

KIC 008161433

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})
008161433-01	OBS	No	484.835392	524.652372	115.1	6.816	8.2	3.7	1.45	6161	1.82	1.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008161433-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

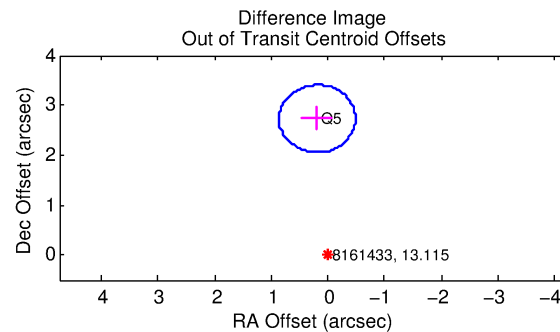
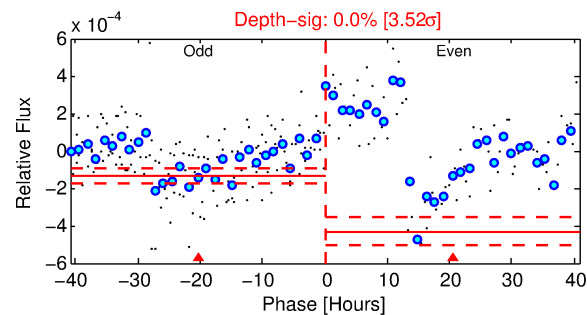
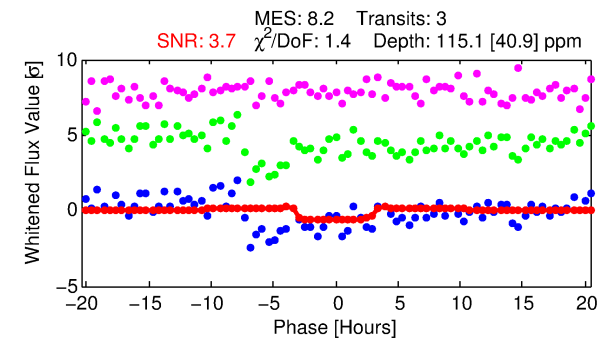
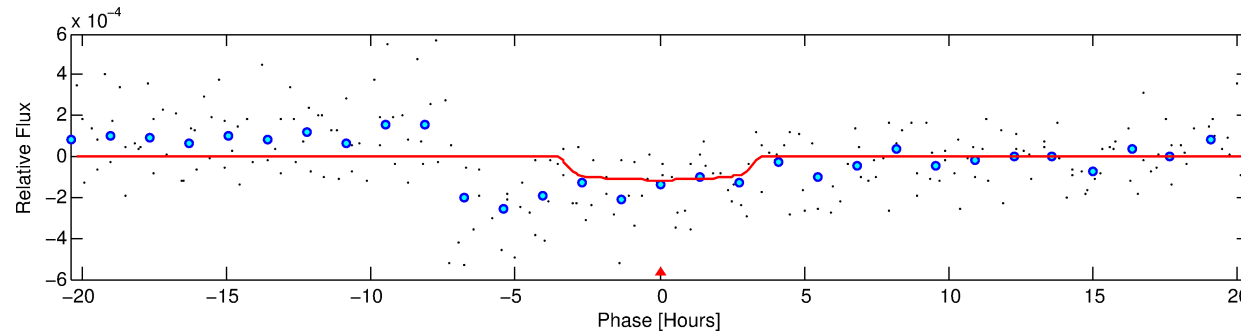
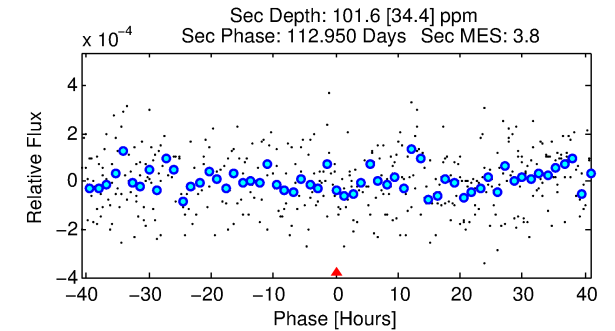
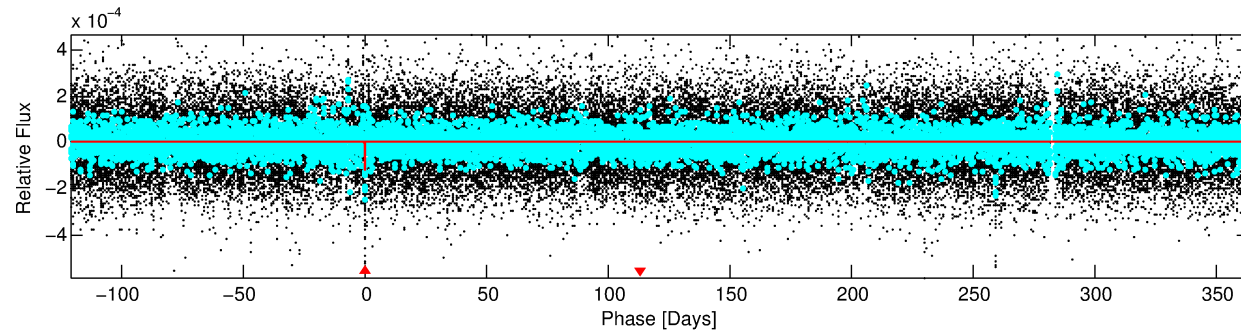
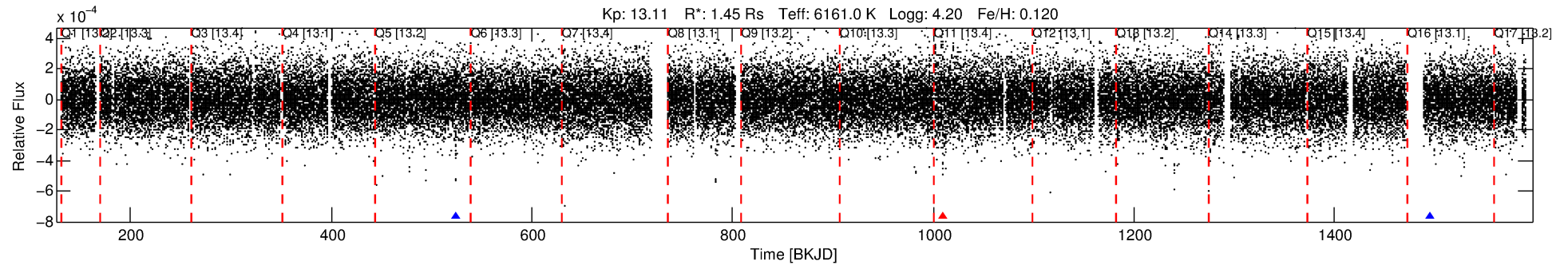
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008161433-01

No Significant Match Found

DV One-Page Summary

KIC: 8161433 Candidate: 1 of 1 Period: 484.835 d



DV Fit Results:

Period = 484.83539 [0.02159] d
Epoch = 524.6524 [0.0321] BKJD
Rp/R* = 0.0115 [0.0107]
a/R* = 256.93 [1204.60]
b = 0.89 [1.06]
Seff = 1.62 [0.41]
Teq = 288 [18] K
Rp = 1.82 [1.72] Re
a = 1.2914 [0.2055] AU
Ag = 28167.99 [53750.96] [0.52σ]
Teff = 5763 [2727] K [2.01σ]

