

KIC 007677313

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})
007677313-01	OBS	No	374.270309	259.732096	970.8	47.561	7.6	9.1	0.92	6113	5.44	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677313-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_MARSHALL_SKYE—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

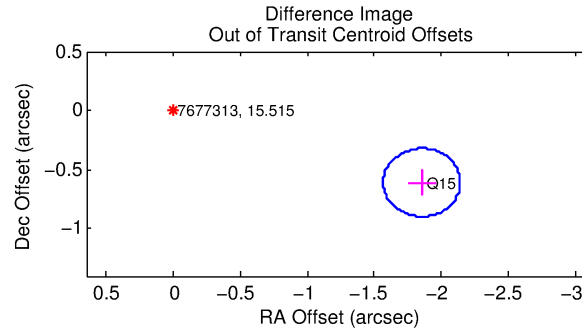
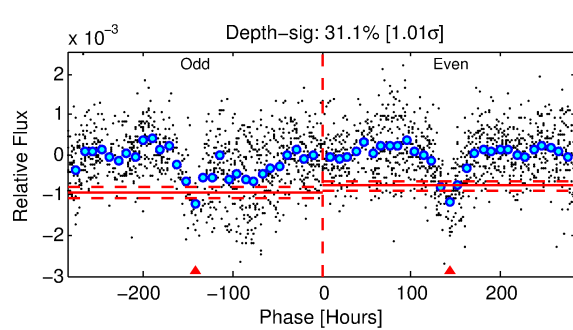
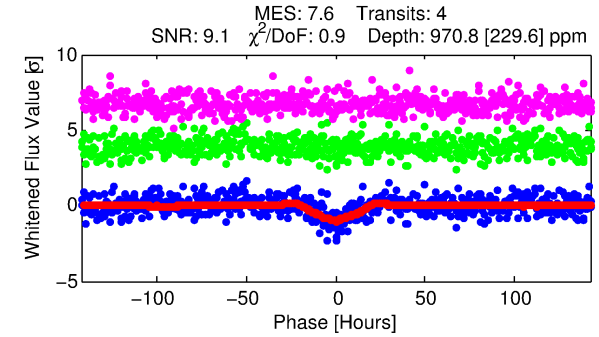
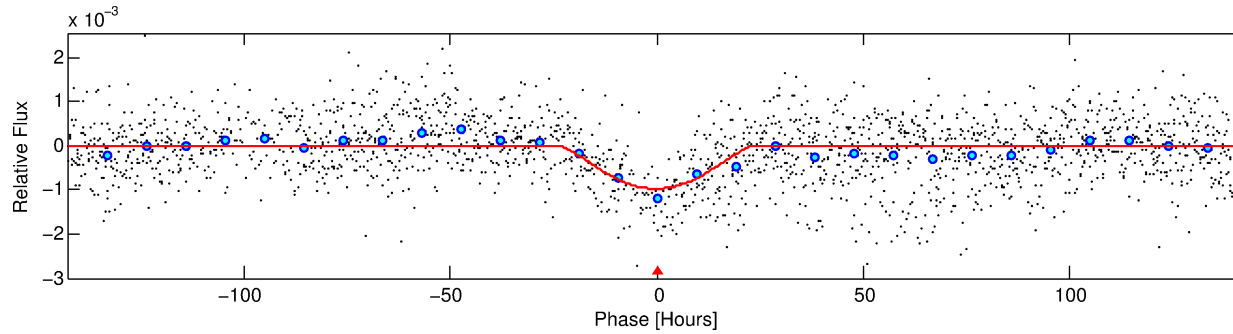
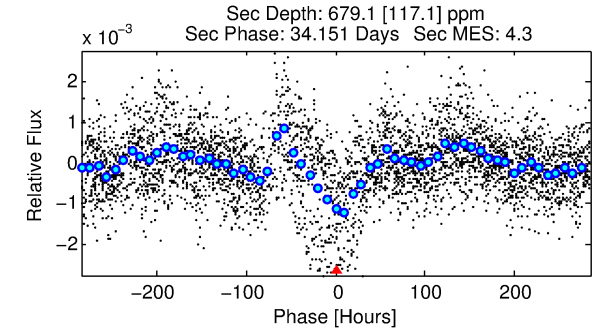
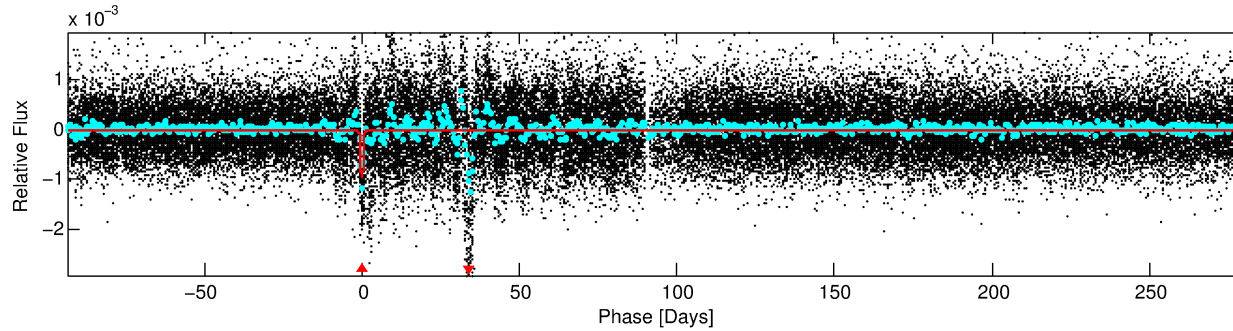
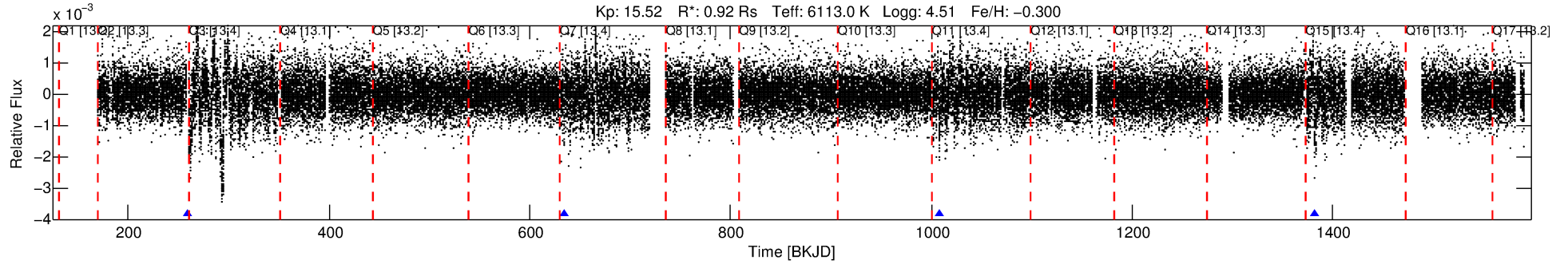
Ephemeris Match Information For 007677313-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007677313-01	7677313	007953701-01	7953701	1:1	2024.4	-1	-509	13.42	15.52	2.12	Col-Anomaly	1	1.84	3.20

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7677313 Candidate: 1 of 1 Period: 374.270 d



DV Fit Results:

