

KIC 012266450

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})
012266450-01	OBS	No	473.728882	306.311384	396.5	6.096	7.2	6.3	1.17	6875	2.63	1.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012266450-01	OBS	FP	0.03	1	0	0	0	MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

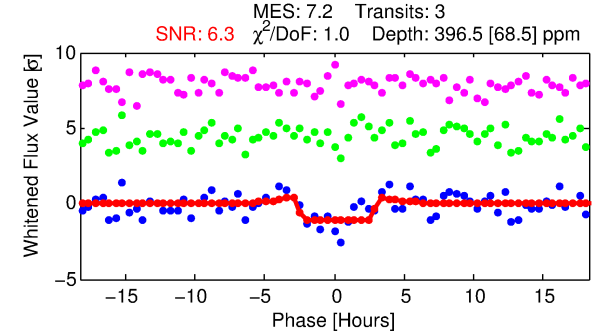
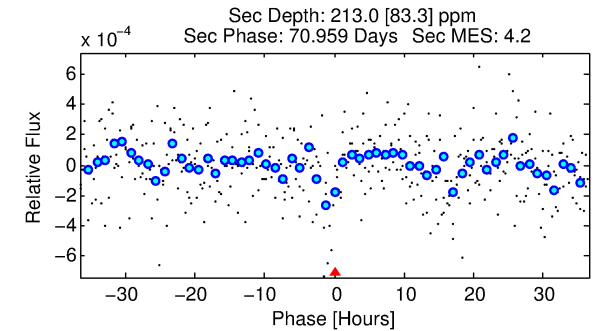
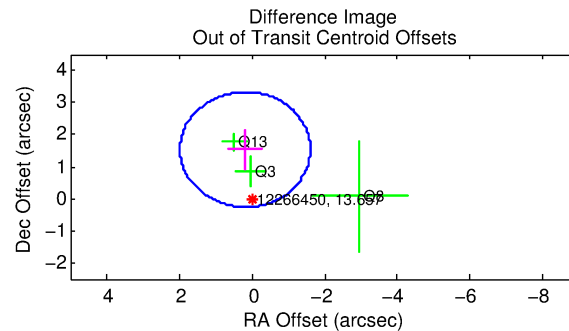
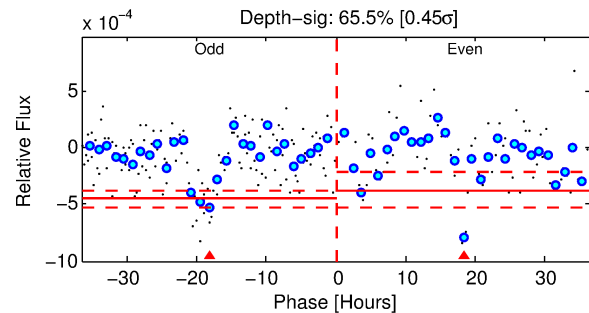
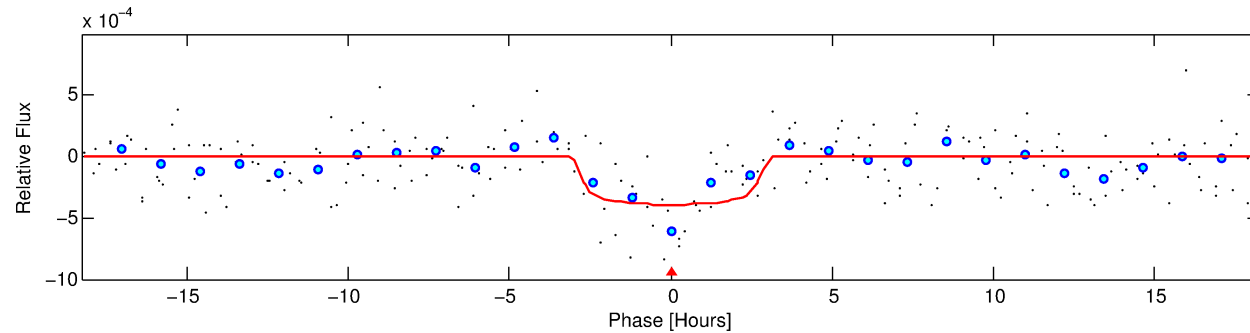
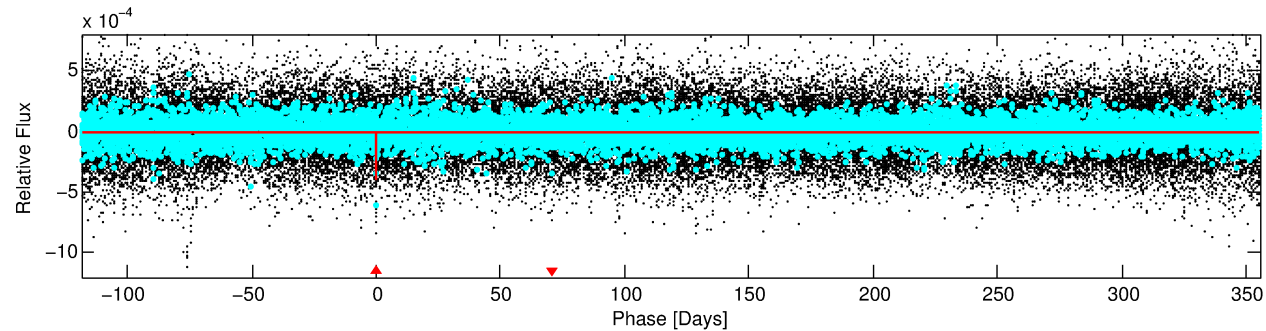
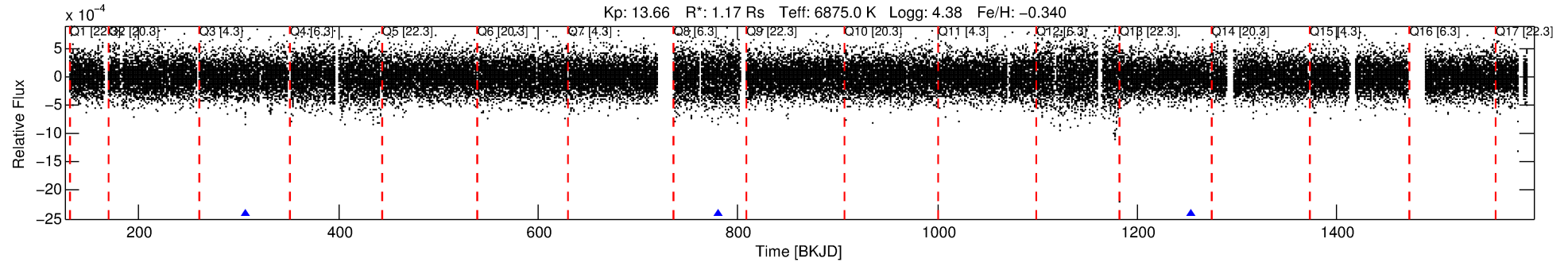
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012266450-01

No Significant Match Found

DV One-Page Summary

KIC: 12266450 Candidate: 1 of 1 Period: 473.729 d



DV Fit Results:

Period = 473.72888 [0.00826] d
Epoch = 306.3114 [0.0105] BKJD
Rp/R* = 0.0206 [0.0069]
a/R* = 330.95 [624.15]
b = 0.85 [0.59]
Seff = 1.73 [0.70]
Teq = 292 [30] K
Rp = 2.63 [1.23] Re
a = 1.2580 [0.3366] AU
Ag = 26849.41 [23095.05] [1.16 σ]
Teff = 5784 [1138] K [4.82 σ]