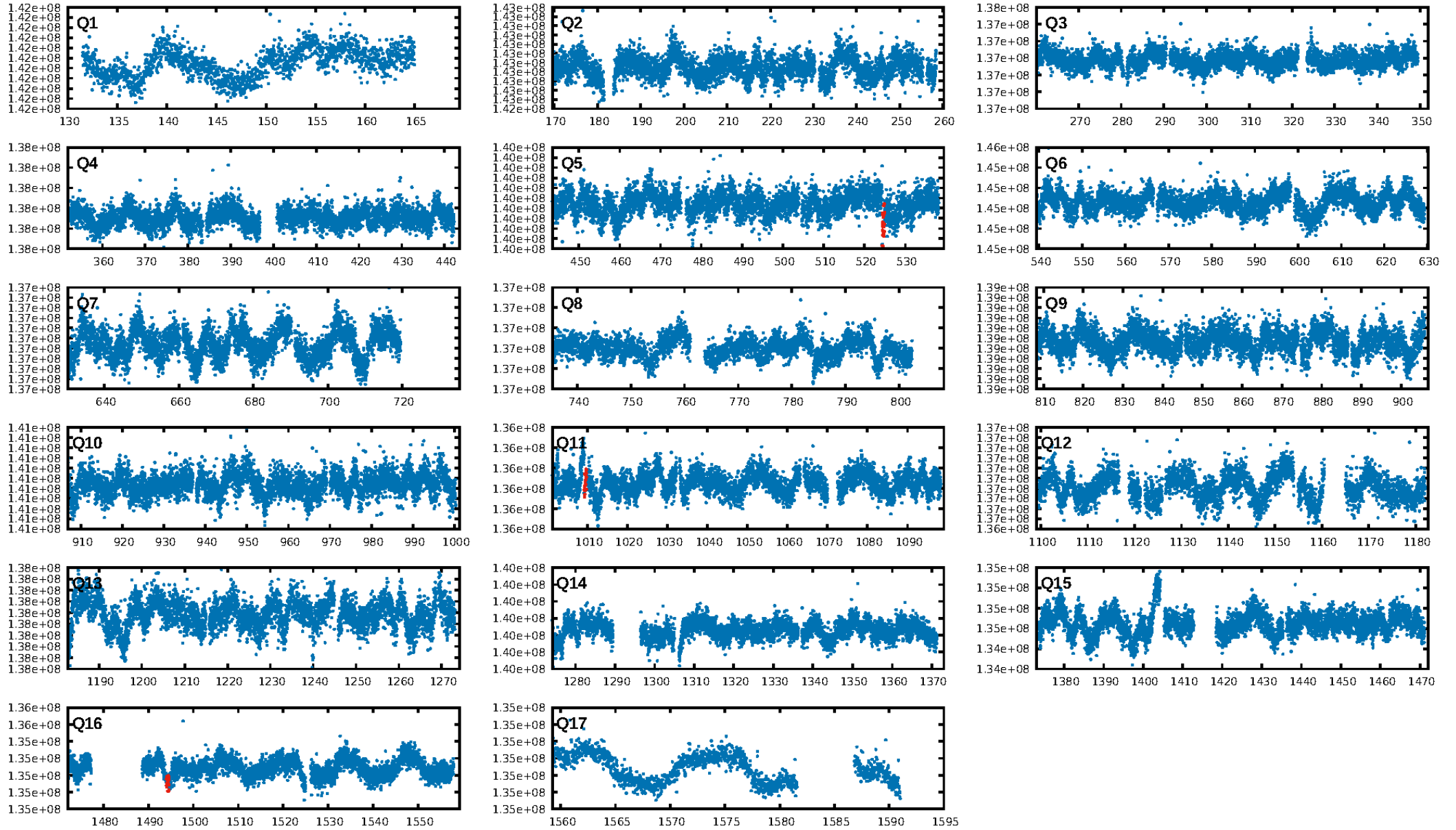
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 22.2%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 3.31e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -0.1098
Centroid-sig: 47.1%
Centroid-so: 2.329 arcsec [0.69σ]
OotOffset-rm: 2.738 arcsec [12.16σ]
KicOffset-rm: 2.866 arcsec [12.71σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

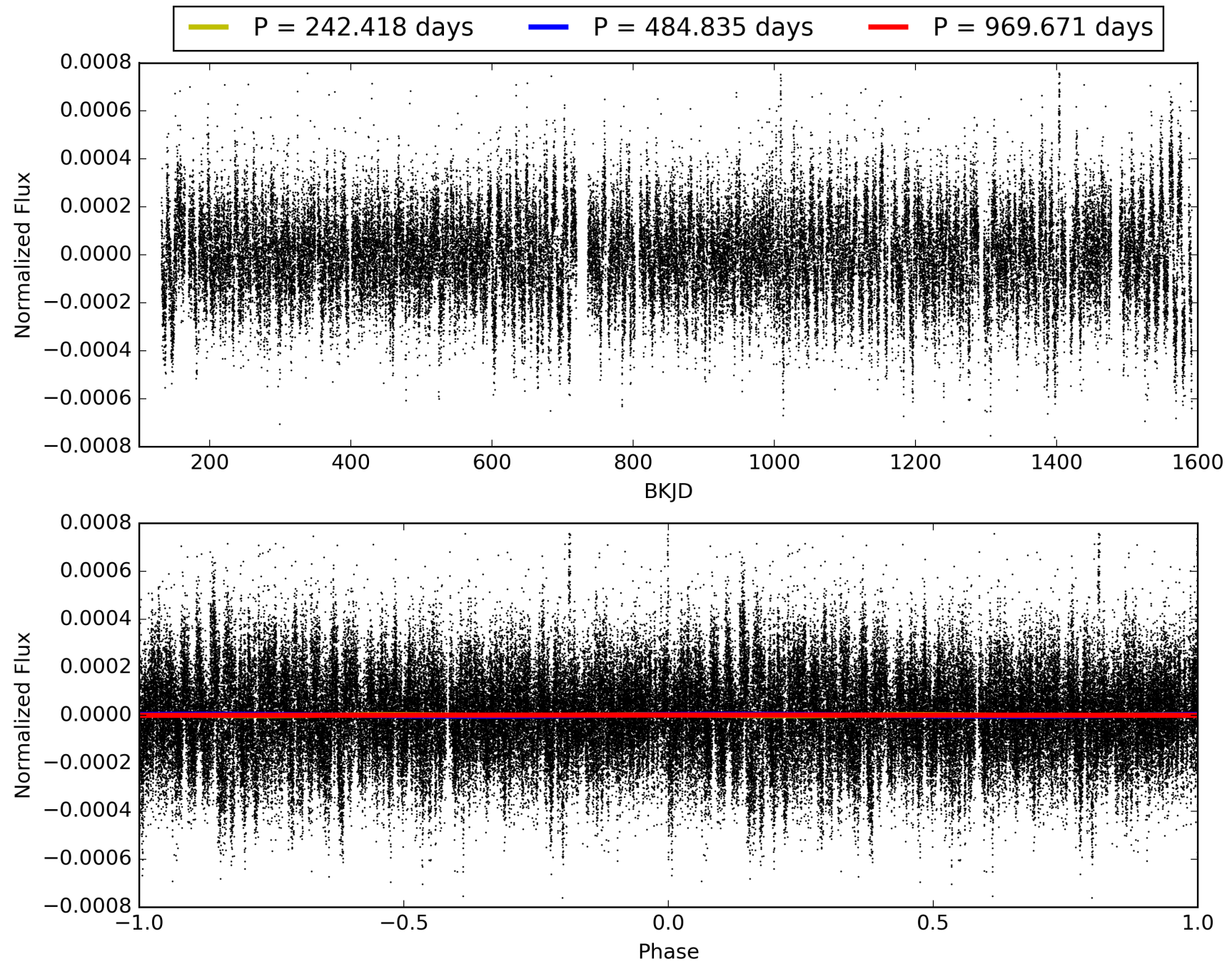
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:30:46 Z

