

KIC 008296401

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})
008296401-01	OBS	No	374.438020	259.630069	1898.0	48.177	12.1	15.6	0.86	5792	7.03	0.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008296401-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE---CENT_FEW_DIFFS---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.

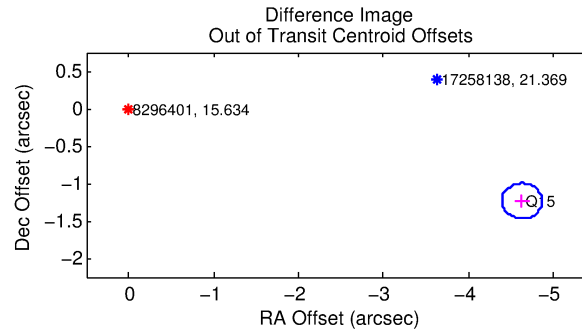
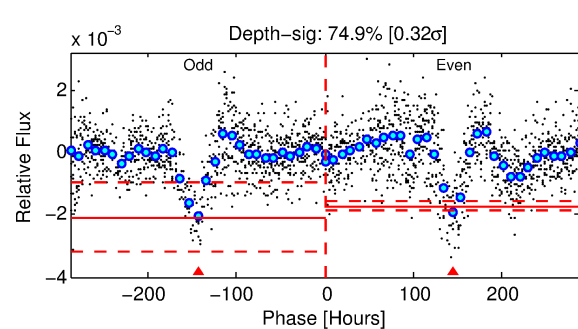
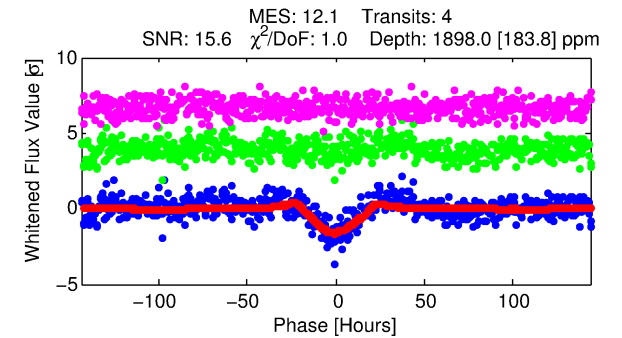
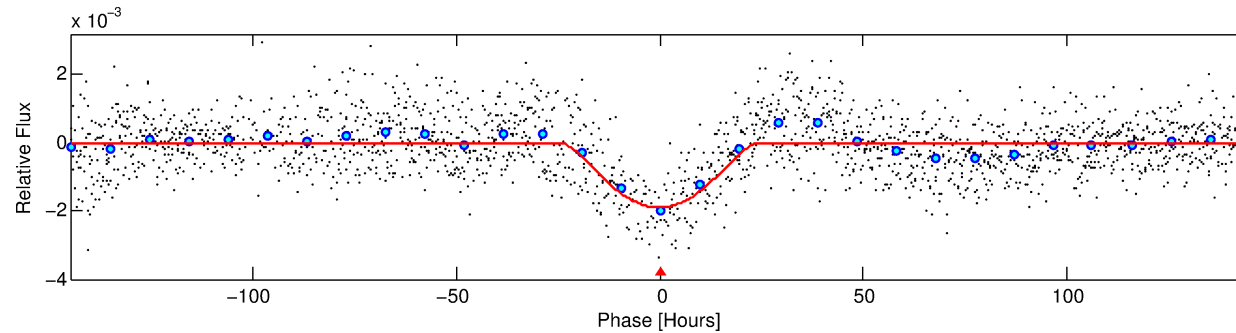
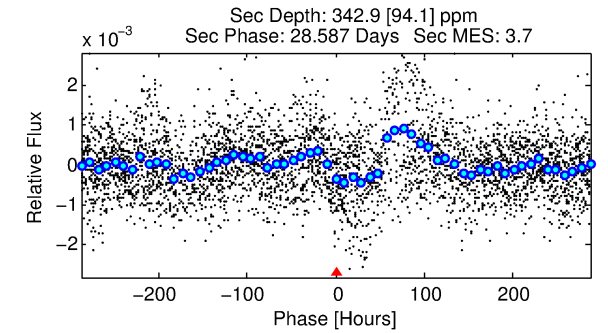
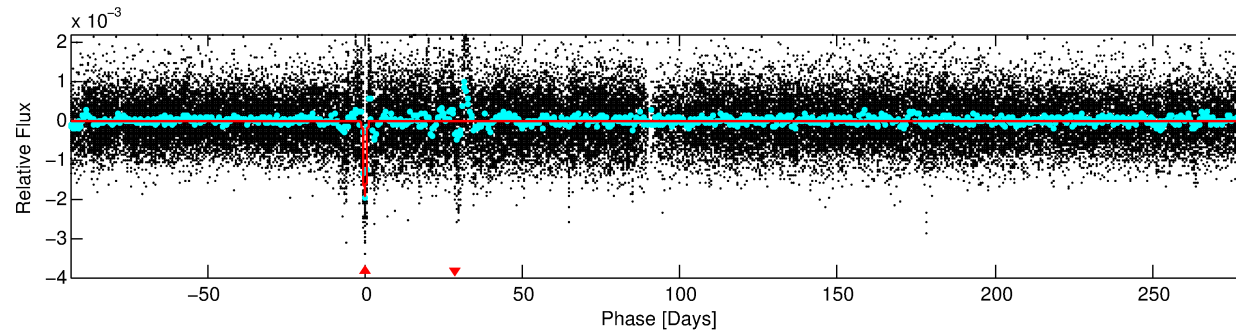
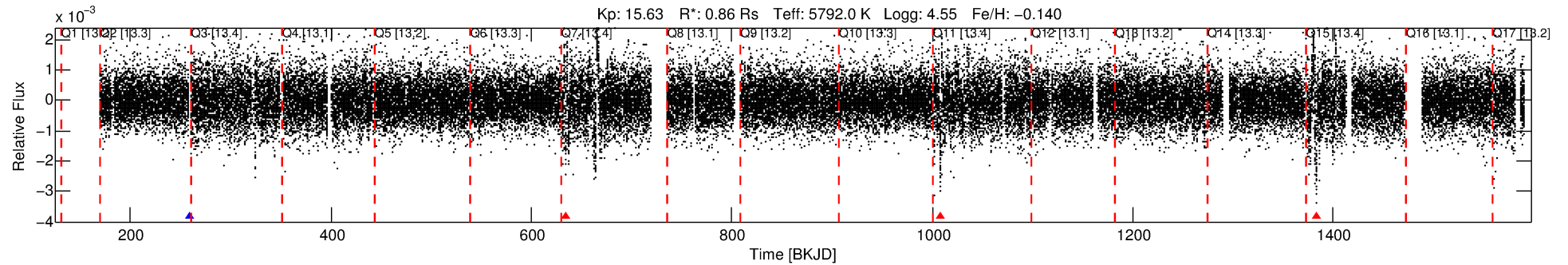
Ephemeris Match Information For 008296401-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (")	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
008296401-01	8296401	008362170-01	8362170	1:1	61.0	1	-15	15.83	15.64	1.43	Direct-PRF	1	1.55	1.27

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 8296401 Candidate: 1 of 1 Period: 374.438 d



DV Fit Results:

