

KIC 010274566

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})
010274566-01	OBS	No	701.509474	135.532167	724.3	20.581	10.6	9.4	0.87	5249	2.98	0.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010274566-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

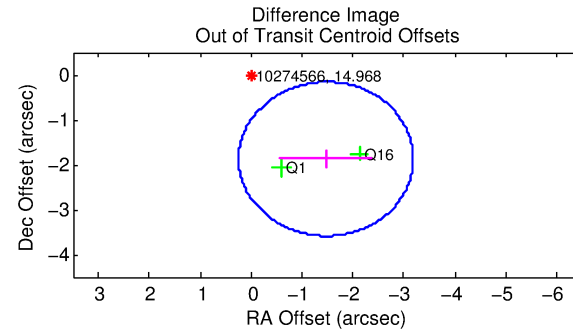
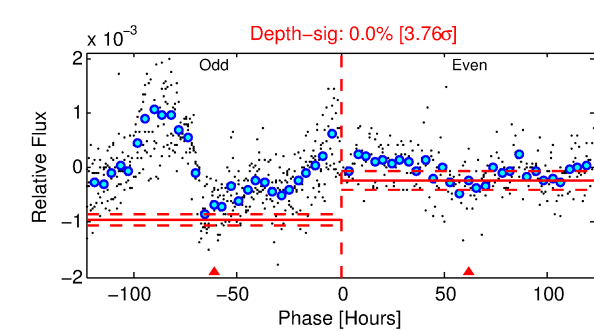
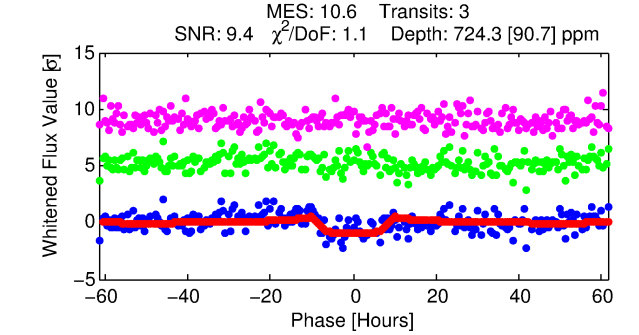
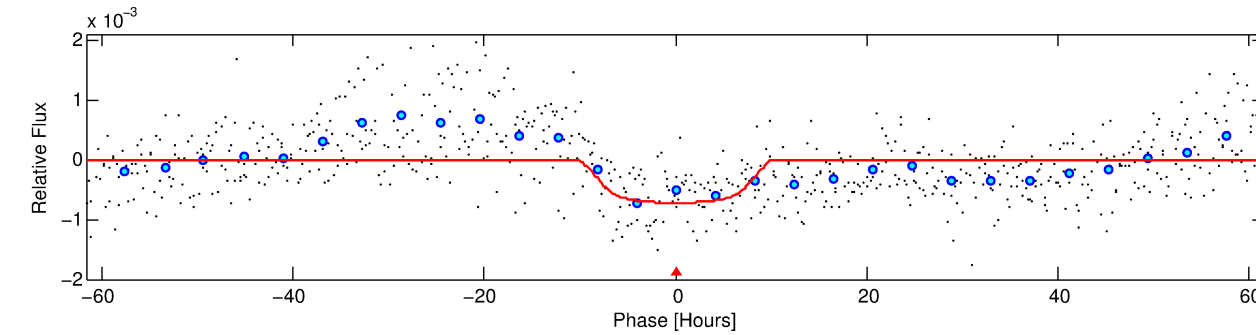
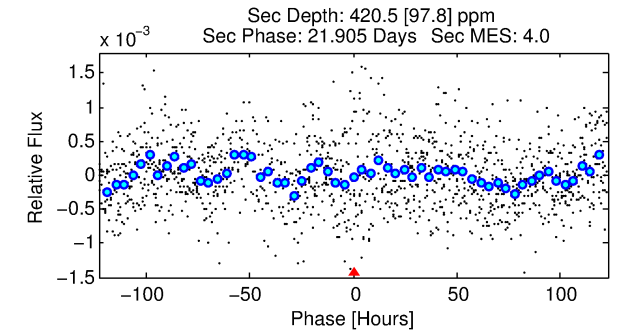
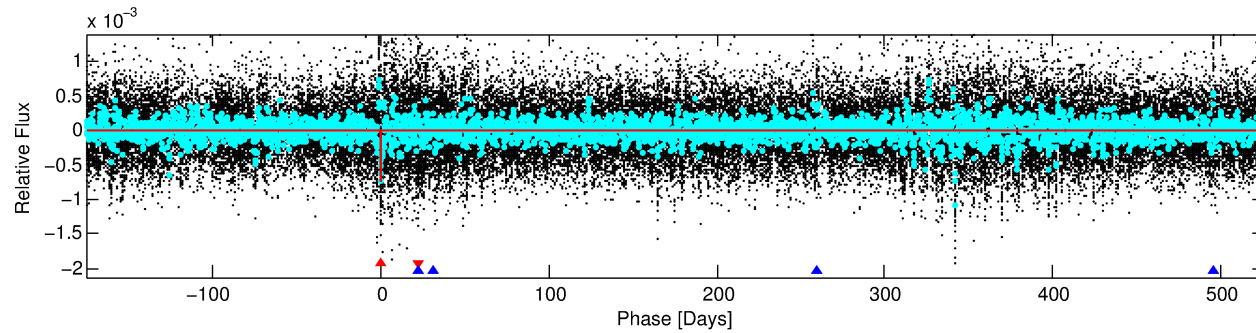
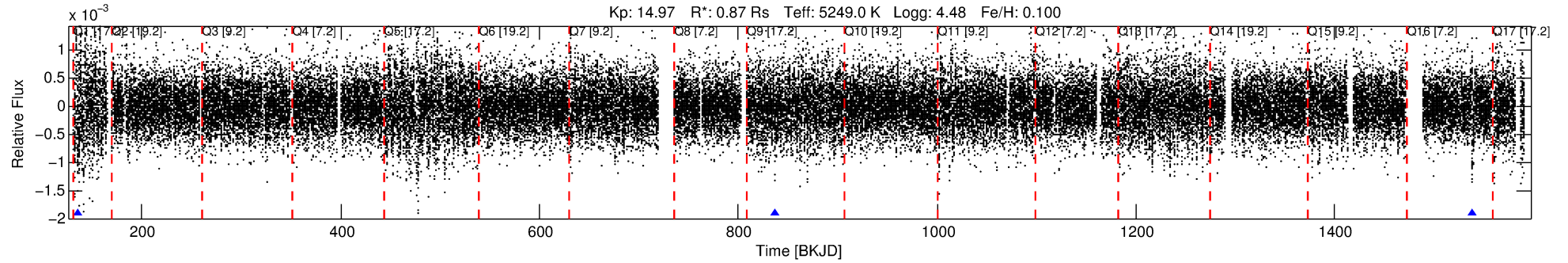
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010274566-01

No Significant Match Found

DV One-Page Summary

KIC: 10274566 Candidate: 1 of 2 Period: 701.509 d



DV Fit Results:

Period = 701.50947 [0.02578] d
Epoch = 135.5322 [0.0401] BKJD
Rp/R* = 0.0312 [0.0029]
a/R* = 114.00 [26.64]
b = 0.93 [0.03]
Seff = 0.24 [0.05]
Teq = 179 [10] K
Rp = 2.98 [0.54] Re
a = 1.4613 [0.1923] AU
Ag = 55791.28 [19637.70] [2.84 σ]
Teffp = 4253 [340] K [11.99 σ]