Period = 374.27031 [0.05212] d
Epoch = 259.7321 [0.1142] BKJD
Rp/R* = 0.0544 [0.1435]
a/R* = 20.15 [12.46]
b = 1.00 [0.20]
Seff = 1.02 [0.45]
Teq = 256 [28] K
Rp = 5.44 [14.48] Re
a = 1.0156 [0.2879] AU
Ag = 13002.52 [68858.75] [0.19σ]
Teff = 4231 [5586] K [0.71σ]

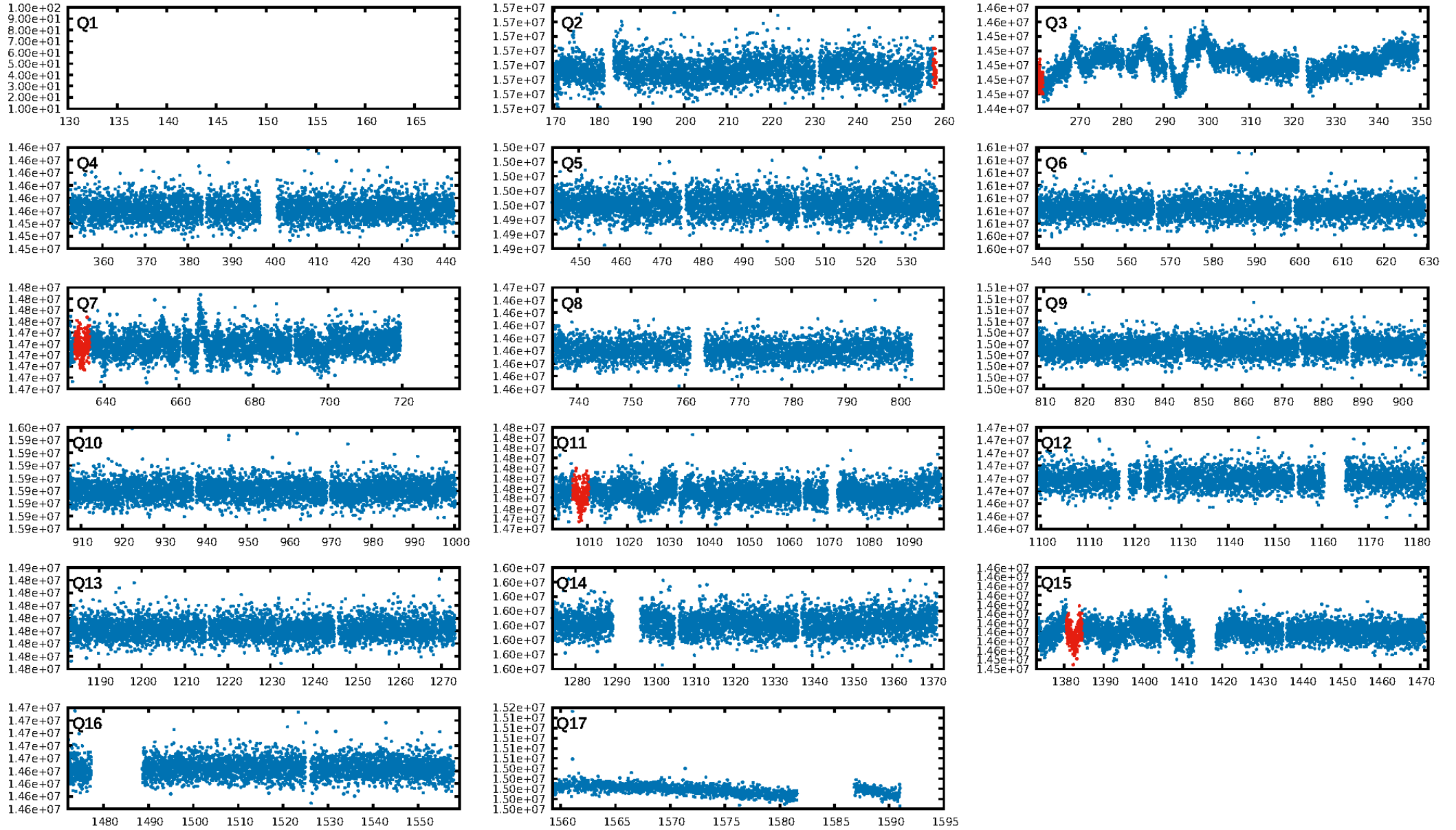
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.5%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.16e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.06034
Centroid-sig: 0.0%
Centroid-so: 3.989 arcsec [1.96σ]
OotOffset-rm: 1.952 arcsec [20.33σ]
KicOffset-rm: 2.145 arcsec [22.30σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

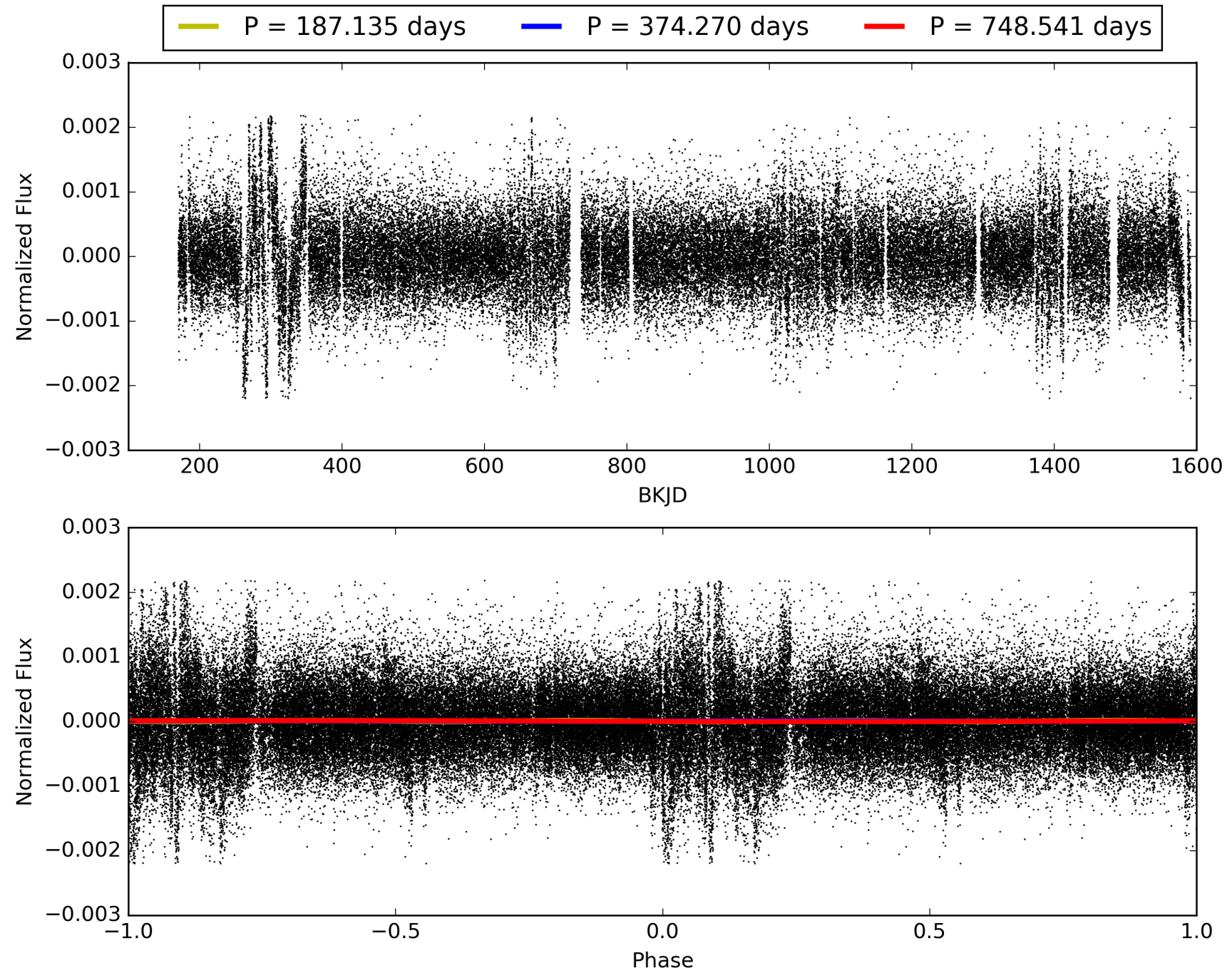
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:57:58 Z