Period = 374.43802 [0.02914] d
Epoch = 259.6301 [0.0620] BKJD
Rp/R* = 0.0745 [0.1238]
a/R* = 23.68 [8.65]
b = 1.00 [0.18]
Seff = 0.75 [0.29]
Teq = 237 [23] K
Rp = 7.03 [11.87] Re
a = 1.0030 [0.2565] AU
Ag = 3842.61 [12889.51] [0.30σ]
Teff = 2887 [2408] K [1.10σ]

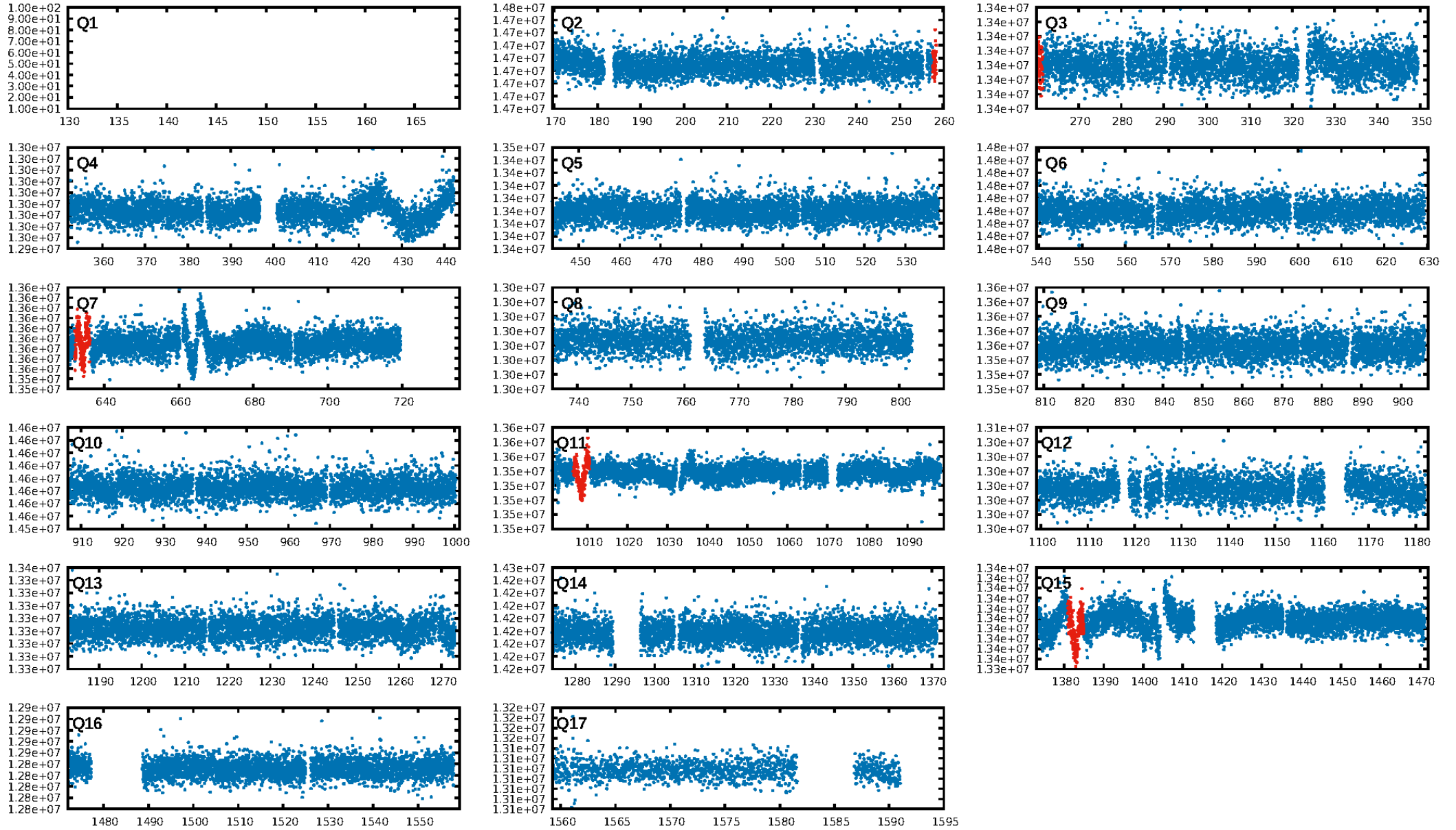
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.1%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 6.12e-22
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 1.031
Centroid-sig: 0.0%
Centroid-so: 3.076 arcsec [3.32σ]
OotOffset-rm: 4.797 arcsec [60.62σ]
KicOffset-rm: 4.846 arcsec [61.35σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

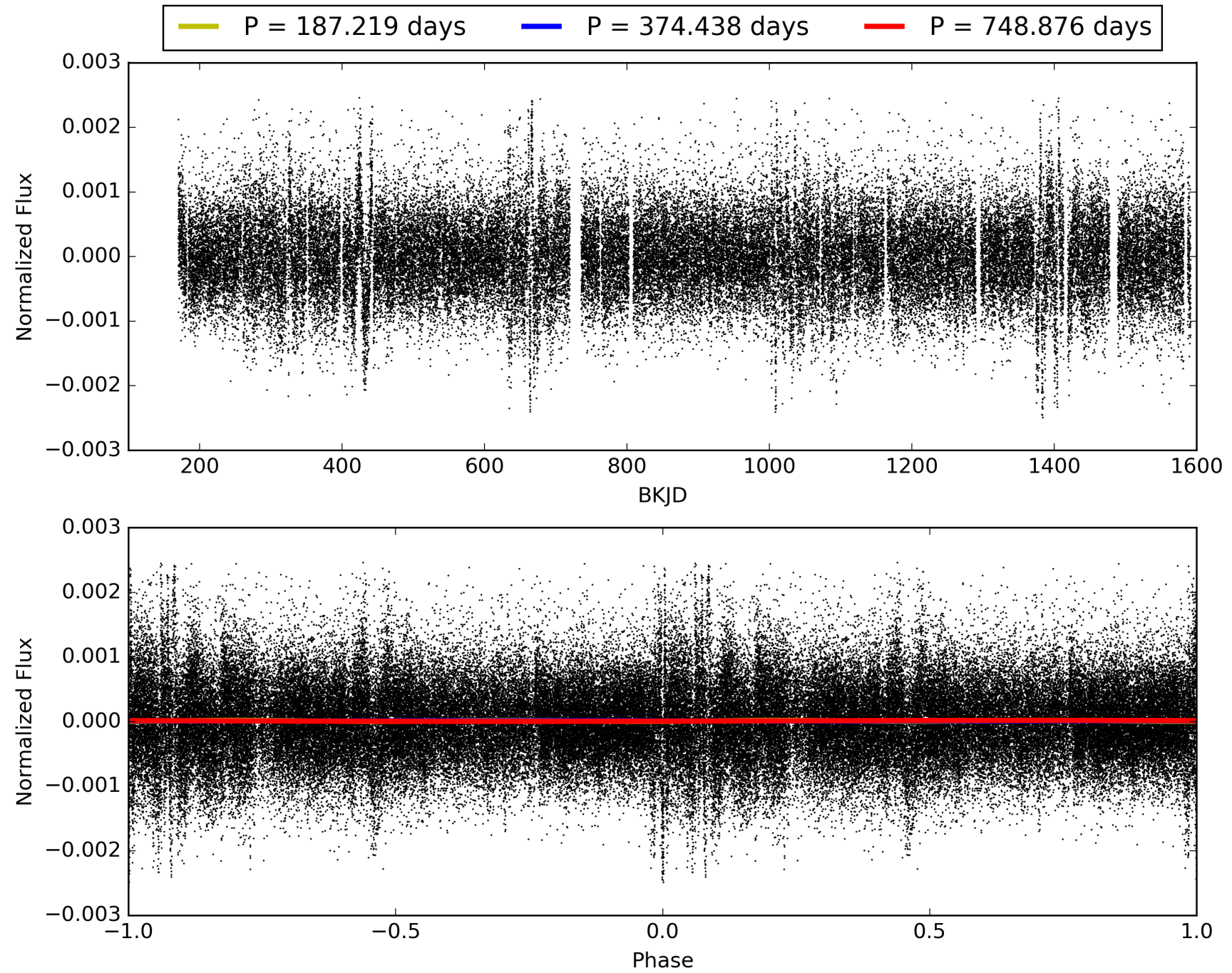
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:03:05 Z

