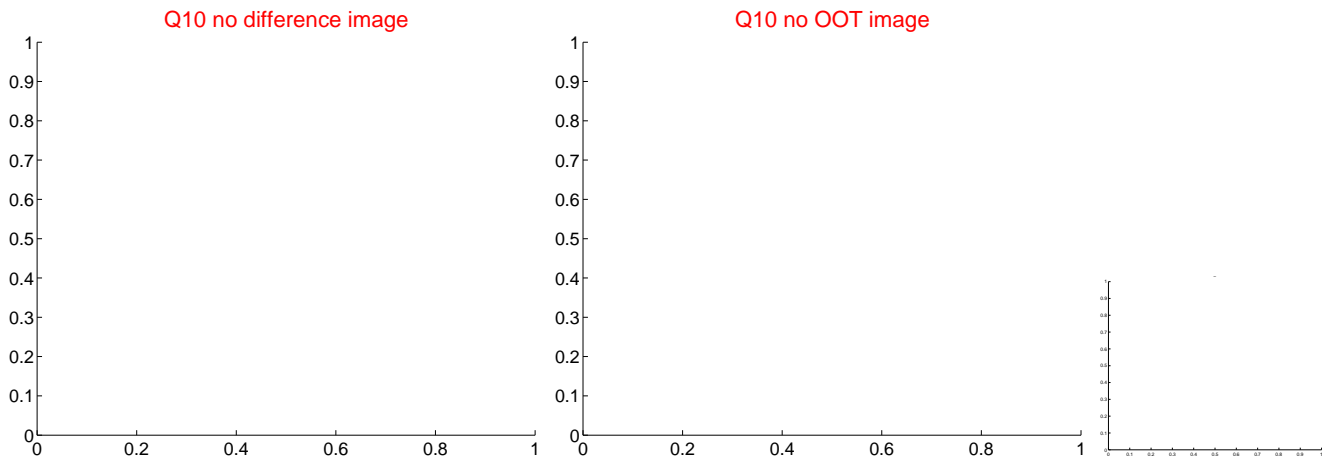
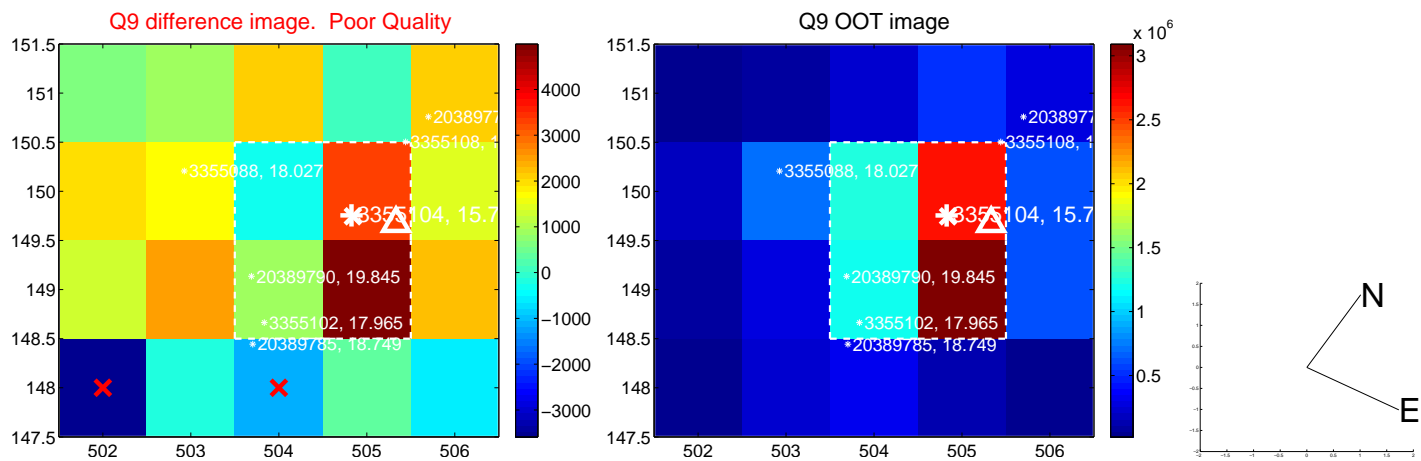
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