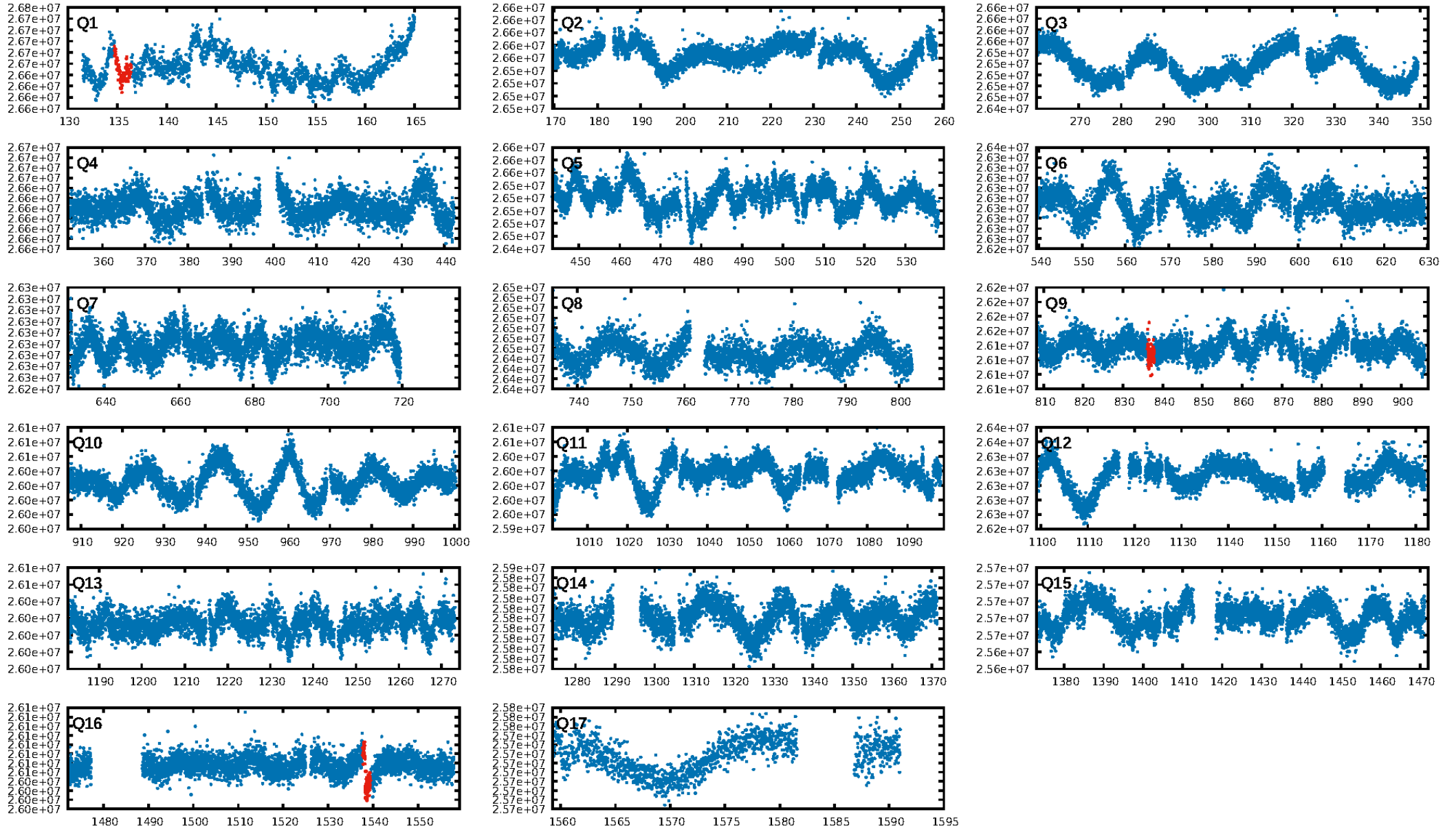
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [193.35 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 90.9%
Bootstrap-pfa: 4.04e-17
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.9601
Centroid-sig: 0.0%
Centroid-so: 3.358 arcsec [2.34 σ]
OotOffset-rm: 2.382 arcsec [4.17 σ]
KicOffset-rm: 2.405 arcsec [4.10 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

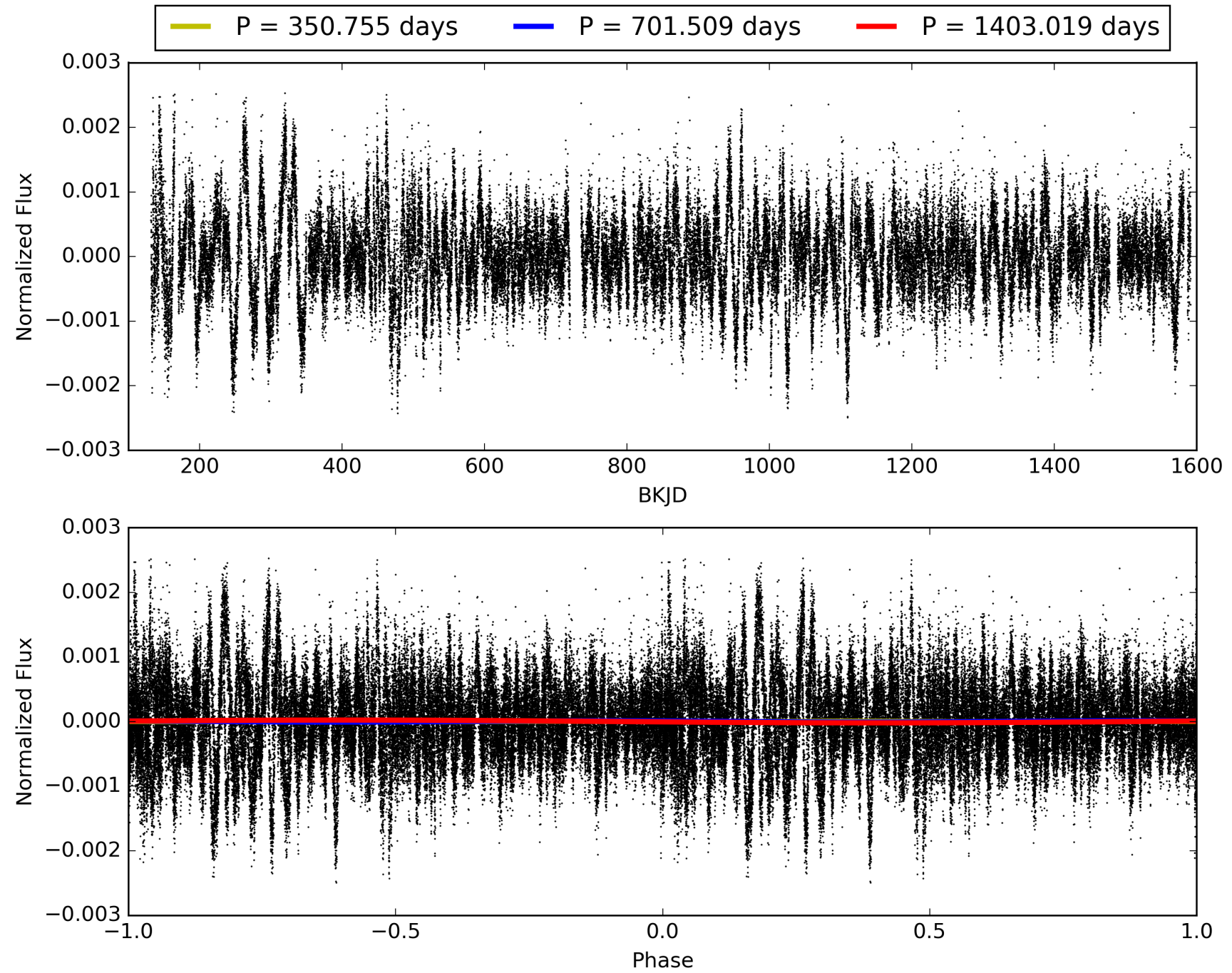
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:06:39 Z