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

TCE 008296401-01, PDC Light Curves

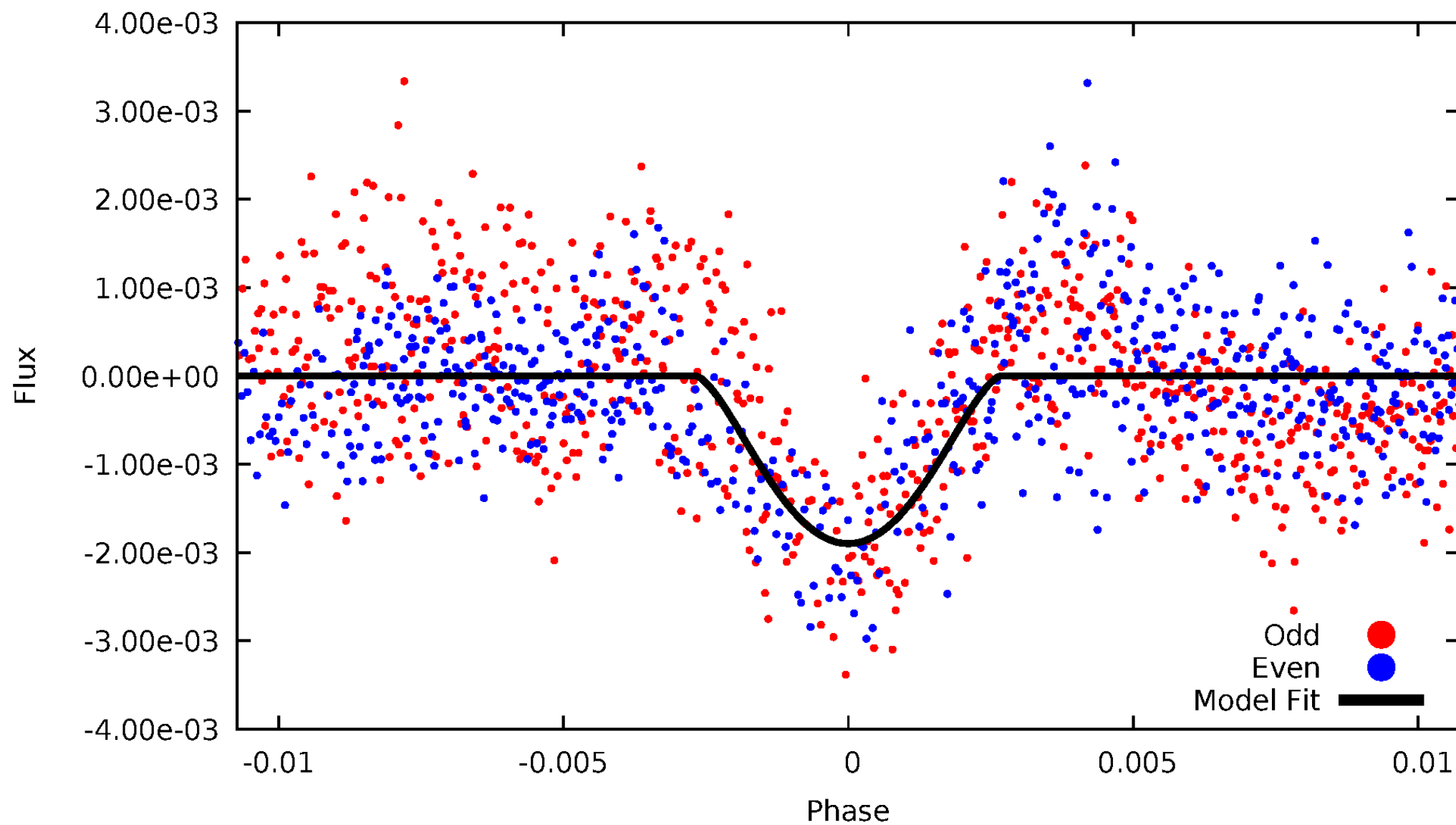


TCE 008296401-01



