

KIC 006463499

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})
006463499-01	OBS	4163.01	94.445576	166.163694	470.9	7.845	14.3	15.9	2.48	5780	7.78	32.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006463499-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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 006463499-01

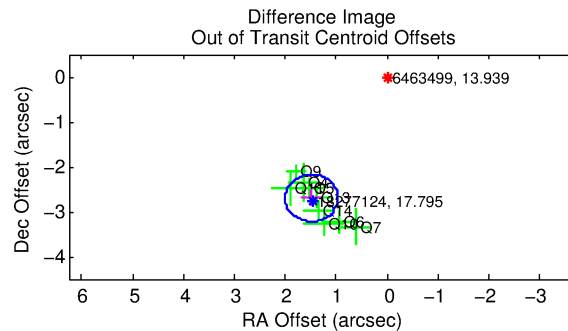
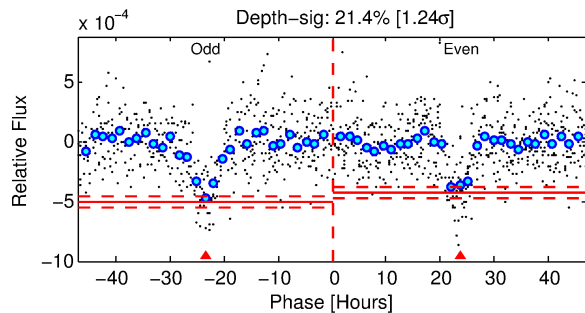
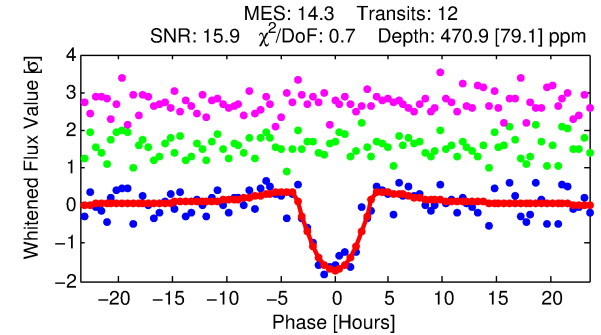
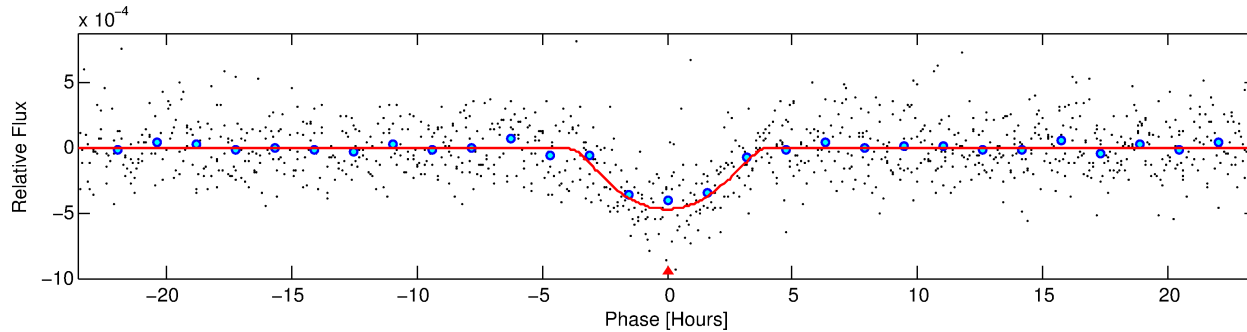
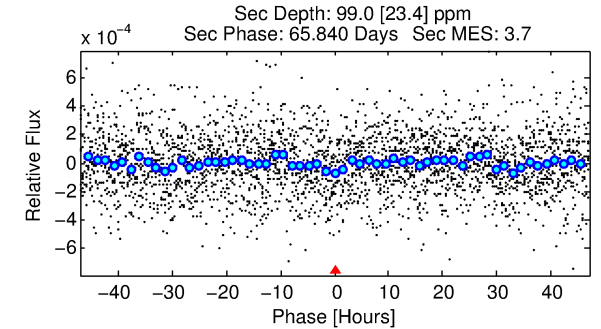
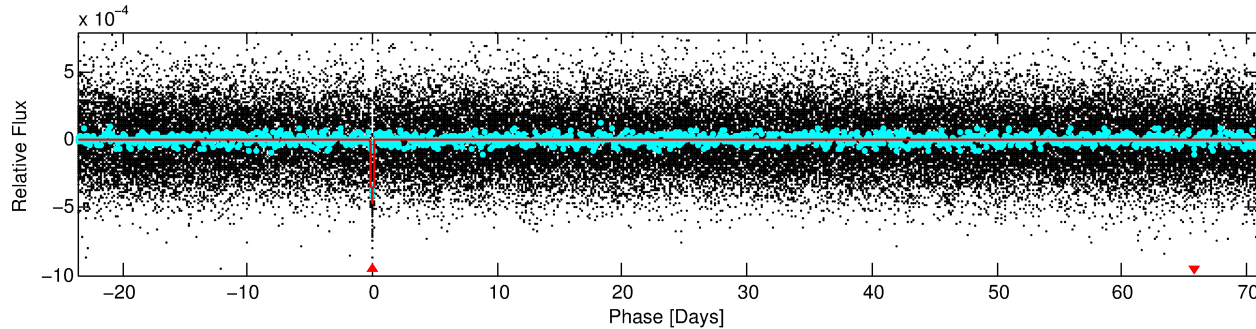
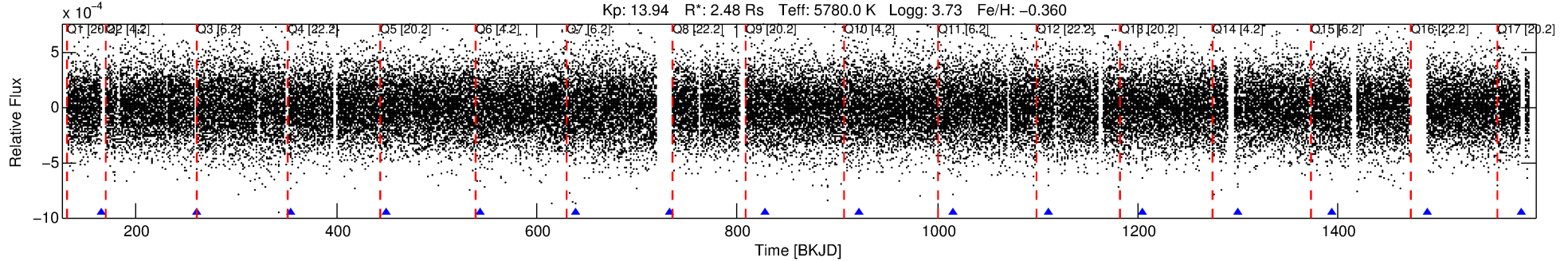
No Significant Match Found

DV One-Page Summary

KIC: 6463499 Candidate: 1 of 1 Period: 94.446 d

KOI: K04163.01 Corr: 0.978

Kp: 13.94 R*: 2.48 Rs Teff: 5780.0 K Logg: 3.73 Fe/H: -0.360



DV Fit Results:

Period = 94.44558 [0.00123] d
Epoch = 166.1637 [0.0100] BKJD
Rp/R* = 0.0288 [0.0109]
a/R* = 28.52 [5.93]
b = 0.98 [0.03]
Seff = 32.99 [36.82]
Teq = 611 [171] K
Rp = 7.78 [5.59] Re
a = 0.4314 [0.2833] AU
Ag = 167.29 [228.16] [0.73σ]
Teffp = 3398 [683] K [3.96σ]

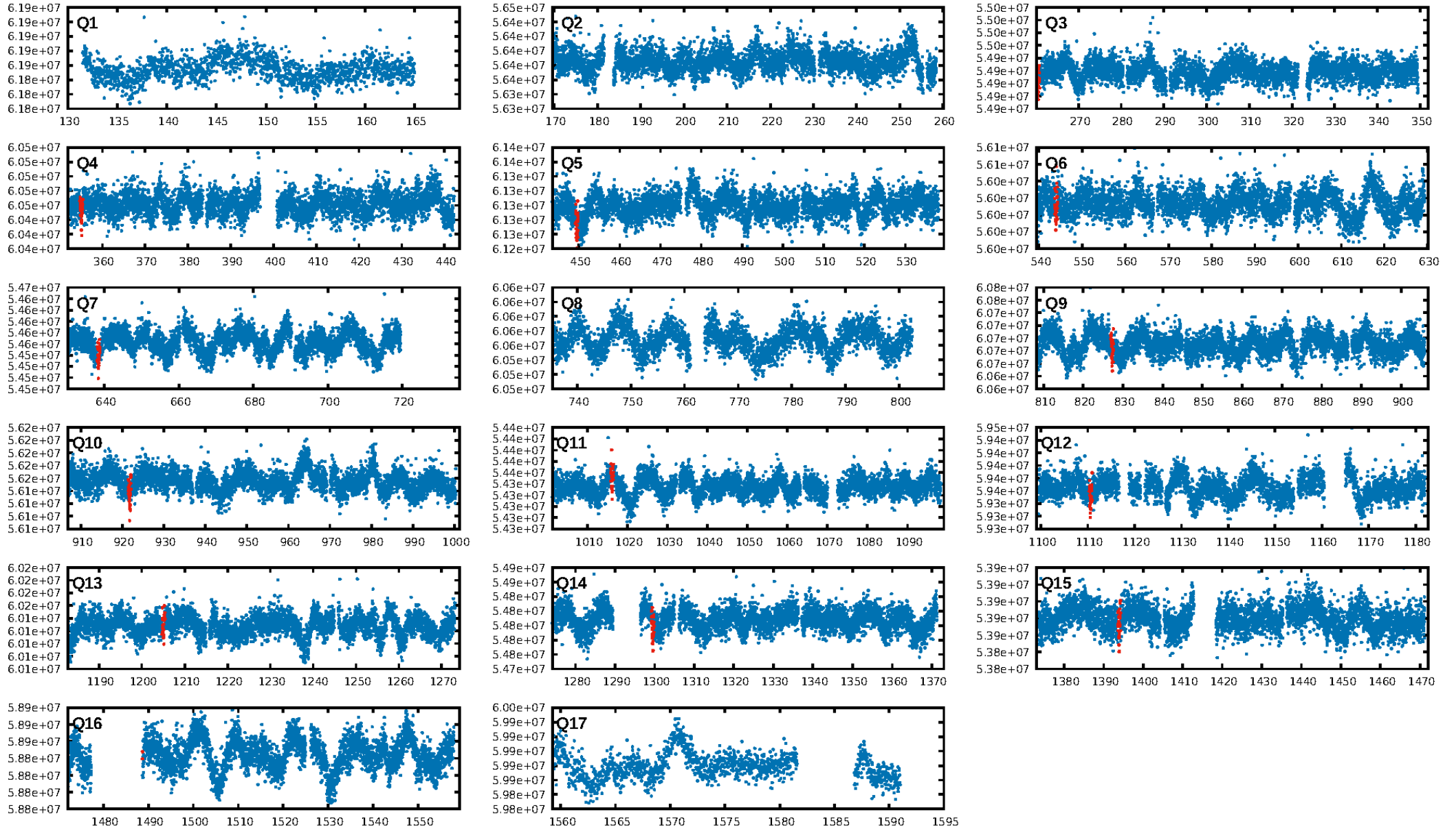
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.75e-44
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 1.001
Centroid-sig: 0.0%
Centroid-so: 4.290 arcsec [6.07σ]
OotOffset-rm: 3.080 arcsec [17.73σ]
KicOffset-rm: 3.130 arcsec [17.90σ]
OotOffset-st: 3/2/1/3 [9]
KicOffset-st: 3/2/1/3 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