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

TCE 007677313-01, PDC Light Curves

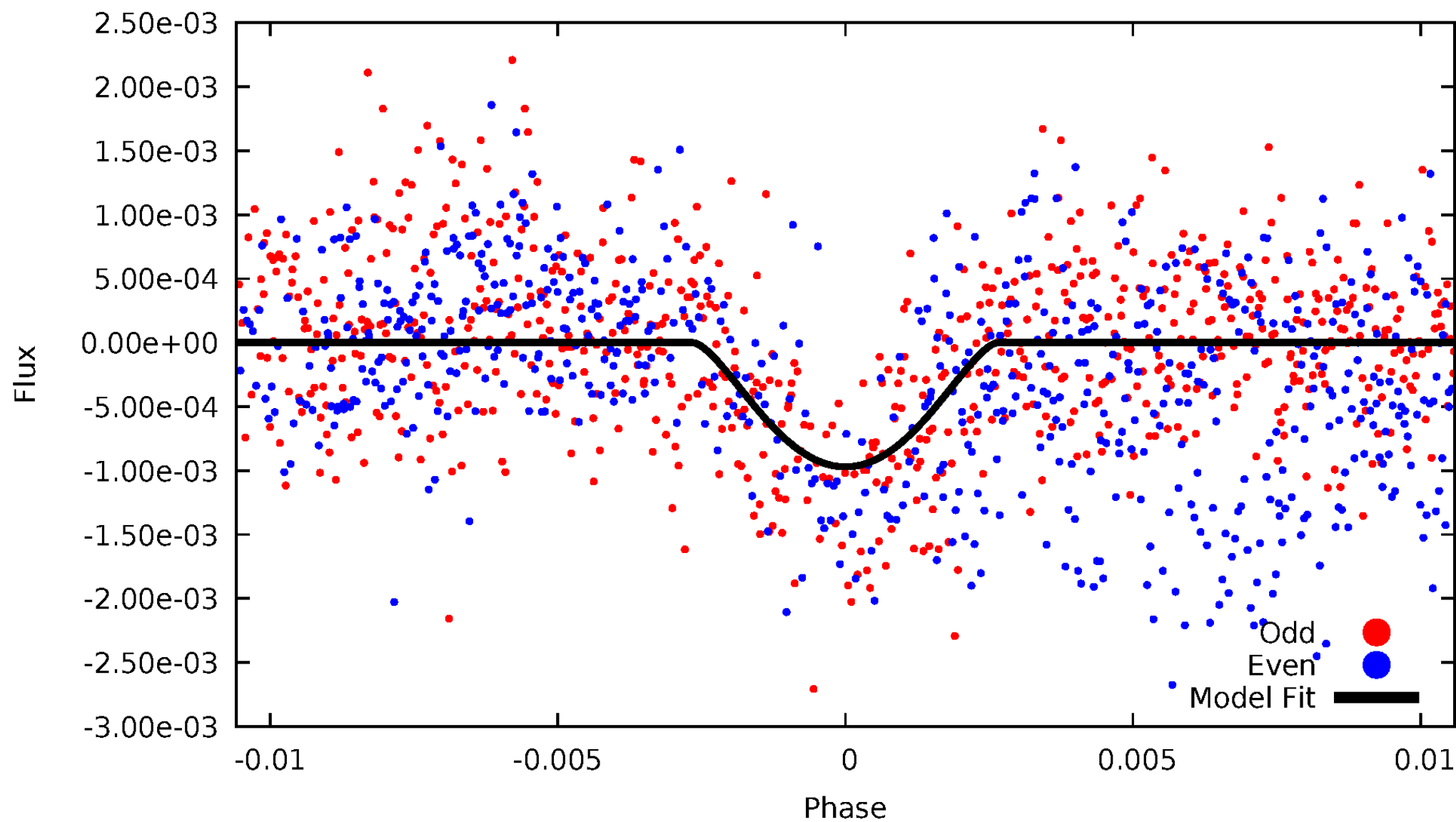


TCE 007677313-01



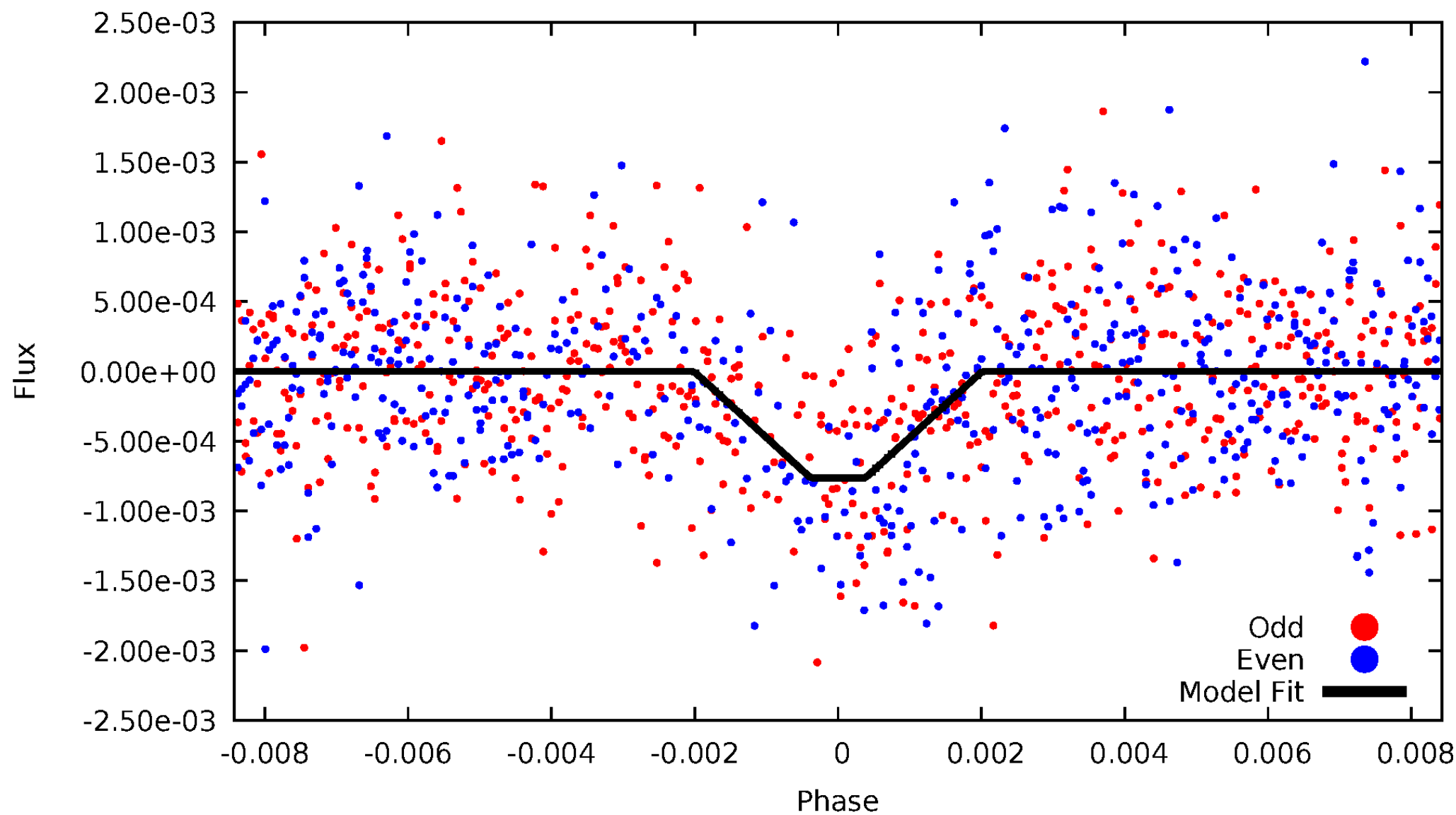
DV Odd/Even

TCE 007677313-01