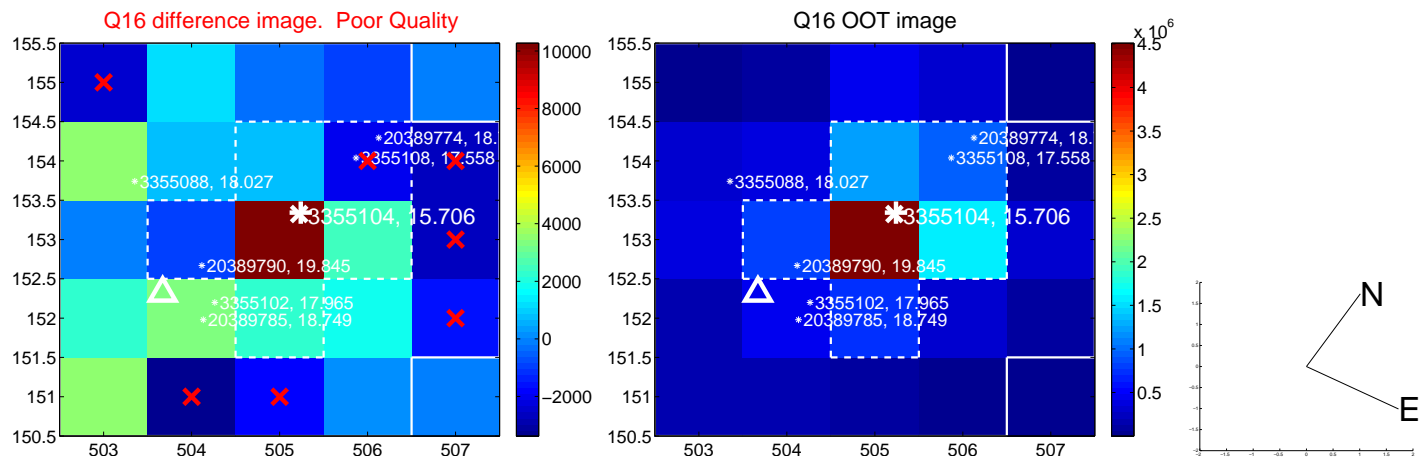
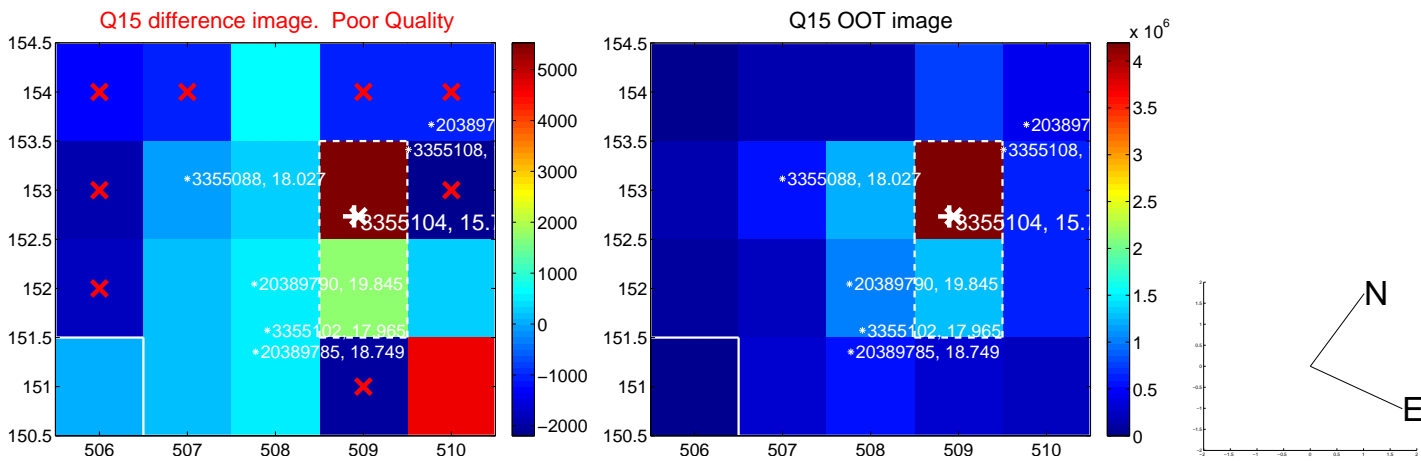