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

TCE 010274566-01, PDC Light Curves

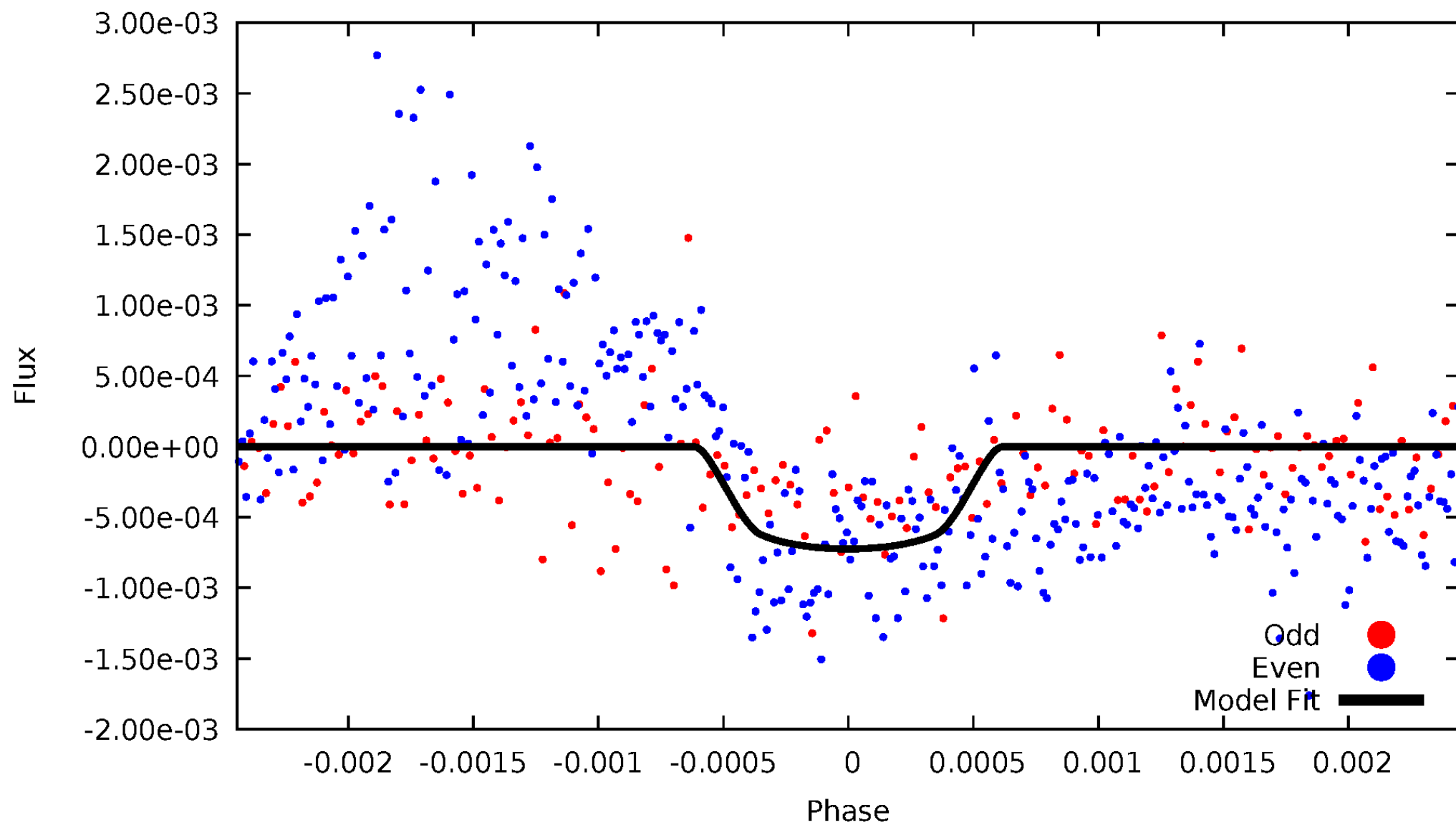


TCE 010274566-01



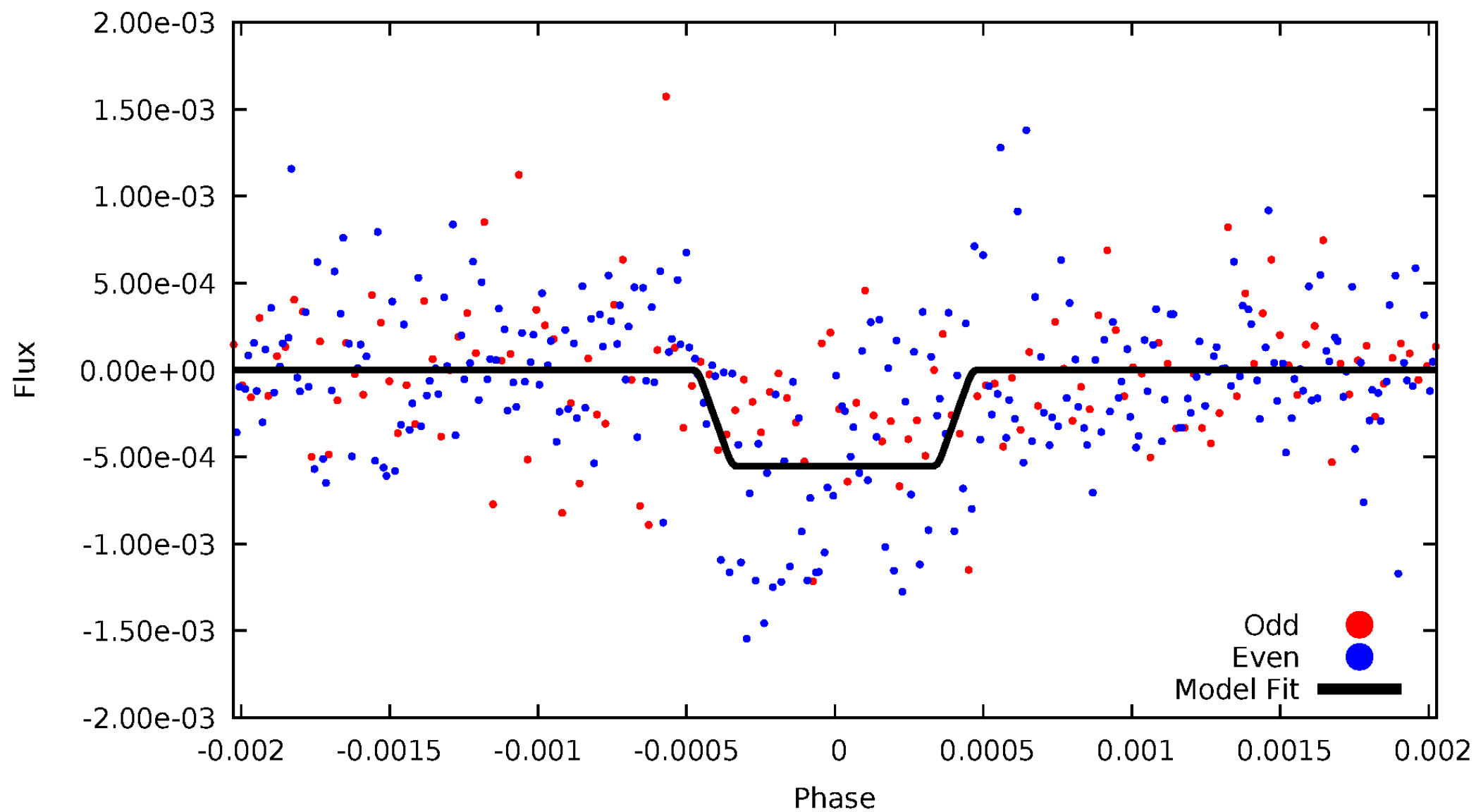
DV Odd/Even

TCE 010274566-01

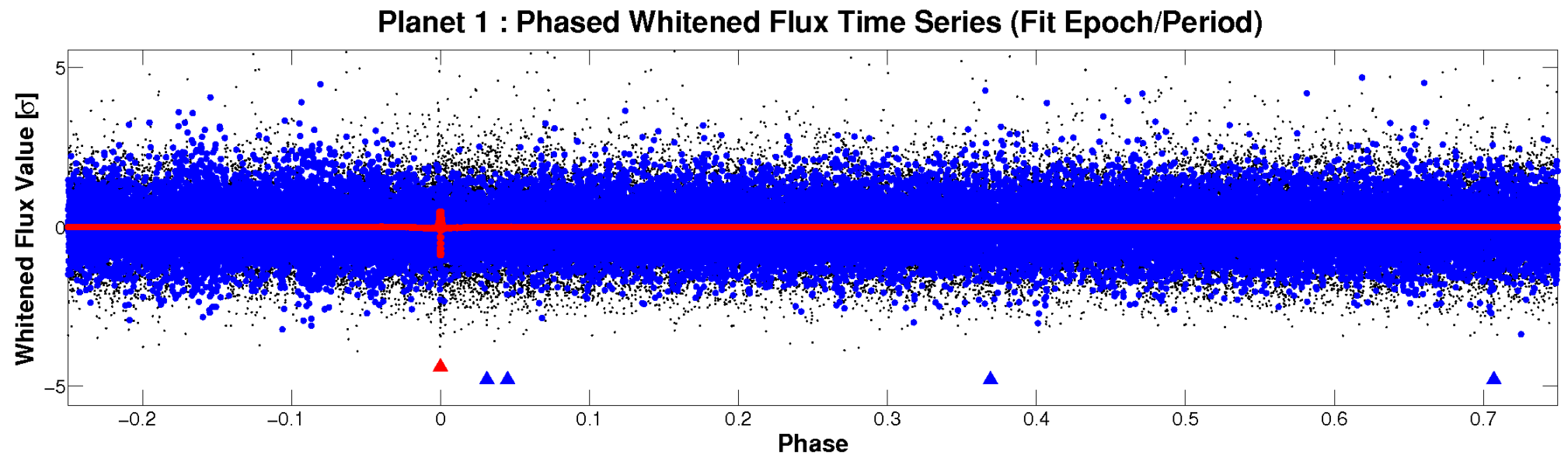
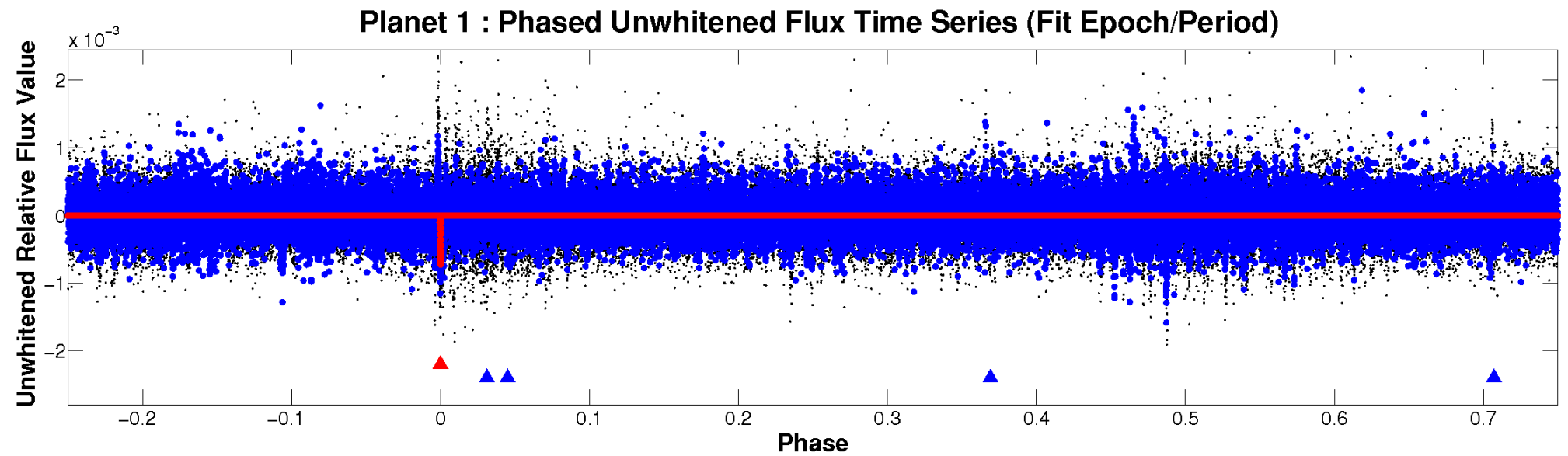