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

TCE 008161433-01, PDC Light Curves

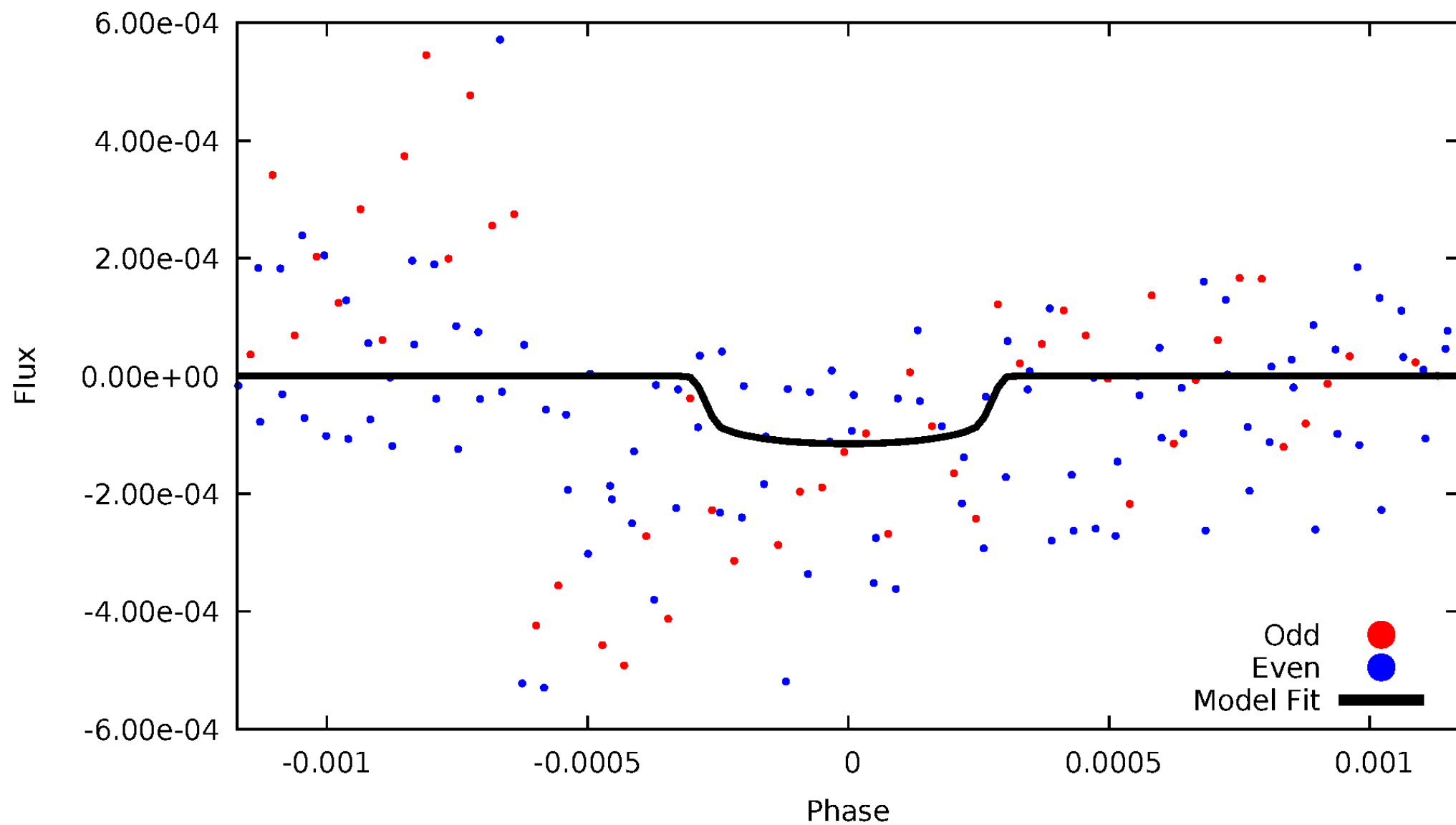


TCE 008161433-01



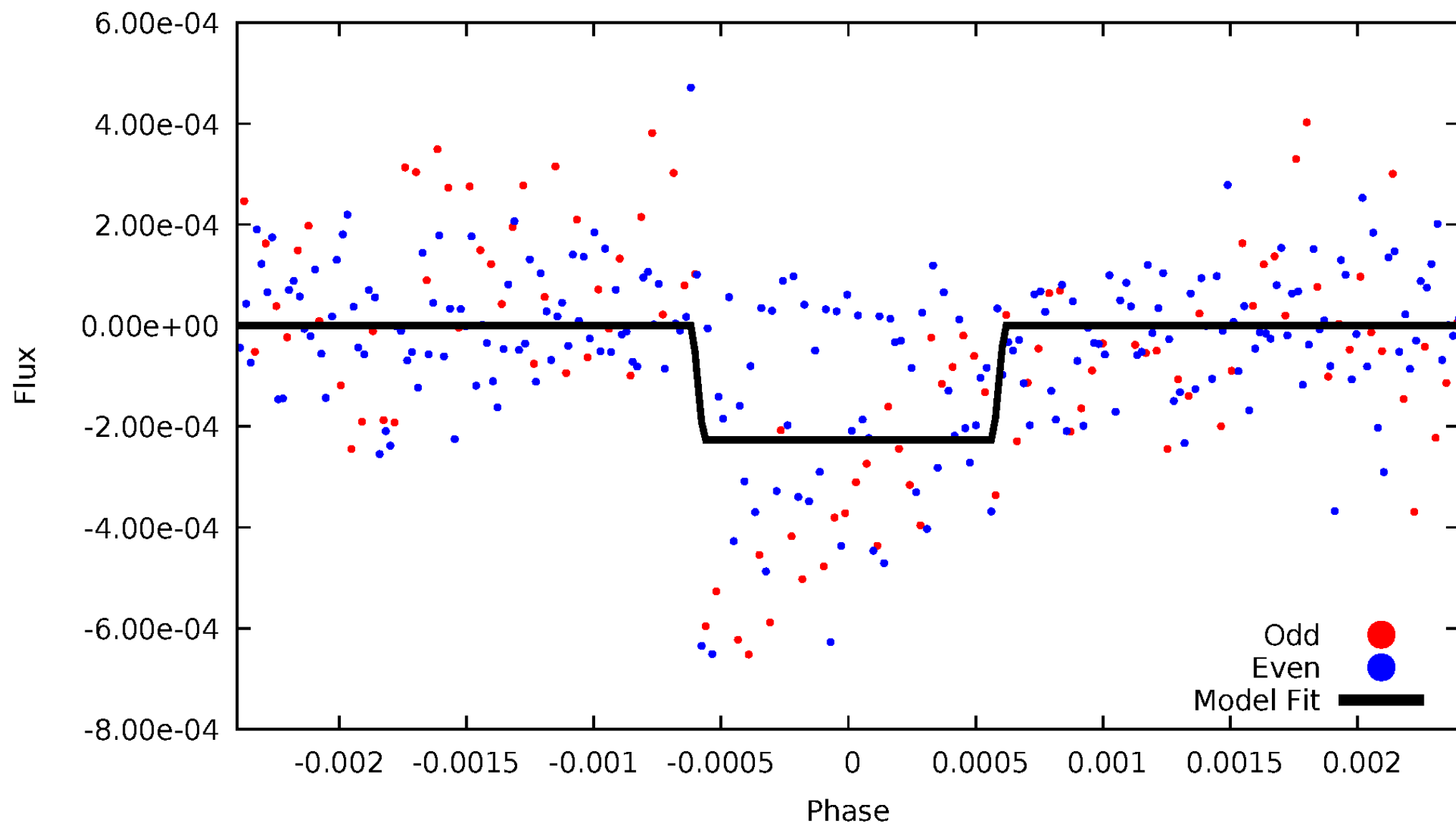
DV Odd/Even

TCE 008161433-01



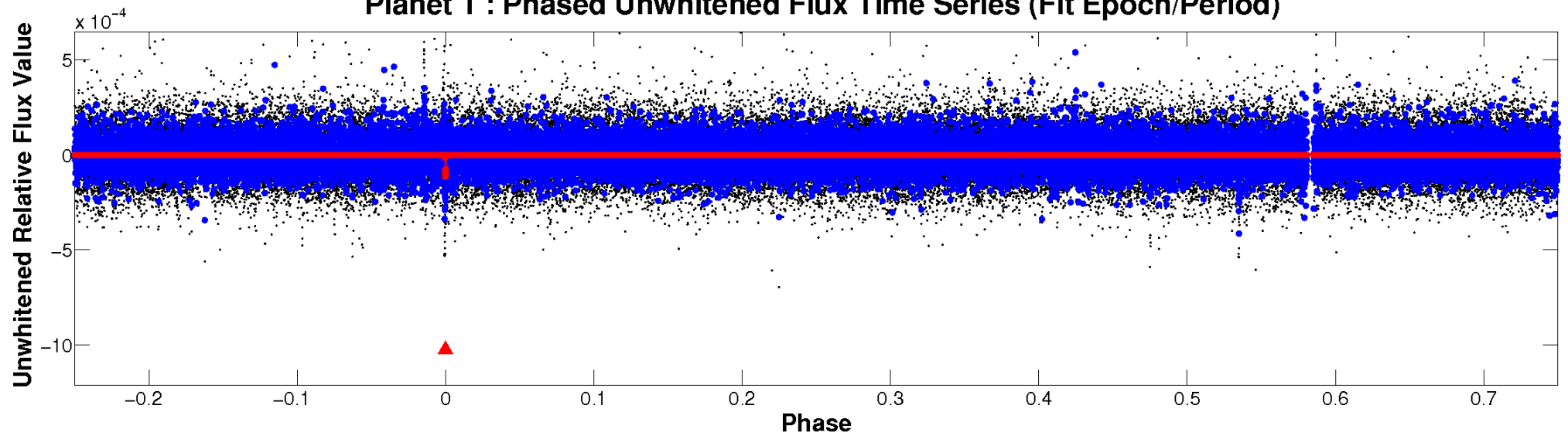
ALT Odd/Even

TCE 008161433-01

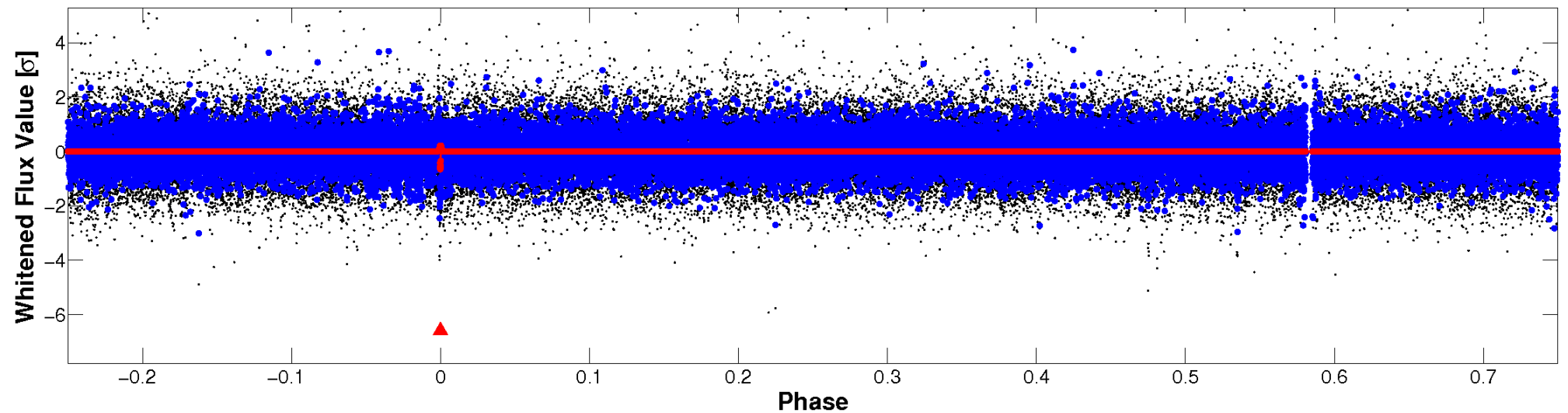


Non-Whitened Vs. Whitened Light Curve

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