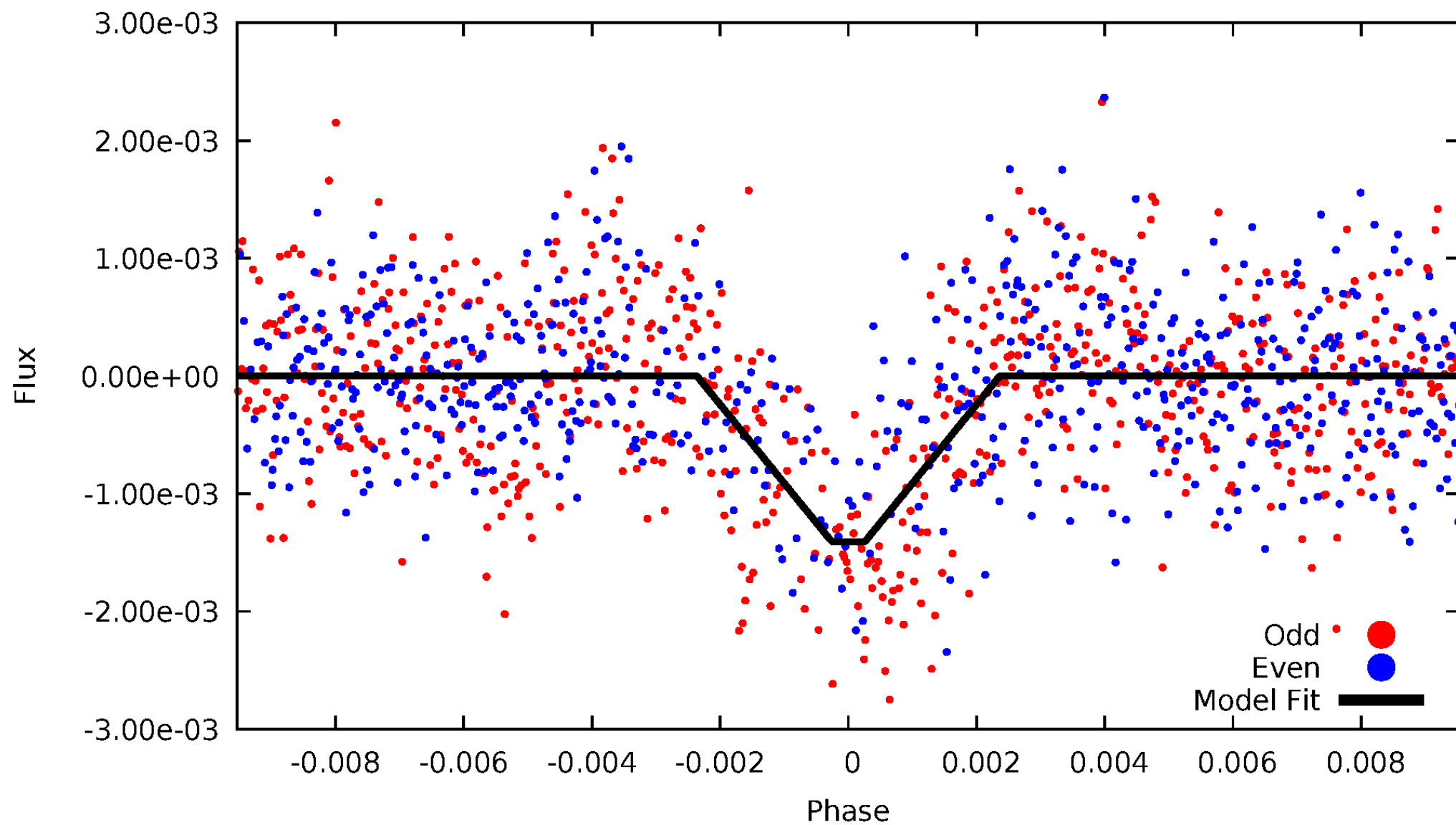
DV Odd/Even

TCE 008296401-01

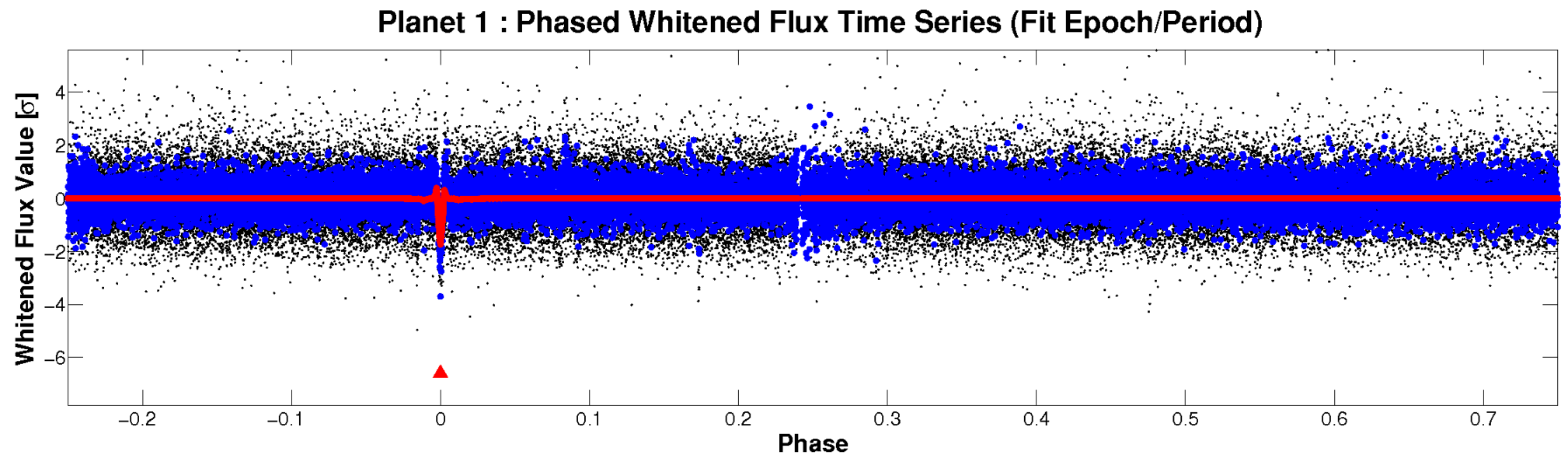
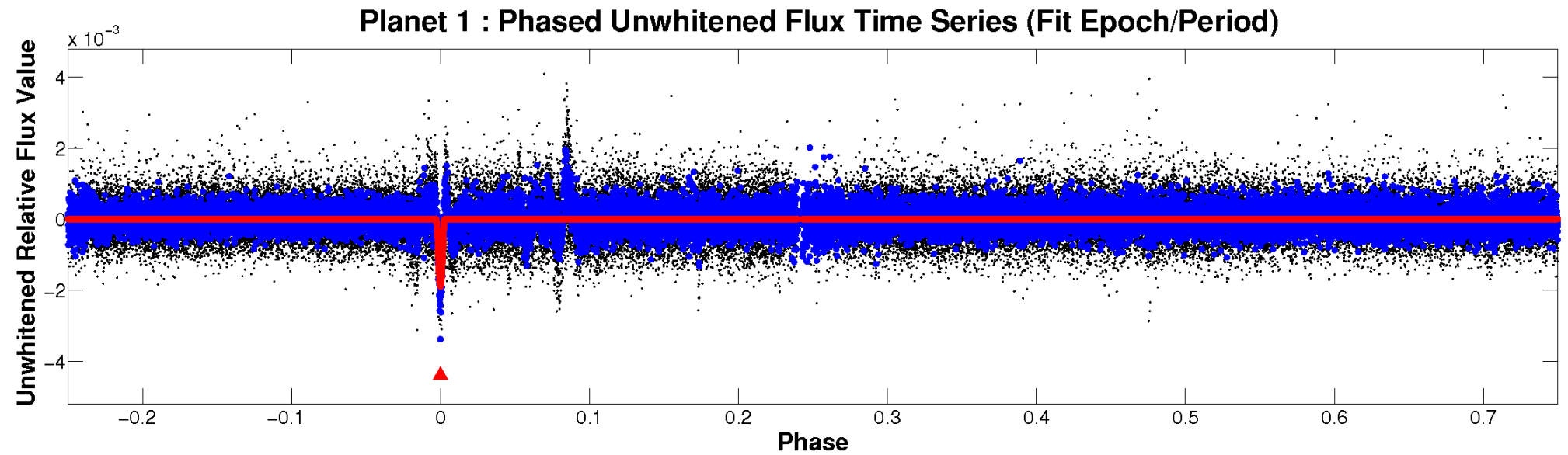