ALT Odd/Even

TCE 010274566-01

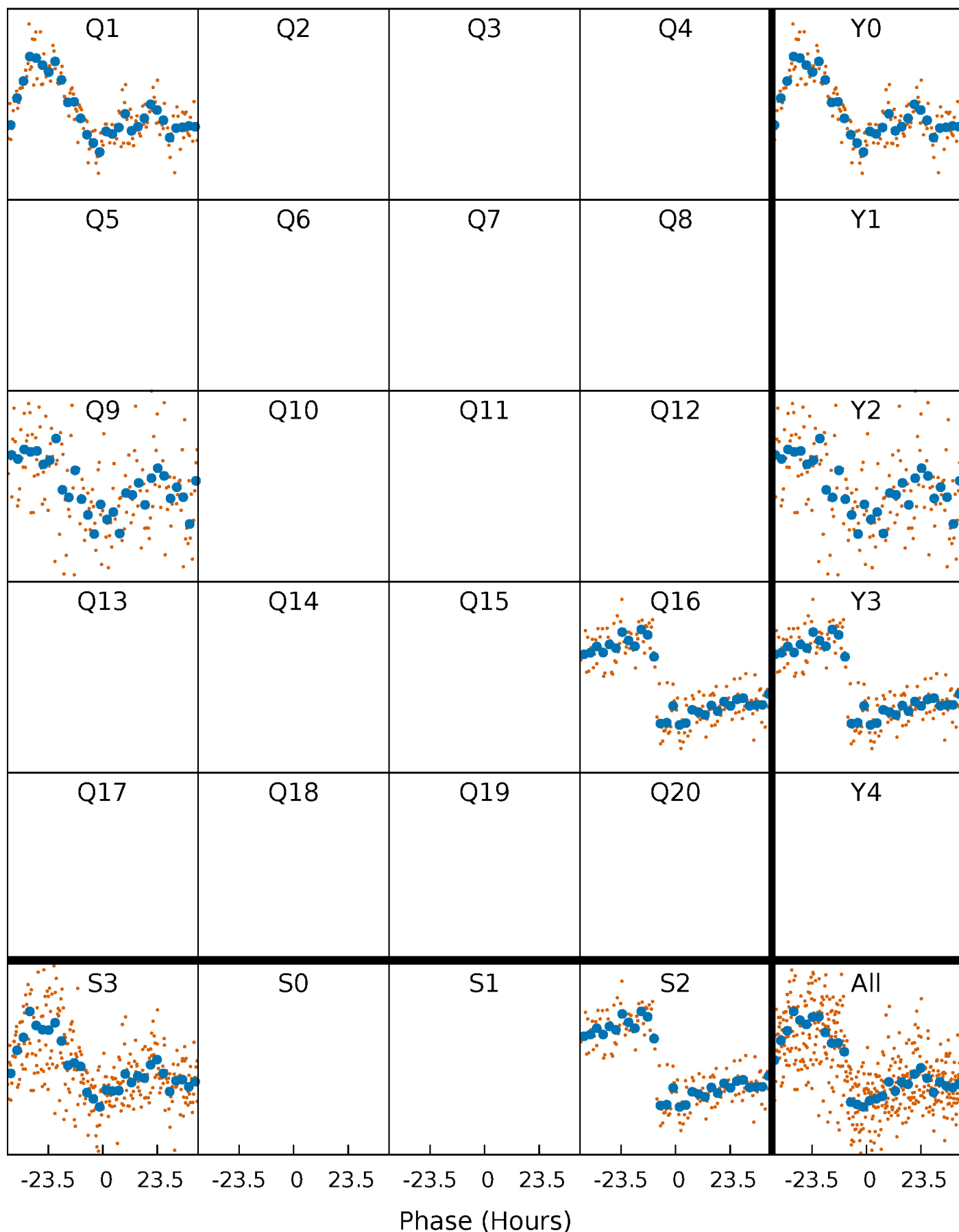


Non-Whitened Vs. Whitened Light Curve



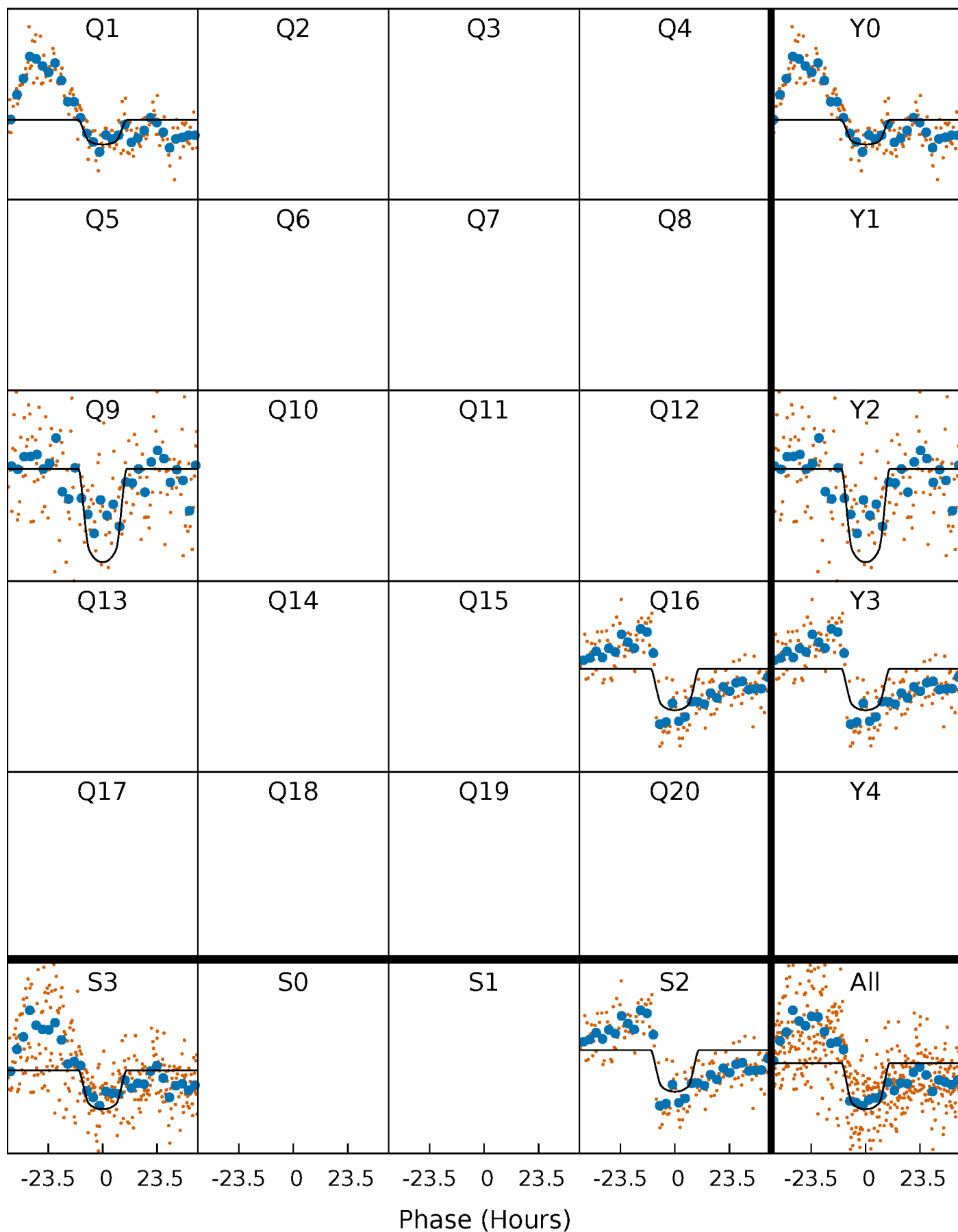
PDC Quarter-Phased Transit Curves

TCE 010274566-01 P=701.509474 Days $T_0=135.532167$ (BKJD)