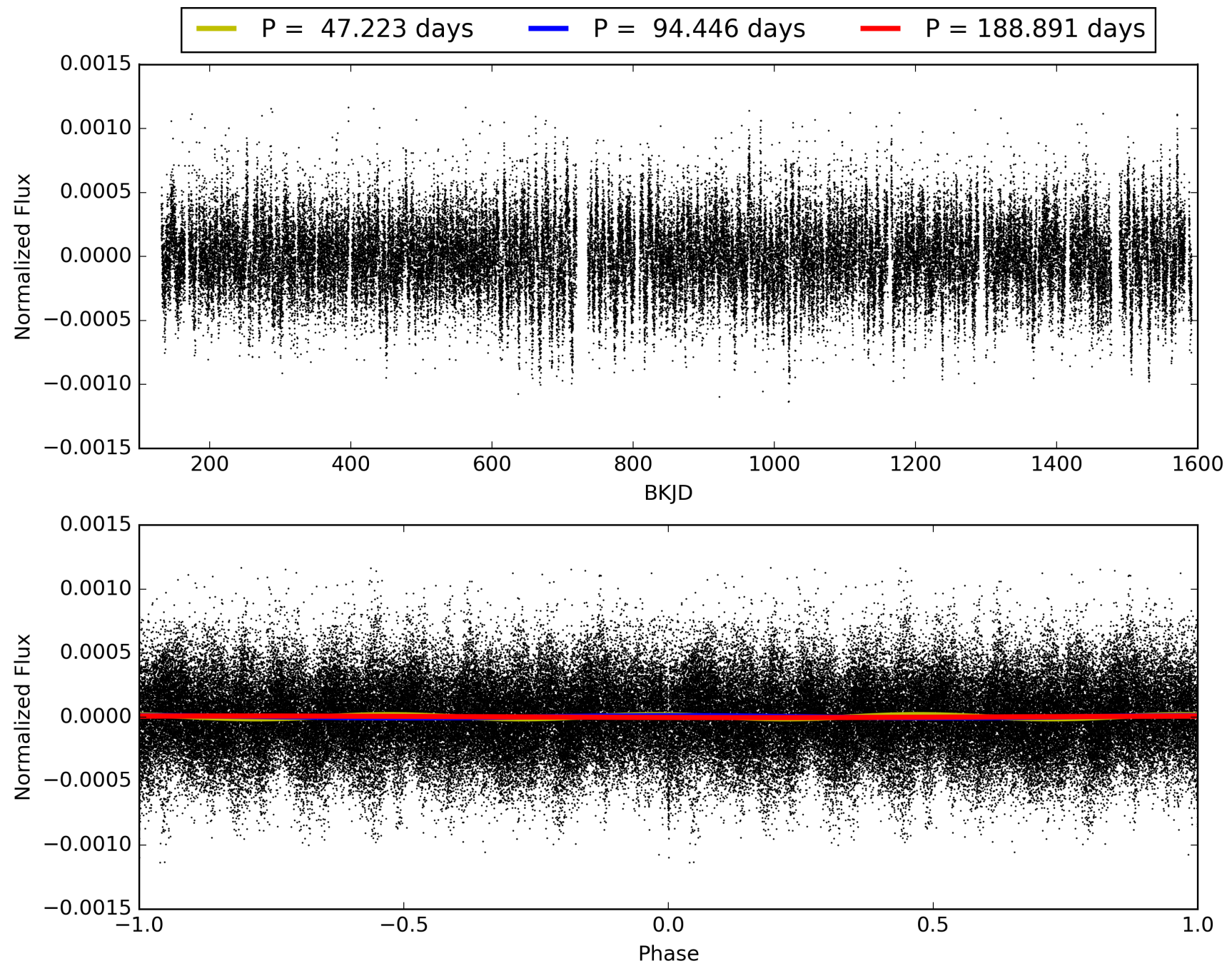
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:47:32 Z