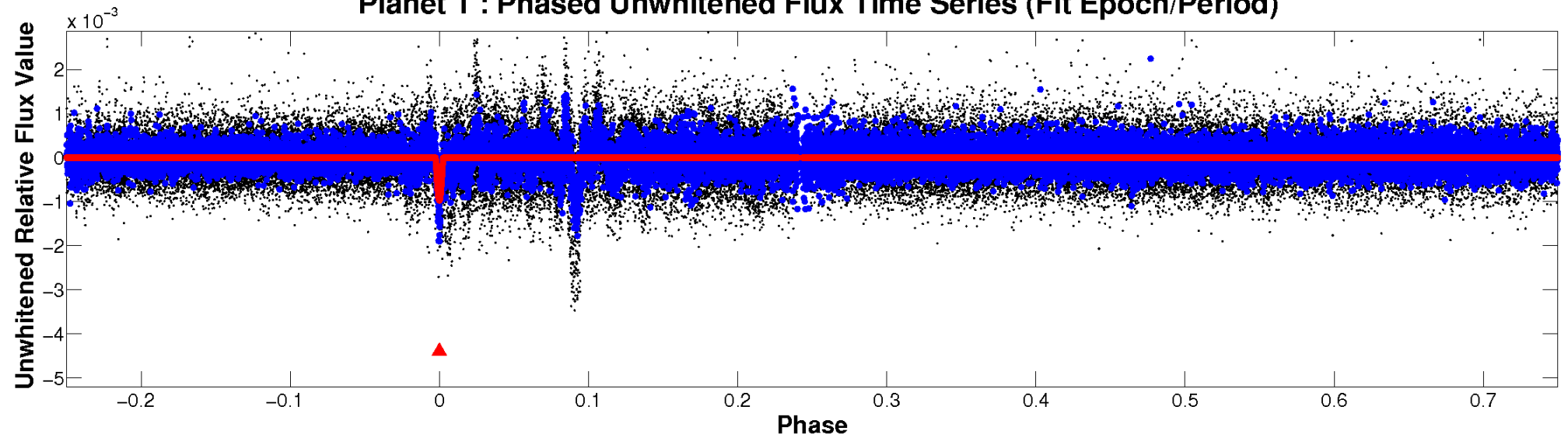
ALT Odd/Even

TCE 007677313-01

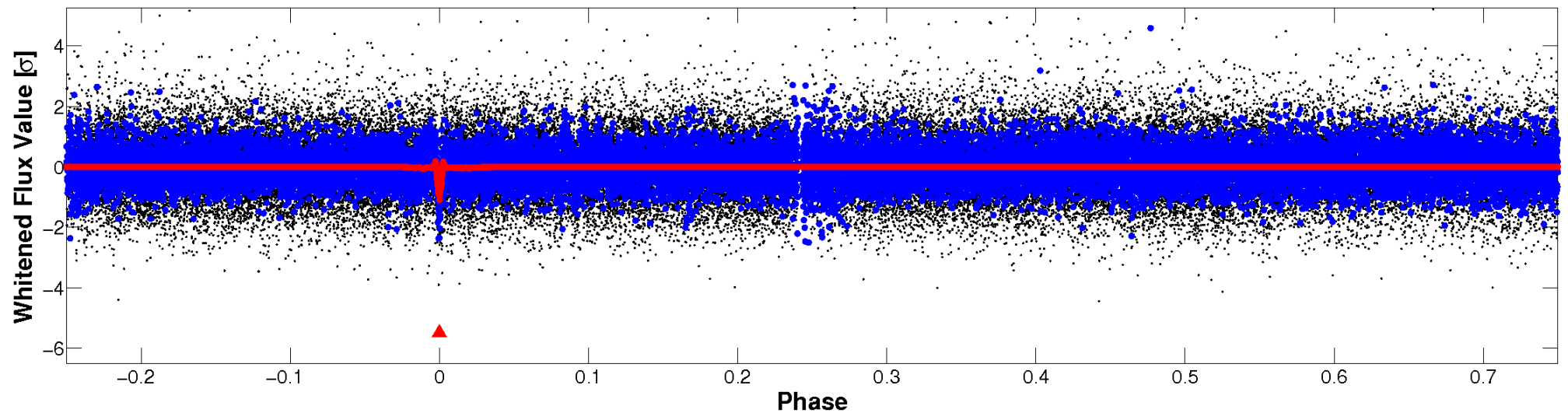


Non-Whitened Vs. Whitened Light Curve

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