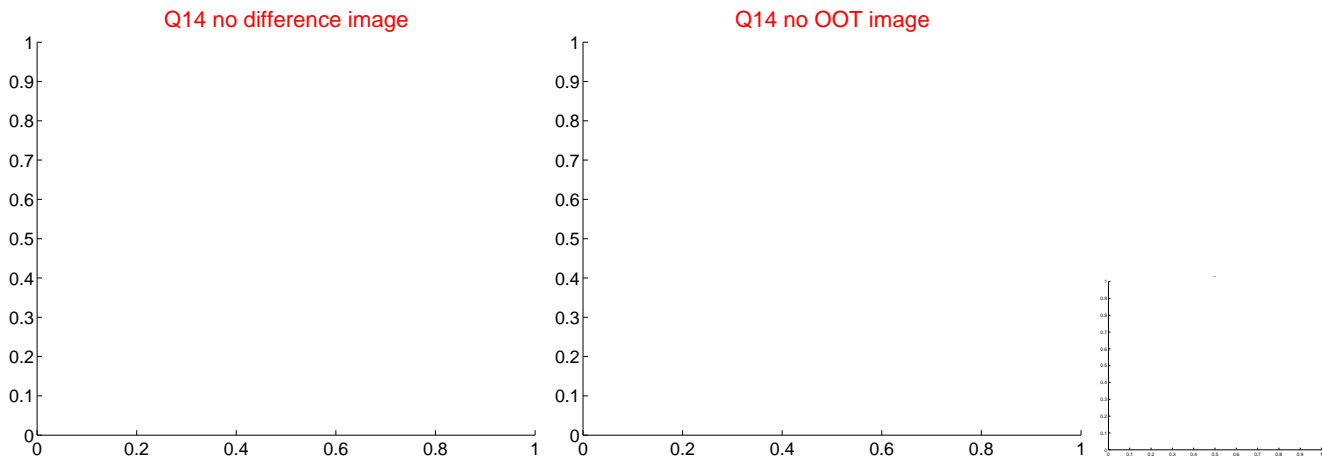
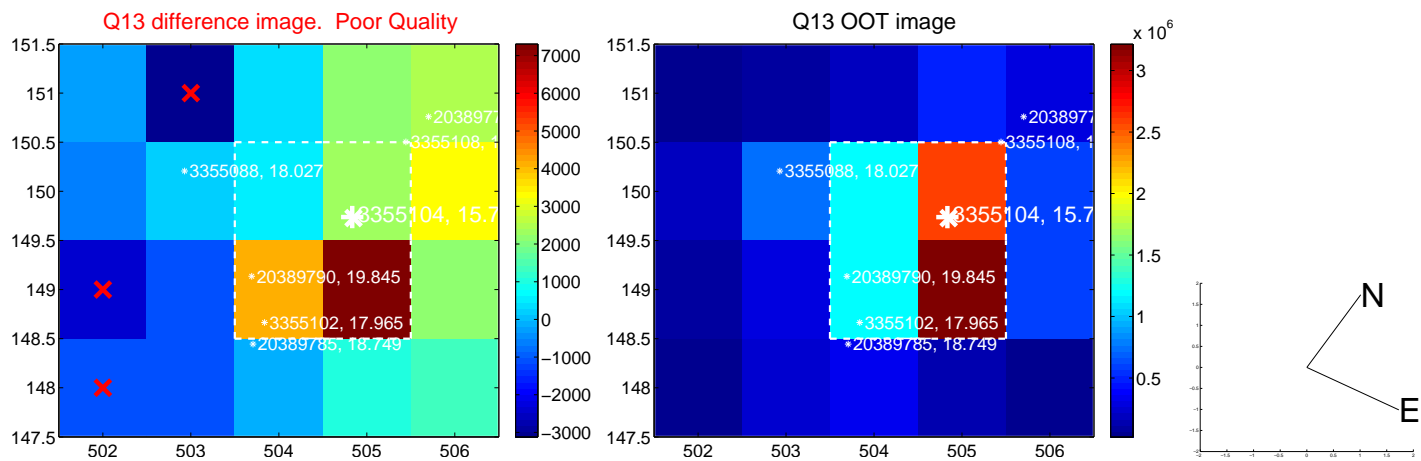
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