ALT Odd/Even

TCE 008296401-01

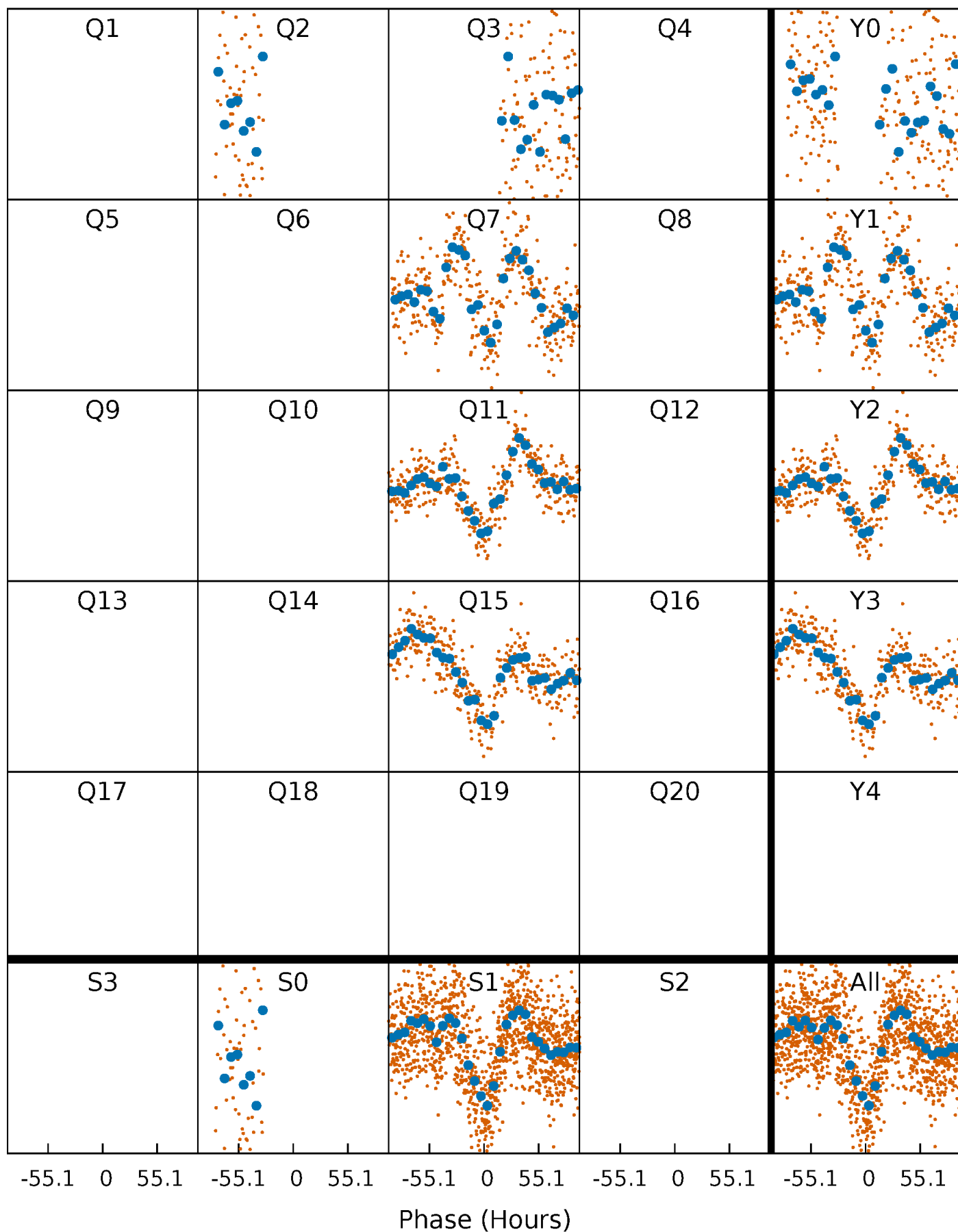


Non-Whitened Vs. Whitened Light Curve



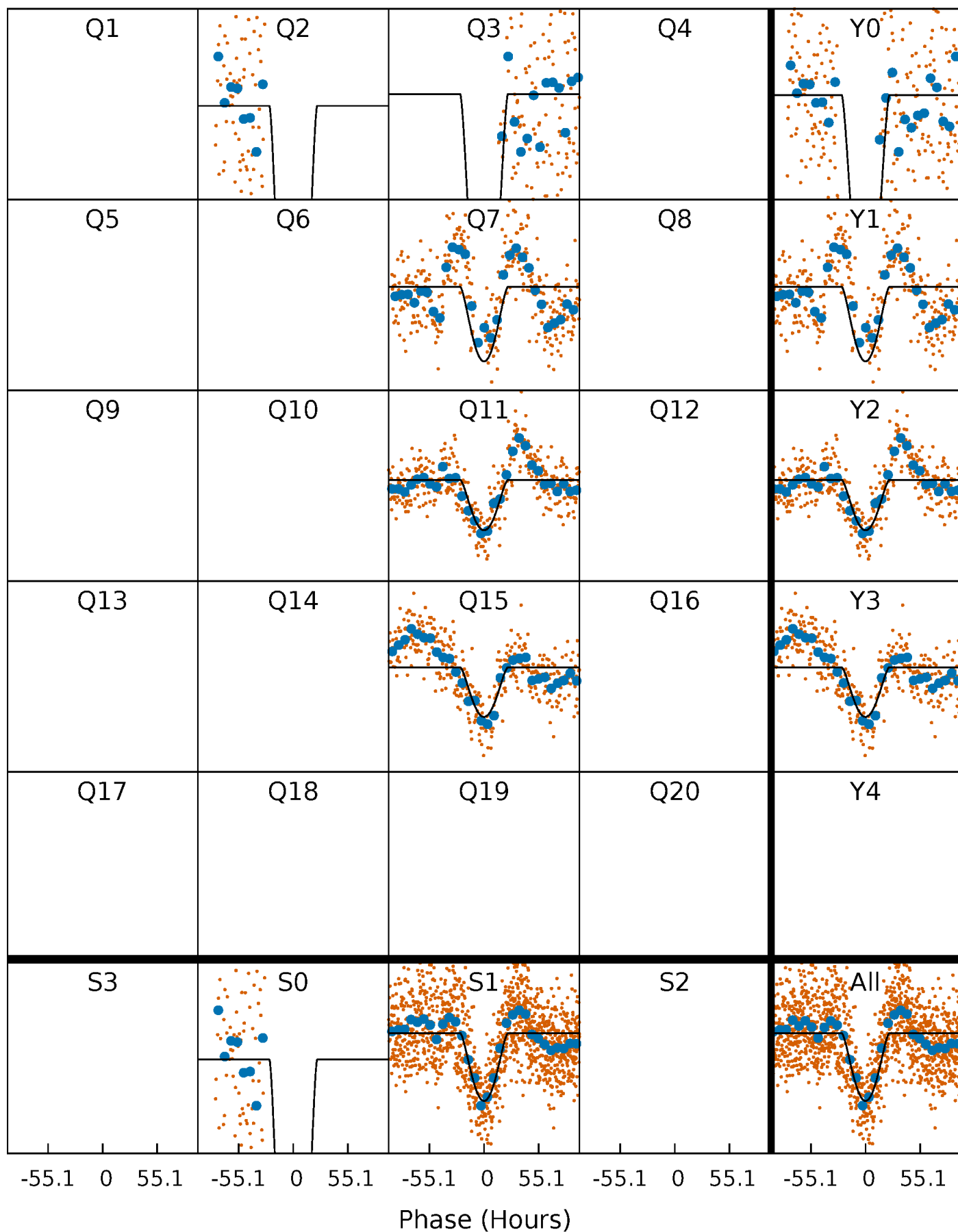
PDC Quarter-Phased Transit Curves

TCE 008296401-01 P=374.438020 Days $T_0=259.630069$ (BKJD)