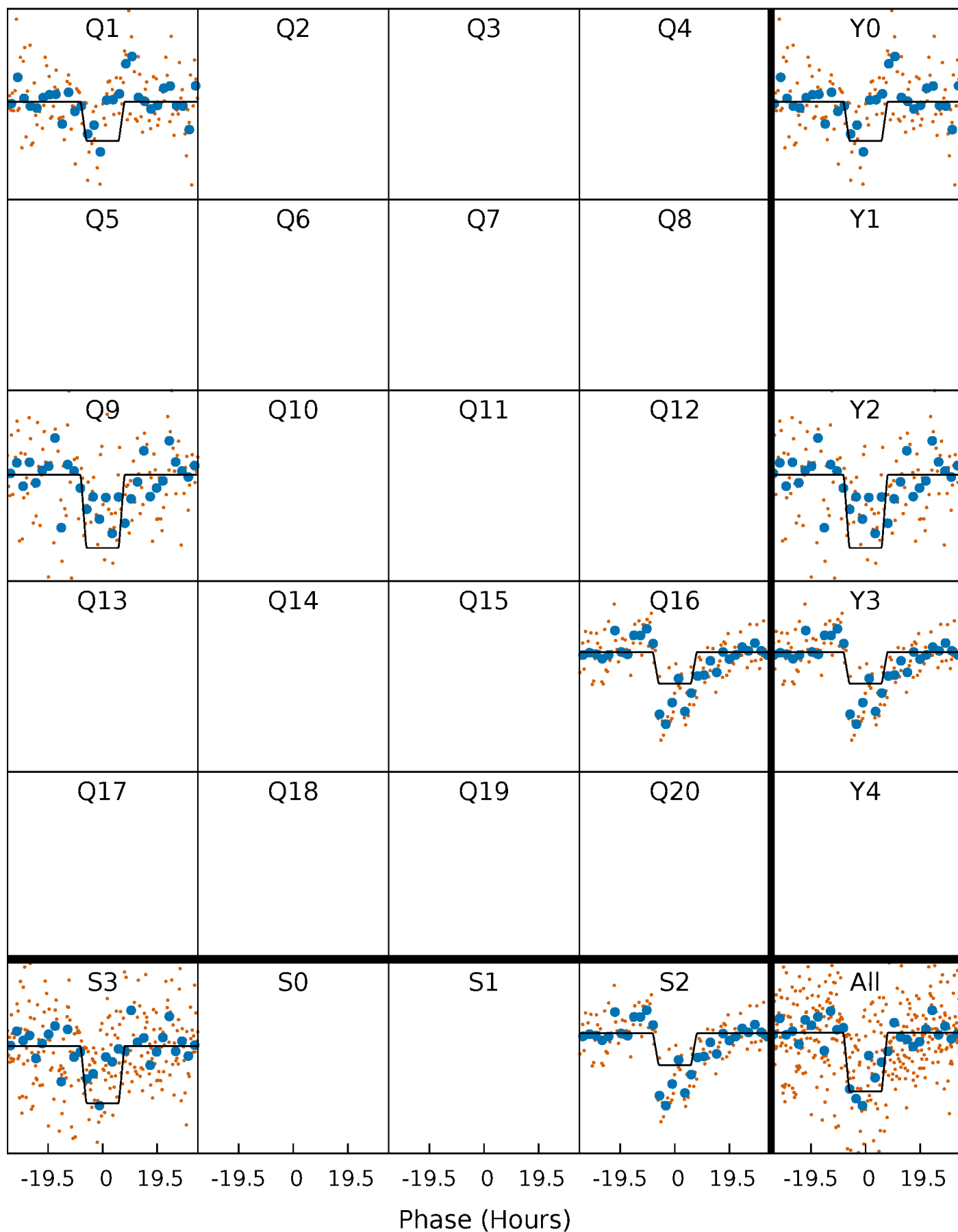
DV Quarter-Phased Transit Curves

TCE 010274566-01 P=701.509474 Days $T_0=135.532167$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

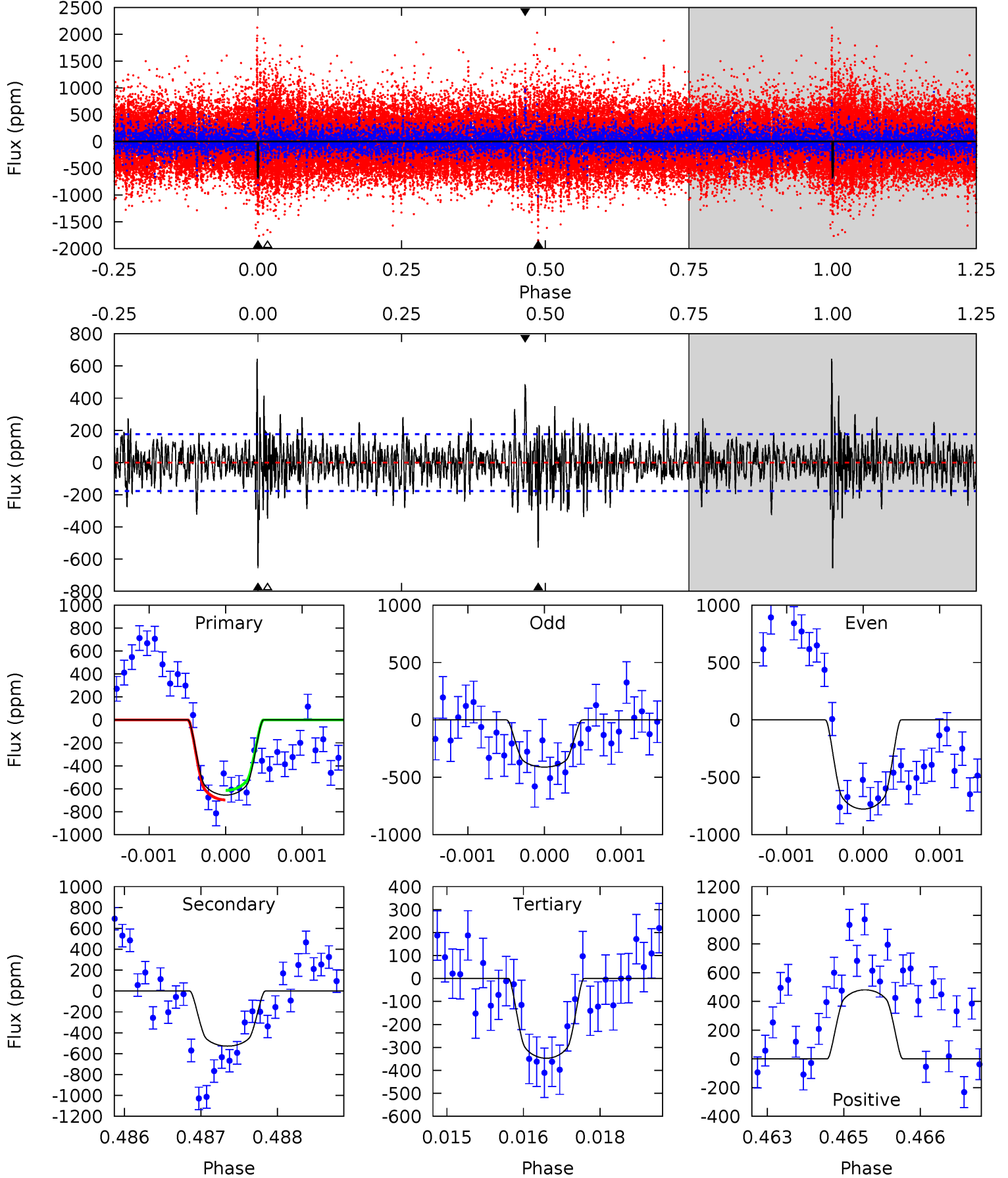
TCE 010274566-01 P=701.497737 Days $T_0=135.493928$ (BKJD)



DV Model-Shift Uniqueness Test

010274566-01, P = 701.509474 Days, E = 135.532167 Days

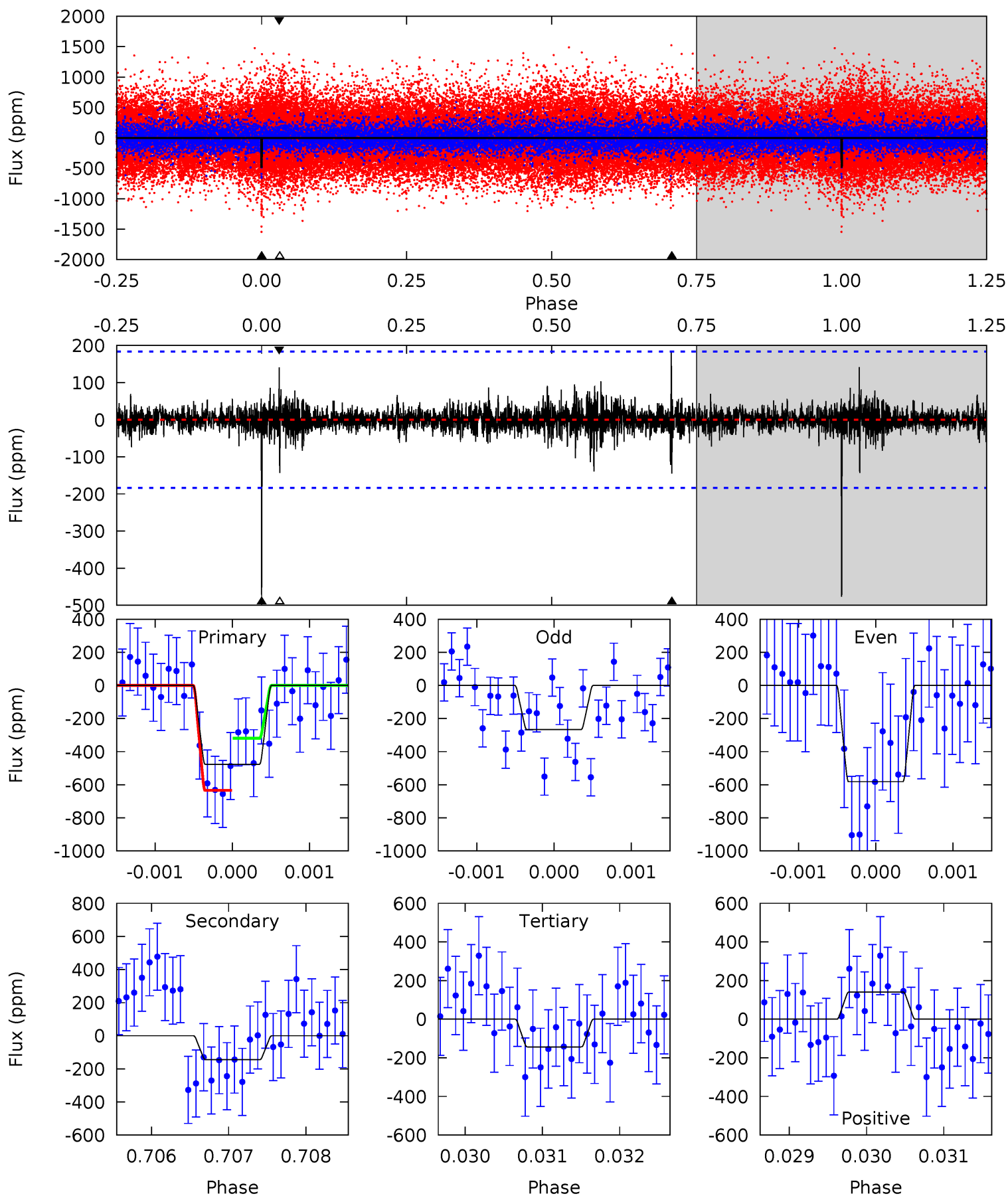
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	16.2	10.6	14.7	5.41	3.23	3.12	9.43	5.34	5.54	1.45	5.35	1.02	0.50	1.28