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

TCE 006463499-01, PDC Light Curves

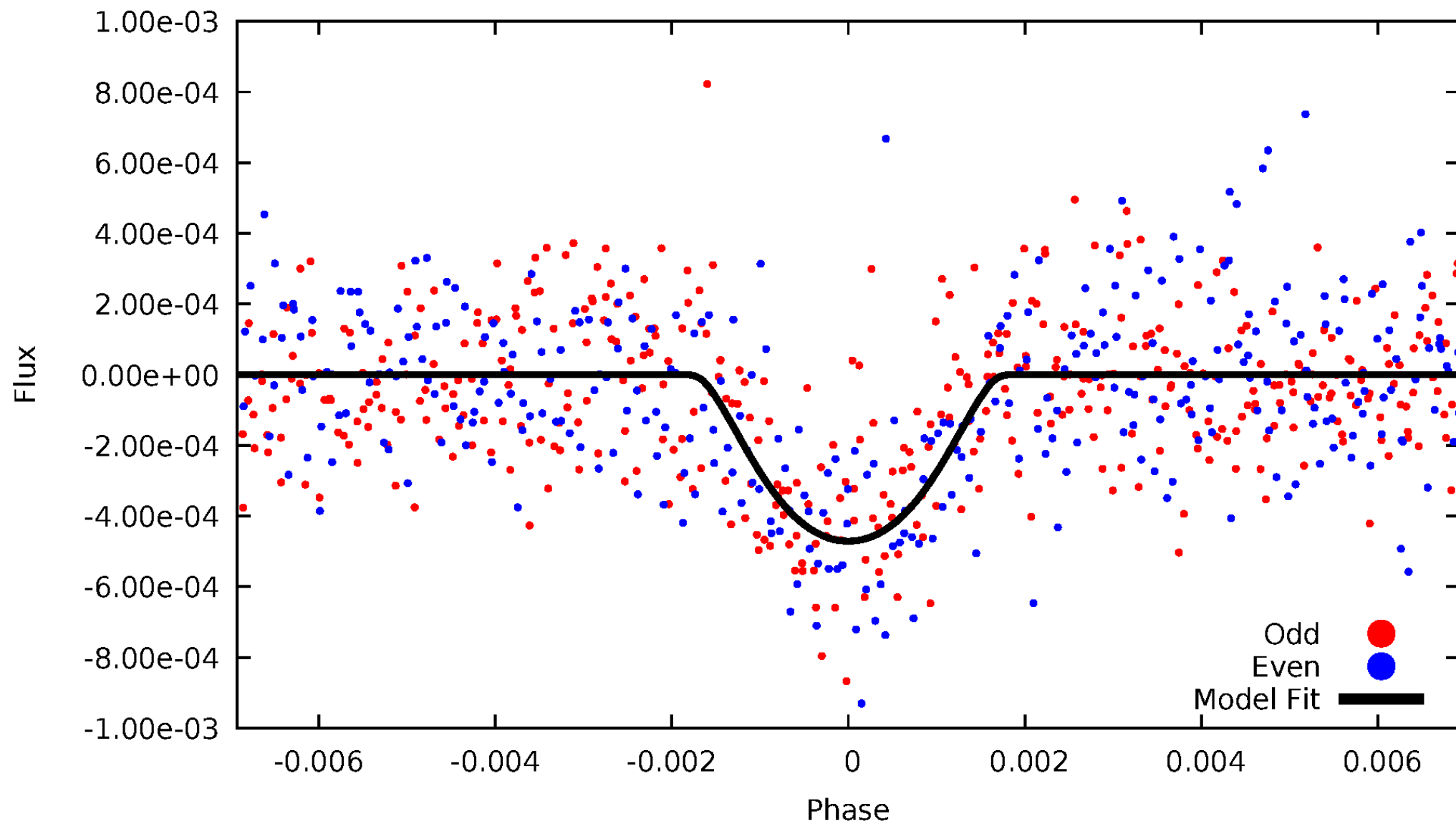


TCE 006463499-01



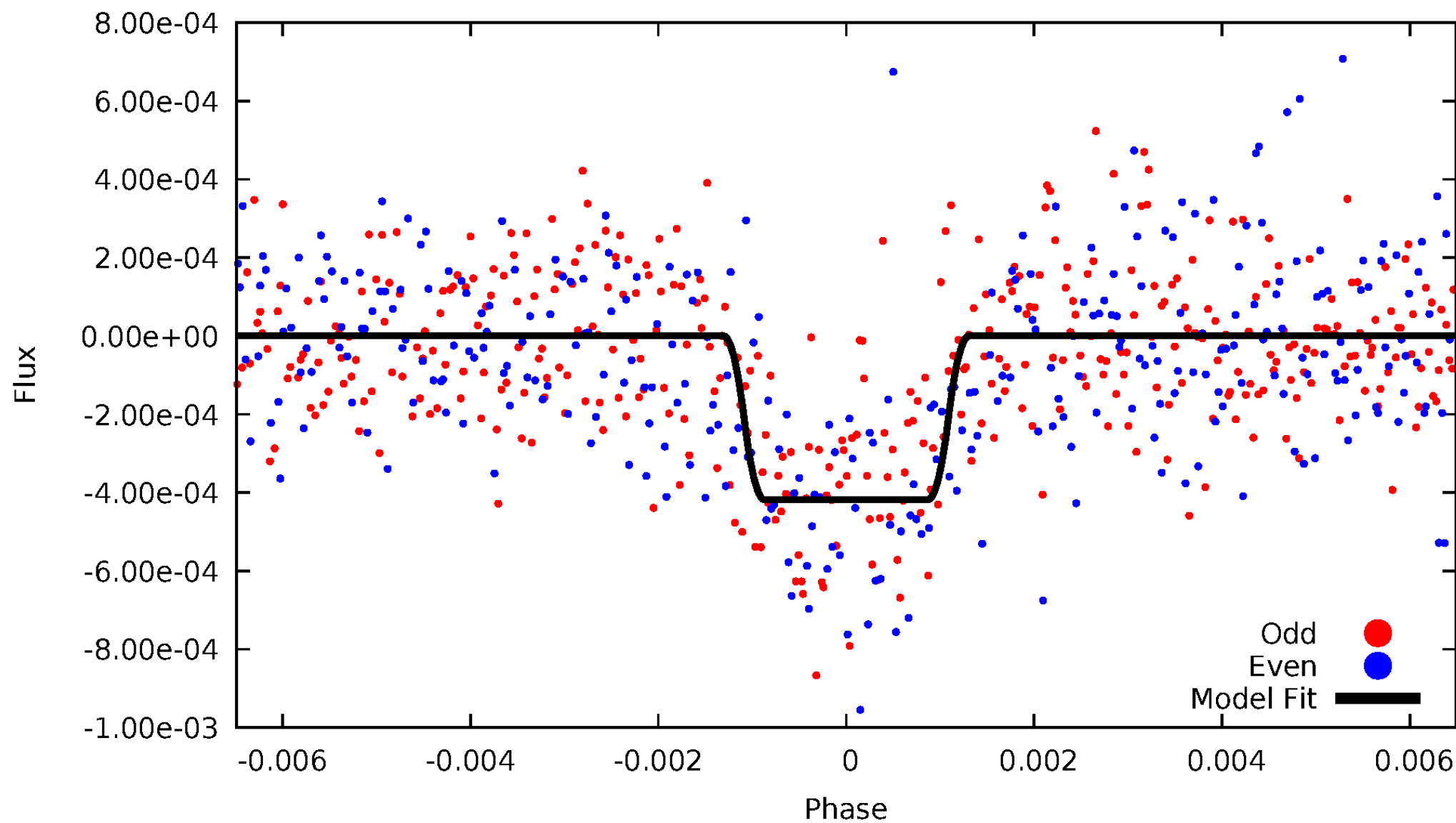
DV Odd/Even

TCE 006463499-01

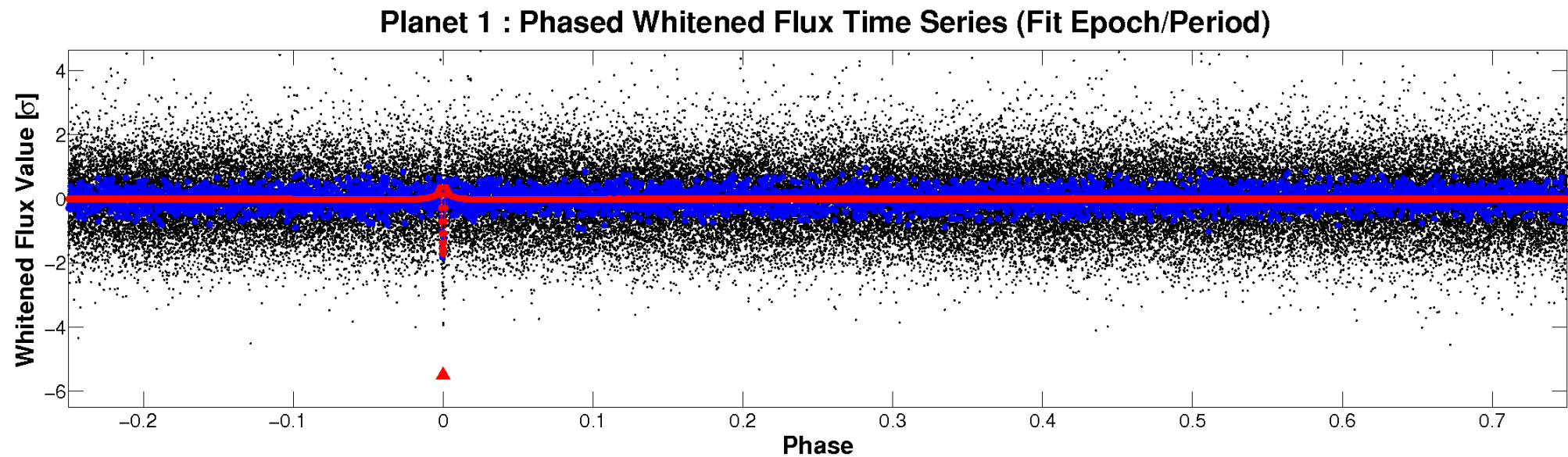
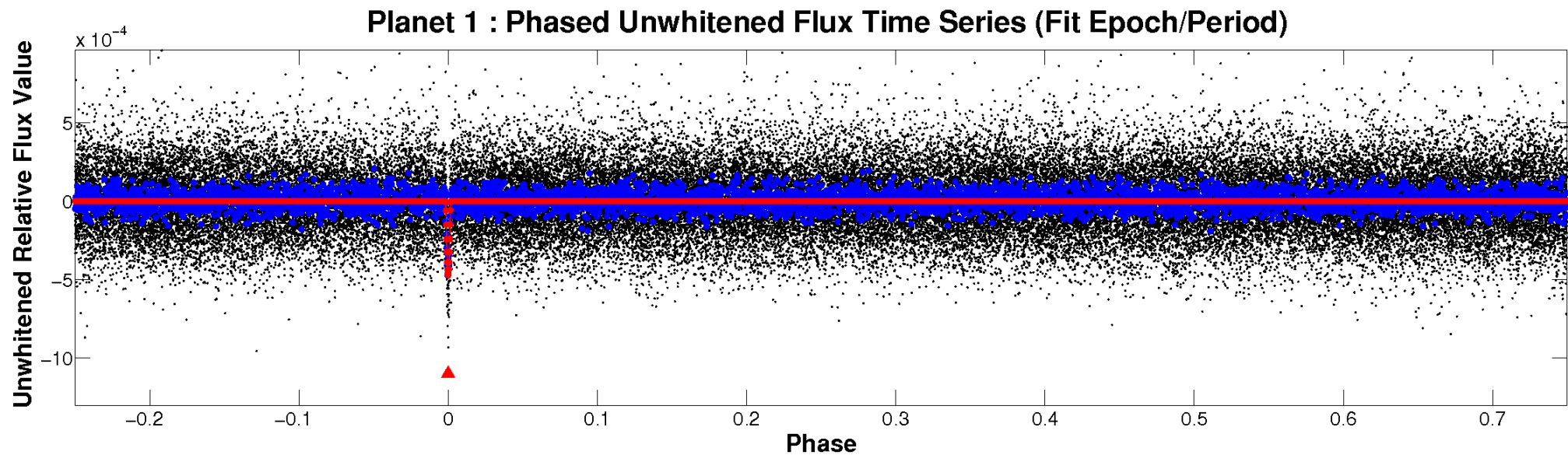