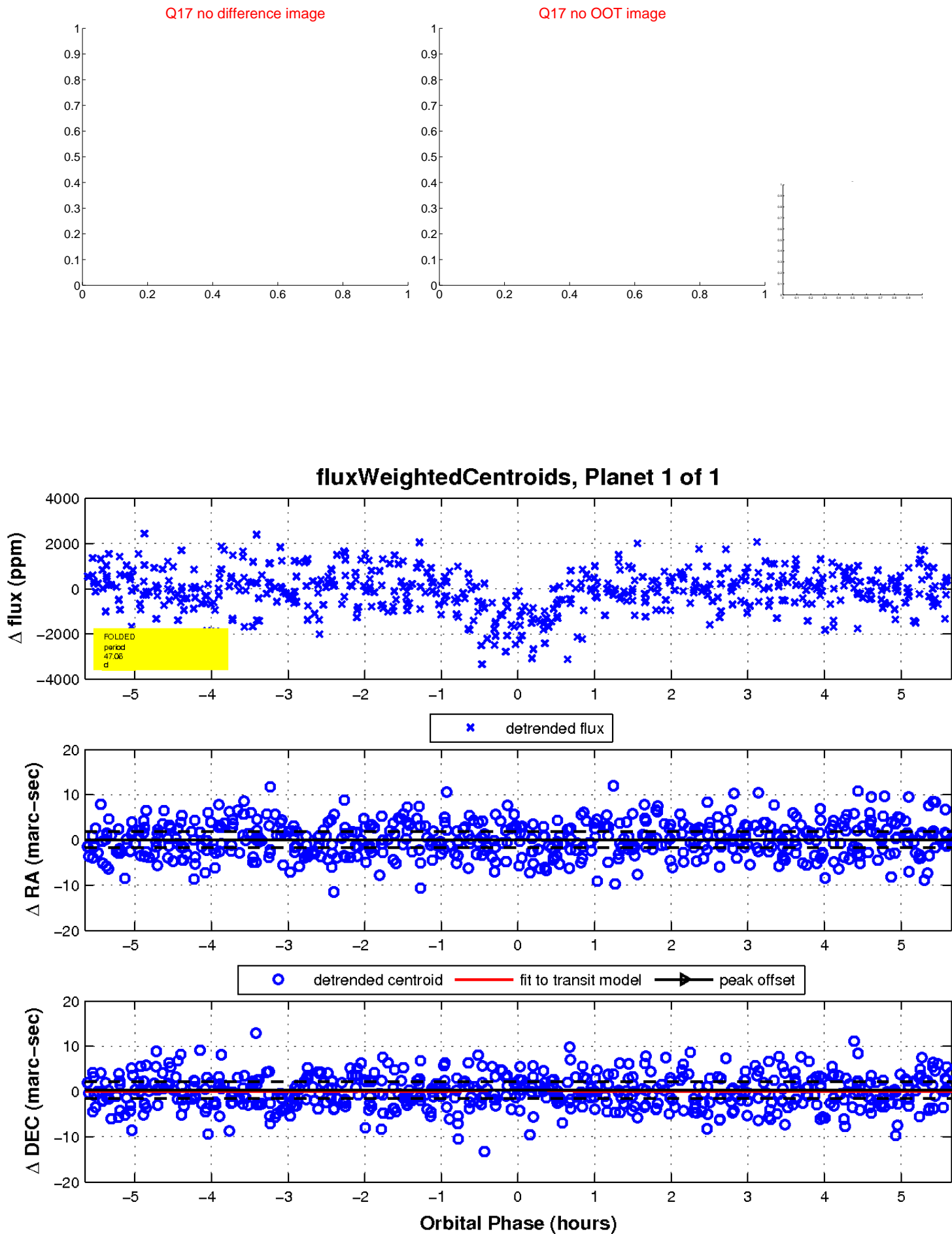
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