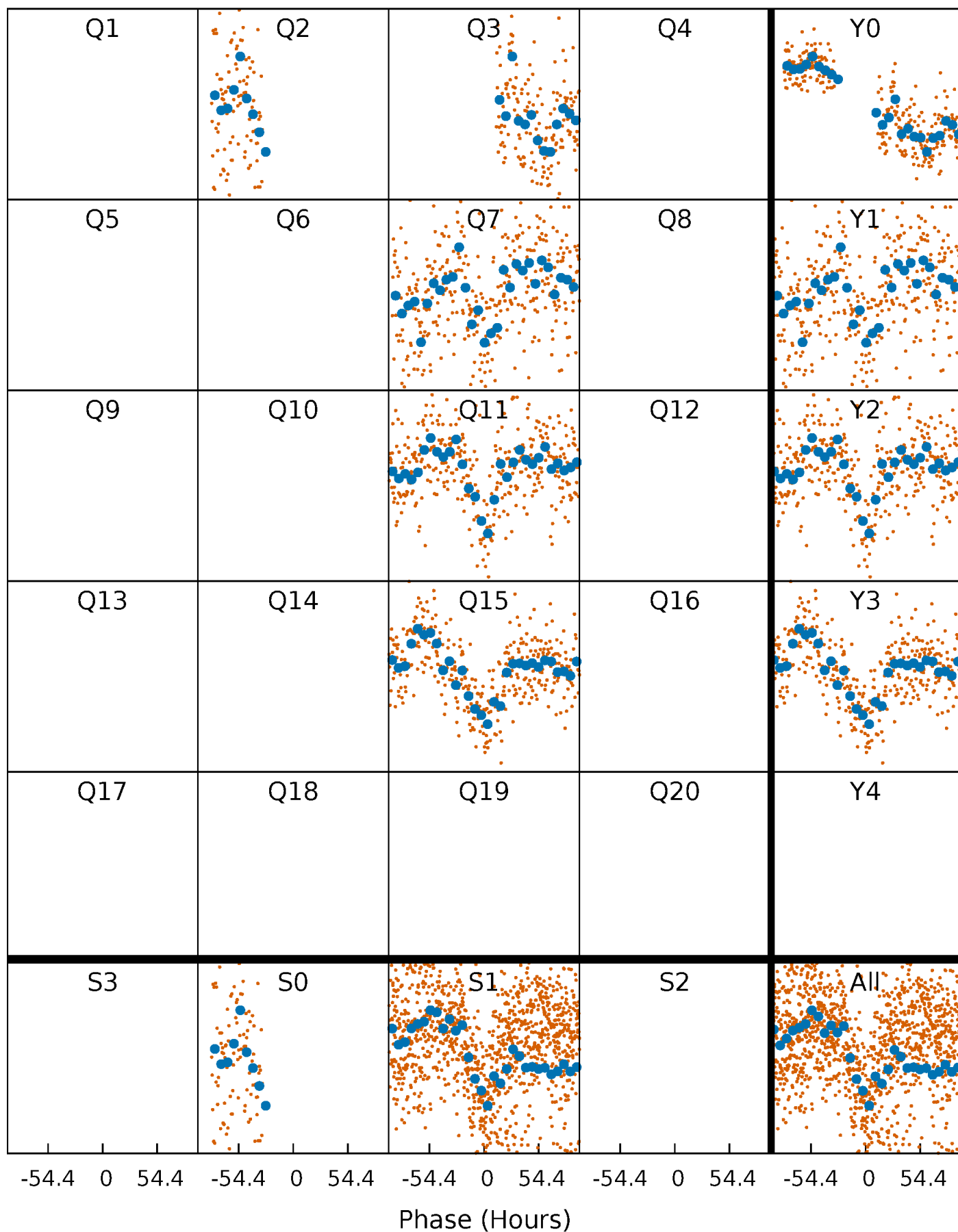


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



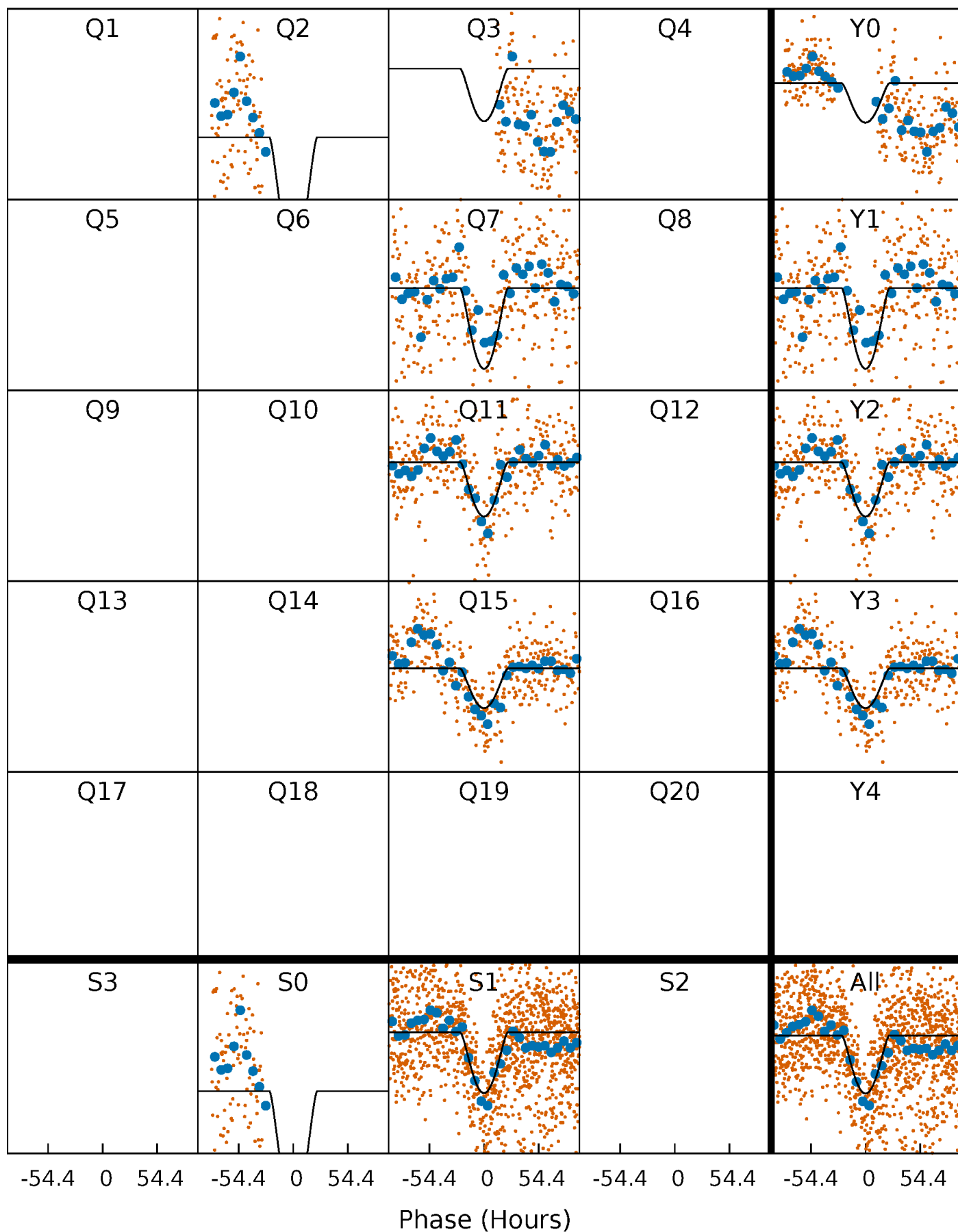
PDC Quarter-Phased Transit Curves

TCE 007677313-01 P=374.270309 Days $T_0=259.732096$ (BKJD)