ALT Odd/Even

TCE 006463499-01

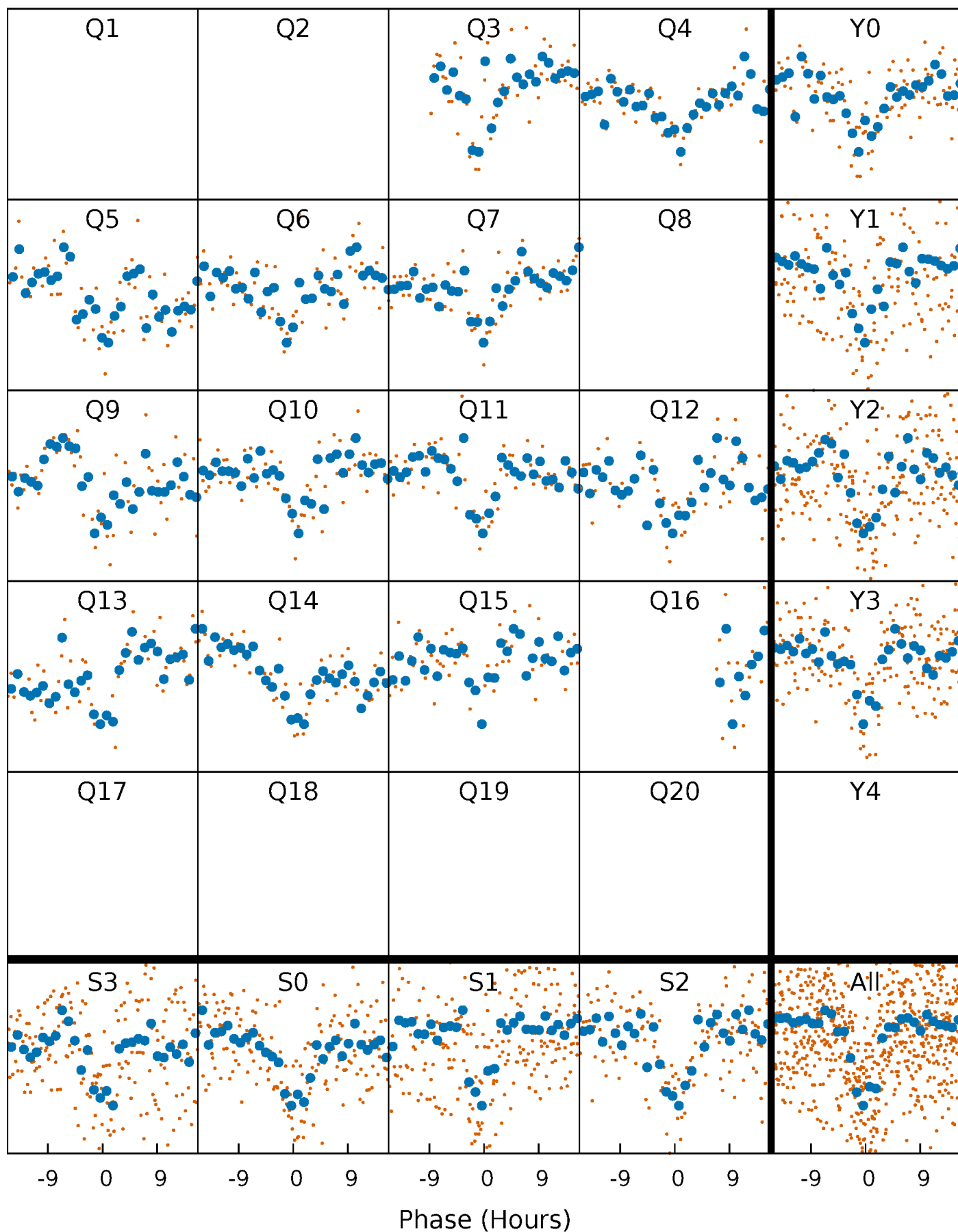


Non-Whitened Vs. Whitened Light Curve



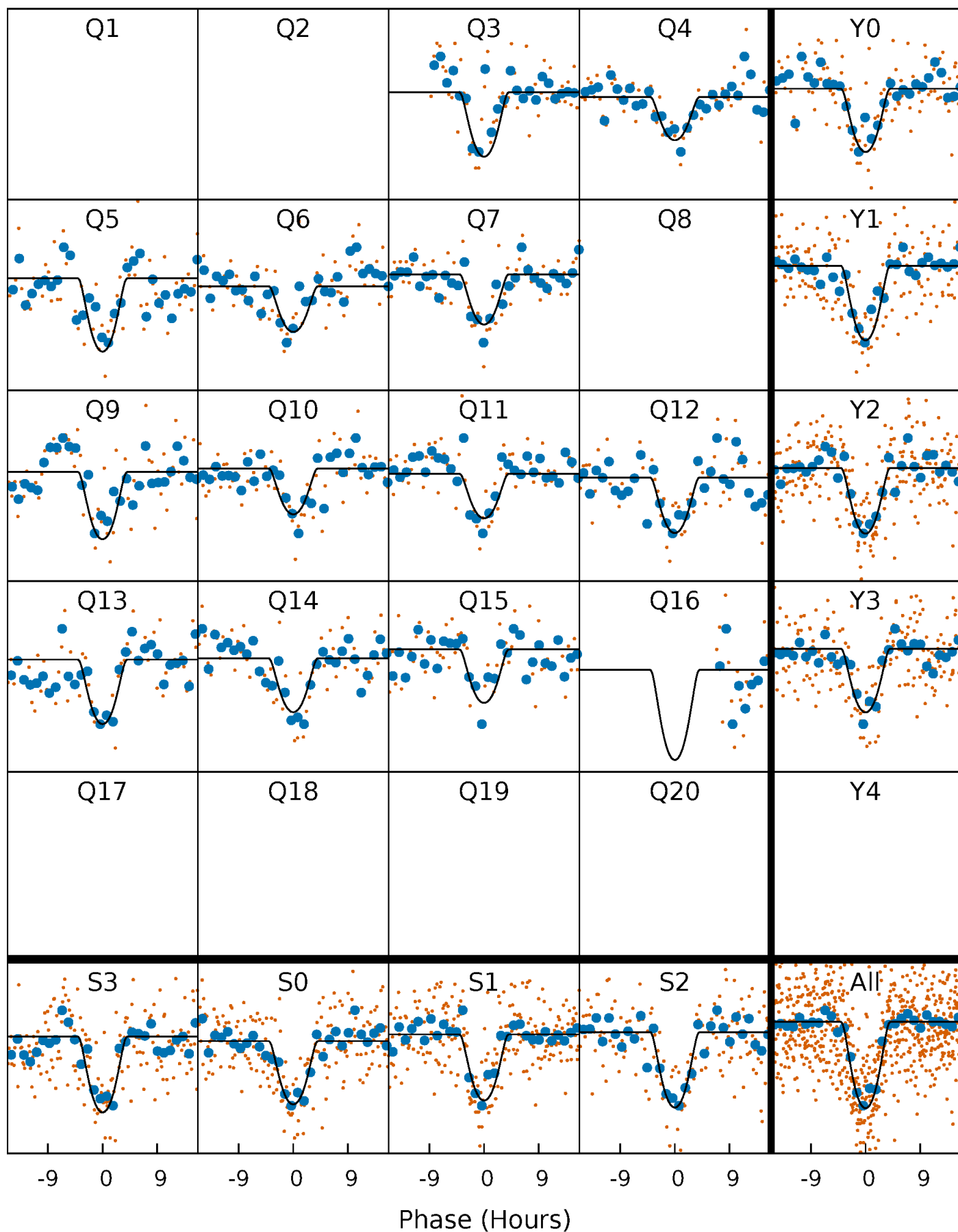
PDC Quarter-Phased Transit Curves

TCE 006463499-01 P= 94.445576 Days $T_0=166.163694$ (BKJD)



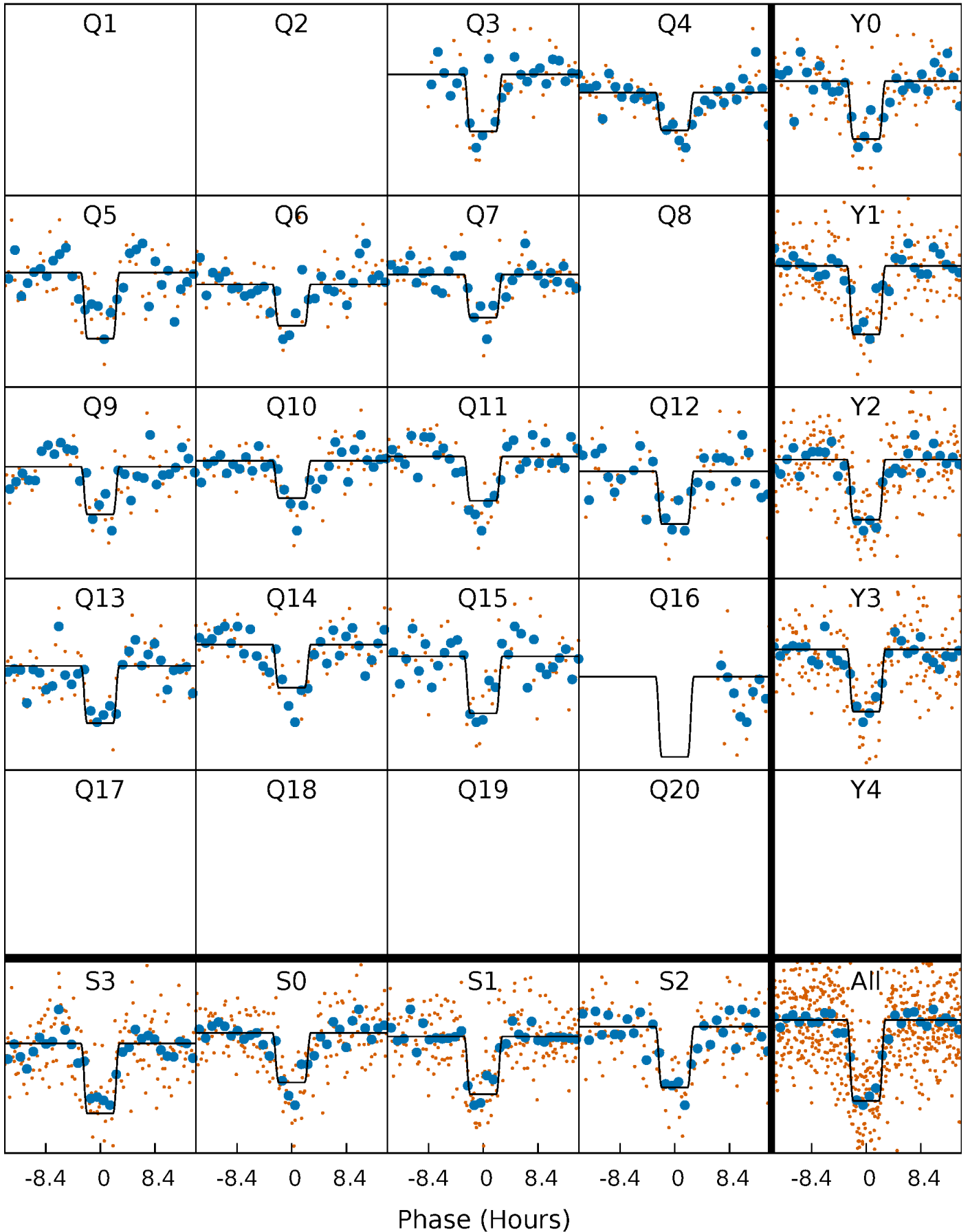
DV Quarter-Phased Transit Curves

TCE 006463499-01 P= 94.445576 Days $T_0=166.163694$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

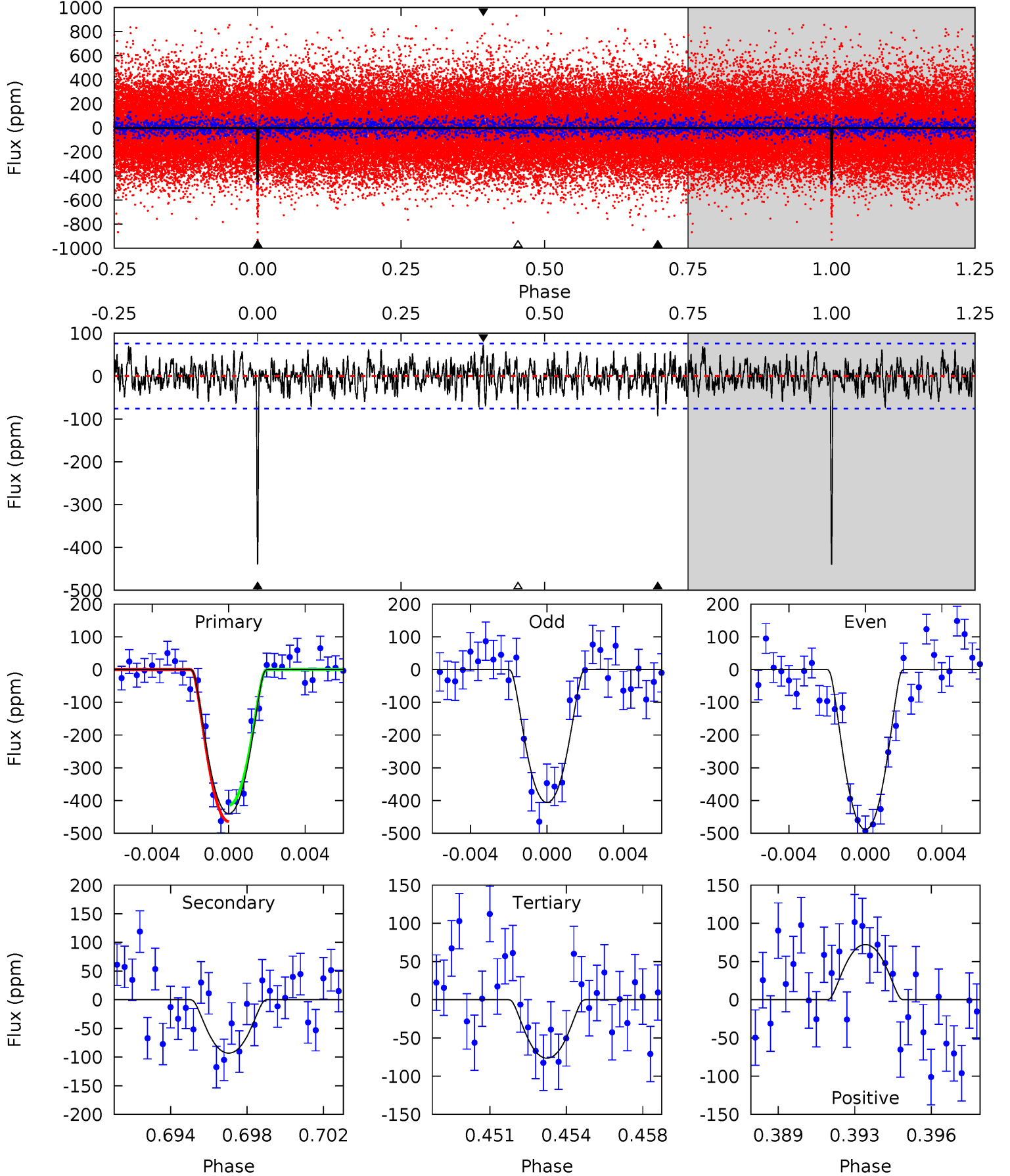
TCE 006463499-01 P= 94.447319 Days $T_0=166.149803$ (BKJD)