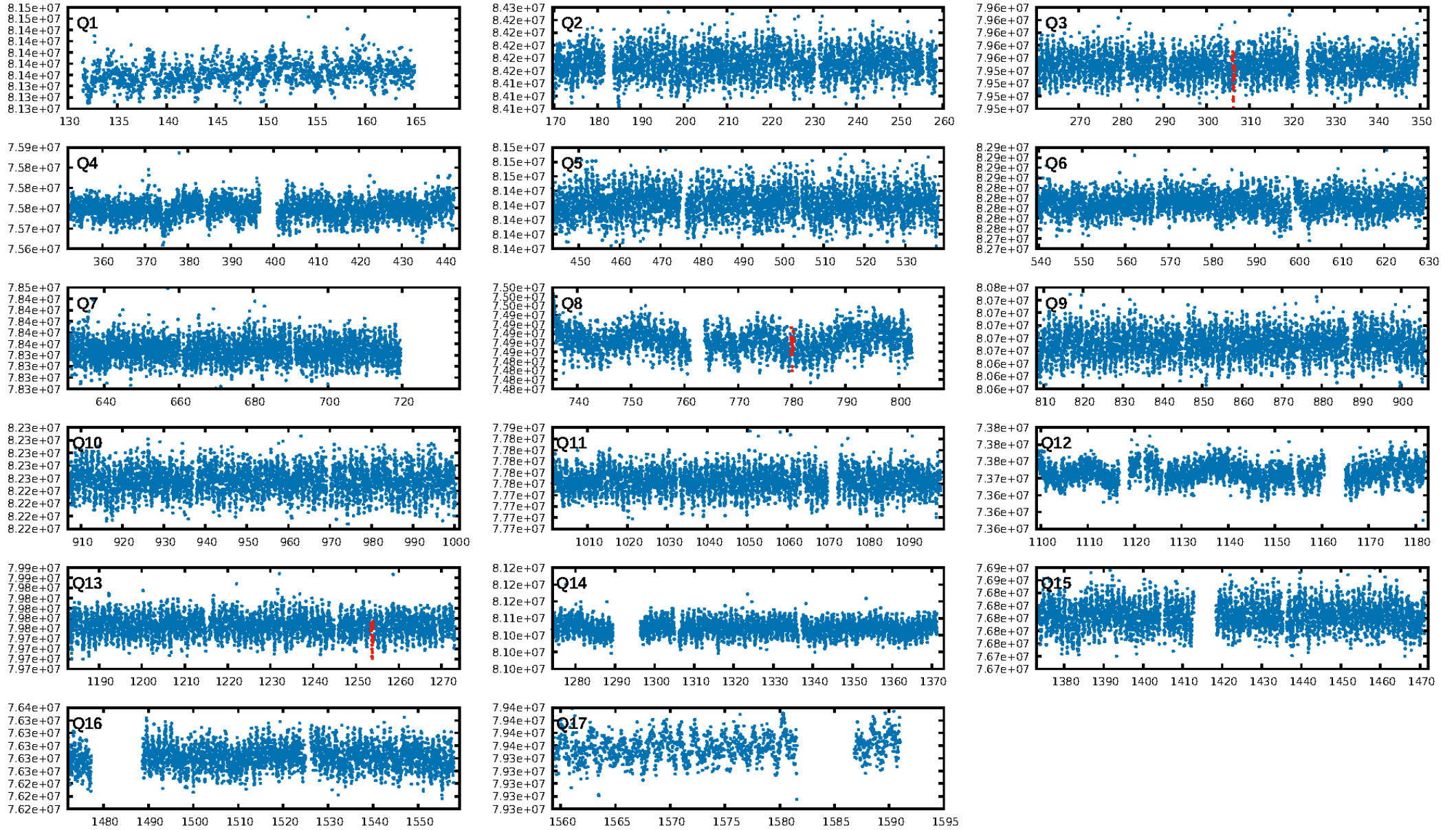
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 29.3%
ModelChiSquareGof-sig: 77.9%
Bootstrap-pfa: 1.15e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.432
Centroid-sig: 10.6%
Centroid-so: 1.863 arcsec [1.81 σ]
OotOffset-rm: 1.544 arcsec [2.58 σ]
KicOffset-rm: 1.638 arcsec [2.74 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

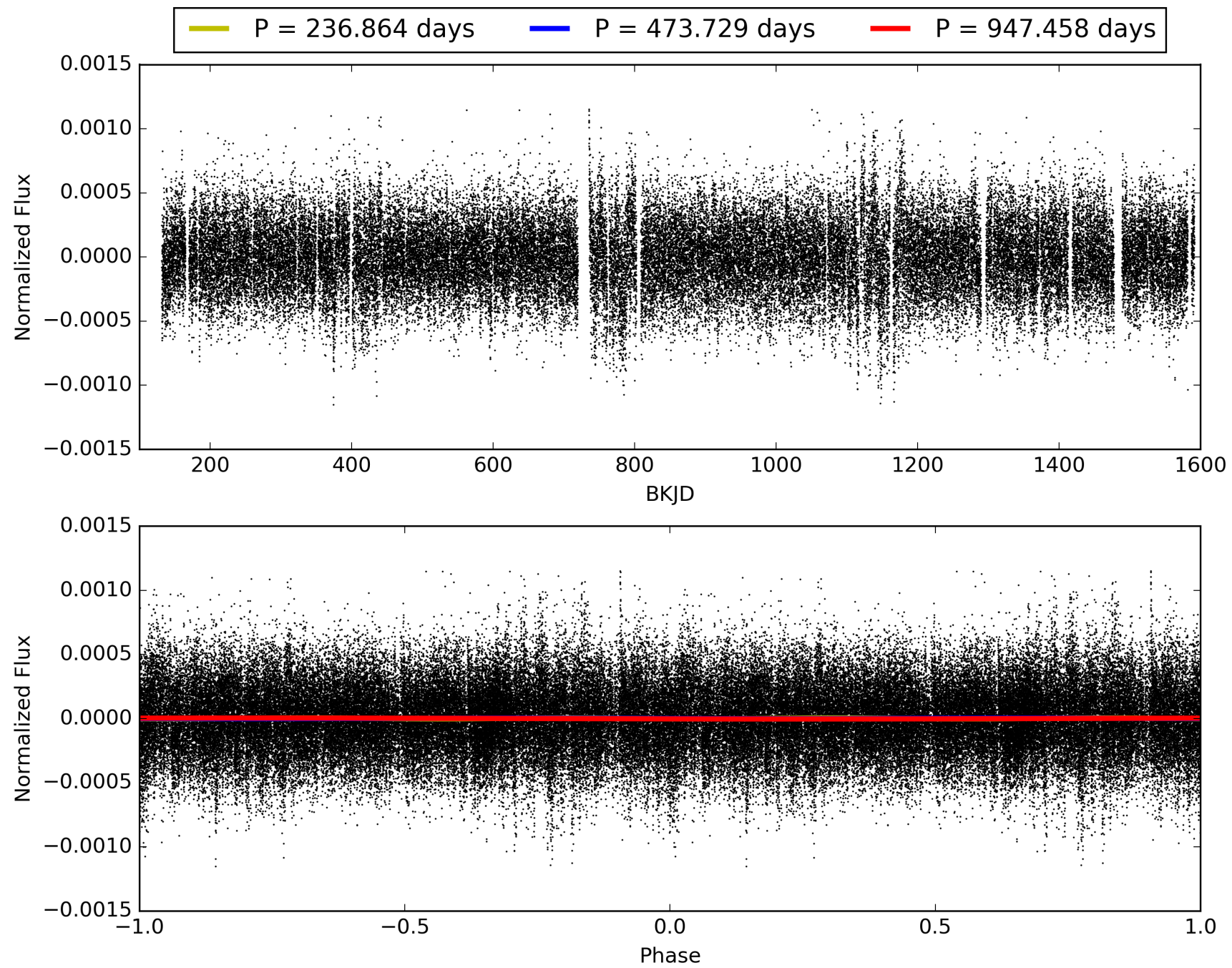
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:01:13 Z