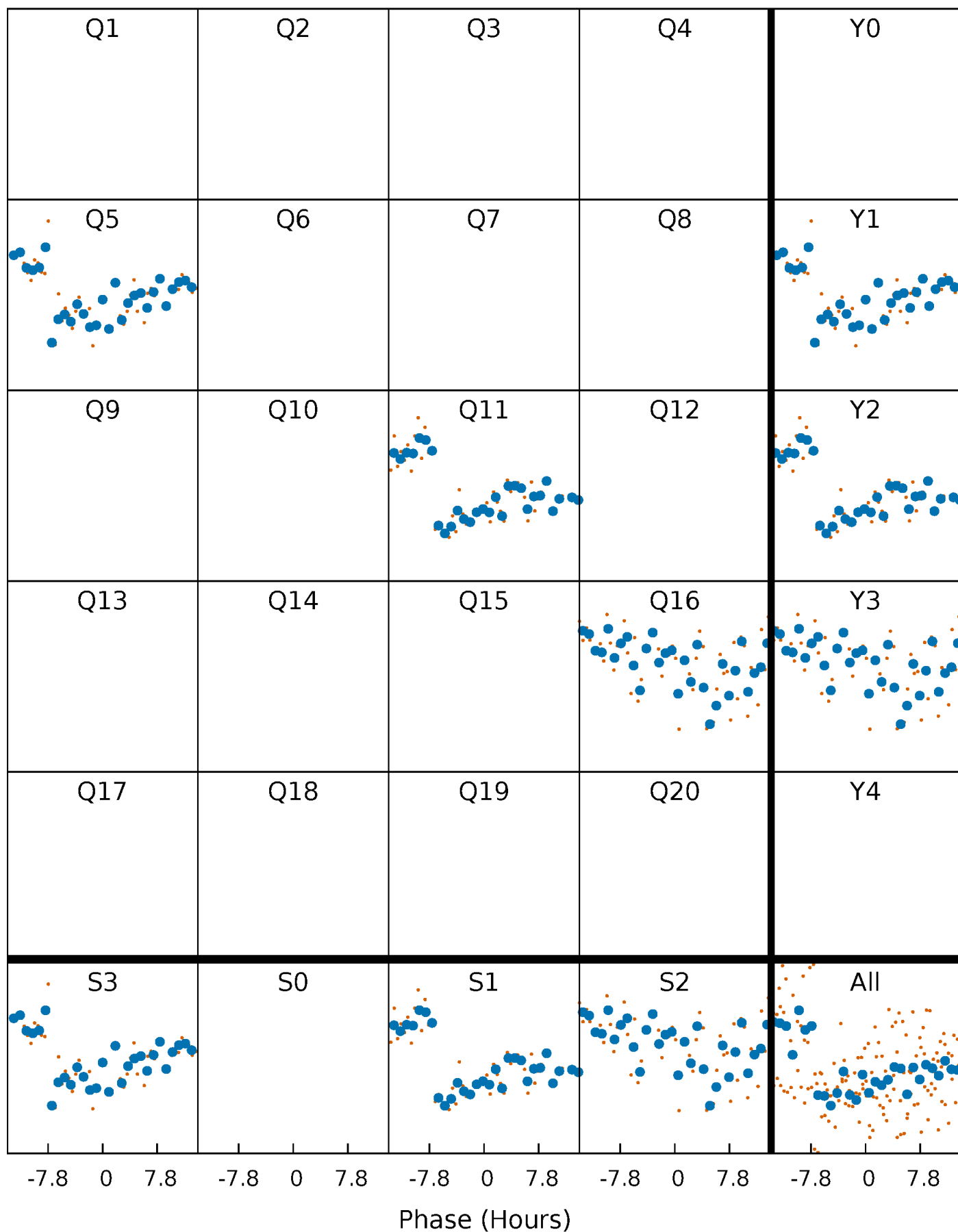


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



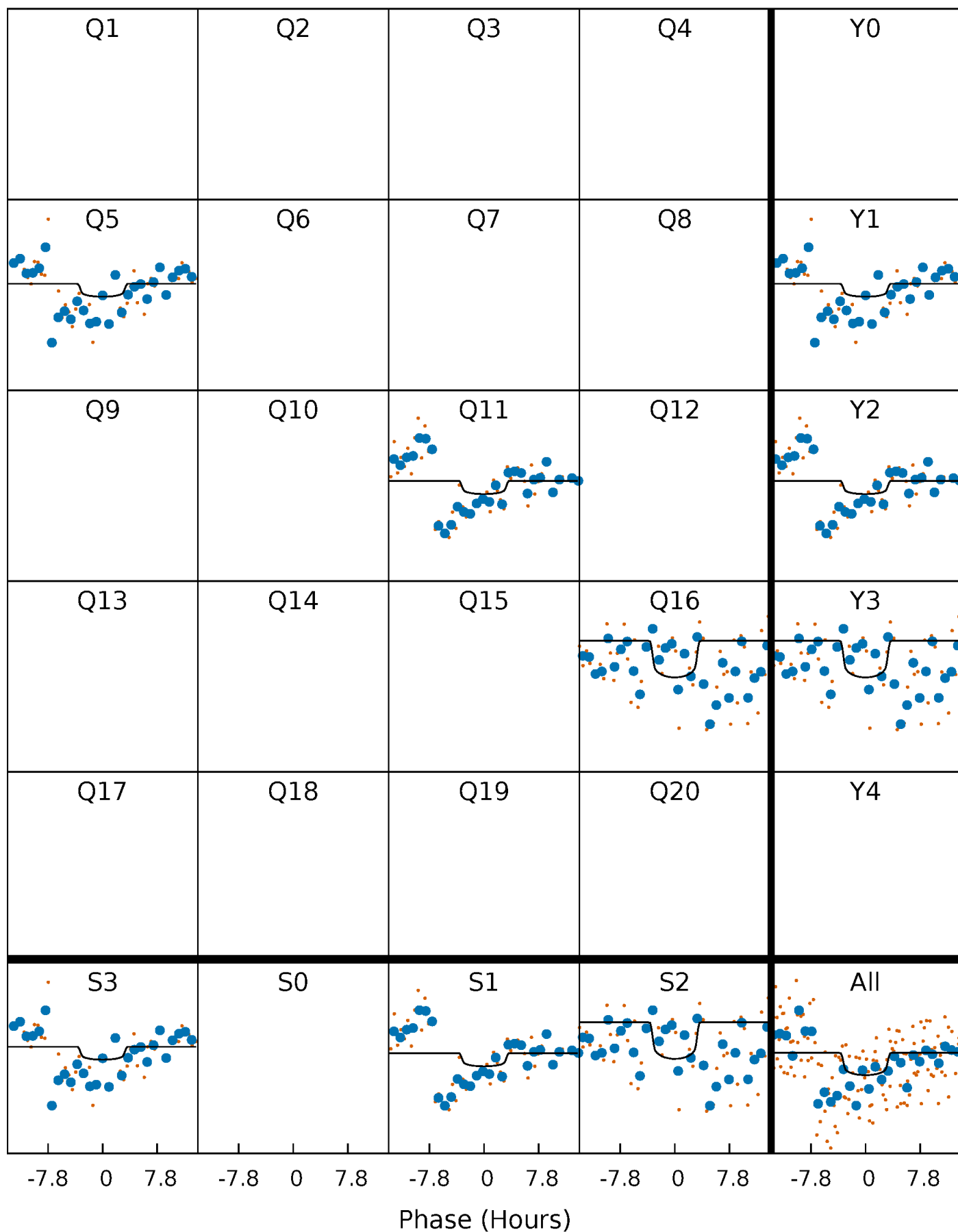
PDC Quarter-Phased Transit Curves

TCE 008161433-01 P=484.835392 Days $T_0=524.652372$ (BKJD)



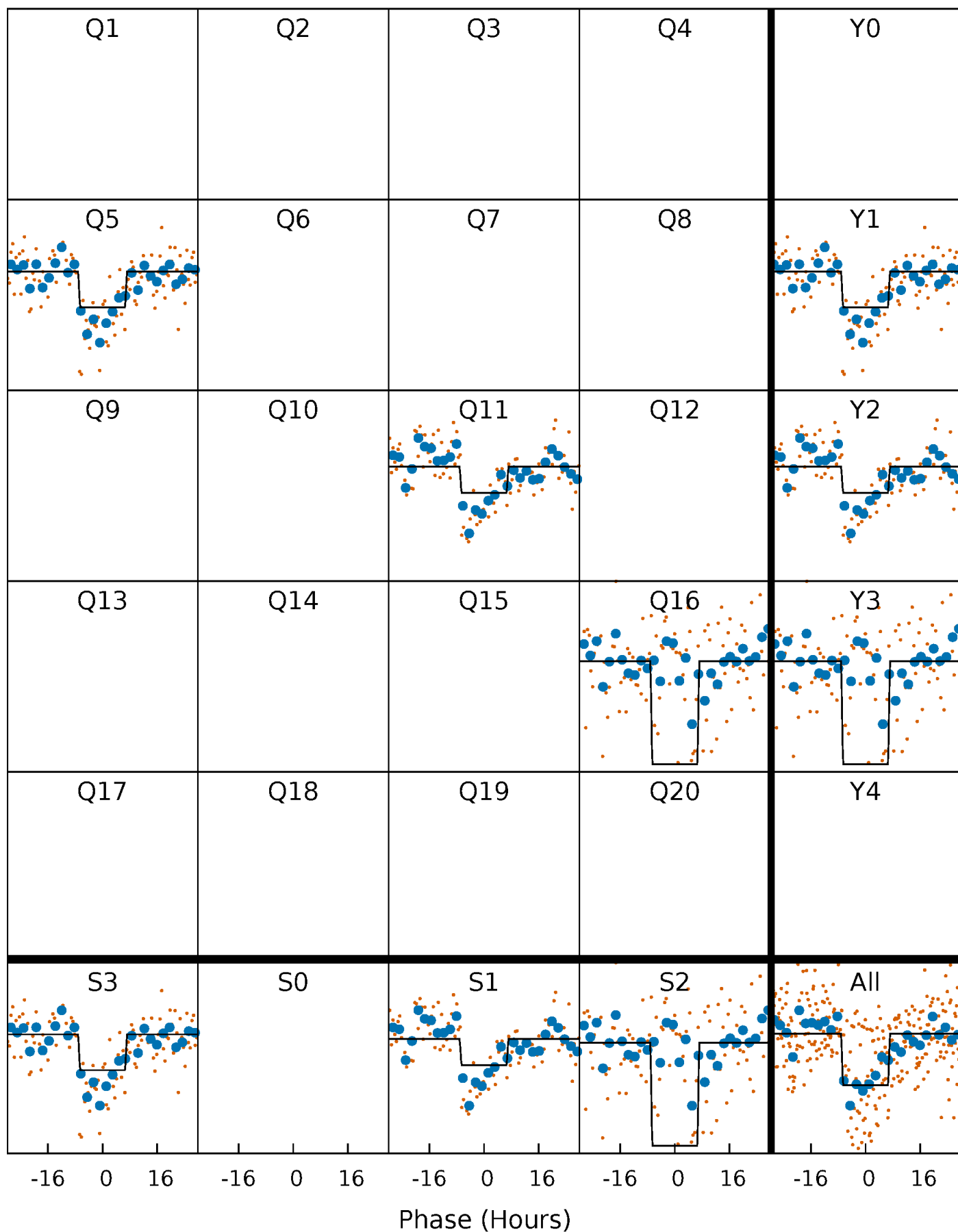
DV Quarter-Phased Transit Curves

TCE 008161433-01 $P=484.835392$ Days $T_0=524.652372$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