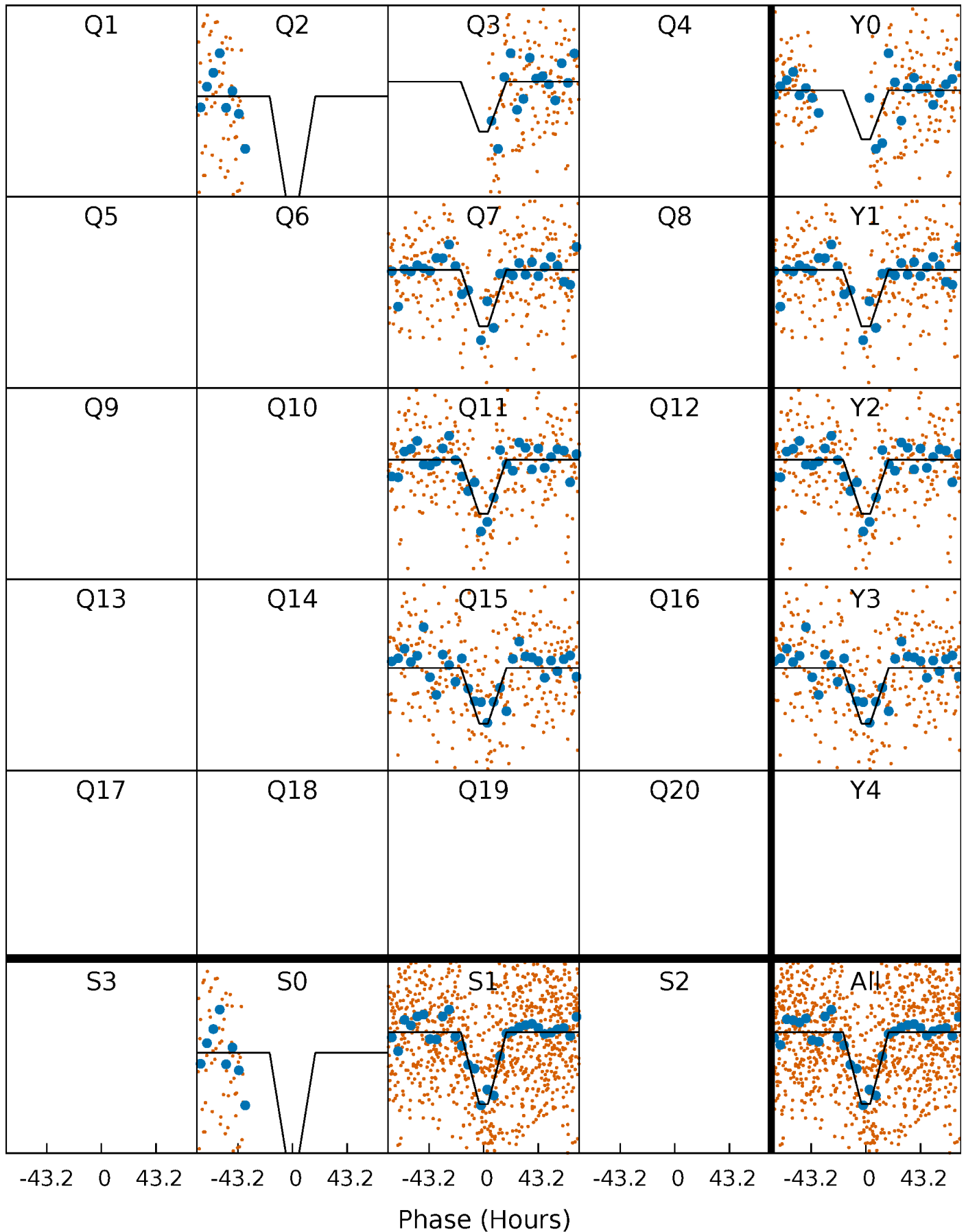
DV Quarter-Phased Transit Curves

TCE 007677313-01 P=374.270309 Days $T_0=259.732096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

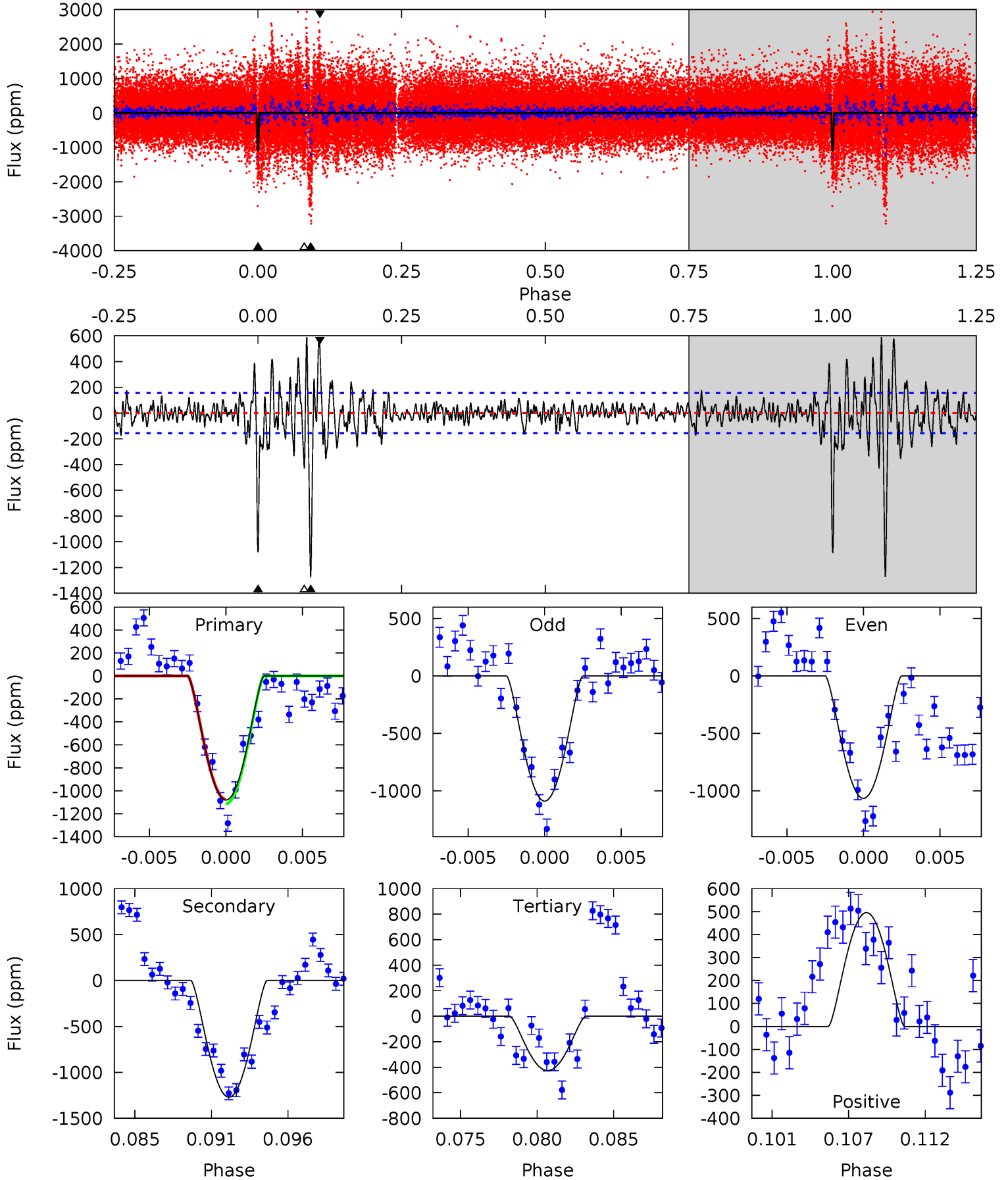
TCE 007677313-01 P=374.118050 Days $T_0=260.089448$ (BKJD)