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

TCE 012266450-01, PDC Light Curves

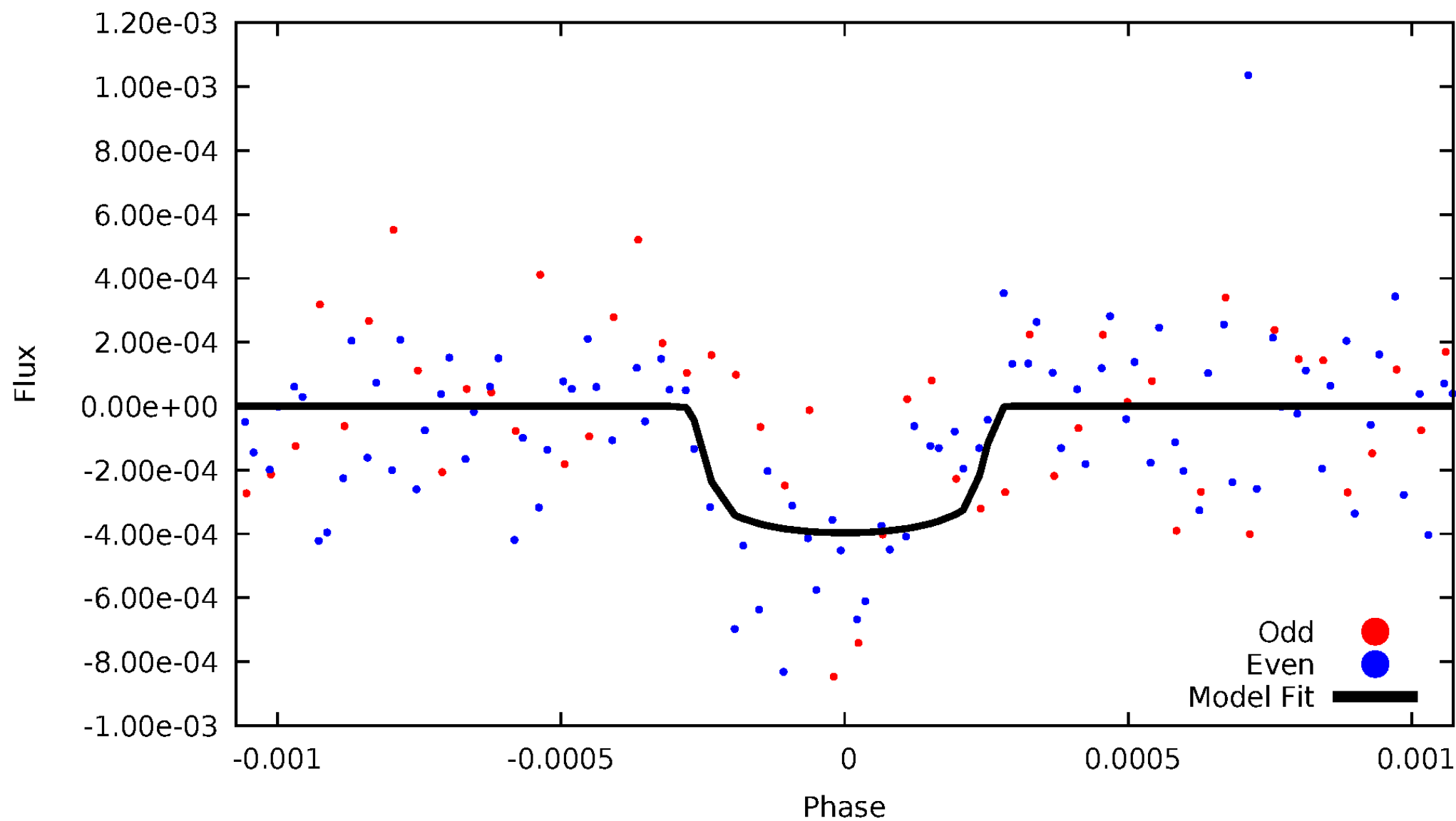


TCE 012266450-01



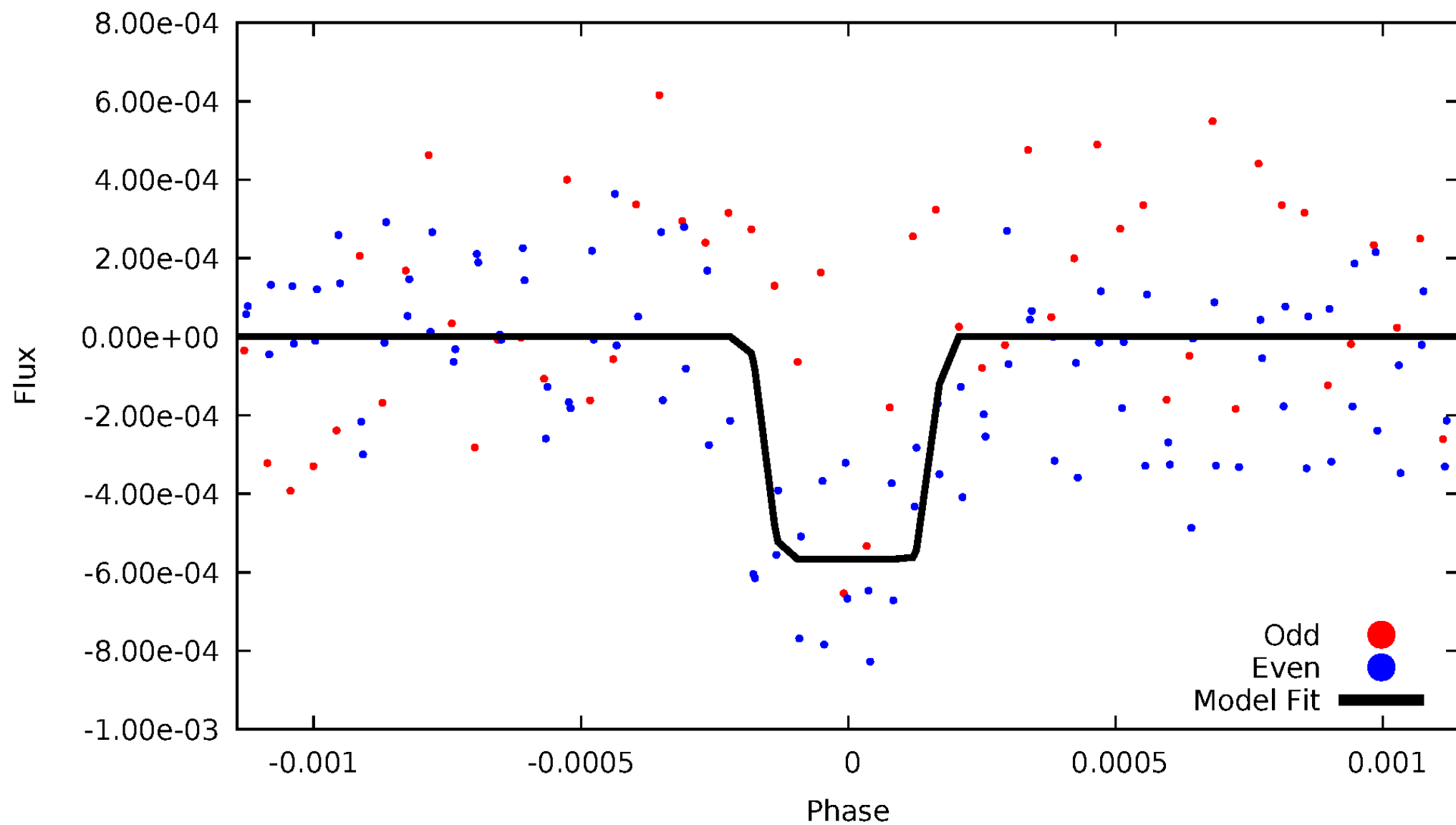
DV Odd/Even

TCE 012266450-01



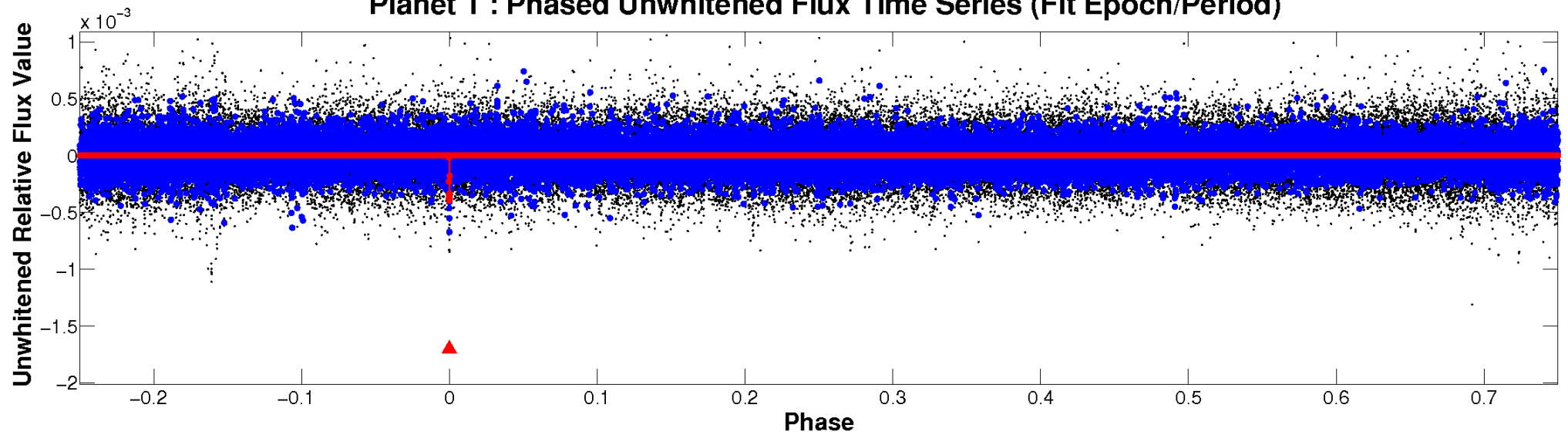
ALT Odd/Even

TCE 012266450-01

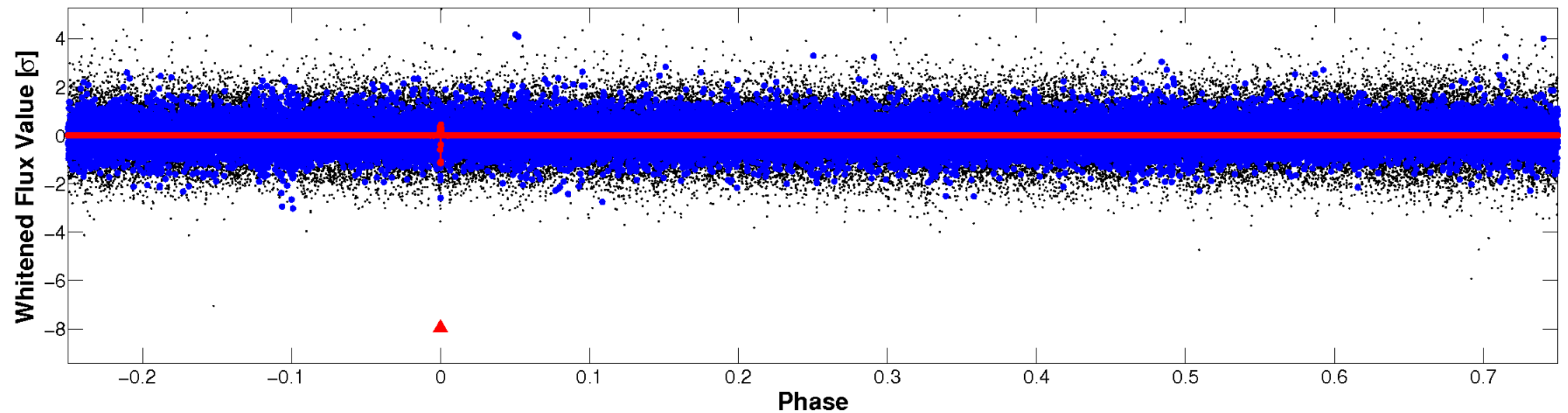