Alt Model-Shift Uniqueness Test

010274566-01, P = 701.497737 Days, E = 135.493928 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	4.30	4.26	4.19	5.46	3.31	0.70	9.92	9.99	0.04	0.11	4.45	1.79	0.28	4.69



Stellar Parameters For KIC 010274566

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5249^{+158}_{-142}	$4.483^{+0.085}_{-0.104}$	$0.100^{+0.250}_{-0.300}$	$0.873^{+0.137}_{-0.103}$	$0.847^{+0.080}_{-0.073}$	$1.790^{+0.646}_{-0.560}$
	+3%/-3%	+2%/-2%	+250%/-300%	+16%/-12%	+9%/-9%	+36%/-31%
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 010274566-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-528 ± 33	$2.98^{+0.37}_{-0.33}$	251^{+13}_{-10}	4623^{+226}_{-191}	69366^{+19190}_{-14779}
Alt.	-145 ± 34	$2.25^{+0.31}_{-0.32}$	251^{+12}_{-11}	4030^{+251}_{-263}	33140^{+13557}_{-10229}

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

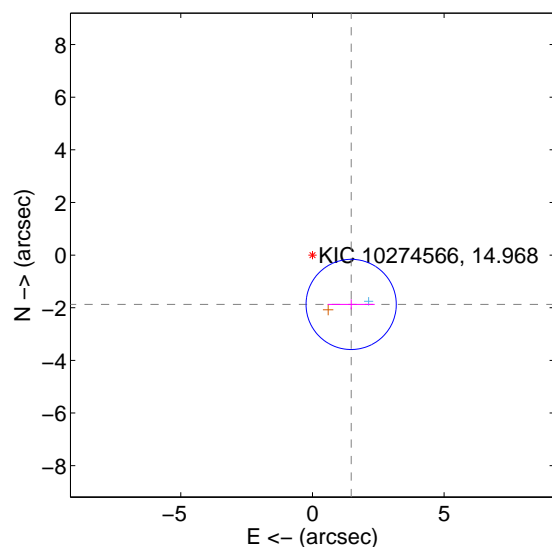
Supplemental centroid analysis for 010274566-01. Kepler magnitude: 14.97. Transit SNR 9.35

There are 1 quarters with good PRF difference image offsets

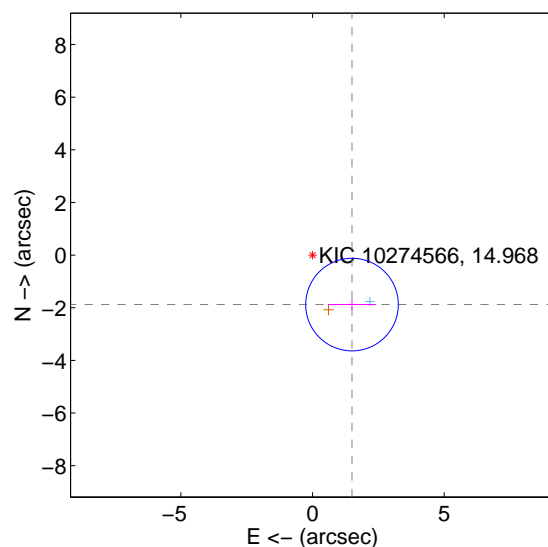
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.382 ± 0.571	4.17	-1.471 ± 0.892	-1.874 ± 0.192
PRF-fit source offset from KIC position	2.405 ± 0.586	4.10	-1.500 ± 0.910	-1.879 ± 0.188
photometric centroid source offset	3.36 ± 1.43	2.34	-1.77 ± 1.54	-2.86 ± 1.39

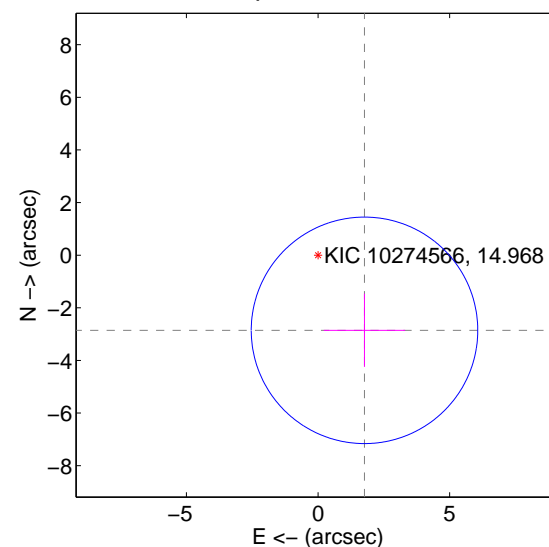
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

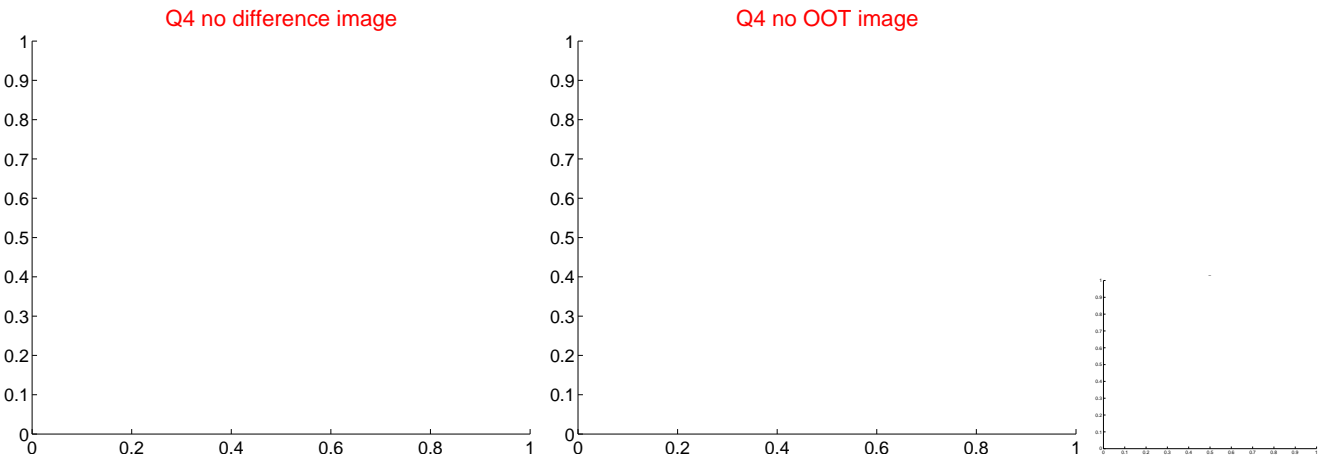
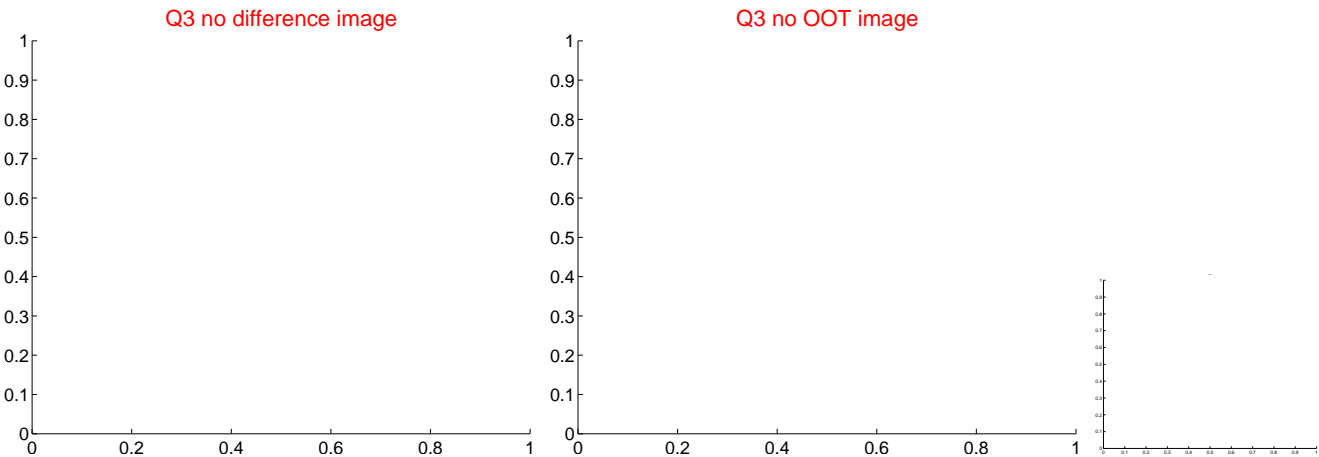
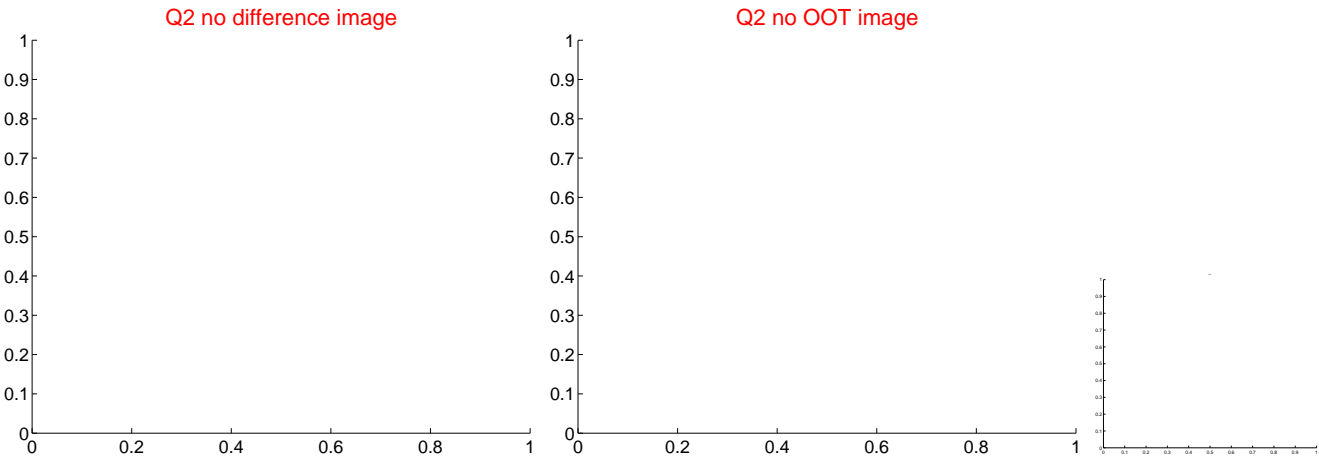
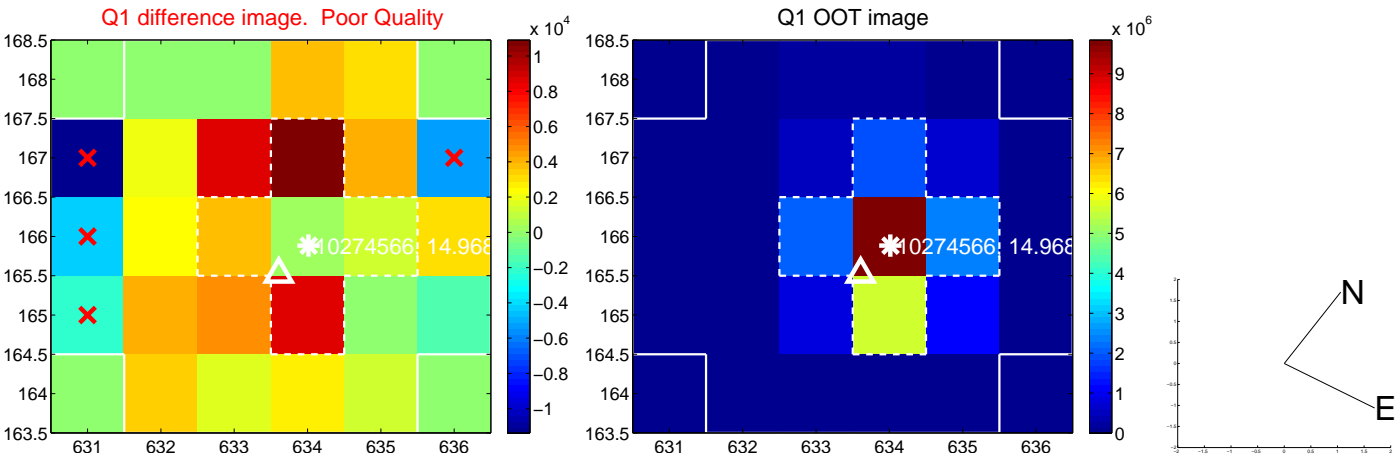