DV Model-Shift Uniqueness Test

007677313-01, P = 374.270309 Days, E = 259.732096 Days

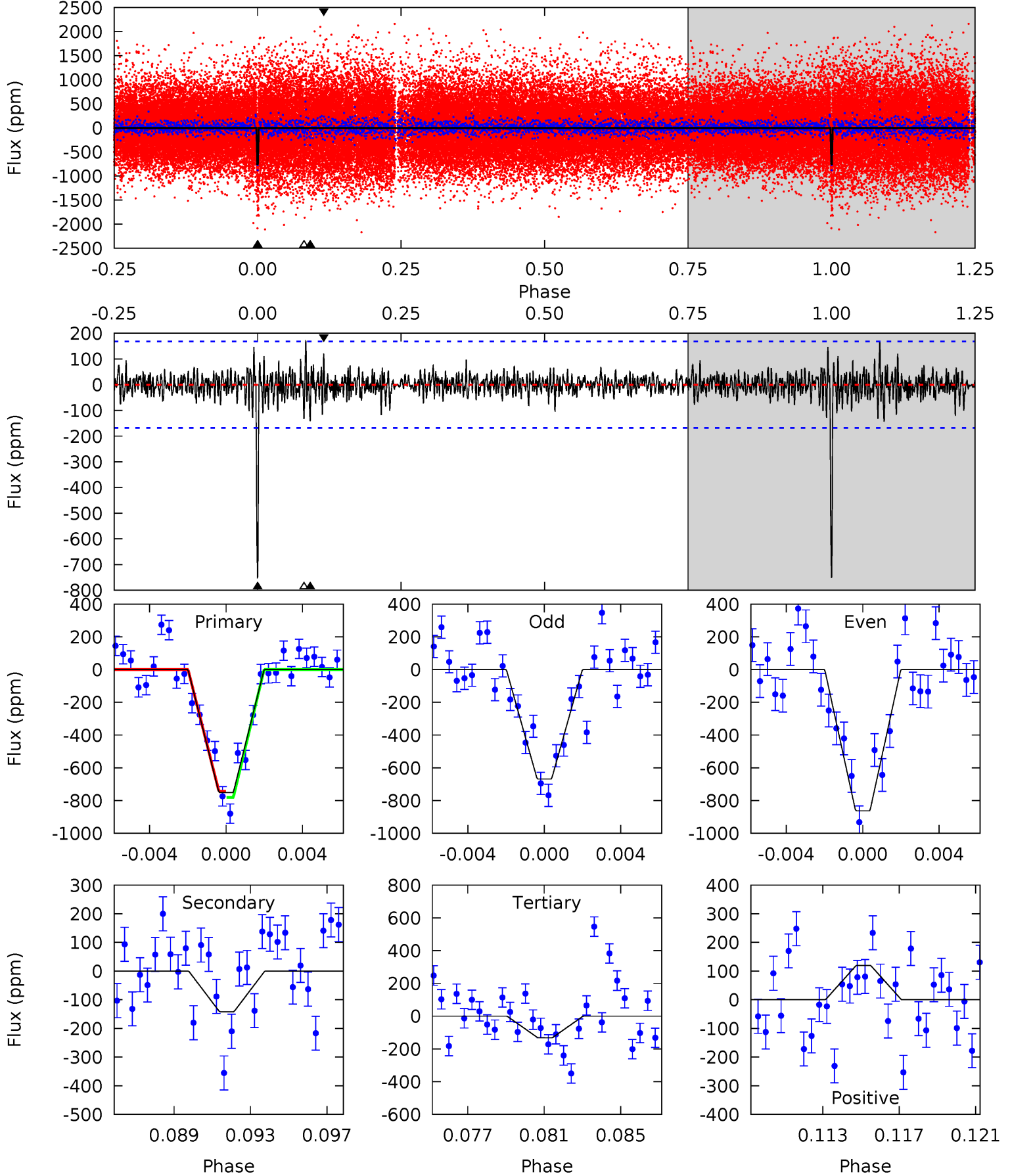
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.6	41.8	14.0	16.3	5.15	2.79	3.42	21.6	19.3	27.8	25.5	0.38	1.01	0.32	0.63



Alt Model-Shift Uniqueness Test

007677313-01, P = 374.118050 Days, E = 260.089448 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	4.09	3.70	5.20	2.88	1.00	19.1	19.5	0.29	0.68	2.97	1.04	0.18	0.58



Stellar Parameters For KIC 007677313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6113^{+183}_{-201}	$4.512^{+0.040}_{-0.229}$	$-0.300^{+0.300}_{-0.300}$	$0.917^{+0.306}_{-0.096}$	$0.997^{+0.124}_{-0.124}$	$1.823^{+0.395}_{-0.988}$
	+3%/-3%	+1%/-5%	+100%/-100%	+33%/-10%	+12%/-12%	+22%/-54%
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 007677313-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1270 ± 30	$12.19^{+11.97}_{-8.12}$	366^{+30}_{-17}	3812^{+2051}_{-739}	4849^{+38466}_{-3643}
Alt.	-142 ± 32	$12.05^{+11.96}_{-8.61}$	367^{+26}_{-16}	2754^{+1147}_{-434}	549^{+5494}_{-421}

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 $A_{obs} \gg 1.0$

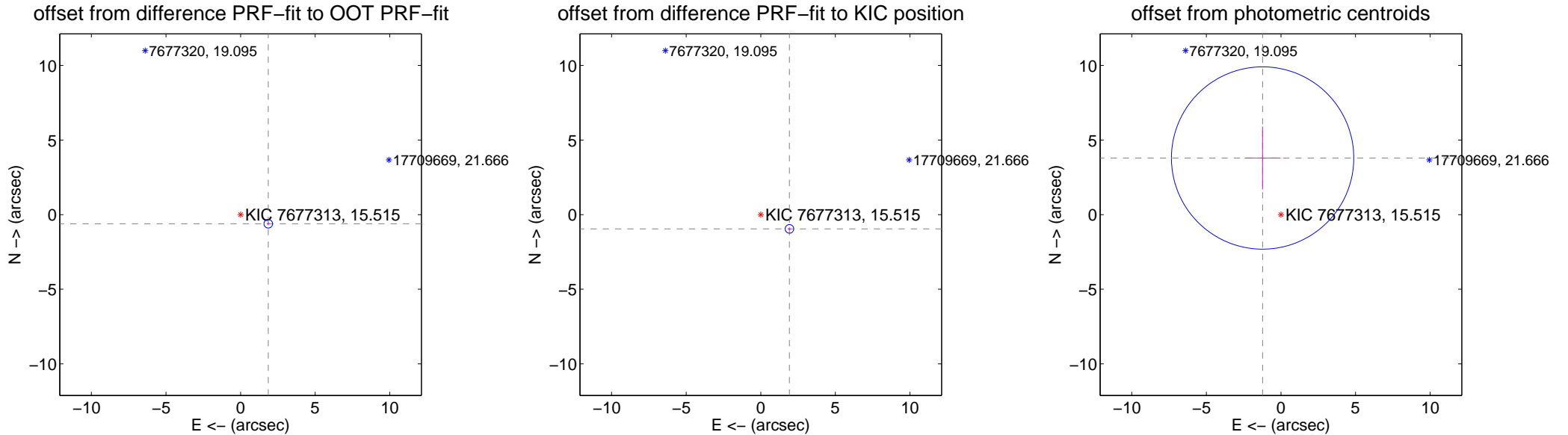
DV Centroid Data

Supplemental centroid analysis for 007677313-01. Kepler magnitude: 15.52. Transit SNR 9.10

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.952 ± 0.096	20.33	-1.854 ± 0.096	-0.610 ± 0.098
PRF-fit source offset from KIC position	2.145 ± 0.096	22.30	-1.921 ± 0.096	-0.955 ± 0.098
photometric centroid source offset	3.99 ± 2.04	1.96	1.23 ± 1.20	3.80 ± 2.10



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.