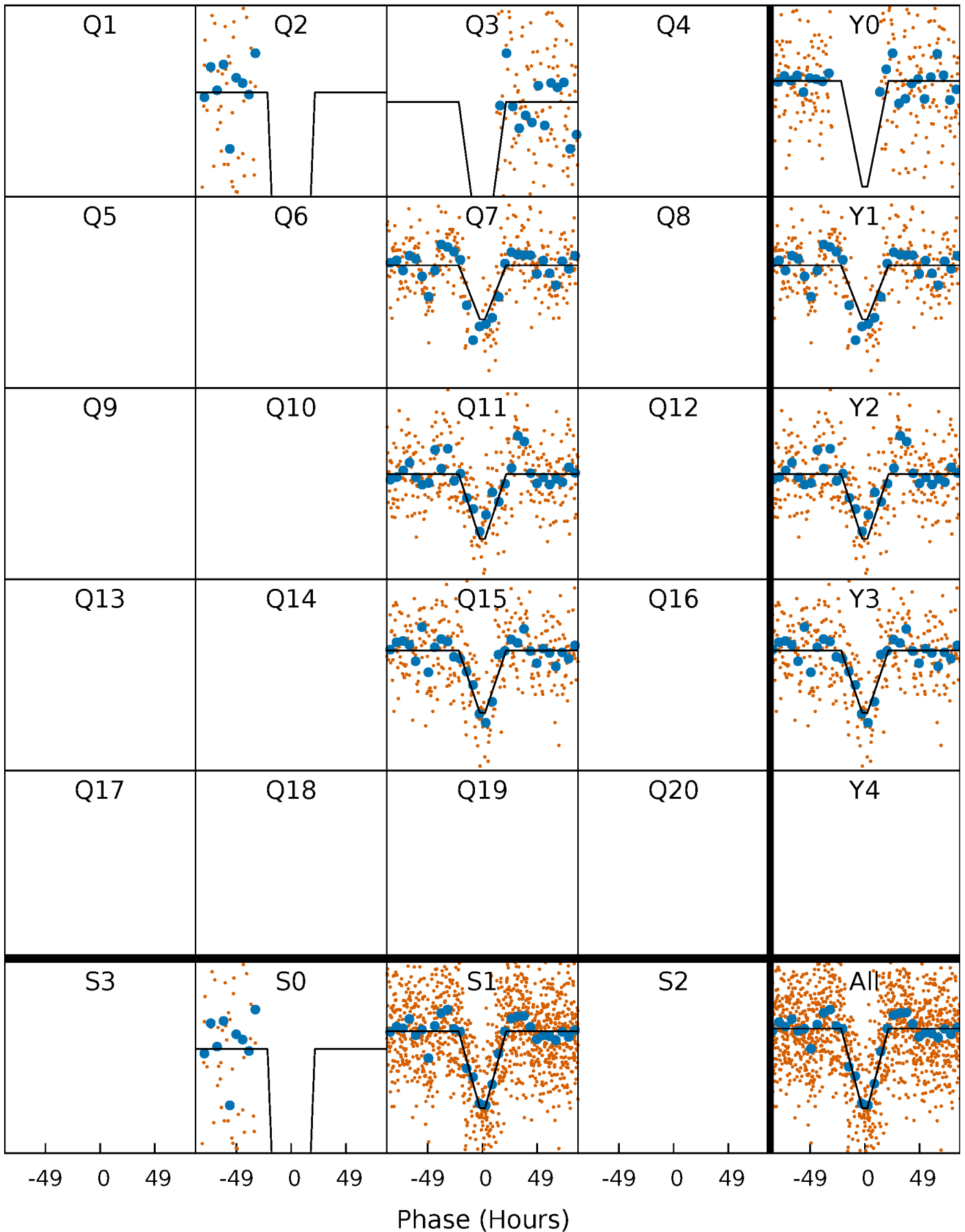
DV Quarter-Phased Transit Curves

TCE 008296401-01 P=374.438020 Days $T_0=259.630069$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

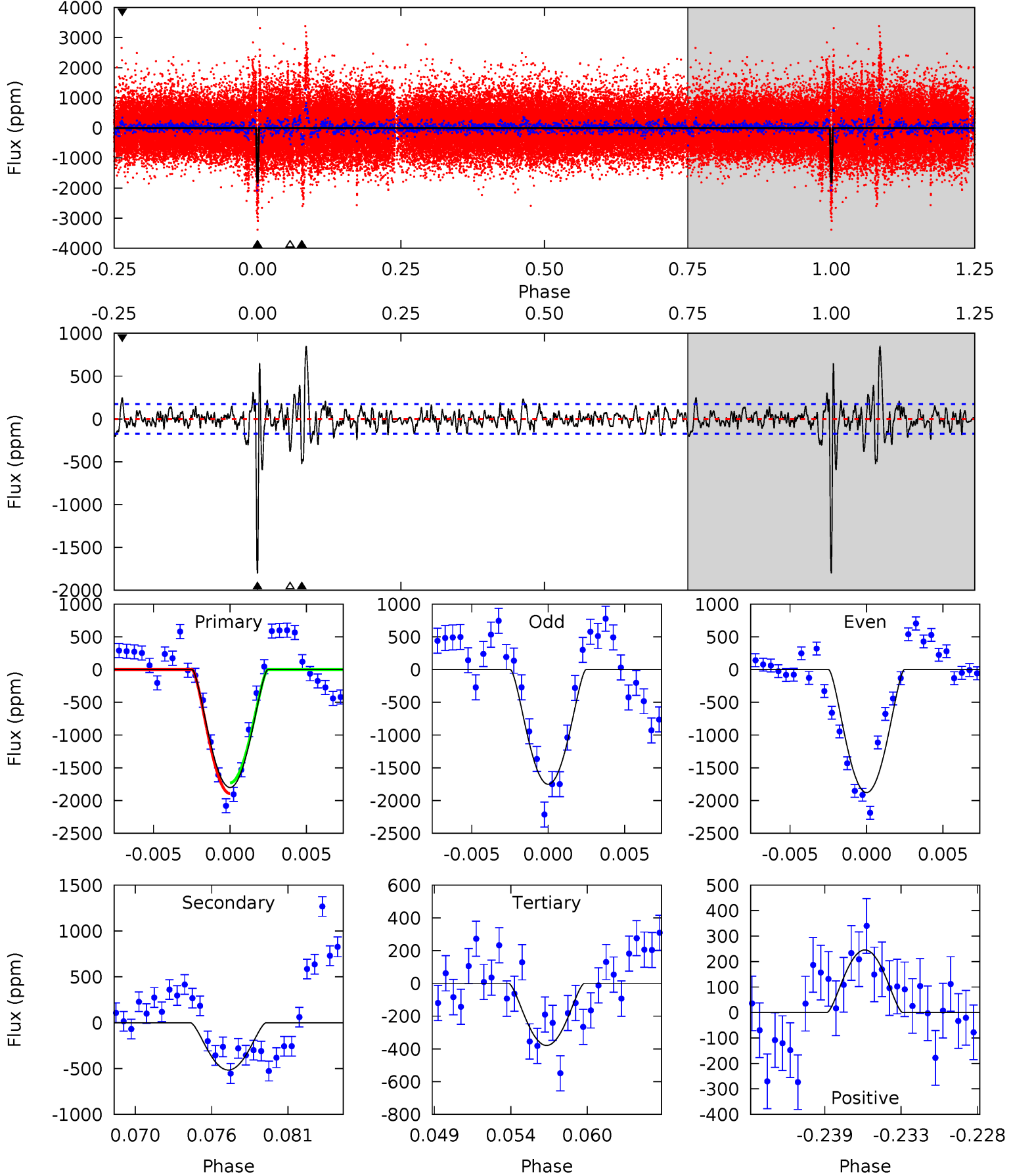
TCE 008296401-01 $P=374.438176$ Days $T_0=259.705277$ (BKJD)