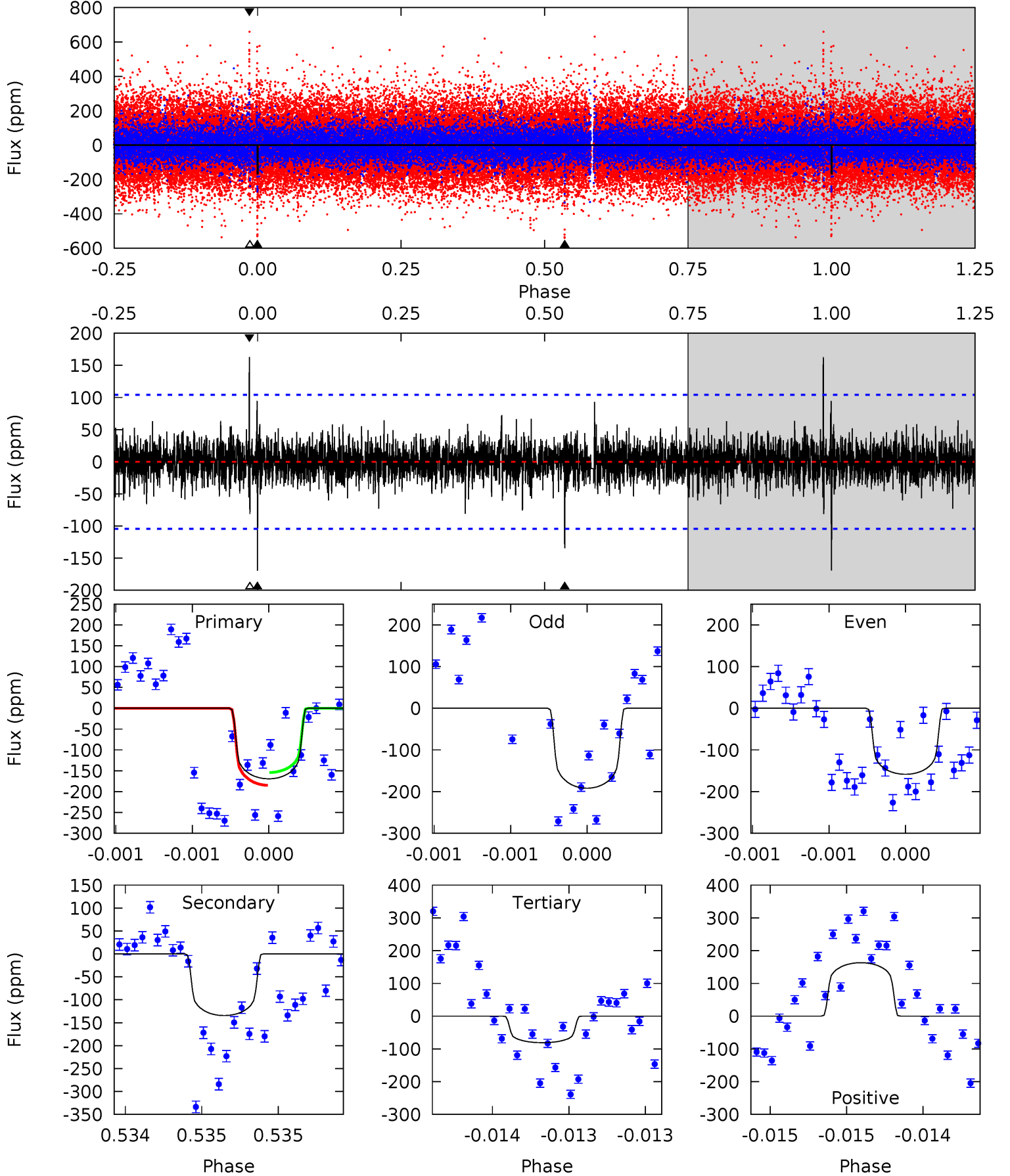
TCE 008161433-01 P=484.840701 Days $T_0=524.628497$ (BKJD)



DV Model-Shift Uniqueness Test

008161433-01, $P = 484.835392$ Days, $E = 39.816980$ Days

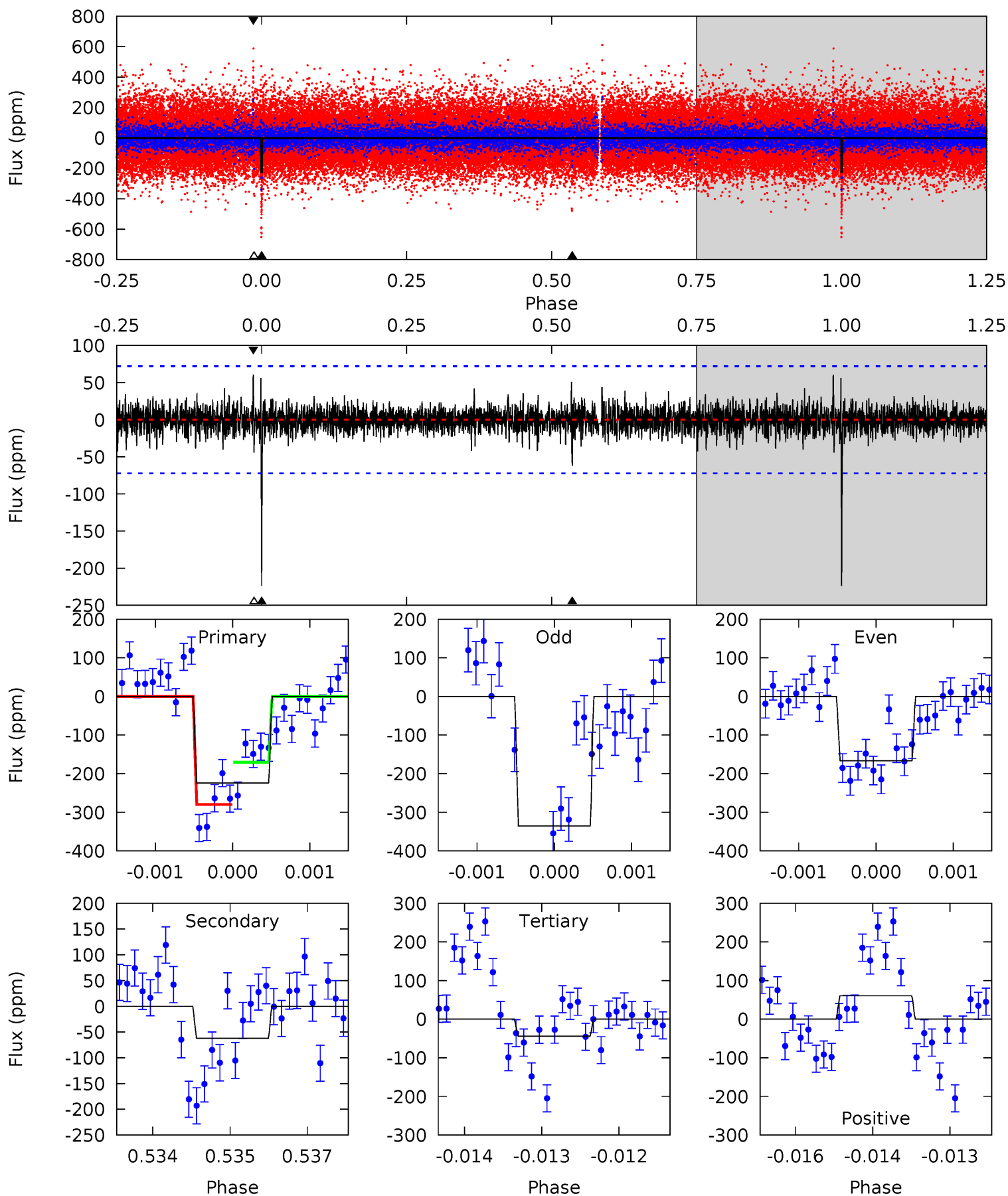
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.98	7.13	4.30	8.65	5.53	3.42	1.02	4.68	0.33	2.83	-1.52	0.82	0.90	0.49	0.81



Alt Model-Shift Uniqueness Test

008161433-01, P = 484.840701 Days, E = 39.787796 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	4.66	3.31	4.54	5.42	3.24	0.85	13.5	12.3	1.35	0.12	5.97	0.70	0.21	4.09