Non-Whitened Vs. Whitened Light Curve

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

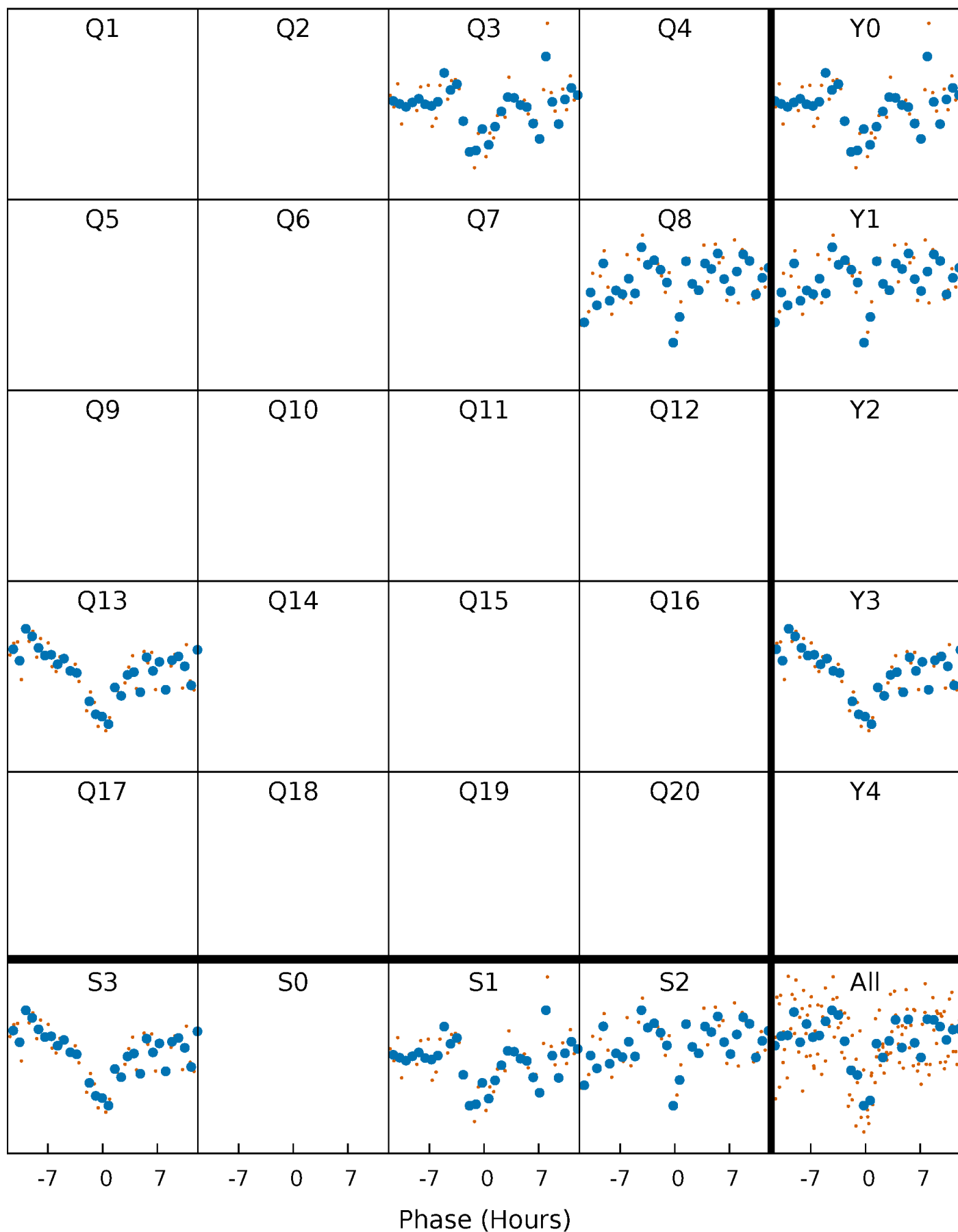


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



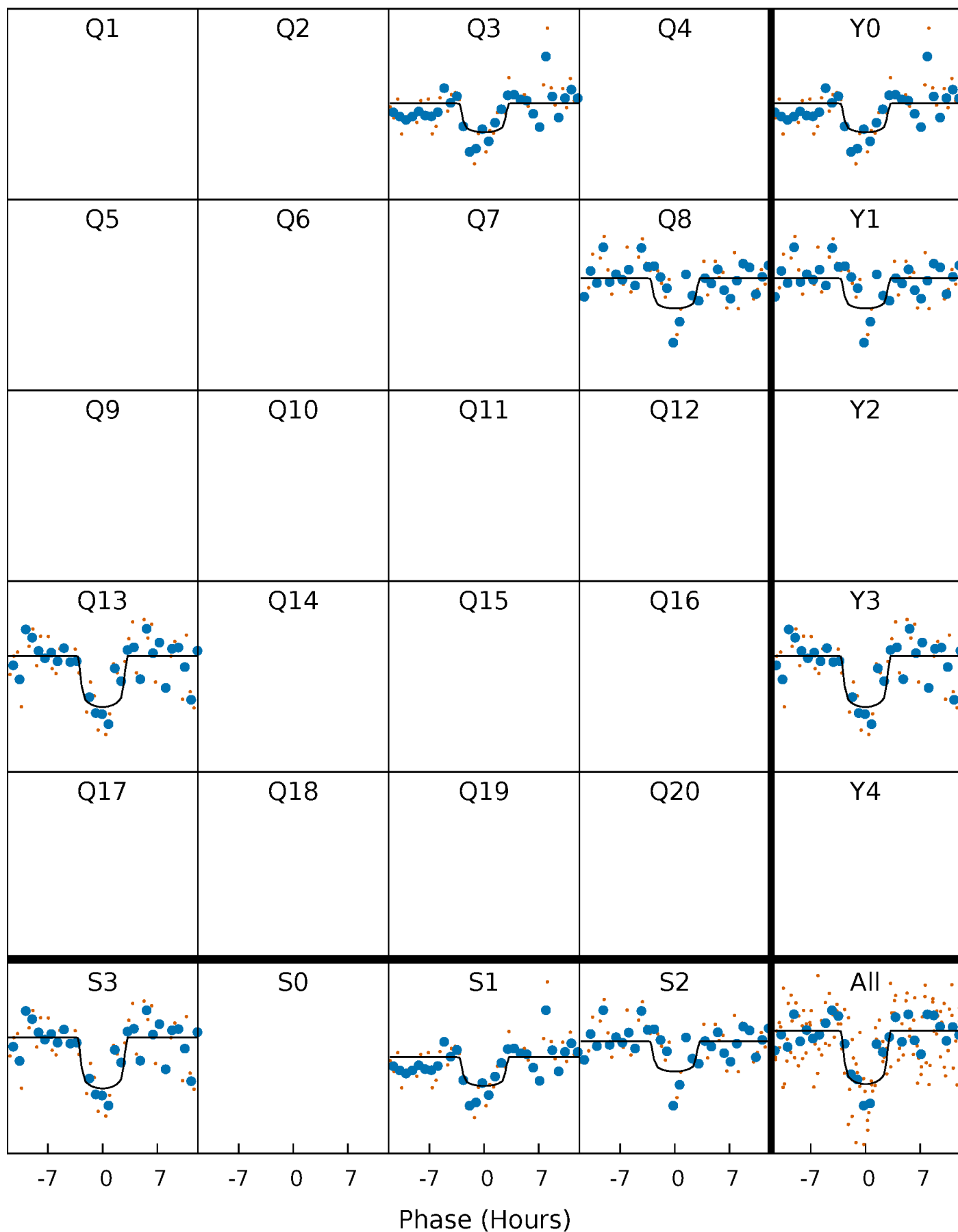
PDC Quarter-Phased Transit Curves

TCE 012266450-01 P=473.728881 Days $T_0=306.311384$ (BKJD)