DV Model-Shift Uniqueness Test

008296401-01, P = 374.438020 Days, E = 259.630069 Days

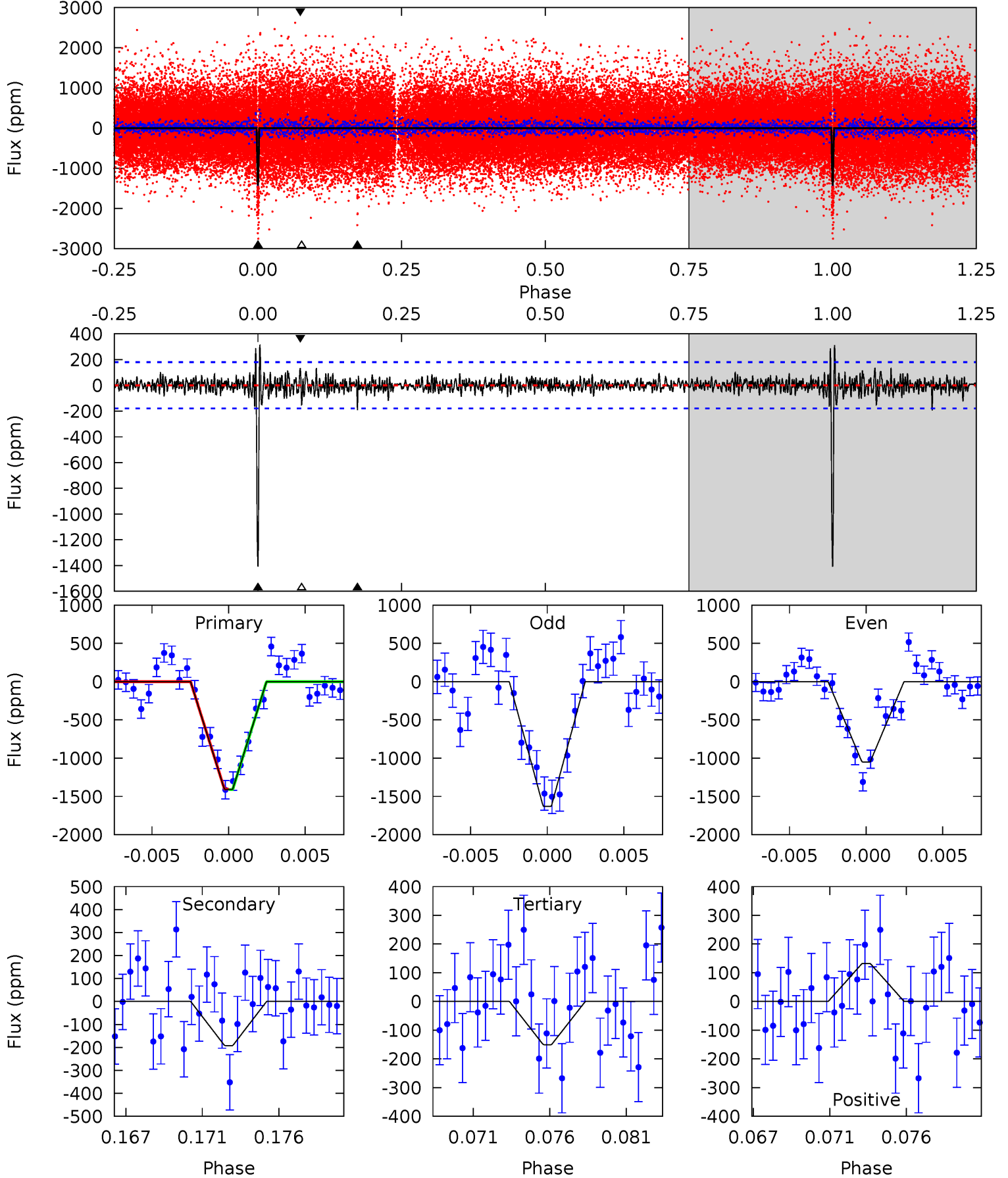
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.3	15.3	11.2	7.26	5.14	2.78	3.03	42.0	46.0	4.05	8.00	1.85	0.97	0.32	2.38



Alt Model-Shift Uniqueness Test

008296401-01, P = 374.438176 Days, E = 259.705277 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.4	5.52	4.33	3.80	5.17	2.82	1.06	36.1	36.6	1.19	1.72	8.14	0.90	0.18	0.11



Stellar Parameters For KIC 008296401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5792^{+157}_{-175}	$4.547^{+0.036}_{-0.204}$	$-0.140^{+0.300}_{-0.300}$	$0.864^{+0.262}_{-0.082}$	$0.959^{+0.104}_{-0.116}$	$2.094^{+0.412}_{-1.074}$
	+3%/-3%	+1%/-4%	+214%/-214%	+30%/-9%	+11%/-12%	+20%/-51%
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 008296401-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-516 ± 34	$12.09^{+10.73}_{-7.79}$	340^{+24}_{-16}	3114^{+1291}_{-467}	1851^{+12909}_{-1294}
Alt.	-192 ± 35	$10.05^{+9.97}_{-7.07}$	340^{+24}_{-16}	2865^{+1385}_{-466}	1030^{+11163}_{-774}

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 $A_{obs} \gg 1.0$

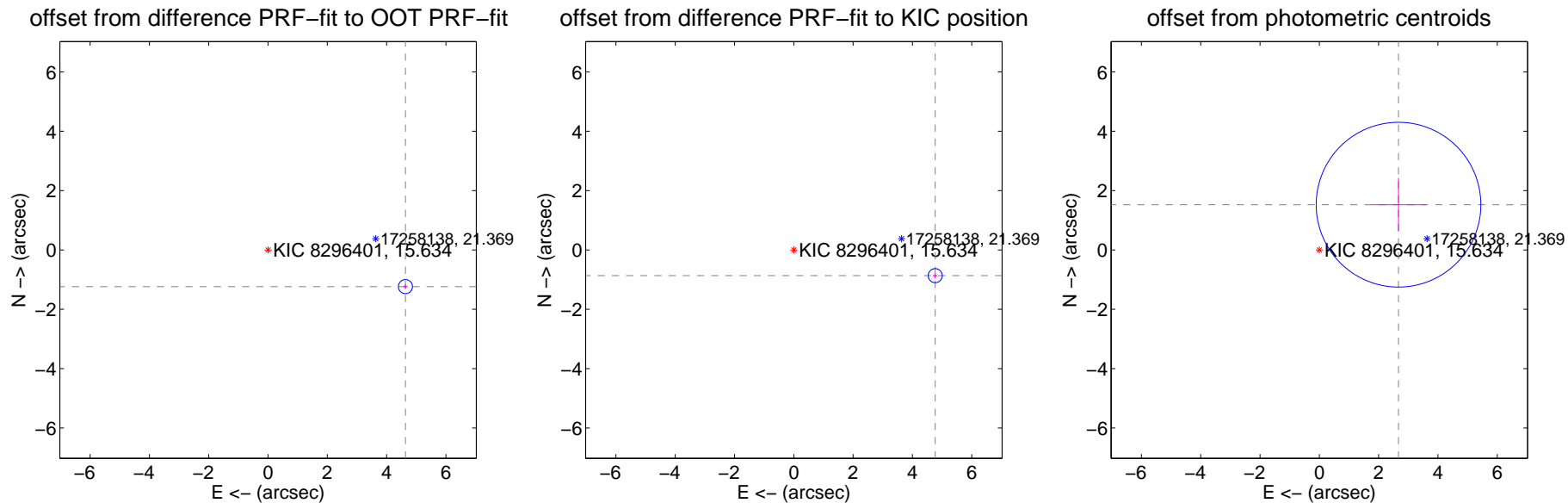
DV Centroid Data

Supplemental centroid analysis for 008296401-01. Kepler magnitude: 15.63. Transit SNR 15.63

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.797 ± 0.079	60.62	-4.635 ± 0.079	-1.237 ± 0.082
PRF-fit source offset from KIC position	4.846 ± 0.079	61.35	-4.768 ± 0.079	-0.867 ± 0.082
photometric centroid source offset	3.08 ± 0.93	3.32	-2.67 ± 0.93	1.52 ± 0.90



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.