Stellar Parameters For KIC 008161433

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6161^{+80}_{-80}	$4.204^{+0.143}_{-0.117}$	$0.120^{+0.150}_{-0.150}$	$1.447^{+0.250}_{-0.250}$	$1.224^{+0.086}_{-0.118}$	$0.570^{+0.386}_{-0.197}$
	+1%/-1%	+3%/-3%	+125%/-125%	+17%/-17%	+7%/-10%	+68%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008161433-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-134 ± 19	$2.09^{+1.69}_{-1.28}$	401^{+19}_{-20}	5713^{+4394}_{-1230}	$27997^{+151139}_{-19451}$
Alt.	-62 ± 13	$2.54^{+1.56}_{-1.41}$	401^{+18}_{-20}	4476^{+2015}_{-717}	8517^{+38996}_{-5275}

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

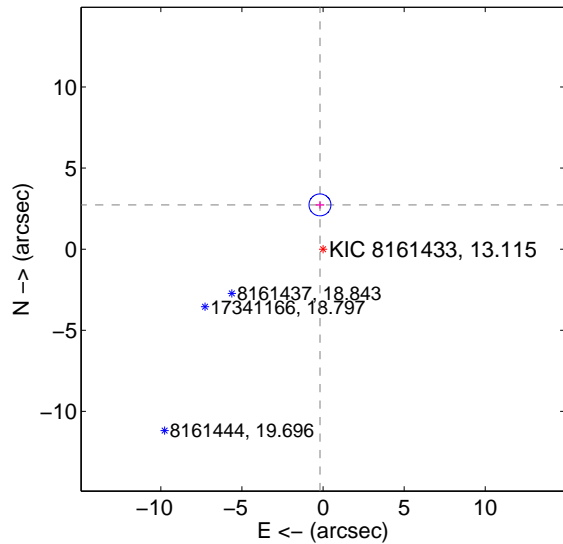
Supplemental centroid analysis for 008161433-01. Kepler magnitude: 13.12. Transit SNR 3.72

There are 0 quarters with good PRF difference image offsets

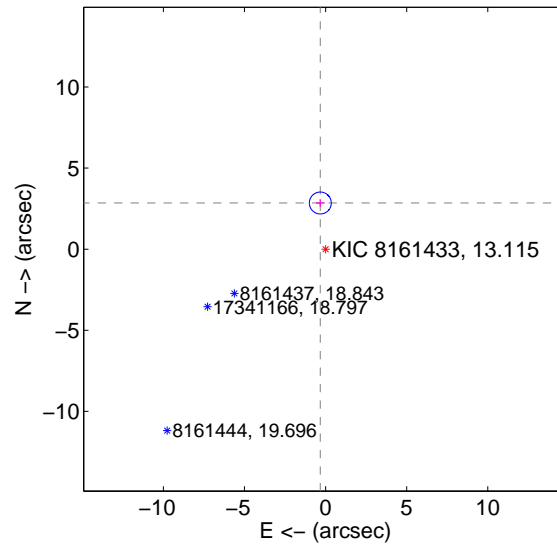
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.738 ± 0.225	12.16	0.190 ± 0.264	2.731 ± 0.225
PRF-fit source offset from KIC position	2.866 ± 0.225	12.71	0.325 ± 0.264	2.848 ± 0.225
photometric centroid source offset	2.33 ± 3.37	0.69	-0.45 ± 3.32	2.28 ± 3.37

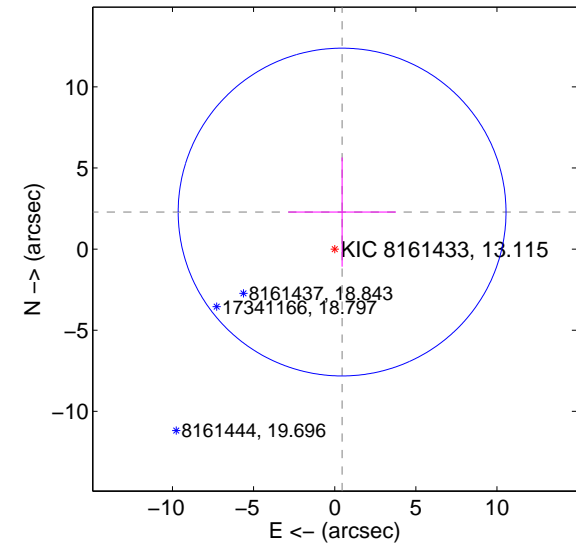
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

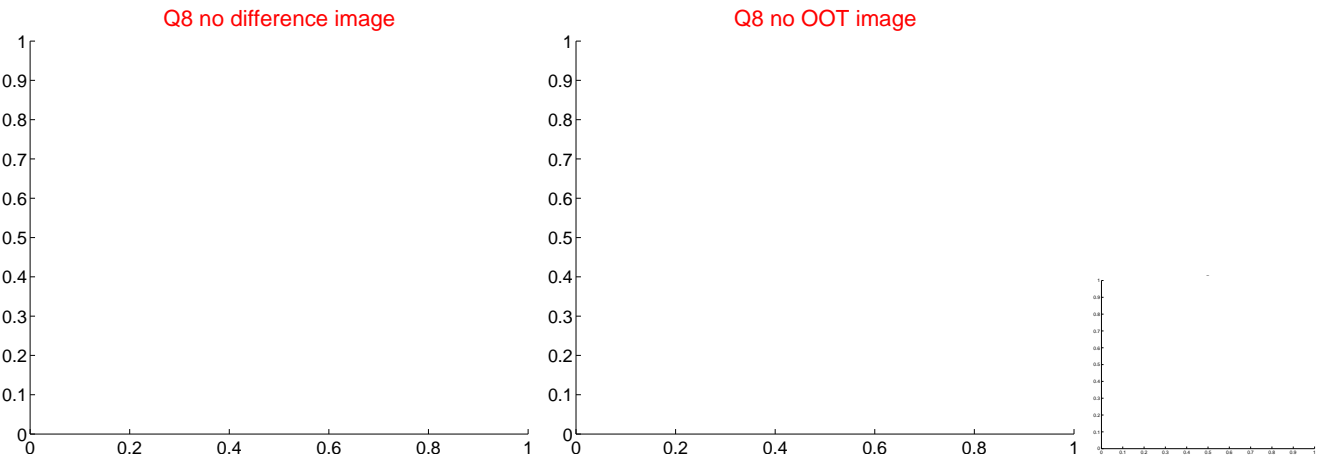
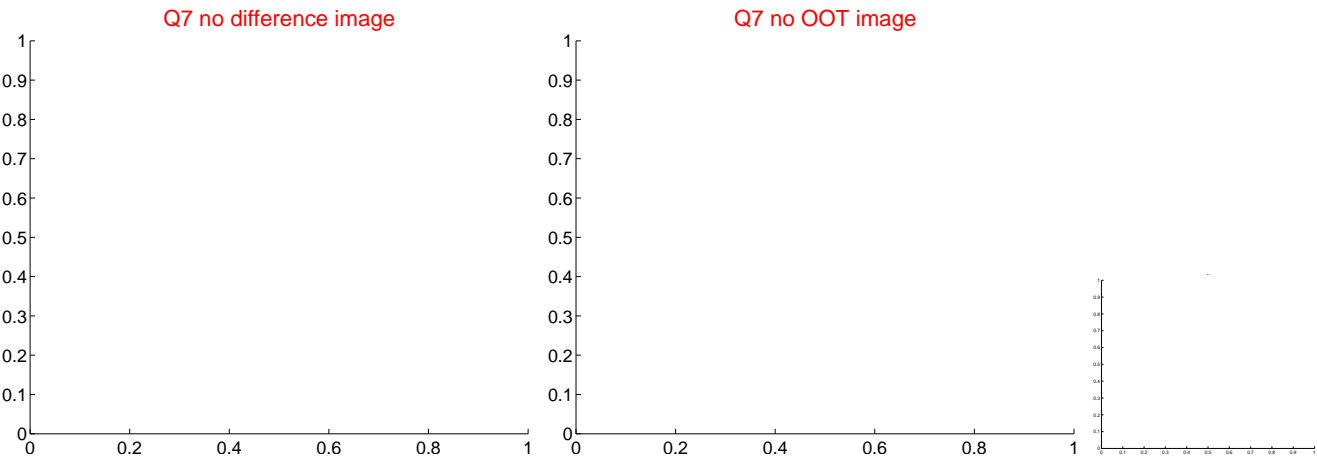
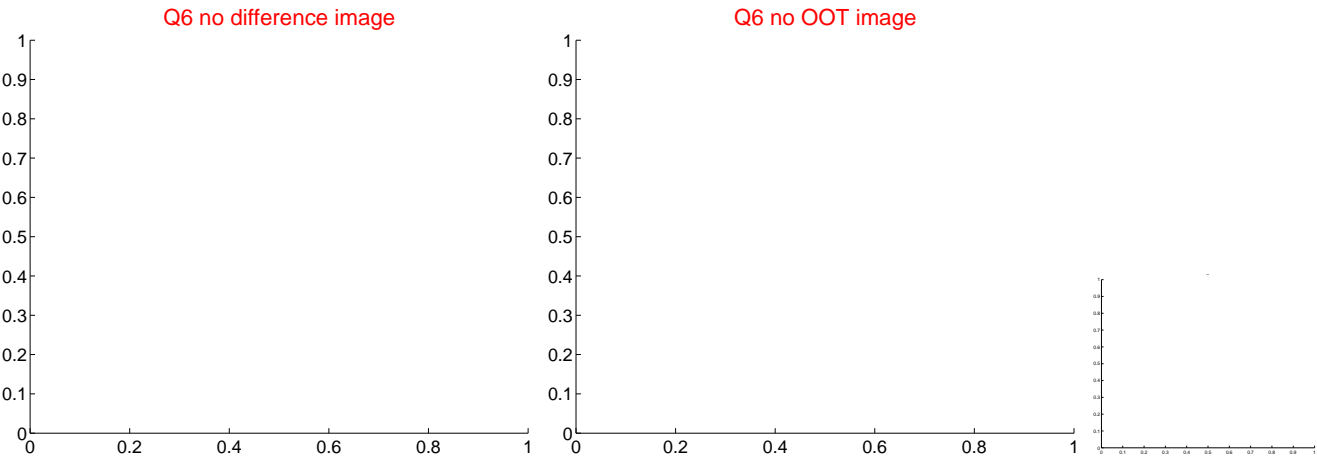
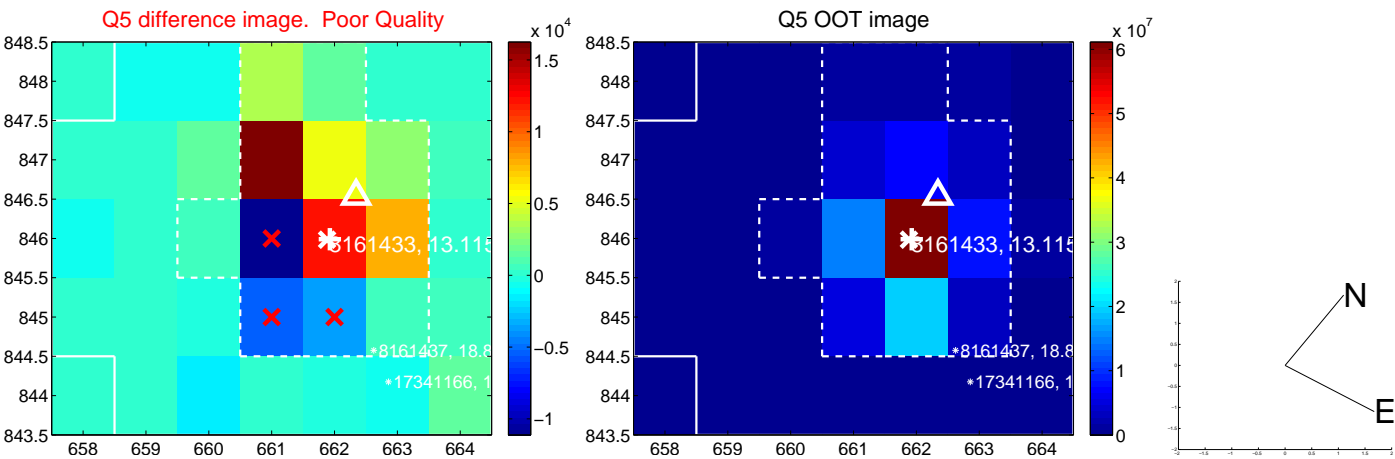