offset from photometric centroids

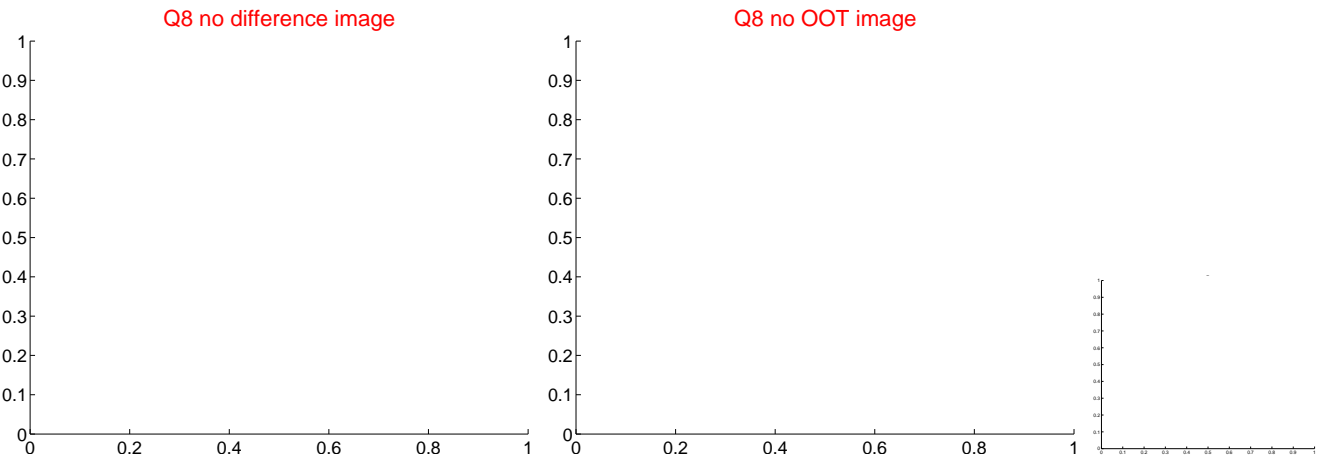
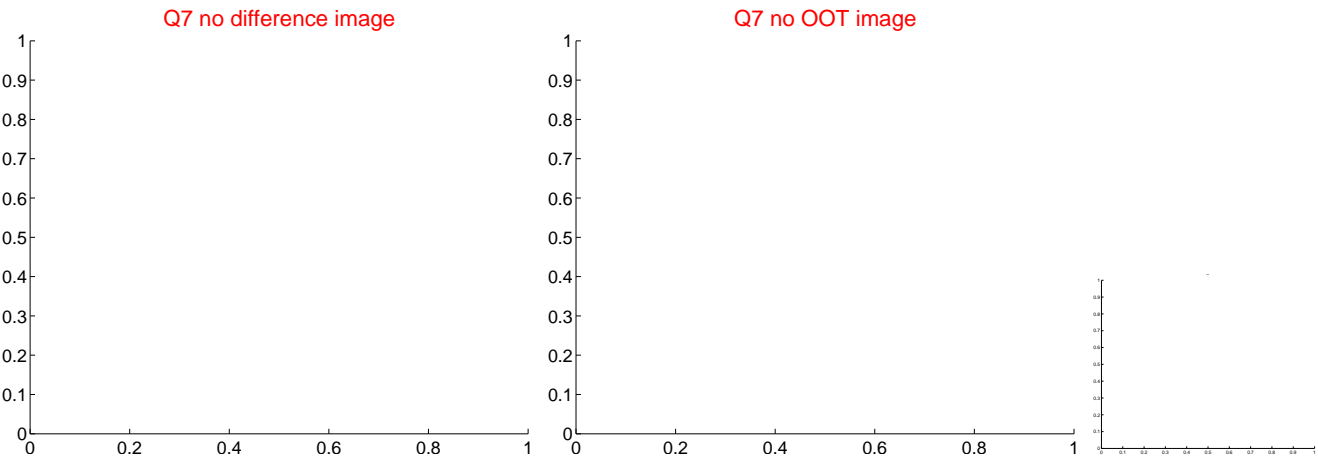
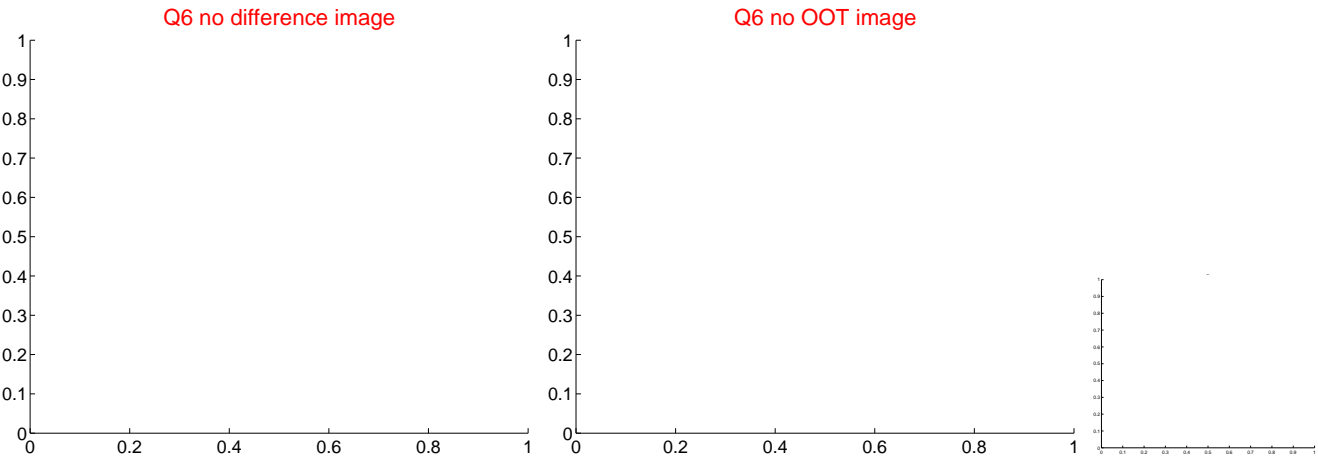
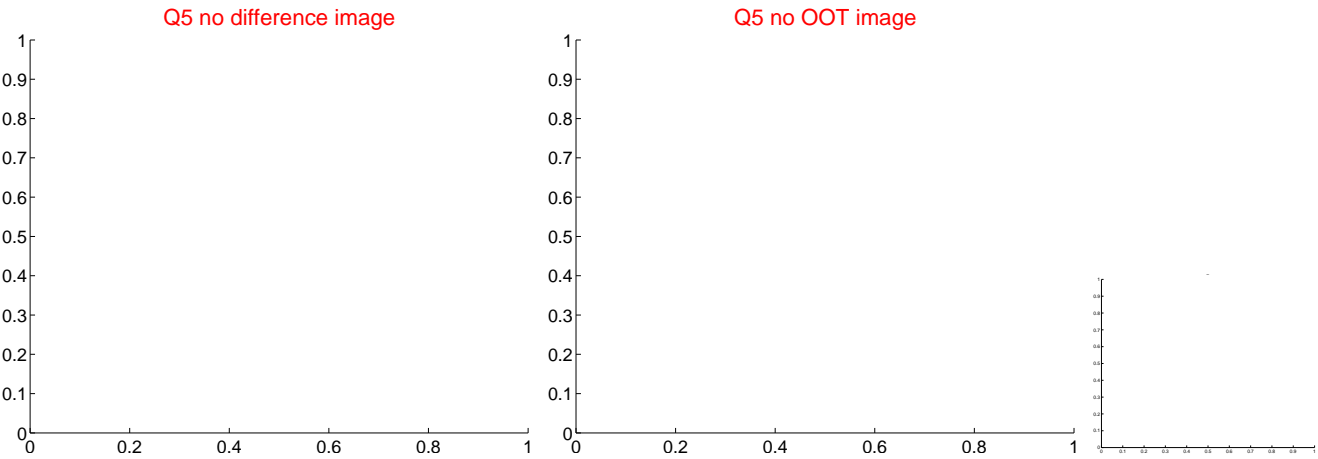