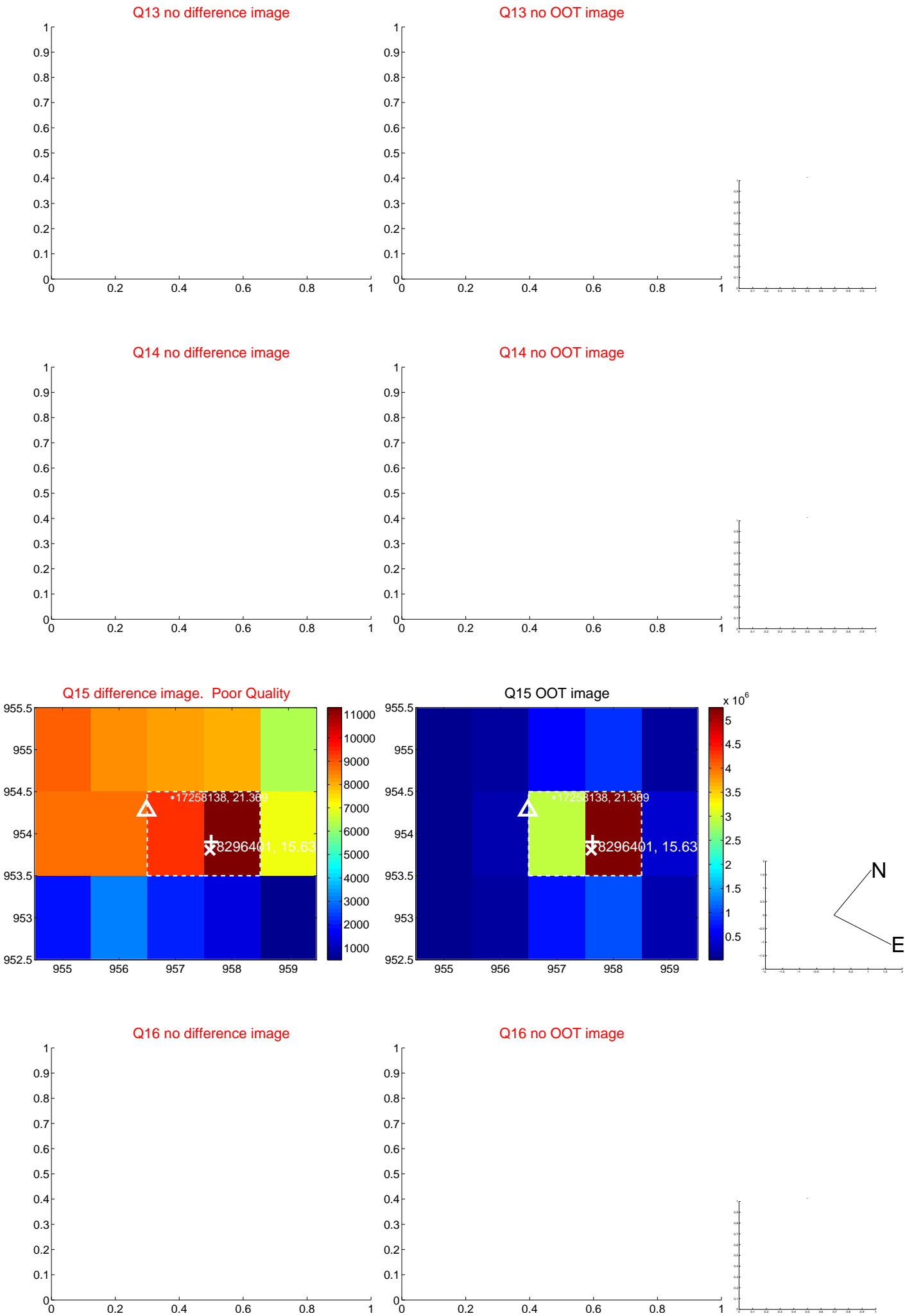
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



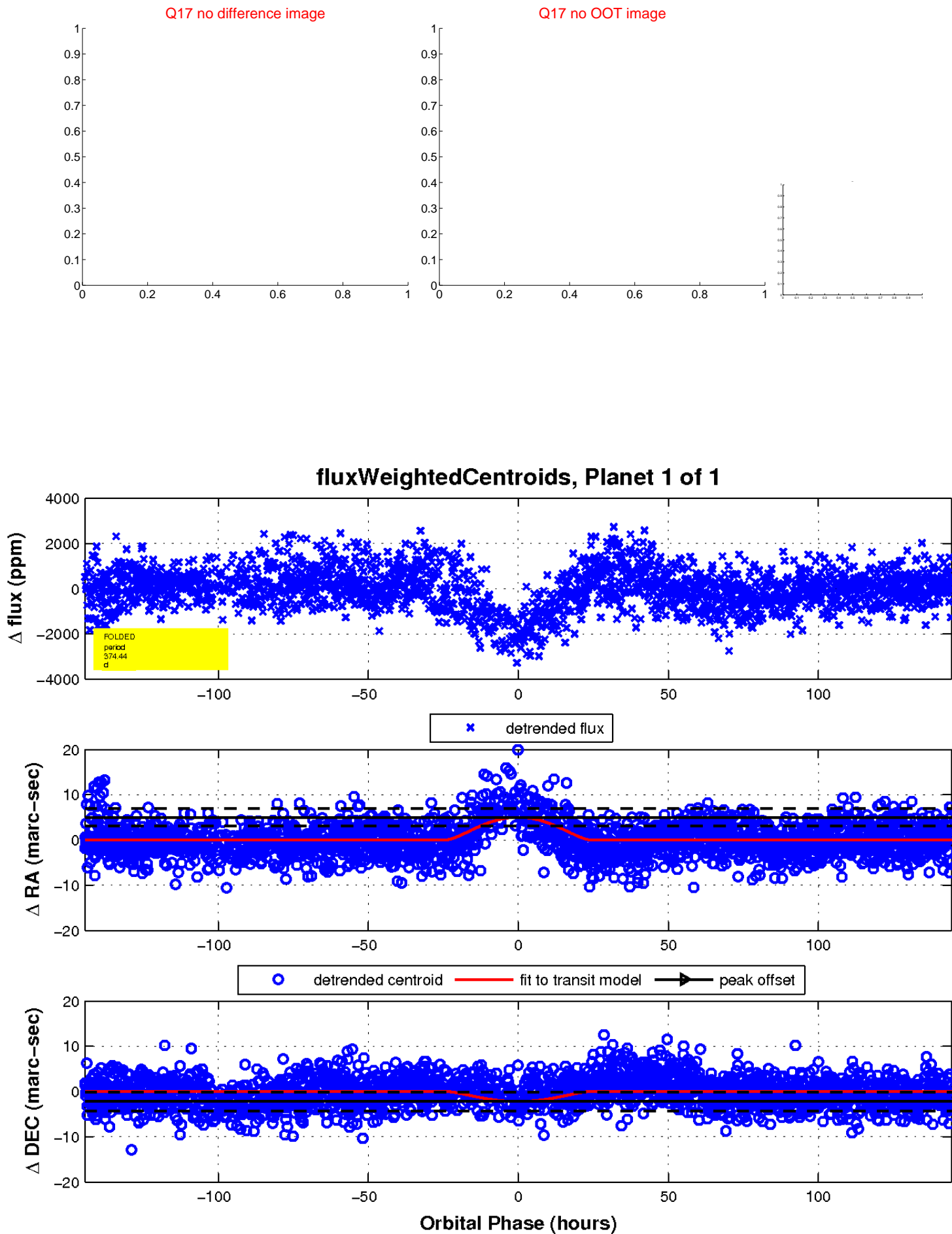
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