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

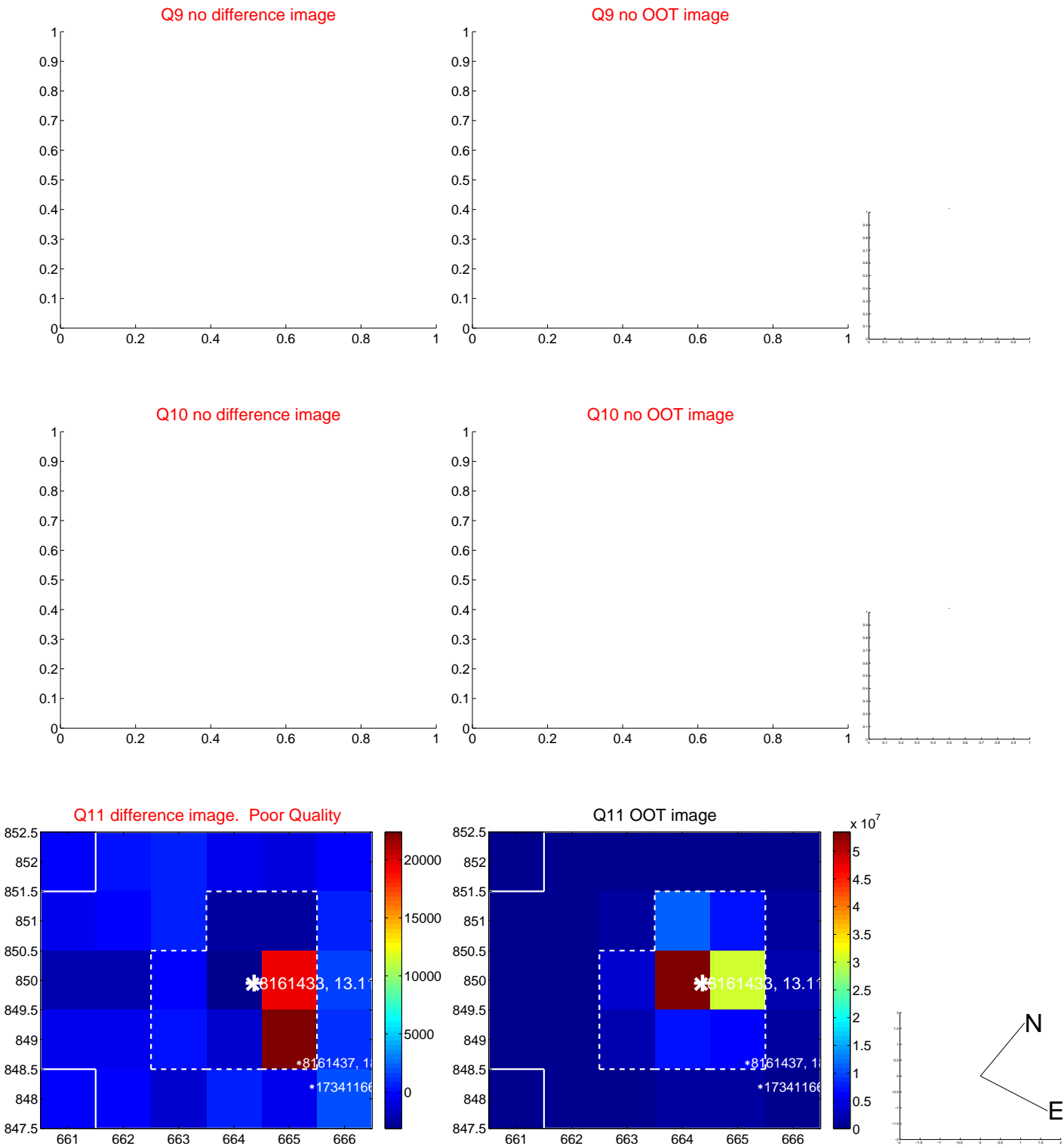
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