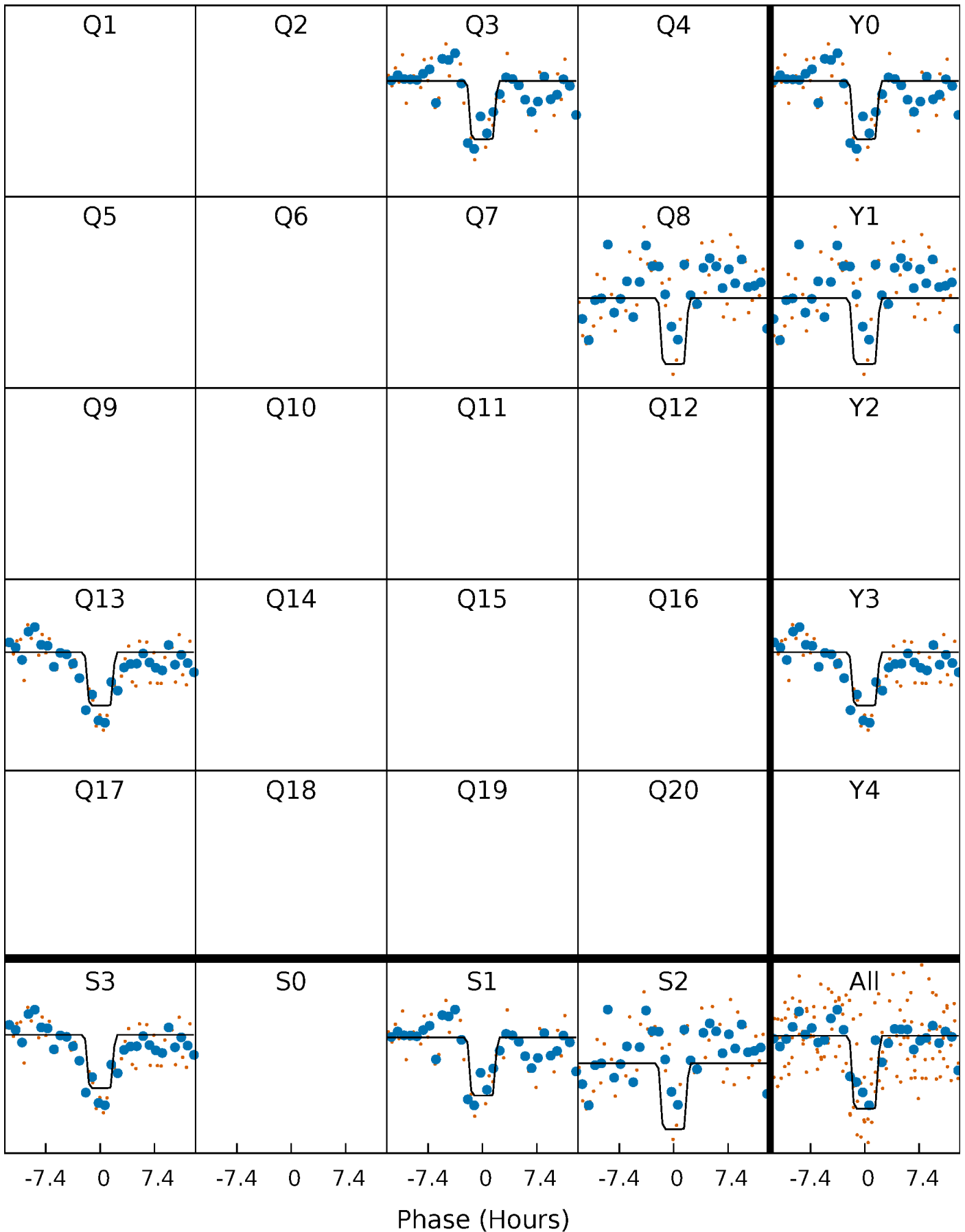
DV Quarter-Phased Transit Curves

TCE 012266450-01 P=473.728881 Days $T_0=306.311384$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

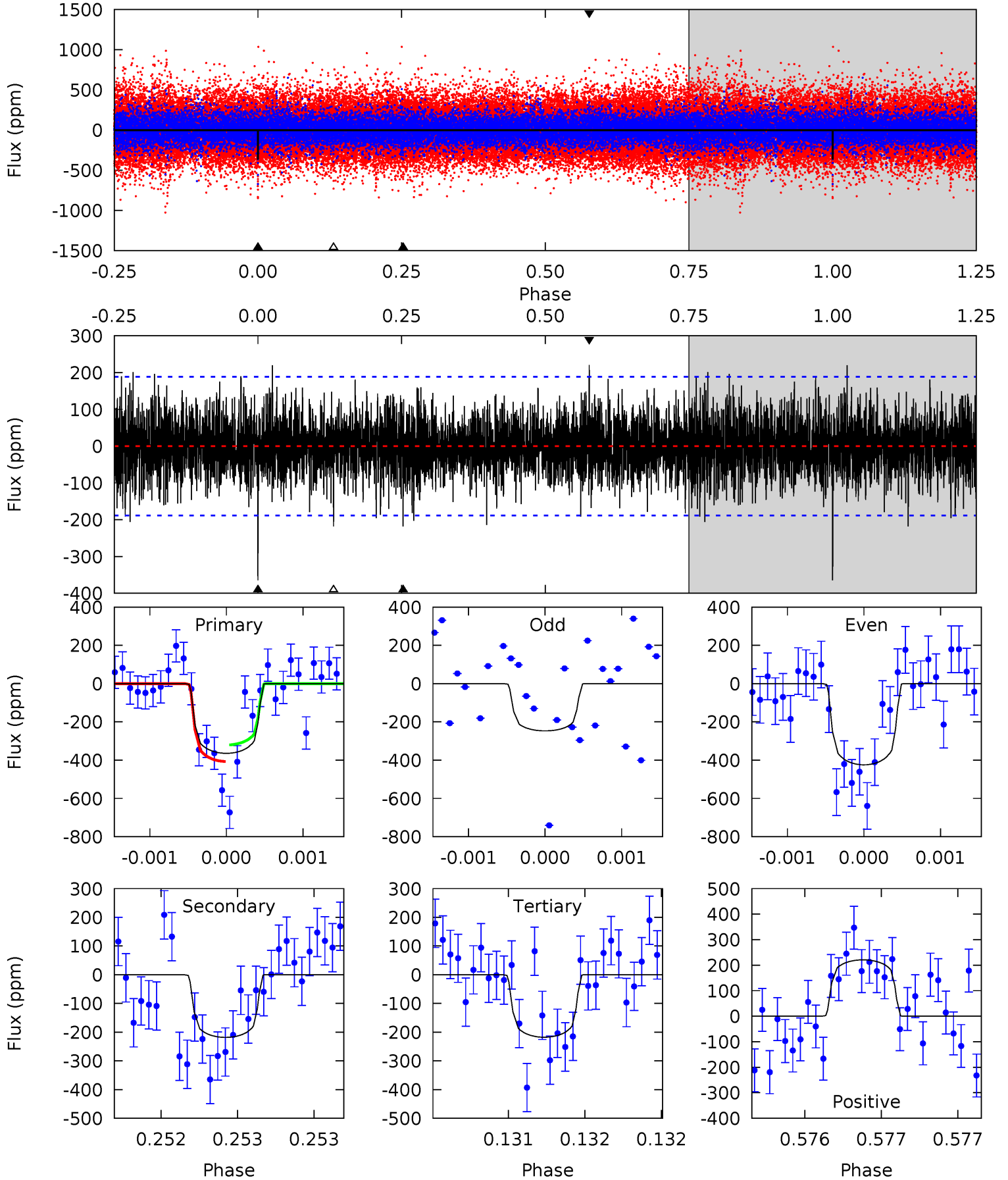
TCE 012266450-01 P=473.731655 Days $T_0=306.303758$ (BKJD)