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

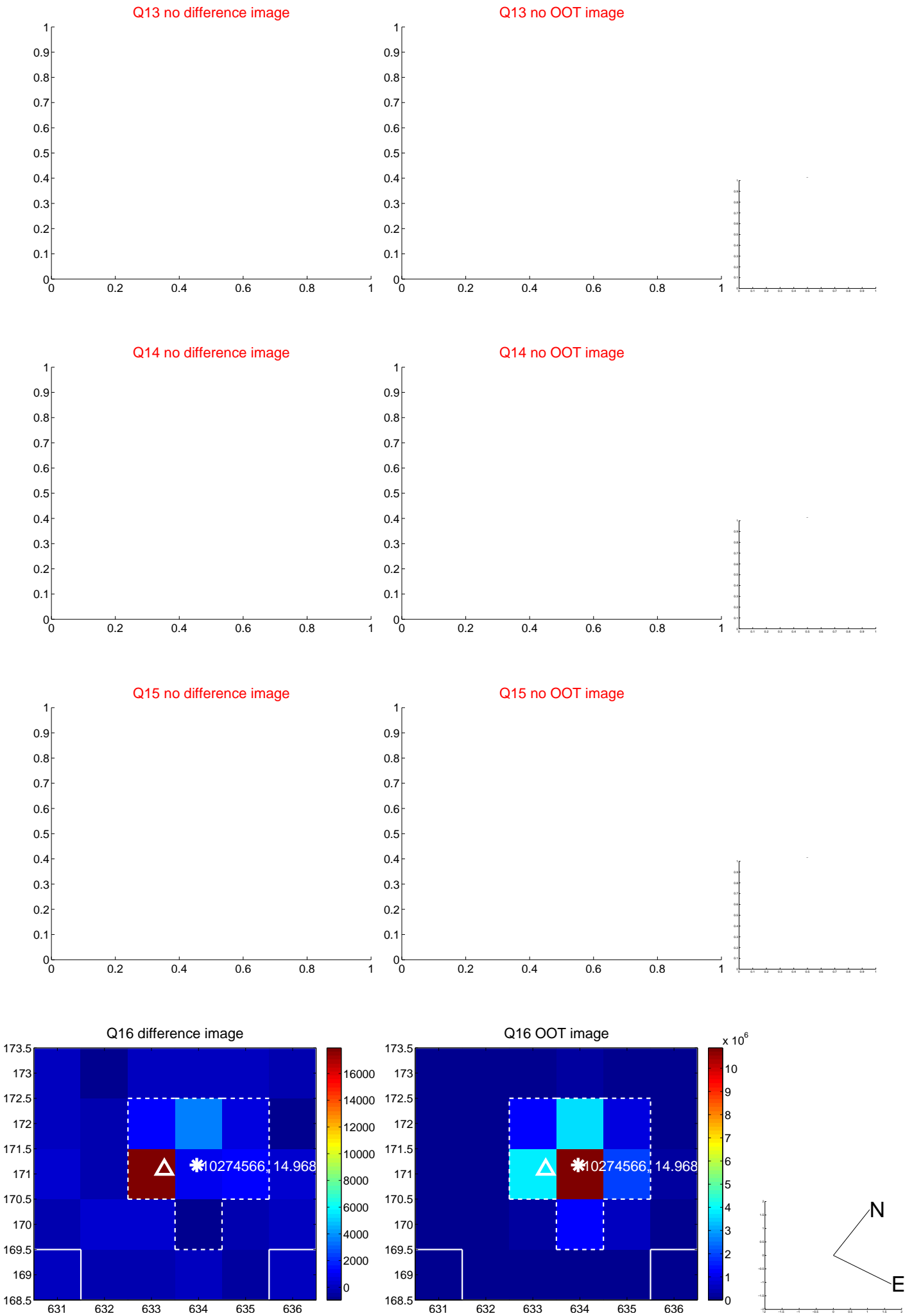
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



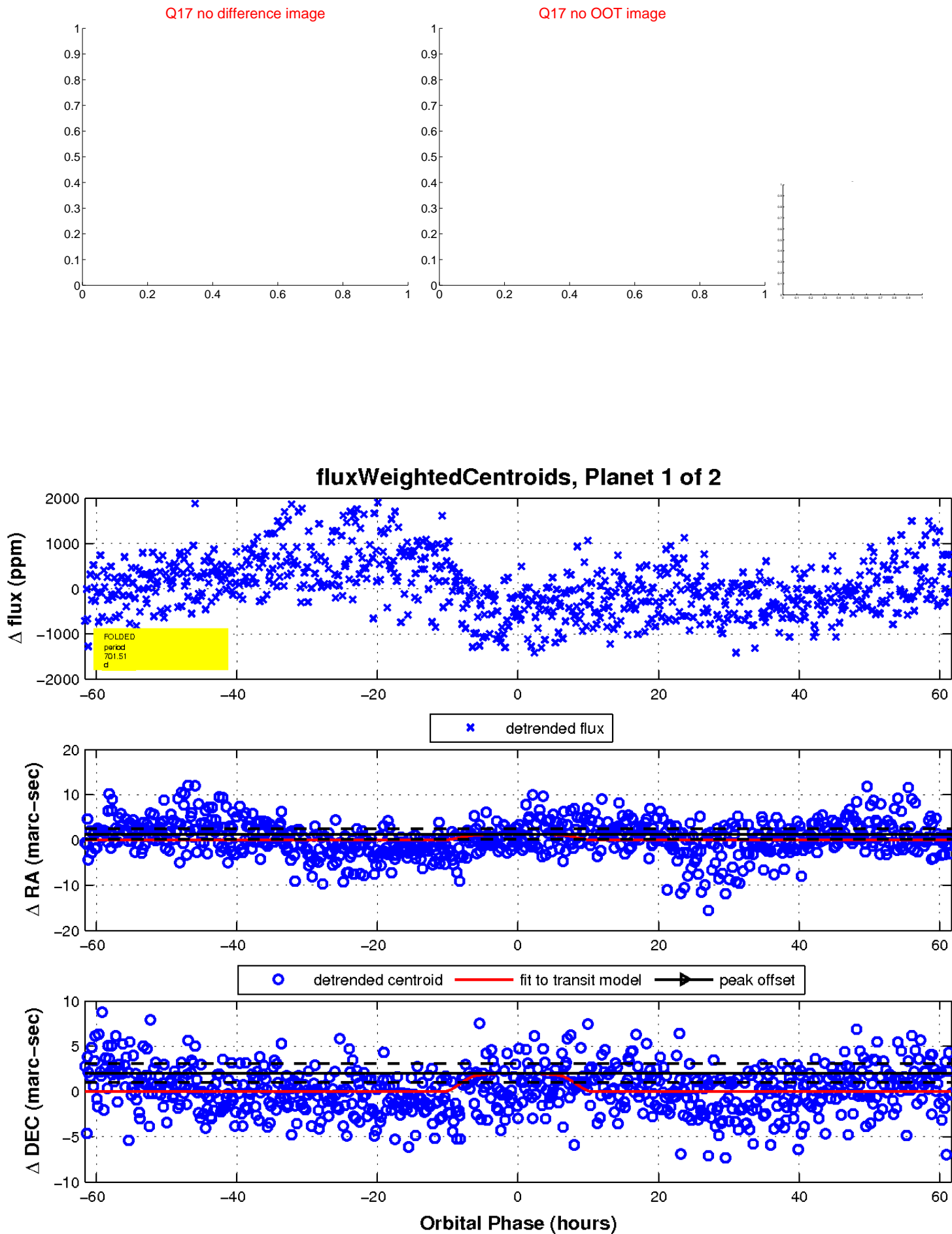
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