DV Model-Shift Uniqueness Test

006463499-01, P = 94.445576 Days, E = 71.718118 Days

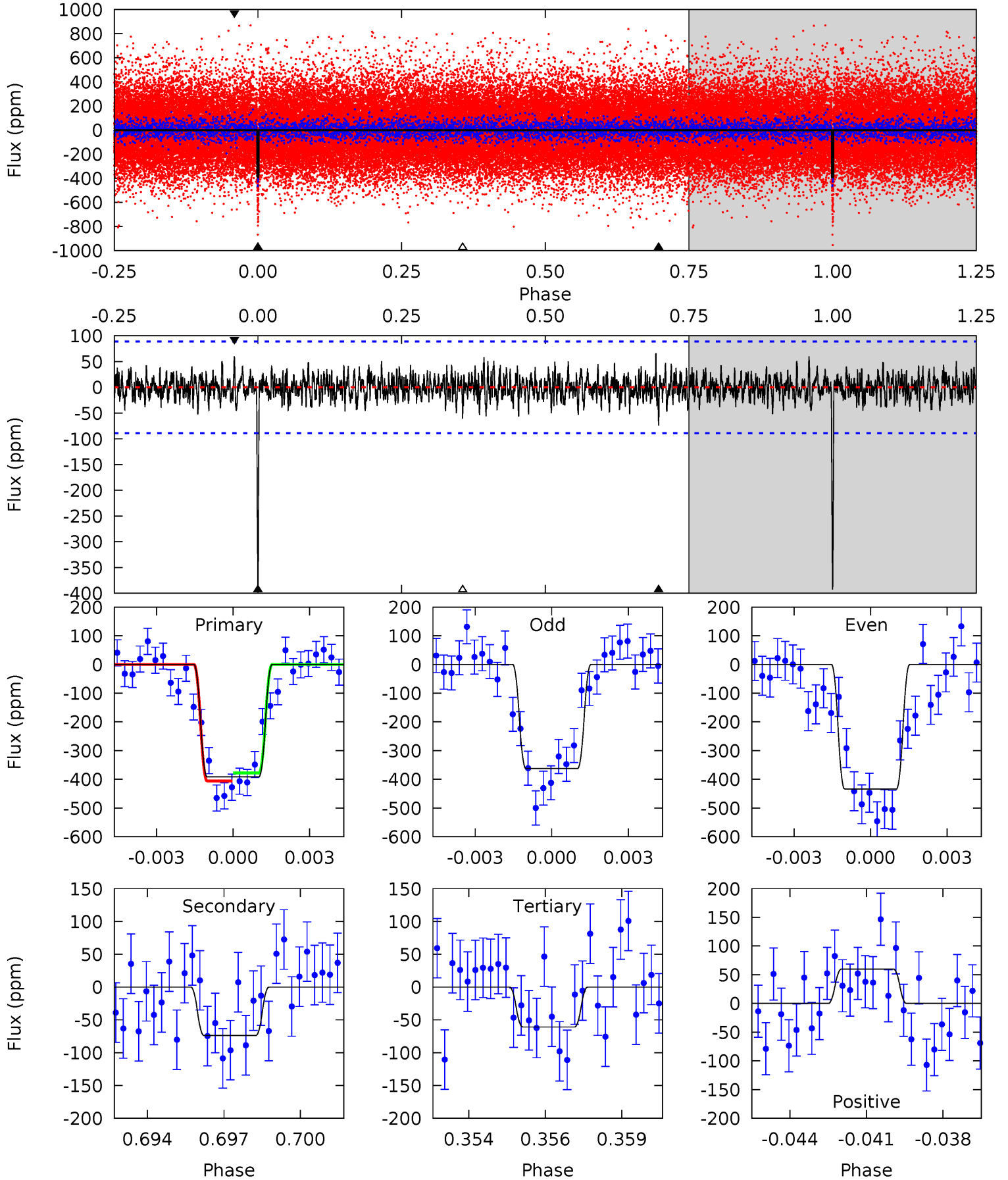
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.2	6.39	5.25	4.96	5.22	2.91	1.67	25.0	25.2	1.14	1.44	2.79	0.98	0.14	1.73



Alt Model-Shift Uniqueness Test

006463499-01, $P = 94.447319$ Days, $E = 71.702484$ 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	4.38	3.61	3.55	5.28	3.02	1.09	19.6	19.7	0.77	0.82	2.09	1.04	0.14	0.82



Stellar Parameters For KIC 006463499

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5780^{+184}_{-163}	$3.729^{+0.672}_{-0.168}$	$-0.360^{+0.350}_{-0.250}$	$2.478^{+0.647}_{-1.511}$	$1.201^{+0.154}_{-0.334}$	$0.111^{+1.349}_{-0.048}$
	+3%/-3%	+18%/-5%	+97%/-69%	+26%/-61%	+13%/-28%	+1213%/-43%
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 006463499-01 / KOI 4163.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-93 ± 15	$6.86^{+3.74}_{-3.29}$	832^{+76}_{-134}	3738^{+758}_{-381}	204^{+507}_{-123}
Alt.	-74 ± 17	$4.58^{+3.47}_{-2.39}$	835^{+81}_{-142}	4080^{+1298}_{-545}	352^{+1254}_{-235}

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

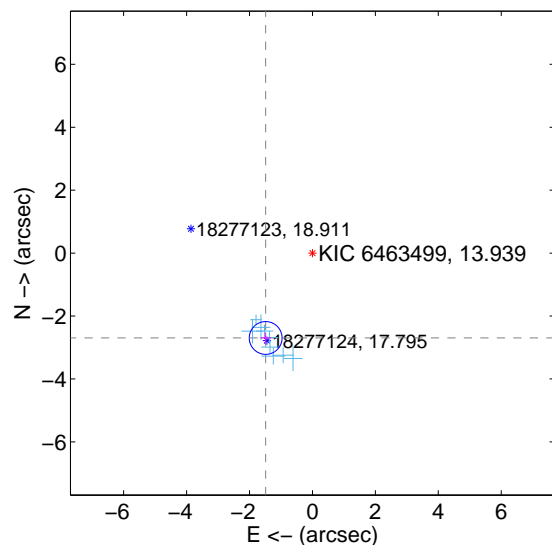
Supplemental centroid analysis for 006463499-01. Kepler magnitude: 13.94. Transit SNR 15.89

There are 9 quarters with good PRF difference image offsets

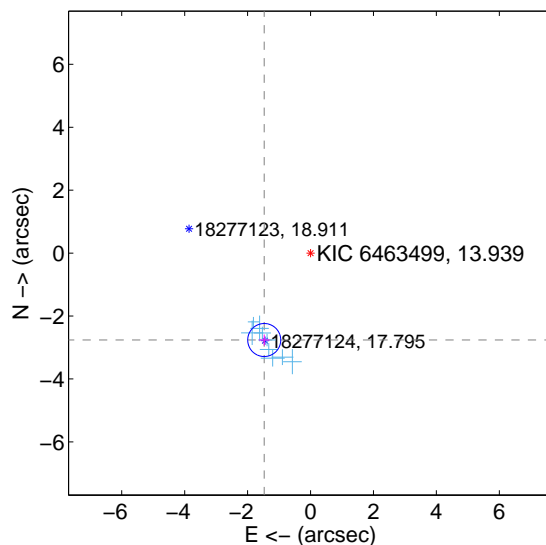
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.080 ± 0.174	17.73	1.487 ± 0.169	-2.698 ± 0.175
PRF-fit source offset from KIC position	3.130 ± 0.175	17.90	1.472 ± 0.169	-2.763 ± 0.176
photometric centroid source offset	4.29 ± 0.71	6.07	2.98 ± 0.76	-3.08 ± 0.65

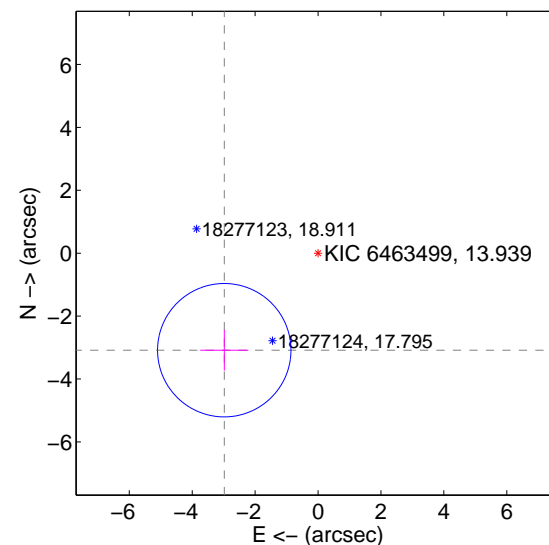
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