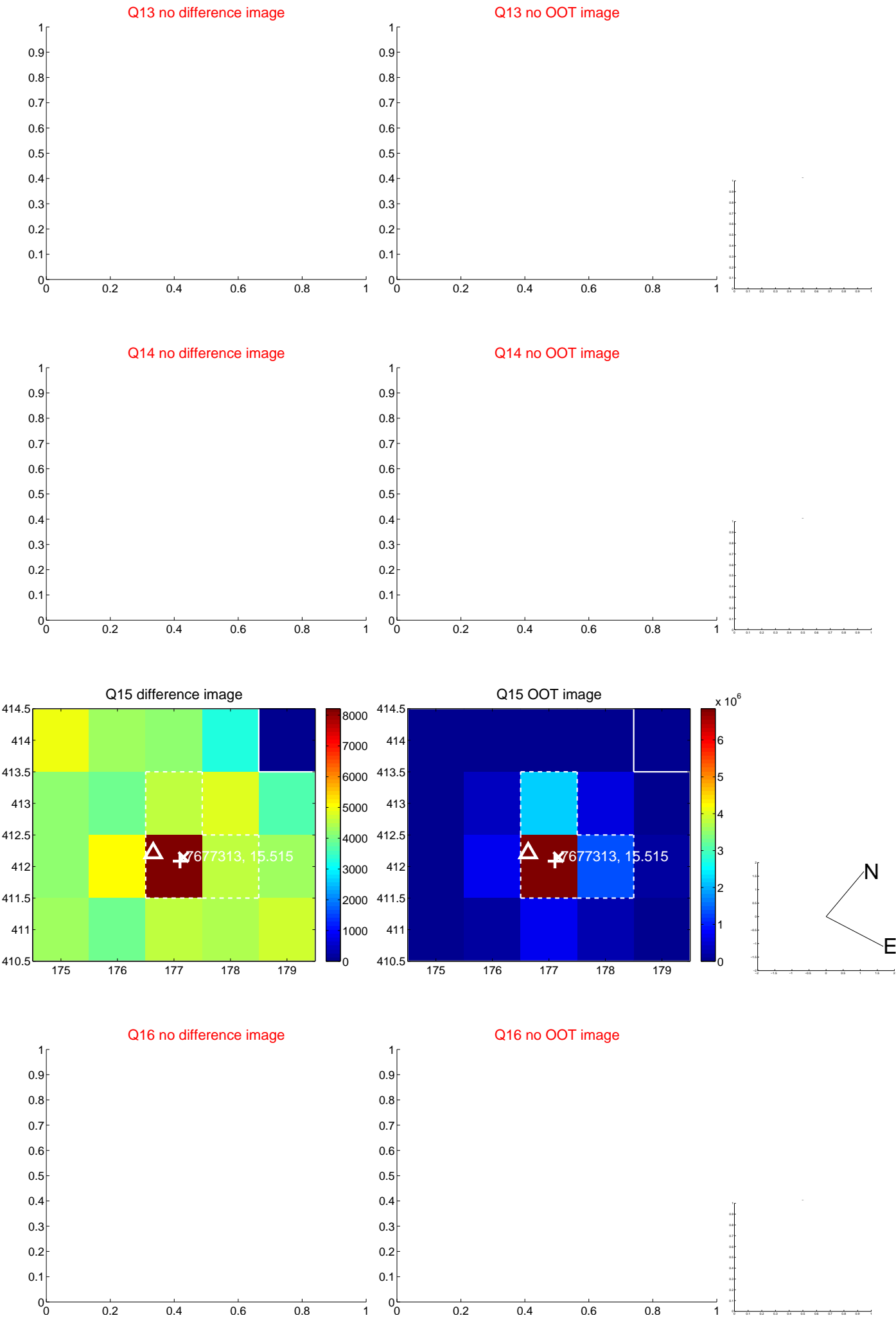
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



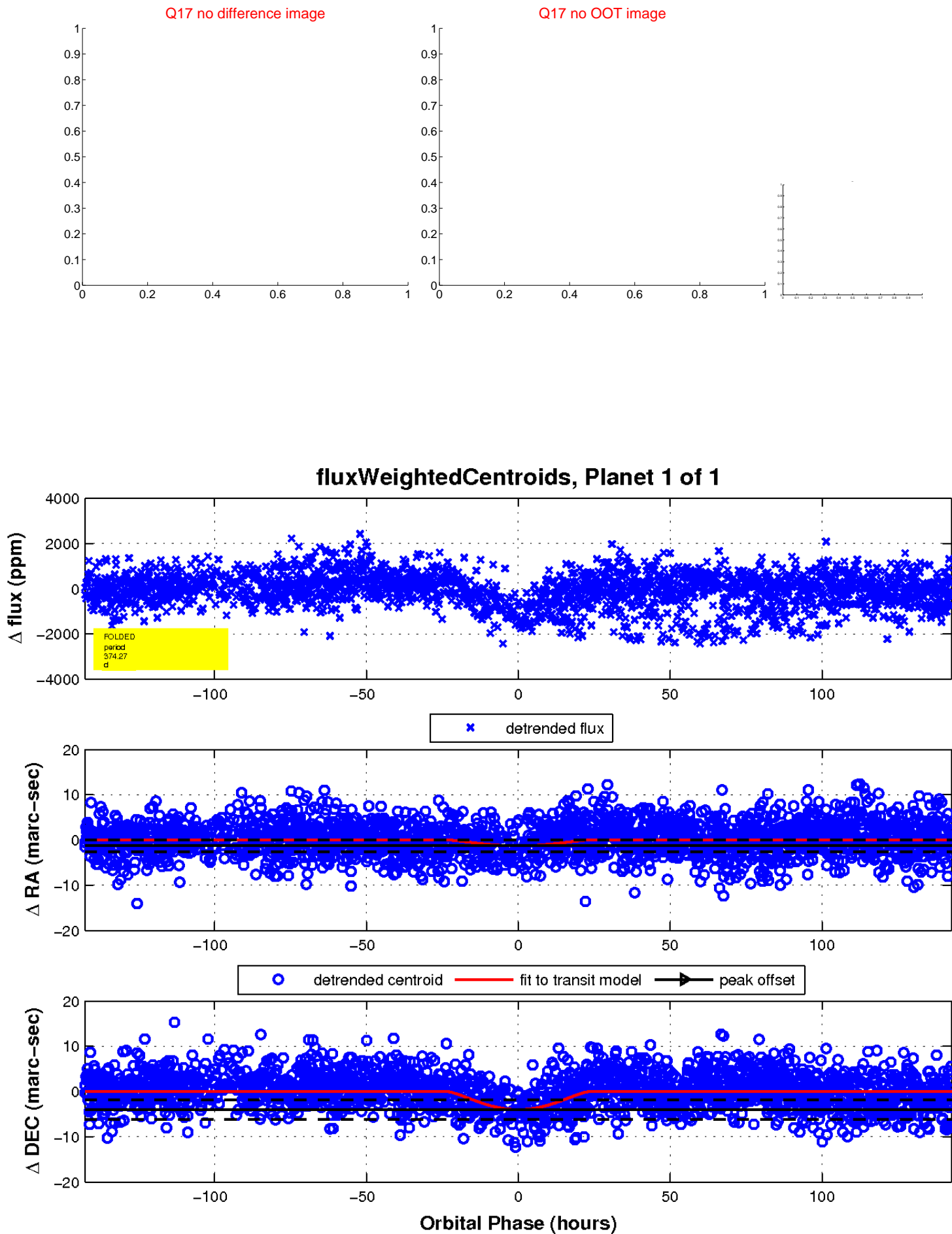
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