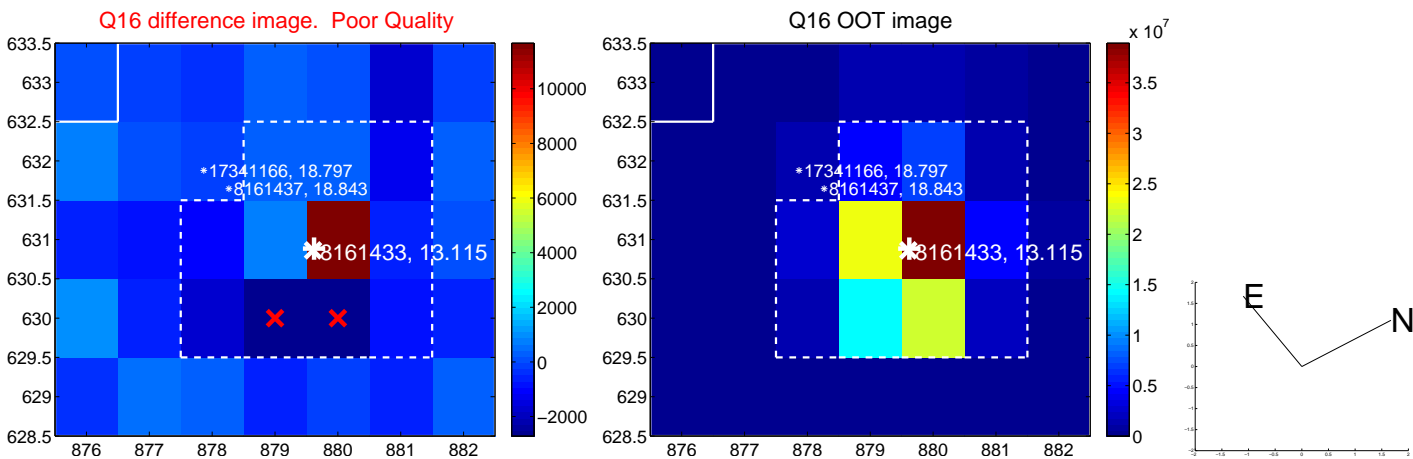
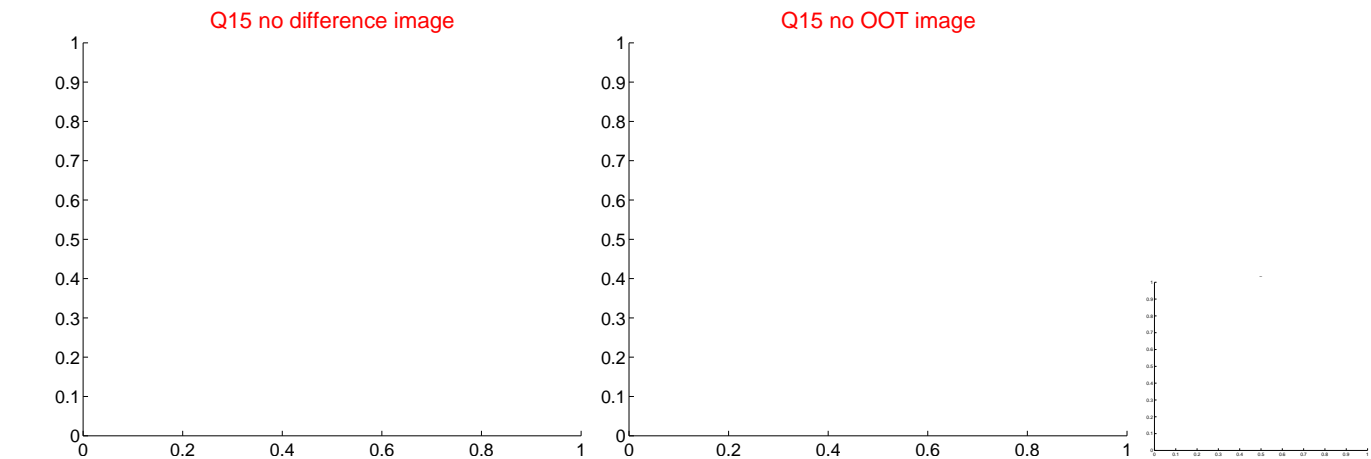
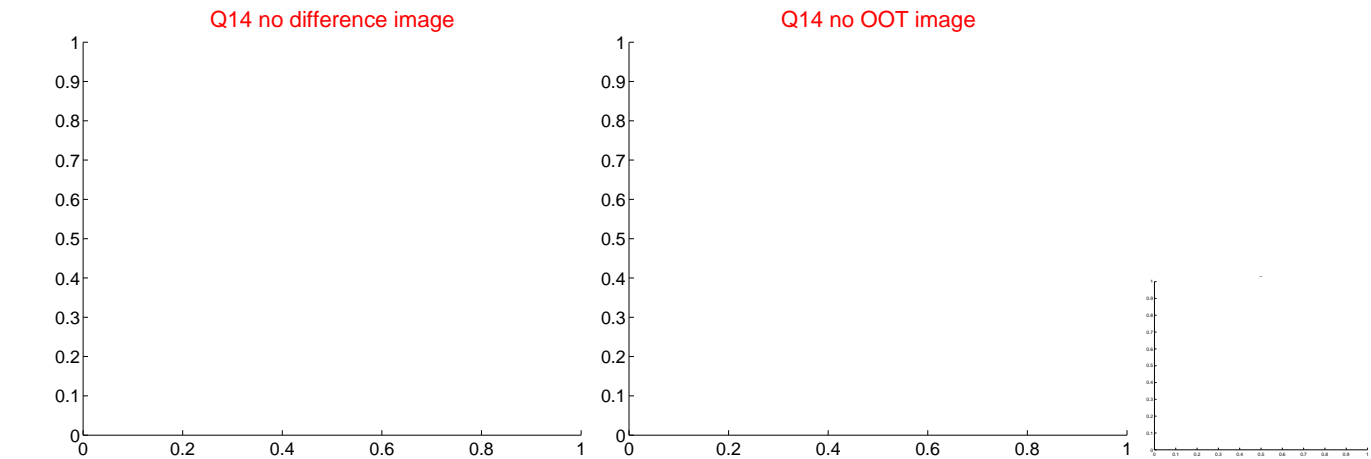
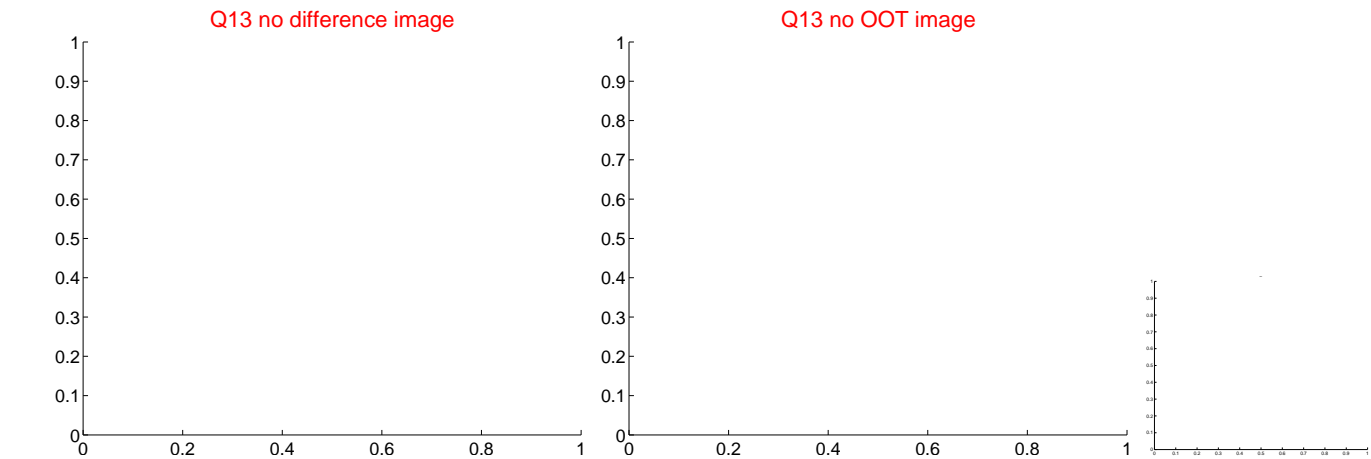
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



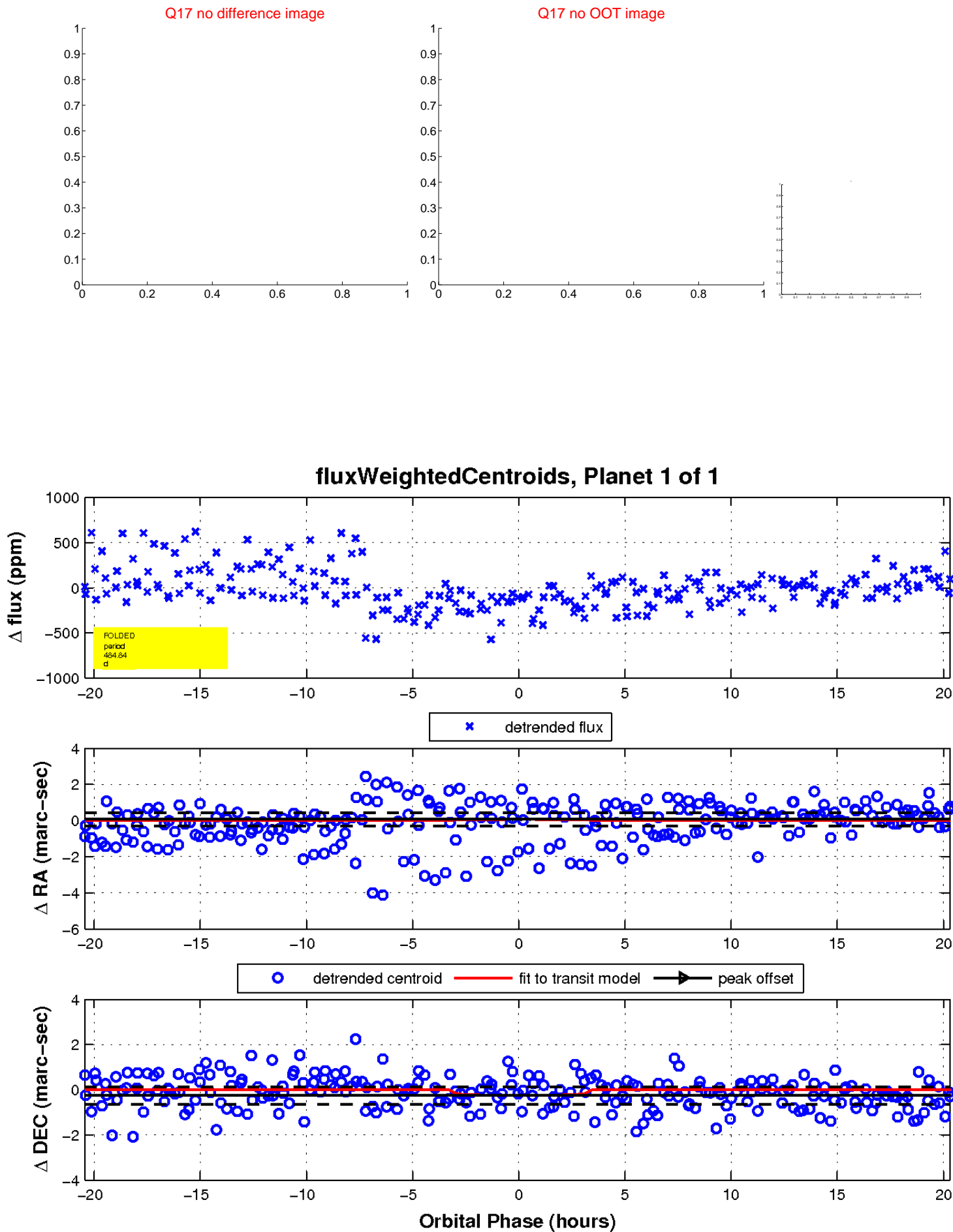
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