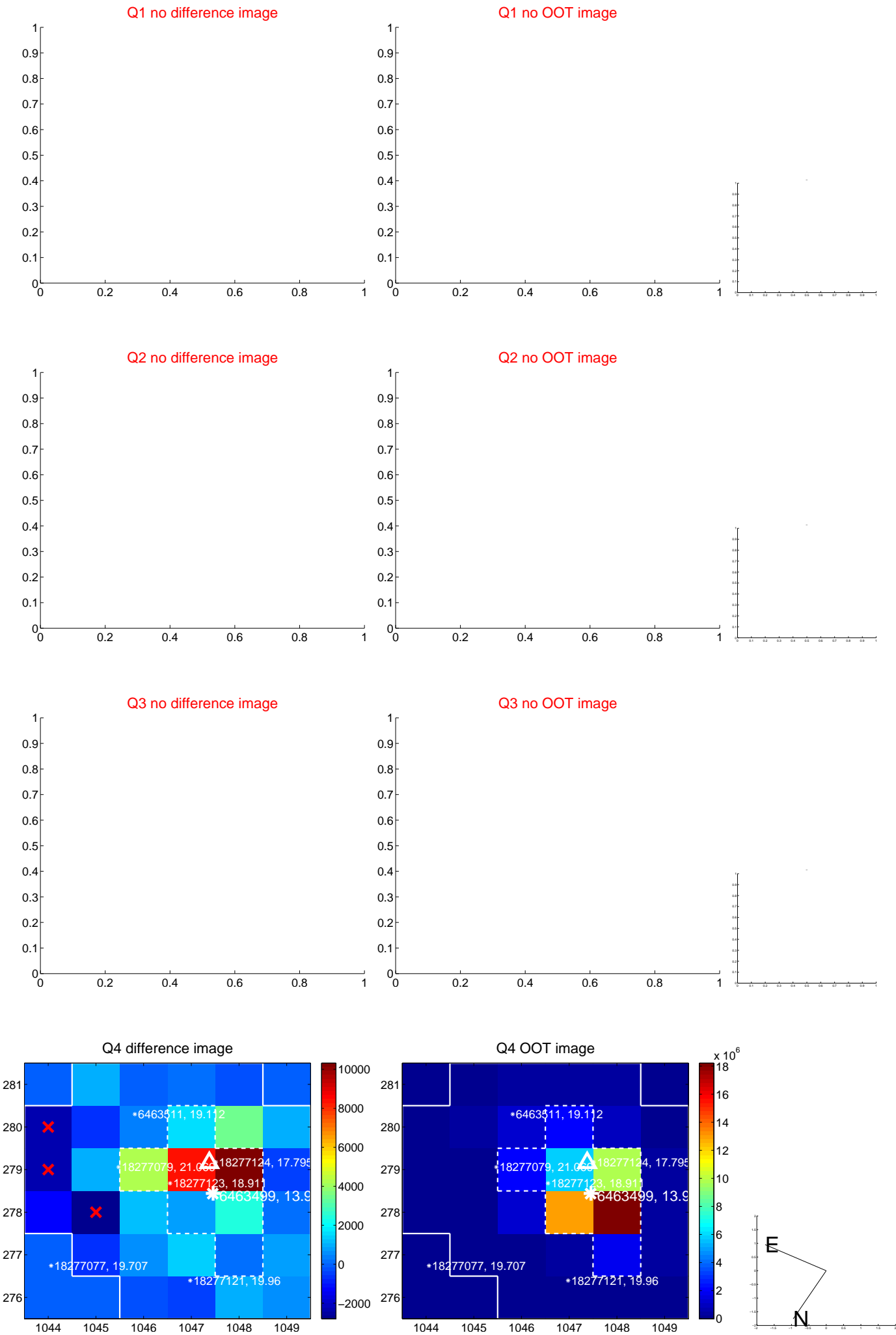


offset from photometric centroids

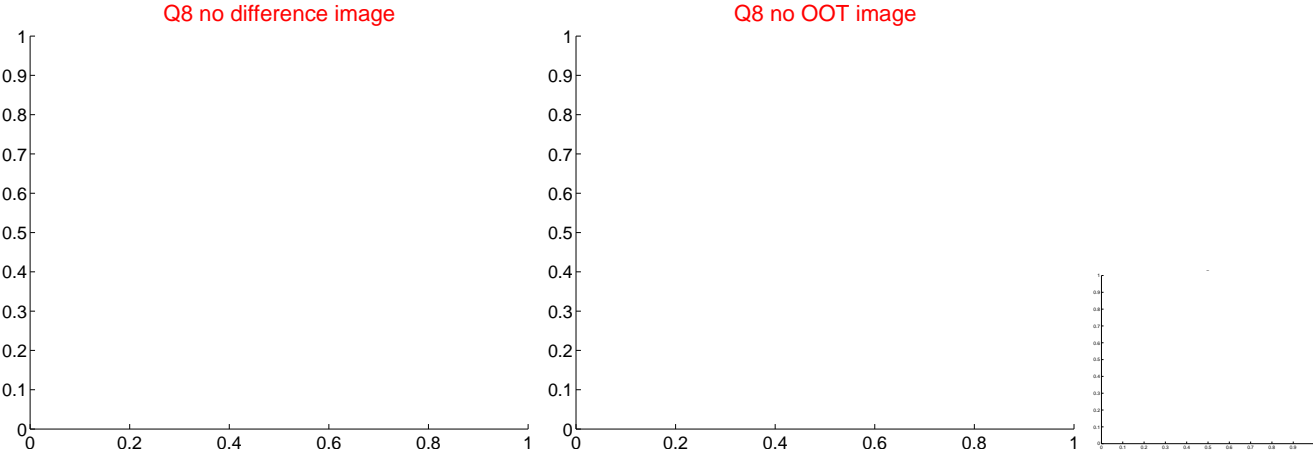
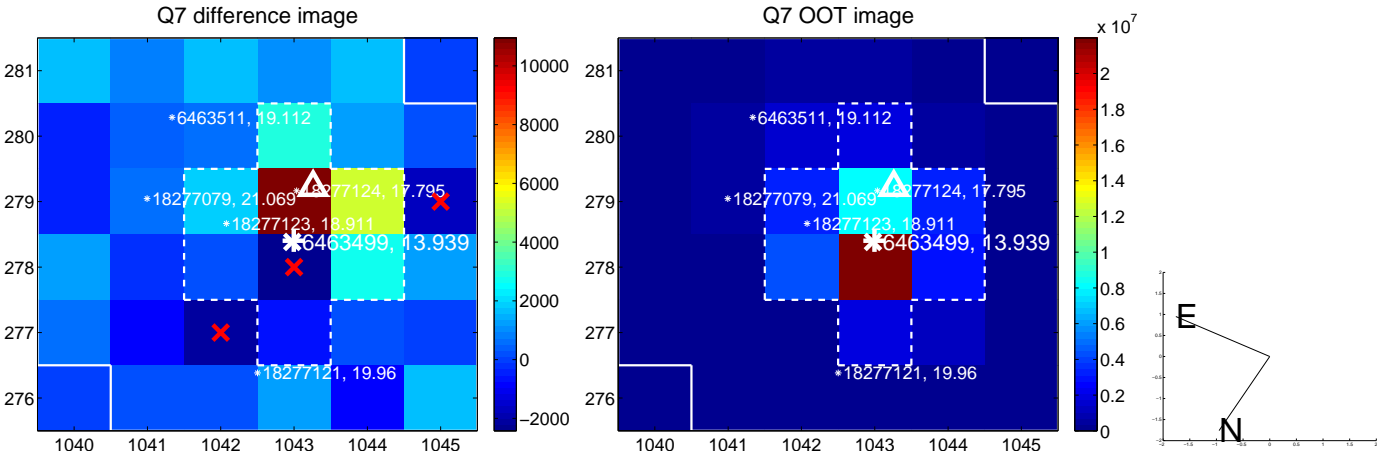
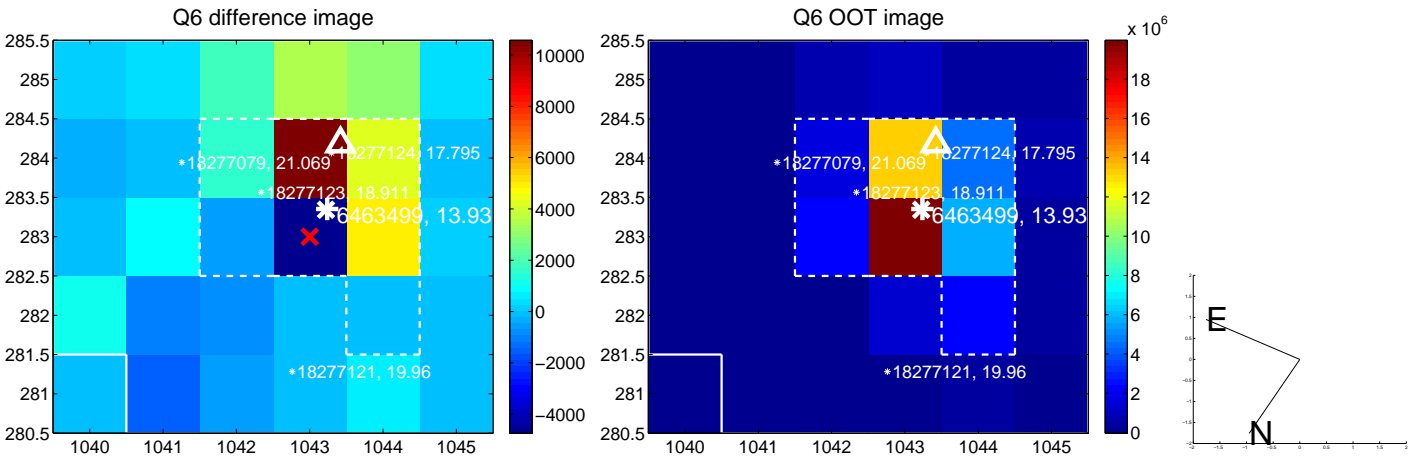
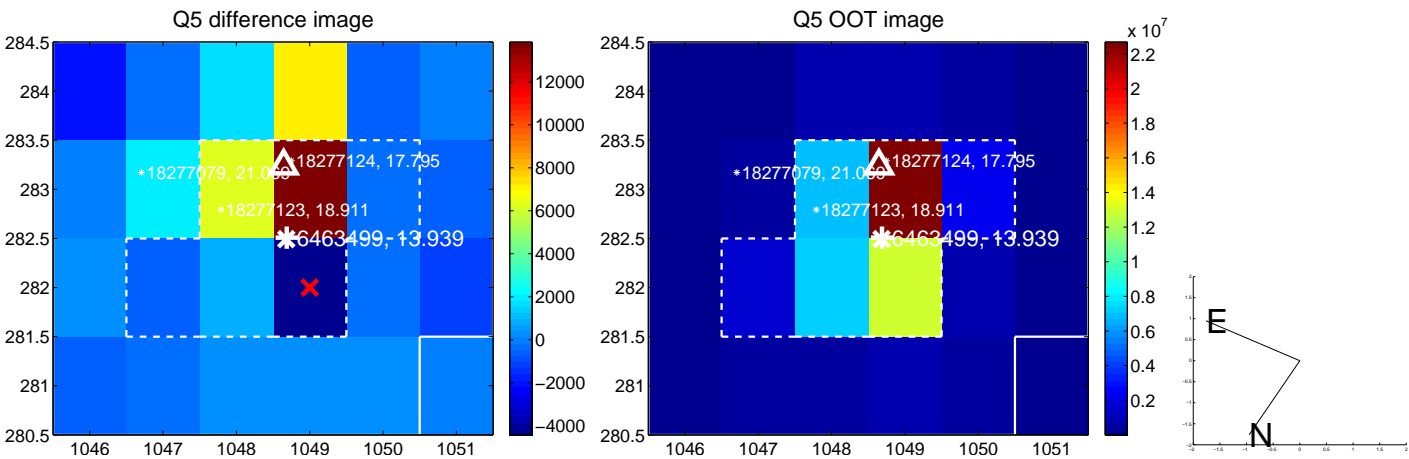