DV Model-Shift Uniqueness Test

012266450-01, P = 473.728881 Days, E = 306.311384 Days

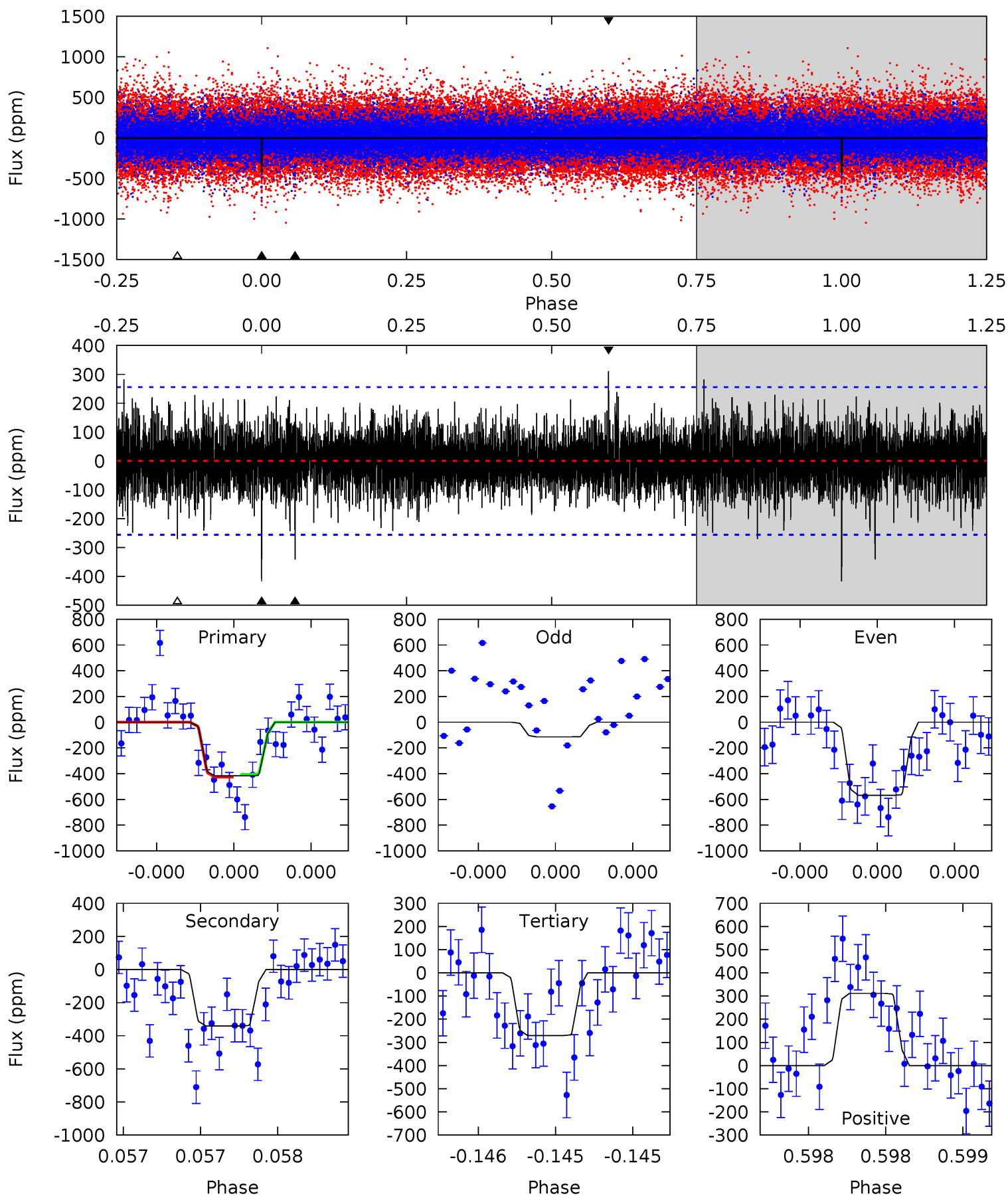
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	6.42	6.40	6.49	5.55	3.44	1.73	4.31	4.21	0.02	-0.08	2.49	1.00	0.38	1.28



Alt Model-Shift Uniqueness Test

012266450-01, P = 473.731655 Days, E = 306.303758 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.16	7.48	5.94	6.84	5.62	3.55	1.47	3.22	2.32	1.54	0.64	4.62	0.81	0.43	0.22



Stellar Parameters For KIC 012266450

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6875^{+167}_{-262}	$4.376^{+0.054}_{-0.202}$	$-0.340^{+0.250}_{-0.350}$	$1.168^{+0.382}_{-0.127}$	$1.199^{+0.181}_{-0.148}$	$1.058^{+0.295}_{-0.550}$
	+2%/-4%	+1%/-5%	+74%/-103%	+33%/-11%	+15%/-12%	+28%/-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 012266450-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-218 ± 34	$2.77^{+0.98}_{-0.89}$	416^{+27}_{-23}	5775^{+1248}_{-741}	25065^{+28875}_{-11958}
Alt.	-341 ± 46	$3.22^{+1.01}_{-0.96}$	413^{+31}_{-20}	5933^{+1261}_{-668}	28300^{+30209}_{-12525}

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 $A_{obs} \gg 1.0$

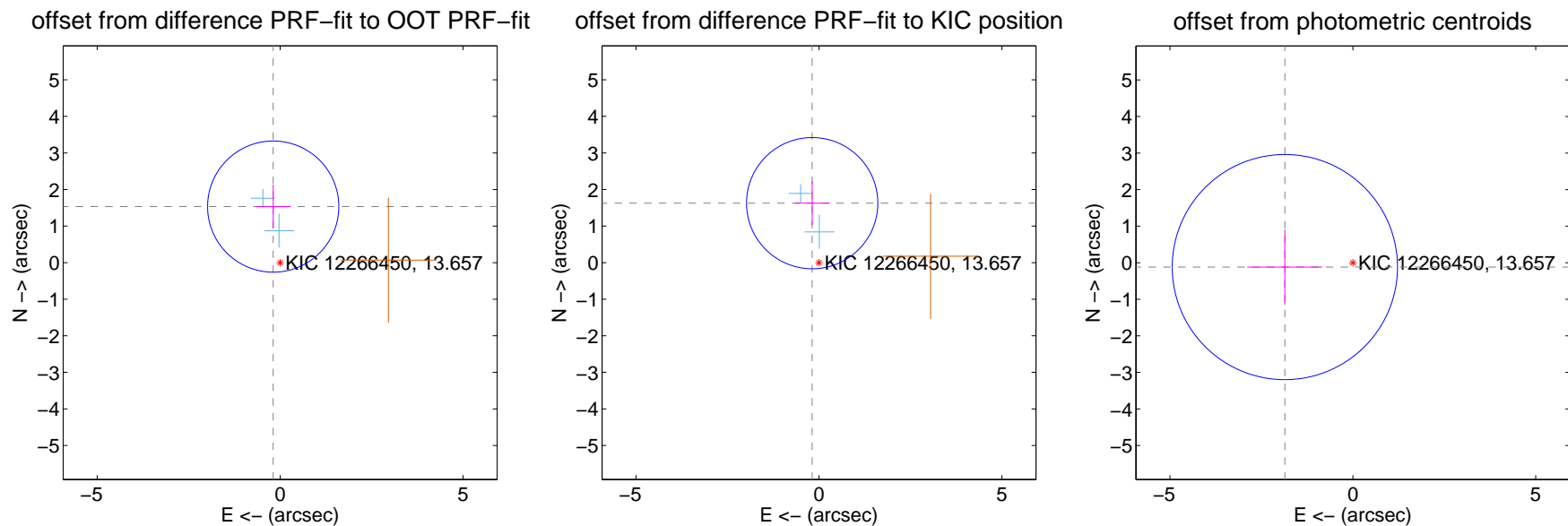
DV Centroid Data

Supplemental centroid analysis for 012266450-01. Kepler magnitude: 13.66. Transit SNR 6.30

There are 2 quarters with good PRF difference image offsets

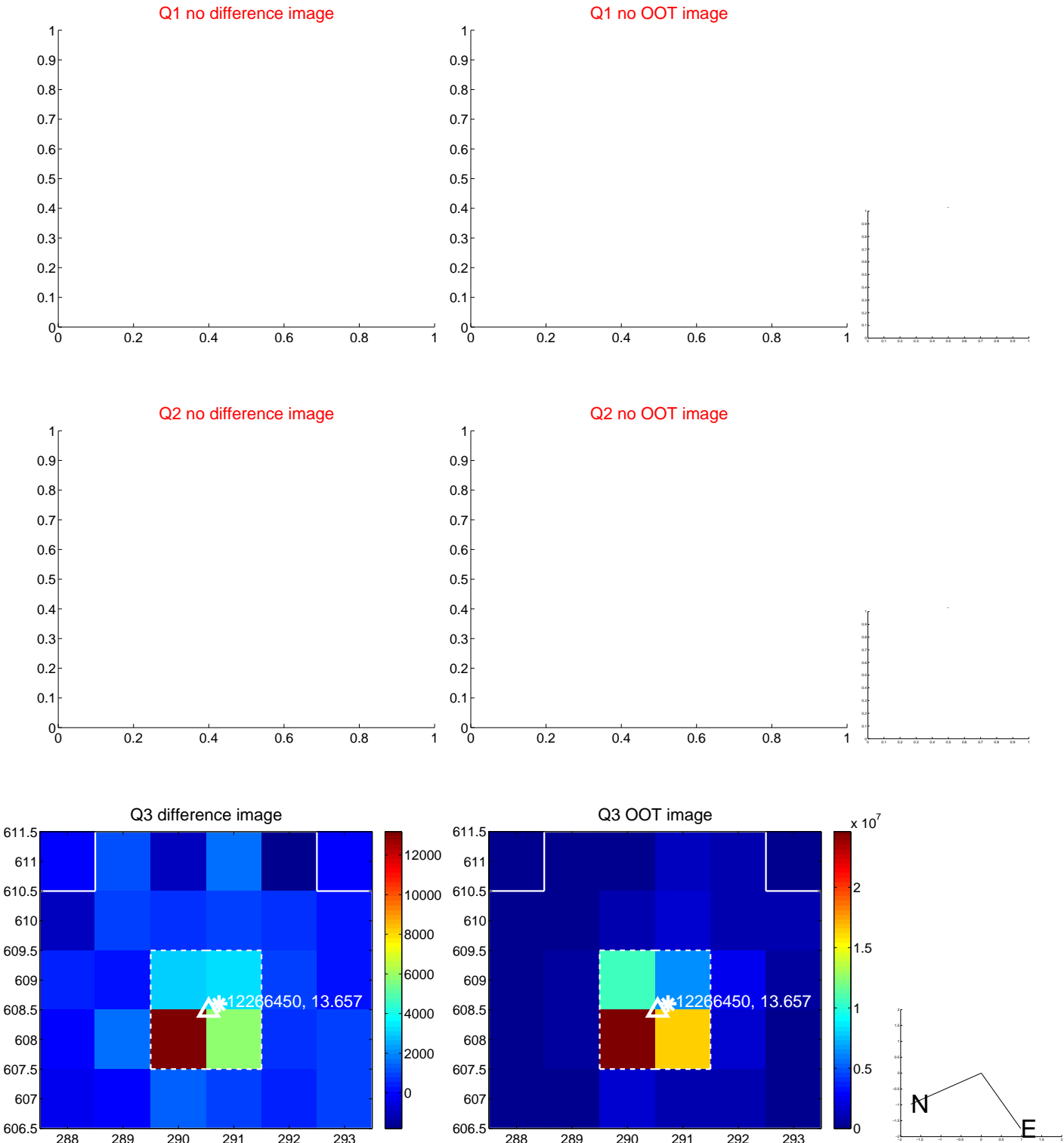
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.544 ± 0.598	2.58	0.189 ± 0.474	1.533 ± 0.600
PRF-fit source offset from KIC position	1.638 ± 0.598	2.74	0.186 ± 0.474	1.627 ± 0.600
photometric centroid source offset	1.86 ± 1.03	1.81	1.86 ± 1.03	-0.12 ± 1.03

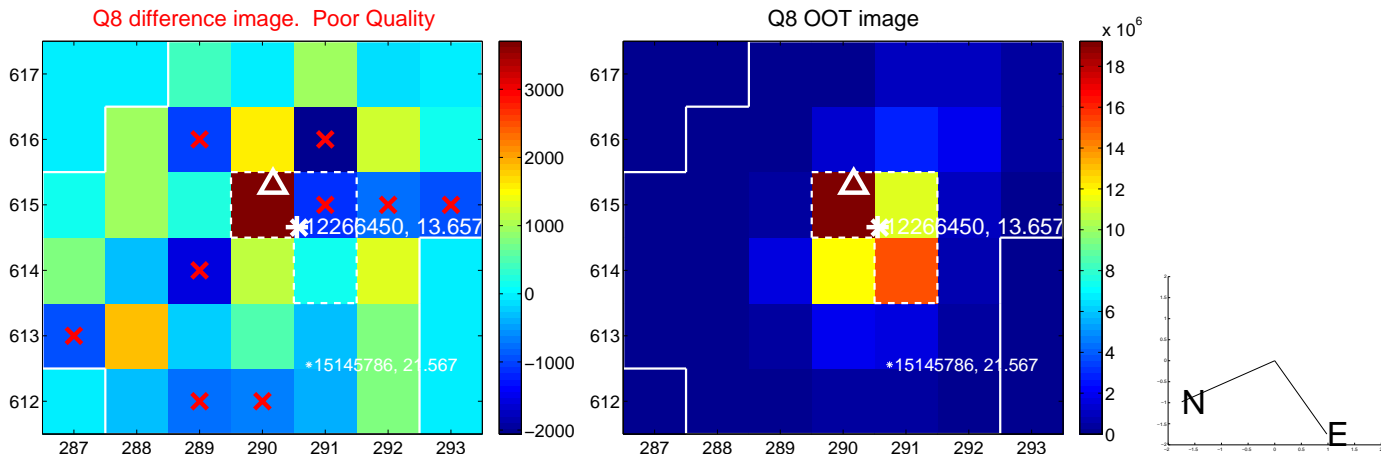
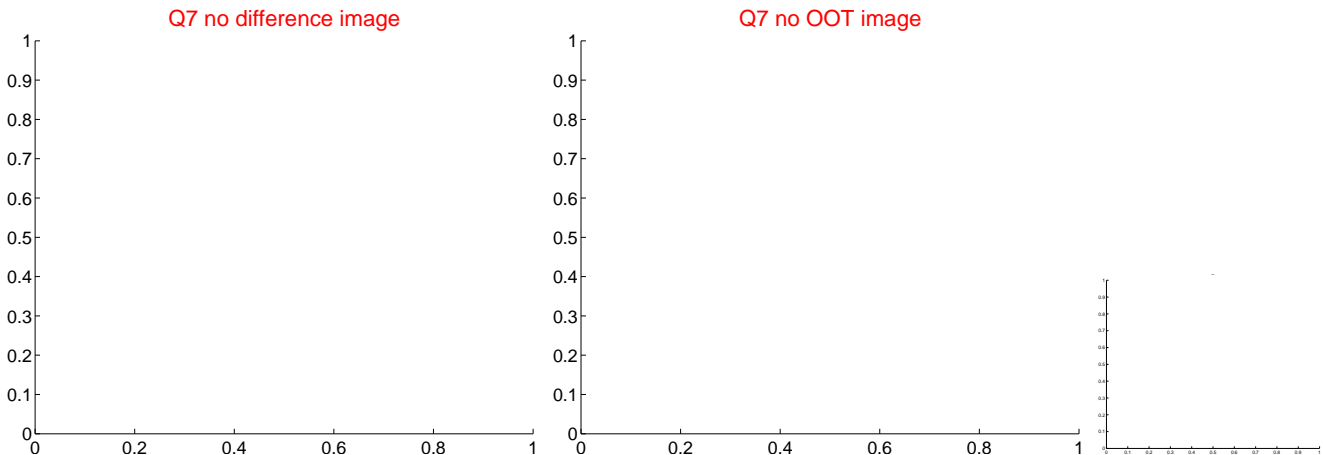
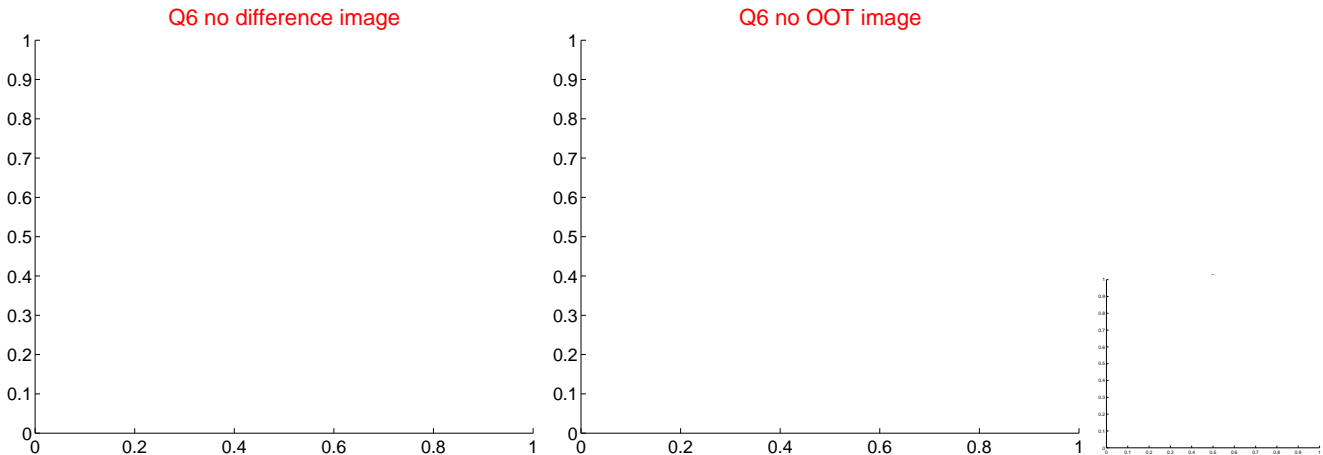
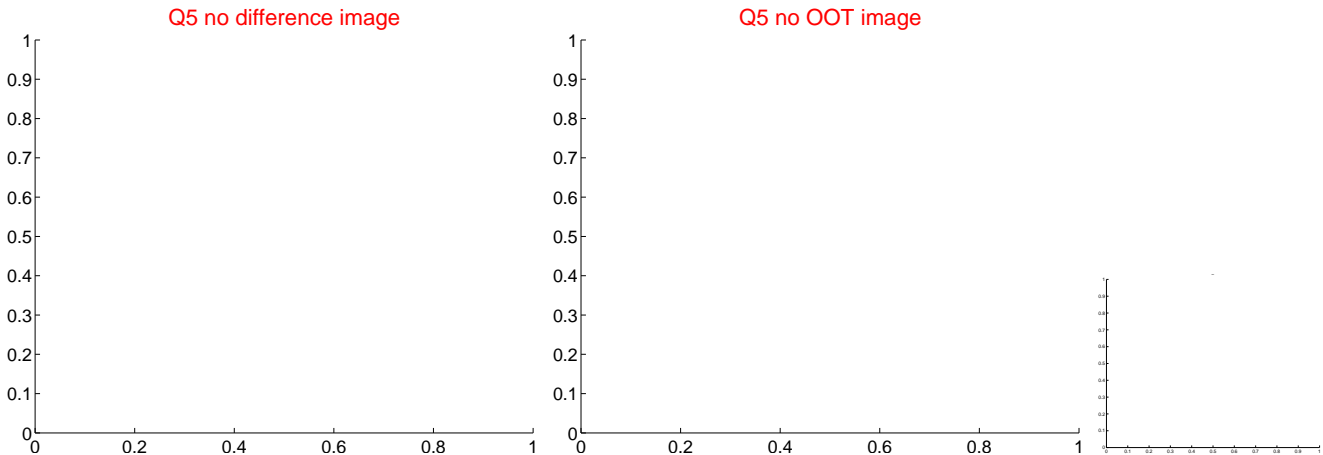