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

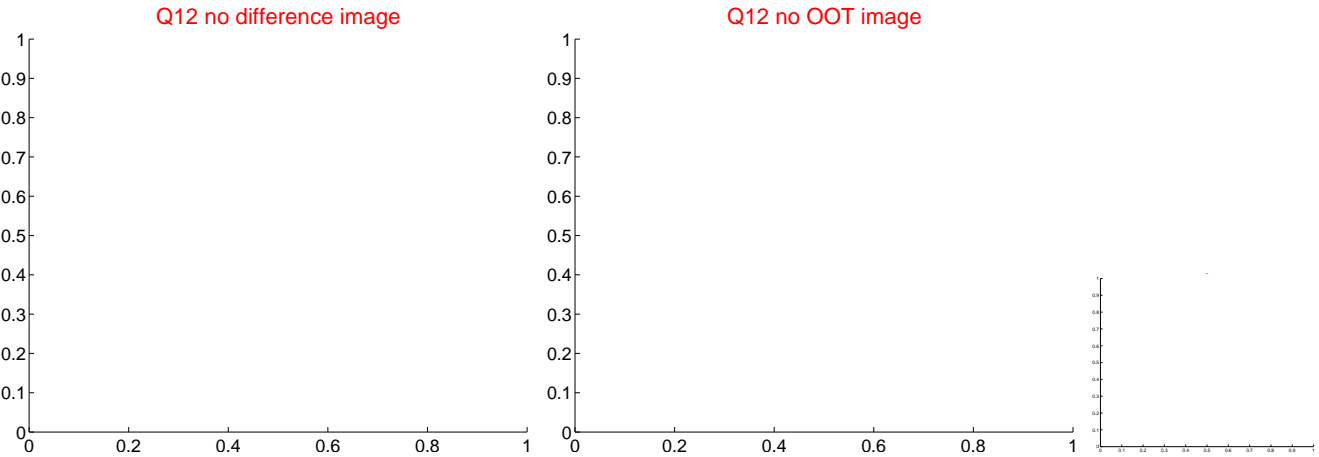
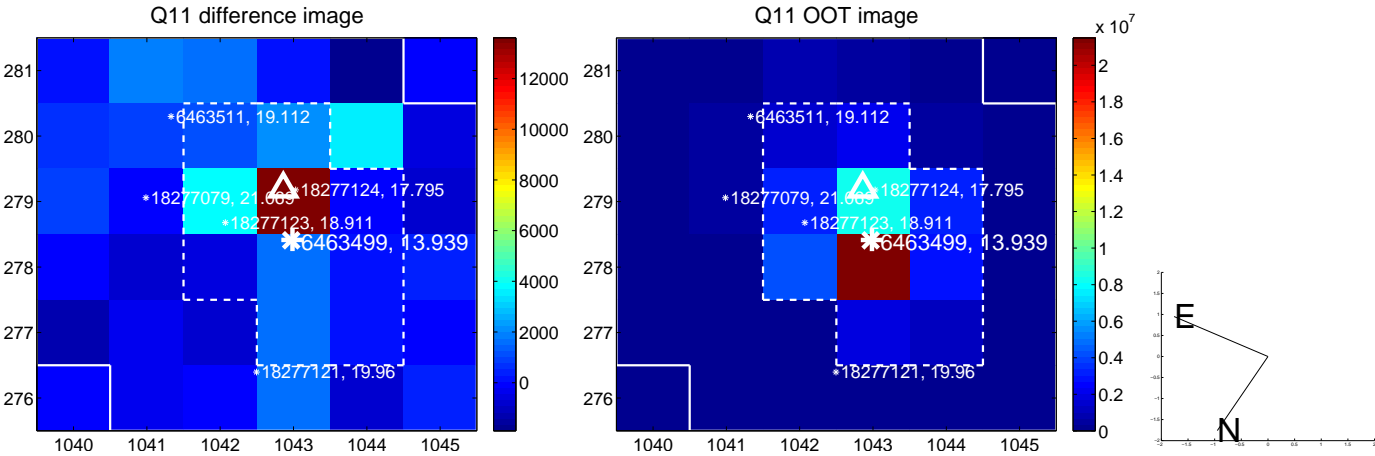
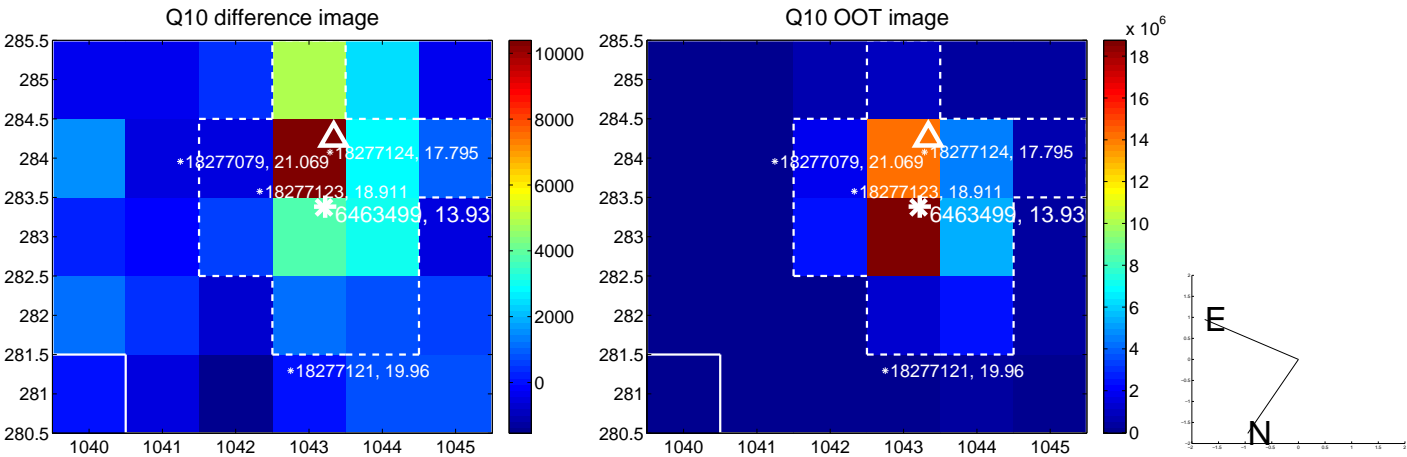
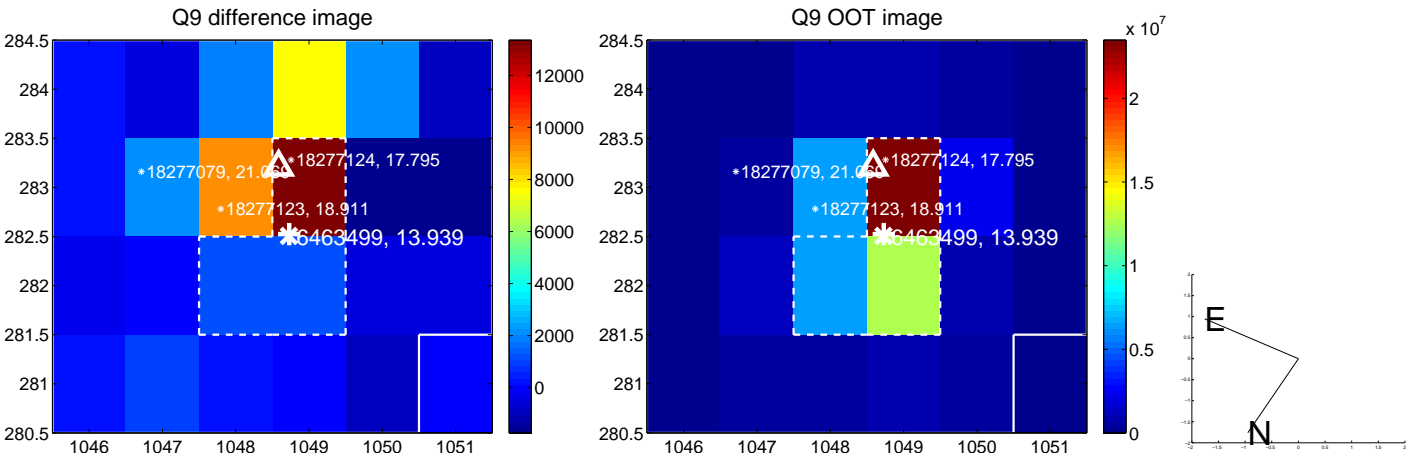
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