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



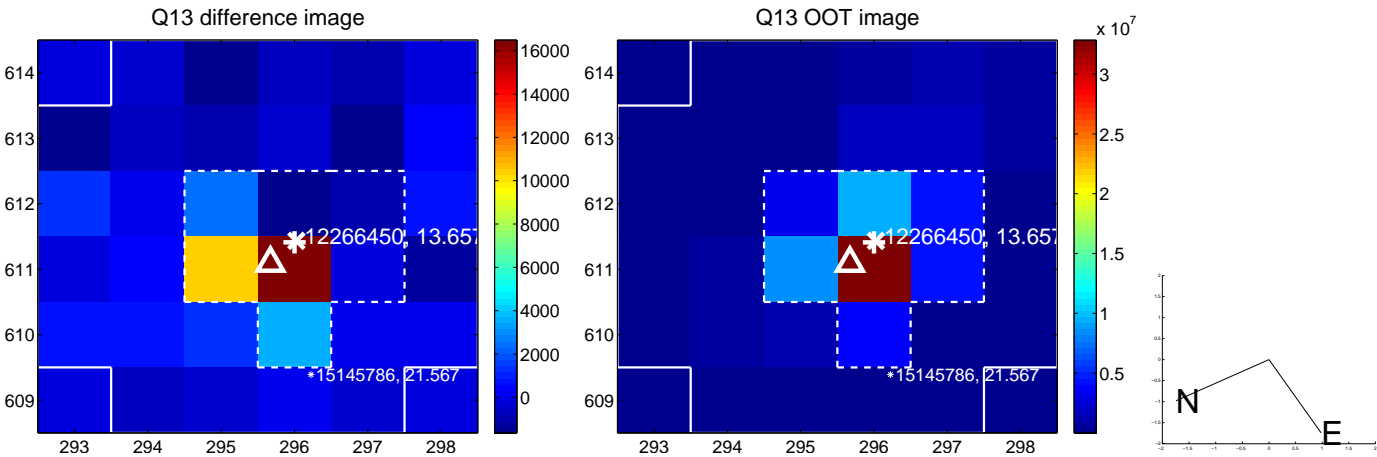
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



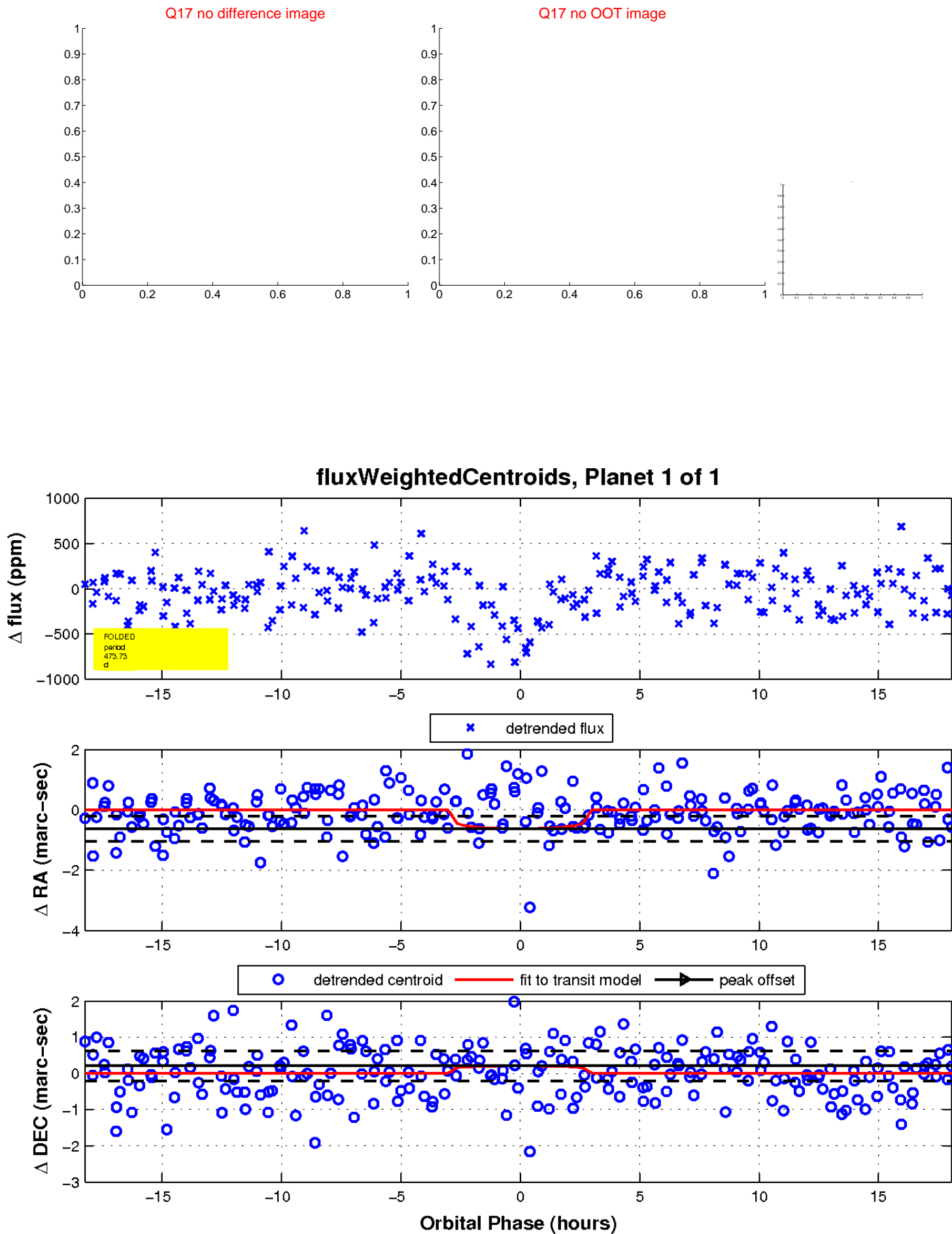
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