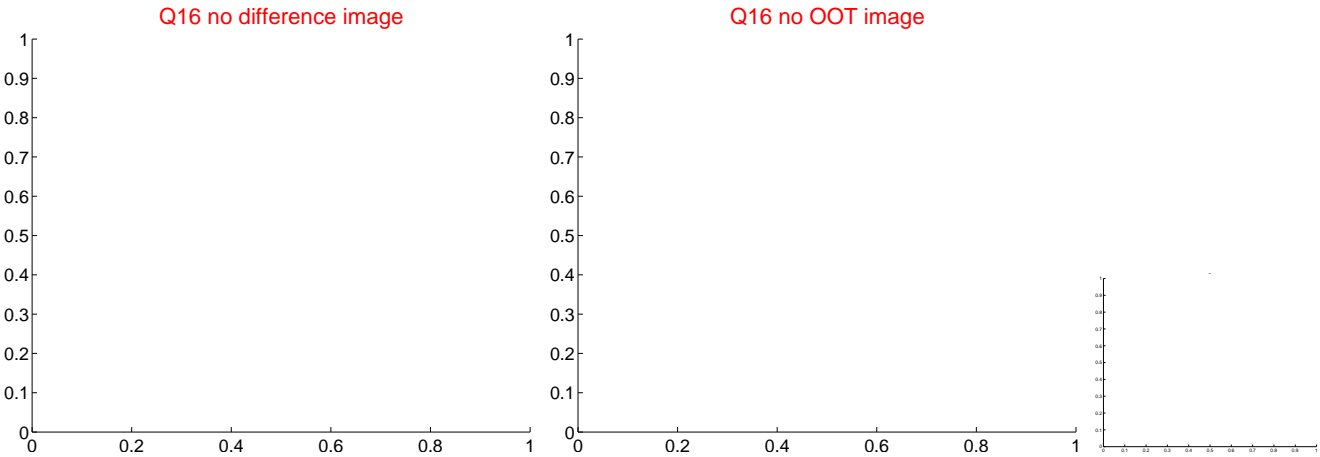
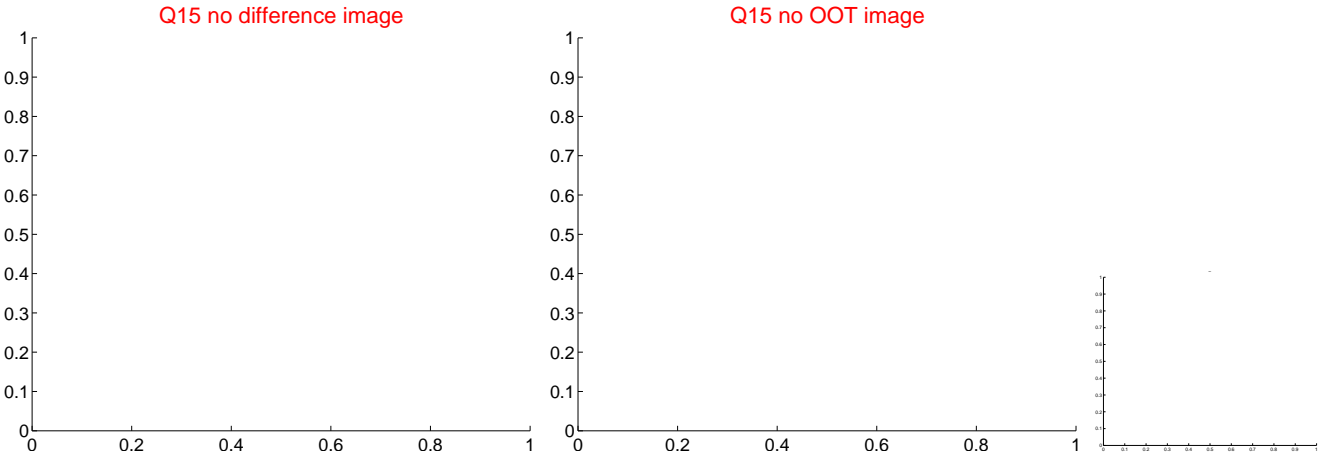
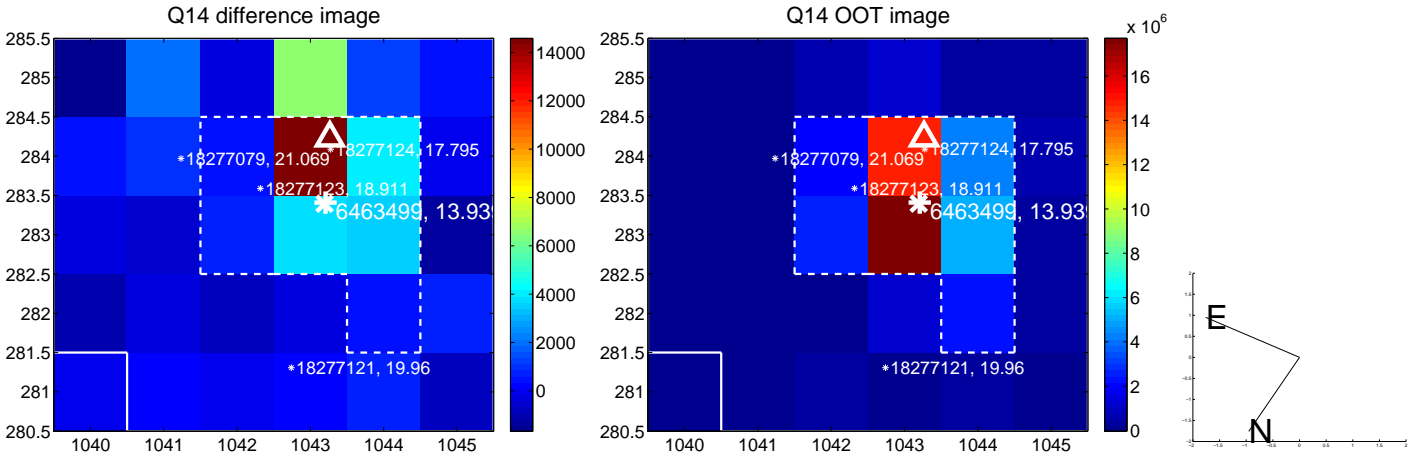
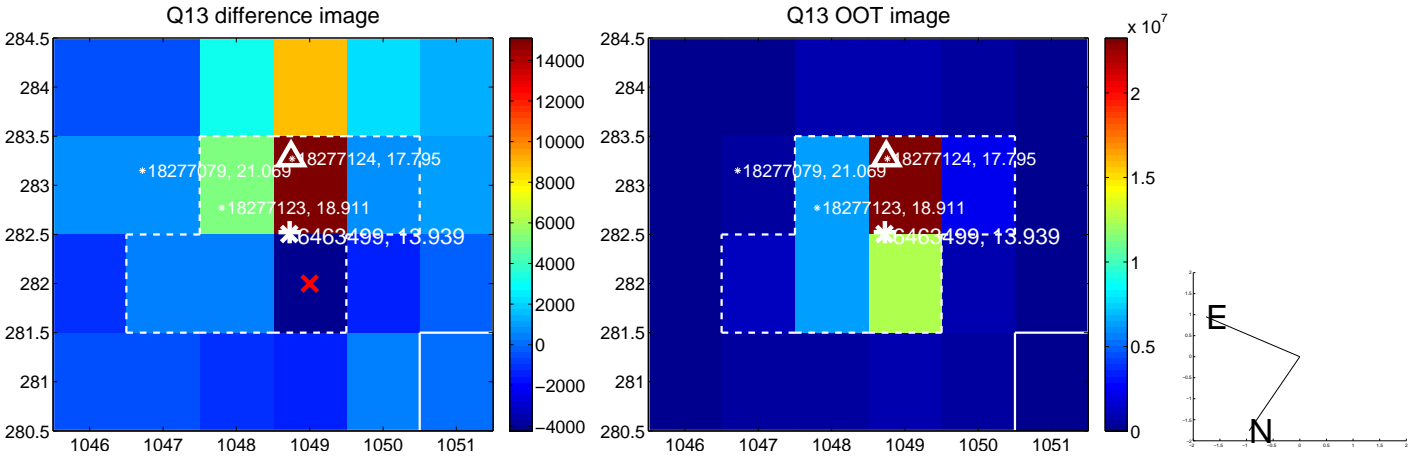
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



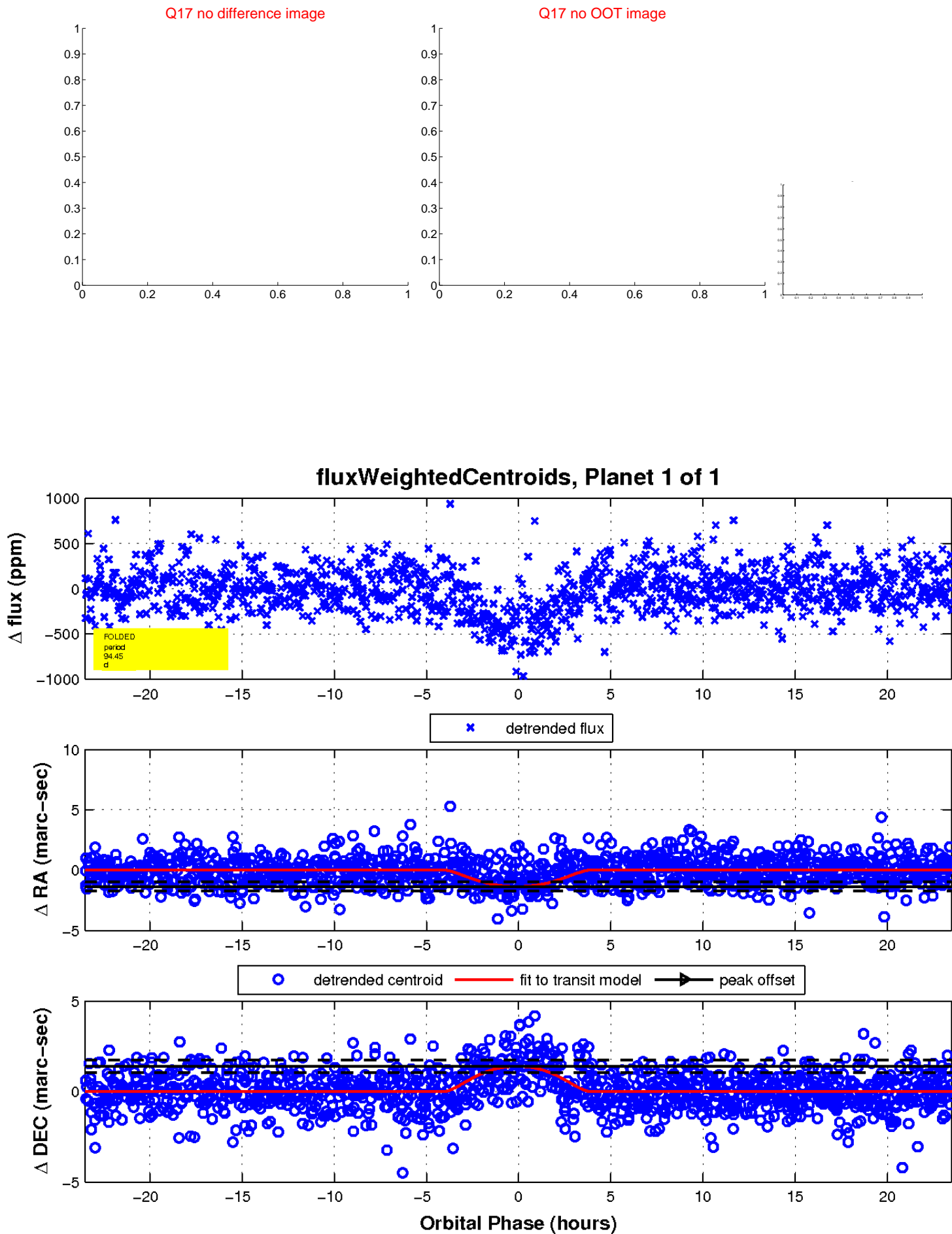
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

